METSÄ BOARD

Annual Report **2019**

Metsä

Mitigating climate change requires shifting away from fossil energy and fossil based raw materials. With population growth circular economy becomes increasingly important.

Metsä Board products and services offer sustainable solutions to global challenges. Paperboards made from renewable wood fibre can be recycled efficiently and they are also the consumers' choice.

The cover of this annual report is MetsäBoard Prime FBB Bright folding boxboard. The pure fresh fibre used in our lightweight premium paperboards is a renewable raw material, fully traceable to sustainably managed northern forests.

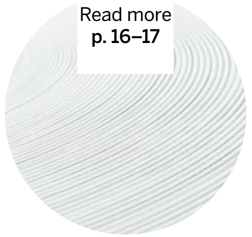
Contents

METSÄ BOARD CREATES VALUE TO STAKEHOLDERS

We are constantly looking for opportunities to grow profitably, produce better results for our owners and customers and to create value for all our stakeholders through our activities.

ENSURING FUTURE GROWTH THROUGH R&D AND INNOVATION WORK

We will continue to develop our paperboards to provide alternatives to plastic.



PAPERBOARD IS AN INTEGRAL PART OF THE CIRCULAR ECONOMY

Fresh fibres ensure the strength and purity of the packaging and keep the recycling loop running.

PUBLISHER
Metsä Board Corporation, Communications
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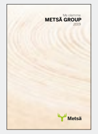
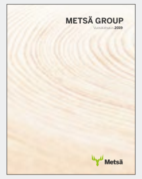
Metsä Board's Annual Report is published in English and in Finnish. Publications are available in PDF format at **www.metsaboard.com**



We are Metsä Group 2019 Brochure



Metsä Group Annual Review 2019

Metsä Group Sustainability Report 2019

Metsä Board Annual Report 2019

This is METSÄ BOARD

Metsä Board is a leading European producer of premium fresh fibre paperboards and a forerunner in sustainability.

FOCUS ON ECOLOGICAL FRESH FIBRE PAPERBOARDS

We are a profitably growing company focused on lightweight and ecological paperboards made from fresh fibres. Our main products are folding boxboards and food service paperboards as well as white kraftliners, mainly used in food and consumer product packaging.

MEGATRENDS SUPPORT RECYCLABLE PACKAGING SOLUTIONS

Global megatrends – such as population growth, globalisation, urbanisation and climate change – support demand for fibre-based, recyclable and lightweight packaging materials and solutions.

STRONG POSITION IN A GROWING MARKET

We are a leading European producer of folding boxboard and white kraftliner. We are also the biggest producer of coated white kraftliner globally. In the United States, we are the largest supplier of folding boxboard. We expect the long-term global demand for our main products to grow at an annual rate of 2–3%.

GOOD AVAILABILITY OF RAW MATERIAL AND SELF-SUFFICIENCY IN PULP ENABLE FUTURE GROWTH

As part of Metsä Group, we have excellent access to our most important raw material – pure northern fibre, which is always 100% traceable. Our self-sufficiency in pulp guarantees the consistent and high quality of the fibre and enables the growth of our paperboard business.

FINANCIAL KEY FIGURES

	2019	2018	2017
Sales, EUR million	1,931.8	1,944.1	1,848.6
EBITDA*, EUR million	279.0	343.8	289.1
% of sales	15.2	17.7	15.6
EBIT*, EUR million	184.4	251.9	193.5
% of sales	9.5	13.0	10.5
Earnings per share, EUR	0.41	0.57	0.42
Dividend per share, EUR	0.24	0.29	0.21
Return of capital employed, %*	10.4	14.4	11.2
Equity ratio on 31 Dec, %	59.1	58.1	52.6
Net gearing ratio on 31 Dec, %	23	25	31
Interest-bearing net liabilities/EBITDA*	1.1	1.0	1.2
Interest-bearing net liabilities on 31 Dec, EUR million	307.8	334.6	358.4
Total investments, EUR million	98.9	70.3	65.4
Net cash flow from operations, EUR million	200.5	150.9	236.3
Market capitalisation of shares on 31 Dec, EUR million	2,136.1	1,856.3	2,539.6
Personnel at end of period	2,351	2,352	2,351
Paperboard deliveries, 1,000 t	1,791	1,830	1,803
Market pulp deliveries, 1,000 t	460	457	515

PRODUCTION KEY FIGURES

	2019	2018	2017
Paperboard production, 1,000 t	1,816	1,866	1,817
Pulp and BCTMP production, 1,000 t	1,373	1,363	1,330
Use of pulp and BCTMP, 1,000 t	1,483	1,516	1,488
Wood sourcing**, million m³	8.2	8.5	8.2
Fossil CO_2 emissions (Scope 1), t	248,274	288,579	300,973
Indirect fossil CO_2 emissions (Scope 2, market based), t	250,742	275,048	259,621
Indirect fossil CO_2 emissions (Scope 2, location based), t	374,409	461,789	361,652
Total energy consumption, GWh	11,686	11,675	11,809
Water sourcing, 1,000 m³	100,967	105,921	106,826

* Comparable
** Includes wood sourcing for Metsä Board's own pulp and BCTMP production and wood sourced for pulp purchased from Metsä Fibre

SALES
EUR MILLION
1,932

OPERATING RESULT, COMPARABLE
EUR MILLION
184

PRODUCTION UNITS
IN FINLAND AND SWEDEN
8

PERSONNEL
AT END OF YEAR
2,351

PAPERBOARD CAPACITY*
MILLION TONNES
2.0

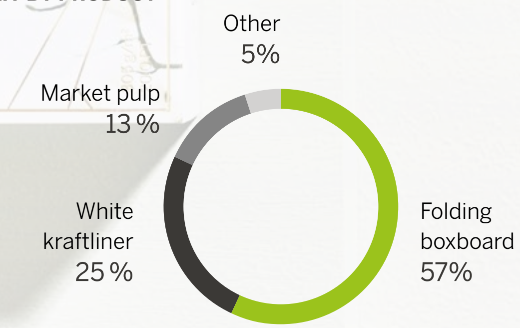
PULP SURPLUS**
TONNES ANNUALLY
600,000

SHARE OF FOSSIL FREE ENERGY
%, OF TOTAL ENERGY USE
83

* Mill-specific capacities on page 123
** Including Metsä Fibre's ownership

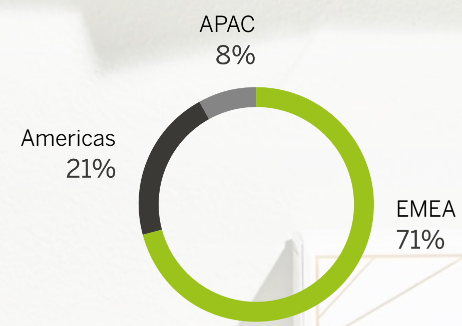
SALES SPLIT BY PRODUCT

%



SALES SPLIT BY REGION

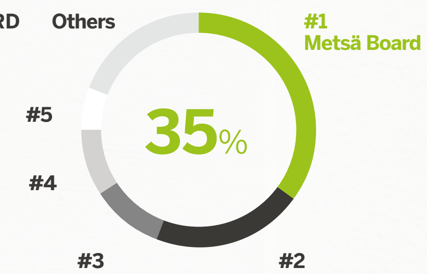
%



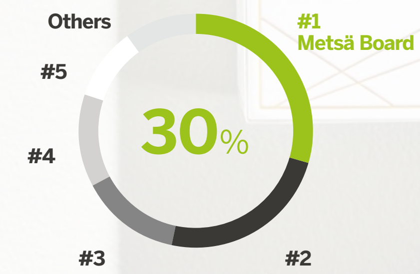
METSÄ BOARD IS A LEADING EUROPEAN PRODUCER OF FOLDING BOXBOARD AND WHITE KRAFTLINER

MARKET SHARES WITH TOTAL CAPACITY Source: Metsä Board, public company information

FOLDING BOXBOARD PRODUCERS IN EUROPE
TOTAL CAPACITY
3.9 million tonnes



WHITE KRAFTLINER PRODUCERS IN EUROPE
TOTAL CAPACITY
2.2 million tonnes



SOLUTIONS
for packaging of the future

The signs of change in the operating environment of packaging materials are increasingly strong. Climate change mitigation and the reduction of plastic waste require action from everyone. We want to contribute by offering solutions for these challenges and are steering our operations and development work accordingly.

SUCCESSES IN THE PAPERBOARD BUSINESS IN 2019

In 2019, demand for our folding boxboard was stable and our average prices rose in all market areas relevant to us. We successfully defended our prices for white kraftliners in the modest demand situation in Europe, which nevertheless picked up after the summer. The total delivery volume of our paperboards was roughly 1.8 million tonnes and our comparable operating result was EUR 184 million. Our profitability was impacted by the decline in the prices of market pulp in both Europe and China. Our cash flow from operations was strong, EUR 201 million. The Board of Directors proposes that EUR 0.24 per share will be distributed to the shareholders, which is in line with our dividend policy.

In the spring, we introduced our renewed folding boxboard portfolio to the market. It will help our customers to respond to the requirements of future packaging – to save on resources and reduce their carbon footprint. In the autumn, we launched a new plastic-free eco-barrier paperboard, which provides good protection against moisture and grease, particularly in food and food service packaging. Our recyclable eco-barrier paperboard has generated a lot of interest among our customers and I believe strongly in its commercial success.

WE ARE A FORERUNNER IN SUSTAINABILITY

Focus, growth and profitability are the cornerstones of our strategy. We will continue to focus on premium fresh fibre paperboards, and our future growth is strongly guided by our profitability targets. We are a forerunner in sustainability and concentrate increasingly on the development of innovative and sustainable packaging solutions in cooperation with our customers.

As part of Metsä Group, we have set ourselves ambitious sustainability targets with which we aim, among other things, for mills and raw materials by 2030. We are committed to mitigating climate change in accordance with the UN's Sustainable Development Goals. Sustainability is also important for our customers, and I believe that fossil free products will provide us with a significant competitive edge.

Future packaging is expected to provide better brand experiences with less environmental impact than before, not forgetting the functionality of the packaging. We always know the origin of our most important raw material – pure northern fibre – and our end products support the principles of the circular economy. We are in the process of building a paperboard and packaging Excellence Centre in Äänekoski. The centre will combine packaging design and R&D excellence under the same roof. The centre enables extensive cooperation with our customers throughout the value chain.

Our success has been enabled by skilled and committed personnel. We want everyone to be successful in their work and to develop their own competence. Clear goals and supervisory work in line with our values, as well as the systematic development of our personnel's know-how will support these successes.

WE INVEST IN FUTURE GROWTH

We have started the first phase of the renewal of the Husum mill in Sweden. With the renewal, we will ensure the development of our paperboard business in the Husum integrated mill in the future. It also improves our energy efficiency and is a significant step toward our target of fossil free mills.

The future of fresh fibre paperboard looks bright. Fibre-based, fully recyclable packaging solutions are replacing packaging materials based on fossil based raw materials to an increasing degree, which means that there is a lot of potential. I am very confident of Metsä Board's continued success.

I want to extend my warmest thanks for the past year to our customers, employees, shareholders and other stakeholders.

Mika Joukio
CEO

“Mitigating climate change and reducing plastic waste require actions from everyone.”

HIGHLIGHTS
of 2019

AIMING FOR FOSSIL FREE MILLS BY 2030

Climate change mitigation requires shifting away from fossil based raw materials. Metsä Board aims to achieve fossil free mills by 2030 as part of its sustainability goals published in August 2019. The fossil free target covers the emissions of our own energy production (Scope 1) and the emissions of purchased energy (Scope 2). Currently, 83% of the energy used by our mills is fossil free and the majority of our raw materials already come from renewable sources. We also aim not to use fossil oil-based raw materials in production by 2030. These targets demonstrate Metsä Board's commitment to climate change mitigation in line with the UN's Sustainable Development Goals (SDGs).

THE PLANNED RENEWAL OF THE HUSUM PULP MILL IS PROGRESSING

In April 2019, Metsä Board launched a pre-engineering project concerning the renewal of the Husum pulp mill in Sweden. The first phase of the renewal includes a new recovery boiler and new turbine, with a total value of approximately EUR 320 million. In the second phase of the investment, during the 2020s, the current two fibre lines will be replaced by a new fibre line. Renewal of the pulp mill enables long-term development and growth of the paperboard business at the Husum integrated mill. In addition, it also develops Metsä Board's competitive pulp and energy production and thus takes the company towards fossil free mills. At the end of 2019, the first investments of the project were made. The final investment decision will be made once the company has secured an environmental permit, expected during the second quarter of 2020 at the earliest.

A PLASTIC-FREE ECO-BARRIER PAPERBOARD FOR FOOD AND FOOD SERVICE PACKAGING

The new plastic-free eco-barrier folding boxboard, launched by Metsä Board in September 2019, provides medium-level protection against moisture and grease and is particularly suited to food and food service packaging. The eco-barrier paperboard does not require a separate plastic separation process and is therefore easy to recycle cost-efficiently. Paperboard packaging made from renewable materials is a responsible choice, and thanks to the further development of the paperboard's barrier properties, it now has even more applications.

THE RENEWED FOLDING BOXBOARD PORTFOLIO PROVIDES PERFORMANCE CAPACITY IN DEMANDING END USES

The key target of packaging of the future is to create better brand experiences with less environmental impact. Metsä Board has developed the properties of the high-yield pulp used in paperboards to make the paperboard lighter in weight and stronger. In April 2019, we launched the renewed folding boxboard portfolio, which helps brand owners and packaging converters to save resources, reduce their carbon footprint and ensure product safety in packaging. The renewed portfolio also increases the appeal of packages with improved visual properties.

RECOGNITION FOR CLIMATE ACTIONS AND SUSTAINABILITY

Metsä Board is committed to major international sustainability initiatives, such as the UN's Global Compact and CEO Water Mandate initiatives. We also participate in a number of evaluations concerning sustainability and corporate responsibility: CDP, EcoVadis, MSCI and Sustainalytics, ISS ESG and Vigeo Eiris. In 2019, Metsä Board again achieved the "Gold" level in EcoVadis's sustainability and social responsibility evaluation.

NEW EXCELLENCE CENTRE COMBINES PACKAGING DESIGN COMPETENCE AND R&D ACTIVITIES

Metsä Board is establishing an Excellence Centre focused on paperboard and packaging innovations in Äänekoski, Finland. The plan, announced in June 2019, combines expertise in packaging design with customer feedback and R&D, accelerating the development of future paperboards and packaging solutions of the future. The Excellence Centre enables extensive collaboration throughout the value chain and helps to exploit the potential of lightweight fresh fibre paperboards now and in the future. The Excellence Centre will open in 2020.

STRATEGY
and operating environment

We are a leading European producer of premium fresh fibre paperboards and a forerunner in sustainability. Our decision-making is guided by our profitability targets and the ambition to increase shareholder value. Our goal is to distribute a competitive dividend to our owners and maintain our strong financial position.

VISION
Preferred supplier of innovative and sustainable fibre-based packaging solutions, creating value for customers globally

MISSION
Packaging solutions that respect nature

STRATEGY

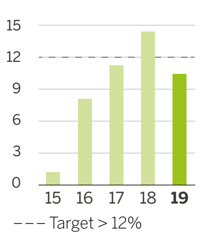
FOCUS
We are the leader in sustainability, focusing on premium fresh fibre products for consumer and retail packaging. The high performance of our products is based on technical excellence and tailor made high-quality Nordic pulps.

PROFITABILITY
Our profitability is based on the efficiency of our operations and prioritisation of businesses that benefit from the high performance of our products and services.

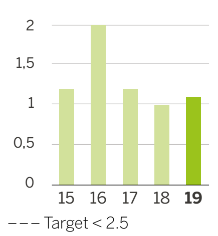
GROWTH
We grow globally together with our existing and new customers by offering sustainable, safe and high-performing products. Our growth is based on skilled people, industry leading products and new innovative packaging solutions.

FINANCIAL TARGETS

COMPARABLE ROCE
%

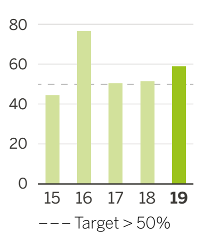


NET DEBT / COMPARABLE EBITDA



DIVIDEND POLICY

DIVIDEND/ NET RESULT
%



We aim to distribute at least 50% of our net result for the financial period in annual dividend.

METSÄ BOARD DELIVERS PAPERBOARD TO MORE THAN 100 COUNTRIES

Metsä Board's production is located in Finland and Sweden, close to its main raw material, high-quality northern fibre. The company delivers paperboard to more than 100 countries around the globe. Metsä Board's biggest market area comprises the EMEA countries, and the largest individual country is the United States, measured by paperboard delivery volumes. While the significance of APAC countries is smaller than that of others in the paperboard business, its importance is more prominent in the pulp business, particularly through our holding in our associated company Metsä Fibre.

MARKET GROWTH FORECAST FOR FIVE YEARS
The global demand for premium fresh fibre paperboard grows at an annual rate of 2–3%.

Segment	Americas	EMEA	APAC
Folding boxboard (FBB)	↑	↑	↑
Food service board (FSB)	↑	↑	↑
White kraftliners (WKL)	↑	↑	→
Other fresh fibre paperboards (e.g. SBS, SUB)	→	→	→
Recycled cartonboards (e.g. WLC)	→	↑	→
White recycled kraftliner	↑	↑	↑
Long-fibre pulp (NBSK)	→	→	↑
Short-fibre pulp (BHKP)	↑	→	↑

Metsä Board's focus areas ↑ > +1%/year → -1 – +1%/year ↓ < +1%/year

Source: Metsä Board estimates

THE GEOGRAPHIC DISTRIBUTION AND MARKET OUTLOOK OF OUR PAPERBOARDS

AMERICAS
24%

HIGH GROWTH POTENTIAL IN NORTH AMERICA
- Limited availability of high-quality, lightweight folding boxboard and coated kraftliner
- Reduced supply of other locally produced fresh fibre cartonboards (SBS / FSB)
- Changing delivery volumes of paperboard imported from China
- Increasing demand for food service packaging

EMEA
70%

STRONG MARKET POSITION IN EUROPE
- Increased environmental awareness and tightened regulatory requirements support demand for lightweight and recyclable packaging materials
- Stable demand situation for folding boxboard and white kraftliner
- Conversion of paper production to lower grade liner production continues. Good availability of raw material has increased supply of recycled liner

APAC
6%

WE FOCUS ON DEMANDING END USES WITH BRAND OWNERS
- Growth of the middle class and rising purchasing power are increasing demand for packaging material
- Plenty of local paperboard supply
- Metsä Board focuses on demanding end uses with brand owners

CREATING VALUE

and well-being by respecting nature

Metsä Board is part of Metsä Group, and benefits from Metsä Group's unique value chain, from pure northern fibre to high-quality end products. We help our customers to reduce their carbon footprint by providing them with eco-friendly packaging materials and solutions, based on the principles of the circular economy. When we make financially sustainable decisions, the well-being is reflected on the environment and people. We are constantly looking for opportunities to grow profitably, produce better results for our owners and customers, and to create value for all our stakeholders through our operations.

INPUT

SOCIAL

- **2,351** employees in **19** countries
- Responsible corporate culture and business ethics (Code of Conduct)
- Apprenticeship training programmes
- Well-being: safe working environment, 5S
- Active co-operation with local communities and educational institutes

ENVIRONMENTAL

- **8.2 million** m^3 wood sourced with **100%** traceability and **76%** certification rate
- **318,000** tonnes purchased pigments, fillers and other raw materials
- **11.7** TWh primary energy used, of which **83%** fossil free
- Process water consumption **59,4 million** m^3, **100%** surface water

ECONOMIC

- **8** production sites: 1 in Sweden and 7 in Finland
- **4,225** suppliers
- **57,500** shareholders (METSA and METSB)
- Capital employed EUR **1,783 million**
- R&D expenditure EUR **6,4 million**

BUSINESS MODEL

FOCUS ON PREMIUM PAPERBOARDS

Our production is located near the most important raw material, high-quality northern fibre. Performance of our products is based on tailor made pulps and technical excellence.

An efficient and global supply chain is a prerequisite for profitable business. We work closely with brand owners, converters and corrugated paperboard manufacturers and merchants globally.

OUTPUT

SOCIAL

- Voluntary employee turnover rate **3%**
- **18** training hours on average per employee
- LTA1 frequency **5.5**
- Leadership index **8.1/10**
- Coverage of Code of Conduct training **97%**
- **8** non-compliance incidents
- Organisation functionality **8.2/10**

ENVIRONMENTAL

- **1.8 million** tonnes of paperboard and **1.4 million** tonnes mechanical and chemical pulp
- Discharges to water: **99%** of process water carefully cleaned and returned back to the nature
- Emissions to air: **499,016** tonnes fossil CO_2 emissions (Scope 1 + Scope 2, market-based)
- **99%** of production waste utilized as materials or energy. **1%** landfill or treated as hazardous waste.

ECONOMIC

- Strong market positions: **#1** in FBB and WKL in Europe, **#1** globally in coated WKL
- EUR **1,932 million** sales
- **95%** of suppliers committed to Supplier code of conduct
- Customer satisfaction: rating **7.86** based on Net Promote Score measurement tool

IMPACT

SOCIAL

- Paid income and property taxes EUR **19,3 million** *
- EUR **194.9 million** to salaries and benefits
- Engaged and skilled personnel
- Ethical business practices
- Improved transparency of operations (transparency to company and its local operations)

ENVIRONMENTAL

- Recyclable paperboards provide alternatives to plastic and support responsible consumption
- Durable and pure packaging materials help reduce food waste
- Lightweight paperboard reduces carbon footprint in the whole value chain
- Climate change mitigation through use of fossil free energy
- Safeguarding biodiversity through sustainable wood sourcing operations

ECONOMIC

- EUR **1,580 million** payments to supplier
- EUR **85.3 million**** dividend and capital distribution to shareholders
- EUR **99 million** capital expenditure
- Return on capital employed **10.4%**
- Customers benefit from lightweight paperboards

* More information on paid taxes on p. 122
** Board of Directors' proposal of 2019 distribution

MEGATRENDS
support demand for recyclable packaging

Metsä Board is actively analysing trends and megatrends as well as changes in consumption, habits and sustainability to develop solutions for packaging of the future.

POPULATION GROWTH

Population growth and a rise in living standards have led to an increase in the consumption of packaged products and have created environmental and sustainability challenges which must be solved.

GLOBALISATION

Globalisation continues, but it is changing shape. The annual growth of global e-commerce is expected to be 17%, on average, between 2018 and 2023, and its share of the retail trade is forecast to rise from 12% to 22%. In e-commerce, a package is handled 20 times on average – four times as often as in traditional retail trade. The challenge is to find an optimum packaging solution for products which provides adequate protection during long-haul transport while avoiding over-packaging.

URBANISATION

More than half of the world's population already lives in cities which cover 2% of the global land area, but generate 70% of the world's gross domestic product (GDP). Cities are also responsible for 70% of the world's greenhouse gas emissions and waste. Urbanisation shapes the structure of the retail trade while influencing package sizes and the requirements imposed on packaging, such as recyclability.

CLIMATE CHANGE

Packaging plays an important role in combating climate change. It protects products during transportation and storage and extends a product's lifetime, thereby reducing waste. The carbon footprint of packaging is usually minimal compared to the packaged product. A damaged product to be disposed has often a considerably larger carbon footprint. The carbon load resulting from packaging can be reduced through recycling. The production of light-weight and ecological packaging materials consumes less water, raw material and energy.

DIGITALISATION

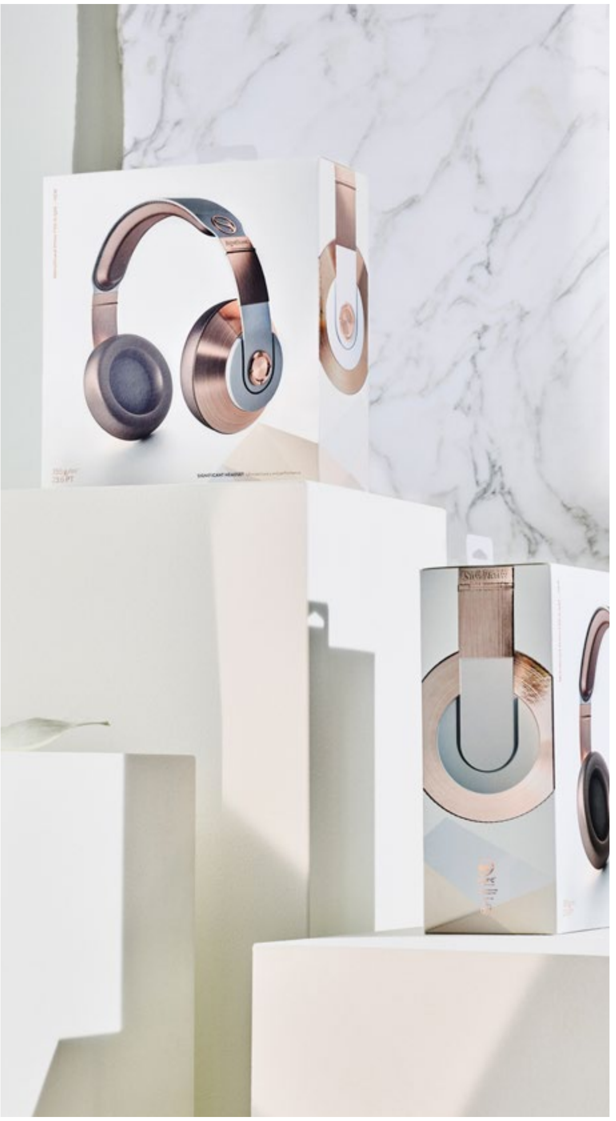
Digitalisation offers solutions for all the other megatrends. Digitalisation allows for increasing operational efficiency and reducing the volume of waste in production, for example. Smart packaging conveys important data on a product's transport chain and condition, reduces food waste and increases product safety in pharmaceutical and food packaging.

What and why do we package?

More than half of the world's packaging is used in the packaging of consumer products, such as food and hygiene products. From the perspective of packaging, the consumption of convenience goods is fairly independent of economic cycles.

The most important function of packaging is to ensure a product's safety to consumers. Packaging protects products during transport, prolongs their useful life and even conveys vital information about the product's composition and use.

Well-designed packaging facilitates the role of good transport and shelving and helps reduce waste throughout the supply chain.



Brand owners are committed to recyclable packaging

New packaging solutions that reduce the amount of plastic waste ending up in nature and accelerate the circular economy are pursued throughout the distribution chain.

An increasing number of brand owners, retailers and fast food chains have announced their commitment to shift to reusable, recyclable and compostable packaging. The EU's Single-Use Plastics Directive and the Ellen MacArthur Foundation's New Plastics Economy Commitment are driving a significant reduction in packaging plastics and the increase of recycling.

Retailers and brand owners have published their views on what responsible packaging means in practice – which packaging materials are the most desirable and which materials we should try to abandon altogether. They want to increase the use of paperboard because its raw material is renewable, bio-based and recyclable. Paperboard already has a well-functioning recycling infrastructure with a high rate of recycling.

Plastic cannot be entirely replaced by other materials. In applications where plastic is necessary, packaging design needs to be improved so that the packaging can be reused or recycled and the amount of plastic used can be reduced.

Packaging innovations are being discovered continuously, but large-scale solutions are yet to be found. Cooperation throughout the distribution chain, and the development of recycling schemes, will become increasingly important factors in the development of solutions.

PRODUCT AND SERVICE
development of the future

Our research and development function responds to changes in the business environment with deeper insight into what the changes mean to packaging and how future packaging should be developed. We will continue to develop lightweight folding boxboards and barrier paperboards that replace plastic as well as our close cooperation with customers in product development and packaging design.

The market is changing, and legislation and regulations related to packaging will increase. This requires diligent and agile development work, testing and commercialisation. We aim for big volumes in the innovations, to give them global significance. Lightweight paperboards are resource-efficient. By reducing the weight of packaging without compromising its strength, carbon footprint can be reduced throughout the chain. We have further developed our high-yield pulp used in paperboard to make paperboard that is even lighter and stronger. In spring 2019, we launched a renewed and improved portfolio of folding boxboard which utilises improved high-yield pulp. The renewed portfolio offers customers more options for the light-weighting of packaging, thus helps to reduce their carbon footprint and make packaging more attractive with improved visual features. The renewed portfolio also improves product consistency and delivery reliability.

Demand for recyclable packaging materials that replace plastic is increasing. Metsä Board's new ecobarrier paperboard provides medium-level protection against moisture and grease. It is also plastic-free, which makes it easy to recycle. We continue to develop other barrier solutions and to investigate the utilisation of dispersion coating and biobased coating solutions as well as their commercial potential.

NEW DIGITAL SOLUTIONS IN PRODUCTION

In 2019, Metsä Board launched a project to pilot artificial intelligence in quality management at the Kyro mill. The software acquired by the mill will make use of measurement results related to the quality properties of paperboard as well as the mill's process data. By combining various process parameters, and using statistical models, the system can automatically predict quality values and adjust process parameters in real time. This improves the production efficiency of the folding boxboard machine and improves quality consistency. We are also investigating the possibility of introducing the use of artificial intelligence at our other mills.

SUSTAINABILITY TARGETS GUIDE

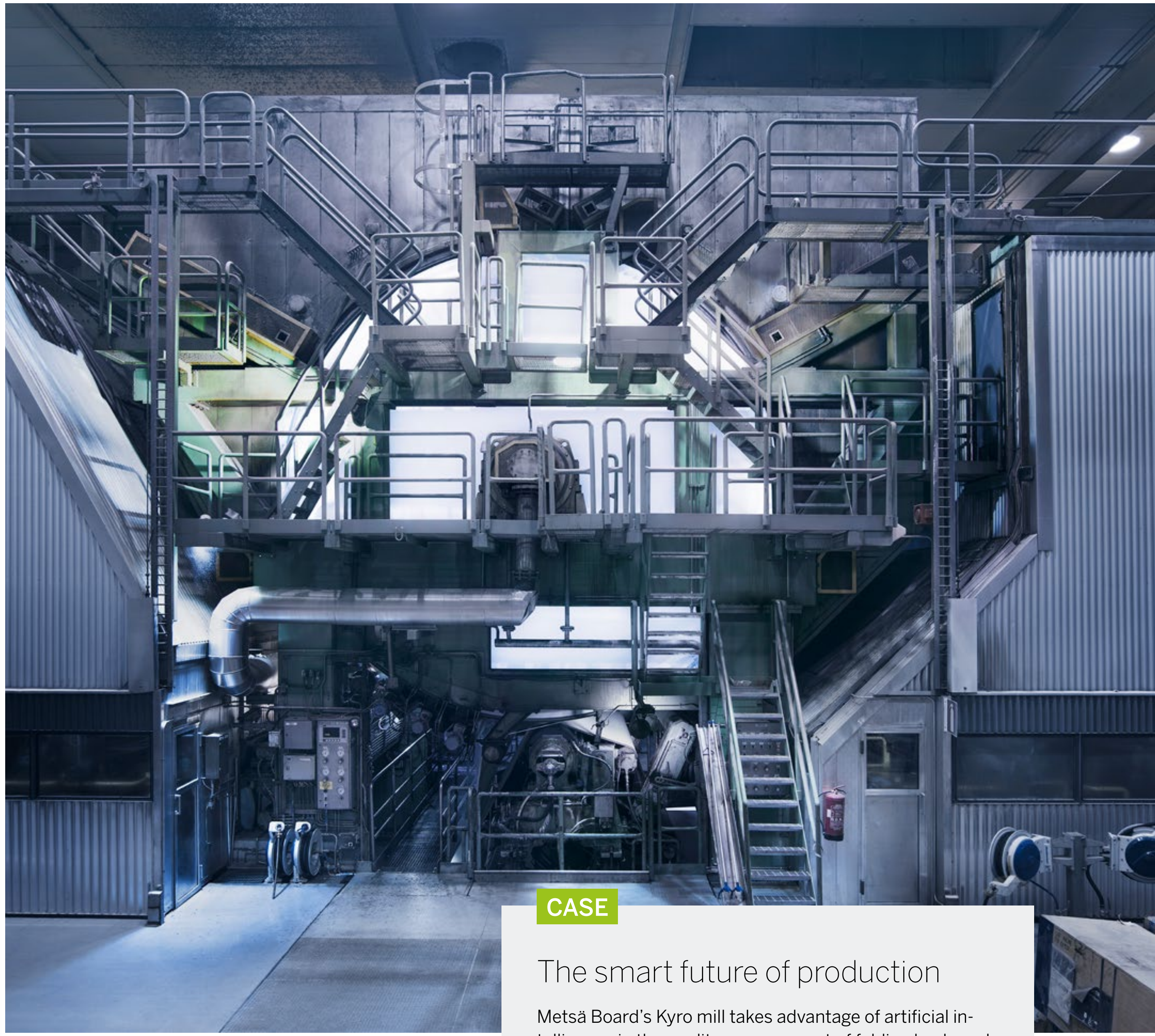
Our development work is guided by the sustainability targets published in 2019. Metsä Board's target is that by 2030 the mills are 100% fossil free, including emission from our own energy production as well as emissions from purchased energy. Our target is also that by 2030, all raw materials will be fossil free. See pages 18–21 for more information.

DEVELOPMENT THROUGHOUT THE WHOLE CHAIN

Metsä Board works in close cooperation with global brand owners and packaging converters to steer its pruduct developent work. The Excellence Centre for paperboard and packaging design, to be opened in Äänekoski, Finland, in 2020, will intensify our cooperation with customers and accelerate joint development projects. By combining different skills under one roof into one coordinated entity will help us respond to our customers' development challenges even better.

The Excellence Centre's service areas include packaging design, training, research and measurements involving product safety and various product development projects. In addition, we are conducting packaging simulations and wide-scale tests on the properties of packaging as well as efficiency analyses on packaging conversion.

As part of the development work, we are expanding our collaboration with research organisations and other companies.



We aim for big scale in innovations, to give them global significance.

CASE

The smart future of production

Metsä Board's Kyro mill takes advantage of artificial intelligence in the quality management of folding boxboard.

"The biggest benefits are improving efficiency and accuracy of production process control. Production waste will decrease, product quality consistency will further improve and grade changes will be quicker," says **Ari Kiviranta**, Senior Vice President of Development at Metsä Board. "The artificial intelligence also gives our operators the chance to focus on comprehensive management and operational development."

The AI software combines various process parameters, and uses statistical models, which improves the predictability of the folding boxboard's quality values and enables the real-time adjustment of process parameters.

Fresh fibre paperboard as part of the CIRCULAR ECONOMY

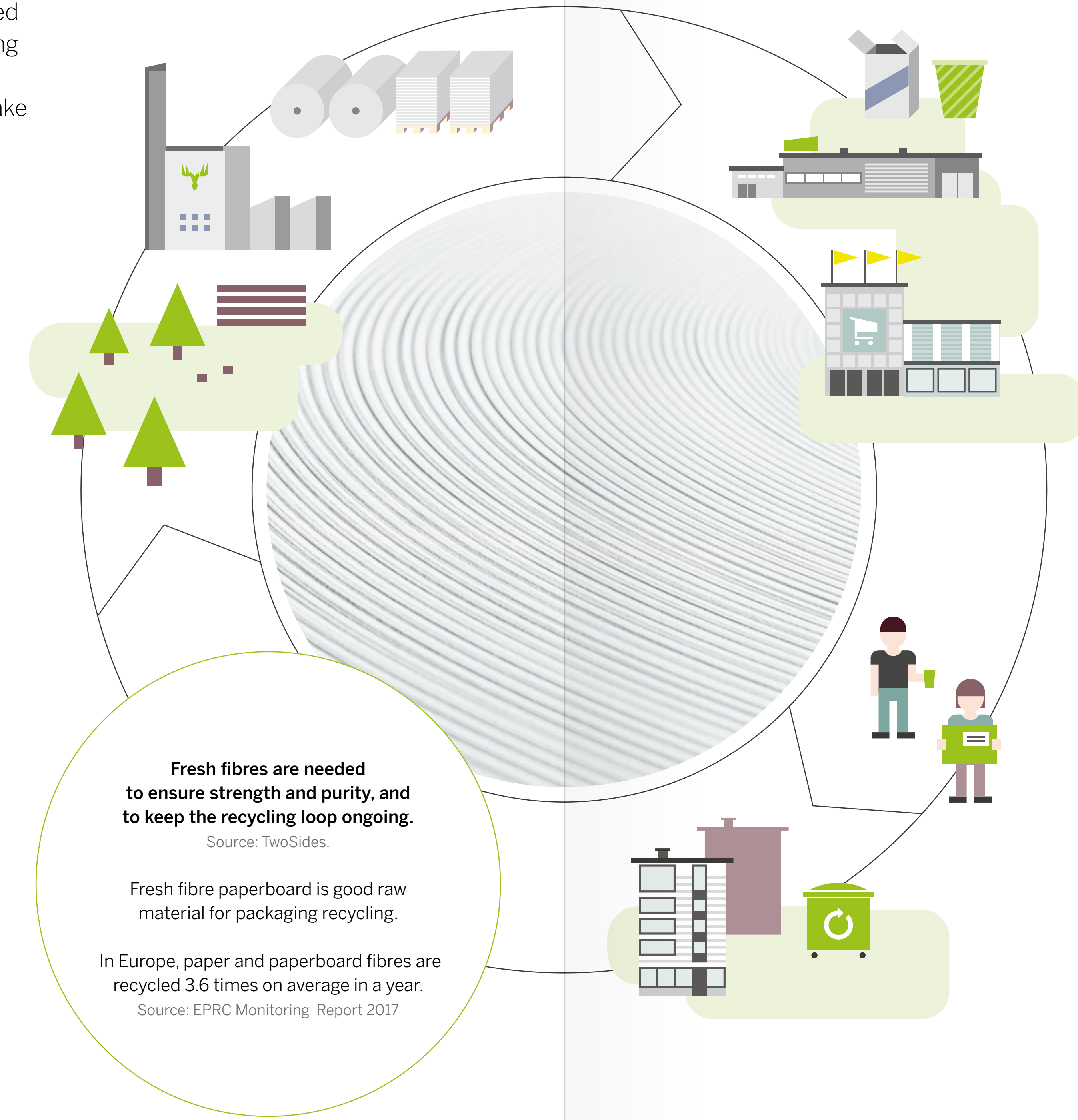
Consumption will continue to grow, and solutions provided by circular economy will play a significant role in mitigating climate change, now and in the future. High-quality and strong fresh fibre is an important raw material to help make packaging lightweight, safe and durable. Fresh fibre also provides a good starting point for packaging recycling. A continuous inflow of fresh fibre is needed to keep the recycling loop ongoing.

SUSTAINABLE WOOD RAW MATERIAL

- Fibre raw material from sustainably managed forests where yearly forest growth exceeds annual drain.
- 100% traceability of fresh fibres which are naturally pure and do not contain harmful substances.
- High share of certified wood: PEFC ™ or FSC® Chain of Custody ensuring sourcing from certified or controlled forests.
- Resource efficient pulp production: BCTMP uses wood raw material efficiently.

PAPERBOARD IS WIDELY RECYCLED

- Paper and board account for almost 65% of recycled packaging material worldwide. Source: Smithers Information Ltd.
- Recycling rates for paper and board significantly higher than for plastic packaging (EU-28: paper & cardboard packaging 85%, plastic packaging 42% in 2017). Source: Eurostat
- 82% of the litter collected on European beaches is plastic, while only 2% is paper or paperboard. Source: European Environment Agency
- Paperboard packaging degrades within months but plastics takes decades or even hundreds of years. Source: ProCarton
- In the EU, by the end of 2023 mandatory separate collection of biowaste. Compostable packaging can be collected within biowaste. Source: Directive on Waste by European Parliament and the Council of the EU



Fresh fibres are needed to ensure strength and purity, and to keep the recycling loop ongoing.
Source: TwoSides.

Fresh fibre paperboard is good raw material for packaging recycling.

In Europe, paper and paperboard fibres are recycled 3.6 times on average in a year.
Source: EPRC Monitoring Report 2017

GROWING PACKAGING CONSUMPTION NEEDS MORE SUSTAINABLE SOLUTIONS

- Packaging is needed to protect the product and reduce wastage.
    - Packaging accounts for only a few percent of the environmental impact during a food product's entire life cycle. Source: The Finnish Packaging Association

MEGATRENDS DRIVE GROWING PACKAGING CONSUMPTION

- In 2019, the total packaging market value was around USD 900 billion.
    - Share of paperboard is 36% and the share of plastic is 34%. Source: Smithers Information Ltd
- The estimated annual growth rate for the total packaging market is 3%. Source: Smithers Information Ltd

CONSUMER PREFERENCES DRIVE USE OF MORE SUSTAINABLE MATERIALS

- 52% of European consumers have switched a brand or product because of environmental concerns about how it is packed. Source: ProCarton
- Four out of five European consumers would rather choose cartonboard packaging over plastic. Source: ProCarton
- 94% of European consumers think industry and retailers should try to reduce plastic packaging. Source: Eurobarometer

INCREASING PLASTIC REGULATION PROVIDES BIG POTENTIAL TO PAPERBOARD

- The SUP Directive will, depending on the product, either ban or ambitiously and sustainably reduce the use of single use plastics in the EU starting from mid 2021. Source: SUP Directive by the European Parliament and the Council of the EU

SUSTAINABILITY
targets guide our work

We want to be a forerunner in sustainability. We focus on business ethics and well-being in our business, sustainable forest management, climate change mitigation and smart use resources, as well as sustainable products and supply chain.

Sustainability is part of Metsä Board's day-to-day operations and management. Metsä Board's Board of Directors approves the long-term strategy and sustainability targets, which are based on Metsä Group's sustainability goals.

Metsä Board's CEO is responsible along with the Corporate Management Team, for implementing the company's strategy and sustainability targets in accordance with the decisions and instructions of the Board of Directors.

The targets are based on a comprehensive materiality analysis of corporate responsibility, completed by Metsä Group in 2018. The impact of our operations on society and the environment, as well as the stakeholder perspective, were taken into account.

Our ambitious 2030 sustainability targets, published in August 2019, focus on four themes: responsible business culture and safety, sustainable forest management, climate and environment, and sustainable products and supply chain.

The new targets support the UN Sustainable Development Goals (SDGs) and demonstrate Metsä Board's commitment to sustainability in its own operations as well as in the supply chain. Combating global warming is at the core of the targets: Metsä Board aims to achieve fossil free mills by 2030 with zero fossil CO_2 emissions. This means that by 2030, our mills will not use any fossil fuels nor purchase any fossil-based energy. In addition, Metsä Board searches alternatives to fossil-oil based raw materials with the target that all raw materials will be fossil free by 2030. See pages 20–21 for more information on all of our sustainability targets.

SCIENCE BASED TARGETS

Metsä Board's targets for reducing greenhouse gas emissions are endorsed by the Science Based Targets (SBTi) initiative. The targets meet the requirements of the most ambitious objective of the Paris Agreement, which is to limit global warming increase to 1.5 degrees. With these targets, Metsä Board is committed to reducing its direct and indirect greenhouse gas emissions (Scope 1 and 2) by 100% by 2030 compared to 2016 levels. Metsä Board's reduction targets for the company's value chain emissions (Scope 3) also meet SBTi's most stringent criteria and are in line with current best practices. The company aims to have 70% of its non-fibre suppliers and downstream transportation suppliers measured by spend set themselves targets according to SBTi by 2024.

MANAGEMENT OF CLIMATE-RELATED RISKS

Metsä Board carefully assesses climate-related risks and opportunities that may affect the implementation of the company's strategy; and its ability to achieve long and short-term goals. The assessment of climate-related risks includes existing and emerging regulation, technological requirements, market situation, supply chain, reputation risks and physical risks such as temperature changes and water availability. Metsä Board regularly assesses and monitors the risk environment and its changes. Identified risks and the means to control them are reported to the Board of Directors at least twice a year.

Metsä Board is preparing for a more comprehensive climate reporting to meet the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD). Currently, our climate-related risks and opportunities are explained in the Report of the Board of Directors (pages 44–47).

EXTERNAL RECOGNITION AND COMMITMENTS

Metsä Board is included in several external assessments that evaluate the company's performance in the context of sustainability and corporate social responsibility. The company is also committed to the UN Global Compact and the UN CEO's Water Mandate initiative.

In 2019, Metsä Board was acknowledged in the CDP's Climate A list for actions in climate change mitigation for the fourth time. Furthermore, we scored A- both in the CDP's Water and Forest programmes and in

Supplier Engagement Rating. These demonstrate sustainable use of water and forests and our actions in managing fossil carbon dioxide emissions and in engaging supply chain to mitigate climate change. CDP is a non-profit organisation offering a global disclosure platform regarding environmental information.

Metsä Board is also in the top 1% of companies assessed by EcoVadis in the manufacture of corrugated paper and paperboard industry. We achieved the highest recognition level 'Gold' for the third consecutive time. Metsä Board also scored high in other ratings related to environmental assessments by, among others, MSCI, ISS ESG, Sustainalytics and Vigeo.

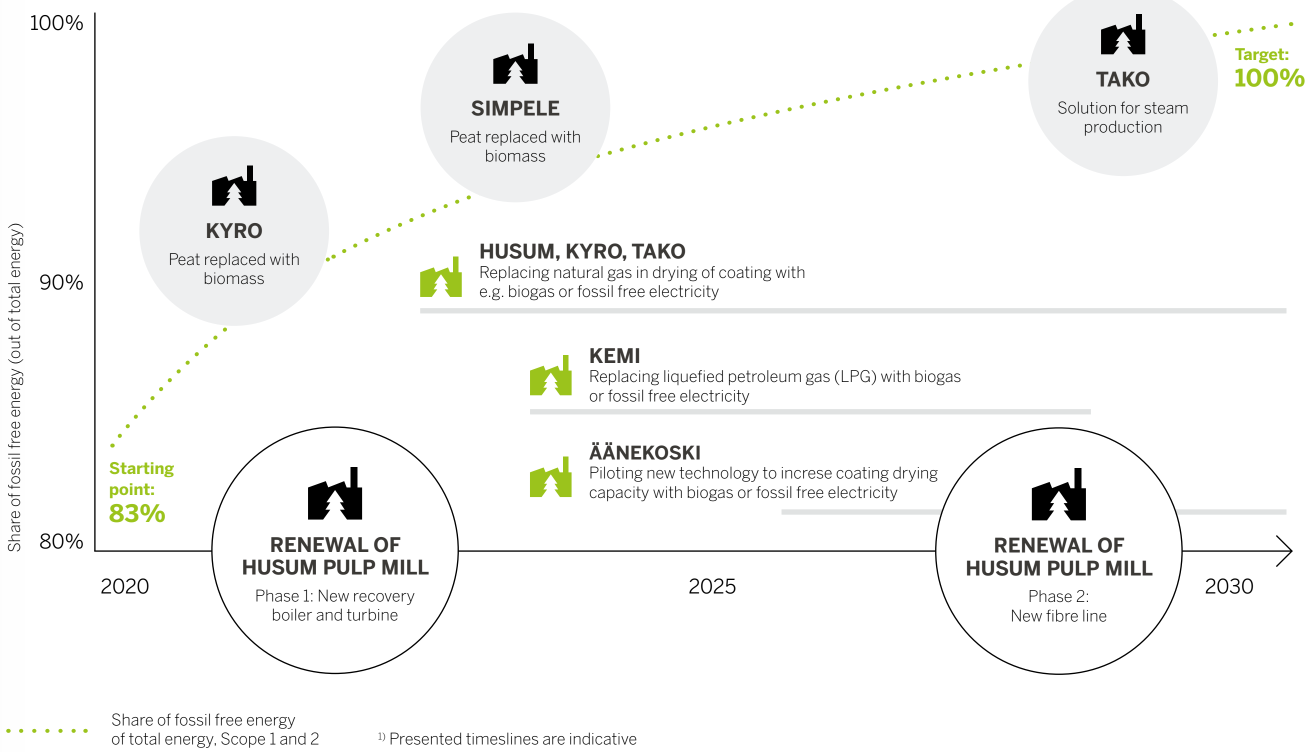
SUSTAINABLE FINANCE AT METSÄ BOARD

Metsä Board can utilise Metsä Group's Green Finance Framework which links sustainable development and climate change mitigation to Metsä Board's future financing. The framework is based on environmentally sustainable investments, such as targets to increase the share of renewable energy and to improve resource and energy efficiency.

In 2019, Metsä Board signed a revolving credit facility (RCF) that is linked to sustainability targets such as lowering specific water consumption and energy consumption.

ROADMAP TO FOSSIL FREE MILLS 2020–2030 [1)]

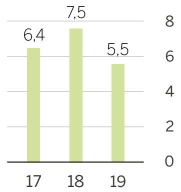
Planned key investments subject to the final investment decisions



METSÄ BOARD'S SUSTAINABILITY TARGETS FOR 2030 AND PERFORMANCE IN 2019

Our sustainability themes and targets are aligned with reaching the Sustainable Development Goals (SDGs) set by the United Nations. From a total of 17 SDGs, we focus especially on seven goals to which we contribute the most through our operations.

WELL-BEING

SDG	Target	Performance in 2019	Comment
8 DECENT WORK AND ECONOMIC GROWTH	**Responsible corporate culture** Coverage of Code of Conduct e-learning, %	97%	Our Code of Conduct was revised in 2019. Associated training consisted of e-learning and classroom sessions. In 2020, Metsä Board will introduce an ethics barometer to further develop business ethics.
	Accident free work environment Lost Time Injury Frequency Rate per 1 million hours worked (LTA1)		All our mills have OHSAS 18001 certificates and the mills follow 5S quality system to increase productivity, well-being and safety at work. In 2020, we will concentrate on introduction of company-wide safety processes and ISO 45001 certification of the mills.

FOREST

SDG	Target	Performance in 2019	Comment
13 CLIMATE ACTION	**Certified wood fibre** Share of certified fibre >90%	76%	All the wood we use is traceable and comes from sustainably managed certified or controlled forests. We constantly aim to increase the share of certified wood by promoting forest certifications and by focusing our wood purchases on certified wood. Globally the share of certified forests is only approx. 10%.
15 LIFE ON LAND	**Increasing the amount of carbon stored in forests and products**	This belongs to Metsä Group level sustainability targets. Read more in Metsä Group Sustainability Report 2019.	Sustainable forest management supports storing of carbon in the forests. Metsä Group also aims to increase the amount of carbon stored in products with a long lifespan e.g. in wooden construction materials.
	Safeguarding biodiversity	This belongs to Metsä Group level sustainability targets. Read more in Metsä Group Sustainability Report 2019.	Decayed wood is a key habitat for many species. Metsä Group encourages forest owners to leave biodiversity stumps and retention trees in their forest sites. Leaving retention trees is also required by the forest certification schemes.

CLIMATE AND ENVIRONMENT

SDG	Target	Performance in 2019	Comment
6 CLEAN WATER AND SANITATION	**Fossil free mills** Share of fossil free energy 100% 0 t CO2 (Scope 1)	82%	83% of our total energy consumption (Scope 1 + 2) was fossil free in 2019. A major share of this is produced from our side streams by utilising black liquor, bark and forest residuals. Planned future key actions are specified in table on page 19.
7 AFFORDABLE AND CLEAN ENERGY	**Fossil free purchased energy** Share of fossil free energy 100% 0 t CO2 (Scope 2)	85%	
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	**Resource efficient production** Utilisation of side-streams 100%	99%	We circulate materials in our processes and provide ash for fertilizers. If side-streams cannot be utilised as materials, they are used for producing energy to avoid landfill waste.
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	Process water use per product tonne -30% vs. 2018	-11%	We have mill-specific action plans to reduce process water consumption e.g. by improving recycling of process water. The disc-filter investment in Husum enabled water savings of 11.5 million m³ in 2019.
13 CLIMATE ACTION	Energy efficiency improvement at least +10%	-0.5%	We invest in more energy-efficient technology – for example renewal of the heat recovery system of paperboard machine 1 in Husum saves steam 18,000 MWH annually. Also reduction of water use improves energy efficiency. Water savings improve energy-efficiency, because we need less energy to heat the process water.

SUSTAINABLE CHOICES

SDG	Target	Performance in 2019	Comment
8 DECENT WORK AND ECONOMIC GROWTH	**Fossil free raw materials** Share of fossil free raw materials 100%	99%	Our main raw material is wood, which is a renewable raw material originating from sustainably managed forests. We have defined our fossil oil-based raw materials and try to find fossil free alternatives.
12 RESPONSIBLE CONSUMPTION AND PRODUCTION 13 CLIMATE ACTION	**Sustainable supply chain** Sustainable suppliers 100% of total purchasing (in euros) Traceability of raw materials 100% of total purchasing (in euros)	Commitment to Supplier Code of Conduct 95% Compliance analysis conducted 82% Coverage of sustainability questionnaire 58% Traceability of raw materials 93%	The wood we use is 100% traceable. We will further improve the traceability of chemicals and other raw materials e.g. by asking our suppliers to disclose information on their management systems and the manufacturing locations of our raw materials in our product safety questionnaires.

Our starting point is ETHICAL BUSINESS

Our daily work is guided by ethical principles that apply to all our personnel. We expect the same high ethics from our suppliers and partners as well.

As part of Husum mill's 100-year-anniversary activities a family day was organized at the mill in May. During the day, the families of the employees were able to learn how pulp and lightweight paperboards are produced, what they are used for and how they are shipped from the mill's own port to the world.

RESPONSIBLE AND ETHICAL CORPORATE CULTURE

Metsä Board, as part of Metsä Group, is committed to respecting the human rights outlined in the UN's Universal Declaration of Human Rights and continuously develops its operations in alignment with the UN Guiding Principles for Business and Human Rights. The group is committed to the UN's Global Compact initiative and supports its ten principles regarding human rights, labour, environment and anti-corruption, and follows the legal reporting requirements.

We require our personnel to comply with applicable laws, act honestly and make ethically sound decisions. Our work is guided by Metsä Group's common ethical principles (Code of Conduct). The ethical principles are supplemented by policies on competition law, environmental issues, equal opportunities, human resources and personal data protection.

We also require the same level of ethical business practice from our suppliers. These practices and principles are documented by suppliers' ethical guidelines.

In our new customer relationships, we follow a 'Know Your Business Partner' process to reduce the risk of illegal activity and improve our understanding of who we are working with.

RENEWED ETHICAL PRINCIPLES

In May 2019, Metsä Group launched a more comprehensive Code of Conduct. The purpose of the renewal and the related classroom and e-learning training was to increase ethical awareness among employees and to further develop leadership in which business ethics is taken into account in daily decision-making.

The share of employees who carried out the e-learning training related to the renewed Code of Conduct in 2019 was 97 per cent. The long-term goal is 100 per cent. In addition, we implemented deeper classroom training which 532 people attended.

In 2020 and beyond, Metsä Board will introduce an ethical barometer to increase understanding of how ethics is seen and to identify potential risks associated with business ethics. Achieving a high barometer score is part of the Metsä Board's 2030 sustainability goals.

COMPLIANCE AND ETHICS CHANNEL

Metsä Board has a Compliance and Ethics Channel where employees and external stakeholders can record events anonymously. In 2019, a total of eight cases were brought to the attention of Metsä Board. These related to e.g. suspected misconduct and other work-related matters. None of the cases concerned the use of child labour or corruption.

ACTIVE STAKEHOLDER COOPERATION

Metsä Board's production units play an active role in their local communities. Metsä Board is a major employer in the localities where we have our mills, and we are also in dialogue with other local people. For example, local people are able to visit Metsä Board's mills during the Open Doors days, which are organised at the mill sites.

The focus of our social engagement is on the promotion of the well-being of children and young people. We visit junior high schools to share our expertise about the opportunities within the forest industry and offer summer jobs and thesis work and trainee programmes to students.

We support the Finnish Olympic Committee Sports Academy's youth campaign. In addition, we participate in family sport events organised in our mill locations and invite young people from local sports academies to mill visits.

CASE

Sustainability education in partnership with schools

Since 2016, Metsä Board has participated in the Paperboard Packaging Council's 'Trees into Cartons, Cartons into Trees' (TICCIT) programme in the US, Norwalk, Connecticut where school children are educated in sustainability and the raw material of paper and paperboard packaging, that is, wood. TICCIT is held every April on Earth Day. In 2019, Metsä Board donated nearly 200 saplings to students with instructions on how to plant them.

Everyone has the right to a **SAFE WORKPLACE**

For us, safety is a professional skill and an integral part of every task. We all have the right to an accident-free workplace. We strive to create a good working environment that is safe and inspiring. All our mills have certified health and safety management systems. We expect our partners to be as committed to promoting occupational safety as we are.

Occupational safety at Metsä Board crystallises skills, responsibility and caring and is part of daily management. At the mills, we always begin morning meetings with safety issues. Our long-term safety objective is zero accidents.

The development of occupational safety requires uncompromising safety thinking throughout the working community. We record and make use of information from safety discussions and rounds. In addition to safety findings, reports of incidents and accidents are recorded. Risk assessments are also carried out and safety training organised.

All of our mills have OHSAS 18001 certification and comply with 5S to improve productivity, well-being and occupational safety. In 2020, we will focus on the introduction of group-wide safety processes and the ISO 45001 certification of the mills.

When safety is seen as a normal part of everyday work, and employees ensure not only their own safety but that of their colleagues, too, good results are achieved. A professional anticipates and identifies risks in his or her own work and intervenes when they see someone performing unsafe work. Good occupational safety has a significant impact on everyone's well-being at work, on the performance of companies, and on the quality of their activities. Occupational safety is also as an indication of overall quality to our customers.

CASE

Towards a world-class level

At Metsä Board, the 5S based on Lean thinking is the cornerstone of a safe and efficient supply chain. Clean mills where well-labelled equipment and tools are organised and easily accessible create conditions for a high level of safety and production. Cleanliness and order have a major impact on everyday well-being at work.

"At Metsä Board, 5S is used in all mills as part of day-to-day work and operation. The activities are monitored by production line and each mill has a system to systematically monitor 5S," says **Ilkka Karvonen**, Safety Manager at Metsä Board. "It has been a pleasure to notice the development of a safety culture and competence throughout the organisation. The work continues. In 2020, we will focus, among other things, on planning the fall protection of work done at heights and launching internal 5S trainers' training. We also demand that our partners draw up a risk assessment and a safety plan for their own work, which we will check before work begins."

At Metsä Board Kemi board mill, the 5S is almost 100% in use. The implementation of 5S is systematically monitored at all our mills.

QUALITY LEADERSHIP
and clear targets

We want to be a responsible employer for our employees. Professional development, good managerial work, equal treatment and remuneration for good performance are important to us.

Our operation is based on continuous improvement, which creates opportunities for improving skills and finding new strengths. Leadership with clear objectives, personal development plans and high-quality managerial work support success at work.

As an employer, we are guided by a number of policies and in 2019 reformed our ethical principles, which we require every employee to study and comply with.

We support development through diverse vocational training and specialist, managerial and leadership training. Regular development discussions support continuous development. High-quality managerial work lays the foundation for well-being at work, safety and the development of performance. A good example of this is the development of job induction at the Kyro, Tako and Äänekoski mills in Finland in 2019. The aim is to ensure the maintenance and transfer of quiet information – or so-called profound skills – to future experts, systematically and in anticipation of needs. At the same time, we want to standardise the level of profound competence by means of content and quality as well as comprehensive and consistent documentation methods.

Metsä Board has a remuneration system in place that supports the implementation of the strategy and operational objectives and motivates the achievement of the objectives set. We encourage action in the interests of values and the company: responsible profitability, reliability, renewal and cooperation.

GOOD TO WORK

The promotion and maintenance of well-being at work and work ability are based on proactive action. We have a model that includes early support, assessment of work ability and a personal work ability plan. Our occupational welfare services work in cooperation with management, human resources management and managers.

We encourage everyone to anticipate and assess their own health. A proactive and performance-based approach has reduced sickness absences, and it is our objective is to keep the number of sick absences below 3%.

Through regular personnel surveys and their results we recognise development areas in our operation. Each team will prepare related development proposals.

PERSONNEL KEY FIGURES

	2019	2018	2017
Number of employees, FTE [1] [3]	2,351	2,352	2,351
Share of permanent employees, %	92.5	93.0	93.7
Share of full-time employees, %	97.2	97.1	97.3
Average age, years	46.2	46.4	46.5
Average years served, years	18.7	19.0	19.2
Voluntary employee turnover rate, %	3.0	2.1	2.1
Average training hours per employee	17.6	17.5 [3]	16.9 [3]
Share of women within all employees %	21.1	21.5	21.2
Share of women in manager positions, % [2]	21.0	20.1	22.3
Share of women in the Corporate Management Team, %	33.3	33.3	33.3
Share of women in the Board of Directors, %	22.2	22.2	22.2
Sickness absences, % of theoretical working hours [3]	4.0	3.5	3.9
Total Recordable Injury Frequency (TRIF) per million hours worked	10.2	12.6	15.1
Lost-time accident frequency (LTA1) per million hours worked [3]	5.5	7.5	6.4
Number of lost time accidents, external service providers	13	8	6
Accident severity rate	18.6	13.8	-
Accident severity, external service providers	10.3	7.8	-

1) Full-time equivalent FTE on 31 Dec.
2) Share of women within all managers
3) Subsidiary Hangö Stevedoring is included

CASE

A career which began as a summer job and led to becoming the Director of the Technology Centre

Like many of her colleagues at Metsä Board, **Heli Kuorikoski**'s career began as a summer job. Her first job was at the Tako board mill in 1997, before moving from customer service and technical marketing to Äänekoski and then to Connecticut, USA. Heli's current work in Finland brings new and interesting projects in the research and development of packaging materials.

"At Metsä Board, we can pursue different careers. I have had the opportunity of a versatile and international career from the beginning," Heli Korikoski says. "As a young engineer, I participated in many projects, such as the investment in the production line at the Äänekoski board mill back in 2002. I appreciate the work experience I have gained. Recently, I have been able to share my technical expertise by lecturing at international conferences."

The assignment to the US sales office that began in 2017 was a great opportunity to deepen customer skills. In 2019, Heli returned to Finland to take up the position of Director of the Technology Centre at Äänekoski. "At Metsä Board, competence development is well supported. I enjoy bringing my expertise to different working communities."

Sustainability across the SUPPLY CHAIN

The main raw material of our products is renewable wood from sustainably managed northern forests. Metsä Group's internal value chain helps us to control the origin and quality of the wood and pulp we use. Our goal is to further improve also the traceability of other raw materials.

INTERNAL VALUE CHAIN SECURES THE QUALITY

Our wood supply is managed by Metsä Forest, which is also part of Metsä Group. The pulp used for paperboard production is manufactured in Metsä Board's own pulp mills or in the pulp mills of our associated company Metsä Fibre. This provides Metsä Board with a secure pulp supply, high quality consistency, and an unbroken product safety chain through full control of chemicals used in production.

The total wood use of Metsä Board in 2019, including the wood used for the pulps purchased from Metsä Fibre, was 8.2 million cubic metres (2018: 8.5 million). Of the total wood used, 76% came from Finland and Sweden and the rest from Russia, the Baltic countries, Germany and Poland.

SUSTAINABLE WOOD SUPPLY

All of the wood raw material Metsä Board uses comes from sustainably managed northern forests and is 100% traceable by PEFC™ or FSC® Chain of Custody systems. Of this wood, 76% (2018: 79%) originated from certified forests in 2019, and 24% (21%) came from controlled forest sources.

Metsä Group's internal auditing procedures and wood origin tracing system control the operations of wood suppliers and harvesting contractors. The auditing covers a wide range of sustainability issues, from the preservation of valuable natural features and the legality of the origin of the wood to social issues, such as preserving the rights of indigenous people and safety at work. This secures wood with a legal and sustainable origin, and enables Metsä Board to define the share of certified wood used in its production.

Digital technology facilitates the verification of wood origin. Modern information systems and digital maps are used during wood harvesting and transportation, enabling 100% traceability from the forest to the mill.

The preservation of valuable natural features during forestry operations are evaluated in internal audits as well as in audits by forestry authorities, external third-party management system audits, and forest certification audits.

BIODIVERSITY

Preserving biodiversity is part of sustainable forest management. For example, forest certifications safeguard that retention trees are always left at felling sites in the regeneration fellings. These retention trees add diversity in tree ages and generate decaying wood, which is important to many species such as birds, insects and fungi.

To further increase the amount of decaying wood and trees with holes, Metsä Group encourages forest owners to leave high biodiversity stumps at the felling sites. Thanks to this voluntary practice, already 80% of the forest owners have chosen to have biodiversity stumps in their forests.

Read more about safeguarding biodiversity in Metsä Group's Sustainability Report 2019.

METSÄ BOARD'S WOOD SUPPLY AREAS IN 2019

%

Finland	50
Sweden	26
Baltic countries, Germany and Poland	13
Russia	11

METSÄ BOARD'S COST SPLIT IN 2019

EUR 1,7 BILLION, %

Wood	28
Logistics	16
Chemicals	16
Energy	14
Personnel	12
Other fixed	14

SUSTAINABLE SUPPLY CHAIN

The sustainability of Metsä Board's suppliers is ensured by a group-wide process in Metsä Group's centralised purchasing function. Metsä Board's suppliers include wood and fibre suppliers within Metsä Group as well as external suppliers of chemical, machinery, equipment and services.

To monitor and develop the sustainability of our supply chain, we have set three key performance indicators: Supplier Code of Conduct coverage, compliance analysis coverage and sustainability evaluation coverage.

By the end of 2019, suppliers covering 95% (2018: 95%) of Metsä Board's total purchasing were committed to Metsä Group's Supplier Code of Conduct or had a corresponding Code of Conduct themselves. In addition to the Supplier Code of Conduct, further sustainability requirements are often agreed within contracts. By the end of the year, compliance analysis had been conducted with suppliers representing 82% of total purchasing. The sustainability evaluation, which includes a supplier self-assessment questionnaire and development actions if needed, covered 58% of suppliers, measured by spend.

In 2019, 14 (27) on-site audits were conducted at Metsä Board's suppliers by Metsä Group and 15 (15) by an external party. These audits included questions pertaining to environment and social responsibility.

TRACEABILITY OF RAW MATERIALS

Metsä Board tracks the origin of all the wood used through PEFC™ or FSC® Chain of Custody systems. In line with our sustainability targets, we will continue to improve the traceability of chemicals, other raw materials and packaging material of our products. Metsä Board conducts annual product safety surveys for all raw material suppliers in order to increase the traceability of raw materials.

Our goal is to know the origin of all our raw materials and packaging materials by 2030. In our product safety surveys, we are already asking our suppliers to indicate where our raw materials are produced. In 2019, the origin was known of 93% of the total purchases of raw materials and packaging materials.

LOGISTICS

Metsä Board uses local suppliers when possible. In 2019, 76% of our purchases came from Finland and Sweden, where our mills are located.

Adverse impacts of logistics are mitigated with careful route planning, minimising transported distances and developing more efficient operations and guidelines. This reduces both costs and emissions. For example, the sea and rail deliveries are prioritised instead of trucks where possible.

BREAKDOWN OF LOGISTIC MODES* IN 2019

%

Sea	38
Road	36
Warehousing and handling	19
Rail	7

* Share of logistics costs

Working towards
FOSSIL FREE MILLS

We systematically manage the environmental impacts of our production units by detailed plans, targets and measuring progress against our sustainability targets. We work to mitigate global warming and use raw materials, water and energy responsibly and resource-wisely.

Our operations are guided by our Environmental Policy and its principles, which include sustainable forest management, environmental responsibility, continuous improvement of environmental performance, resource efficiency and the environmental and social responsibility of our suppliers.

All of our mills comply with the limits of mill-specific environmental and water permits set by the local environmental authorities. The permits cover factors such as discharges to water, emissions to air, noise, and accidental releases. We conduct regular environmental risk analyses and audits at our production units. All of our production units have certified management systems in place regarding e.g. quality, environment and energy. For more detailed information see page 32.

MITIGATING CLIMATE CHANGE

Metsä Board has reduced its direct fossil CO2 emissions (Scope 1 and Scope 2) by 50% per product tonne since 2009. Lower fossil carbon dioxide emissions are a result of long-term actions and investments that have improved efficiency in the use of process water and energy, and increased the share of fossil free energy.

Our target is that by the year 2030 our mills will not use any fossil fuels in our production units nor purchase any fossil based energy to be used in our production.

In 2019, the share of fossil free energy of Metsä Board's total energy consumption was 83% (2018: 82%). Most of this consisted of renewable bioenergy produced from wood-based side streams from our processes (black liquor, bark and logging residuals).

During the year, our energy efficiency declined by 0.5% compared to 2018. This resulted mainly from production curtailment at Kemi mill's white kraftliner production during the second quarter. Compared to 2009, our energy efficiency improved by 12%. Our target of fossil free mills requires the further improvement of energy efficiency and mill-specific actions will be taken to decrease the share of fossil fuels. The renewal of Husum mill has a major role in reaching our goal of fossil free mills. Read more about this and other key actions on page 19.

REDUCING THE USE OF WATER

Metsä Board's mills are located in the Nordic countries, which belong to the world's water-richest regions. Still, we seek new ways to minimise the use of fresh water in the processes, for instance by recycling our process waters effectively. This minimises our wastewater discharges and saves energy, therefore reducing impact on the climate.

In 2019, Metsä Board's freshwater intake totalled 101 million cubic metres. All process water was taken from surface waters such as rivers and lakes. After use, process water is cleaned thoroughly before it is returned to nearby waterways. About 99% of the water we use is returned to the waterways.

Our target is to reduce the process water use per product tonne by 30% by 2030 compared to the 2018 level. In 2019, the reduction was 11%, and, compared to 2010 the reduction was 29%.

To reach the target, we have set mill-specific targets. Husum mill has the largest potential for improvement, which is included in the planned renewal of the pulp mill.

NOTHING IS WASTED

In our operations, the wood raw material is 100% utilised. The most valuable part of wood, the logs, are utilised in Metsä Group's mechanical wood industry, with the thinner parts of wood being the main raw material for the pulp and board mills.

To prevent waste generation in pulp and board manufacturing, Metsä Board enhances recovery processes, seeks new ways to reuse residuals, and uses organic waste to generate energy. Our 2030 target is that all production side streams will be utilised 100% with nothing sent to landfill.

In 2019, 99% of side streams were utilised. Side streams consist of production waste and by-products such as ash used for fertilisers. Out of production waste 46% were reused as materials and 53% was incinerated to produce energy. The remaining 1%, was sent to landfill or treated as hazardous waste.

TOTAL ENERGY CONSUMPTION IN 2019

11,7 TWH (AS PRIMARY ENERGY)

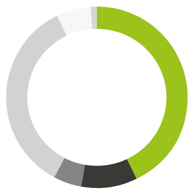
- Renewable energy, wood-based side streams 48
- Other renewable energy 1
- Nuclear power 34
- Fossil-based fuels.................... 17

Total energy consumption is expressed as primary fuel consumption. Primary energy of purchased electricity is calculated assuming following efficiency factors; for traditional combusted fuel fuels 40%, nuclear energy 33%, hydro, wind and solar energy 100 %. Purchased heat is calculated according to actual fuel consumption of the near-by energy plants.

TOTAL ENERGY SOURCED IN 2019

11.7 TWH (AS PRIMARY ENERGY)

- Fuels, renewable.....................43
- Fuels, non-renewable 10
- Purchased electricity, ... renewable.................................5
- Purchased electricity, non-renewable*......................35
- Purchased heat, renewable 6
- Purchased heat, non-renewable.......................... 1



* incl. carbon-neutral nuclear power

ELECTRICITY SOURCED IN 2019

2,4 TWH

- Own generation 20
- Purchased through PVO* shareholding................32
- Purchased electricity** 48

* Pohjolan Voima Oyj is a non-listed public limited liability company. It supplies electricity and heat for its shareholders at cost price. Metsä Board's shareholding in PVO is 3.2%.

** Approximately 13% of electricity generated by Metsä Fibre and 34% purchased externally

TOTAL FUEL CONSUMPTION IN 2019

5,6 TWH*

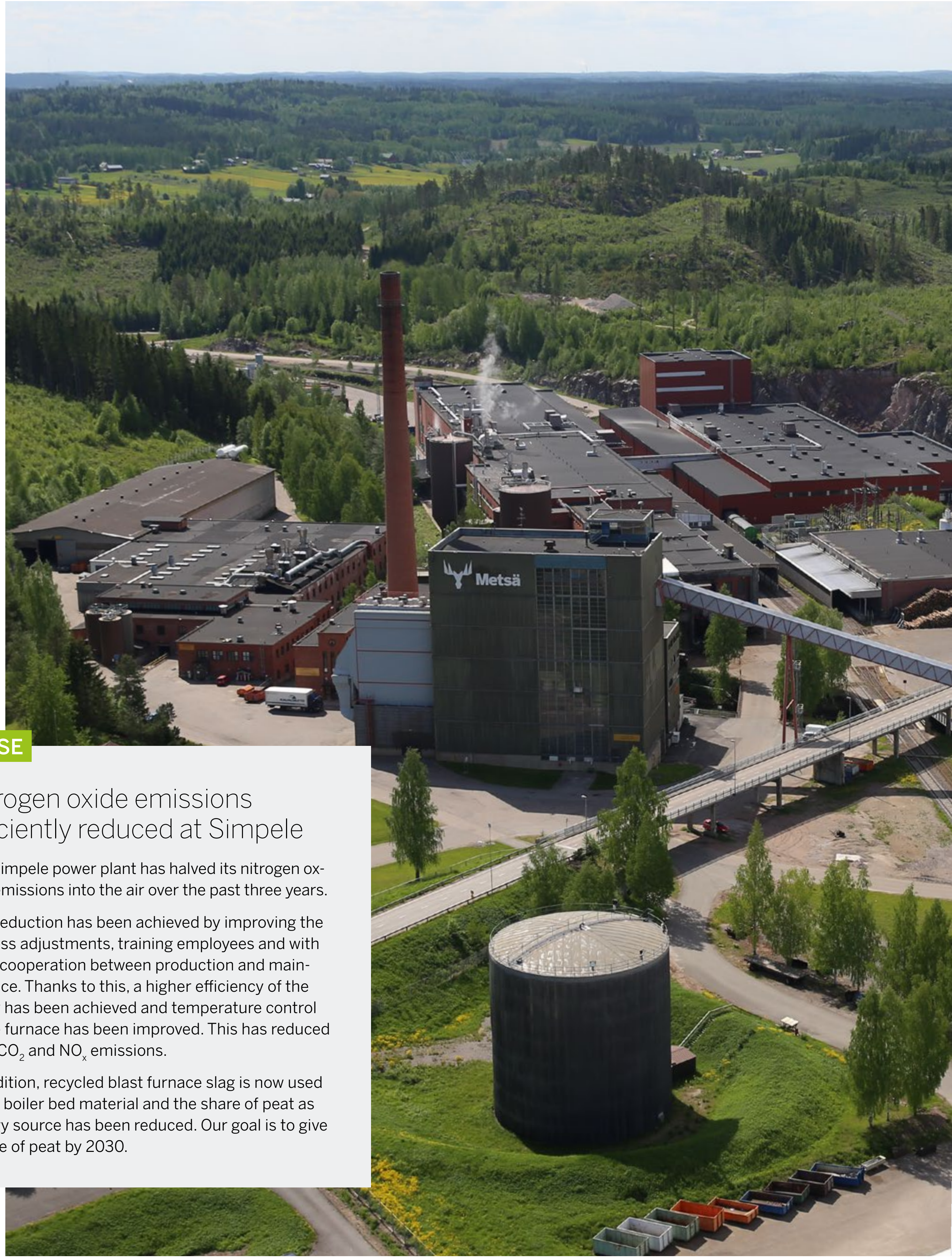
- Wood-based side streams .. 82
- Gas 12
- Peat 3
- Oil 3

* excluding purchased heat

MILL-SPECIFIC INFORMATION

Mills	Joutseno	Kaskinen	Kemi	Kyro	Simpele	Tako	Äänekoski	Husum	Others [4]	Total
COUNTRIES	FINLAND	FINLAND	FINLAND	FINLAND	FINLAND	FINLAND	FINLAND	SWEDEN		
PERSONNEL										
Number of employees, FTE [1]	58	81	119	151	273	209	193	672	595	**2,351**
Lost-time accident frequency (LTA1) [2]	0	7.1	5.9	7.5	6.3	5.7	6.2	3.5	-	**5.5**
Sickness absences, % [3]	3.2	3.3	4.2	3.4	4	5.2	3.9	4	-	**4**
Organisational functionality index	7.4	7.9	8.6	7.7	8.1	8.2	8.2	8.3	-	**8.2**
MANAGEMENT SYSTEMS										
ISO 9001	x	x	x	x	x	x	x	x		
ISO 14001	x	x	x	x	x	x	x	x		
ISO 50001	x	x	x	x	x	x	x	x		
OHSAS 18001	x	x	x	x	x	x	x	x		
ISO 22000	x	x	x	x	x	x	x	x		
FSSC 22000			x	x	x		x	x		
CHAIN OF CUSTODY										
PEFC™	x	x	x	x	x	x	x	x		
FSC®	x	x	x	x	x	x	x	x		
EMISSIONS TO AIR (T)										
CO_2 bio	0	163,992	0	0	135,774	0	0	1,515,413		**1,815,179**
CO_2 fossil	27,230	4,734	6,183	4,654	75,371	76,815	0	53,287		**248,274**
Sulphur as SO_2	0	14	0	0	67	0.04	0	252		**333**
Nitrogen oxides as NO_2	15	192	2.7	2.4	94	47	0	869		**1,221**
Particles	11	15	0	0	1	0	0	318		**345**
DISCHARGES TO WATER (T)										
AOX	0	0	0	0	0	0	0	60		**60**
COD	646	1,374	249	159	598	202	532	8,677		**12,437**
BOD	3.6	53	28	48	79	63	155	0		**429**
Total phosphorus	0.23	2.4	1.5	0.82	1.6	1.3	0.65	13.3		**22**
Total nitrogen	3.4	29	43	18	11	0.87	11	90		**206**
Total suspended solids	22	74	110	54	89	34	127	856		**1,366**
WATER USE (1,000 M^3)										
Water sourcing	6,657	11,693	8,578	4,378	19,175	4,715	3,906	41,865		**100,967**
Waste waterflow	576	3,949	7,060	3,201	5,149	2,814	3,321	33,256		**59,326**
WASTE (T)										
Utilised	3,701	31,083	5,041	15,476	54,970	4,351	12,549	29,579		**156,750**
Landfill	0	962	294	4	0	180	62	0		**1,502**
Hazardous	28	65	1	9	38	67	15	713		**936**

1) Full-time equivalent FTE on 31 December 2019
2) Lost-time accident frequency (LTA1) per million hours worked
3) % of theoretical working hours
4) includes sales and logistics personnel, administration and subsidiaries. Production, discharges and waste which are from Äänevoima's energy production sold to external use. Personnel figure Others is included in Metsä Board's total figures.
5) BOD at Husum mill has not been measured.



CASE

Nitrogen oxide emissions efficiently reduced at Simpele

The Simpele power plant has halved its nitrogen oxides emissions into the air over the past three years.

This reduction has been achieved by improving the process adjustments, training employees and with good cooperation between production and maintenance. Thanks to this, a higher efficiency of the boiler has been achieved and temperature control of the furnace has been improved. This has reduced both CO_2 and NO_x emissions.

In addition, recycled blast furnace slag is now used in the boiler bed material and the share of peat as energy source has been reduced. Our goal is to give up use of peat by 2030.

Supporting SUSTAINABLE CONSUMPTION

Our recyclable paperboard, made from renewable fresh fibre, is well suited to sustainable packaging. According to ProCarton, 75% of consumers in Europe say the environmental impact of a product's packaging affects their purchasing decision.

Metsä Board works for creating better packaging solutions with less environmental impact. Metsä Board's lightweight fresh fibre paperboards reduce CO_2 emissions throughout the value chain. As our paperboards are up to 30% lighter compared to competing materials such as solid bleached board or recycled paperboards, they consume less raw material, water and energy, reduce transport weight and produce less waste.

Consumers use daily approximately 150 million packages made of Metsä Board's folding boxboard. By reducing paperboard weight by 1%, we can achieve material savings equivalent to some 1.5 million packages per day, which could result into material savings of some 550 million packages in a year in end-uses such as cereals, chocolate, cosmetics and pharmaceuticals.

Our folding boxboards are developed for food, beautycare, healthcare and luxury packaging and graphics applications. In spring 2019, Metsä Board further lightweighted and optimised its folding boxboards with improvements to the high yield pulp.

Metsä Board's lightweight and strong white kraftliners are used in high quality corrugated packaging, for example, in shelf-ready packaging, displays, and point-of-sale solutions. They support the promotion and differentiation of product brands, including the growing online shopping sector where durability and lightness are key considerations.

RECYCLABLE PLASTIC-FREE ALTERNATIVES

Paperboard is made from renewable, biobased wood fibre and is highly recycled. For example, in Europe, 85 per cent of paperboard is collected for recycling, while the corresponding figure for plastic is 42 per cent (Eurostat). All Metsä Board's paperboards are recyclable depending on local recycling infrastructure.

Paperboards can reduce or replace the use of plastics in many packaging end uses and the application areas will widen as the properties of paperboards are further developed.

In autumn 2019, Metsä Board introduced a new eco-barrier paperboard that is both plastic-free and recyclable. The eco-barrier paperboard, MetsäBoard Prime FBB EB, provides an alternative to plastic in end uses requiring medium grease and moisture resistance, such as food service, fresh food, dry food and frozen food packaging. As the paperboard is plastic-free, it is recyclable in existing paper or paperboard recycling schemes. It contains no fluorochemicals nor optical brightening agents, making it safe for direct food contact.

One of Metsä Board's recently revised sustainability targets for 2030 is to use only fossil free raw materials. During 2019, Metsä Group defined which raw materials are currently fossil oil-based and calculated their share of all raw materials used in the finished products. In 2019, the share of fossil free raw materials was 99 % (2018: 99%) of volume (dry tonnes). Our main raw material fresh fibre covers 92% of all raw materials.

FRESH FIBRES AND RECYCLED FIBRES

In Europe, wood fibre is currently recycled an average of 3.6 times in a year (CEPI). To keep the fibre loop alive, a constant inflow of fresh fibres is needed: wood fibre cannot be recycled an unlimited number of times because the fibres become shorter and weaker with each cycle. A part of the fibre is also lost due to incomplete collecting or contamination.

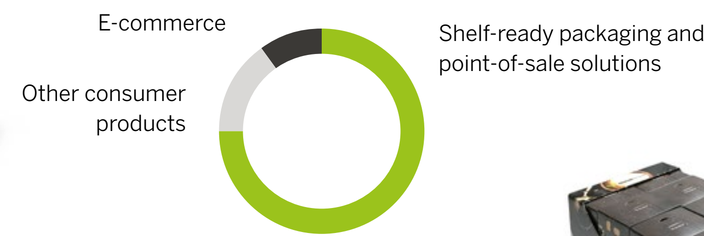
Fresh fibre paperboards provide good properties for packaging in which high quality printing and special effects are required. Because fresh fibres contain no unknown chemical substances, they are the safest fibre choice for food packaging. Recycled fibres are best suited to end uses in which premium quality or high hygiene is not the key criteria. Recycled fibres can release mineral oils and other harmful substances to the packed products, and therefore legislation and country-specific recommendations limit the use of recycled fibres in direct food contact, for example, in China, Italy and Switzerland.

END-USES OF METSÄ BOARD'S FOLDING BOXBOARDS

Source: Metsä Board estimates

END-USES OF METSÄ BOARD'S WHITE KRAFTLINERS

Source: Metsä Board estimates



CASE

Metsä Board participates in paperboard cup collection initiative in France

Metsä Board participates in paperboard cup collection initiative started in France in 2019. Metsä Board is one of the founding members of Alliance Gobelet Carton.

Alliance Gobelet Carton is an association of four paperboard cup producers and two paperboard producers. It aims to create a collection system to recycle paperboard cups and to bring together cup producers, paperboard suppliers, cup users and the recycling sector. Participants in the scheme have been issued with a collection box that can take up to 750 cups. The collection system has been piloted with selected fast food restaurants and vending machine companies.

"Paperboard cups can be collected after use, recycled and used as valuable raw material when producing new packaging products. This is what we intend to demonstrate through the pilot project and to create a model that can be widened to more extensive use", says **Laurence Sovran**, Sales Manager at Metsä Board.

PURE FRESH FIBRE PAPERBOARDS ARE A SAFE CHOICE

All Metsä Board's paperboards are made from renewable fresh fibre, which is naturally pure, traceable and recyclable. In 2019, about half of the folding boxboard supplied by Metsä Board was used for food and food service packaging where product safety is of utmost importance. Metsä Board paperboards do not alter the taste, smell, colour or composition of the food that is packaged or served in them.

Only safe and tested chemicals are used in our paperboard production. The properties and microbiological purity of paperboard are regularly tested and also sensory tested. All of our products are tested by external accredited laboratories in accordance with applicable legal requirements. All Metsä Board mills have ISO 22000 food safety management system in place. During 2018–2019, product safety practices at our mills were further developed. All of our paperboard mills producing paperboard, to be use in food industry, now apply the highest standard food safety system, the FSSC 22000 standard. These same standards are also used by the food industry to ensure product safety.

Metsä Board also works closely with suppliers of logistics services. We regularly audit logistics partners' warehouses to ensure that risks are managed throughout the logistics chain.

SUSTAINABLE PACKAGING DESIGN

Smart packaging design can have a significant impact on sustainability. Good packaging is the right size and functional, made from material most suited to the use, and protects the product from damage. The sustainability of packaging can be improved by optimising the use of materials, lightweighting, and minimising the use of glues and other additional chemicals. It is also important to secure the re-usability or recyclability of packaging, and its functionality in the logistics chain, in stores, and for consumer use.

Metsä Board has invested in structural and graphical packaging design expertise to support its customers with more sustainable packaging solutions. Our design teams work with brands globally to fully utilise the potential of our premium lightweight paperboards.

We encourage innovation in sustainable packaging design by organising global packaging design competitions. Through our Better with Less – Design Challenge competition, we seek new environmentally-friendly and functional packaging solutions for the world's most used and fastest-growing types of consumer packaging.

A CIRCULAR AND SUSTAINABLE ECONOMY

Metsä Board seeks solutions that meet the principles of the circular economy. In 2019, Metsä Board became, together with other members of the European Paper Industry Association (CEPI), a founding member of the 4evergreen Industry Consortium.

4evergreen creates connections between members of the fibre-based packaging value chain of converters, brand owners and retailers, and technology and material producer companies as well as waste sorters and collectors. The purpose is to increase awareness of the benefits of fibre-based packaging materials, advocate EU legislation that support the design of recyclable products and call for optimised collection systems and development of infrastructure for appropriate recycling systems.

CASE

The blue box – classical, lightweight and sustainable

The classical and famous blue package of Barilla pasta is made of Metsä Board's lightweight paperboard. Barilla's GRDQ (Group, Research, Development & Quality) Vice President of Global Packaging, **Michele Amigoni** tells that Metsä Board plays a significant role in providing technical innovations and developing lighter and more ecological packaging material.

"Our main principles in packaging are reducing the quantity of material, using recyclable materials, and also using materials from responsibly managed forests", Amigoni says. Currently, over 99% of Barilla's packaging is recyclable, and 100% of the paper and paperboard used in the packaging is certified. At the same time, Barilla wants to tackle the challenges that the world's food systems are facing: it is crucial to protect the food with a proper package and minimise food loss that way."

Barilla is very aware of consumers' changing attitudes towards plastic. Barilla also uses plastic. However, it is essential to identify the uses where plastic is not needed.

CASE

New innovative design for a praline box

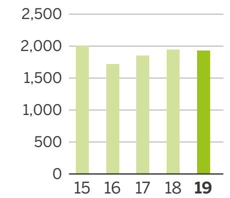
By working in partnership Metsä Board and Kultasuklaa created a new packaging design that is eye-catching, protects the contents and helps to reduce plastic. The new design and use of the eco-barrier board has achieved our objective of reducing the amount of raw materials and plastic whilst protecting the delicate nature of the pralines inside," says **Juri Kaskela**, chocolate entrepreneur and owner of the Kultasuklaa company. "Futhermore, the plastic-free package is easy to recycle."

CONTENTS

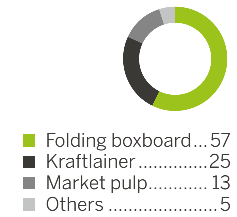
* part of the Report of the Board of Directors

KEY FIGURES

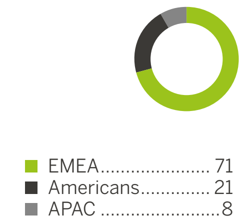
SALES
EUR MILLION



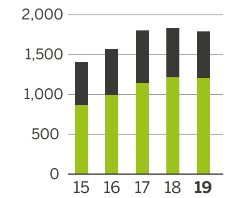
SALES SPLIT BY PRODUCT
%



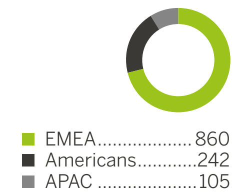
SALES SPLIT BY MARKET AREA
%



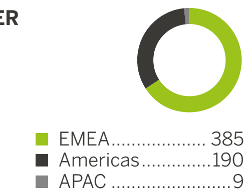
PAPERBOARD DELIVERIES
1,000 TONNES



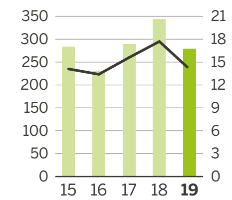
FOLDING BOXBOARD DELIVERIES BY REGION
1,000 TONNES



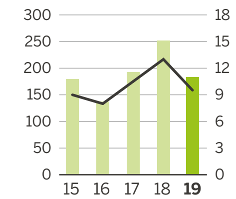
WHITE KRAFTLINER DELIVERIES BY REGION
1,000 TONNES



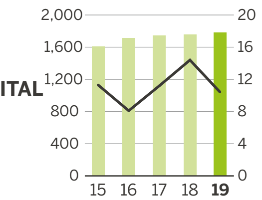
EBITDA, COMPARABLE
EUR MILLION
% OF SALES



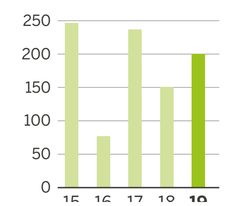
OPERATING RESULT COMPARABLE
EUR MILLION
% OF SALES



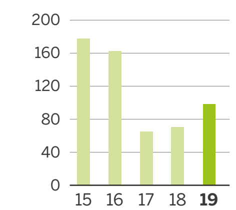
CAPITAL EMPLOYED
EUR MILLION
RETURN ON CAPITAL EMPLOYED
%



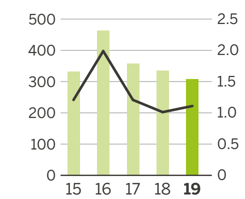
CASH FLOW FROM OPERATIONS
EUR MILLION



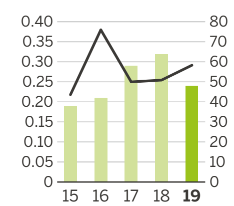
TOTAL INVESTMENTS
EUR MILLION



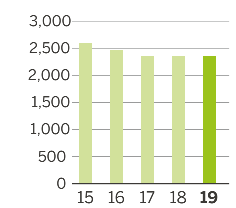
NET DEBT / COMPARABLE EBITDA



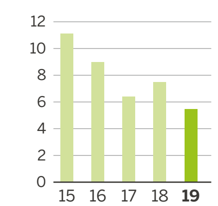
DISTRIBUTION PER SHARE
EUR
PAYOUT RATIO
%



PERSONNEL AT THE END OF PERIOD



LOST-TIME ACCIDENT FREQUENCY (LTA1)



Report of the Board of Directors 2019

BUSINESS DEVELOPMENT AND OPERATING ENVIRONMENT

PAPERBOARDS

The demand for recyclable fresh fibre paperboard is supported by market trends such as globalisation and urbanisation, sustainability, product safety and the growth of e-commerce. Pure fresh fibre paperboards are replacing plastic packaging materials and the use of recycled paperboard to an increasing degree, particularly in food and food service packaging. Metsä Board expects the global demand for folding boxboard and white kraftliner to grow by approximately 2–3% a year. Metsä Board delivers paperboard across the globe to the EMEA and APAC regions as well as the Americas.

Metsä Board is the leading producer of folding boxboard and white kraftliner in Europe. The company's share of the total capacity of European producers of folding boxboard is around 35%, while its corresponding share of white kraftliner is 30%. Metsä Board's share of the total deliveries by European folding boxboard producers in the review period was 36%, and 59% of exports from Europe. In 2019, deliveries by European producers of folding boxboard declined by 3% and market prices rose from the previous year. Correspondingly, deliveries by white kraftliner producers increased by 1%, and market prices declined.

In the EMEA region, the delivery volumes of Metsä Board's folding boxboard increased from the previous year and the price increases, which took effect at the beginning of the year, improved the average price. Demand for white kraftliners remained muted in the first half of the year but picked up towards the end of the year. The delivery volumes of Metsä Board's white kraftliners declined, but their average price improved slightly from the previous year.

Metsä Board's deliveries to the Americas consist of folding boxboard and coated white kraftliner. The company has a strong market position in both of its main products. Demand is driven by, among other factors, the limited local availability of high-quality, lightweight paperboard and the growing demand for ecological packaging materials. In the United States, the production of solid bleached boxboard for local consumption declined, and the production of food service paperboard increased year-on-year. The market prices of solid bleached boxboard remained stable, and the market prices of food service paperboard increased slightly.

In 2019, Metsä Board's deliveries of folding boxboard to the Americas declined slightly, while those of white kraftliner increased. Sales optimisation clearly improved the average price of folding boxboard during the year. The average price of coated white kraftliner remained stable.

In the APAC region, Metsä Board focuses on demanding end uses in cooperation with international brand owners, primarily in folding boxboard. In 2019, deliveries of Metsä Board's folding boxboard to the APAC region declined from the previous year.

MARKET PULP

Metsä Board's annual market pulp position, composed of the company's own pulp production and consumption, as well as of its 24.9% holding in Metsä Fibre, shows a surplus of approximately 600,000 tonnes. A significant portion of the surplus pulp is chemical long-fibre pulp, sold primarily to Europe and China.

In 2019, the market prices of long-fibre pulp declined by 16% in Europe and by 28% in China compared to the previous year, calculated from the difference between the average yearly prices. The price decreases had a significant negative impact on Metsä Board's profitability.

The delivery volumes of Metsä Board's own market pulp in 2019 remained at the previous year's level. Most of Metsä Board's market pulp is sold to Europe. The pulp delivery volumes of Metsä Board's associated company Metsä Fibre increased from 2018. Some 50% of Metsä Fibre's market pulp is sold in the EMEA region and 50% in the APAC region, where China's share is significant.

PROFIT DEVELOPMENT IN 2019 (2018)

The comparable operating result was EUR 184.4 million (251.9), and the operating result was EUR 180.8 million (246.3). Items affecting comparability during the financial period totalled EUR -3.6 million and comprised the following items: a EUR 3.3 million capital gain on a non-operating investment in shares; the Äänevoima shares sold to Metsä Fibre, which had a net impact of EUR 6.8 million on the operating result; EUR 5.5 million from the sale of a land area not related to business operations; and a EUR -19.1 million impairment recognised in the assets of the Husum pulp mill, where the company plans to replace the recovery boiler and turbine during the first phase of the pulp mill's renewal.

The higher sales prices of paperboards, especially of folding boxboard, had a positive effect on the operating result in 2019. Correspondingly, profitability was weakened by market pulp prices, which declined globally. The negative impact that pulp had on the result was reduced by lower pulp costs in the paperboard business. Nevertheless, the overall impact that the decline in pulp prices had on Metsä Board's operating result was clearly negative.

The production costs of paperboard and pulp grew from the previous year. Cost inflation in 2018 was rapid, and the prices of raw materials remained high in 2019. Wood costs were at a higher level than the year before, but declined slightly towards the end of the year.

Exchange rate fluctuations including hedges had a positive effect of EUR 48 million on the operating result of the financial year, compared to the previous year.

Metsä Board's share of the comparable operating result of its associated company Metsä Fibre was EUR 45.3 million (124.5). In addition to the low price of market pulp, Metsä Fibre's result was burdened by the weak profitability of the sawmill business and the increased production costs of pulp.

Financial income and expenses totalled EUR -15.4 million (-22.3), including foreign exchange rate differences from trade receivables, trade payables, financial items and the valuation of currency hedging instruments, totalling EUR -1.6 million (-3.1).

The result before taxes for the financial period was EUR 165.6 million (224.2). Comparable result before taxes was EUR 169.2 million (229.7). Income taxes amounted to EUR 21.0 million (20.8).

Earnings per share were EUR 0.41 (0.57). Comparable earnings per share were EUR 0.41 (0.58). The return on equity was 10.9% (16.3%), and the comparable return on equity was 11.0% (16.7%). The return on capital employed was 10.2% (14.0%), and the comparable return on capital employed was 10.4% (14.4%).

DELIVERIES OF FOLDING BOXBOARD BY REGION IN 2019 (2018)
1,000 TONNES

- EMEA region 860 (844)
- Americas region 242 (252)
- APAC region 105 (119)

DELIVERIES OF WHITE KRAFTLINER BY REGION IN 2019 (2018)
1,000 TONNES

- EMEA region 385 (439)
- Americas region 190 (173)
- APAC region 9 (4)

DELIVERY AND PRODUCTION VOLUMES

Annual production reached record high levels on the folding boxboard lines of the Äänekoski, Tako and Husum mills as well as the BCTMP mills of Kaskinen and Joutseno in 2019. In Kemi, the production of white kraftliner was curtailed, particularly during the second quarter, to meet market demand. In August, production returned to the normal level.

1,000 t	2019	2018	2017
Delivery volumes			
Paperboards	1,792	1,830	1,803
Metsä Board's market pulp	460	457	515
Metsä Fibre's pulp [1]	745	701	601
Production volumes			
Paperboards	1,816	1,866	1,817
Metsä Board's pulp	1,373	1,363	1,330
Metsä Fibre's pulp [1]	734	740	619

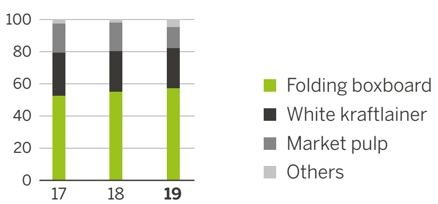
[1] Equals to Metsä Board's 24.9% holding in Metsä Fibre.

KEY FIGURES

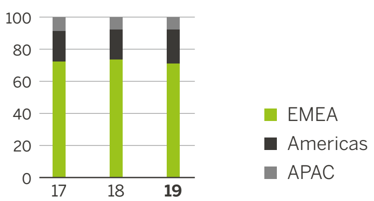
	2019	2018	2017
Sales, EUR million	1,931.8	1,944.1	1,848.6
EBITDA, EUR million	294.5	338.2	298.7
comparable, EUR million	279.1	343.8	289.1
EBITDA, % of sales	15.2	17.4	16.2
comparable, % of sales	14.4	17.7	15.6
Operating result, EUR million	180.8	246.3	207.1
comparable, EUR million	184.5	251.9	193.5
Operating result, % of sales	9.4	12.7	11.2
comparable, % of sales	9.5	13.0	10.5
Result before taxes, EUR million	165.6	224.2	170.8
comparable, EUR million	169.2	229.7	157.2
Result for the period, EUR million	144.6	203.4	150.5
comparable, EUR million	145.8	207.8	137.5
Earnings per share, EUR	0.41	0.57	0.42
comparable, EUR	0.41	0.58	0.39
Return on equity, %	10.9	16.3	13.6
comparable, %	11.0	16.7	12.4
Return on capital employed, %	10.2	14.0	11.9
comparable, %	10.4	14.4	11.2
Equity ratio at end of period, %	59	58	53
Net gearing ratio at end of period, %	23	25	31
Interest-bearing net liabilities/comparable EBITDA	1.1	1.0	1.2
Shareholders' equity per share at end of period, EUR	3.76	3.72	3.28
Interest-bearing net liabilities at end of period, EUR million	307.8	334.6	358.4
Investments (owned assets), EUR million	94.9	70.3	65.4
Net cash flow from operations, EUR million	200.5	150.9	236.3
Personnel at end of period	2,351	2,352	2,456
Salaries and remuneration, EUR million	125.1	131.9	125.7

[1] The ratio of the interest-bearing net liabilities to the comparable EBITDA of the previous 12 months at the end of the period.

SALES SPLIT BY PRODUCT
%



SALES SPLIT BY REGION
%



CASH FLOW

Net cash flow from operations in January–December was EUR 200.5 million (1–12/2018: EUR 150.9 million). Working capital increased by EUR 43.0 million (1–12/2018: increased by EUR 62.4 million). In 2019, cash flow from operations was strengthened by higher dividends from Metsä Fibre.

INVESTMENTS

Investments in January–December 2019 in owned property, plant and equipment were EUR 94.9 million (1-12/2018: EUR 70.3 million), and investments in leased property, plant and equipment were EUR 4.1 million (0.0). Out of total investments, maintenance investments accounted for roughly 60% and development investments roughly 40%.

At the Äänekoski mill, Metsä Board invested in a new sheeting line, which increased the annual capacity of the mill's sheeting facility by 35,000 tonnes to 120,000 tonnes. The investment's value was approximately EUR 11 million, which was allocated mainly to 2019.

Investments in the first phase of the renewal of the Husum pulp mill in 2019 amounted to EUR 21 million. The total value of the investment is around EUR 320 million.

In December, Metsä Board decided to modernise the finishing area of Kyro's board machine. The modernisation is expected to be completed in 2021. The value of the investment is approximately EUR 20 million.

PRE-ENGINEERING PROJECTS OF MAJOR INVESTMENTS

METSÄ BOARD: RENEWAL OF THE HUSUM PULP MILL

On 26 April 2019, Metsä Board announced the launch a pre-engineering project related to the renewal of the Husum pulp mill in Sweden. The investment's first phase includes a new recovery boiler and a new turbine. In August, the company announced that it was applying for an amendment to its current environmental permit. The final investment decision on the first phase will be made once the company has secured the environmental permit, i.e. during the second quarter of 2020, at the earliest.

In 2019, Metsä Board invested a total of EUR 21 million in the project. In addition, the company recognised a EUR 19 million impairment in the assets of the Husum pulp mill, which the company plans to replace with a new recovery boiler and new turbine during the first phase of the pulp mill's renewal.

The total value of the first phase of the investment is approximately EUR 320 million, which will be spread over 2019–2022. Following its completion, the investment is expected to generate an annual cash flow improvement of roughly EUR 35 million, of which some EUR 30 million consists of an EBITDA improvement and EUR 5 million less maintenance capex.

The second phase of the investment, in the 2020s, is planned to include the replacement of the existing fibre lines with a new fibre line.

The pulp mill's renewal will enable the long-term development and growth of competitive paperboard business operations at the Husum integrated mill over the coming years. In addition, the investment aims to further develop Metsä Board's pulp and energy production and promote a shift towards fossil free mills.

METSÄ FIBRE: NEW BIOPRODUCT MILL AND PINE SAWMILL

Metsä Board's associated company Metsä Fibre started a pre-engineering phase concerning the construction of a bioproduct mill in Kemi and the construction of a pine sawmill in Rauma. The value of the bioproduct mill investment would be approximately EUR 1.5 billion. The final investment decision is expected in the summer of 2020, at the earliest. The value of the Rauma pine mill investment would be around EUR 200 million. The final investment decision is expected in early 2020.

In September, Metsä Fibre filed the bioproduct mill's environmental permit application with the Regional State Administrative Agency for Northern Finland.

BALANCE SHEET AND FINANCING

Metsä Board's equity ratio at the end of the year was 59% (31 December 2018: 58%), and its net gearing ratio was 23% (31 December 2018: 25%). The ratio of interest-bearing net liabilities to comparable EBITDA in the previous 12 months was 1.1 at the end of the review period (31 December 2018: 1.0).

At the end of the year, interest-bearing liabilities totalled EUR 444.9 million (31 December 2018: 447.2). Loans in foreign currency accounted for 2% of loans and floating-rate loans for 18%, with the rest being fixed-rate loans. At the end of the year, the average interest rate on loans was 2.5% (31 December 2018: 3.3%), and the average maturity of long-term loans was 6.4 years (31 December 2018: 5.5). The interest rate maturity of loans at the end of the year was 56.0 months (31 December 2018: 60.0). During the review period, the company repaid the remaining EUR 60.3 million share of the bond it issued in 2014.

At the end of the year, net interest-bearing liabilities totalled EUR 307.8 million (31 December 2018: 334.6).

Metsä Board's liquidity has remained strong. At the end of the review period, the available liquidity was EUR 524.3 million (31 December 2018: 425.4), consisting of the following items: liquid assets and investments of EUR 134.2 million, a syndicated credit facility (revolving credit facility) of EUR 200.0 million, and undrawn pension premium (TyEL) funds of EUR 190.1 million. Of the liquid assets, EUR 127.1 million consisted of short-term deposits with Metsä Group Treasury, and EUR 7.1 million were cash funds and investments. Other interest-bearing receivables amounted to EUR 2.9 million. In addition, Metsä Board's liquidity reserve is complemented by Metsä Group's internal undrawn short-term credit facility of EUR 150.0 million.

At the end of September, Metsä Board agreed on a bank financing arrangement consisting of an approximately five-year drawn loan of EUR 150 million and an approximately five-year multicurrency revolving credit facility of EUR 200 million, with two 1-year extension options and an increase option of EUR 50 million. The margin of the revolving credit facility is partly tied to sustainability targets based on selected targets among Metsä Board's sustainability targets for 2030. The funds from the new arrangement were withdrawn at the beginning of October, and they replaced the drawn loan of EUR 50 million and the undrawn revolving credit facility of EUR 150 million, maturing in March 2020.

The fair value of long-term investments was EUR 255.1 million at the end of the review period (31 December 2018: 270.1). The change in the fair value is related to the decrease in the fair value of Pohjolan Voima Oyj's shares.

At the end of the review period, an average of 7.8 months of the net foreign currency exposure was hedged, including the hedging of the balance sheet position of trade receivables and trade payables (31 December 2018: 7.3). The degree of hedging during the period varied between seven and eight months, on average. In addition to the balance sheet position, half of the projected annual net foreign currency exposure at the normal level is hedged. The amount of hedging may deviate from the normal level by 40% in either direction. When hedging is at the normal level, the aim is to allocate the hedges primarily to the following two quarters.

In 2019, Metsä Board adopted Metsä Group's Green Finance Framework, which links sustainability and climate change mitigation to Metsä Board's future financing arrangements.

Metsä Board has investment grade credit ratings by S&P Global and Moody's Investor Service. The company's rating by S&P Global is BBB-, with a stable outlook. The company's rating by Moody's is Baa3, with a stable outlook.

PERSONNEL

In 2019, Metsä Board employed an average of 2,433 people (2,435), of whom 60% worked in Finland, 29% in Sweden, 7% elsewhere in the EMEA region, and 4% in the Americas and the APAC region. Of the personnel, 1,539 (1,519) were production workers, 11% (9%) being women and 89% (91%) men. Correspondingly, 813 (834) members of the personnel were white-collar employees, of whom 41% (42%) were women and 59% (58%) men. The average age of Metsä Board's production workers was 45.9 years, and the average age of its white-collar employees was 48.6 years. Personnel expenses in 2019 totalled EUR 194.9 million (203.1), of which salaries and remuneration amounted to EUR 123.4 million (129.3). The figure for the comparison year includes cost provisions related to the operational efficiency programme of the Husum mill.

Future retirements are prepared for with retirement forecasts and resource plans are drawn up based upon these. The company also arranges apprenticeship training in Finland, aiming to recruit future personnel, and the mill units are investing in on-the-job learning and sharing of know-how.

The section Report on non-financial key figures in this report contains further information about personnel development and safety at work.

R&D, INNOVATIONS AND NEW PRODUCTS

The main objectives of Metsä Board's research and development activities in terms of consumer packaging boards are the production of increasingly lightweight folding boxboards and the development of new products for the food service packaging segment. The objective in terms of white kraftliners is to maintain and develop the competitiveness of the strength and printing properties. Metsä Board's research and development costs in 2019 were approximately EUR 6.4 million (6.3), or approximately 0.3% (0.3%) of net sales.

In the spring of 2019, Metsä Board introduced a renewed and improved selection of folding boxboards to the market. The renewed portfolio helps brand owners and packaging converters respond to future packaging requirements – to reduce the carbon footprint and increase the attractiveness of their packaging. The streamlining of the product selection also improved the consistency of Metsä Board's product quality and delivery reliability.

In the autumn, Metsä Board launched a new eco-barrier paperboard, which responds to consumers' and brand owners' needs to find more responsible and easily recyclable alternatives to plastic packaging. The eco-barrier paperboard provides a medium barrier against moisture and grease, making it well-suited for food and food service packaging. The product can be recycled with other paperboard packaging.

The safety requirements for products and the related expectations are becoming increasingly strict. Metsä Board is responding to these requirements by developing verification processes and by participating in international studies. As Europe's leading producer of fresh fibre paperboard, the company wants to ensure that all of its paperboards and pulps meet purity and product safety requirements into the future. The development of product safety practices continued in 2019, and all of Metsä Board's mills producing food packaging paperboard are now applying the FSSC 22000 food safety management system.

Metsä Board helps brand owners enhance their brands with sustainable and innovative packaging solutions. With its design team, reinforced in 2019, and extensive partnership network, Metsä Board helps its customers to design functional and visually desirable consumer packaging with minimum environmental impact.

Metsä Board is building an Excellence Centre in Äänekoski which will bring packaging design skills as well as research and development operations together. The Centre enables joint packaging design workshops and innovation events with customers and other partners. It is set to begin operation in 2020.

Metsä Board's Kyro mill takes advantage of artificial intelligence in the folding boxboard machine's quality management. The artificial intelligence makes use of the mill's process data and measurement results related to the paperboard's quality features. The aim is to improve the machine's production efficiency and quality consistency. Metsä Board is also investigating in various possibilities for the application of AI at the company's other mills.

STRATEGY AND FINANCIAL TARGETS

Metsä Board is a leading European producer of fresh fibre paperboards and a leader in sustainability. The company focuses on lightweight, premium fresh fibre paperboards used in consumer goods, retail-ready and food service packaging. Metsä Board expects global demand for premium fresh fibre paperboard to grow by around 2–3% a year.

In the medium-term, Metsä Board aims for moderate growth, taking into account the prevailing market situation. The growth is based on skilled people, the industry's leading products and innovative packaging solutions.

Decision-making is guided by profitability targets and the increase of shareholder value. Metsä Board focuses on efficiency and businesses which benefit from the high performance of the company's products and services. The company also aims to retain a strong balance sheet.

In 2019, the company removed the target of growing faster than the average market from its financial targets. In other respects, the financial targets and dividend policy remained unchanged.

- A comparable return on capital employed (ROCE) of, at minimum, 12%.
- Actual in 2019 was 10.4%.
- A ratio of interest-bearing net liabilities to comparable EBITDA of, at maximum, 2.5. Actual in 2019 was 1.1.

Metsä Board aims to distribute at least 50% of the result for the financial period in dividends every year. The Board of Directors' proposal to the Annual General Meeting in terms of the 2019 dividend and capital distribution corresponds with 59% of the result for the financial period.

SHARES

At the end of the financial period, the price for Metsä Board's B share on the Nasdaq Helsinki was EUR 6.00. The share's highest and lowest prices in 2019 were EUR 6.65 and EUR 3.86, respectively. At the end of the financial period, the price for Metsä Board's A share on the Nasdaq Helsinki was EUR 6.14. The share's highest and lowest prices in 2019 were EUR 7.98 and EUR 5.46, respectively.

In 2019, the average daily trading volumes of the B and A shares on the Nasdaq Helsinki were 880,683 shares and 2,778 shares, respectively. The total trading volumes of the B and A shares were EUR 1,158.8 million and EUR 4.6 million, respectively.

In addition to the Nasdaq Helsinki, Metsä Board's shares are traded on other marketplaces, such as Chi-X and BATS. The Nasdaq Helsinki's share of total trading in 2019 was 74%.

In 2019, a total of 2,271,147 of Metsä Board Corporation's A shares were converted to B shares. At the end of the year, there were 33,087,647 A shares and 322,425,099 B shares.

At the end of the financial period, the market value of all Metsä Board's shares was EUR 2.14 billion, of which the market value of the B shares and the A shares accounted for EUR 1.93 billion and EUR 0.2 billion, respectively.

Metsäliitto Cooperative increased its holding in Metsä Board during the year. In 2019, its holding grew from 41% to 46% and the votes conferred by the shares from 62% to 66%. At the end of the year, international and nominee-registered investors held 15% of all the shares (31 December 2018: 21%). The company does not hold any treasury shares.

REPORT ON NON-FINANCIAL KEY FIGURES

BUSINESS MODEL

Metsä Board manufactures high-quality, lightweight and recyclable fresh fibre paperboards. The company's main products are folding boxboard and food service paperboard as well as white kraftliner, all used primarily in consumer product packaging and for the various needs of the retail trade. The annual capacity for folding boxboard and food service paperboard is 1,350,000 tonnes, and the annual capacity for white kraftliner is 675,000 tonnes. The company also produces chemical pulp and bleached high-yield pulp, both for its own use and for sale. The annual capacity for pulp and high-yield pulp is 1,430,000 tonnes. Metsä Board sells its products to more than 100 countries, and the company employs some 2,400 people in 19 countries.

Metsä Board's eight production units are located in Finland and Sweden, close to its main raw material: high-quality northern fibre. Metsä Board's raw wood supply is carried out centrally through Metsä Group from Finland, Sweden, the Baltic countries and Russia. The majority of the wood purchased in Finland comes from forests owned by Metsäliitto Cooperative's owner-members.

Metsä Board is part of Metsä Group, the parent company of which is Metsäliitto Cooperative. At the end of 2019, Metsäliitto Cooperative held 45.7% of Metsä Board's shares and 66.3% of the voting rights conferred by shares. Metsä Board, on the other hand, owns 24.9% of its associated company, Metsä Fibre. Together, in-house pulp production and the holding in Metsä Fibre secure Metsä Board's self-sufficiency in pulp and guarantee premium pulp of a consistent quality.

NON-FINANCIAL KEY FIGURES

	2019	2018	2017
Personnel			
Coverage of training on the Group's Code of Conduct, %	97	97	79
Lost-time accident frequency (LTA1) per million hours worked	5.5	7.5	6.4
Fatal occupational accidents, number of	0	0	1
Supply chain			
Share of certified wood,%	76	79	80
Commitment to the Supplier Code of Conduct, % of total purchases	95	95	89
Traceability of raw materials, % of total purchases	93	-	-
Share of raw materials and packaging materials, % of dry tonnes	99	99	-
The environment			
Fossil CO_2 emissions (Scope 1), t	248,274	288,579	300,973
Indirect fossil CO_2 emissions (Scope 2, market-based), t	250,742	275,048	259,621
Indirect fossil CO_2 emissions (Scope 2, location-based), t	374,409	416,789	361,652
Fossil-free mills: share of fossil free energy, %	82	82	82
Purchased fossil free energy: share of energy, %	85	81	80
Improvement in energy efficiency from 2018 level, %	-0.5	-	-
Process water use per produced tonne compared to 2018 level, %	-11	-	-
Utilisation of production side streams, %	99	99	99

SUSTAINABILITY PRINCIPLES

Metsä Board aims to be a leader in sustainability and create packaging solutions that respect nature. Climate change mitigation and the efficient use of resources are strong drivers of the company's operations. The promotion of sustainability includes complying with good corporate governance, bearing social and environmental responsibility, respecting business ethics and human rights, as well as the continuous improvement of operations in terms of all of the above. In addition to its own operations, Metsä Board requires sustainability throughout its supply chain.

The company's sustainability targets focus on four aspects: (I) Ethical business operations and the well-being of personnel; (ii) Sustainable forestry and wood supply; (iii) Climate and the environment; and (iv) Sustainable products and supply chain. The targets are based on Metsä Board's business strategy and Metsä Group's strategic sustainability objectives.

Metsä Board supports the UN's Global Compact initiative and its principles on human rights, employees, the environment and anti-corruption. Metsä Board's updated sustainability targets, which extend to 2030, also further the realisation of the UN's Sustainable Development Goals (SDGs).

Further information on Metsä Board's sustainability work is available on pages 18–37 of Metsä Board's Annual Report and in Metsä Group's Sustainability Report at https://www.metsagroup.com/en/Sustainability/Pages/default.aspx.

COMPLIANCE AND ETHICS

The Code of Conduct, updated in 2019, and the related training programme seek to strengthen the culture of doing the right thing, help personnel to identify ethically challenging situations and encourage them to report any shortcomings they observe. The Code of Conduct is based on Metsä Group's shared values: renewal, reliability, cooperation and responsible profitability. The Code of Conduct commits, for example, to a respect for human rights and to measures against corruption and bribery. We also require the same of our partners.

The e-learning course concerning the updated Code of Conduct was completed by 97% of Metsä Board's personnel during the financial period. In addition, 532 people participated in complementary training in a classroom setting. The goal is for the company's entire personnel to complete the e-learning concerning the Code of Conduct. In 2020, the company will adopt an ethics barometer which measures personnel's perception of ethics in their workplace and based on which risks related to the ethics of our business can be identified.

Metsä Group has a joint reporting channel through which personnel and stakeholder representatives can anonymously report any shortcomings they detect. All breaches and suspected breaches brought to the attention of the company are investigated, and the most significant of them are dealt with by the Compliance Committee. In 2019, Metsä Board was informed of a total of 8 (3) non-compliance incidents involving suspected irregularities and various matters involving personnel. None of these cases pertained to the use of child labour, bribery or corruption.

RESPONSIBLE SUPPLY CHAIN

Metsä Group has a shared group-wide purchasing process aiming to ensure that the partners operating in the Group's supply chain comply with principles that support ethical and responsible business practices. This aims to minimise risks related, for example, to the environment, health, corruption, the use of child labour and human rights violations in the supply chain.

Suppliers committed to the Supplier Code of Conduct covered 95% (95%) of Metsä Board's total purchasing in 2019. The Group assesses the country risk and category risk in terms of each supplier. 82% of suppliers, measured by costs, have been subject to a compliance analysis which checks suppliers' backgrounds in terms of trade sanctions, money laundering, corruption, human rights violations and other key risks. Metsä Board also has a corresponding process applicable to customers. In addition, 58% of suppliers, measured by spend, have completed a self-assessment questionnaire based on which suppliers are then analysed from the perspective of sustainability. Every year, Metsä Group and external auditors audit some of Metsä Board's suppliers. In 2019, Metsä Group and an external party conducted 14 (27) and 15 (15) onsite audits, respectively, at Metsä Board's suppliers.

The responsibility of the wood raw material is ensured with the PEFC™ Chain-of-Custody or the FSC® Chain-of-Custody supply chain systems so that the origin of the wood and fibre can be traced in full. The origin of other raw materials and packaging materials is often known up to the level of the manufacturing country, and the development of the systematic gathering of origin data continues. In 2019, we knew the origin with regard to 93% of the total purchases of raw materials and packaging materials. The target stands at 100% by 2030.

SOCIAL RESPONSIBILITY

A motivated workforce is one of the critical success factors defined in Metsä Board's strategy. Ensuring personnel's well-being and capacity to work in a systematic manner plays a key role. We aim to anticipate risks through early support discussions and solutions between supervisors and employees, the anticipation of possible working capacity risks as well as by targeting guidance and support at risk groups. In 2019, the realised rate of sickness absences was 4.0% (3.5).

Metsä Board aims to ensure the availability and retention of skilled personnel by investing in its employer image and with the help of development programmes and successor planning. In 2019, Metsä Board's employees attended an average of 17.6 hours (17.5) of training per employee. Regarding new talent, the company opened an application process for apprenticeship training, the content of which will be tailored according to competence needs.

Metsä Board's personnel are committed to their employer: the voluntary turnover rate was 3.0% (2.1). Every year, Metsä Board conducts an Organisation Functionality Survey, the result of which was 8.20 (8.12). The survey follows a scale of 4–10. The survey gives units a basis for determining their development targets and the related actions.

Metsä Board aims for zero accidents leading to absences. In 2019, the accident frequency rate per million hours worked (LTA1) was 5.5 (7.5). Slips as well as injuries to hands and feet were counted amongst the most typical accidents. Safety cooperation and the flow of information between mills have been the subject of special attention in recent years, and safety at work and its measurement are subject to further development. Accidents are prevented with anticipatory measures such as safety observations, safety walk-throughs and safety training.

Metsä Board's mills continued to roll out the 5S method, aiming to improve productivity, safety at work and well-being at work. The continuous use of the method is ensured through 5S audits, as well as through addressing any deviations detected during inspections.

THE ENVIRONMENT

The requirements for packaging are increasing: the origin of materials, the recyclability of packaging as well as product safety and purity, particularly in food packaging, are becoming increasingly important. The EU Plastics Strategy, the planned restrictions on disposable plastic products and consumer desire to challenge companies to develop alternative packaging materials that put less strain on the environment are all key factors.

The lightweight and strong paperboards produced by Metsä Board are resource efficient. Their production consumes less energy, water and raw materials than the production of heavier paperboard grades. Lighter paperboards also generate less waste, and they are recyclable wherever there is a functioning recycling system.

Renewable wood fibre is the main raw material for Metsä Board's products. All of the wood raw material used by the company is fully traceable and always originates from either certified or controlled, sustainably managed forests (PEFC™ Chain-of-Custody and FSC® Chain-of-Custody). In 2019, the company used a total of 8.2 million cubic metres of wood (8.5). This use includes the wood used in Metsä Board's own production of pulp and high-yield pulp as well as the volume of wood used in the pulp purchased from Metsä Fibre. Metsä Board aims for certified wood to account for at least 90% of all the wood used by the company by 2030. During the review period, 76% (79) of the wood used by the company came from certified forests.

Metsä Board has scored highly in a number of ESG assessments – such as MSCI, Sustainalytics, ISS ESG and Vigeo Eiris – covering the environment, social responsibility and good governance. In 2019, the global firm, EcoVadis, which conducts supplier responsibility evaluations, gave Metsä Board's sustainability practices a gold-level recognition for the third year in a row. CDP, the non-profit global reporting system for environmental data, nominated Metsä Board again on its Climate A List in recognition of the company's efforts to reduce fossil based CO_2 emissions, mitigate climate risks and develop low-carbon solutions. Metsä Board was also awarded a Leadership status A- in the CDP's water programme and forest programme as well as in the CDP's supplier engagement rating.

Metsä Board has reduced its fossil CO_2 emissions (Scope 1) per product tonne by 50% in 2009-2019. The company aims for fossil free mills and raw materials by 2030. In essence, this refers to a situation where the company's mills do not use fossil fuels or purchase energy generated with fossil fuels. Accordingly, the target for fossil CO_2 emissions (Scope 1 and 2) is zero. In addition, Metsä Board intends to find alternatives to fossil oil-based raw materials and packaging materials by 2030.

In 2019, 83% (82) of the energy used by Metsä Board was fossil free. Of this energy, 49% (50) was bioenergy based on the utilisation of wood-based materials (black liquor, bark, logging residue) or other renewable energy, while 34% (32) was nuclear energy. Fossil fuels covered 17% (17) of the company's energy need. The proportion of fossil free raw materials, including the packaging materials of the company's own products, was 99% (99).

In terms of energy efficiency, Metsä Board aims for a minimum improvement of 10% in 2018–2030. In 2019, energy efficiency declined by 0.5% compared to 2018 mainly due to the curtailed production of white kraftliner in Kemi during the second quarter.

Metsä Board's process water consumption in 2019 was 59.4 million cubic metres (67.5), 100% of which was surface water. The aim is to reduce the use of process water by 30% per tonne produced in 2018–2030. In 2019, the reduction was 11% compared to the previous year. Approximately 99% of the used water is returned to the waterways after careful purification. Approximately 99% (99) of production side streams was used as materials or energy.

All of Metsä Board's mills apply quality, environmental and energy efficiency management systems (ISO 9001, ISO 14001, ISO 50001) as well as the management and monitoring system ISO 22000 required by food safety. The mills producing paperboard for food packaging also apply the FSSC 22000 food safety system. The environmental awareness of the mills' personnel is increased through information sessions. No deviations resulting in significant environmental impact occurred in Metsä Board's production units in 2019. Some short-term deviations from permit limits were nevertheless recorded.

Metsä Board has environmental liabilities related to former operations at sites that have since been closed, sold or leased, as well as at decommissioned landfill sites. Financial provisions for the cost of land rehabilitation work have been made in cases where it has been possible to measure the company's liability for land contamination. Metsä Board's environmental liabilities in 2019 totalled EUR 3.5 million (5.5), and its environmental expenses amounted to EUR 14.4 million (15.4). The environmental expenses consist mainly of expenses related to the use and maintenance of environmental protection equipment, expenses related to waste management and environmental insurance, and the depreciation of capitalised environmental expenses

RELATED RISKS

The risks related to the environmental, human and social issues, respect for human rights as well as the fight against corruption, are described in more detail in this Report of Board of Directors under the section "Main risks and uncertainties".

MAIN RISKS AND UNCERTAINTIES

Metsä Board's Corporate Management Team reviews the most significant risks as part of its management team work. The identified risks, and the means by which they are managed, are reported to the Board of Directors and the Board of Directors' Audit Committee at least twice a year and as necessary in the interim reports and financial statements bulletins published by the company.

Metsä Board's risk management is described in the 2019 Corporate Governance Statement.

The risk assessments carried out in 2019 identified the following risks and uncertainties that have a possible impact on Metsä Board's business operations and profitability.

MARKET RISKS

UNCERTAINTY IN THE DEVELOPMENT OF THE ECONOMY

Considerable uncertainties still exist in the global economy. If realised, they may result in weakened demand and reduced prices for end products. While the trade tensions between global super powers have abated to some degree, the threat of regional conflicts may increase uncertainty in the global economy. A slowdown in the Chinese economy could also have an impact on the demand for Metsä Board's products and on the growth outlooks for the markets. The potential effects of the UK's exit from the EU are still a source of uncertainty in the euro area.

CHANGES IN THE OPERATING ENVIRONMENT

Metsä Board operates in an industry where the balance between supply and demand has a significant impact on the demand for, and prices of, end products. New operators entering the market, alternative products or changes in consumer behaviour may have a negative impact on demand for Metsä Board's paperboards. The capacity increase or growth in product portfolio by competitors could lower the price level of end products and have a negative impact on Metsä Board's profitability.

Any increased changes in the industrial and trade policies of leading industrialised nations may lead to more extensive trade restrictions, subdue growth in the world economy more than expected, and reduce global trade flows. The trade relations of the United States, China and Europe are a particular source of uncertainty. Increased protectionism and negative developments in international trade would, if realised, have a weakening impact on Metsä Board's result.

Changes in regulations, such as the EU's climate and environmental policy, and increasing new requirements to limit carbon dioxide, sulphur or other emissions, may increase production costs and weaken the profitability of business. Restrictions imposed on products that contain single-use plastics guide Metsä Board's product portfolio. The acceptability of plastic-free single serving products also involves risks.

MARKET SITUATION OF PULP

Weakening of the global pulp market may have a negative impact on the delivery volumes and market prices of pulp and therefore an adverse effect on Metsä Board's profitability. Metsä Board's market pulp position, accounting for its holding in Metsä Fibre, shows a surplus of approximately 600,000 tonnes. The market price of pulp strengthening (weakening) by 10% would have a positive (negative) impact of roughly EUR 30 million on the company's operating result.

GEOPOLITICAL RISKS

The impact of existing inter-related geopolitical risks and crises in the world may manifest as changes in regional security situations and living conditions, and also in the global economy. These include regional conflicts, the repercussions of which are visible as the migration of people and in terrorism based on extremism. The predictability of these risks is poor, and their impact may also emerge either very rapidly or over a long period of time. The international sanctions related to the management of international crises may have a direct or indirect impact on the demand for Metsä Board's products and on its results.

OPERATIONAL RISKS

CLIMATE RISKS

In the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), climate risks are divided into 1) transition risks, i.e. risks arising from the transition into a low-carbon economy, and 2) physical risks related to changes in temperatures and precipitation, for example. At Metsä Board, these climate risks concern particularly forests, as well as the use of energy and water. Should they materialise, climate risks could have a negative impact on Metsä Board's profitability.

The most important transition risks include increasing regulation, requirements for new technology as well as a market and reputation risk, if the company fails to respond to the changed market environment in an effective manner. EU regulation may steer the future use of forests. Increased regulation aiming to mitigate climate change and reduce greenhouse gas emissions may, furthermore, increase costs and result in substantial change requirements applicable to production technology. The supply and demand of products in a low-carbon economy may differ from what it is currently.

Physical climate risks can be further divided into acute weather phenomena and more permanent, long-term changes. Extreme weather phenomena may weaken the availability of the process water needed by mills and result in production breaks. The risk is mitigated by the fact that all of Metsä Board's mills are located in northern areas with ample water. As the climate grows warmer, the most significant risks influencing forests and the availability of the wood raw material are the weakening of harvesting conditions as winters grow shorter and the increase of various kinds of damage caused by insects.

Climate change mitigation and the transition to a low-carbon economy are strongly visible in Metsä Board's sustainable development goals. The core of these goals consists of a transition to the use of entirely fossil free energy in production, abandoning the use of raw materials based on fossil oil and increasing the efficiency of energy and water consumption. The measures related to these goals help Metsä Board to manage climate risks. At the same time, they open up new opportunities for Metsä Board in the changed operating environment.

CONCENTRATION OF OPERATIONS IN A LIMITED GEOGRAPHICAL AREA

Seven of Metsä Board's eight production units are located in Finland, and one of them is located in Sweden. Finland has a history of labour disputes in both the forest industry and in the distribution chain of forest industry products. These may have a negative impact on production volumes and customer deliveries, and weaken the company's competitiveness and profitability. Labour disputes in Sweden may also damage Metsä Board's production and customer deliveries and have a negative impact on the company's business operations.

CONTINUITY RISKS

The continuity of mills' production can be influenced by, among other things, large-scale fires, major equipment malfunctions, extreme weather phenomena and environmental damage. Serious malfunctions in key information systems, labour disputes and availability problems in the most important raw materials may furthermore damage Metsä Board's business operations and, if prolonged, even result in the loss of customer accounts. The mills have drawn up continuity and recovery plans in preparation for the realisation of such risks.

Long-term problems in production, the supply chain or in the quality of products may jeopardise the continuity of customer relationships. Should interruptions in production or the supply chain continue for a long period of time, the resulting financial losses may be substantial and result in the permanent loss of customer accounts. The company has prepared continuity and recovery plans in preparation for the realisation of these risks.

BUSINESS DEVELOPMENT

The development and growth of Metsä Board's business requires strategic choices that involve risks. The uncertainties in question involve the selection and timing of growth investments, for example, as well as the development of sales and the customer portfolio. The growth of the paperboard business and the introduction of new production to the market are dependent on successful sales. The commercialisation of new products involves uncertainties that, should they be realised, could have a negative impact on the demand for Metsä Board's products and the company's profitability. Increasing sales on a global scale also involves cost and exchange rate risks.

BUSINESS ETHICS

Business ethics in general and prevention of human rights violations, conflicts of interest, fraud, bribery and money laundering have been identified as areas requiring continuous development. In addition to the 2019 renewed Code of Conduct and related extensive training programme targeted at all personnel, Metsä Board is developing its know your business partner process to better recognise and mitigate risks related to the sustainability of its supply chain. A concrete way to manage risks related to unethical business practices is to ensure the availability of an anonymous reporting channel for cases of suspected misconduct. This must in turn be supported by a reliable investigation process. The company has put in place a new Compliance and Ethics Channel in 2019, which is available to its personnel and external stakeholders.

PRICE RISKS OF PRODUCTION AND LOGISTICS COSTS

An unforeseen rise in the price of production inputs important for Metsä Board's operations (such as wood, energy and chemicals), or availability problems, may reduce profitability and threaten the continuity of operations. Changes in exchange rates may also influence the costs of some production inputs. Metsä Board works to hedge against this risk by entering into long-term delivery agreements and goods-related derivative contracts. In addition, a steep increase in transportation and other logistics costs may have a negative effect on Metsä Board's profitability. Moreover, any amendments to legislation, regulations or taxation related to the most important production inputs may result in significantly increased costs.

LIABILITY RISKS

Metsä Board's business involves liability risks, such as contractual, environmental and product liability risks. Liability risks are managed by way of efficient business processes, contract training, management practices, quality control and transparent operations. Some of the operational liability risks have been hedged with insurance policies.

PERSONNEL AVAILABILITY AND RETENTION

Metsä Board pays attention to ensuring the availability and retention of competent personnel by means of various personnel development programmes and successor plans, and by investing in its employer image. Metsä Board also prepares for retirements and other personnel risks through the promotion of multiple skills and work ability as well as through job rotation.

FINANCIAL RISKS

FINANCIAL AND EXCHANGE RATE RISKS

As a result of increasing regulation in the financial market, the operations of credit and bond markets may become more difficult, which may impact the company's ability to acquire long-term debt financing at a competitive price. The financial risks are managed in accordance with the treasury policy approved by Metsä Board's Board of Directors. The purpose is to hedge against considerable financial risks, balance cash flow and give the business enough time to adjust to changing conditions.

Metsä Board sells its products in several countries and is therefore susceptible to fluctuations in exchange rates. The US dollar strengthening by 10% against the euro would have a positive impact of approximately EUR 63 million on Metsä Board's annual operating result. Correspondingly, the Swedish krona strengthening by 10% would have a negative impact of approximately EUR 39 million. The British pound strengthening by 10% would have a positive impact of approximately EUR 8 million. The impact of weakened exchange rates would be the opposite. The sensitivities do not include the impact of hedging.

CREDIT RISKS

The management of credit risks related to commercial operations is the responsibility of Metsä Board's executive management and Metsä Group's centralised credit control. Metsä Board's management determines the limits on credit extended to customers and the applicable terms of payment in cooperation with the centralised credit control. Nearly all credit risks are transferred by means of credit insurance contracts. Metsä Board's customer credit risk was at a normal level in 2019. The main principles of credit control are defined in the credit guidelines of the risk management policy approved by the company's Board of Directors.

Metsä Board's financial risks and their management are described in more detail in the Notes to the Consolidated Financial Statements, found on pages 80–90 of the 2019 Annual Report.

LEGAL PROCEEDINGS

In the autumn of 2015, as a part of Metsä Board Oyj's 2014 tax assessment, Finnish Tax Administration refused to accept the deductibility of a French subsidiary's losses transferred in a cross-border merger. Metsä Board has appealed the decision issued by the Tax Administration as the company believes the losses are deductible. The Board of Adjustment dismissed the company's appeal in March 2018. The company has appealed against the decision to the Administrative Court of Helsinki.

GOVERNANCE

Metsä Board's statutory administrative bodies are the Annual General Meeting, the Board of Directors and the CEO. The Board of Directors has general authority and, accounting for the scope and quality of the company's operations, it is responsible for matters that are strategic, far-reaching and unusual in nature, and therefore not part of the company's day-to-day business operations. The CEO, supported by the Corporate Management Team, the members of which are not members of the Board of Directors, is responsible for the company's operational management. The tasks and responsibilities of the different administrative bodies are determined in accordance with the Finnish Limited Liability Companies Act.

Metsä Board's Board of Directors has nine members, two of whom are women. A majority of Board members (five of nine) are independent of both the company and its biggest shareholders. Four members of the Board of Directors are not independent of Metsäliitto Cooperative. During the 2019 financial period, the Board of Directors held a total of 13 meetings, at which the attendance rate of Board members was 100% (2018: 97%).

Metsä Board's Board of Directors has determined the principles applicable to the diversity of the Board. The realisation of the principles is reported on yearly, in the Board's Corporate Governance Statement.

RESOLUTIONS OF THE 2019 ANNUAL GENERAL MEETING

The Annual General Meeting held on 28 March 2019 adopted the company's financial statements for the financial year 2018, and decided to distribute a dividend of EUR 0.10 per share and capital in the amount of EUR 0.19 per share from the reserve for invested non-restricted equity, totalling EUR 0.29 per share.

The Annual General Meeting decided to keep the Board of Directors' annual remuneration unchanged in such a way that the Chair of the Board of Directors is paid annual remuneration of EUR 95,000, the Deputy Chair is paid EUR 80,000 and each member of the Board is paid EUR 62,500, and that a meeting fee of EUR 700 is paid for each meeting of the Board and committees of the Board that a member attends. The Annual General Meeting decided to pay roughly half of the remuneration in the form of the company's B shares acquired through public trading. Furthermore, the Annual General Meeting decided to pay the Chair of the Audit Committee monthly remuneration of EUR 800.

The Annual General Meeting confirmed the number of members of the Board of Directors as nine (9) and elected the following individuals as members of the Board of Directors: Hannu Anttila, M.Sc. (Econ.); Martti Asunta, metsäneuvos (Finnish honorary title); Ilkka Hämälä, M.Sc. (Eng.); Kirsi Komi, LL.M.; Kai Korhonen, M.Sc. (Eng.); Liisa Leino, teollisuusneuvos (Finnish honorary title); Jussi Linnaranta, M.Sc. (Agriculture and Forestry); Juha Niemelä, vuorineuvos (Finnish honorary title); and Veli Sundbäck, ambassador.

At its constitutive meeting, the Board of Directors elected Ilkka Hämälä as its Chair and Martti Asunta as its Vice Chair. The Board members' term of office expires at the end of the next Annual General Meeting.

Further information on the decisions of the Annual General Meeting, the constitution of the Board of Directors, and introductions of the Board members is available on Metsä Board's website at https://www.metsaboard.com/Investors/General-Meeting/Pages/default.aspx#General-meeting.

EVENTS AFTER THE PERIOD

The Finnish Paper Union launched a paper industry strike in Finland on 27 January 2020, which ended on 10 February 2020. The strike affected all Metsä Board's mills in Finland and the pulp mills of its associated company Metsä Fibre. Metsä Board estimates that the strike will have a negative impact on its operating result of approximately EUR 20 million, affecting mainly the first quarter of the year.

OUTLOOK

The total impact of the Paper Union strike on the operating result is approximately EUR 20 million and it will mainly affect the first quarter of 2020.

Growth in the demand for high-quality and ecological paperboards made from fresh fibre is expected to continue in market areas important for Metsä Board.

The market prices of Metsä Board's folding boxboard and white kraftliner in local currencies, and the demand for them, are expected to remain stable.

The supply and demand of long-fibre pulp is expected to remain balanced, and prices are not expected to decline further.

Metsä Board's production costs are expected to remain stable. The mild winter may complicate harvesting and increase wood costs.

BOARD OF DIRECTORS' PROPOSAL FOR DISTRIBUTION OF PROFIT

The distributable funds of the parent company on 31 December 2019 were EUR 545.1 million, of which the retained earnings for the financial year are EUR 227.8 million.

The Board of Directors proposes to the Annual General Meeting, to be held on 26 March 2020 that a dividend of EUR 0.10 per share and a capital distribution from the reserve for invested non-restricted equity of EUR 0.14 per share, totalling EUR 0.24, be paid for the 2019 financial period.

The proposed dividend and capital distribution, totalling EUR 0.24 per share, corresponds with 59% of the result per share for 2019. The amount of dividend and capital distribution total EUR 85.3 million.

The dividend and capital distribution will be paid to shareholders who are registered in the company's shareholders register held by Euroclear Finland Oy on the dividend payment and capital distribution record date of 30 March 2020. The Board of Directors proposes 7 April 2020 as the dividend payment and capital distribution date.

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

EUR million	Note	1–12/2019	1–12/2018
Sales	2.1, 2.2, 7.3	1,931.8	1,944.1
Change in stocks of finished goods and work in progress		3.8	-32.2
Other operating income	2.3, 7.3	51.7	25.6
Materials and services	2.4, 7.3	-1,389.8	-1,374.4
Employee costs	3.	-194.9	-203.1
Share of result of associated company	7.2, 7.3	43.1	124.5
Depreciation, amortization and impairment charges	4.1, 4.2	-113.7	-91.8
Other operating expenses	2.4	-151.1	-146.3
Operating result		180.8	246.3
Share of profit from associated companies and joint ventures	7.2	0.1	0.1
Net exchange gains/losses	5.2	-1.6	-3.1
Other financial income	5.2, 7.3	0.8	0.5
Interest and other financial expenses	5.2, 7.3	-14.6	-19.7
Result before tax		165.6	224.2
Income taxes	6.	-21.0	-20.8
Result for the period		144.6	203.4
Other comprehensive income			
Items that may be reclassified to profit or loss	5.1		
Cash flow hedges	3.4	-3.5	1.2
Translation differences	4.3	-14.7	29.9
Share of profit from other comprehensive income of associated company		0.2	0.2
Income tax relating to components of other comprehensive income		2.8	-5.6
Total		-15.1	25.8
Items that may be reclassified to profit or loss	5.1		
Cash flow hedges		-10.1	10.7
Translation differences		-3.4	-7.6
Share of profit from other comprehensive income of associated company		1.7	-4.0
Income tax relating to components of other comprehensive income		2.2	-2.3
Total		-9.6	-3.1
Other comprehensive income, net of tax		-24.8	22.6
Total comprehensive income for the period		119.8	226.0
Result for the period attributable to			
Shareholders of parent company		144.6	203.4
Non-controlling interest		-	-
		144.6	203.4
Total comprehensive income for the period attributable to			
Shareholders of parent company		119.8	226.0
Non-controlling interest		-	-
		119.8	226.0
Adjusted average number of shares, thousands		355,513	355,513
Basic and diluted earnings per share for result for the period attributable to the share-holders of parent company, EUR		0.41	0.57

The notes are an integral part of these financial statements.

CONSOLIDATED BALANCE SHEET

EUR million	Note	31 DEC 2019	31 DEC 2018
ASSETS			
Non-current assets			
Goodwill	4.1	12.4	12.4
Other intangible assets	4.1	8.8	10.1
Tangible assets	4.2	742.0	753.2
Investments in associated companies and joint ventures	7.2	392.4	411.3
Other investments	4.3, 5.7	255.1	270.1
Other non-current financial assets	5.3	15.2	19.4
Derivative financial instruments	5.7	1.4	9.0
Deferred tax receivables	6.	6.7	5.5
		1,434.0	1,491.0
Current assets			
Inventories	4.4	379.5	365.6
Accounts receivable and other receivables	4.5, 7.3	303.8	304.1
Current income tax receivables		1.7	1.1
Derivative financial instruments	5.7	17.3	12.7
Cash and cash equivalent	5.4, 7.3	134.2	109.7
		836.4	793.2
Total assets		2,270.4	2,284.2
SHAREHOLDERS' EQUITY AND LIABILITIES			
Equity attributable to shareholders of parent company	5.1		
Share capital		557.9	557.9
Translation differences		-29.1	-26.4
Fair value and other reserves		175.5	194.0
Reserve for invested unrestricted equity		315.5	383.1
Retained earnings		318.2	214.4
		1,338.0	1,322.9
Non-controlling interests		0.0	0.0
Total shareholders' equity		1,338.0	1,322.9
Non-current liabilities			
Deferred tax liabilities	6.	105.6	104.5
Post employment benefit obligations	3.4	13.8	13.6
Provisions	4.8	4.2	7.2
Borrowings	5.5, 5.6, 5.7	412.9	342.4
Other liabilities	4.6	1.9	1.9
Derivative financial instruments	5.7	3.1	1.5
		541.5	471.0
Current liabilities			
Provisions	4.8	1.6	4.0
Current borrowings	5.5, 5.6, 5.7	32.0	104.8
Accounts payable and other liabilities	4.7, 7.3	345.4	374.9
Current income tax liabilities		4.2	4.8
Derivative financial instruments	5.7	7.8	1.8
		391.0	490.2
Total liabilities		932.4	961.3
Total shareholders' equity and liabilities		2,270.4	2,284.2

The notes are an integral part of these financial statements.

STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY

EQUITY ATTRIBUTABLE TO SHAREHOLDERS OF PARENT COMPANY

EUR million	Note	Share capital	Translation differences	Fair value and other reserves	Reserve for invested restricted equity	Retained earnings	Total	Non-controlling interest	Total shareholders' equity
Shareholders' equity, 1 Jan 2019		557.9	-26.4	194.0	383.1	214.4	1,322.9	0.0	1,322.9
Result for the period						144.6	144.6		144.6
Other comprehensive income net of tax total	5.1		-2.7	-18.4		-3.6	-24.8		-24.8
Comprehensive income total			-2.7	-18.4		140.9	119.8	0.0	119.8
Share based payments	3.3					-1.6	-1.6		-1.6
Related party transactions									
Dividends and capital distribution	5.1				-67.5	-35.6	-103.1		-103.1
Shareholders' equity, 31 Dec 2019		557.9	-29.1	175.5	315.5	318.2	1,338.0	0.0	1,338.0
Shareholders' equity, 31 December 2017		557.9	-17.8	164.3	383.1	79.9	1,167.4	0.0	1,167.3
IFRS 2 standard amendment						2.9	2.9		2.9
IFRS 9 standard implementation						-0.2	-0.2		-0.2
Shareholders' equity 1 January 2018		557.9	-17.8	164.3	383.1	82.6	1,170.1	0.0	1,170.1
Result for the period						203.4	203.4		203.4
Other comprehensive income net of tax total	5.1		-8.6	29.6		1.6	22.6		22.6
Comprehensive income total			-8.6	29.6		205.0	226.0	0.0	226.0
Share based payments	3.3					1.4	1.4		1.4
Related party transactions									
Dividends paid	5.1					-74.7	-74.7		-74.7
Shareholders' equity, 31 Dec 2018		557.9	-26.4	194.0	383.1	214.4	1,322.9	0.0	1,322.9

The notes are an integral part of these financial statements.

CONSOLIDATED CASH FLOW STATEMENT

EUR million	Note	1–12/2019	1–12/2018
Cash flow from operating activities			
Result for the period		144.6	203.4
Adjustments to the result, total		70.6	5.0
Interest received		0.3	0.1
Interest paid		-16.3	-17.4
Dividends received		63.3	34.9
Other financial items, net		-0.9	2.5
Income tax paid		-18.1	-15.2
Change in working capital		-43.0	-62.4
Net cash flow from operations		200.5	150.9
Cash flow from investing activities			
Acquisition of other shares		0.0	-
Capital expenditure		-94.3	-67.7
Proceeds from disposal of shares in subsidiary, net of cash	7.1	4.2	0.6
Proceeds from disposal of other shares		3.7	0.1
Proceeds from sale of tangible and intangible asets		20.1	10.7
Change in non-current receivables, net		0.1	0.6
Net cash flow from investing		-66.3	-55.8
Cash flow from financing activities			
Proceeds from non-current interest bearing liabilities		150.0	-
Payment of non-current interest bearing liabilities		-155.7	-135.5
Change in current liabilities	5.5	-1.7	1.8
Change in non-current non-interest bearing liabilities, net		-0.2	1.7
Dividend paid and capital distribution		-103.1	-74.7
Net cash flow from financing		-110.6	-206.5
Change in cash and cash equivalents		23.6	-111.4
Cash and cash equivalents at beginning of period		109.7	215.1
Translation adjustments		0.9	6.0
Change in cash and cash equivalents		23.6	-111.4
Cash and cash equivalents at end of period	5.4	134.2	109.7
Adjustments to the result, total			
Taxes		21.0	20.8
Depreciation, amortization and impairment charges		113.7	91.8
Share of result from associated companies and joint ventures		-43.2	-124.6
Gains and losses on sale of non-current assets		-33.3	-10.5
Finance costs, net		15.5	22.3
Post-employment benefit obligations and provisions		-3.5	2.7
Other adjustments		0.5	2.6
Adjustments to the result, total		70.6	5.0
Change in working capital			
Inventories		-15.1	-45.6
Accounts receivables and other receivables		-2.5	-32.6
Accounts payable and other liabilities		-25.4	15.7
Change in working capital		-43.0	-62.4

The notes are an integral part of these financial statements.

Notes to the consolidated financial statements

1. ACCOUNTING PRINCIPLES

METSÄ BOARD GROUP

Metsä Board Corporation and its subsidiaries comprise a forest industry group (”Metsä Board” or ”the Group”). Metsä Board’s business operations consist solely of folding boxboard, fresh fibre linerboard and market pulp businesses. Metsä Board reports on its financial performance in one reporting segment.

Metsä Board Corporation is Group’s parent company, which is domiciled in Helsinki. The registered address of the company is Revontulenpuisto 2, 02100 Espoo Finland. The parent company is listed on Nasdaq Helsinki Ltd. At the end of 2019 Metsäliitto Cooperative owned 45.7 per cent of the shares, and the voting rights conferred by these shares were 66.3 per cent.

A copy of the annual report can be obtained from Metsä Board’s website www.metsaboard.com or parent company’s head office at Revontulenpuisto 2, 02100 Espoo Finland.

The Group consolidated financial statements were authorised for issue by the Board of Directors on 12 February 2020. According to Finnish Companies Act shareholders can accept or reject the financial statements in General Meeting of shareholders after date of publication. General Meeting of shareholders also have possibility to decide to change financial statements.

ACCOUNTING PRINCIPLES

Metsä Board Corporation’s consolidated financial statements have been prepared in accordance with the International Financial Reporting Standards (IFRS), applying the IAS and IFRS standards and SIC and IFRIC interpretations that were effective and approved by the EU at the date of the financial statements 31 December 2019. International Financial Reporting Standards refer to the standards and their interpretations approved for use in the EU by the Finnish Accounting Act and the regulations set out pursuant to it in accordance with the procedure defined in the EU regulation (EC) no. 1606/2002. The notes to the consolidated financial statements also comply with the requirements of Finnish accounting and company legislation supplementing the IFRS regulations.

The consolidated financial statements are presented in millions of euros, unless otherwise noted.

The consolidated financial statements have been prepared based on original acquisition costs, excluding financial assets recognised at fair value, hedged items in fair value hedging, biological assets, assets and obligations related to defined benefit plans and share-based payments measured at fair value.

GOING CONCERN

According to assessment by the management, the Group has sufficient resources to continue as a going concern in the foreseeable future. Consequently, the group has prepared the financial statements on a going concern basis.

NEW STANDARD TO BE APPLIED IN THE 2019 FINANCIAL PERIOD

IFRS 16 LEASES. The new standard replaces IAS 17 and the related interpretations. IFRS 16 requires lessees to recognise lease agreements on the balance sheet as a lease obligation and an asset related to the lease obligation. The recognition on the balance sheet is greatly similar to the accounting treatment of financial leasing pursuant to IAS 17.

As a result of the change, the Group has recognised the operating leases concerning land, property, equipment and vehicles pursuant to the IAS 17 standard on the balance sheet. Exemptions provided in the standard that concern short-term leases and low-value assets are an exception to this. Leases in which the remaining lease term on 1 January 2019 was less than 12 months have been treated as short-term leases. The Group has applied hindsight in determining the lease term when the contract contains options to extend or terminate the lease. The Group has applied the definition of new leases in accordance with the IFRS 16 standard to new and amended contracts signed during or after the transition period. The simplified approach has been applied to the adoption of the standard. The comparative information has not been restated.

In connection to the adoption, liabilities have been determined as the present value of remaining lease payments, which the Group has calculated by using the lessee’s incremental borrowing rate on 1 January 2019 as the discount rate. The right-of-use assets have been measured at the amount of the lease liability, adjusted for any accrued lease payments related to the lease in question which transferred to the balance sheet on 31 December 2018.

RECONCILIATION OF LEASE LIABILITY

EUR million	
Rent and lease commitments arising from operating leases presented in notes to consolidated financial statements 31 Dec 2018 under section 8.1 Contingent liabilities, assets and commitments	16.2
Deduct: short-term lease contracts recognised as expenses on a straight line basis	-0.1
Deduct: lease contracts covering low value ICT equipment recognised as expenses on a straight line basis	-1.8
	14.3
Discounted at Group’s weighted average incremental borrowing rate of 2.17%	12.8
Add: finance lease liabilities recognised at 31 Dec 2018	8.6
Add: Adjustments arising from different treatment of extension options in lease contracts	1.8
Add: Adjustments arising from different treatment of lease contracts with indefinite lease term	2.1
Add: Other adjustments	0.2
Lease liability recognised at 1 Jan 2019	25.5

The change only has a minor effect on the Group’s result key figures. The new rules have an effect on the classification of expenses in the income statement and cash flow statement.

In the income statement the rent costs in January–December (EUR 7.8 million) is recognised as depreciation of right-of-use assets in the operating result (EUR 7.7 million) and as interest expense in financial income and expenses (EUR 0.6 million). In the cash flow statement the amortisations of lease agreement liabilities (EUR 7.1 million) are presented in cash flow arising from financial activities and the interest expenses (EUR 0.6 million) in cash flow from operating activities. Lease liabilities are included in financial liabilities in the balance sheet.

Additional information related to leases on note 4.2.

Other new or amended standards have no effect on Group’s consolidated accounts.

CONSOLIDATION PRINCIPLES

SUBSIDIARIES

In addition to the parent company, Metsäliitto Cooperative, the financial statements include all of the companies controlled by the Group. Intra-Group shareholding is eliminated using the acquisition method. Intra-Group business transactions, receivables, liabilities and unrealised gains, as well as internal distribution of profits, are eliminated on consolidation. Unrealised losses arising from impairment are not eliminated. When necessary, the accounting principles applied by subsidiaries have been adjusted to comply with the Group’s principles.

The parent company’s owners’ and non-controlling interests’ shares of the result for the period and comprehensive income are presented in the comprehensive income statement. The non-controlling interests’ share of equity is presented as a separate item under equity on the balance sheet.

JOINT OPERATIONS

A joint operation is a joint arrangement in which parties who have joint control in the arrangement have rights concerning the assets related to the arrangement and obligations concerning liabilities. The Group consolidates its proportion of the assets, liabilities, income and expenses of the joint operation in its financial statements.

ASSOCIATE COMPANIES AND JOINT VENTURES

Associated companies include all companies over which the Group has considerable influence but no control. Significant influence is usually based on a shareholding conferring 20–50 per cent of the voting rights. A joint venture is a joint arrangement in which the parties that have joint control of the arrangement have rights to its net assets. recognised at cost. The Group’s shares in associated companies and joint ventures also include the goodwill measured at the time of acquisition, less any impairment. The Group’s share of the profits or losses of associated companies and joint ventures is recognised in the income statement.

The Group’s share of the profits or losses of associated companies and joint ventures is recognised in the income statement as a separate line item above the operating result in case of associate company Metsä Fibre and below the operating result in case of other associate companies. Correspondingly, the Group’s share of other comprehensive income in associated companies and joint ventures is recognised in its items of other comprehensive income.

A proportion corresponding to the Group’s shareholding is eliminated from unrealised profits between the Group and its assciate companies and joint ventures. Unrealised losses arising from impairment are not eliminated. When necessary, the accounting principles applied by associated companies and joint ventures have been adjusted to comply with the Group’s principles.

TRANSLATIONS IN FOREIGN CURRENCY

The items included in the financial statements of Group companies are presented in the currency that is used in each company’s primary operating environment. The consolidated financial statements are presented in euros, which is the parent company’s functional and presentation currency.

Business transactions denominated in foreign currencies are recognised in the operating currency using the exchange rate on the transaction date. At the end of the financial period, open receivables and liabilities denominated in foreign currencies are translated into the functional currency using the exchange rate on the balance sheet date. Any gains or losses resulting from transactions in foreign currencies and from the translation of monetary items are recognised in financial income and expenses.

Information about currency hedging is provided in Note 5.6 Management of financial risks.

The income statements of Group companies whose functional currency is not the euro are translated into euros using the average exchange rates of the financial period, and their balance sheets are translated using the exchange rates on the balance sheet date. Changes in translation differences arising from the translation of Group companies’ income statements and balance sheets and from the translation of net investments in foreign entities are recognised in the consolidated comprehensive income statement. In conjunction with divestments of Group companies, either by selling or by dissolving , translation differences accumulated by the time of the divestment are recognised in the income statement as part of the gain or loss from the divestment.

EARNINGS PER SHARE

Undiluted earnings per share are calculated using the weighted average number of shares during the reporting period. In calculating earnings per share adjusted for the effect of dilution, the average number of shares is adjusted for the dilution effect of any equity instruments that have been issued. In calculating earnings per share, earnings are taken to be the reported earnings attributable to the parent company’s shareholders.

OTHER ACCOUNTING PRINCIPLES

Other accounting principles are presented as part of the relevant Notes.

KEY ESTIMATES AND JUDGEMENTS

The preparation of financial statements requires the use of the management’s estimates, assumptions and judgement-based decisions that affect the amount of assets and liabilities, the presentation of contingent assets and liabilities in the financial statements, and the amount of income and expenses. Even though such estimates and assumptions are based on the management’s best knowledge at the time they were made, it is possible that the actual values differ from those used in the financial statements. In terms of the financial statements, the key areas that involve the management’s estimates and judgement-based decisions are presented in the following notes:

Key estimates and judgements	Note
Retirement benefit obligations	3.4 Retirement benefit obligations
Impairment of intangible and tangible assets	4.1 Intangible assets 4.2 Tangible assets
Leases	4.2 Tangible assets
Financial instruments measured at fair value	4.3 Other investments
Valuation of inventories	4.4 Inventories
Valuation of accounts receivable	4.5 Accounts receivable and other receivables
Provisions	4.8 Provisions
Income taxes	6. Income taxes
Contingent liabilities from legal disputes and claims	8.1 Contingent liabilities, assets and commitments

2. PROFITABILITY

2.1 SEGMENT INFORMATION

ACCOUNTING PRINCIPLES

The Corporate Management Team is the chief operational decision-maker monitoring business operations performance based on the operating segments.

Metsä Board's business operations consist solely of folding boxboard, fresh fibre linerboard and market pulp businesses. Metsä Board reports on its financial performance in one reporting segment.

Sales, assets and capital expenditure information by geographical areas is presented in the table below. Geographical sales are reported based on the location of the customer and assets and capital expenditure based on the location of the assets.

GEOGRAPHICAL AREAS

	External sales by location of customer		Non-current assets		Capital expenditure	
EUR million	2019	2018	2019	2018	2019	2018
Germany	154.4	174.2	4.7	3.2	0.1	0.3
Italy	130.1	139.8	0.5	0.0	0.0	0.0
Sweden	108.5	111.3	341.7	362.8	44.8	22.5
Turkey	118.4	103.9	-	-	-	-
Finland	77.7	95.7	1,061.9	1,096.8	53.0	47.3
United Kingdom	85.5	94.2	11.8	12.6	0.0	-
Russia	85.5	83.2	0.3	0.0	0.3	0.0
Spain	74.7	81.8	0.5	0.0	-	0.0
France	65.9	80.8	0.6	0.0	0.2	-
Poland	74.9	75.3	0.1	0.0	0.0	0.0
Norway	43.5	52.0	-	-	-	-
The Netherlands	86.2	48.3	-	-	-	-
Belgium	25.4	24.0	2.0	0.4	0.0	-
Other Europe and Middle East	161.5	243.3	0.0	0.0	-	-
USA	309.4	275.0	1.5	0.4	0.1	0.1
Canada	25.9	23.4	-	-	-	-
Asia	131.8	125.8	0.4	0.2	0.2	0.1
Other countries	172.3	112.1	-	-	-	-
Total	1,931.8	1,944.1	1,425.9	1,476.5	98.9	70.3

Non-current assets include all non-current assets with the exception of derivative financial instruments and deferred tax assets.

PERSONNEL AT YEAR END

By country	2019	2018
Finland	1,414	1,361
Sweden	684	714
Belgium	56	64
Germany	46	50
USA	54	57
China	17	19
Other countries	80	87
Total	2,351	2,352

PERSONNEL AVERAGE

By country	2019	2018
Finland	1,458	1,433
Sweden	710	715
Belgium	58	65
Germany	48	51
USA	55	54
China	25	32
Other countries	80	86
Total	2,433	2,435

There were no customers with revenue exceeding 10 per cent of total Group revenue in 2019 and 2018.

2.2 SALES

ACCOUNTING PRINCIPLES

Performance obligations arising from the Group's sales contracts are mainly order-driven customer deliveries related to the sale of forest industry goods. Services mostly have an ancillary role in the Group's business operations, or they complement deliveries of goods.

The transaction price is the amount that the Group expects to receive in exchange for a fulfilled performance obligation. This amount, less sales-based value added taxes and sales taxes, is presented as the Group's sales. The prices received by the Group are divided into a fixed part and a variable part. The variable part consists of various discounts based on, among other things, payment terms and purchased quantities, and is allocated by the Group as deductions from sales revenue in line with estimates of the extent of the discount the customer is deemed to be entitled to. The Group's sales contracts mostly include obligations solely related to deliveries of goods, to which the allocation of the transaction price is uncomplicated. The terms of payment applied in the Group's sales invoicing vary to some degree geographically and in different business areas, but the term of payment provided is nonetheless always clearly less than a year, when the financing component does not need to be separated.

The Group recognises revenue from the sale of goods in the period during which the control of the delivered products passes to the customer, i.e. when the risks and benefits related to the sold products transfer to the customer. Services are recognised as income over time.

Control to products transfers at the point of time when the products have been delivered in accordance with the agreed term of delivery. The Incoterms 2010 delivery terms most commonly applied by the Group and the corresponding times of sales income recognition are:

D terms: Delivery of goods to the buyer at the agreed destination at the agreed time

C terms: Handing over the goods to be transported to the agreed destination by a carrier arranged for by the seller

F terms: Handing over the goods to a carrier arranged for by the buyer

The Group can agree in a separate written contract with selected customers on so-called bill and hold arrangement, in which the customer becomes the legal owner of goods after the contractually set free warehousing period with related risks and rewards, the customers is granted the control of said goods and the Group will store the goods on customer's behalf as a separately charged warehousing service. Sales revenue from goods covered by a bill and hold arrangement is recognised at the end of the free warehousing period.

The Group sees geographical distribution of sales as decribing best the nature, amount, timing and uncertainty of sales revenue. Sales by geographical regions is presented below based on the location of customers.

GEOGRAPHICAL DISTRIBUTION OF SALES

EUR million	2019	2018
Germany	154.4	174.2
Italy	130.1	139.8
Sweden	108.5	95.7
Turkey	118.4	103.9
Finland	77.7	94.2
United Kingdom	85.5	83.2
Russia	85.5	81.8
Spain	74.7	111.3
France	65.9	80.8
Poland	74.9	75.3
Norway	43.5	48.3
The Netherlands	86.2	52.0
Belgium	25.4	24.0
Rest of EMEA	238.2	265.1
EMEA	1,369.1	1,429.7
USA	309.4	275.0
Canada	25.9	23.4
Rest of Americas	68.2	62.8
Americas	403.5	361.2
APAC	159.3	153.2
Total	1,931.8	1,944.1

2.3 OTHER OPERATING INCOME

EUR million	2019	2018
Gains on disposal	33.4	10.7
Rental income	1.2	1.2
Service revenue	6.0	7.2
Government grants and allowances	0.3	0.7
Scrap and waste sale	0.3	0.2
Other operating income	10.5	5.6
Total	51.7	25.6

In 2019 Metsä Board's disposal gains included a EUR 14.1 million gain from sale emission right sales, a EUR 3.3 million gain from sale of non-operative shares reported as other investments, a EUR 9.0 million gain from sale of Äänevoima Oy shares to Metsä Fibre as well as gain of EUR 5.5 million from sale of non-business related land area.

In 2018 Metsä Board's disposal gains included a EUR 8.3 million gain from sale of emission rights, a valuation gain of EUR 1.8 million from Metsä Board Sverige electricity certificates, EUR 0.3 million gain from translation differences of liquidated subsidiaries as well as EUR 0.2 million gain from asset sales.

The government grants and compensation relate to the compensation for training, healthcare and research costs, insurance indemnities and energy aid.

EMISSION ALLOWANCES

In 2019 the Group received 846 thousand tonnes of emission allowances free of charge (2017: 561). In addition the Group has sold 563 thousand tonnes to the market (498). At balance closing date the group had emission allowances of 922 thousand tonnes (947). Emissions during the reporting period fell below the amount of emission allowances received free of charge and consequently emissions during the year did not have an impact on income statement or balance sheet.

In 2019, the Group sold emission allowances for EUR 14.1 million (10.4). On the balance sheet date, the fair market value of an emission right was EUR 24.93 per tonne (24.63) and total value of owned rights approximately EUR 23.0 million (23.3).

ACCOUNTING PRINCIPLES

The Group has received emission allowances in accordance with the European Union Emissions Trading System. Allowances are treated as intangible assets and are measured at acquisition cost. The acquisition cost of emission allowances received without consideration is zero. Emission allowances are used simultaneously with the carbon dioxide emissions generated during their validity period. Earnings from emission allowances sold are recognised in other operating income. If the emission allowances received without consideration are not sufficient to cover the amount of the actual emissions, the Group purchases additional allowances from the market.

The allowances purchased are recognised in intangible rights at the fair value on the acquisition date. The provision to fulfil the obligation to return the emission allowances is recognised at fair value on the closing date of the reporting period if the emission allowances received without consideration and purchased are not sufficient to cover the amount of the actual emissions.

2.4 OPERATING EXPENSES

ACCOUNTING PRINCIPLES

RESEARCH AND DEVELOPMENT COST

Research costs are recognised as expenses at the time they are incurred. Development costs are capitalised and amortised over their useful lives if the research project is likely to generate financial benefits and the costs can be measured reliably. Metsä Board has not capitalised development costs.

OTHER OPERATING EXPENSES

Other operating expenses include energ y costs, real estate costs, marketing and advertising expenses and administrative costs, among other expenses.

EUR million	2019	2018
Materials and services		
Raw materials and consumables		
Purchases during the financial year	1,103.6	1,160.2
Change in inventories	-9.6	-79.2
External services		
Logistics cost	239.7	237.9
Other external services	56.1	55.5
Total	1,389.8	1,374.4
Employee costs		
Employee costs total	194.9	203.1
Other operating expenses		
Rents and other real estate expenses	10.5	9.8
Purchased services	76.1	68.1
Losses on sale of non-current assets	0.4	0.1
Other operating expenses	64.0	68.3
Total	151.1	146.3

Employee costs are reported in Note 3.1 and information on depreciation, amortisation and impairment charges in Notes 4.1 and 4.2.

The reported rental and other property expenses decreased in 2019 due to the adoption of the IFRS 16 standard (Leases). on 1 January 2019. Note 1 contains further information on the adoption of the standard.

Employee costs for financial year 2018 include a restructuring provision of EUR 4.1 million for Metsä Board Sverige Ab's Husum plant efficiency improvement programme.

Research and development cost during financial year 2019 amounted to EUR 6.4 million and EUR 6.3 million in 2018.

PRINCIPAL AUDITOR FEES

Group's principal auditor is KPMG Oy Ab.

PRINCIPAL AUDITOR FEES

EUR million	2019	2018
Audit	0.4	0.4
Auditors' opinions	0.0	0.0
Tax services	0.0	0.0
Other services	0.0	0.0
Total	0.4	0.4

In 2019 fees to other auditors than KPMG amounted to EUR 0.1 million (2018: 0.04).

3. REMUNERATION

3.1 EMPLOYEE COSTS

EUR million	2019	2018
Wages and salaries	123.4	129.3
Share-based payments	1.7	2.7
Social security costs		
Pension costs		
Defined benefit plans	0.4	0.3
Defined contribution plans	24.6	24.2
Other social security costs	44.9	46.6
	69.8	71.2
Employee costs total	194.9	203.1

Employee costs in 2018 include a cost provision of EUR 4.1 million related to the operational efficiency programme of the Husum mill.

3.2 REMUNERATION PAID TO THE KEY MANAGEMENT

Key management includes members of the Board of Directors as well as Corporate Management Team.

REMUNERATION PAID TO THE KEY MANAGEMENT

EUR	2019	2018
Salaries and other remuneration	2,208,039.91	2,107,980.52
Share-based payments	2,398,896.71	1,963,874.88
Pension costs		
Defined benefit plans	538,994.91	374,106.40
Defined contribution plans	262,578.06	383,289.26
Total	5,408,509.59	4,829,251.06

REMUNERATION PAID TO THE MEMBERS OF THE BOARD OF DIRECTORS OF THE PARENT COMPANY AND THEIR SHAREHOLDING

	Shareholding shares	2019 Renumeration EUR	2018 Renumeration EUR	2019 Defined contribution EUR	2018 Defined contribution EUR
Ilkka Hämälä Chairman, from 27 March 2018	218,797	106,260	103,460	17,249	17,921
Martti Asunta Vice chairman	55,903	91,140	93,940	16,154	17,628
Hannu Anttila (from 27 March 2018)	131,177	74,200	75,600	13,155	13,199
Kari Jordan (until 27 March 2018)			5,600		977
Kirsi Komi	73,012	74,200	74,200	12,050	12,861
Kai Korhonen	209,782	83,800	84,500	14,869	15,918
Liisa Leino	177,657	73,500	76,300	11,936	13,227
Jussi Linnaranta	14,187	73,500	76,300	13,031	14,364
Juha Niemelä	171,657	73,500	76,300		
Veli Sundbäck	62,677	74,200	74,900		
Erkki Varis (until 27 March 2018)			4,200		
Total	1,114,849	724,300	745,299	98,444	106,096

Metsä Board's Annual General Meeting 2019 decided, that about one half of the remuneration will be paid in cash while the other half is paid in company's B shares.

Remuneration of Corporate Management Team consists of fixed monthly salary, annual bonus determined by each Team member position pension benefits and share based incentive schemes. In addition the CEO has a pension benefit.

SALARIES AND REMUNERATION PAID TO THE CEO AND OTHER MEMBERS OF THE CORPORATE MANAGEMENT TEAM

EUR	2019 CEO	2018 CEO	2019 Other Management Team	2018 Other Management Team
Salaries and remuneration				
Basic salary including fringe benefits [1]	511,552	510,397	1,116,592	1,023,773
Short-term performance bonus [2]	218,168	232,933	361,728	340,878
Share-based incentive [3]	604,104	1,022,925	641,564	940,950
Deferred share-based incentive [4] [5]	625,703	0	527,526	0
Total	1,959,527	1,766,254	2,647,410	2,305,601
Pension Costs				
Supplemental defined benefit pension plan	538,995	374,106	0	0
Contribution-based statutory arrangement	77,496	129,711	185,082	253,578
Total	616,491	503,817	185,082	253,578
Salaries and remuneration as well as pension costs in total	2,576,018	2,270,072	2,832,492	2,559,179

1) Basic salary includes a company phone and car benefit, extended healthcare, travel and accident insurance as well as other minor fringe benefits.
2) The 2019 payment concerns performance in 2018; the 2018 payment concerns performance in 2017.
3) 2019: earning period 2016–2018; 2018: earning period 2015–2017.
4) In addition to CEO's long-term rewards paid in 2018, a reward of EUR 868,716 was delayed. Delayed long-term rewards were paid EUR 625,703 in accordance with the conditions of payment in 2019. The payment 2019 also includes long-term rewards delayed in 2017.
5) In addition to other management team's long-term rewards paid in 2018, a reward of EUR 727,822 was delayed. Delayed long-term rewards were paid EUR 527,526 in accordance with the conditions of payment in 2019. The payment 2019 also includes long-term rewards delayed in 2017.

The monthly salary of CEO Mika Joukio is EUR 40,609. The salary includes car and phone benefits and extended insurance cover for travel and accidents. Until 2018, the CEO could, based on a decision by the Board and overall performance, be paid an annual bonus equal to a maximum of seven (7) months' salary. In 2019, the remuneration possibility of the CEO's short-term remuneration scheme was, at the target level, 30%, and at the maximum level, 75% of the fixed annual salary (9 months).

Until 2018, the members of Corporate Management Team could, based on a decision by the Board and overall performance, be paid an annual bonus equal to a maximum of six (6) months' salary. In 2019, the remuneration possibility of the Corporate Management Team's short-term remuneration scheme was, at the target level, 20% or 25 %, and at the maximum level, 50% or 62,5% of the fixed annual salary.

The Board approves the forms and basis of the compensation systems as well as the measures and targets applied. The potential rewards are based on the achievement of the company's financial and strategic goals as well as personal goals.

Share based incentive schemes and the shareholding programme for Corporate Management Team are presented in Note 3.3.

The CEO's mutual term of notice is six months. In case the CEO contract is terminated by the Board of Directors, the CEO is entitled to receive discharge compensation equal to his 12-month salary.

The period of notice for other members of Corporate Management Team is six months. Corporate Management Team members are entitled to additional severance compensation of six month salary in case of employment termination on grounds not related to the affected Management Team member.

The CEO is covered by statutory employee pension scheme. This offers pension benefits based on term of service and renumeration earned as prescribed in applicable legislation. Finnish pension system includes basic salary, bonuses and taxable value of fringe benefits in its definition of remuneration, but excludes stock options and share based compensation. Through supplementary pension arrangements, the CEO is entitled to retire at the age of 62 years. His pension will be equal to 60 per cent of his salary at the time of retirement calculated in accordance with Finnish pension legislation and based on the calculation period of five years immediately preceding retirement. In case the CEO's contract is terminated prior to retirement, the pension earned by the CEO becomes vested.

Excluding the CEO, the Corporate Management Team members have no pension arrangements differing from statutory pensions. Corporate Management Team members are covered by statutory employee pension scheme. This offers pension benefits based on term of service and renumeration earned as prescribed in applicable legislation. Finnish pension system includes basic salary, bonuses and taxable value of fringe benefits in its definition of remuneration, but excludes stock options and share based compensation. The Group has no off balance sheet pension liabilities on behalf of management.

Key management had any loans outstanding from the company or its subsidiaries and there were no guarantees given on behalf of key management.

3.3 SHARE-BASED PAYMENTS

ACCOUNTING PRINCIPLES

Share-based incentive programmes in which the payments are made with equity instruments and cash have been established for the company's top executives. The Group's share-based incentive schemes have been treated in full as arrangements settled in shares. The incentives granted are measured at fair value on the grant date, and recognised as expenses in the income statement and equity evenly over the vesting period.

The effect on profit of the incentive programmes is presented under employee costs.

During the review period, Metsä Board had three active share-based incentive schemes: Share incentive scheme 2014, which company Board of Directors decided to adopt on 6 February 2014, Performance based share incentive scheme 2017–2021 and Retentive share incentive scheme, both of which the company Board of Directors decided to adopt on 10 January 2017, as part of company's incentive and key personnel retention programme.

The effect on consolidated income statement of share-based incentive schemes amounted to EUR 1,719,419 in 2019 (2018: EUR 2,662,719).

SHARE INCENTIVE SCHEME 2014 AND PERFORMANCE BASED SHARE INCENTIVE SCHEME 2017–2021

The schemes offer the participants the possibility to be awarded Metsä Board Corporation's B shares for achieving set goals for three-year periods. Incentive periods are the calendar years 2014–2016, 2015–2017, 2016–2018, 2017–2019, 2018–2020, and 2019–2021. The bonus awarded under the share incentive scheme is determined by achievement of the set goals and paid in March following the incentive period. In addition to shares, the bonus includes a cash component, which is used to cover taxes and tax-like charges incurred by plan participants due to the bonus.Where key person's employment is terminated during the restriction period, he/she is principally obliged to return the shares already earned.

Based on attainment of criteria set for incentive period 2016–2018, 131,792 Metsä Board Corporation's B shares were paid to plan participants together with the cash component to cover taxes and tax-like charges incurred at the point of share transfer.

The company changed the terms of the scheme during 2016 so that for incentive periods 2014–2016 and 2015–2017 a cap was set for total employee compensation, including the share incentive paid, based on each plan participant's salary. The part of earned incentive exceeding the cap is deferred and paid in full in cash in coming years when allowed by the cap. Starting from vesting period 2016–2018, a salary based cap was set with the effect of cutting the part of share incentive exceeding the cap and resulting in the forfeiture of the excess part of the incentive. On balance sheet date, the deferred compensation for periods 2014–2016 and 2015–2017 reflects the value of deferred compensation and interest accrued thereon to be paid later when the employment criterion is fulfilled

RETENTIVE SHARE INCENTIVE SCHEME 2017–2021

The scheme offers the participants the possibility to be awarded Metsä Board Corporation's B shares, provided that the participant's employment contract remains in force and continues to do so until the end of the retention period. The scheme has retention periods of 12–36 months. As a rule, the incentive is forfeited, if the participant's employment is terminated during the retention period.

Key characteristics of Share incentive scheme 2014 are summarised in the table below:

31 Dec 2019	2014–2016	2015–2017	2016–2018	Total
Key characteristics				
Shares allocated to the scheme, shares	427,500	427,500	266,250	1,121,250
Grant date(s)	17.3.2014, 10.6.2014, 1.11.2016	27.2.2015, 1.11.2016	18.4.2016, 1.11.2016, 7.9.2017	
Criteria	Equity ratio, ROCE, EBIT multiplier	Equity ratio, ROCE, EBIT multiplier	Equity ratio, ROCE, EBIT	
Personnel (31 December 2019)				14
Factors used to determine fair value (EUR) [1]				
Share price at grant date	3.37	5.85	5.60	
Share fair value at grant date	2.90	5.12	4.94	
Annual dividend assumption in fair value measurement	0.10	0.14	0.22	
Share price at payment date / balance sheet date	6.31	7.46	5.12	
Fair value on balance sheet date	-	-	1,472,627	1,472,627
Effect on result and financial position (EUR)				
Expense in 2019, share-based payments settled as equity	0	576 704	352,166	928,870
Share-based payments settled in cash, unpaid part, estimate	188,916	1,299,254	0	1,488,170
Number of shares 1 January 2019 [2]				
Outstanding at the beginning of the period	0	250,516	207,222	457,738
Changes during the year				
Shares granted	0	0	0	0
Shares forfeited	0	0	0	0
Shares exercised	0	250,516	0	250,516
Shares expired	0	0	75,430	75,430
Number of shares 31 December 2019				
Outstanding at the end of the period	0	0	131,792	131,792

1) The fair value of the share settled component at the grant date was the share price of Metsä Board Corporation's B share less any dividends estimated by analyst consensus to be paid before the payment of the incentive. From 1 January 2018 following the implementation of IFRS 2 standard changes, the fair value of the part of compensation to be settled in cash equals that of the part settled in equity. The fair value of the share based payment is recognised to the number of shares based on the best available estimate of the total incentive to which the participants are expected to be entitled.

2) The amounts in the table represent net amounts, i.e. the number of shares to be given based on the share based payment schemes. In addition, the payment will include a cash settled component used to cover taxes and tax-like charges.

Key characteristics of Performance based share incentive scheme and Retentive share incentive scheme 2017–2021 are summarised in the table below:

	Performance based share incentive scheme 2017–2021			Retentive share incentive scheme 2017–2021	
31 Dec 2019	**2017–2019**	**2018–2020**	**2019–2021**	**2018–2020**	**Total**
Key characteristics					
Shares allocated to the scheme, shares	269,167	275,278	280,694	10,000	835,139
Grant date(s)	6.4.2017, 7.9.2017	9.4.2018, 25.9.2018	2.4.2019, 13.6.2019, 12.8.2019	25.9.2018	
Criteria	Equity ratio, ROCE ja EBIT	Equity ratio, ROCE ja EBIT	Equity ratio, ROCE ja EBIT	Employment requirement	
Personnel (31 December 2019)					24
Factors used to determine fair value (EUR) [1]					
Share price at grant date	6.37	8.64	5.82	8.65	
Share fair value at grant date	5.92	7.84	5.20	8.12	
Annual dividend assumption in fair value measurement	0.23	0.27	0.31	0.27	
Share price at payment date / balance sheet date	5.12	5.12	6.00	6.00	
Fair value on balance sheet date	2,279,826	2,739,570	401,201	175,530	5,596,127
Effect on result and financial position (EUR)					
Expense in 2019, share-based payments settled as equity	258,354	382,972	62,292	86,932	790,549
Share-based payments settled in cash, unpaid part, estimate	1,290,746	1,135,811	253,862	69,702	2,750,121
Number of shares 1 January 2019 [2]					
Outstanding at the beginning of the period	249,723	261,389	0	10,000	521,112
Changes during the year					
Shares granted	2,188	5,938	280,694	0	288,820
Shares forfeited	7,187	10,938	0	0	18,125
Shares exercised	0	0		0	0
Shares expired	0	0		0	0
Number of shares 31 December 2019					
Outstanding at the end of the period	244,724	256,389	280,694	10,000	791,807

[1] The fair value of the share settled component at the grant date was the share price of Metsä Board Corporation's B share less any dividends estimated by analyst consensus to be paid before the payment of the incentive. From 1 January 2018 following the implementation of IFRS 2 standard changes, the fair value of the part of compensation to be settled in cash equals that of the part settled in equity. The fair value of the share based payment is recognised to the number of shares based on the best available estimate of the total incentive to which the participants are expected to be entitled.

[2] The amounts in the table represent net amounts, i.e. the number of shares to be given based on the share based payment schemes. In addition, the payment will include a cash settled component used to cover taxes and tax-like charges.

3.4 RETIREMENT BENEFIT OBLIGATIONS

ACCOUNTING PRINCIPLES

The Group's arrangements concerning benefits following the termination of employment are either defined benefit pension plans or defined contribution pension plans. A defined contribution plan is a pension arrangement in which fixed contributions are made to a separate unit, and the Group does not have legal or constructive obligations to make additional contributions if the fund has insufficient funds to pay all benefits to all employees in accordance with its obligations in the future. All arrangements that do not meet these requirements are considered to be defined benefit plans. A defined benefit plan defines the pension benefit that the employee will receive upon retiring , the amount of which depends on factors including the employee's age, years of service and salary level, for example.

With defined benefit plans, the current value of the obligations on the end date of the reporting period, less the fair value of the assets included in the arrangement, is recognised on the balance sheet as a liability. The amount of the obligation arising from the plan is based on annual calculations by independent actuaries using the projected unit credit method. The current value of the obligation is determined using the interest rate equalling the interest rate of high-quality bonds issued by the companies as the discount rate for the estimated future cash flows. The bonds used in determining the interest rate have been issued in the same currency as the benefits to be paid, and their maturity is approximately the same as that of the corresponding pension obligation.

Actuarial gains and losses from experience verifications and changes in actuarial assumptions are recognised through items of other comprehensive income as a reimbursement or charge in equity for the period during which they have been incurred. Past service costs are recognised immediately through profit and loss.

Apart from contributions related to pension insurance, the Group does not have any other payment obligations in defined contribution plans. Obligation-based payments are allocated as expenses in accordance with accrual accounting.

KEY ESTIMATES AND JUDGEMENTS

The determination of the current value of pension obligations arising from defined benefit plans and the items to be recognised as expenses during the financial period is based on the use of actuarial assumptions, which involves management judgement. The actuarial assumptions used may differ significantly from the actual results, due to changes in economic conditions or the employment relationships of the people covered by the arrangements. Significant differences between the assumptions and actual results may affect the amount of the pension obligation and the value of items to be recognised as expenses.

POST-EMPLOYMENT BENEFITS

EUR million	2019	2018
Liabilities recognised in balance sheet		
Defined benefit pension plans	13.5	12.9
Defined contribution pension plans	0.2	0.6
Total	13.8	13.6
Surplus of funded plans in assets	-12.1	-16.3

DEFINED BENEFIT PENSION PLANS

The most significant defined benefit pension plans are in Germany, United Kingdom and Finland.

Group's German defined benefit pension plans grant old-age pensions, disability pensions and family pensions exceeding the statutory pension level to eligible officials and senior management. The retirement age is usually 65 years, and the amount of pension depends on the length of service. Officials and senior management are required to have a service history of 25–30 years to receive a full pension. Some of the pension arrangements are closed. The defined benefit plans in Germany are unfunded.

The defined benefits plans in United Kingdom guarantee participants of the plan a pension, the amount of which is based on the length of service and the salary in the most recent working years. The arrangement is closed to new members. The assets in the arrangement have been invested in funds that are managed in accordance with local guidelines and practice. Funds administered by third parties pay the benefits to the eligible recipients. The Group participates actively in the activities of the pension trust's investment committee.

In Finland, the Group has additional pension arrangements that qualify as defined benefit plans. Metsäliitto Employees' Pension Foundation have granted old-age pensions, disability pensions and family pensions exceeding the statutory pension level to some of its officials. The insurance operation of the Metsäliitto Employees' Pension Foundation was transferred to OP Life Assurance Company Ltd. on 31 December 2019. The Group remains responsible for addressing future TyEL index increases related to pensions.

The Group also has defined benefit plans in Belgium and Italy.

AMOUNTS IN BALANCE SHEET

EUR million	2019	2018
Present value of funded obligations	56.9	46.1
Fair value of plan assets	-67.5	-60.8
Deficit (+) / surplus (-)	-10.5	-14.6
Present value of unfunded obligations	11.9	11.3
Deficit (+) / surplus (-) of defined benefit pension plans, total	1.4	-3.3
Defined benefit-based pension liabilities on the balance sheet, net	13.5	12.9
Defined benefit-based pension assets on the balance sheet, net	-12.1	-16.3

CHANGE IN DEFINED BENEFIT PENSION OBLIGATIONS IN 2019

EUR million	Present value of obligation	Fair value of plan assets	Total
1 Jan 2019	57.4	-60.8	-3.3
Current service cost	0.4	-	0.4
Administrative costs	-	0.0	0.0
Interest expense (+) or interest income (-)	1.4	-1.7	-0.3
Past service cost			
Total amount recognised in profit and loss	1.8	-1.7	0.1
Remeasurements in other comprehensive income			
Return on plan assets, excluding amounts included in interest income or expense	-	-7.2	-7.2
Gains (-) and losses (+) from change in demographic assumptions	-0.8	-	-0.8
Gains (-) and losses (+) from change in financial assumptions	9.4	-	9.4
Experience gains (-) and losses (+)	2.3	-	2.3
Total remeasurements in other comprehensive income	10.9	-7.2	3.7
Translation differences	1.7	-2.3	-0.7
Contributions			
Employers	-	2.2	2.2
Plan participants	0.0	0.0	0.0
Payments from plans			
Benefit payments	-2.9	2.3	-0.6
Settlements	-	-	-
31 Dec 2019	68.9	-67.5	1.4

CHANGE IN DEFINED BENEFIT PENSION OBLIGATIONS IN 2018

EUR million	Present value of obligation	Fair value of plan assets	Total
1 Jan 2018	62.3	-63.6	-1.4
Current service cost	0.3	-	0.3
Administrative costs	-	0.0	0.0
Interest expense (+) or interest income (-)	1.3	-1.4	-0.2
Past service cost	-	-	-
Total amount recognised in profit and loss	1.6	-1.4	0.2
Remeasurements in other comprehensive income			
Return on plan assets, excluding amounts included in interest income or expense	-	2.0	2.0
Gains (-) and losses (+) from change in demographic assumptions	-0.1	-	-0.1
Gains (-) and losses (+) from change in financial assumptions	-4.5	-	-4.5
Experience gains (-) and losses (+)	1.4	-	1.4
Total remeasurements in other comprehensive income	-3.2	2.0	-1.2
Translation differences	-0.3	0.4	0.1
Contributions			
Employers	-	-0.3	-0.3
Plan participants	0.0	0.0	-
Payments from plans			
Benefit payments	-2.8	2.2	-0.6
Settlements	-0.1	-	-0.1
31 Dec 2018	57.4	-60.8	-3.3

DEFINED BENEFIT PENSION OBLIGATION AND PLAN ASSETS BY COUNTRY IN 2019

EUR million	Germany	United Kingdom	Finland	Other countries	Total
Present value of obligation	11.0	42.0	12.4	3.5	68.9
Fair value of plan assets	-	-53.7	-11.9	-1.9	-67.5
Total	11.0	-11.7	0.5	1.6	1.4

DEFINED BENEFIT PENSION OBLIGATION AND PLAN ASSETS BY COUNTRY IN 2018

EUR million	Germany	United Kingdom	Finland	Other countries	Total
Present value of obligation	10.4	31.6	12.2	3.3	57.4
Fair value of plan assets	-	-44.2	-14.9	-1.6	-60.8
Total	10.4	-12.6	-2.8	1.7	-3.3

SIGNIFICANT ACTUARIAL ASSUMPTIONS 2019

	Germany	United Kingdom	Finland	Belgium
Discount rate, %	0.82	2.00	0.56	1.50
Salary growth rate, %	3.00	2.10	0.00	1.00
Pension growth rate, %	1.75	3.10	1.37	1.50

SIGNIFICANT ACTUARIAL ASSUMPTIONS 2018

	Germany	United Kingdom	Finland	Belgium
Discount rate, %	1.68	3.20	1.62	1.50
Salary growth rate, %	3.00	2.40	0.00	1.00
Pension growth rate, %	1.75	3.40	1.66	1.50

SENSITIVITY OF BENEFIT OBLIGATION TO CHANGES IN ESSENTIAL WEIGHTED ASSUMPTIONS 2019

		Impact on benefit obligation	
	Change of assumption	Increase	Decrease
Discount rate	0,5 %-points	6,8 % decrease	7,0 % increase
Salary growth rate	0,5 %-points	0,5 % increase	0,4 % decrease
Pension growth rate	0,5 %-points	5,4 % increase	5,3 % decrease

	One year increase in assumption	One year decrease in assumption
Life expectancy	3,4 %:n increase	3,3 % decrease

The aforementioned sensitivity analyses are based on a situation where all other assumptions remain unchanged when one assumption changes. The sensitivity of a defined benefit obligation to changes in significant actuarial assumptions has been calculated using the same method as is used in calculating the pension obligation entered in the balance sheet.

PLAN ASSETS ARE COMPRISED AS FOLLOWS:

	2019 EUR million	2019 %	2018 EUR million	2018 %
Equity instruments	-	-	5.4	9%
Debt instruments	-	-	6.0	10%
Qualifying insurance policies	1.9	3%	1.6	3%
Cash and cash equivalents	0.1	0%	0.3	0%
Investment funds	53.6	79%	47.4	78%
Funds held by Insurance company	11.9	18%	-	-
Total	67.5	100%	60.8	100%

Assets 31 December 2019 included in the pension arrangements included Metsäliitto Cooperative's participations with a fair value of EUR 0.0 million and Metsä Board Corporation's B shares with a fair value of EUR 1.5 million.

Defined benefit plans expose the Group to several different risks, the most considerable being as follows:

VOLATILITY OF ASSETS

The Group works to reduce investment risk by diversifying the assets in the arrangement to different asset types. However, the Group believes that equity investments offer the best yield in the long run with acceptable risk and that is why a considerable portion of the assets consists of equity investments. The plan assets have been diversified through direct holdings or mutual funds also to other asset types, such as property, government bonds as well as corporate bonds.

CHANGES IN THE RETURN ON BONDS

Liabilities arising from the arrangements have been calculated using a discount rate based on the return on high-quality corporate bonds. A decline in the discount rate increases the arrangements' liabilities.

INFLATION RISK

The plan's benefit obligations are linked to inflation and a higher inflation will lead to increased obligation.

LIFE EXPECTANCY

The majority of the arrangement obligations arises from generating lifetime benefits for members, so the expected increase in life expectancy will increase the arrangement obligations.

The contribution made to post-employment defined benefit plans is expected to be EUR 0.9 million in 2020. The weighted average duration of the defined benefit obligation is 15.7 years (15.2).

4. CAPITAL EMPLOYED

4.1 INTANGIBLE ASSETS

ACCOUNTING PRINCIPLES

GOODWILL

Goodwill arising from the merging of business operations is recognised as the amount by which the sum of the consideration paid, the non-controlling interests' share in the object of the acquisition and the previous holding exceed the fair value of the acquired net assets.

Goodwill is not amortised. Instead, it is tested for impairment annually and always when there is an indication of a decrease in value. Goodwill is therefore allocated to cash-generating units for impairment testing. Goodwill is recognised at original acquisition cost less accumulated impairment losses.

OTHER INTANGIBLE ASSETS

Intangible assets are initially recognised at their original acquisition cost on the balance sheet if the acquisition cost can be determined reliably and it is probable that the expected financial benefit from the asset will be to the benefit of the Group.

Intangible assets with limited useful lives are recognised as expenses over their known or estimated useful lives, using the straight-line depreciation method.

The residual value of an asset, the useful life and depreciation method are reviewed at least annually, at the end of each financial period, and adjustments are made when necessary to reflect changes in the expected financial benefit of the asset.

COMPUTER SOFTWARE

Costs arising from developing and building of significant new computer software are recognised as intangible assets on the balance sheet and depreciated on a straight-line basis over its estimated useful life, which is not to exceed seven years. Maintenance and operating costs related to computer software are recorded as expenses in the reporting period during which they have been incurred.

OTHER

The cost of patents, licences and trademarks with finite useful lives are capitalised on the balance sheet under intangible assets and depreciated on a straight-line basis over their useful lives of 5–10 years.

EUR million	Goodwill	Other intangible assets	Construction in progress	Total
Acquisition cost, 1 Jan 2019	12.4	136.6	0.9	149.9
Translation differences		-0.1	-	-0.1
Increases		1.0	0.5	1.5
Decreases		-6.9	-	-6.9
Transfers between asset categories		0.0	0.0	0.0
Acquisition cost, 31 Dec 2019	12.4	130.5	1.4	144.3
Accumulated amortisation and impairment charges, 1 Jan 2018	-	-127.4		-127.4
Translation differences	-	0.1		0.1
Accumulated amortisation on decreases and transfers	-	6.8		6.8
Amortisation for the period	-	-2.5		-2.5
Impairment charges for the period	-	-		-
Accumulated amortisation and impairment charges, 31 Dec 2018	-	-123.1		-123.1
Book value, 1 Jan 2019	12.4	9.2	0.9	22.5
Book value, 31 Dec 2019	12.4	7.4	1.4	21.2

EUR million	Goodwill	Other intangible assets	Construction in progress	Total
Acquisition cost, 1 Jan 2018	12.4	137.8	0.8	151.0
Translation differences	-	-0.3	0.0	-0.3
Increases	-	0.4	0.6	1.0
Decreases	-	-1.8	0.0	-1.8
Transfers between asset categories	-	0.5	-0.5	-
Acquisition cost, 31 Dec 2018	12.4	136.6	0.9	149.9
Accumulated amortisation and impairment charges, 1 Jan 2018	-	-124.4		-124.4
Translation differences	-	0.2		0.2
Accumulated amortisation on decreases and transfers	-	-0.4		-0.4
Amortisation for the period	-	-2.8		-2.8
Impairment charges for the period	-	-		-
Accumulated amortisation and impairment charges, 31 Dec 2018	-	-127.4		-127.4
Book value, 1 Jan 2018	12.4	13.3	0.8	26.6
Book value, 31 Dec 2018	12.4	9.2	0.9	22.5

No impairments were recorded for intangible assets during the current or previous financial year.
Other intangible assets include among other things computer software, patents and licenses. Metsä Board has not capitalised development expenditure.

IMPAIRMENT TESTING

Depreciation is not recognised for assets with indefinite useful lives. Instead, such assets are tested for impairment annually. Assets that are subject to depreciation are always tested for impairment when events or changes in conditions indicate that it is possible that the monetary amount corresponding to the book value of the assets might not be recoverable.

Cash-generating units are reporting segments or smaller units for which a utility value can be defined.

The recoverable amount is the higher of the fair value of an asset less the cost of sale, and its value in use. Value in use is the estimated future net cash flows, discounted to their present value, expected to be derived from said asset or cash-generating unit.

An impairment loss is recognised if the carrying amount of the asset is higher than its recoverable amount. If the impairment loss concerns a cash-generating unit, it is first allocated to decrease the goodwill of the cash-generating unit, and thereafter to decrease the other assets of the unit on pro-rata basis. In connection with the recognition of the impairment loss, the useful life of the depreciated asset is re-evaluated. An impairment loss recognised for an asset other than goodwill is reversed if a change has taken place in the estimates used to determine the recoverable amount of the asset. However, the maximum reversal of an impairment loss amounts to no more than the carrying amount of the asset if no impairment loss had been recognised. An impairment loss recognised on goodwill is not reversed under any circumstances.

KEY ESTIMATES AND JUDGEMENTS

Future cashflows

The recoverable amounts of cash-generating units are based on calculations of value in use. The management's key estimates in the calculations concern the product price developments, delivery volumes, currency exchange rates, capacity utilisation rates, and the development of costs related to key raw material costs and other costs, as well as the discount rate.

Discount rate

The discount rate used is the weighted average cost of capital (WACC). When calculating the WACC, the cost of debt takes into account the market-based view of the credit risk premium. Both future cash flows and the discount rate are calculated after tax, which means that the established discounted cash flows and values in use are before tax.

TESTING PRINCIPLES

Metsä Board carries out impairment testing at least once a year, during the fourth quarter and based on the situation as of 30 September. Additionally, a sensitivity analysis is performed quarterly. Full impairment test is initiated if sensitivity analysis indicates possible impairment. Audit Committee reviews the results of sensitivity analyses and impairment testing quarterly.

In 2019, the Group did not recognize impairments based on impairment testing.

The carrying values of asset items or cash generating units are evaluated for possible impairment. Cash-generating units are operating segments or smaller units for which a recoverable amount can be determined. In 2019 testing , the cash-generating units are Folding boxboard, Liner, and Market Pulp. The cash generating units are the same as in 2018 testing.

If there are indications of impairment of an asset item or cash-generating unit, or if the unit's carrying amount includes or it has been allocated goodwill, the recoverable amount of the asset or cash-generating unit is measured. The recoverable amount of the asset or cash-generating unit is the value in use based on future cash flows, or fair value less cost to sell. In 2019 testing , all recoverable amounts are based on the value in use of cash-generating units.

The recoverable cash flows for the cash-generating units under testing are based on five-year forecasts with subsequent cash flows expected to grow at a constant rate.

The key testing assumptions are Metsä Board management's estimates and projections as well as third party forecasts. The key factors affecting the projections are development of average paper and board prices, delivery volumes, foreign exchange rates, and capacity utilisation rates, cost development of key raw materials such as wood, pulp, chemicals and energ y, the development of personnel costs and other fixed costs as well as the discount rate. The key factors affecting estimates are similar to those used in 2018 testing.

Metsä Board's share of Metsä Fibre's recoverable amounts, carrying amount and goodwill included in "Investment in associated companies and joint ventures" (EUR 45.2 million) and other assets with indefinite useful life (brands), which are not amortised (EUR 5.6 million) is allocated to cash generating units in the proportion of their pulp purchases.

For the situation on 30 September 2019 and for previous goodwill impairment tests, the cash flows subsequent to the 5-year projected cash flows are based on a 1.5 (2018: 2) per cent fixed annual growth rate. Average values for the key assumptions (price, variable costs) during the projection period have been used as initial point for the cash flows following the forecast period. The fixed costs are based on the projected costs for the fifth year.

The discount rate used is Metsä Board's Weighted Average Cost of Capital (WACC). When calculating WACC, the cost of debt takes into account market based view of Metsä Board's risk premium. For testing carried out based on status at 30 September 2019, the WACC after taxes was 5.56 per cent (2018: 6.01) and for Metsä Fibre 5,54 per cent (6.13). Management's view is that the risk factors regarding future cash flows do not differ materially from one cash-generating unit to another.

The goodwill impairment test results are evaluated by comparing the recoverable amount (V) with the carrying amount of the cash-generating unit (B). The most important cash-generating units of Metsä Board Group, the goodwill and brands allocated to them their testing result as of 30 September 2019.

Cash-generating unit	Goodwill EUR million	Brand EUR million	Test result (V-B) / B
Folding boxboard [1]	29.7	2.5	over 50%
Liner [1]	27.9	3.0	over 50%
Market pulp [1]	0.0	-	over 50%
Total	57.6	5.6	

[1] Goodwill includes the goodwill from Metsä Board's holding in Metsä Fibre (EUR 45.2 million). Goodwill from the holding as well as other assets with indefinite useful life (EUR 5.6 million) are shown under "Investments in associated companies and joint-ventures" in balance sheet.

4.2 TANGIBLE ASSETS

ACCOUNTING PRINCIPLES

Property, plant and equipment are measured at acquisition cost less accumulated depreciation and impairment losses.

The acquisition cost includes costs that are directly incurred in the acquisition of an item of property, plant or equipment. Qualifying external borrowing costs resulting directly from the acquisition, construction or manufacture of an item of property, plant or equipment are capitalised as part of the acquisition cost of property, plant and equipment.

If a piece of property, plant or equipment consists of several components with differing useful lives, each component is handled as a separate item. In that case, the expenses related to replacing the component are capitalised, and any book value remaining at the time of replacement is derecognised on the balance sheet.

Spare parts, spare equipment and maintenance supplies are recognised in property, plant and equipment when they fulfill the criteria for recognition of property, plant and equipment. Otherwise, such commodities are classified as inventories.

Significant investments in refurbishments and improvements are capitalised on the balance sheet and depreciated over the remaining useful life of the main asset related to such investments.

Repair and maintenance costs are recognised as expenses when they are incurred.

Property, plant and equipment is depreciated on a straight-line basis over the estimated useful lives. Depreciation is not recognised for owned land and water.

Estimated useful lives

Buildings and constructions	20–40 years
Machinery and equipment	
Heavy power plant machinery	20–40 years
Other heavy machinery	15–20 years
Lightweight machinery and equipment	5–15 years
Other tangible assets	5–20 years

The residual value of an asset, the financial useful life and depreciation method are reviewed at least annually, at the end of each financial period, and adjustments are made when necessary to reflect changes in the expected financial benefit of the asset.

Gains and losses arising from the sale and decommissioning of items of property, plant and equipment are recognised in other operating income and expenses. Sales gains or losses are calculated as the difference between the sales price and the remaining acquisition cost.

Government grants related to the acquisition of assets are presented as adjustments of the acquisition cost on the balance sheet and recognised as income in the form of lower depreciation during the useful life of the asset.

LEASES

At the beginning of 2019, the Group adopted the new IFRS 16 (Leases) standard.

The Group has leased various land areas, properties, equipment and vehicles. When the leased asset is available for the Group's use, the right-of-use item and the corresponding liability of the lease is recognised. Paid rents are divided into liabilities and finance costs. The finance cost is included in profit or loss over the lease term in such a way that the interest rate of the remaining debt balance is the same during each period. The right-of-use asset is subject to straight-line depreciations over the asset's economic life or the lease term, depending on which of them is shorter.

Assets and liabilities arising from leases are initially measured at the present value. Lease liabilities include fixed payments, less any lease incentives receivable; amounts expected to be payable by the lessee under residual value guarantees; the exercise price of a purchase option if the lessee is reasonably certain to exercise that option; and payments of penalties for terminating the lease, if the lease term reflects the lessee exercising an option to terminate the lease. The lease payments are discounted using the interest rate implicit in the lease, if that rate can be readily determined, or the Group's incremental borrowing rate. Right-of-use assets are measured at cost, which includes the amount of the initial measurement of the lease liability; any lease payments made at or before the commencement date, less any lease incentives received; any initial direct costs incurred; and any costs incurred by restoring the site on which it is located.

Some of the leases include options to extend or terminate, which are largely available only for the Group, not the lessor.

Payments related to short-term leases or leases where the value of the underlying asset is low are recognised as costs on a straight-line basis. A lease with a lease term of 12 months or less is considered a short-term lease. Assets of a low value include mainly ICT and office equipment.

Note 1 includes further information on the adoption of the IFRS 16 standard.

KEY ESTIMATES AND JUDGMENTS

LEASES

When determining the lease term, the management accounts for all relevant facts and circumstances that create an economic incentive to exercise the option to extend the lease, or not to exercise the option to terminate the lease. Options to extend the lease (or the time subsequent to an option to terminate) are accounted for in the lease term only if the extension of the lease (or the decision not to terminate the lease) is reasonably certain. The possible future cash flows of EUR 1.3 million have not been included in the lease liability because the extension of the lease (or the decision not to terminate it) is not reasonably certain. The Group will conduct a reassessment upon the occurrence of either a significant event or a significant change in circumstances that is within the control of the lessee and affects the assessment.

	Land and water areas		Buildings and constructions		Machinery and equipment	
EUR million	**Owned**	**Leased**	**Owned**	**Leased**	**Owned**	**Leased**
Acquisition cost, 1 Jan. 2019	12.7		396.1		2,528.1	
Translation differences	0.0	0.0	-2.2	0.0	-23.2	0.0
Adoption of IFRS 16 standard		2.5		10.4		4.0
Additions	2.3	0.0	6.2	0.4	29.8	3.6
Acquisitions	0.0		0.0	0.0	-126.6	-0.5
Decrease	-0.4		-9.3	0.0	8.8	9.1
Transfers between items	0.0		1.0	0.0		47.9
Acquisition cost, 31 Dec. 2019	14.6	2.5	391.8	10.9	2,416.9	16.2
Accumulated depreciation and impairment charges 1 Jan. 2019	-0.5		-267.4		-1,950.3	
Translation differences	0.0		1.6	0.0	16.2	0.0
Accumulated depreciation on deductions and transfers	0.0		7.8		120.9	0.0
Depreciation for the period		-0.3	-7.0	-2.3	-76.1	-5.1
Impairments			-2.3		-16.8	
Accumulated depreciation and impairment charges 31 Dec. 2019	-0.5	-0.3	-267.3	-2.3	-1,906.2	-5.1
Book value, 1 Jan. 2019	12.2	0.0	128.7	0.0	577.8	0.0
Book value, 31 Dec. 2019	14.2	2.2	124.5	8.5	510.7	11.1

	Other tangible assets	Construction in progress	Total	Total	
EUR million	**Owned**	**Owned**	**Owned**	**Leased**	**Total**
Acquisition cost, 1 Jan. 2019	22.1	26.2	2 985.2	0.0	2 985.2
Translation differences	-0.2	0.4	-25.2	0.0	-25.2
Adoption of IFRS 16 standard			0.0	16.9	16.9
Additions	1.4	53.7	93.4	4.1	97.4
Decrease	-0.1	0.0	-136.3	-0.5	-136.8
Transfers between items	1.4	-19.4	-8.2	9.1	0.9
Acquisition cost, 31 Dec. 2019	24.6	60.9	2 908.9	29.6	2 938.5
Accumulated depreciation and impairment charges 1 Jan. 2019	-13.8	0.0	-2 232.0	0.0	-2 232.0
Translation differences	0.1		18.0	0.0	17.9
Accumulated depreciation on deduction and transfers	0.1		128.7	0.0	128.7
Depreciation for the period	-1.2		-84.4	-7.7	-92.1
Impairments			-19.1		-19.1
Accumulated depreciation and impairment charges 31 Dec. 2019	-14.8	0.0	-2 188.8	-7.7	-2 196.5
Book value, 1 Jan. 2019	8.3	26.2	753.2	0.0	753.2
Book value, 31 Dec. 2019	9.8	60.9	720.1	21.8	742.0

EUR million	Land and water areas	Buildings	Machinery and equipment	Other tangible assets	Construction in progress	Total
Acquisition cost, 1 Jan. 2018	12.5	413.6	2,550.6	36.7	23.7	3,037.1
Translation differences	0.0	-4.9	-50.7	-1.1	-0.3	-57.0
Increase	0.4	1.9	47.8	3.0	16.2	69.3
Decrease	-0.1	-16.8	-30.8	-16.6	0.0	-64.3
Transfers between items	0.0	2.3	11.2	-	-13.5	0.0
Acquisition cost, 31 Dec. 2018	12.7	396.1	2,528.1	22.1	26.2	2,985.2
Accumulated depreciation and impairment charges 1 Jan. 2018	-0.5	-280.9	-1,936.9	-30.3	-	-2,248.6
Translation differences	-	3.7	36.8	0.9	-	41.4
Accumulated depreciation on deduction and transfers	-	16.8	30.8	16.6	-	64.1
Depreciation for the period	-	-7.0	-81.0	-1.0	-	-89.0
Impairments	-	-	-	-	-	-
Accumulated depreciation and impairment charges 31 Dec. 2018	-0.5	-267.4	-1,950.3	-13.8	-	-2,232.0
Book value, 1 Jan. 2018	12.0	132.7	613.7	6.4	23.7	788.6
Book value, 31 Dec. 2018	12.2	128.7	577.8	8.3	26.2	753.2

LEASES

EUR million	
Costs related to short-term leases	1.2
Costs of leases in which the underlying asset is of low value	1.3
Interest expenses	-0.6
Cash outflow for leases	-7.7

Disclosures on lease liabilities are presented in Note 5.5 (Financial liabilities) and 5.6 (Management of financial risks) and disclosures on lease obligations in Note 8.1 (Commitments and contingencies).

IMPAIRMENTS

Metsä Board investments in modernisation of the Husum pulp mill in Sweden. The investment includes a new recovery boiler and turbine. In Financial Statements 2019 Metsä Board recognised a EUR 19.1 million impairment in the assets taken out of service.

BORROWING COSTS

Borrowing costs were not capitalised in 2019 or in 2018.

FINANCE LEASES 2018

In 2018 property, plant and equipment increases include assets of EUR 3.6 million acquired under finance lease agreements. Property, plant and equipment includes tangible assets acquired under finance lease agreements as follows:

	31 December 2018		
EUR million	Buildings	Machinery and equipment	Total
Acquisition cost	1.2	17.7	18.9
Accumulated depreciation	-0.4	-9.2	-9.6
Book value, 1 Jan	0.4	8.2	8.6
Book value, 31 Dec	0.7	8.6	9.3

4.3 OTHER INVESTMENTS

ACCOUNTING PRINCIPLES

Other investments consist of listed and unlisted equity investments. The most significant of these is the Group's holding in Pohjolan Voima. This investment is unlisted and strategic in nature, serving the Group's long-term energy sourcing needs. This being the case, the Group classifies its shares in Pohjolan Voima as financial assets at fair value recognised under other items of comprehensive income. Changes in their fair value are presented in the fair value reserve, accounting for the tax effect. Changes in fair value are never transferred from equity to profit and loss.

The Group classifies its other equity financial assets as financial assets at fair value to be recognised as financial assets through profit and loss.

The fair values of publicly listed shares are based on the share price on the balance sheet date. The fair values of shares other than listed shares are determined using various valuation models, such as the price levels of recent transactions and valuation methods based on the present value of discounted cash flows. As far as possible, the valuation methods are founded on market-based valuation factors.

KEY ESTIMATES AND JUDGEMENTS

FAIR VALUE MEASUREMENT

The application of valuation models to measuring fair value requires judgement concerning the selection of the method to be applied, as well as valuation factors required by the chosen method that are based on the price and interest levels prevailing in the market on the end date of each reporting period. The most significant item of other investments that has been valued by using a valuation model is the Group's investment in the shares of Pohjolan Voima Oyj. The price of these shares is determined based on realised transactions and the present value of discounted cash flows. Key factors affecting cash flows include the price of electricity, inflation expectations and the discount rate. The carrying amount of the Group's shares in Pohjolan Voima was EUR 251.4 million on the balance sheet on 31 December 2019. The carrying amount of these shares is estimated to change by EUR 1.6 million if the rate used for discounting the cash flows changes by 10 per cent from the rate estimated by the management. The carrying amount of the shares is estimated to change by EUR 38.8 million if the energ y prices applied in the fair value calculation differ by 10 per cent from the rate estimated by the management.

EUR million	2019	2018
Listed shareholdings	0.0	0.0
Pohjolan Voima Oyj	251.4	266.1
Other unlisted shareholdings	3.7	3.9
Other investments total	255.1	270.1

The most important unlisted shareholding under other investments consists of a 3.2 per cent stake in Finnish energy company Pohjolan Voima Oyj, which produces electricity and heat for its shareholders in Finland. Pohjolan Voima trades with its shareholders at prices based on production costs, which generally are lower than market prices. The Group is entitled to about:

- 5.2 per cent of the energy produced by Olkiluoto nuclear power plants (OL1 and OL2) through its ownership of Pohjolan Voima B-shares,
- 1.5 per cent of the energy produced by Olkiluoto 3 nuclear power plant under construction through its ownership of Pohjolan Voima B2-shares, and
- 84 per cent of the energy produced by Hämeenkyrön Voima Oy through Pohjolan Voiman G10-shares.

In addition, the Group holds 11.2 per cent of Pohjolan Voima C2-shares, which the shareholders have decided to discontinue during 2018 and divest the coal-fired Meri-Pori power plant connected to the shares.

The ownership is measured quarterly at fair value on share series basis by using the average of discounted cash flow method and valuation based on earlier transactions. The weighted average cost of capital used was 1.37 (2018: 1.97) per cent and 2.37 per cent (2.97) for the Olkiluoto 3 currently under construction. 12-month rolling averages have been used for energy price estimates, which evens out the effect of fluctuations in short-term energy price estimates. The changes in fair value less deferred tax calculated at Finnish tax rate are recorded in other comprehensive income and presented under fair value reserve in equity.

The acquisition cost of shares in Pohjolan Voima Oy is EUR 38.0 million (38.0) and the fair value EUR 251.4 million (266.1), which can be allocated to different shares as follows: The fair value of nuclear power shares totals EUR 239.4 million (254.1), the discontinued coal-fired power plant shares (C2 shares) have a fair value of EUR 0.0 million (0.0) and G10 shares have a fair value of EUR 12.0 million (12.0).

Shareholder agreement restricts sale of shares of Pohjolan Voima to buyers that are not existing shareholders.

4.4 INVENTORIES

ACCOUNTING PRINCIPLES

Inventories are measured at the lower of acquisition cost or net realisable value. In measuring inventories, the FIFO principle is observed or, alternatively, the weighted average price method, depending on the nature of the inventories. The acquisition cost of finished products acquired comprises all purchase costs, including direct transport, handling and other expenses. The acquisition cost of finished and semi-finished products of own manufacture includes raw materials, direct production costs, and the systematically allocated portion of variable manufacturing overheads and fixed overheads at the normal level of operation. Borrowing cost is not included in the acquisition cost.

Net realisable value is the estimated sales price in ordinary business operations less the estimated cost of completion and the necessary sales costs.

KEY ESTIMATES AND JUDGEMENTS

The Group regularly reviews its inventories for situations where the inventories contain non-marketable items or items with net realizable value below the acquisition cost. When necessary, the Group reduces the book value of the inventories accordingly. This review requires the management's estimates of the sales prices of products, the cost of completion and the costs necessary to make the sale. Any changes in these estimates might lead to an adjustment in the book value of the inventories in future periods.

EUR million	2019	2018
Raw materials and consumables	156.7	147.2
Finished goods	211.5	208.7
Advance payments	11.3	9.7
Inventories total	379.5	365.6

The value of Metsä Board inventories was not reduced through write-downs in 2019 or in 2018.

4.5 ACCOUNTS RECEIVABLE AND OTHER RECEIVABLES

ACCOUNTING PRINCIPLES

Trade receivables are measured at the expected net realisable value, which is the original invoicing value less estimated impairment provisions on the receivables. The Group applies a model based on expected credit losses to the determination of the impairment of trade receivables. Provisions are furthermore set up on a case-by-case basis when there is a justifiable reason to assume that the Group will not receive payment for the invoiced amount according to the original terms.

KEY ESTIMATES AND JUDGEMENTS

The evaluation of the recognition criteria and the amount of impairment losses requires the management's judgement. If customers' financial position weakens so that it affects their solvency, further impairment losses may need to be recognised in future periods.

ACCOUNTS RECEIVABLE AND OTHER NON-INTEREST BEARING RECEIVABLES

EUR million	2019	2018
From Group companies		
Accounts receivable	13.4	18.2
Other receivables	0.8	-
Prepayments and accrued income	0.0	0.8
	14.2	19.0
From associated companies and joint ventures		
Accounts receivable	0.4	0.3
From others		
Accounts receivable	229.6	230.6
Impairments	-2.1	-1.0
	227.5	229.6
Other receivables	37.1	33.7
Prepayments and accrued income	24.7	21.5
	289.2	284.8
Accounts receivable and other receivables total	303.8	304.1

Receivables from Group companies are receivables from parent company Metsäliitto Cooperative and from other subsidiaries of the parent company. Derivative receivables are from Metsä Group Treasury Oy, a wholly owned subsidiary of Metsäliitto Cooperative.

DOUBTFUL ACCOUNTS RECEIVABLE

Case-specific impairments and impairments determined by applying the model based on expected credit losses deducted from accounts receivable are as follows:

EUR million	2019	2018
Value 1 Jan	1.0	0.9
Increase	1.5	0.4
Decrease	-0.4	-0.3
Value 31 Dec	2.1	1.0

EUR 0.8 million of credit losses were recognised during 2019 (EUR 0.5 million in 2018).

AGE DISTRIBUTION OF ACCOUNTS RECEIVABLE LESS IMPAIRMENTS

EUR million	2019	2018
Not overdue	207.7	209.8
Overdue		
Less than 30 days	17.8	17.9
Between 31 and 60 days	0.8	0.9
Between 61 and 90 days	0.1	0.1
Between 91 and 180 days	0.4	0.3
Over 180 days	0.7	0.3
Total	227.5	229.6

4.6 OTHER NON-CURRENT LIABILITIES

EUR million	2019	2018
Non-interest bearing non-current liabilities to Group companies	-	-
Non-interest bearing non-current liabilities to others		
Advance payments received	1.5	1.7
Accruals and deferred income	0.3	0.2
Other liabilities	-	-
Total	1.9	1.9

Liabilities to Group companies are liabilities from parent company Metsäliitto Cooperative and from other subsidiaries of the parent company. Derivative liabilities are from Metsä Group Treasury Oy, a wholly owned subsidiary of Metsäliitto Cooperative.

4.7 ACCOUNTS PAYABLE AND OTHER LIABILITIES

EUR million	2019	2018
Non-interest bearing current liabilities to Group companies		
Accounts payable	40.9	51.5
Other liabilities	1.2	0.9
Non-interest bearing current liabilities to associated companies and joint ventures		
Accounts payable	0.6	1.4
Non-interest bearing current liabilities to others		
Advance payments	4.1	3.9
Accounts payable	243.4	257.3
Other liabilities	10.2	7.7
Accruals and deferred income	45.0	52.3
Total	345.4	374.9

Accrued expenses include EUR 23.4 million (EUR 26.3 million in 2018) of customer discount accruals related to sales revenue.

Liabilities to Group companies are liabilities from parent company Metsäliitto Cooperative and from other subsidiaries of the parent company. Derivative liabilities are from Metsä Group Treasury Oy, a wholly owned subsidiary of Metsäliitto Cooperative.

4.8 PROVISIONS

ACCOUNTING PRINCIPLES

A provision is recognised when, as a result of an earlier event, the Group has a legal or actual obligation, the realisation of a payment obligation is likely, and the amount of the obligation can be reliably estimated. Any reimbursement from a third party is presented as an asset separate from the provision if it is practically certain that reimbursement will be received.

RESTRUCTURING

A restructuring provision is recorded when the Group has incurred a legal or constructive obligation to make a payment. Termination payments are recorded when a detailed plan has been made for the restructuring and the Group has raised valid expectations in those affected that it will carry out the restructuring by starting to implement that plan or announcing its main features to those affected by it. If the Group makes an offer to employees concerning voluntary resignation against benefits determined in the offer, the liability arising from this is recorded when the Group can no longer withdraw its offer. The liability arising from such an offer is based on the number of employees that the Group expects to accept the offer. Benefits falling due in twelve months' time or later are measured at their present value.

ENVIRONMENTAL OBLIGATIONS

Costs arising from environmental remediation that do not increase present or future revenue are recorded as expenses. Environmental liabilities are measured at current value in accordance with current environmental protection regulations when it is probable that an obligation has arisen and its amount can be estimated reasonably.

OTHER PROVISIONS

Other provisions mainly consist of provisions arising from estimated cost of future restoration of leased sites.

PROVISIONS 2019

EUR million	Restructuring	Environmental	Other	Total
1 Jan 2019	4.0	5.5	1.7	11.2
Translation differences	-0.1	0.0	0.0	-0.1
Increases	0.0	0.0	0.0	0.0
Utilised during the year	-2.7	-0.1	-0.5	-3.3
Unused amounts reversed	0.0	-2.0	-	-2.0
31 Dec 2019	1.2	3.5	1.2	5.8

	2019	2018
Non-current	4.2	7.2
Current	1.6	4.0
Total	5.8	11.2

Non-current provisions are estimated to be utilised mainly by the end of 2025. The decrease in restructuring provision EUR -2.7 million relates to usage of Husum plant efficiency improvement programme 2018 provision. Decrease in environmental obligations is mainly due to updated estimate of fair value of environmental provision.

5. CAPITAL STRUCTURE AND FINANCIAL RISKS

5.1 SHAREHOLDERS' EQUITY

CHANGES IN SHARE CAPITAL

	Share capital		
EUR million	Series A	Series B	Total
1 Jan 2018	56.3	501.6	557.9
Conversion of A shares into B shares	-0.8	0.8	-
31 Dec 2018	55.5	502.4	557.9
Conversion of A shares into B shares	-3.6	3.6	-
31 Dec 2019	51.9	506.0	557.9

Each series A share confers to its holder twenty (20) votes at the General Meeting of Shareholders, and each series B share confers to the holder one (1) vote. All shares carry the same right to receive a dividend. Metsä Board's A shares can be converted to B shares if shareholder or representative of the nominee registered shares makes a written request for the conversion to the company. No monetary consideration is paid for the conversion.

NUMBER OF SHARES

	Share capital		
shares	Series A	Series B	Total
1 Jan 2018	35,886,682	319,626,064	355,512,746
Conversion of A shares into B shares	-527,888	527,888	-
31 Dec 2018	35,358,794	320,153,952	355,512,746
Conversion of A shares into B shares	-2,271,147	2,271,147	-
31 Dec 2019	33,087,647	322,425,099	355,512,746

The share has no nominal value. All shares have been paid in full.

FAIR VALUE AND OTHER RESERVES

EUR million	2019	2018
Fair value reserve	173.8	192.3
Legal reserve and reserves stipulated by the Articles of Association	1.7	1.7
Total	175.5	194.0
Reserve for invested unrestricted equity	315.5	383.1

LEGAL RESERVE AND RESERVES STIPULATED BY THE ARTICLES OF ASSOCIATION

Legal reserve and reserves stipulated by the Articles of Association have been created and accumulated on resolutions by the General Meeting of Shareholders.

FAIR VALUE RESERVE

Fair value changes in derivatives designated as cash flow hedges are recorded to fair value reserve deducted by deferred tax effect. Additionally, the fair value change of Pohjolan Voima Oyj shares recognised by the Group as other investments is moved to the reserve with deferred tax effect deducted.

TRANSLATION DIFFERENCES

Translation differences include translation differences arising from translation of subsidiaries in other currencies than euro and gains and losses arising on hedging of net investments in these subsidiaries less deferred tax, when requirements of hedge accounting have been fulfilled. Net investments were not hedged in Metsä Board Group in 2019 or in 2018

	Cumulative translation		Translation differences in other comprehensive income	
EUR million	2019	2018	2019	2018
SEK	-31.7	-26.2	-5.5	-11.6
RUB *	-5.4	-6.3	0.9	-1.2
USD	6.3	5.2	1.2	4.6
CNY	0.9	0.9	0.0	-0.1
GBP	-0.3	-0.6	0.4	-0.1
Others	1.0	0.7	0.3	-0.2
Total	-29.1	-26.4	-2.7	-8.6

* RUB denominated translation difference arises mostly from associate company Metsä Fibre.

RESERVE FOR INVESTED UNRESTRICTED EQUITY

According to Finnish Limited Liability Companies Act, the reserve for invested unrestricted equity shall be credited with the part of the subscription price of the shares that according to the share issue decision is not to be credited to the share capital and that according to the Accounting Act is not to be credited to liabilities, as well as with other equity additions that are not to be credited to some other reserve.

DIVIDEND

Dividends payable by the company are recorded as deductions to equity in the period during which the shareholders in a general meeting have declared the dividend.

The Board of Directors has proposed that a dividend of EUR 0.10 per share be distributed for the 2019 financial year, and further that EUR 0.14 per share be distributed from the unrestricted equity reserve

OTHER COMPREHENSIVE INCOME AFTER TAXES 2019

EUR million	Translation differences	Fair value and other reserves	Retained earnings	Total equity
Items that will not be reclassified to profit or loss				
Actuarial gains/losses on defined benefit pension plans			-3.5	-3.5
Financial assets at fair value through other comprehensive income		-14.7		-14.7
Share of profit from other comprehensive income of associated company		0.2		0.2
Income tax relating to items that will not be reclassified		2.9	-0.1	2.8
Items that will not be reclassified to profit or loss total		-11.5	-3.6	-15.1
Items that will not be reclassified to profit or loss total				
Cash flow hedges				
Currency hedges				
Gains and losses recorded in equity		-25.0		-25.0
Transferred to adjust Sales		28.8		28.8
Interest hedges				
Gains and losses recorded in equity		-0.9		-0.9
Transferred to adjust net financial items		0.0		0.0
Commodity hedges				
Gains and losses recorded in equity		-5.8		-5.8
Transferred to adjust purchases		-7.2		-7.2
Share of profit from other comprehensive income of associated company		1.0		1.0
Cahs flow hedges total		-9.1		-9.1
Translation differences	-3.4			-3.4
Share of profit from other comprehensive income of associated company	0.7			0.7
Translation differences total	-2.7			-2.7
Income tax relating to components of other comprehensive income		2.2		2.2
Items that may be reclassified to profit or loss total	-2.7	-6.9		-9.6
Other comprehensive income, net of tax	-2.7	-18.4	-3.6	-24.8

OTHER COMPREHENSIVE INCOME AFTER TAXES 2018

EUR million	Translation differences	Fair value and other reserves	Retained earnings	Total equity
Items that will not be reclassified to profit or loss				
Actuarial gains/losses on defined benefit pension plans			1.2	1.2
Financial assets at fair value through other comprehensive income		29.9		29.9
Share of profit from other comprehensive income of associated company		0.2		0.2
Income tax relating to items that will not be reclassified		-6.0	0.4	-5.6
Items that will not be reclassified to profit or loss total		24.2	1.6	25.8
Items that may be reclassified to profit or loss				
Cash flow hedges				
Currency hedges				
Gains and losses recorded in equity		-28.3		-28.3
Transferred to adjust Sales		28.2		28.2
Interest hedges				
Gains and losses recorded in equity		0.1		0.1
Transferred to adjust net financial items		-0.1		-0.1
Commodity hedges				
Gains and losses recorded in equity		26.2		26.2
Transferred to adjust purchases		-15.4		-15.4
Share of profit from other comprehensive income of associated company		-3.0		-3.0
Cahs flow hedges total		7.7		7.7
Translation differences	-7.6			-7.6
Share of profit from other comprehensive income of associated company	-1.0			-1.0
Translation differences total	-8.6			-8.6
Income tax relating to components of other comprehensive income		-2.3		-2.3
Items that may be reclassified to profit or loss total	-8.6	5.4		-3.1
Other comprehensive income, net of tax	-8.6	29.6	1.6	22.6

5.2 FINANCIAL INCOME AND EXPENSES

ACCOUNTING PRINCIPLES

Dividend income is recognised when the right to receive a payment is established. Interest incomeand expenses are recognised using the effective interest rate method.

Borrowing costs are generally recognised as an expense in the period in which they are incurred. When an item of property, plant or equipment is involved in a major and long-term investment project, the borrowing costs directly due to the acquisition, construction or production of the asset are included in the asset's acquisition cost.

The Group presents net interest income and expenses related to defined benefit plans as financial income and expenses.

EUR million	2019	2018
Exchange differences		
Commercial items	2.1	1.5
Hedging / hedge accounting not applied	-3.6	-4.6
Other items	-0.1	0.1
Exchange differences total	-1.6	-3.1
Other financial income		
Interest income on loans, other receivables and cash and cash equivalents	0.7	0.4
Dividend income	0.0	0.0
Other financial income total	0.8	0.5
Valuation of financial assets and liabilities		
Impairment gains and losses from financial assets	0.8	-
Gains and losses on derivatives / hedge accounting not applied	0.7	-0.6
Gains and losses on hedging instrument in cash flow hedges	-	0.1
Valuation total	1.4	-0.5
Interest expenses on financial liabilities carried at amortised cost using the effective interest method	-15.2	-18.4
Other financial expenses	-0.8	-0.8
Interest and other financial expenses, total	-16.0	-19.2
Valuation of financial assets and liabilities and interest and other financial expenses, total	-14.6	-19.7

5.3 OTHER NON-CURRENT FINANCIAL ASSETS

EUR million	2019	2018
Interest-bearing loan receivables		
Loans to associated companies and joint ventures	-	-
Other loan receivables	2.9	2.9
Interest-bearing loan receivables total	2.9	2.9
Non-interest bearing receivables		
Other loan receivables	0.2	0.3
Defined benefit pension plans (Note 3.4)	12.1	16.3
Non-interest bearing receivables total	12.3	16.5
Other non-current financial assets total	15.2	19.4

5.4 CASH AND CASH EQUIVALENTS

ACCOUNTING PRINCIPLES

Cash and cash equivalents consist of cash and other short-term, highly liquid investments that can be easily converted into an amount of cash known in advance and that carry a minimal risk of value changes. Metsä Board has classified as cash and cash equivalents the short-term money market investments made in accordance with its treasury policy and interest-bearing receivables comparable to cash funds and available immediately from Metsä Group's internal bank Metsä Group Treasury Oy. The expected credit losses are reviewed for the following 12 months.

EUR million	2019	2018
Current investments	1.0	0.9
Cash at hand and in bank	6.0	10.6
Deposits to Metsä Group Treasury Oy	127.1	98.2
Total	134.2	109.7

5.5 BORROWINGS

ACCOUNTING PRINCIPLES

Financial liabilities are categorised initially recognised at fair value. The Group has classified all financial liabilities under "Other liabilities". Transaction costs are included in the original book value of financial liabilities measured at amortised cost. Subsequently, all financial liabilities are measured at amortised cost using the effective interest method.

INTEREST-BEARING NET DEBT

EUR million	2019	2018
Non-current interest-bearing financial liabilities		
Bonds	248.5	248.3
Loans from financial institutions	148.8	62.9
Pension loans	0.0	24.1
Lease liabilities	15.6	-
Finance lease liabilities	-	6.0
Other liabilities	0.0	1.1
Non-current interest-bearing financial liabilities total	412.9	342.4
Current interest-bearing financial liabilities		
Current portion of non-current debt	30.4	101.5
Current portion of non-current debt	1.6	3.3
Current interest-bearing financial liabilities total	32.0	104.8
Interest-bearing financial liabilities total	444.9	447.2

EUR million	2019	2018
Non-current interest-bearing financial assets		
Loan receivables	2.9	2.9
Current interest-bearing financial assets		
Loan receivables and other receivables	0.0	0.0
Current investments at amortised cost	1.0	0.9
Cash at hand and in bank	6.0	10.6
Deposits to Metsä Group Treasury Oy	127.1	98.2
Current interest-bearing financial assets, total	134.2	109.7
Interest-bearing financial assets total	137.1	112.6
Interest-bearing net debt	307.8	334.6

Lease liabilities are recognised according to the IFRS 16 standard (Leases) as of 1 January 2019. Note 1 contains further information on the adoption of the standard.

Metsä Board has classified interest-bearing receivables comparable to cash funds and available immediately from Metsä Group's internal bank Metsä Group Treasury Oy as Cash and cash equivalents.

CASH AND NON-CASH CHANGES IN FINANCIAL LIABILITIES 2019

			Non-cash changes			
EUR million	1 Jan 2019	Cash flows	Changes in foreign exchange rates	New finance leases	Other changes	31 Dec 2019
Non-current interest-bearing liabilities incl. Current portion						
Bonds	308.6	-60.4	-	-	0.3	248.5
Loans from financial institutions	63.1	87.1	-	-	-1.4	148.8
Pension loans	62.6	-38.5	-	-	-	24.1
Finance lease liabilities	8.6	-6.9	-0.1	3.4	16.9	21.8
Other liabilities	1.1	-1.1	-	-	-	0.0
Total	443.9	-19.8	-0.1	3.4	15.9	443.3
Current interest-bearing liabilities	3.3	-1.7	0.0	-	-	1.6
Current interest-bearing receivables	0.0	0.0	-	-	0.0	0.0
Non-current non-interest bearing liabilities	1.9	-0.2	0.0	-	0.1	1.8
Total	449.1	-21.7	-0.1	3.4	15.9	446.7

Other changes consist mostly of accrual of effective interest during the financial year on financial liabilities valued.

CASH AND NON-CASH CHANGES IN FINANCIAL LIABILITIES 2018

			Non-cash changes			
EUR million	1 Jan 2018	Cash flows	Changes in foreign exchange rates	New finance leases	Other changes	31 Dec 2018
Non-current interest-bearing liabilities incl. Current portion						
Bonds	308.0	-	-	-	0.5	308.6
Loans from financial institutions	163.4	-101.1	-	-	0.8	63.1
Pension loans	95.1	-32.5	-	-	-	62.6
Finance lease liabilities	7.9	-1.8	-0.2	2.7	-	8.6
Other liabilities	1.1	-	-	-	-	1.1
Total	575.6	-135.5	-0.2	2.7	1.3	443.9
Current interest-bearing liabilities	1.4	1.8	0.0	-	-	3.3
Current interest-bearing receivables	0.0	-	-	-	-	0.0
Non-Current non-interest-bearing liabilities	0.2	1.7	0.0	-	-	1.9
Total	577.2	-131.9	-0.2	2.7	1.3	449.1

BONDS

EUR million	Interest %	2019	2018
2014–2019	4.00	0.0	60.3
2017–2027	2.75	248.5	248.3
Total		248.5	308.6

Metsä Board Corporation issued in September 2017 a bond of EUR 250 million. The bond carries a fixed coupon rate of 2.75 per cent, and the maturity date is 29 September 2027. The bond ranks senior and is unsecured.

Metsä Board Corporation had a bond with original value of EUR 225 million issued in March 2014, of which the outstanding nominal value was EUR 60.4 million after the repurchases made in 2017. The bond carried a fixed coupon rate of 4.0 per cent, and maturity date was 13 March 2019. The bond ranked senior and was unsecured.

5.6 MANAGEMENT OF FINANCIAL RISKS

The financial risks associated with business operations are managed in accordance with the financial policy endorsed by the Board of Directors and the senior management of the company. The policy defines focal instructions on the management of foreign currency, interest rate, liquidity and counterparty risks, and for the use of derivative financial instruments. Correspondingly, commodity risks are managed according to the company's commodity risk policy. The purpose is to protect the company against major financial and commodity risks, to balance the cash flow and to allow the business units time to adjust their operations to changing conditions.

Metsä Group Treasury Oy is specialized in finance and functions as the Group's internal bank. Metsäliitto Cooperative´s holding is 100 per cent of the company. Financial operations have been centralised to Metsä Group Treasury, which is in charge of managing the Group companies' financial positions according to the strategy and financial policy, providing necessary financial services and acting as an advisor in financial matters.

FOREIGN CURRENCY RISK

The Group's foreign currency exposure consists of the risks associated with foreign currency flows, translation risk of net investments in foreign entities and economic currency exposure. Most of the Group's costs are incurred in the euro zone and to some extent in Sweden, but a significant part of the sales is received or priced in other currencies. Sales may therefore vary because of changes in exchange rates, while production costs remain unchanged. The foreign currency transaction exposure is consisting of foreign currency denominated sales and costs. The exposure is including foreign currency denominated balance sheet exposure consisting of accounts receivable and accounts payable and 50 per cent share of the annual contracted or estimated net currency cash flow.

The main currencies of the Group's foreign currency transaction exposure are the US dollar, the Swedish krona and the British pound. The share of dollar is 56 per cent, share of Swedish krona is 35 per cent and share of pound is 7 per cent. A strengthening of the dollar and the pound has a positive impact on the financial result and a weakening a negative impact. A weakening of the Swedish krona has a positive impact on the result of the Group. Other significant currencies are Australian dollar and Canadian dollar. The hedging policy is to keep the balance sheet exposure and 50 per cent of annual cash flow of contracted or estimated currency flows consistently hedged. The amount of hedging may deviate from the normal level by 40 per cent in either direction. The Board of Directors of Metsä Board is deciding on hedging levels significantly deviating from the norm set out in the financial policy. The amount of currency-specific hedging depends on current exchange rates and market expectations, on the interest rate differences between the currencies and the significance of the exchange rate risk for the financial result of the Group. The transaction exposure is mainly hedged by forward transactions but also by the use of foreign currency loans and currency options.

At the end of the reporting period, the foreign exchange transaction exposure had been hedged 7.8 months on average (2018: 7.3) being 109 per cent of the hedging norm (108). During the reporting period, the hedging level has varied between 7 and 8 months (7-9) being between 107 and 113 per cent of the norm (106-115). The dollar's hedging level was 6.2 months (5.8) being 90 per cent of the norm (88). The Swedish krona's hedging level was 10.6 months (9.6) being 140 per cent of the norm (140). The pound's hedging level was 7.7 months (7.6) being 100 per cent of the norm (100). Hedge accounting in accordance with IFRS 9 has been applied to hedging of transaction exposure and forwards and options allocated to hedge accounting have been used to hedge the portion of highly probable forecast sales of the currency transaction exposure.

The translation risk of a net investment in a foreign entity is generated from the consolidation of the equity of subsidiaries and associated companies outside the euro area into euros in the consolidated financial statements. Hedging of equity has been discontinued.

The Group applies the Value-at-Risk method to assess the risk of its open foreign currency positions. The VaR is calculated on the deviation from the balance sheet exposure plus 50 per cent of annual foreign currency exposure hedge norm defined in the financial policy. A 99% confidence level on one month period is applied to the VaR risk figure. The risk mandates regarding hedging decisions have been defined by restricting the company management's powers by linking them to maximum currency-specific hedging level changes and to a VaR limit. Possible strategic decisions which exceed the policy risk limits are made by the Board of Directors. The limit set for the Metsä Board's foreign currency risk is EUR 10.5 million (10.0) and the VaR is at the end of the reporting period EUR 3.8 million (4.9). Average during the period has been EUR 4.2 million (4.1).

INTEREST RATE RISK

The interest rate risk is related in the interest bearing receivables and loans, working capital financing and currency hedging. The most significant currencies in risk management are the euro, the US dollar, the British pound and the Swedish krona. The objective of the interest rate risk policy is to minimise the negative impact of interest rate changes on the Group´s and group companies´ result and the financial position, and to optimise financing costs within the framework of risk limits. The effect of interest rate changes on financial costs depends on the average interest fixing time of interest bearing assets and liabilities, which is measured in the Group by duration. As duration is lengthening the rise of interest rates affects more slowly the interest expenses of financial liabilities. The maturity of the loan portfolio can be influenced by adjusting between floating-rate and fixed-rate loans and by using interest rate swaps.

The average interest duration norm based on the Group's financial policy is twelve months. The duration can, however, deviate from the hedging policy norm so that the decision of a deviation exceeding four months has to be made by the Board of Directors. The average duration of loans was 56.0 months at the end of the year (60.0). During the reporting period duration has varied between 53 and 65 months (56-68). Duration is lengthened by the 10 year bond of EUR 250 million. Of interest-bearing liabilities 18 per cent (15) is subjected to variable rates and the rest to fixed rates and the average interest rate at the end of 2019 is 2.5 per cent (3.3). At the end of 2019, an increase of one per cent in interest rates would decrease net interest rate costs of the next 12 months by 1.3 M€ (1.1).

The Group has applied cash flow hedge accounting in accordance with IFRS 9 to interest rate swaps by which floating-rate financing has been converted to fixed-rate financing. The gross nominal volume of interest rate derivatives at the time of financial statements is EUR 100.0 million (100.0), of which EUR 100.0 million (50.0) has been allocated to hedge accounting. The maturity of interest rate swap contracts varies between 1 – 6 years (1-7).

COMMODITY RISK

In the hedging of commodity risks the Group applies risk management policies defined separately for each selected commodity. According to the policy, the management of commodity risks with regard to financial hedges is accomplished centralized by Metsä Group Treasury based on the strategy approved by Board of Directors of Metsä Board. The commodity hedging policy is applied to the management of the price risks of electricity, natural gas, propane and gas oil and heavy fuel oil and also transactions related to Emission allowances are managed by Metsä Group Treasury. Hedge accounting in accordance with IFRS 9 has been applied to all commodity hedging. The commodity hedging policy was revised in 2018 so that an 80 per cent hedge level of the estimated net position during the first 12 month period has been set as a hedging norm and the hedge ratio can vary by 20 per cent in either direction. Hedges based on previous policy are gradually maturing. The Group Board of Directors makes significant strategic decisions.

Metsä Board's target in managing the electricity price risk is to balance the effect of changes in the price of electricity on the Group's result and financial position. The main principle is to hedge the electricity purchase exposure, which consists of the difference of factory-specific electricity consumption estimates and power plant production shares in the possession of the Group. The hedge strategy is implemented in cooperation with Metsä Group Energy service unit centralized through Metsä Group Treasury. Approximately a quarter of Metsä Board's mills' purchase of fuel is based on natural gas and and the company is hedging the price risk of natural gas and propane purchases by using financial hedges. Metsä Board is hedging also the gas oil and heavy fuel oil price risk related to logistics costs (sea freights) based on commodity risk policy by using financial hedges. Metsä Board is not hedging its pulp price risk.

LIQUIDITY RISK

Liquidity risk is defined as the risk that funds and available funding become insufficient to meet business needs, or costs that are incurred in arranging the necessary financing are unreasonable high. Liquidity risk is monitored by estimating the need for liquidity needs 12 – 24 months ahead and ensuring that the total liquidity available will cover a main part of this need. According to the financial policy, the liquidity reserve must at all times cover 100 per cent of the Group's liquidity requirement for the first 12 months and 50 – 100 per cent of the following 12 – 24 months liquidity requirement. The objective is that at the most 20 per cent of the Group's loans, including committed credit facilities, are allowed to mature within the next 12 months and at least 25 per cent of the total debt must have a maturity in excess of four years. The target is to avoid keeping extra liquidity as liquid funds and instead maintain a liquidity reserve as committed credit facilities outside the balance sheet.

The cornerstone of liquidity risk management is to manage the Group's operative decisions in such a way that targets concerning indebtedness and sufficient liquidity reserve can be secured in all economic conditions. Liquidity risk is also managed by diversifying the use of capital and money markets to decrease dependency on any single financing source and the optimisation of the maturity structure of loans is also emphasized in financial decisions. Metsä Board is using short-term working capital financing related to accounts receivables and accounts payables. In 2019 Metsä Board has agreed to continue its syndicated credit agreement maturing in 2020 as presented in Report of the Board of Directors.

Metsä Board's liquidity has remained strong. At the end of the review period, available liquidity was EUR 524.3 million (425.4), of which EUR 200.0 million (150.0) consisted of a revolving credit facility, EUR 190.1 million (165.7) consisted of undrawn pension premium (TyEL) funds and EUR 134.2 million (109.7) of liquid assets and investments. Of the liquid funds, EUR 7.1 million consisted of cash and cash equivalents and investments and EUR 127.1 million were cash comparable, interest-bearing immediately drawable receivables from Metsä Group's internal bank Metsä Group Treasury Oy. In addition the Group had other interest-bearing receivables EUR 2.9 million (2.9). Metsä Board liquidity reserve is supplemented by Metsä Group internal EUR 150.0 million unused short-term funding limit. At the end of 2019, the liquidity reserve covers fully the forecasted financing need of 2020-2021 even though financing of Husum investment is still under preparation. 4 per cent (13) of long-term loans and committed facilities fall due in a 12 month period and 95 per cent (55) have a maturity of over four years. The average maturity of long-term loans is 6.4 years (5.5). The share of short-term financing of the Group's interest bearing liabilities is 0.4 per cent (0.7).

COUNTERPARTY RISK

Financial instruments carry the risk that the Group may incur losses should the counterparty be unable to meet its commitments. The Group is managing this risk by entering into financial transactions only with most creditworthy counterparties and within pre-determined limits. During the reporting period, credit risks of financial instruments did not result in any losses. Cash and cash equivalents, and other investments have been spread to several banks, commercial papers of several institutions and money market funds. Counterparty limits have been revised during the year by taking into account the needs of the company and the view on the financial position of the used counterparties. Derivatives trading is regulated by the standardised ISDA contracts made with the counterparties. Main part of financial credit risks are in the balance sheet of Metsä Group Treasury and not directly in the balance sheet of Metsä Board. The Group has since 2018 applied expected credit loss model in accordance with IFRS 9 to calculate the impairment of financial assets.

The Group's accounts receivable carry a counterparty risk that the Group may incur losses should the counterparty be unable to meet its commitments. Credit risk attached to accounts receivable is managed on the basis of the credit risk management policies approved by operative management. Accounts receivable performance is followed weekly by Group Credit Risk Management Team and reported monthly to Customer Credit & Compliance Committee and operative management. Credit quality of customers is assessed at regular intervals based on the customers' financial statements, payment behaviour, credit agencies and credit ratings agencies. Individual credit limits are reviewed at least annually. Letters of Credits, bank and parent company guarantees and Credit insurance are used to mitigate credit risk according to management decisions. Credit limits are approved according to credit risk management policy with approval limits of varying values across the Group. The Customer Credit & Compliance Committee reviews and sets all major credit limits which are not supported by credit insurance and/ or other security.

Metsä Board implements regular impairment tests for customer accounts receivables. Credit loss impairment is booked when a customer enters legal bankruptcy, or becomes past due for more than 6 months (180 days) without a valid payment plan or other acceptable reasons. New credit loss provisions for the year were EUR 1.5 million (2018: 0.5) before insurance claims of EUR 0.6 million were paid. The portion of overdue client receivables of all accounts receivable is at the time of financial statements 7.5 per cent (8.0), of which 0.1 per cent (0.1) is overdue between 90 - 180 days and 0.1 per cent (0.1) over 180 days. The specification of doubtful receivables is in the Notes. Expected credit losses on accounts receivables in accordance with IFRS 9 are calculated by using a provision matrix. Expected credit loss expense is recognized by applying expected credit loss percentages based on five-year historic losses on accounts receivables from external debtors net of credit insurance outstanding at period end. The expected credit loss percentage is 0.1 per cent of receivables (0.1).

The geographical structure of the accounts receivable is diversified and is reflecting the external sales structure presented in the Segment information. The top ten largest sources of credit risk exist in Italy, USA, United Kingdom, Turkey, Germany, Poland, Spain, Russian Federation, Sweden and Australia (around 64 per cent of total external receivables (65)). The share of largest individual customer (individual companies or groups of companies under common ownership) credit risk exposure of Metsä Board at the end of 2019 represented 4 per cent (5) of total external accounts receivable. 30 per cent (32) of accounts receivable was owed by ten largest customer groups (individual companies or groups of companies under common ownership). At the end of 2019, there was around 1.4 per cent (3.7) shortfall of credit insurance limits beyond usually policy deductibles and exclusions.

MANAGING THE CAPITAL

Terms capital and capital structure are used to describe investments made in the company by its owners and retained earnings (together equity) and debt capital (liabilities) as well as the relation between them. In managing its capital structure, the Group aims at maintaining an efficient capital structure that ensures the Group's operational conditions in financial and capital markets in all circumstances despite the fluctuations typical to the sector. The company has a credit rating for its long-term financing. Certain central target values, which correspond to standard requirements set by financing and capital markets, have been defined for the capital structure. No target level has been defined for the credit rating. The Group’s capital structure is regularly assessed by the Group’s Board of Directors and its Audit Committee.

Metsä Board updated the company´s long-term financial targets and decided on a new dividend policy in 2017. Metsä Board´s target for the comparable return on capital employed is at least 12 per cent. According to the company´s new target, the ratio of interest-bearing net liabilities to comparable EBITDA is a maximum of 2.5. This target level gives the company enough flexibility for potential growth in the future. In 2019 the long-term financial targets have been kept constant.

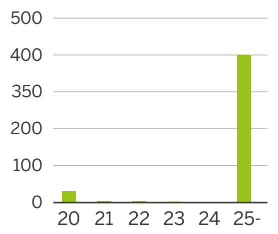
The key ratios describing the capital structure and the capital amounts used for the calculation of the key ratio were on 31.12.2019 and 31.12.2018 the following:

EUR million	2019	2018
Interest-bearing net liabilities/comparable EBITDA	1.1	1.0
Net gearing ratio, %	23	25
Interest-bearing borrowings	444.9	447.2
./. Liquid funds	134.2	109.7
./.Interest-bearing receivables	2.9	2.9
Net interest bearing liabilities	307.8	334.6
Equity attributable to shareholders of parent company	1,338.0	1,322.9
+ Non-controlling interest	-	0.0
Total Equity	1,338.0	1,322.9

In Group`s certain financial contracts financial covenants have been set regarding financial performance and capital structure. Other covenants in the Group’s loan agreements are customary terms and conditions including for example a negative pledge, restrictions on major asset disposals, limitations on subsidiary indebtedness, restrictions on changes of business and mandatory prepayment obligations upon a change of control of the Group. The Group has been in compliance with its covenants during the accounting periods 2019 and 2018. In case the company could not meet its obligations as defined in financial contracts and in order to avoid a breach of contract that could have an adverse effect on the company’s financial position, it would need to renegotiate its financial arrangements, payback its loans or get its debtors to give up their claims to meet these obligations.

Metsä Group has launched a Green Finance Framework, which integrates sustainability and climate change mitigation to the Group´s investments and related financing activities. The framework is based on the Group´s strategy and the strategic sustainability objectives for 2030.

REPAYMENT OF NON-CURRENT LOANS
EUR MILLION



BREAKDOWN OF CURRENCY
%

- USD 56%
- SEK 35%
- GBP 8%
- AUD 1%
- CAD 1%
- Others 0%

HEDGING OF FOREIGN EXCHANGE TRANSACTION EXPOSURE 31.12.2019

	Annual transaction exposure							
EUR million	USD	GBP	SEK	AUD	CAD	Other long	Other short	Total
Transaction exposure, net (mill. currency units)	709	72	-4,073	11	14			
Transaction exposure, net (EUR million)	631	85	-390	7	10	3	0	1, 125
Transaction exposure hedging (EUR million)	-325	-54	345	-6	-5	0	0	-736
Hedging at the end of the year (months)	6,2	7,7	10,6	11,3	6,0			7,8
Average hedging in 2019 (months)	6,3	7,4	10,2	10,8	6,0			7,7
Average rate of hedging at the end of the year	1,1232	0,8777	10,7000					

HEDGING OF FOREIGN EXCHANGE TRANSACTION EXPOSURE 31.12.2018

	Annual transaction exposure							
EUR million	USD	GBP	SEK	AUD	CAD	Other long	Other short	Total
Transaction exposure, net (mill. currency units)	853	72	-5 086	21	14			
Transaction exposure, net (EUR million)	745	80	-496	13	9	1	0	1 348
Transaction exposure hedging (EUR million)	-360	-51	397	-10	-4	0	0	-824
Hedging at the end of the year (months)	5,8	7,6	9,6	9,4	6,0			7,3
Average hedging in 2018 (months)	6,3	7,4	10,2	10,8	6,0			7,8
Average rate of hedging at the end of the year	1,1632	0,8925	10,4050					

NET INVESTMENTS IN A FOREIGN ENTITY 31.12.2019

	Equity exposure				
EUR million	USD	GBP	SEK	Others	Total
Equity exposure (mill. currency units)	91	9	4,051		
Equity exposure (EUR million)	81	10	388	6	485

NET INVESTMENTS IN A FOREIGN ENTITY 31.12.2018

	Equity exposure				
EUR million	USD	GBP	SEK	Others	Total
Equity exposure (mill. currency units)	86	10	3,918		
Equity exposure (EUR million)	75	12	382	5	474

INTEREST RATE RISK / DURATION AND RE-PRICING STRUCTURE OF LOANS (INCL. INTEREST RATE DERIVATIVES) 31.12.2019

				31 Dec 19 Re-pricing structure of interest rates of loans						
Loan amount (EUR million)	Duration (months)	Average interest rate (%)	Interest rate sensitivity (EUR million)	1-4/2020	5-8/2020	9-12/2020	2021	2022	2023	>2023
445	56,0	2,5	-1,3	-97	20	158	2	2	52	308

INTEREST RATE RISK / DURATION AND RE-PRICING STRUCTURE OF LOANS (INCL. INTEREST RATE DERIVATIVES) 31.12.2018

				31 Dec 18 Re-pricing structure of interest rates of loans						
Loan amount (EUR million)	Duration (months)	Average interest rate (%)	Interest rate sensitivity (EUR million)	1-4/2019	5-8/2019	9-12/2019	2020	2021	2022	>2022
447	60,0	3,3	-1,1	-26	76	17	26	1	1	352

[1)] Interest rate sensitivity is an estimate of the effect of an interest rate change of one percent in one direction on net interest cost based on year end exposure

HEDGING OF ELECTRICITY PRICE RISK EXPOSURE 31.12.2019

GWh	31 Dec 19	31 Dec 18
Electricity exposure, net 2020	773	727
Electricity hedging 2020	458	474
Hedging at the end of the year 2019 (%)	59	65
Average price of hedging at the end of the year 2019 (€/MWh)	21,38	24,97

Electricity price risk is hedged based on defined risk management policy by physical contracts or by financial contracts. The net electricity exposure has been calculated by taking into account the own and associated companies´ electricity production.

MARKET RISK SENSITIVITY 31.12.2019

MEUR	31 Dec 19 Impact on financial assets and liabilities	Impact on equity exposure and annual transaction exposure Impact on net equity of foreign entities	Impact on annual transaction exposure (cash flow)	Impact on annual transaction exposure (cash flow) incl. hedging
Interest rate risk (100 bp rise in interest rates)				
Effect on profit	4.0		1.3	5.3
Effect on other change in equity				
Commodity risk (electricity price + 20 %)				
Effect on profit			-5.3	-1.5
Effect on other change in equity	3.9			
FX risk (USD - 10 %)				
Effect on profit	0.0		-63.1	-30.6
Effect on other change in equity	31.4	-8.1		
FX risk (GBP - 10 %)				
Effect on profit	0.0		-8.5	-3.0
Effect on other change in equity	4.2	-1.0		
FX risk (SEK - 10 %)				
Effect on profit	-0.3		39.0	4.5
Effect on other change in equity	-29.2	-38.8		

MARKET RISK SENSITIVITY 31.12.2018

MEUR	31 Dec 18 Impact on financial assets and liabilities	Impact on equity exposure and annual transaction exposure Impact on net equity of foreign entities	Impact on annual transaction exposure (cash flow)	Impact on annual transaction exposure (cash flow) incl. hedging
Interest rate risk (100 bp rise in interest rates)				
Effect on profit	2.0		1.1	6.1
Effect on other change in equity	3.0			
Commodity risk (electricity price + 20 %)				
Effect on profit			-7.3	0.7
Effect on other change in equity	8.1			
FX risk (USD - 10 %)				
Effect on profit	-1.3		-74.5	-38.4
Effect on other change in equity	33.6	-7.5		
FX risk (GBP - 10 %)				
Effect on profit	0.0		-8.0	-3.0
Effect on other change in equity	4.0	-1.2		
FX risk (SEK - 10 %)				
Effect on profit	1.4		49.6	9.9
Effect on other change in equity	-36.1	-38.2		

Items with + sign = positive effect = increase of assets / decrease of liabilities / increase of cash flow
Items with - sign = negative effect = decrease of assets / increase of liabilities / decrease of cash flow

IFRS 7 requires an entity to disclose a sensitivity analysis for each type of market risk to which the entity is exposed at the reporting date, showing how profit or loss and equity would have been affected by changes in the relevant risk variable that were reasonably possible at that date. The Group has recognized interest rates, electricity prices and foreign exchange rates as its key market risks and has set 1 per cent interest rate rise, 20 per cent rise in electricity price and 10 per cent weakening of USD, GBP and SEK as reasonably possible risk variables. These currencies represent over 90 per cent of Group´s annual transaction exposure. The nature of the market price risk is relatively linear so that the size of effects of opposite market price changes do not essentially differ from the presented figures. The scenarios have been calculated by using regular principles of calculating market values of financial instruments described in the Group Accounting policies. Figures at the reporting date reflect quite well the average market risk conditions throughout the reporting period.

Additionally the Group is presenting figures describing the effects of the risk variables to its equity exposure and annual transaction exposure (cash flow) to present a broader picture about market risks of interest rates, electricity prices and foreign exchange rates. Annual cash flows are based on estimates, but not existing commercial contracts. The weakening of USD and GBP has a negative impact on annual cash flow and the weakening of SEK has a positive impact. Hedges reduce this impact depending on hedging strategy. The impact on net equity of foreign entities is arising from the consolidation of subsidiaries to the Group consolidated accounts. The rise of electricity price has a negative impact on cash flow. As according to hedging policy the electricity price risk of the nearest year has mostly been hedged, the impact including hedges remains minor.

CASH FLOWS OF INSTALLMENTS AND INTEREST PAYMENTS OF FINANCIAL LIABILITIES 31 DEC 2019

EUR million	Carrying amount	2020	2021	2022	2023	2024	2025–
Bonds	248.5						-248.5
Loans from financial institutions	148.8						-148.8
Pension loans	24.1	-24.1					
Finance lease liabilities	24.1	-6.8	-4.9	-3.9	-2.7	-1.6	-4.1
Other non-current interest-bearing liabilities	0.0						0.0
Non-current interest-bearing liabilities total	445.6						
Current interest-bearing liabilities	1.6	-1.6					
Total liabilities	447.2	-32.5	-4.9	-3.9	-2.7	-1.6	-401.5
Interest payments	62.9	-8.9	-8.2	-8.2	-8.2	-8.2	-21.0
Guarantee agreements	9.1	-6.4	-0.2	-0.2			-2.4
Derivative financial instrument liabilities							
Interest rate swaps	-3.1	-0.9	-0.7	-0.7	-0.4	-0.3	-0.1
Currency derivatives	-4.8	-964.7					
Commodity derivatives	-3.0	-3.0	0.0	0.0			
Derivative financial instrument liabilities total	-10.9	-968.6	-0.7	-0.7	-0.4	-0.3	-0.1
Derivative financial instrument assets							
Interest rate swaps							
Currency derivatives	10.6	970.5					
Commodity derivatives	8.1	6.7	1.1	0.2			
Derivative financial instrument assets total	18.6	977.2	1.1	0.2			
Derivative financial instruments cash flow	7.8	8.7	0.4	-0.4	-0.4	-0.3	-0.1

CASH FLOWS OF INSTALLMENTS AND INTEREST PAYMENTS OF FINANCIAL LIABILITIES 31 DEC 2018

EUR million	Carrying amount	2019	2020	2021	2022	2023	2024–
Bonds	308.6	-60.3					-248.3
Loans from financial institutions	63.1	-0.2	-50.0		-12.9		
Pension loans	62.6	-38.5	-24.1				
Finance lease liabilities	8.6	-2.5	-1.9	-1.3	-1.1	-0.8	-1.0
Other non-current interest-bearing liabilities	1.1						-1.1
PNon-current interest-bearing liabilities	443.9						
Current interest-bearing liabilities	3.3	-3.3					
Total liabilities	447.2	-104.8	-76.0	-1.3	-14.0	-0.8	-250.4
Interest payments	69.4	-12.7	-8.0	-7.1	-7.0	-6.9	-27.7
Guarantee agreements	14.4	-0.2	0.0	-0.4			-13.8
Derivative financial instrument liabilities							
Interest rate swaps	-1.5	-0.8	-0.6	-0.4	-0.2	0.2	0.3
Currency derivatives		-1 155.8					
Commodity derivatives	-1.8	-1.8	-0.0				
Derivative financial instrument liabilities total	-3.3	-1 158.3	-0.6	-0.4	-0.2	0.2	0.3
Derivative financial instrument assets							
Interest rate swaps							
Currency derivatives	1.8	1 157.6					
Commodity derivatives	19.9	10.9	7.7	1.2	0.2		
Derivative financial instrument assets total	21.7	1 168.5	7.7	1.2	0.2		
Derivative financial instruments cash flow	18.5	10.2	7.0	0.8	0.0	0.2	0.3

5.7 FAIR VALUES OF FINANCIAL ASSETS AND LIABILITIES

FINANCIAL ASSETS 31.12.2019

EUR million	Note	Fair value through proft and loss	Fair value through other comprehensive income	Amortised cost	Total carrying amount
Financial assets					
Other non-current investments	4.3	3.7	251.4		255.1
Other non-current financial assets	5.3			15.2	15.2
Accounts receivable and other receivables	4.5			303.8	303.8
Cash and cash equivalents	5.4			134.2	134.2
Derivative financial instruments	5.7	0.7	17.9		18.6
Total carrying amount		4.4	269.4	453.2	726.9
Total fair value		4.4	269.4	453.2	726.9
Financial liabilities					
Non-current interest-bearing financial liabilities	5.5			412.9	412.9
Other non-current financial liabilitiest	4.7			0.3	0.3
Current interest-bearing financial liabilities	5.5			32.0	32.0
Accounts payable and other liabilities	4.7			315.4	315.4
Derivative financial instruments	5.7	0.3	10.6		10.9
Total carrying amount		0.3	10.6	760.6	771.4
Total fair value		0.3	10.6	789.4	800.3

FINANCIAL ASSETS 31.12.2018

EUR million	Note	Fair value through proft and loss	Fair value through other comprehensive income	Amortised cost	Total carrying amount
Financial assets					
Other non-current investments	4.3	3.9	266.1		270.1
Other non-current financial assets	5.3			19.4	19.4
Accounts receivable and other receivables	4.5			303.0	303.0
Cash and cash equivalents	5.4			109.7	109.7
Derivative financial instruments	5.7	1.8	19.9		21.7
Total carrying amount		5.8	286.0	432.1	723.9
Total fair value		5.8	286.0	432.1	723.9
Financial liabilities					
Non-current interest-bearing financial liabilities	5.5			342.4	342.4
Other non-current financial liabilities	4.7			0.2	0.2
Current interest-bearing financial liabilities	5.5			104.8	104.8
Accounts payable and other liabilities	4.7			347.9	347.9
Derivative financial instruments	5.7	2.2	1.1		3.3
Total carrying amount		2.2	1.1	795.2	798.5
Total fair value		2.2	1.1	796.4	799.7

Accounts receivable and other receivables do not include advance payments, accrued tax receivables and periodisations of employee costs (Note 4.5). Accounts payable and other financial liabilities do not include advance payments, accrued tax liabilities and periodisations of employee costs (Note 4.7).

In Metsä Board, all interest-bearing liabilities are valued in the balance sheet at amortised cost based on effective interest method.

Fair values are based on present value of cash flow of each liability or assets calculated by market rate. The discount rates applied are between 0.3–2.1 per cent (31 December 2018: 0.3–2.7). The fair values of accounts and other receivables and accounts payable and other liabilities do not materially deviate from their carrying amounts in the balance sheet.

FAIR VALUE HIERARCHY OF FINANCIAL ASSETS AND LIABILITIES

ACCOUNTING PRINCIPLES

Financial assets and liabilities measured at fair value have been categorised as follows:

Level 1 Fair value is based on quoted prices in active markets.

Level 2 Fair value is determined by using valuation techniques that use observable price information from market.

Level 3 Fair value are not based on observa-ble market data, but on company's own assumptions.

The fair value measurement of financial assets at fair value recognised under other items of comprehensive income is described in Note 4.3.

The fair values of electricity, natural gas, propane, gas oil and heavy fuel oil derivatives are determined by using public price quotations in an active market (Level 1).

The fair values of currency forwards and options are determined by using the market prices of the closing date of the reporting period. The fair values of interest rate swaps are determined by using the present value of expected payments, discounted using a risk adjusted discount rate, supported by market interest rates and other market data of the closing date of the reporting period (Level 2).

For financial instruments not traded on an active market, the fair value is determined by valuation techniques. Judgment is used when choosing the different techniques and making assumptions, which are mainly based on circumstances prevailing in the markets on each closing date of the reporting period (Level 3).

FAIR VALUE HIERARCHY OF FINANCIAL ASSETS AND LIABILITIES

		31 Dec 2019			
EUR million	Note	Level 1	Level 2	Level 3	Total
Financial assets at fair value					
Other non-current investments	4.3	0.0		255.1	255.1
Derivative financial assets	5.7	8.1	10.6		18.6
Financial liabilities measured at fair value					
Derivative financial liabilities	5.7	2.0	8.8		10.9
Financial assets not measured at fair value					
Cash and cash equivalents	5.4		134.2		134.2
Financial liabilities not measured at fair value					
Non-current interest-bearing financial liabilities	5.5		441.4		441.4
Current interest-bearing financial liabilities	5.5		32.3		32.3

FAIR VALUE HIERARCHY OF FINANCIAL ASSETS AND LIABILITIES

		31 Dec 2018			
EUR million	Note	Level 1	Level 2	Level 3	Total
Financial assets at fair value					
Other non-current investments	4.3	0.0		270.1	270.1
Derivative financial assets	5.7	19.9	1.8		21.7
Financial liabilities measured at fair value					
Derivative financial liabilities	5.7	1.8	1.5		3.3
Financial assets not measured at fair value					
Cash and cash equivalents	5.4		109.7		109.7
Financial liabilities not measured at fair value					
Non-current interest-bearing financial liabilities	5.5		342.2		342.2
Current interest-bearing financial liabilities	5.5		106.2		106.2

OTHER NON-CURRENT INVESTMENTS MEASURED AT FAIR VALUE BASED ON LEVEL 3 VALUATION

EUR million	2019	2018
Value 1 Jan	270.1	240.3
Total gains and losses in profit and loss	3.2	-0.1
Total gains and losses in other comprehensive income	-14.7	29.9
Purchases	0.0	-
Sales	-3.5	-0.1
Value Dec 31.	255.1	270.1

FINANCIAL DERIVATIVES AND HEDGE ACCOUNTING

ACCOUNTING PRINCIPLES

Derivative contracts are initially recognised on the balance sheet at fair value at cost, and thereafter during their term-to-maturity revalued at their fair value at each reporting date. The fair value of derivatives is presented in non-interest-bearing receivables or liabilities. Gains and losses resulting from recognition at fair value are treated in accounting as required with regard to the intended use of the derivative contract in question. Derivatives are initially classified as either

1. Hedges of the exposure to changes in the fair value of receivables, liabilities or firm commitments;

2. Hedges of the cash flow from a highly probable forecast transaction;

3. Hedges of a net investment in a foreign entity, or

4. Derivatives to which it has been decided not to apply hedge accounting.

Metsä Board currently applies hedge accounting only to cash flow hedging. When applying hedge accounting at the inception of a hedging relationship, the Group has documented the relationship between the hedged item and the hedging instruments, as well as the hedging strategy observed. To meet the requirements of hedge accounting, the Group has also continuously carried out effectiveness testing to verify that changes in the fair value of the hedging instrument for each hedging relationship cover any changes in the fair value of the hedged item effectively enough, with respect to the hedged risk. Changes in the fair value of the effective portion of derivative instruments that meet the criteria for cash flow hedging are recognised in other items of comprehensive income. The gains and losses recognised in equity are transferred to the income statement when the forecast sale or purchase is realised, and are recognised as an adjustment to the hedged item. If the forecast transaction is no longer expected to occur, the gain or loss accrued in equity is recognised immediately in the income statement.

Derivatives not subject to hedge accounting, as well as the ineffective portion of derivatives subject to hedge accounting, are measured at fair value, and changes in the value of interest rate and currency derivatives are recognised in financial items and changes in the value of commodity derivatives are recognised in other income and expenses.

Hedge accounting in accordance with IFRS 9 is applied as cash flow hedging to highly probable cash flows from sales denominated in foreign currencies and contractual cash flows from floating interest rates of loans. In the management of price risks related to commodities, hedge accounting is applied to cash flows from highly probable purchases of electricity, natural gas, propane, light fuel oil and heavy fuel oil. The fair values of forward foreign exchange contracts are based on the forward prices prevailing on the balance sheet date, and currency options are measured at fair value in accordance with the Black–Scholes model. Interest rate swaps are measured at the current value of cash flows, with the calculation being based on the market interest rate yield curve. The fair values of electric power, natural gas, propane and fuel oil derivatives are measured on the basis of publicly quoted market prices.

MANAGEMENT OF FINANCIAL RISKS AND HEDGE EFFECTIVENESS

The management of the Group's currency, interest rate and commodity risks is described in more detail in Note 5.6, Management of financial risks. Note 5.7., Fair values of financial assets and liabilities, includes the fair values and grouping of derivatives. Note 5.1, Equity, includes itemisations of hedge accounting entries in the fair value reserve.

The hedging of the currency flow position is effective, given that there is a direct financial relationship between the hedged sale and the hedging derivative. The spot rate component of a forward contract or the reference value component of a currency option has been determined as the hedged item, and the forward points or the option's time value are treated as hedging costs subject to amortisation based on the period. Currency flow forecasts are fairly stable, invoicing steady within quarters and months, and forward deals are allocated to each month, due to which the ineffectiveness of hedging usually remains very low. Changes in production or the structure of sales may sometimes lead to ineffectiveness during the validity of a hedging relationship, in which case the hedging is adjusted accordingly.

The hedge accounting of the cash flow from interest rates is primarily effective, given that there is a direct financial relationship between the long-term loans subject to hedging and the hedging interest rate swaps. Ineffectiveness in the hedge relationship derives from any possible differences between the loans and the swaps' interest rate periods as well as from differences in the reference rates of contract terms. The ineffective portion of interest rate hedging is recognised through profit and loss. Unrealised, anticipated loan withdrawals or the premature repayment of loans may result in a state of ineffectiveness, in which case the hedging interest rate swaps are reversed or derecognised from hedge accounting, and the change in fair value is recognised in financial items under income.

The hedging of commodity purchases is effective, given that, in lieu of the total purchase price, the hedged item is the same, identical risk component of pricing applied in the hedging derivative. In the hedging of the price risk of electricity, the hedged item is what is referred to as the portion of the system price and the hedging takes place with a system-priced electricity swap. Correspondingly, the price components of the purchases and the hedging derivative in the hedging of natural gas, propane and light and heavy fuel oil are identical. Commodity purchases are fairly steady and hedges are allocated to each month, due to which the ineffectiveness of the hedging usually remains low. Changes in the use of various commodities may sometimes lead to ineffectiveness during the validity of a hedging relationship, in which case the hedging is adjusted accordingly.

DERIVATIVES 2019

	Nominal value	Fair value				
EUR million		Derivative assets	Derivative liabilities	Fair value net	Fair value through profit and loss	Fair value through other comprehensive income
Interest rate swaps	100.0		3.1	-3.1		-3.1
Interest rate derivatives	100.0		3.1	-3.1		-3.1
Currency forward contracts	959.9	10.3	4.7	5.6	0.4	5.2
Currency option contracts	480.3	0.2	0.1	0.1		0.1
Currency derivatives	1.440.2	10.6	4.8	5.8	0.4	5.3
Electricity derivatives	17.1	7.5	1.4	6.1		6.1
Oil derivatives	7.6	0.5	0.5	-0.0		-0.0
Other commodity derivatives	8.5	0.1	1.1	-1.0		-1.0
Commodity derivatives	33.2	8.1	3.0	5.1	0.0	5.1
Derivatives total	1.573.4	18.6	10.9	7.8	0.4	7.3

ECONOMIC EFFECT OF THE NET SETTLEMENT OF INSTRUMENTS UNDER MASTER NETTING AGREEMENTS EXECUTED IN 2019

	Financial derivatives on-balance sheet	Assets and liabilities related to master netting agreements	Net risk
Derivative assets	18.6	0.0	18.6
Derivative liabilities	-10.9	0.0	-10.9

Master netting agreements are used for derivative contracts entered into by the Group and its counterparties. In the event of unlikely credit events, all valid transactions based on the agreement will be cancelled, and only one net sum will be payable by each counterparty for all the transactions. The items are not netted on the balance sheet.

CASH FLOW HEDGE MATURITIES 2019

EUR million	1–6 months	6–12 months	1–5 years	over 5 years	Hedged cash flow total
Interest rate derivatives, hedge accounting			50.0	50.0	100.0
Interest rate derivatives, no hedge accounting					0.0
Currency rate derivatives, hedge accounting	525.4	99.2			624.6
Currency derivatives, no hedge accounting	87.4				87.4
Commodity derivatives, hedge accounting	17.0	9.4	3.3		29.8
Commodity derivatives, no hedge accounting					0.0

DERIVATIVES 2018

	Nominal value	Fair value				
EUR million		**Derivative assets**	**Derivative liabilities**	**Fair value net**	**Fair value through profit and loss**	**Fair value through other comprehensive income**
Interest rate swaps	100.0		1.5	-1.5	-0.7	-0.8
Interest rate swaps	100.0		1.5	-1.5	-0.7	-0.8
Currency forward contracts	1,155.8	1.8		1.8	0.3	1.5
Currency option contracts	471.6	0.0		0.0		0.0
Currency derivatives	1,627.4	1.8		1.8	0.3	1.5
Electricity derivatives	30.9	19.9		19.9		19.9
Oil derivatives	11.8		1.5	-1.5		-1.5
Other commodity derivatives	2.6		0.2	-0.2		-0.2
Commodity derivatives	45.3	19.9	1.8	18.1	0.0	18.1
Derivatives total	1,772.7	21.7	3.3	18.5	-0.3	18.8

6. INCOME TAXES

ACCOUNTING PRINCIPLES

Tax expenses in the income statement consist of taxes based on the taxable income for the period, taxes for previous periods, and deferred tax assets and liabilities. The tax effect related to the items recorded in the comprehensive income statement is recognised in the comprehensive income statement. Taxes based on the taxable income for the period are calculated based on taxable income in accordance with the tax rate as it stands in each country at that time. Deferred tax assets and liabilities are calculated on the temporary differences between the carrying amount and the tax base in accordance with the tax rates enacted as at the balance sheet date.

No deferred taxes are recognised for non-deductible goodwill, and no deferred taxes are recognised for subsidiaries' undistributed profits to the extent that the difference will not likely realise in the predictable future. Deferred tax assets are recognised to the extent that it is probable that taxable profit will be available against which a deductible temporary difference can be utilised.

Deferred income tax assets and liabilities can be offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred taxes are related to the same taxation authority.

The most significant temporary differences arise from depreciation of property, plant and equipment; the measurement of other investments and derivatives contracts at fair value; defined benefit plans; unused tax losses; and measurement at fair value in conjunction with acquisitions of business operations.

KEY ESTIMATES AND JUDGEMENT

The management's judgement is required for determining the taxes based on the result for the period, deferred tax assets and liabilities, and the extent to which deferred tax assets are recorded. The Group is subject to income taxation in several countries, and the final amount of tax is uncertain for several business operations and calculations. The Group anticipates future tax audits and recognises liabilities based on estimates of whether further taxes will need to be paid. If the associated final tax differs from the originally recorded amounts, the difference has an effect on both the taxes based on the taxable income for the period, and on deferred tax receivables and liabilities.

EUR million	2019	2018
Income taxes for the financial period	16.9	9.5
Income taxes from previous periods	0.1	-0.1
Change in deferred taxes	4.1	11.4
Other taxes	0.0	0.0
Income taxes total	21.0	20.8

INCOME TAX RECONCILIATION

EUR million	2019	2018
Result before tax	165.6	224.2
Calculated tax at Finnish statutory rate of 20.0%	33.1	44.8
Change in Swedish company tax rate from 22.0% to 21.4%	0.0	-0.6
Effects of differences between Finnish and non-Finnish tax rates	0.8	1.1
Tax exempt income	-2.3	-0.1
Non-deductible expenses	0.2	0.1
Previous years tax losses on which no deferred tax asset has been recognized used during period	-0.3	-0.3
Adjustments to previously recognised deferred taxes	-2.0	0.2
Losses from subsidiaries, on which no deferred tax asset has been recognised	0.1	0.0
Share of result from associate companies and joint ventures	-8.6	-24.9
Income taxes from previous periods	0.1	-0.1
Other items	0.0	0.4
Income taxes total	21.0	20.8
Effective tax rate, %	12.7	9.3

In the autumn of 2015 as a part of Metsä Board Oyj's 2014 tax assessment Finnish Tax Administration refused to accept the deductibility of a French subsidiary's losses transferred in a cross-border merger. Metsä Board has appealed the decision issued by the Tax Administration, as the company believes the losses are deductible. The Board of Adjustment dismissed the company's appeal in March 2018. The company will appeal the decision to the Administrative Court of Helsinki. Metsä Board has not recognized a deferred tax asset on the contested losses.

Taxes reported in other comprehensive income are specified in Note 5.1.

RECONCILIATION OF DEFERRED TAX ASSETS AND LIABILITIES TO BALANCE SHEET 2019

EUR million	1 Jan 2019	Charged to income statement	Charged to other comprehensive income	Translation differences	Sold subsidiaries	31 Dec 2019
Deferred tax assets						
Pension obligations and provisions	5.3	-1.2	-0.1	0.0	-	4.1
Intercompany margins	2.7	1.1	-	0.0	-	3.8
Unused tax loss carry-forwards	8.4	-7.5	-	-0.3	-	0.6
Financial instruments	-	-	-	-	-	-
Other temporary differences	2.7	2.9	0.0	0.0	-1.9	3.7
Total	19.2	-4.8	-0.1	-0.3	-1.9	12.3
Netting against liabilities	-13.7	7.8	0.0	0.3	0.1	-5.5
Deferred tax assets in balance sheet	5.5	3.0	-0.1	0.1	-1.7	6.7
Deferred tax liabilities						
Pension obligations	2.3	-0.4	-0.1	0.2	-	2.1
Depreciation differences and appropriations	66.3	-2.0	0.0	-0.8	-0.1	63.4
Other investments recognised at fair value	45.4	-	-2.9	-		42.5
Financial instruments	3.6	1.4	-2.1	0.0	-	2.9
Net investments in foreign operations	-	0.7	-	-0.7	-	-
Other temporary differences	0.6	-0.3	0.0	0.0	-	0.3
Total	118.2	-0.7	-5.0	-1.2	-0.1	111.2
Netting against receivables	-13.7	7.8	0.0	0.3	0.1	-5.5
Deferred tax liabilities in balance sheet	104.5	7.1	-5.1	-0.9	-	105.6

RECONCILIATION OF DEFERRED TAX ASSETS AND LIABILITIES TO BALANCE SHEET 2018

EUR million	1 Jan 2018	Charged to income statement	Charged to other comprehensive income	Translation differences	31 Dec 2018
Deferred tax assets					
Pension obligations and provisions	4.3	0.9	0.2	0.0	5.3
Intercompany margins	0.7	2.0	0.0	-	2.7
Unused tax loss carry-forwards	17.5	-8.3	-	-0.7	8.4
Financial instruments	-	-	-	-	-
Other temporary differences	3.9	-1.2	0.0	-0.1	2.7
Total	26.4	-6.6	0.3	-0.8	19.2
Netting against liabilities	-22.1	7.3	-0.2	1.3	-13.7
Deferred tax assets in balance sheet	4.3	0.6	0.0	0.5	5.5
Deferred tax liabilities					
Pension obligations	2.3	0.2	-0.2	0.0	2.3
Depreciation differences and appropriations	63.8	4.2	-	-1.6	66.3
Other investments recognised at fair value	39.4	-	6.0	-	45.4
Financial instruments	2.0	-0.7	2.3	0.0	3.6
Net investments in foreign operations	-	1.1	-	-1.1	-
Other temporary differences	0.6	-0.1	-	0.0	0.6
Total	108.1	4.7	8.1	-2.7	118.2
Netting against receivables	-22.1	7.3	-0.2	1.3	-13.7
Deferred tax liabilities in balance sheet	86.1	12.0	7.9	-1.4	104.5

The Group has recognised deferred tax assets related to operating loss carry-forwards for EUR 0.6 million in Germany. Management assesses that taxable profit will be available against which loss carry-forward can be utilised.

The taxable loss carry-forwards of business operations, for which deferred tax assets have not been recognised due to uncertainty of amount or utilisation possibilities, amounted approximately to EUR 505 million (508), mainly in Finland. The unrecognised deferred tax assets for these loss carry forwards is about EUR 113 million (111). About EUR 75 million of the loss carry-forwards will expire between 2020–2024. The remaining loss carry-forwards of about EUR 430 million do not expire.

7. GROUP STRUCTURE

7.1 ACQUIRED AND DISPOSED OPERATIONS AND NON-CURRENT ASSETS HELD FOR SALE

ACCOUNTING PRINCIPLES

Acquired business operations are consolidated from the time when control is transferred to the Group, and divested operations are consolidated until the time when control is transferred away from the Group.

The consideration paid, including the contingent sales price and the identifiable assets and liabilities of the acquired business operations, are measured at fair value at the time of acquisition. Expenses related to acquisitions are recognised as costs. Depending on the acquisition, the non-controlling interests' share in the object of the acquisition is recognised at fair value or at the amount that corresponds to the non-controlling interests' proportion of the net assets of the object of the acquisition.

The amount by which the sum of the consideration paid, the fair value of the non-controlling interests' share and the fair value of the assets previously owned in the object of the acquisition exceed the fair value of the identifiable net assets is recognised as goodwill.

There were no acquisitions and no assets were classified as held for sale in 2019 or 2018.

In February 2019, Metsä Board sold all 56,25% ownership in its partly owned subsidiary Äänevoima subgroup (Äänevoima Oy and Ääneverkko Oy) to associated company Metsä Fibre. Cash balance of the sold company amounted to EUR 2.5 million, and Metsä Board received EUR 6.7 million for the shares. The transaction had a cash flow effect of EUR 4.2 million and resulted in a divestment gain of EUR 6.8 million (net in operating profit).

In November 2018, Metsä Board sold all shares in its wholly owned subsidiary Metsa Board Shanghai Ltd to Metsäliitto Cooperative. Cash balance of the sold company amounted to EUR 0.2 million, and Metsä Board received EUR 0.8 million for the shares. The transaction had a cash flow effect of EUR 0.6 million and resulted in a divestment gain of EUR 0.0 million.

DISPOSED ASSETS, 2019 ÄÄNEVOIMA SUBGROUP AND 2018 METSA BOARD SHANGHAI LTD.

EUR million	2019	2018
Intangible rights	0.2	0.0
Tangible Assets	6.9	0.0
Other non-current non-interest bearing receivables	0.0	0.2
Inventories	0.7	0.0
Accounts receivable	2.9	0.4
Accrued income and other receivables	1.8	0.3
Cash and cash equivalents	2.5	0.2
Total assets	15.0	1.1
Non-current loan liabilities	14.0	0.0
Accounts payable	2.2	0.1
Accrued expenses and other liabilities	1.2	0.2
Total liabilities	17.4	0.3
Net assets disposed	-2.4	0.8
Total	-2.4	0.8
Proceeds from the sale	6.7	0.8
Less: associated company Fibre's internal margin	-2.2	0.0
Divestment gain before tax	6.8	0.0
Income taxes	0.0	0.1
Divestment gain after tax	6.8	0.0
Divestment proceeds received	6.7	0.8
Cash and cash equivalents of divested subsidiary	-2.5	-0.2
Proceeds from disposal of shares in subsidiary, net of cash	4.2	0.6

7.2 HOLDINGS IN OTHER COMPANIES

SUBSIDIARIES AND JOINT OPERATIONS 31 DECEMBER 2019

METSÄ BOARD OYJ'S HOLDINGS IN GROUP COMPANIES

	Country	Holding, %	Number of shares	Book value EUR
Holdings in parent company				
Metsäliitto Cooperative	Finland	-	179 171	606,778.98
Subsidiary shares in Finland				
Kotimaiset				
Oy Hangö Stevedoring Ab	Finland	100.00	150	1,000,000.00
Metsä Board International Oy	Finland	100.00	10,000	23,347,464.13
in other countries				
Metsa Board Americas Corporation [1]	USA	99.00	17,820	12,209,018.39
Metsä Board Benelux n.v./s.a [1]	Belgium	0.08	2	0.00
Metsa Board Hong Kong Ltd [1]	Hong Kong	1.00	1	168.19
Metsä Board Deutschland GmbH	Germany	100.00	1	0.00
Metsa Board Ibéria S.A. [1]	Spain	1.00	100	1,561.63
Metsä Board NL Holding B.V.	The Netherlands	100.00	15,350	4,492,764.02
Metsä Board Sverige Ab	Sweden	100.00	10,000,000	493,721,059.95
Subsidiary shares total				534,772,036.31
Shares and holdings in Group companies				535,378,815.29

[1]Total Group holding 100.0%

	Country	Holding, %	Number of shares	Book value EUR
Subgroup in Finland				
Metsä Board International Oy				
Metsä Board Benelux n.v./s.a [1]	Belgium	99.92	2 921	140,001.71
OOO Metsä Board Rus	Russia	100.00	1	821,786.71
Metsä Board France SAS	France	100.00	8 211	418,951.75
Metsa Board Hong Kong Ltd [1]	Hong Kong	99.00	99	1,069.35
Metsa Board Ibéria S.A. [1]	Spain	99.00	147 771	155,316.78
Metsa Board Italia S.r.l.	Italy	100.00	100 000	50,691.84
Metsa Board (Middle East & Africa) Ltd	Cyprus	100.00	742 105	214,000.00
Metsä Board Polska Sp. Z o.o.	Poland	100.00	232	54,458.58
Metsa Board Singapore Pte Ltd	Singapore	100.00	10 000	4,036.51
Metsa Board Singapore Pte Ltd Indian Branch	India	100.00	-	-
Metsa Board UK Ltd	United Kingdom	100.00	2 400	264,172.02
Metsa Board Americas Corporation [1]	USA	1.00	180	4,435.15
Metsa Board Australia and New Zealand Pty Ltd	Australia	100.00	1	41,827.54
Metsa Board Middle East & Africa DMCC	UAE	100.00	50	12,690.00
Subsidiary shares total				2,183,437.94
Subgroup in other countries				
Metsä Board NL Holding B.V				
Metsa Board IBP (China) Ltd	China	100.00		227,782.76
Metsa Board IBP HK Ltd	Hong Kong	100.00	7,009,900	710,776.87
Subsidiary shares total				938,559.63

MATERIAL SUBSIDIARIES

Metsä Board has one material subsidiaries:

- Metsä Board Sverige AB

Metsä Board Sverige AB is located in Örnsköldsvik, Sweden. Metsä Board Sverige AB produces folding boxboard and kraftliner. In addition, Metsä Board Sverige AB produces pulp for its own production needs and to the market. Metsä Board Sverige AB's sales were EUR 610 million (2018: 656) in 2019. The company's capacity is 250,000 tonnes of liner, 400,000 tonnes of folding boxboard and 730,000 tonnes of chemical pulp.

Metsä Board Kemi Oy was merged to Metsä Board Oyj on 1 January 2019. The company's sales in 2018 were EUR 339 million, total assets EUR 141 million, depreciation difference EUR 19 million and liabilities EUR 101 million.

INVESTMENTS IN ASSOCIATE COMPANIES AND JOINT VENTURES

EUR million	2019	2018
Value 1 Jan	411.3	324.4
Share of results from associated companies and joint ventures		
Share of result from Metsä Fibre (operating result)	43.1	124.5
Share of results from other associated companies and joint ventures	0.1	0.1
Dividends received	-63.3	-34.9
Share of other comprehensive income from associated companies and joint ventures		
Fair value reserve	1.2	-2.7
Translation differences and other changes in equity	-0.1	-0.1
Investments in associated companies and joint ventures 31 Dec	392.4	411.3

AMOUNTS RECOGNISED IN INCOME STATEMENT

EUR million	2019	2018
Amounts recognised in income statement		
Associate companies	43.2	124.5
joint ventures	0.0	0.1
Amounts recognised in income statement total	43.2	124.6

AMOUNTS RECOGNISED IN BALANCE SHEET

EUR million	2019	2018
Associate companies	391.8	410.8
joint ventures	0.6	0.6
Amounts recognised in balance sheet total	392.4	411.3

The carrying amount of associated companies at 31 December 2019 includes goodwill of EUR 45.2 million (2018: 45.2). None of the associate companies or joint ventures are listed companies. Transactions with associate companies and joint ventures are detailed in Note 7.3.

FINANCIAL INFORMATION SUMMARY OF ESSENTIAL ASSOCIATED COMPANIES

According to management's view, the only essential associated company is Metsä Fibre Group, which produces chemical pulp and sawn timber. Metsä Board owns 24.9 per cent of Metsä Fibre. Metsä Board's parent company, Metsäliitto Cooperative, owns 50.1 per cent, and Itochu Corporation from Japan owns 25.0 per cent. Metsä Fibre has operations primarily in Finland, and its production capacity is approximately 3.2 million tonnes of chemical pulp. In Addition Metsä Fibre has five sawmills in Finland and Metsä Svir sawmill in Russia.

SUMMARISED FINANCIAL INFORMATION FOR METSÄ FIBRE

METSÄ FIBRE GROUP

EUR million	2019	2018
Sales	2,236.0	2,469.1
Result for the period	175.3	507.0
Other comprehensive income	7.9	-15.1
Total comprehensive income for the period	183.2	491.9
Dividend received	63.3	34.9
Non-current assets	1,462.6	1,485.2
Current assets	964.7	1,179.8
Non-current liabilities	632.4	652.8
Current liabilities	415.2	559.5
Net assets	1,379.6	1,452.6

RECONCILIATION OF FINANCIAL INFORMATION FOR METSÄ FIBRE TO THE VALUE RECOGNISED IN CONSOLIDATED BALANCE SHEET

EUR million	2019	2018
Group's share of net assets	343.5	361.7
Goodwill	45.2	45.2
Other purchase price allocations at acquisition	6.1	6.6
Other adjustments	-3.2	-3.1
Carrying value of associated company in consolidated balance sheet	391.7	410.4

Metsä Fibre has been consolidated according to equity method based on its consolidated financial statements prepared under IFRS.

FINANCIAL INFORMATION SUMMARY OF OTHER THAN ESSENTIAL ASSOCIATED COMPANIES

EUR million	2019	2018
Share of result from other associated companies	0.1	0.0
Carrying value in consolidated balance sheet	0.1	0.3

JOINT VENTURES

Metsä Board has one joint venture, Kemishipping Oy. Kemishipping Oy offers logistics services in Kemi, Finland. Parties have joint control of relevant activities. Kemishipping Oy has been consolidated according to equity method. Metsä Board's ownership is 15 per cent.

EUR million	2019	2018
Sales	15.3	16.8
Result for the period	0.2	0.9
Result for the period includes the following items:		
Depreciation, amortisation and impairment charges	1.3	1.3
Interest expenses	0.1	0.1
Income taxes	0.0	0.3
Income taxes	-	-
Non-current assets	6.2	7.3
Current assets	4.3	4.1
Non-current liabilities	2.6	4.4
Current liabilities	3.9	3.2
Net assets	4.0	3.8
Group's share of net assets	0.6	0.6
Joint venture carrying value in consolidated balance sheet	0.6	0.6

7.3 RELATED PARTY TRANSACTIONS

Related parties include Metsä Board's ultimate parent company Metsäliitto Cooperative, which owns 46 per cent of Metsä Board's shares and 66 per cent of the voting rights, other subsidiaries of Metsäliitto, associated companies and joint ventures as well as Metsäliitto Employees' Pension Foundation. The members of the Board of Directors, Metsä Group's Executive Management Team and Metsä Board's Corporate Management Team as well as their close family members are also included in related parties.

The most significant subsidiaries of Metsäliitto, with which Metsä Board has business transactions, are as follows:

Metsä Tissue Group
Metsä Fibre Group
Metsä Forest Sverige Ab

Metsä Fibre has been consolidated by using equity method according to Investments in associates standard (IAS 28). Related party transactions with Metsä Fibre are presented as transactions with sister companies.

Financial operations of the Group have been centralised to Metsä Group Treasury Oy, which is a wholly-owned subsidiary of Metsäliitto Cooperative and in charge of managing the Group companies' financial positions according to the strategy and financial policy defined by the Group, providing necessary financial services and acting as a competence center in financial matters. Financial transactions with Metsä Group Treasury Oy are carried out at market prices.

The value of wood purchases from Metsäliitto Cooperative was EUR 112.0 million (2018: 115.6) and pulp purchases from Metsä Fibre Oy EUR 327,3 million (365.1). The purchases were carried out at market prices.

Metsä Board is participating in the supplementary pension arrangement of Metsä Group executives. Payments to the arrangement amounted to EUR 0.5 million in 2019 (2018: 0.4).

Metsäliitto Employees' Pension Foundation is a separate legal entity granting defined supplementary pension benefits to part of Metsä Board officials and manages foundation's assets. The foundation owns about 0.1 per cent of Metsä Board Corporation. Furthermore, the foundation has invested EUR 0.0 million in Metsäliitto Cooperative's participations. Metsä Board did not pay any contributions to the foundation in 2019 and 2018. The employer loans granted by the foundation to Metsä Board amounted to EUR 0,0 million (5.9) in 2019.

	Transactions with parent company		Transactions with sister companies	
EUR million	2019	2018	2019	2018
Sales	8.1	10.1	93.0	82.0
Other operating income	2.9	3.1	2.3	2.6
Purchases	112.0	115.6	570.4	599.2
Share of result from associated companies	-	-	43.1	124.5
Dividend income	0.0	0.0	0.0	34.9
Interest income	-	-	0.1	0.0
Interest expense	-	0.1	1.9	1.7
Receivables				
Accounts receivable and other receivables	1.7	1.4	31.1	39.3
Cash equivalents	-	-	127.1	98.2
Liabilities				
Accounts payable and other liabilities	9.3	10.1	45.3	48.8

TRANSACTIONS WITH ASSOCIATED COMPANIES AND JOINT VENTURES

EUR million	2019	2018
Sales	0.5	0.7
Purchases	5.3	5.7
Interest income	-	-
Receivables		
Other non-current financial assets	-	-
Accounts receivable and other receivables	0.4	0.3
Liabilities		
Accounts payable and other liabilities	0.6	1.4

Metsä Board has classified interest-bearing receivables comparable to cash funds and available immediately from Metsä Group's internal bank Metsä Group Treasury Oy as Cash and cash equivalents.

The receivables from group companies do not include doubtful receivables, and no bad debt was recognised during the period. No security or collateral has been provided for group liabilities.

8. OTHER NOTES

8.1 CONTINGENT LIABILITIES, ASSETS AND COMMITMENTS

DISPUTES AND CLAIMS

Metsä Board companies have been sellers in several share transactions in recent years. In these divestments, the companies have issued regular seller's assurances. Claims presented against Metsä Board companies and costs incurred by the companies due to these assurances cannot be ruled out.

EUR million	2019	2018
Own liabilities for which collateral has been provided	24.1	56.6
Pledges granted	138.7	145.4
Floating charges	232.8	232.8
Real estate mortgages	371.5	378.2
Lease commitments	1.6	16.2
Other commitments given on own behalf	9.1	14.0
Commitments given on the behalf of others	0.1	0.1
Total	382.4	408.5

Commitments include granted pledges, mortgages and floating charges as well as guarantees. Pledges granted are shares in associate company (Metsä Fibre).

RENT AND LEASE COMMITMENTS

Starting from 1 January 2019, rent commitments include liabilities arising from contracts for low value items and short term leases. Note 1 include additional information on the adopted IFRS 16 -standard.

LEASE COMMITMENTS INCLUDE THE MINIMUM RENTS OF OTHER NON-CANCELLABLE LEASES PURSUANT TO THE IAS 17 STANDARD

EUR million	2019	2018
Rent and lease commitments, maturity		
Not later than 1 year	0.7	4.9
Later than 1 year and not later than 5 years	0.9	8.2
Later than 5 years		3.0
Total	1.6	16.2

INVESTMENT COMMITMENTS

EUR million	2019	2018
Payments due in following 12 months	60.2	0.0
Payments due later	-	-
Total	60.2	0.0

LEGAL DISPUTE (CONTINGENT ASSET)

In the autumn of 2015 as a part of Metsä Board Oyj's 2014 tax assessment Finnish Tax Administration refused to accept the deductibility of a French subsidiary's losses transferred in a cross-border merger. Metsä Board has appealed the decision issued by the Tax Administration, as the company believes the losses are deductible. The Board of Adjustment dismissed the company's appeal in March 2018. The company has appealed against the decision to the Administrative Court of Helsinki.

OTHER INFORMATION

Metsä Board has investment grade credit ratings by S&P Global and Moody's Investor Service. The company's rating by S&P Global is BBB-, with a stable outlook. The company's rating by Moody's is Baa3, with a stable outlook.

8.2 EVENTS AFTER THE FINANCIAL PERIOD

Finnish Paper Union launched a paper industry strike in Finland on 27 January 2020, which ended on 10 February 2020. The strike affected all Metsä Board's mills in Finland and the pulp mills of its associated company Metsä Fibre. Metsä Board estimates that the strike will have a negative impact on its operating result of approximately EUR 20 million, affecting mainly the first quarter of the year.

CDP selected Metsä Board for its Climate A-list in recognition of company's efforts to reduce fossil CO2 emissions, minimize climate risks and develop low carbon solutions. In the CDP's Water Program and Forest Program and in the Supply Chain Engagement category, Metsä Board was awarded the Leadership status A-.

Parent company

INCOME STATEMENT

EUR	NOTE	1.1.–31.12.2019	1.1.–31.12.2018
Sales	2	1,298,912,836.71	978,947,129.00
Change in stocks of finished and unfinished products		-7,841,433.77	10,369,278.03
Other operating income	3.4	41,790,929.10	28,821,466.98
Materials and services			
Materials, consumables and goods			
Purchases during the financial period		-795,211,696.96	-622,639,885.82
Changes in stocks		1,819,625.65	5,190,772.49
External services	5	-191,026,632.56	-142,549,325.17
Employee costs	5	-93,166,366.22	-83,938,947.57
Depreciations and impairment charges	3.6	-49,425,058.98	-41,833,266.22
Other operating expenses	3.5	-119,924,845.71	-99,325,941.87
		-1,246,934,974.78	-985,096,594.16
Operating profit/loss		85,927,357.26	33,041,279.85
Financial income and expenses	7		
Income from group companies		72,115,919.33	54,573,825.01
Income from investments in other non-curren assets		1,432.32	10,321.45
Other interest and financial income		866.91	1,695.22
Exchange rate differences		-5,590,305.18	-10,693,257.00
Interest expenses and other financial expenses		-15,124,245.07	-17,154,523.80
		51,403,668.31	26,738,060.88
Profit/loss before appropriations and taxes		137,331,025.57	59,779,340.73
Appropriations			
Change in deprciation differences	6	-6,020,879.19	-11,121,764.16
Group contribution		1,050,000.00	30,070,000.00
		-4,970,879.19	18,948,235.84
Income taxes	8	-14,427,786.37	-7,668,177.20
Profit/loss for the financial period		117,932,360.01	71,059,399.37

PARENT COMPANY

BALANCE SHEET

EUR	Note	31.12.2019	31.12.2018
ASSETS			
Intangible asstest	9		
Intangible assets		14,278,206.33	13,395,284.97
Other intangible assets		486,562.90	711,910.12
Advance payment and construction in progress		1,383,677.21	901,832.68
		16,148,446.44	15,009,027.77
Tangible assets	9		
Land and water areas		28,976,820.98	26,511,730.60
Buildings and constructions		126,429,353.21	121,733,403.01
Machinery and equipment		233,190,115.27	202,150,186.81
Other tangible assets		7,162,554.22	5,072,627.96
Advance payment and construction in progress		31,410,056.94	23,167,806.23
		427,168,900.62	378,635,754.61
Investments	10		
Shares in group companies		535,378,815.29	563,209,026.13
Receivables from group companies		301,618,572.70	304,923,645.95
Shares in associated companies		86,429,409.33	90,929,409.33
Other shares and holdings		252,435,976.80	267,411,629.23
Other receivables		35,222.52	35,222.52
		1,175,897,996.64	1,226,508,933.16
Total non-current assets		1,619,215,343.70	1,620,153,715.54
CURRENT ASSETS			
Inventories			
Materials and consumables		45,520,102.14	38,912,633.41
Finished products		138,540,621.00	113,910,462.57
Advance payments		7,463,245.05	5,778,414.62
		191,523,968.19	158,601,510.60
NON-CURRENT RECEIVABLES	11		
Receivables from group companies		76,578,473.79	80,671,362.40
Receivables from group companies		76,578,473.79	80,671,362.40
Current receivables			
Accounts receivables		138,926,647.98	110,176,088.86
Receivables from group companies		68,621,064.30	56,173,711.72
Receivables from associated companies		426,042.57	239,764.71
Other receivable		21,802,288.77	16,335,289.98
Prepayments and accrued income		20,579,735.64	17,091,678.59
		250,355,779.26	200,016,533.86
Total receivables		326,934,253.05	280,687,896.26
Cash and cash equivalents		3,258,020.29	6,377,889.07
Total current assets		521,716,241.53	445,667,295.93
TOTAL ASSETS		2,140,931,585.23	2,065,821,011.47

EUR	Note	31.12.2019	31.12.2018
EQUITY AND LIABILITIES			
SHAREHOLDERS' EQUITY	12		
Share capital		557,881,540.40	557,881,540.40
Other reserves			
Reserve for invested unrestricted equity		317,293,305.61	384,840,727.35
Value adjustment reserve		171,598,515.80	182,839,879.60
Profit/loss for previous financial periods		109,887,379.52	74,379,254.75
Profit/loss for the financial period		117,932,360.01	71,059,399.37
		1,274,593,101.34	1,271,000,801.47
APPROPRIATIONS			
Accumulated depreciation difference	6	138,897,065.91	113,793,981.38
PROVISIONS	13	4,568,212.78	7,062,363.91
LIABILITIES			
Non-current liabilities	15		
Bonds		249,349,299.01	249,265,345.02
Loans from financial institutions		150,000,000.00	50,153,318.00
Pension premium loans		0.00	23,348,214.32
Advance payments		1,515,404.94	1,731,891.42
Deferred tax liability	8.14	42,013,315.59	44,297,497.13
Liabilities to group companies		3,093,184.14	1,994,155.25
		445,971,203.68	370,790,421.14
Current liabilities	16		
Bonds		0.00	60,347,860.00
Loans from financial institutions		0.00	210,416.00
Pension premium loans		23,348,214.32	37,707,919.28
Advance payments		2,870,361.05	2,675,507.99
Accounts payable		134,113,280.45	103,949,313.97
Liabilities to group companies		51,944,254.45	36,938,069.54
Liabilities to participating companies		415,389.81	197,890.72
Other liabilities		6,328,756.57	4,958,790.48
Accruals and deferred income		57,881,744.87	56,187,675.59
		276,902,001.52	303,173,443.57
Total liabilities		722,873,205.20	673,963,864.71
Total shareholdes' equity and liabilities		2,140,931,585.23	2,065,821,011.47

PARENT COMPANY ACCOUNTS

CASH FLOW STATEMENT

EUR	1.1.–31.12.2019	1.1.–31.12.2018
CASH FLOW FROM OPERATING ACTIVITIES		
Profit/loss before appropriations and taxes	137,331,025.57	59,779,340.73
Adjustments to profit/loss a)	-17,853,757.10	8,139,303.05
Interest received	8,822,022.70	8,672,641.57
Interest paid	-14,084,523.72	-16,005,835.78
Dividends received	63,295,885.58	45,913,055.50
Other financial items, net	-2,920,192.59	541,292.41
Income taxes paid	-14,438,004.48	-12,475,312.94
Change in net working capital b)	-30,197,487.13	34,097,785.75
Net cash flow from operating activities	129,954,968.83	128,662,270.29
INVESTMENTS		
Acquisition of shares in affiliated companies,	0.00	-12,209,018.39
Acquisition of other shares	-32,697.47	0.00
Investments in tangible and intangible assets	-58,388,063.02	-43,307,793.66
Proceeds from disposal of shares in affiliated companies,	1,338,919.46	12,692.46
Proceeds from disposal of participating interests	6,663,325.00	0.00
Proceeds from disposal of other shares	3,491,420.46	58,431.62
Prodeeds from sale of tangible and intangible assets	19,940,902.58	10,660,205.07
Increase and decrease of non-current receivables, net	0.00	-56,547,378.63
Total cash flow from investing activies	-26,986,192.99	-101,332,861.53
CASH FLOW BEFORE FINANCIAL ACTIVITIES	102,968,775.84	27,329,408.76
Cash flow from financial activities		
Dividend paid and other profit distribution	-103,098,696.34	-74,657,676.66
Increase in non-current liabilities	150,000,000.00	0.00
Decrease in non-current liabilities	-148,289,588.83	-130,305,322.97
Increase or decrease in interest bearing current liabilities, net	-7.12	0.00
Increase or decrease in interest bearing current receivables, net	-4,700,352.33	180,506,216.86
	-106,088,644.62	-24,456,782.77
CHANGES IN CASH AND CASH EQUIVALENTS	-3,119,868.78	2,872,625.99
Cash and cash equivalents opening balance	6,377,889.07	3,505,263.08
Change in cash and cash equivalents	-3,119,868.78	2,872,625.99
Cash and cash equivalents closing balance	3,258,020.29	6,377,889.07
A) Adjustments to profit/loss	,,	
Depreciations and impairment charges	49,425,058.98	41,833,266.22
Financial income and expenses	-51,403,668.31	-26,738,060.88
Gains or losses on sale of fixed assets	-13,380,996.64	-5,914,352.19
Change in provisions	-2,494,151.13	-1,041,550.10
Total	-17,853,757.10	8,139,303.05
B) Change in net working capital		
Inventories	4,336,977.69	-14,361,709.51
Change in current receivalbles, non-interes bearing	-8,315,945.23	48,630,034.85
Change in current liabilities, non-interest bearing	-26,218,519.59	-170,539.59
Total	-30,197,487.13	34,097,785.75

PARENT COMPANY ACCOUNTING POLICIES

1. ACCOUNTING POLICIES

Metsä Board Oyj belongs to Metsä Group, whose parent company is Metsäliitto Cooperative. Metsäliitto Cooperative's registered office is in Helsinki. The Metsä Group prepares consolidated financial statements which are available at the Group's main office at Revontulenpuisto 2 A, FIN-02100 Espoo, Finland.

Metsä Board Oyj's financial statements have been prepared in accordance with Finnish Accounting Standards (FAS).

ITEMS AFFECTING COMPRATABILITY

Metsä Board Kemi Oy was merged with Metsä Board Corporation on January 1, 2019. Metsä Board Kemi Oy's net sales in 2018 were EUR 339 million, assets on the balance sheet EUR 141 million, accumulated appropriations EUR 19 million and liabilities EUR 101 million.

FOREIGN CURRENCY TRANSACTIONS

Foreign exchange gains and losses have been booked to exchange gains/losses under financial income and expense. Open and actual foreign exchange differences hedging sales are recorded immediately to financial income and expenses in the income statement.

DERIVATIVE FINANCIAL INSTRUMENTS

The company uses derivatives only for hedging against currency, interest rate and commodity risks. Derivatives are valued at fair value in accordance with the alternative treatment permitted by Chapter 5, Section 2a of the Accounting Act. The management of financial risks and the principles applied to derivatives are explained in Notes 5.6 and 5.7 to the consolidated financial statements.

The unrealized fair value of cash flow hedges in hedge accounting is recognised in the fair value reserve of the balance sheet to the extent that they are effective. The unrealized fair value of derivatives not in hedge accounting is recognised in the income statement. In addition, the company has recognised deferred tax assets and liabilities as a separate item in the income statement and balance sheet during the financial year.

Metsä Board Oyj applies the fair value option under Chapter 5, Section 2a of the Accounting Act also to the other shares and holdings. Accordingly, the company has classified its shares in Pohjolan Voima Oyj as financial assets at fair value through equity in accordance with IFRS 9 and other equity instruments in financial assets valued at fair value through profit or loss. The principles applied in determining the fair value of shares and the sensitivity of fair value to various valuation factors are described in Note 4.3 to the consolidated financial statements.

SALES

Sales are calculated after deduction of indirect sales taxes, trade discounts and other items adjusting sales.

PENSIONS AND PENSION FUNDING

Statutory pension security is handled by pension insurance companies outside the Group. In addition to statutory pension security, some salaried employees have supplementary pension arrangements which are either insured at Pohjola or are an arranged through Metsäliitto Employees' Pension Foundation or are anMetsäliitto Employees' Pension Foundation or are an unfunded liability of the company. Pension insurance premiums have been accrued to correspond to the accrual-based wages and salaries given in the financial statements.

LEASING

Lease payments are treated as rental expenses.

INCOME TAXES

Tax expenses in the income statement consists of taxes based on the taxable income for the period, taxes for the previous periods and deferred tax assets and liabilities. Deferred tax assets and liabilities are calculated on the temporary differences between the carrying amount and the tax base in accordance with the tax rate issued as at the balance sheet date. Deferred taxes are calculated on the basis of the enacted tax rate.

PROPERTY, PLANT AND EQUIPMENT AND DEPRECIATION

The carrying values of property, plant and equipment are based on original acquisition costs less depreciation according to plan and impairment losses.

Depreciation according to plan is based on the estimated useful life of the asset as follows:

Buildings and constructions	20–40	years
Heavy machinery	20–40	years
Other heavy machines	15–20	years
Lightweight machinery and equipment	5–15	years
Other tangible assets	5–10	years

Depreciation is not recorded on the purchase cost of land and water.

INVENTORIES

Inventories are measured at the lower of cost or net realizable value. FIFO principle is observed in measuring inventories or, alternatively, the weighted average cost method. Value of finished and semi-finished goods comprises raw materials, direct wages and salaries, depreciation and amortisation and other direct cost as well as a reasonable share of variable and fixed production overhead cost calculated at normal level of production. Net realizable value is the estimated selling price less the estimated cost of completion and the estimated costs necessary to make the sale.

PROVISIONS

Contingent costs and losses that are no longer generate corresponding income and for which the parent company is obliged or committed and whose monetary value can be reasonably estimated are recognized in the income statement in line with the nature of the expense item and in the mandatory provisions of the balance sheet.

EUR	2019	2018
2. SALES BY REGION		
Finland	44,551,062.34	48,902,647.29
Other EU-countries	701,544,734.24	541,244,862.78
Other European countries	207,031,287.84	185,901,870.07
Other countries	345,785,752.29	202,897,748.86
Total	1,298,912,836.71	978,947,129.00
3. EXCEPTIONAL ITEMS		
Other operating income		
Proceeds from liquidation of shares,	5,419,690.00	0.00
Proceeds from selling of land	5,456,174.34	0.00
	10,875,864.34	0.00
Employee costs		
Refund from pension	2,493,510.00	0.00
	2,493,510.00	0.00
Other operating expenses		
Subsidiary merger loss	-6,109,684.85	-2,175,779.12
Other exceptional items	0.00	-1,495,444.86
	-6,109,684.85	-3,671,223.98
Exceptional items in income statement	7,259,689.49	-3,671,223.98
4. OTHER OPERATING INCOME		
Rental income	1,080,975.72	1,171,887.54
Service revenue	12,270,340.82	15,564,463.93
Gains on disposal	19,216,671.07	8,144,668.38
Government grants and allowances	297,294.45	247,770.82
Scrap and waste sale	289,697.26	221,974.31
Others	8,635,949.78	3,470,702.00
	41,790,929.10	28,821,466.98
5. OPERATING EXPENSES		
External services		
Distribution costs	140,130,611.14	100,361,574.87
Other external services	50,896,021.42	42,187,750.30
	191,026,632.56	142,549,325.17
Employee costs		
Wages and salaries for working hours	57,849,024.96	52,298,821.88
Social security expenses		
Pension expenses	11,307,166.51	10,526,134.95
Other social security expenses	24,010,174.75	21,113,990.74
	93,166,366.22	83,938,947.57

Management's salaries, wages and pension commitments are presented in Group's Note 3.2.

	2019	2018
The average number of personnel during the financial period in the parent company	1,177	1,057
Other operating expenses		
Rental and other property costs	8,882,314.90	6,622,523.65
Purchases of services	81,868,726.97	71,847,641.56
Losses on disposal of non-current assets	6,199,408.43	2,230,316.19
Other expenses		
Voluntary social costs	2,310,950.99	2,106,292.30
Fixed energy costs	9,220,062.19	6,057,377.46
Traveling expenses	1,652,292.34	1,319,608.22
Insurances	2,413,653.52	2,397,543.44
Advertising and marketing expenses	2,183,325.61	1,743,358.48
Others	5,194,110.76	5,001,280.57
	119,924,845.71	99,325,941.87
Fees of principal auditor		
Audit fees	196,064.00	132,144.00
Auditor's opinions	2,870.00	5,925.00
Tax consulting fees	0.00	900.00
	198,934.00	138,969.00

The principal auditor is KPMG Oy Ab.

6. DEPRECIATION AND IMPAIRMENT CHARGES

EUR	2019	2018
Planned depreciation		
Intangible rights	1,852,262.64	2,175,018.78
Other intangible assets	225,347.22	122,207.60
Buildings and constructions	7,671,798.14	5,859,074.08
Machinery and equipment	38,968,190.12	33,289,443.43
Other tangible assets	707,460.86	387,522.33
Total	49,425,058.98	41,833,266.22
Change in depreciation difference	6,020,879.19	11,121,764.16
Total depreciation	55,445,938.17	52,955,030.38
Depreciation difference at the beginning of the financial year	113,793,981.38	102,672,217.22
Change in deprciation differences	6,020,879.19	11,121,764.16
Transfer in Merger	19,082,205.34	0.00
Depreciation difference at the end of the financial year	138,897,065.91	113,793,981.38

7. FINANCIAL INCOME AND EXPENSES

EUR	2019	2018
Income from investments in non-current assets		
Dividend income		
From Group companies	63,294,453.26	45,902,734.05
From others	1,432.32	10,321.45
	63,295,885.58	45,913,055.50
Interest income on investments in non-current assets		
From Group companies	6,905,069.36	6,535,113.57
	6,905,069.36	6,535,113.57
Total income from non-current assets	70,200,954.94	52,448,169.07
Other interest and financial income		
Interest income from Group companies	1,916,396.71	2,135,977.39
Other interest income	556.63	1,550.61
Other financial income	310.28	144.61
	1,917,263.62	2,137,672.61
Exchange rate differences recognized in financial income and expenses		
Exchange rate differences on sales	1,366,174.87	-399,002.07
Exchange rate differences on purchases	-76,941.19	-71,430.92
Exchange rate differences on financing	-6,879,538.86	-10,222,824.01
	-5,590,305.18	-10,693,257.00
Interest and other financial expenses		
Interest expenses for the same group companies	-1,781,249.49	-1,418,558.23
Other interest expenses	-11,289,806.84	-14,944,610.08
Other financial expenses	-2,053,188.74	-791,355.49
Total interest expenses and other financial expenses	-15,124,245.07	-17,154,523.80
Financial income and expenses total	51,403,668.31	26,738,060.88

8. INCOME TAXES

EUR	2019	2018
Taxes for the financial year	13,928,522.19	7,451,245.02
Taxes for previous financial years	433.95	8,622.16
Deferred taxes	498,830.23	208,310.02
	14,427,786.37	7,668,177.20

9. INTANGIBLE AND TANGIBLE ASSETS

EUR	2019	2018
Intangibe rights		
Acquisition costs 1.1.	114,519,881.98	107,199,410.34
Increases	9,293,523.18	7,323,335.29
Decreases	-6,579,639.18	-511,163.65
Transfers between items	21,300.00	508,300.00
Acquisition costs 31.12.	117,255,065.98	114,519,881.98
Accumulated depreciation and impairment charges 1.1.	-101,124,597.01	-97,050,041.46
Accumulated depreciation of deductions and transfers	0.00	-1,899,536.77
Depreciation and write-downs for the financial period	-1,852,262.64	-2,175,018.78
Accumulated depreciation and impairment 31.12.	-102,976,859.65	-101,124,597.01
Book value 31.12.	14,278,206.33	13,395,284.97
Other intangible assets		
Acquisition costs 1.1.	15,852,998.18	15,874,501.10
Decreases	-128,300.00	-21,502.92
Acquisition costs 31.12.	15,724,698.18	15,852,998.18
Accumulated depreciation and impairment charges 1.1.	-15,141,088.06	-15,040,383.38
Accumulated depreciation of deductions and transfers	128,300.00	21,502.92
Depreciation and write-downs for the financial period	-225,347.22	-122,207.60
Accumulated depreciation and impairment 31.12.	-15,238,135.28	-15,141,088.06
Book value 31.12.	486,562.90	711,910.12
Advance payments and work in progress		
Acquisition costs 1.1.	901,832.68	844,755.31
Increases	503,144.53	565,377.37
Transfers between items	-21,300.00	-508,300.00
Acquisition costs 31.12.	1,383,677.21	901,832.68
Intangible assets total		
Acquisition costs 1.1.	131,274,712.84	123,918,666.75
Increases	9,796,667.71	7,888,712.66
Decreases	-6,707,939.18	-532,666.57
Acquisition costs 31.12.	134,363,441.37	131,274,712.84
Accumulated depreciation and impairment charges 1.1.	-116,265,685.07	-112,090,424.84
Accumulated depreciation of deductions and transfers	128,300.00	-1,878,033.85
Depreciation and write-downs for the financial year	-2,077,609.86	-2,297,226.38
Accumulated depreciation and impairment charges 31.12.	-118,214,994.93	-116,265,685.07
Book value 31.12.	16,148,446.44	15,009,027.77
Land and water areas		
Acquisition costs 1.1.	26,511,751.58	11,180,652.84
Increases	2,302,472.96	15,457,776.36
Increase from Kemi merger	520,077.00	0.00
Decreases	-357,459.58	-129,142.62
Transfers between items	0.00	2,465.00
Acquisition costs 31.12.	28,976,841.96	26,511,751.58
Accumulated depreciation and impairment charges 1.1.	-20.98	-20.98
Accumulated depreciation and impairment charges 31.12.	-20.98	-20.98
Book value 31.12.	28,976,820.98	26,511,730.60

EUR	2019	2018
Buildings and constructions		
Acquisition costs 1.1.	282,902,966.42	263,086,169.64
Increases	6,061,728.59	34,516,392.53
Increase from Kemi merger	5,286,407.95	0.00
Decreases	0.00	-16,397,831.06
Transfers between items	1,019,611.80	1,698,235.31
Acquisition costs 31.12.	295,270,714.76	282,902,966.42
Accumulated depreciation and impairment charges 1.1.	-161,169,563.41	-171,708,320.39
Accumulated depreciation of deductions and transfers	0.00	16,397,831.06
Depreciation and write-downs for the financial year	-7,671,798.14	-5,859,074.08
Accumulated depreciation and impairment 31.12.	-168,841,361.55	-161,169,563.41
Book value 31.12.	126,429,353.21	121,733,403.01
Machinery and equipment		
Acquisition costs 1.1.	1,085,857,469.61	1,096,898,398.80
Increases	14,471,064.30	10,542,083.17
Increase from Kemi merger	39,006,333.67	0.00
Decreases	-60,176.35	-29,759,428.65
Transfers between items	16,585,011.96	8,176,416.29
Acquisition costs 31.12.	1,155,859,703.19	1,085,857,469.61
Accumulated depreciation and impairment charges 1.1.	-883,707,282.80	-880,177,268.02
Accumulated depreciation of deductions and transfers	5,885.00	29,759,428.65
Depreciation and write-downs for the financial year	-38,968,190.12	-33,289,443.43
Accumulated depreciation and impairment 31.12.	-922,669,587.92	-883,707,282.80
Book value 31.12.	233,190,115.27	202,150,186.81
Other tangible assets		
Acquisition costs 1.1.	10,955,016.63	9,001,636.32
Increases	1,373,597.54	2,921,181.03
Increase from Kemi merger	41,212.99	0.00
Decreases	0.00	-967,800.72
Transfers between items	1,382,576.59	0.00
Acquisition costs 31.12.	13,752,403.75	10,955,016.63
Accumulated depreciation and impairment charges 1.1.	-5,882,388.67	-6,462,667.06
Accumulated depreciation of deductions and transfers	0.00	967,800.72
Depreciation and write-downs for the financial year	-707,460.86	-387,522.33
Accumulated depreciation and impairment 31.12.	-6,589,849.53	-5,882,388.67
Book value 31.12.	7,162,554.22	5,072,627.96
Advance payments and work in progress		
Acquisition costs 1.1.	23,167,806.23	12,335,206.40
Increases	24,382,531.92	20,709,716.43
Increase from Kemi merger	2,846,919.14	0.00
Transfers between items	-18,987,200.35	-9,877,116.60
Acquisition costs 31.12.	31,410,056.94	23,167,806.23
Total tangible assets		
Acquisition costs 1.1.	1,429,395,010.47	1,392,502,064.00
Increases	96,292,346.06	84,147,149.52
Decreases	-417,635.93	-47,254,203.05
Acquisition costs 31.12.	1,525,269,720.60	1,429,395,010.47
Accumulated depreciation and impairment charges 1.1.	-1,050,759,255.86	-1,058,348,276.45
Accumulated depreciation of deductions and transfers	5,885.00	47,125,060.43
Depreciation and write-downs for the financial year	-47,347,449.12	-39,536,039.84
Accumulated depreciation and impairment 31.12.	-1,098,100,819.98	-1,050,759,255.86
Book value 31.12.	427,168,900.62	378,635,754.61

EUR	2019	2018
10. INVESTMENTS		
Shares in Group companies		
Acquisions costs 1.1.	563,209,026.13	601,916,547.84
Addition from Kemi merger	168.19	12,209,018.39
Decreases	-27,830,379.03	-50,916,540.10
Acquisions costs 31.12.	535,378,815.29	563,209,026.13
Shares in participating companies		
Acquisions costs 1.1.	90,929,409.33	90,929,409.33
Decreases	-4,500,000.00	0.00
Acquisions costs 31.12.	86,429,409.33	90,929,409.33
Other shares and holdings		
Acquisions costs 1.1.	267,411,629.23	237,553,200.27
Increases	32,697.47	29,947,091.30
Addition from Kemi merger	1,700.00	0.00
Decreases	-15,010,049.90	-88,662.34
Acquisions costs 31.12.	252,435,976.80	267,411,629.23
Total invesments and holdings		
Acquisions costs 1.1.	921,550,064.69	930,399,157.44
Increases	34,565.66	42,156,109.69
Decreases	-47,340,428.93	-51,005,202.44
Acquisions costs 31.12.	874,244,201.42	921,550,064.69
Receivables from Group companies		
Acquisions costs 1.1.	304,923,645.95	253,966,963.99
Increases	0.00	50,956,681.96
Decreases	-3,305,073.25	0.00
Acquisions costs 31.12.	301,618,572.70	304,923,645.95
Other receivables		
Acquisions costs 1.1.	35,222.52	35,222.52
Acquisions costs 31.12.	35,222.52	35,222.52
Receivables total		
Acquisions costs 1.1.	304,958,868.47	254,002,186.51
Increases	0.00	50,956,681.96
Decreases	-3,305,073.25	0.00
Acquisions costs 31.12.	301,653,795.22	304,958,868.47
Investments total		
Acquisions costs 1.1.	1,226,508,933.16	1,184,401,343.95
Increases	34,565.66	93,112,791.65
Decreases	-50,645,502.18	-51,005,202.44
Acquisions costs 31.12.	1,175,897,996.64	1,226,508,933.16

11. RECEIVABLES

EUR	2019	2018
Non-current receivables		
Receivables from group companies		
Loans receivables	76,578,473.79	78,012,247.92
Prepayments and accrued income		
Derivatives	0.00	2,659,114.48
	76,578,473.79	80,671,362.40
Total non-current receivables	76,578,473.79	80,671,362.40
Current receivables		
Receivables from group companies		
Accounts receivable	27,941,695.10	17,682,027.52
Loans receivables	25,915,112.11	4,177,969.97
Other receivables	1,999,146.01	29,735,944.63
Prepayments and accrued income	12,765,111.08	4,577,769.60
	68,621,064.30	56,173,711.72
Receivables from participating companies		
Accounts receivable	426,042.57	239,764.71
	426,042.57	239,764.71
Receivables from others		
Accounts receivable	138,926,647.98	110,176,088.86
Other receivables	21,802,288.77	16,335,289.98
Prepayments and accrued income	20,579,735.64	17,091,678.59
	181,308,672.39	143,603,057.43
Total current receivables	250,355,779.26	200,016,533.86
Accrued income from group companies, current, specification		
Derivatives	11,251,348.16	1,718,203.77
Accrued interests	1,513,762.92	1,487,379.36
Others	0.00	1,372,186.47
	12,765,111.08	4,577,769.60
Accrued income from others, current, specification		
Accrued personnel costs	846,121.00	1,400,139.65
Energy and other taxes	13,059,069.00	11,688,642.42
Others	6,674,545.64	4,002,896.52
	20,579,735.64	17,091,678.59
Total receivables	326,934,253.05	280,687,896.26

12. SHAREHOLDERS' EQUITY

EUR	2019	2018
Restricted equity		
Share capital 1.1.		
A-shares	55,486,107.56	56,314,485.65
B-shares	502,395,432.84	501,567,054.75
	557,881,540.40	557,881,540.40
Conversion of A shares into B shares		
A-shares	-3,563,953.76	-828,378.09
B-shares	3,563,953.76	828,378.09
	0.00	0.00
Share capital 31.12.		
A-shares	51,922,153.80	55,486,107.56
B-shares	505,959,386.60	502,395,432.84
Total	557,881,540.40	557,881,540.40
Fair value reserve 1.1.	182,839,879.60	159,430,291.55
Changes	-11,241,363.80	23,409,588.05
Fair value reserve 31.12.	171,598,515.80	182,839,879.60
	729,480,056.20	740,721,420.00
Unrestricted equity		
Reserve for invested unrestricted equity 1.1.	384,840,727.35	384,840,727.35
Return of invested unrestricted equity	-67,547,421.74	
Reserve for invested unrestricted equity 31.12.	317,293,305.61	384,840,727.35
Retained earnings 1.1.	145,438,654.12	149,036,931.41
Dividends	-35,551,274.60	-74,657,676.66
Profit for the financial period	117,932,360.01	71,059,399.37
Retained earnings 31.12.	227,819,739.53	145,438,654.12
	545,113,045.14	530,279,381.47
Equity total 31.12	1,274,593,101.34	1,271,000,801.47
Distributable funds		
Reserve for invested unrestricted equity	317,293,305.61	384,840,727.35
Profit from previous financial periods	109,887,379.52	74,379,254.75
Profit for the financial period	117,932,360.01	71,059,399.37
Distributable funds	545,113,045.14	530,279,381.47

EUR	2019	2018
13. DEFERRED TAX ASSETS AND LIABILITIES		
Provisions for pension		
1.1.	889,819.00	947,660.00
Decrease	-46,651.00	-57,841.00
31.12.	843,168.00	889,819.00
Provisions for unemployment pension cost		
1.1.	636,556.73	1,328,647.43
Decrease	-394,493.53	-692,090.70
31.12.	242,063.20	636,556.73
Provisions for business closure		
1.1.	0.00	230,907.01
Decrease	0.00	-230,907.01
31.12.	0.00	0.00
Provisions for environmental obligations		
1.1.	5,535,988.18	5,596,699.57
Increase	29,091.00	29,091.00
Decrease	-82,097.60	-89,802.39
Cancellation of unused provision	-2,000,000.00	0.00
31.12.	3,482,981.58	5,535,988.18
Total provisions		
1.1.	7,062,363.91	8,103,914.01
Increase	29,091.00	29,091.00
Decrease	-2,441,144.53	-1,070,641.10
31.12.	4,568,212.78	7,062,363.91

	2019	2018
14. DEFERRED TAX ASSETS AND LIABILITIES		
Deferred tax assets		
Mandatory provisions	913,642.55	1,412,472.78
	913,642.55	1,412,472.78
Deferred tax liabilities		
Valuation of Pohjolan Voima Oyj shares at fair value	42,464,818.26	45,403,618.26
Financial instruments	462,139.88	306,351.65
	42,926,958.14	45,709,969.91
Deferred tax assets (+) and liabilities (-), net	-42,013,315.59	-44,297,497.13

The deferred tax liability for accrued depreciation in 2019 was EUR 27,8 million (22,8).

	2019	2018
15. NON-CURRENT LIABILITIES		
Liabilities to group companies		
Accrued liabilities		
Derivatives	3,093,184.14	1,994,155.25
	3,093,184.14	1,994,155.25
Other liabilities		
Bonds	249,349,299.01	249,265,345.02
Loans from financial institutions	150,000,000.00	50,153,318.00
Pension premium loans	0.00	23,348,214.32
Deferred tax liabilities	42,013,315.59	44,297,497.13
Advance payments	1,515,404.94	1,731,891.42
	442,878,019.54	368,796,265.89
Non-current liabilities total	445,971,203.68	370,790,421.14

BOND AND DEBENTURES

Bond	Nominal value	Interest %	2019	2018
2014–2019	0.00	4	0.00	60 347 860.00
2017–2027	250 000 000.00	2.75	249 349 299.01	249 265 345.02
	250 000 000.00		249 349 299.01	309 613 205.02

At the end of September, Metsä Board agreed on a bank financing arrangement consisting of an approxi-mately five-year drawn loan of EUR 150 million and an approximately five-year multicurrency revolving credit facility of EUR 200 million, with two 1-year extension options and an increase option of EUR 50 million. The margin of the revolving credit facility is partly tied to sustainability targets based on selected targets among Metsä Board's sustainability targets for 2030. The funds from the new arrangement were withdrawn at the be-ginning of October, and they replaced the drawn loan of EUR 50 million and the undrawn revolving credit facility of EUR 150 million, maturing in March 2020.

Metsä Board Corporation issued in September 2017 a bond of EUR 250 million. The bond carries a fixed coupon rate of 2.75 per cent, and the maturity date is 29 September 2027. The bond ranks senior and is unsecured.

Bonds has been paid totally 66.732.866,07 euroa during 2019.

NON-CURRENT LIABILITIES AND REPAYMENT

	Liabilities to group companies	Bonds	Loans from financial institutions	Pension premium loans	Other loans	Total
2020						
2021						
2022						
2023						
2024						
2025–		249,349,299.01	150,000,000.00			399,349,299.01
Total		249,349,299.01	150,000,000.00			399,349,299.01

EUR	2019	2018
16. CURRENT LIABILITIES		
Liabilities from Group companies		
Accounts payable	44,212,846.86	33,937,637.91
Other liabilities	0.00	1,347,024.84
Accruals and deferred income	7,731,407.59	1,653,406.79
	51,944,254.45	36,938,069.54
Liabilities from participating interests		
Accounts payable	415,389.81	197,890.72
	415,389.81	197,890.72
Liabilities from other		
Bonds	0.00	60,347,860.00
Loans from financial institutions	0.00	210,416.00
Premium pension loans	23,348,214.32	37,707,919.28
Advance payment	2,870,361.05	2,675,507.99
Accounts payable	134,113,280.45	103,949,313.97
Other liabilities	6,328,756.57	4,958,790.47
Accruals and deferred income	57,881,744.87	56,187,675.59
	224,542,357.26	266,037,483.30
Total current liabilities	276,902,001.52	303,173,443.56
Accruals and deferred income to group companies, current, specification		
Derivatives	6,938,840.59	1,194,118.79
Others	792,567.00	459,288.00
	7,731,407.59	1,653,406.79
Accruals and deferred income, current, external		
Personnel expenses	23,730,052.16	23,043,544.87
Accruals of purchases	9,323,139.88	8,706,270.45
Discounts	16,229,184.80	11,740,013.29
Interests	2,127,990.43	3,897,936.03
Others	6,471,377.60	8,799,910.95
	57,881,744.87	56,187,675.59

17. FINANCIAL INSTRUMENTS

FINANCIAL DERIVATIVES 2019

EUR	Nominal value	Fair value: Derivative assets	Fair value: Derivative liabilities	Fair value: Total	Fair value: Fair value through profit and loss	Fair value: Fair value through fair value reserve
Interest rate swaps	100,000,000.00		3,093,184.14	-3,093,184.14	0.00	-3,093,184.14
Total interest rate derivatives	100,000,000.00		3,093,184.14	-3,093,184.14	0.00	-3,093,184.14
Currency forward agreements	959,922,102.68	10,311,344.00	4,703,492.00	5,607,852.00	439,059.00	5,168,793.00
Currency option agreements	480,297,808.00	242,797.50	98,446.98	144,350.52	0.00	144,350.52
Currency derivates total	1,440,219,910.68	10,554,141.50	4,801,938.98	5,752,202.52	439,059.00	5,313,143.52
Electricity derivatives	4,172,392.45	170,926.48	639,485.50	-468,559.02	0.00	-468,559.02
Oil derivatives	7,611,085.00	457,860.61	489,733.51	-31,872.90	0.00	-31,872.90
Other commodity derivatives	7,396,908.00	68,419.57	1,007,682.60	-939,263.03	0.00	-939,263.03
Commodity derivatives	19,180,385.45	697,206.66	2,136,901.61	-1,439,694.95	0.00	-1,439,694.95
Derivatives total	1,559,400,296.13	11,251,348.16	10,032,024.73	1,219,323.43	439,059.00	780,264.43

FINANCIAL DERIVATIVES 2018

EUR	Nominal value	Fair value: Derivative assets	Fair value: Derivative Liabilities	Fair value: Total	Fair value: Fair value through profit and loss	Fair value: Fair value through fair value reserve
Interest rate swaps	100,000,000.00		1,507,839.08	-1,507,839.08	-664,640.32	-843,198.76
Total interest rate derivatives	100,000,000.00		1,507,839.08	-1,507,839.08	-664,640.32	-843,198.76
Currency forward agreements	1,155,776,451.80	1,803,914.00		1,803,914.00	321,926.00	1,481,988.00
Currency option agreements	471,615,720.52	22,146.41		22,146.41		22,146.41
Currency derivates total	1,627,392,172.32	1,826,060.41		1,826,060.41	321,926.00	1,504,134.41
Electricity derivatives	6,112,786.89	2,551,257.48		2,551,257.48		2,551,257.48
Oil derivatives	11,815,827.00		1,530,123.92	-1,530,123.92		-1,530,123.92
Other commodity derivatives	1,489,326.00		150,311.12	-150,311.12		-150,311.12
Commodity derivatives	19,417,939.89	2,551,257.48	1,680,435.04	870,822.44		870,822.44
Derivatives total	1,746,810,112.21	4,377,317.89	3,188,274.12	1,189,043.77	-342,714.32	1,531,758.09

All derivative agreements of Metsä Board Oyj have been entered into for hedging purpose, and cash flow hedge accounting according to IFRS 9 has been applied in major part of the agreements within IFRS financial statements. Only the part of currency derivatives designated as hedges of accounts receivables and accounts payables is not directed to hedge accounting. Interest rate derivatives are interest rate swaps maturing in 1-6 years and entered into to hedge the floating rate interest payments. Currency derivatives contracts concluded to hedge currency cash flows mature fully during 2020. Commodity derivatives are electricity forwards, natural gas forwards, propane forwards and gasoil and heavy fuel oil forwards concluded to hedge the cash flows arising from purchases of these commodities. Commodity forwards mature fully during 2020. A more detailed description of financial risk management and the principles applied to derivative contracts is included in note 5.6 and 5.7 of the concolidated Group accounts.

THE FAIR VALUE HIERARCHY OF FINANCIAL ASSETS AND LIABILITIES 2019

EUR	Level 1	Level 2	Level 3	Total
Financial assets at fair value				
Other shares and holdings			252,435,976.80	252,435,976.80
Derivative financial assets	697,206.66	10,554,141.50		11,251,348.16
Financial liabilities measured at fair value				
Derivative financial liabilities	1,187,093.33	8,844,931.40		10,032,024.73

THE FAIR VALUE HIERARCHY OF FINANCIAL ASSETS AND LIABILITIES 2018

EUR	Level 1	Level 2	Level 3	Total
Financial assets at fair value				
Other shares and holdings			267,411,629.23	267,411,629.23
Derivative financial assets	2,551,257.48	1,826,060.41		4,377,317.89
Financial liabilities measured at fair value				
Derivative financial liabilities	1,680,435.04	1,507,839.08		3,188,274.12

The principles applied to classification of financial assets and liabilities valued at fair value are described in Notes 5.6 and 5.7 of the Metsä Board consolidated financial statements.

18. DISPUTES, LEGAL PROCEEDINGS AND COMMITMENTS

DISPUTES AND LEGAL PROCEEDINGS

Disputes are presented in Note 8.1 of the consolidated financial statements.

COMMITMENTS AND CONTINGENCIES

EUR	2019	2018
For own liabilities		
Liabilities secured by pledges		
Pension premium loans	6,785,714.32	16,071,428.60
Pledges granted	30,615,259.99	30,615,259.99
Corporate mortgages		
Liabilities secured by mortgages		
Pension premium loans	17,312,500.00	40,562,500.00
Real estate mortgages	232,779,000.00	232,779,000.00
For affiliated companies		
Guarantees	9,431,119.00	14,387,213.00
For associated and joint ventures		
Guarantees	95,704.00	0.00
Leasing commitments		
Payments due in following 12 months	1,286,910.48	1,582,011.03
Payments due later than 1 year	4,699,743.88	2,754,891.04
Total		
Pledged assets	30,615,259.99	30,615,259.99
Corporate mortgages		
Real estate mortgages	232,779,000.00	232,779,000.00
Guarantees	9,526,823.00	14,387,213.00
Other commitments		
Leasing commitments	5,986,654.36	4,336,902.07
Total commitments	278,907,737.35	282,118,375.06

19. SHARES AND HOLDINGS

Shares and holdings are presented in Note 7.2. of consolidated financial statements.

THE BOARD'S PROPOSAL FOR THE DISTRIBUTION OF FUNDS

The distributable funds of the company are EUR 545,113,045.14 of which retained earnings constitute EUR 227,819,739.53 and profit for the period EUR 117,932,360.01.

The Board of Directors proposes the following to the Annual General Meeting regarding the distribution of funds:

Dividend of EUR 0.10 per share be paid, or in total	35,551,274.60
Capital distribution of EUR 0.14 per share from the invested unrestricted equity fund be paid, or in total	49,771,784.44
To be left in the unrestricted shareholders' equity	459,789,986.10
Distributable funds of the company	545,113,045.14

The Board of Directors proposes that the dividend and equity repayment will be paid on 7th April, 2020.

No material changes have been taken place in respect of the company's financial position after the balance sheet date. The liquidity of the company is good, and in the opinion of the Board of Directors, the proposed profit distribution would not compromise the liquidity of the company.

Espoo 12th February 2020

Ilkka Hämälä	Martti Asunta	Hannu Anttila
Kirsi Komi	Kai Korhonen	Liisa Leino
Jussi Linnaranta	Juha Niemelä	Veli Sundbäck
Mika Joukio CEO		

AUDITOR'S REPORT

TO THE ANNUAL GENERAL MEETING OF METSÄ BOARD CORPORATION

REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS

OPINION

We have audited the financial statements of Metsä Board Corporation (business identity code 0635366-7) for the year ended 31 December 2019. The financial statements comprise the consolidated balance sheet, statement of comprehensive income, statement of changes in equity, statement of cash flows and notes, including a summary of significant accounting policies, as well as the parent company's balance sheet, income statement, statement of cash flows and notes.

In our opinion

- the consolidated financial statements give a true and fair view of the group's financial performance, financial position and cash flows in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU
- the financial statements give a true and fair view of the parent company's financial performance and financial position in accordance with the laws and regulations governing the preparation of 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 the 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 2.4 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.

MATERIALITY

The scope of our audit was influenced by our application of materiality. The materiality is determined based on our professional judgement and is used to determine the nature, timing and extent of our audit procedures and to evaluate the effect of identified misstatements on the financial statements as a whole. The level of materiality we set is based on our assessment of the magnitude of misstatements that, individually or in aggregate, could reasonably be expected to have influence on the economic decisions of the users of the financial statements. We have also taken into account misstatements and/or possible misstatements that in our opinion are material for qualitative reasons for the users of the financial statements.

KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. The significant risks of material misstatement referred to in the EU Regulation No 537/2014 point (c) of Article 10(2) are included in the description of key audit matters below.

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

THE KEY AUDIT MATTER	HOW THE MATTER WAS ADDRESSED IN THE AUDIT
VALUATION OF TANGIBLE AND INTANGIBLE ASSETS (REFER TO NOTES 4.1 AND 4.2 TO THE CONSOLIDATED FINANCIAL STATEMENTS)	
Tangible and intangible assets total EUR 763 million and represent 34 percent of the consolidated total assets. Gross investments totalled EUR 99 million. The impairment tests cover non-financial assets allocated to the business units. Determining the key assumptions used in the cash flow forecasts underlying the impairment tests requires management judgment. Due to the significant carrying values involved, valuation of tangible and intangible assets is determined a key audit matter.	Our audit procedures included evaluation of the appropriateness of the capitalization and depreciation principles applied. We also assessed the key assumptions used in the impairment tests by reference to the budgets approved by the parent company's Board of Directors, data external to the Group and our own views. We involved KPMG valuation specialists when assessing the mathematical accuracy of the calculations, as well as comparing the assumptions to externally available market and industry data. In addition, we considered the appropriateness of the disclosures regarding the tangible and intangible assets

THE KEY AUDIT MATTER	HOW THE MATTER WAS ADDRESSED IN THE AUDIT
VALUATION OF INVENTORIES (REFER TO NOTE 4.4 TO THE CONSOLIDATED FINANCIAL STATEMENTS)	
Inventory management, stocktaking routines and pricing of inventories are key factors in the valuation of inventories. The Group's carrying value of inventories was EUR 380 million at the end of the financial year. The valuation of inventories involves management estimates in relation to potentially obsolete inventory, as well as to fluctuations in the market prices of finished goods. The valuation of inventories has a significant impact on the profit and loss account and therefore it is determined as a key audit matter.	We evaluated the appropriateness of the accounting policies by reference to IFRS standards, as well as the functionality of the key IT systems of inventory management. We tested the controls over inventory management, accuracy of inventory amounts and valuation of inventories, as well as performed substantive audit procedures relating to the valuation of inventories to test the accuracy of inventory valuation. We also followed the execution of certain stocktaking routines during the financial year.
FINANCIAL CONTRACTS AND HEDGING INSTRUMENTS (REFER TO NOTES 5.5, 5.6 JA 5.7 TO THE CONSOLIDATED FINANCIAL STATEMENTS)	
The financial liabilities amount to EUR 445 million, accounting for 20 percent of the consolidated balance sheet. In addition, the Group has off-balance sheet committed credit facility agreements amounting to EUR 390 million. The Group hedges financial risks with interest rate and foreign currency derivatives and their nominal values amounted to EUR 1 540 million at the end of the financial year. Due to the significance of the financial and derivative contracts and the IFRS requirements set for hedge accounting, the financial contracts and hedging instruments are determined as a key audit matter.	Our audit procedures included evaluation of the recognition and measurement principles applied to financial instruments for appropriateness, as well as testing of controls over the accuracy and valuation of financial instruments. As part of our year-end audit procedures we tested the appropriateness of valuations by using various analysis, as well as selecting transactions for testing on a sample basis. We evaluated the effectiveness of hedge accounting by reference to IFRS requirements. In addition, we evaluated the adequacy of the disclosures relating to financial instruments.
CONTROLS OVER FINANCIAL REPORTING AND RELATED IT SYSTEMS	
The IT control environment relating to the financial reporting process and the application controls of individual IT systems have an impact on the selected audit approach. As the consolidated financial statements are based on extensive number of data flows from multiple IT systems, consequently the financial reporting control environment is determined as a key audit matter.	Our audit procedures included evaluation of the financial reporting process and related control environment, as well as testing of the effectiveness of controls including general IT controls. Our audit procedures focused on testing the reconciliation and approval controls as well as on evaluating the administration of access rights. Our audit procedures extensively consisted of several substantive procedures as well as data analysis relating to the most significant balances on the income statement and on the balance sheet.

RESPONSIBILITIES OF THE BOARD OF DIRECTORS AND THE MANAGING DIRECTOR FOR THE FINANCIAL STATEMENTS

The Board of Directors and the Managing Director are responsible for the preparation of consolidated financial statements that give a true and fair view in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU, and of financial statements that give a true and fair view in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements. The Board of Directors and the Managing Director are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board of Directors and the Managing Director are responsible for assessing the parent company's and the group's ability to continue as a going concern, disclosing, as applicable, matters relating to the 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 THE 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 scepticism 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 28 March 2012 and our appointment represents a total period of uninterrupted engagement of 8 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 in the Annual Report, but does not include the financial statements and our auditor's report thereon. We have obtained the report of the Board of Directors prior to the date of this auditor's report, and the Annual Report is expected to be made available to us after that date. Our opinion on the financial statements does not cover the other information.

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. With respect to the report of the Board of Directors, our responsibility also includes considering whether the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

In our opinion, the information in the report of the Board of Directors is consistent with the information in the financial statements 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.

OTHER OPINIONS

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

Espoo, February 12, 2020

KPMG Oy Ab

Kirsi Jantunen
Authorised Public Accountant

SHARES AND SHAREHOLDERS

METSÄ BOARD'S SHARES

Metsä Board's shares are listed on the Nasdaq Helsinki. On 31 December 2019, the company's share capital was EUR 557,881,540.40.

Metsä Board has two series of shares. At the end of 2019, there were 33,087,647 A shares and 322,425,099 B shares.

Each A share entitles its holder to twenty (20) votes at a General Meeting of Shareholders, and each B share entitles the holder to one (1) vote. All shares carry the same right to receive a dividend. Metsä Board's A shares can be converted to B shares if a shareholder or a representative of the nominee registered shares makes a written request for the conversion to the company. In 2019, a total of 2,274,147 Metsä Board Corporation's A shares were converted to B shares.

TRADING OF SHARES IN 2019

The shares of Metsä Board are listed on the Nasdaq Helsinki. The shares are also traded in other marketplaces, such as Chi-X and BATS. Nasdaq Helsinki accounted for 74% of total trade in 2019. The trading ID of the B share is METSB and the ISIN code FI0009000665. A share trading ID is METSA and ISIN code FI0009000640.

At the end of the financial year, the price for B share on Nasdaq Helsinki was EUR 6.00. The highest price for the B share in 2019 was EUR 6.65 (10.30) and the lowest was EUR 3.86 (4.98). Correspondingly, the price for Metsä Board's A share on Nasdaq Helsinki was EUR 6.14. The highest price in 2019 was EUR 7.98 (10.10) and the lowest was EUR 5.46 (6.00).

In 2019, the average daily trading volumes of the B and A shares on Nasdaq Helsinki were 880,683 shares and 2,778 shares, respectively. The total exchange of the B share was EUR 1,158,8 million and EUR 4.6 million of the A share.

The market value of all shares in Metsä Board at the end of the financial year was EUR 2.14 (1.86) billion, of which the market value of B shares was EUR 1.93 (1.64) billion and EUR 0.2 (0.2) billion of the A shares.

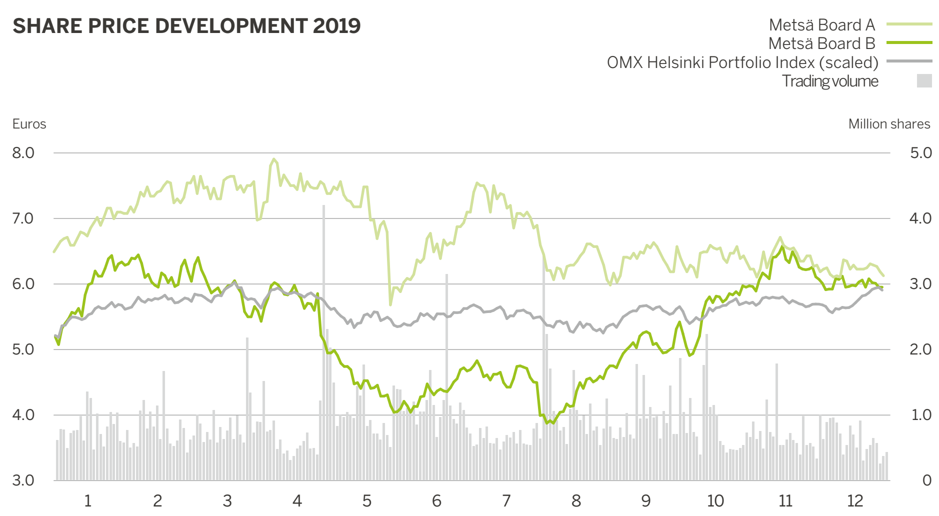
BASIC INFORMATION ON METSÄ BOARD'S SHARES

	Metsä Board's A share	Metsä Board's B share
Listing	Nasdaq Helsinki	Nasdaq Helsinki
Date of listing	2 January 1987	2 January 1987
Market cap segment	Large Cap	Large Cap
Ticker symbol	METSA	METSB
ISIN code	FI0009000640	FI0009000665
Reuters code	METSA.HE	METSB.HE
Bloomberg code	METSA FH	METSB FH
Number of shares 31 Dec 2019	33,087,647	322,425,099

TRADING ON THE NASDAQ HELSINKI IN 2019 (2018)

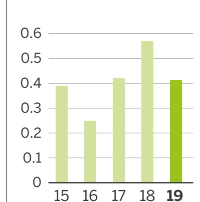
	Metsä Board's A share	Metsä Board's B share
Closing price on 31 December, EUR	6.14 (6.14)	6.00 (5.12)
Lowest price, EUR	5.46 (6.00)	3.86 (4.98)
Highest price, EUR	7.98 (10.10)	6.65 (7.95)
Average price, EUR	6.56 (8.36)	5.26 (7.95)
Average daily trading volume, no. of shares	2,778 (8,911)	880,683 (723,339)
Total trading volume, no. of shares	694,519 (2,227,788)	220,170,829 (180,834,626)
- % of total no. of shares	2 (6)	68 (56)
Market capitalisation, EUR million	203 (217)	1,934 (1,639)

SHARE PRICE DEVELOPMENT 2019

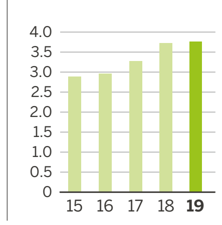


Source: Euroland

EARNINGS PER SHARE
EUR

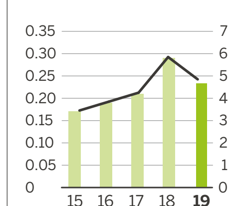


SHAREHOLDER'S EQUITY PER SHARE
EUR

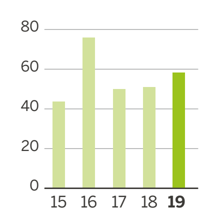


DIVIDEND
EUR %

Dividend yield, %



DIVIDEND/ EARNINGS
%



MAJOR SHAREHOLDERS 31 DEC 2019 [1)]

		A series	B series	Total shares		Votes
Shareholders		No. Of shares	No. Of shares	No. Of shares	%	%
1	Metsäliitto Cooperative	25 767 605	136 36 308	162 403 913	45,68	66,25
2	Varma Mutual Pension Insurance Company	2 203 544	15 041 485	17 245 029	4,85	6,01
3	Ilmarinen Mutual Pension Insurance Company	1 250 000	8 102 608	9 352 608	2,63	3,36
4	Etola Erkki Olavi	0	7 000 000	7 000 000	1,97	0,71
5	OP-Finland	0	4 792 871	4 792 871	1,35	0,49
6	Elo Mutual Pension Insurance Company	0	3 405 000	3 405 000	0,96	0,35
7	The State Pension Fund	0	3 215 617	3 215 617	0,90	0,33
8	KEVA	0	2 641 000	2 641 000	0,74	0,27
9	Evli Finnish Small Cap Fund	0	1 870 000	1 870 000	0,53	0,19
10	Maa- ja Metsätaloustuottajain Keskusliitto MTK ry	839 315	495 697	1 335 012	0,38	1,76
11	OP-life insurance Ltd	1 620	1 101 117	1 102 737	0,31	0,12
12	Sr Danske Invest Suomi Osake	0	960 101	960 101	0,27	0,10
13	Veritas Pension Insurance Company Ltd	0	890 000	890 000	0,25	0,09
14	Nordea Pro Finland		800 944	800 944	0,23	0,08
15	Aktia Capital Mutual Fund	0	754 841	754 841	0,21	0,08
16	Fondita Nordic Small Cap Placfond	0	740 000	740 000	0,21	0,08
17	OP-Finland Small Firms Fund	0	611 323	611 323	0,17	0,06
18	Seppälä Tommi Kalervo	0	600 000	600 000	0,17	0,06
19	Merepe Avoin Yhtiö	0	540 000	540 000	0,15	0,05
20	Etola Markus Eeriki	0	500 000	500 000	0,14	0,05

[1)] Shareholders in the book entry system

METSÄ BOARD A SHARE

Number of shares	Number of Shareholders	%	Number of shares	%
1–10	689	9.77	4,015	0.01
11–100	2,570	36.46	141,600	0.43
101–1 000	3,212	45.57	1,250,801	3.78
1 001–10 000	554	7.86	1,287,347	3.89
10 001–100 000	20	0.28	343,420	1.04
100 001+	4	0.06	30,060,464	90.85
Total	7,049	100.00	33,087,647	100.00

METSÄ BOARD B SHARE

Number of shares	Number of Shareholders	%	Number of shares	%
1–10	2,551	5.06	17,930	0.01
11–100	13,129	26.04	698,861	0.22
101–1 000	23,403	46.42	9,556,885	2.96
1 001–10 000	10,238	20.31	28,913,133	8.97
10 001–100 000	994	1.97	23,563,344	7.31
100 001+	105	0.21	259,974,946	80.54
Total	50,420	100.00	322,425,099	100.00

SHAREHOLDERS

At the end of 2019, Metsä Board had 7,049 (31 Dec 2018: 6,209) registered shareholders of A shares and 50,420 of B shares (45,341). At the end of 2019, Metsäliitto Cooperative owned 46 (41) per cent of the shares, and the voting rights conferred by these shares totalled 66 (62) per cent. Foreign and nominee-registered investors held 15 (21) per cent of the shares. The company does not hold any treasury shares.

IMPACT OF CHANGE IN CONTROL

Some of Metsä Board's shareholder agreements concerning resource and associated companies include provisions under which Metsä Board must offer its shares in an associated company for sale to the other shareholders in the case of a change of control of Metsä Board. Of these agreements, pursuant to the shareholders agreement of Metsä Fibre Oy, Metsä Fibre's shareholders should offer their shares for sale to the other shareholders in the case of a change of control. A decrease in the voting rights of Metsäliitto Cooperative in Metsä Board to below 50 per cent would not, however, obligate Metsä Board to offer its shares in Metsä Fibre Oy for sale.

BOARD OF DIRECTORS' AUTHORITY TO ISSUE SHARES

The Board of Directors is authorised to decide on an issue of shares and any special rights with an entitlement to shares as referred to in Chapter 10, section 1 of the Limited Liability Companies Act as follows.

The maximum number of shares that can be issued on the basis of the authorisation is 35,000,000 B shares, which corresponds to approximately 10 per cent of all shares in the company. The Board of Directors decides on all terms and conditions applicable to the issue of shares and the special rights with an entitlement to shares. The authorisation applies to both an issue of new shares and the assignment of own shares. The issue of shares and any special rights with an entitlement to shares may occur in departure from a shareholder's subscription right (private placement).

The authorisation is valid until 23 March 2022. The authorisation was fully unused on 31 December 2019.

DIVIDEND POLICY

Metsä Board aims to distribute at least 50 per cent of the result for the financial period as dividend every year. The Board of Directors proposes that a dividend of EUR 0.10 per share and a capital distribution of EUR 0.14 per share be paid for the 2019 financial period. The proposed dividend and capital distribution, totaling EUR 0.24 per share (a total of 355,512,746 shares), corresponds to 58.5% of the result per share for 2019.

SHAREHOLDINGS OF THE MEMBERS OF THE BOARD OF DIRECTORS AND CEO ON 31 DECEMBER 2019

		Holding
Ilkka Hämälä	Chairman of the Board of Directors	218,797 B shares
Martti Asunta	Deputy Chairman of the Board of Directors	55,903 B shares
Kirsi Komi	Member of the Board of Directors	73,012 B shares
Kai Korhonen	Member of the Board of Directors	209,782 B shares
Liisa Leino	Member of the Board of Directors	177,657 B shares
Jussi Linnaranta	Member of the Board of Directors	14,187 B shares
Juha Niemelä	Member of the Board of Directors	171,657 B shares
Veli Sundbäck	Member of the Board of Directors	62,677 B shares
Hannu Anttila	Member of the Board of Directors	131,177 B shares
Mika Joukio	CEO	297,700 B shares

The shareholdings of the other members of Metsä Board's Corporate Management Team are presented on page 122.

SPLIT OF SHAREHOLDINGS AND VOTING RIGHTS, 31 DECEMBER 2019

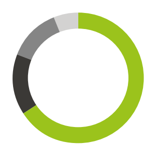
SPLIT OF SHAREHOLDINGS

%

- Metsäliitto Cooperative 46
- Finnish institutions 19
- Finnish private investors 20
- Foreign owners 15

SPLIT OF VOTING RIGHTS

%



- Metsäliitto Cooperative 66
- Finnish institutions 15
- Finnish private investors 13
- Foreign owners 6

CHANGES IN SHARE CAPITAL AND NUMBER OF SHARES 1 JAN 2004–31 DECEMBER 2019

		Number of shares	Share capital, EUR million
2003	Share capital 31 D ec 2003	178,999,425	304.3
2004	Rights issue	148,633,415	252.7
	Rights issue	532,772	0.9
	Share capital 31 D ec 2004	328,165,612	557.9
2005–2014	No changes		
2015	Rights issue, no changes to share capital	27,347,134	
	Share capital 31 D ec 2015	355,512,746	557.9
2016–2019	No changes		
	Share capital 31.12.2018	355,512,746	557.9

PRICE DEVELOPMENT AND NUMBER OF SHARES

		2019	2018	2017	2016	2015
Adjusted share prices, EUR						
A share	high	7.98	10.10	7.28	6.93	7.67
	low	5.46	6.00	5.43	4.80	4.47
	closing	6.14	6.14	7.13	6.75	6.75
	average	6.56	8.36	6.35	5.85	5.98
B share	high	6.65	10.30	7.36	7.15	7.01
	low	3.86	4.98	5.34	4.23	4.47
	closing	6.00	5.12	7.15	6.80	6.86
	average	5.26	7.95	6.37	5.34	5.72
Trading volume at Nasdaq Helsinki, number of shares						
A share		694,519	2,227,788	1,491,973	776,677	1,189,370
% of total number of shares		2.1	6.3	4.2	2.2	3.3
B share		220,170,829	180,834,626	172,937,862	185,712,500	109,988,836
% of average number of shares		68.3	56.5	54.1	58.1	35.1
Number of shares at year end						
A share		33,087,647	35,358,794	35,886,682	35,895,651	35,895,651
B share		322,425,099	320,153,952	319,626,064	319,617,095	319,617,095
Total		355,512,746	355,512,746	355,512,746	355,512,746	355,512,746
Number of shares at year end, adjusted for 2015 rights issue.		355,512,746	355,512,746	355,512,746	355,512,746	355,512,746
Market capitalisation at year end, EUR million		2,136.1	1,856.3	2,539.6	2,415.7	2,434.9
Number of shareholders, B shares		50,420	45,341	43,268	42,011	42,050

KEY FIGURES

EUR million	2019	2018	2017	2016	2015
Earnings per share					
Result before tax	165.6	224.2	170.8	101.6	167.1
– Non-controlling interest	-	-	-	0.0	0.0
– Income taxes	-21.0	-20.8	-20.3	-11.3	-29.8
= Result for the period	144.6	203.4	150.5	90.4	137.3
– Average number of shares adjusted for 2015 rights issue	355,512,746	355,512,746	355,512,746	355,512,746	349,503,922
Earnings per share, basic and diluted, EUR	0.41	0.57	0.42	0.25	0.39
Shareholders' equity per share, EUR	3.76	3.72	3.28	2.96	2.89
Dividend per share, EUR	0.24[1)]	0.29	0.21	0.19	0.17
Payout ratio, %	58.5	50.9	50.0	76.0	43.6

Metsä Board shares have no nominal value.

	2019	2018	2017	2016	2015
Dividend yield, % of closing price					
A share	3.9[1)]	4.7	2.9	2.8	2.5
B share	4.0[1)]	5.7	2.9	2.8	2.5
Price/earning ratio (P/E ratio)					
A share	15.0	10.8	17.0	27.0	17.3
B share	14.6	9.0	17.0	27.2	17.6
Price to book value (P/BV), %					
A share	163.3	165.1	217.4	228.0	233.6
B share	159.6	137.6	217.8	229.7	237.4

[1)] The Board of Directors has proposed that a dividend of EUR 0.10 per share be distributed for the 2019 financial year, and further that EUR 0.14 per share be distributed from the unrestricted equity reserve.

TAXES

Metsä Board contributes to surrounding society also through paid taxes. In addition to paid corporate income taxes and property taxes Metsä Board's operations generate various other taxes and tax-like payments. Some are directly paid by the company, like employer's social security payments. Some are collected by Metsä Board on behalf of the government, like employees' payroll taxes.

In addition, fuels and electricity used for production activities include indirect taxes. Considering all directly and indirectly generated taxes and tax-like payments arising from Metsä Board's operations, our economic contribution to surrounding society is material.

Metsä Board is committed to follow international transfer pricing guidelines and local tax laws and regulations in all of its operating countries. Majority of Metsä Board's production and other operations are located in Finland, thus most of the taxes are paid in Finland.

Metsä Board's cooperation with tax authorities is transparent and cooperative. We manage our tax issues by Metsä Group's tax function and taxes are in the scope of Board of Directors' Audit Committee regular follow-up.

METSÄ FIBRE'S SHARE OF RESULT

Metsä Board's consolidated result includes associated company Metsä Fibre's result share (24.9% ownership). Metsä Fibre pays corporate income taxes on its own results and Metsä Board consolidates the result share on post-tax basis.

PAID CORPORATE INCOME TAXES AND PROPERTY TAXES

EUR million	2019	2018
Finland	15.1	13.5
Other countries	4.2	2.8

PRODUCTION CAPACITIES PER MILL

BOARD MILLS

Tonnes	Country	Machines	Folding boxboard	White kratliner	Total
Tampere (Tako)	Finland	2	210,000		210,000
Kyröskoski (Kyro)	Finland	1	190,000		190,000
Äänekoski	Finland	1	260,000		260,000
Simpele	Finland	1	290,000		290,000
Kemi	Finland	1		425,000	425,000
Husum	Sweden	2	400,000	250,000	650,000
Total		8	1,350,000	675,000	2,025,000

PULP AND BCTMP MILLS

Tonnes	Country	Chemical pulp	BCTMP	Total
Husum	Sweden	730,000		730,000
Joutseno	Finland		330,000	330,000
Kaskinen	Finland		370,000	370,000
Total		730,000	700,000	1,430,000

METSÄ FIBRE PULP MILLS [1)]

1,000 Tonnes	Country	Chemical pulp	Total
Äänekoski	Finland	1,300,000	1,300,000
Kemi	Finland	610,000	610,000
Rauma	Finland	650,000	650,000
Joutseno	Finland	690,000	690,000
Total		3,250,000	3,250,000

[1)] Metsä Board owns 24.9% of Metsä Fibre.

CALCULATION OF KEY RATIOS

PROFITABILITY

Return on equity (%)	=	Profit from continuing operations before tax - direct taxes / Shareholders' equity (average)
Return on capital employed (%)	=	Profit from continuing operations before tax + interest expenses, net exchange gains/losses and other financial expenses / Total equity + interest-bearing borrowings (average)

FINANCIAL POSITION

Equity ratio (%)	=	Shareholders' equity / Total assets - advance payments received
Net gearing ratio (%)	=	Interest-bearing borrowings - liquid funds - interest-bearing receivables / Shareholders' equity

SHARE PERFORMACE INDICATORS

Earnings per share	=	Profit attributable to shareholders of parent company / Adjusted number of shares (average)
Shareholders´ equity per share	=	Equity attributable to shareholders of parent company / Adjusted number of shares at 31 December
Dividend per share	=	Dividends / Adjusted number of shares at 31 December
Payout ratio (%)	=	Dividend per share / Earnings per share
Dividend yield (%)	=	Dividend per share / Share price at 31 December
Price/earnings ratio (P/E ratio) (%)	=	Adjusted share price at 31 December / Earnings per share
P/BV (%)	=	Adjusted share price at 31 December / Shareholders' equity per share
Adjusted average share price	=	Total traded volume per share (EUR) / Average adjusted number of shares traded during the financial year
Market capitalisation	=	Number of shares x market price at 31 December

OTHER KEY FIGURES

Interest cover	=	Net cash flow arising from operating activities + net interest expenses / Net interest expenses

COMPARABLE PERFORMANCE MEASURES

European Securities and Markets Authority (ESMA) guidelines on Alternative Performance Measures define alternative performance measures as a financial measure of historical or future financial performance, financial position or cash flows, other than a financial measure defined in the applicable financial reporting framework, in Metsä Board's case International Financial Reporting Standards as adopted in the EU pursuant to Regulation (EC) No 1606/2002. With the exception of Earnings per share defined in IAS 33 Earnings Per Share, performance measures provided in the interim report all qualify as alternative performance measures under the ESMA guidelines.

Metsä Board sees the presentation of alternative performance measures as providing users of financial statements with an improved view of the company's financial performance and position, including among other things the efficiency of its capital utilization, operational profitability and debt servicing capabilities.

Exceptional and material items outside the ordinary course of business have been eliminated from the comparable operating result. Metsä Board has defined operating result as follows: Result for the period presented in IFRS income statement before income taxes, financial income and expense as well as share of result of associate companies and joint ventures.

Reconciliation of operating result under IFRS and comparable operating result as well as EBITDA and comparable EBITDA is presented below. Comparable return on capital employed has been calculated using the same adjustments as the comparable operating result, and it has been further adjusted with items of financial income affecting comparability when applicable. Metsä Board considers that key figures derived in this manner improve comparability between reporting periods.

None of these key figures with items affecting comparability eliminated are key figures used in IFRS reporting, and they cannot be compared with other companies' key figures identified with the same names. Typical items affecting comparability include material gains and losses on disposals of assets, impairments and impairment reversals in accordance with IAS 36 Impairment of Assets, restructuring costs and their adjustments as well as items arising from legal proceedings.

In Metsä Board's view, comparable performance measures better reflect the underlying operational performance of the company by eliminating the result effect arising from items and transactions outside ordinary course of business.

RECONCILIATION OF OPERATING RESULT AND EBITDA

EUR million	2019	2018
Operating result	180.8	246.3
Depreciation, amortization and impairment charges	113.7	91.8
EBITDA	294.5	338.2
Items affecting comparability		
Gains and losses on disposal in other operating income and expenses	-17.8	-
Employee costs	-	4.1
Share of result of associated company	2.2	
Other operating expenses	-	1.5
Total	-15.5	5.6
EBITDA, comparable	279.0	343.8
Depreciation, amortization and impairment charges	-113.7	-91.8
Items affecting comparability		
Impairment charges and reversals of impairments	19.1	-
Operating result, comparable	184.4	251.9

"+" sign items = expense affecting comparability

"-" sign items = income affecting comparability

Items affecting comparability in 2019 totaled EUR -3.6 million and comprised disposal gains from shares in Liaison Technologies Inc. reported under other investments total of EUR 3.3 million, Äänevoima Oy shares sold to Metsä Fibre totalling to net effect on operating result EUR 6.8 million, disposal gains from sold non-business related land area total of EUR 5.5 million as well as the EUR -19.1 million impairment recognised in the assets of the Husum pulp mill.

Items affecting comparability in the financial year amounted to EUR 5.6 million and consisted of EUR 4.1 million employee costs arising from efficiency improvement programme at Husum mill as well as other costs affecting comparability of EUR 1.5 million, mainly comprising the amount paid to Pohjolan Voima with regard to the divestment of TVO's Meri-Pori coal-fired power plant.

QUARTERLY DATA

	Full year		Quarterly							
EUR million	**2019**	**2018**	**IV/2019**	**III/2019**	**II/2019**	**I/2019**	**IV/2018**	**III/2018**	**II/2018**	**I/2018**
Sales	1,931.8	1,944.1	478.4	489.2	477.1	487.1	458.0	475.1	518.7	492.3
	2019	**2018**	**IV/2019**	**III/2019**	**II/2019**	**I/2019**	**IV/2018**	**III/2018**	**II/2018**	**I/2018**
Operating result, comparable	184.4	251.9	39.1	42.5	41.0	61.8	60.1	63.7	59.2	69.0
	2019	**2018**	**IV/2019**	**III/2019**	**II/2019**	**I/2019**	**IV/2018**	**III/2018**	**II/2018**	**I/2018**
Operating result	180.8	246.3	20.0	42.5	46.4	71.9	60.1	63.7	53.6	69.0
Share of profit from associated companies	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.0
Exchange gains/losses	-1.6	-3.1	-0.1	-0.3	-0.8	-0.4	0.3	-0.2	-0.3	-3.0
Other financial income and expenses	-13.8	-19.2	-3.0	-3.4	-3.8	-3.6	-4.7	-4.0	-5.5	-5.1
Result before tax	165.6	224.2	17.0	38.8	41.9	67.9	55.8	59.5	47.8	61.0
	2019	**2018**	**IV/2019**	**III/2019**	**II/2019**	**I/2019**	**IV/2018**	**III/2018**	**II/2018**	**I/2018**
Operating result, % of sales	9.4	12.7	4.2	8.7	9.7	14.8	13.1	13.4	10.3	14.0

	Full year		Quarterly							
1 000 t	**2019**	**2018**	**IV/2019**	**III/2019**	**II/2019**	**I/2019**	**IV/2018**	**III/2018**	**II/2018**	**I/2018**
Deliveries										
Paperboard	1,792	1,830	440	466	445	440	426	447	489	468
Market pulp	460	457	137	104	109	109	95	108	131	124
	2019	**2018**	**IV/2019**	**III/2019**	**II/2019**	**I/2019**	**IV/2018**	**III/2018**	**II/2018**	**I/2018**
Production										
Paperboard	1,816	1,866	468	442	446	460	470	451	468	477
Metsä Fibre's pulp [1]	734	740	332	343	352	346	193	191	179	177
Metsä Board's pulp	1,373	1,363	186	182	186	181	338	334	338	352

[1] Corresponds to Metsä Board's ownership of 24.9 per cent in Metsä Fibre.

TEN YEARS IN FIGURES

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Income statement, eur million										
Sales	1,932	1,944	1 849	1 720	2 008	2 008	2 019	2 108	2 485	2 605
- change, %	-0.1	5.2	7.5	-14.3	-0.0	-0.5	-4.2	-15.2	-4.6	7.1
EBITDA, comparable	279	344	289	231	283	236	208	186	180	305
- % of sales	14.4	17.7	15.6	13.4	14.1	11.8	10.3	8.8	7.2	11.7
Operating result	181	246	207	132	199	117	114	221	-214	146
Operating result, comparable	184	252	193	137	180	137	104	75	59	173
- % of sales	9.5	13.0	10.5	8.0	9.0	6.8	5.2	3.6	2.4	6.6
Result for the period	145	203	150	90	137	69	64	171	-273	27
Balance sheet, eur million										
Balance sheet total	2,270	2,284	2 226	2 194	2 220	2 149	2 097	2 581	2 688	3 117
Equity attributable to shareholders of parent company	1,338	1,323	1 167	1 052	1 029	841	850	851	732	994
Interest bearing net liabilities	308	335	358	464	333	427	597	625	783	827
Key figures per share and distribution										
Dividend and equity distribution, EUR million	85.3[1]	103.1	74.7	67.5	60.4	39.4	29.5	19.7	0.0	0.0
Dividend and equity distribution per share, EUR	0.24[1]	0.29	0.21	0.19	0.17	0.12	0.09	0.06	0.0	0.0
Payout ratio including equity distribution, %	58.5[1]	50.9	50.0	76.0	43.6	57.1	47.4	11.3	0.0	0.0
Dividend yield, %	4.0[1]	5.7	2.9	2.8	2.5	2.7	2.9	2.7	0.0	0.0
Key figures – profitability										
Return on capital employed (ROCE), comparable, %	10.4	14.4	11.2	8.1	11.3	9.1	6.4	4.8	3.4	7.6
Return on equity, comparable, %	11.0	16.7	12.4	9.0	12.9	10.4	6.5	5.3	0.9	7.6
Key figures – balance sheet and financing										
Interest bering net liabilities / EBITDA, comparable	1.1	1.0	1.2	2.0	1.2	1.8	2.9	3.4	4.4	2.7
Equity ratio, %	59.1	58.1	52.6	48.2	46.5	39.2	40.7	33.2	27.4	32.1
Net gearing, %	23	25	31	44	32	51	70	73	106	83
Net cash flow from operations, EUR million	201	151	236	77	247	198	82	-2	83	-69
Net interest expense, EUR million	14	19	36	26	26	42	60	70	66	64
Interest cover	15.4	9.0	7.6	4.0	10.4	5.7	2.4	1.0	2.3	-0.1
Other key figures										
Gross investments, EUR million	95	70	65	162	178	44	67	66	95	66
Depreciation, amortisation and impairment losses, EUR million	114	92	92	102	104	126	101	100	191	166
R & D expenditure, EUR million	6	6	6	6	8	6	5	5	5	5
- % of sales	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.2	0.2	0.2
Personnel, average	2,433	2,435	2 456	2 588	2 851	3 200	3 245	3 552	4 428	4 772
- in Finland	1,458	1,433	1 441	1 552	1 538	1 542	1 560	1 634	1 795	1 842
Paperboard deliveries, 1,000 t	1,792	1,830	1,803	1,568	1,404	1,256	1,141	1,062	1,018	1,091

Dividend and key figures per share for years 2009–2014 have been have been issue-adjusted. The rights issue factor was 1.030627. Effect of IAS19r Employee benefits has been reported only for years 2012–2019.

[1] The Board of Directors has proposed that a dividend of EUR 0.10 per share be distributed for the 2019 financial year, and further that EUR 0.14 per share be distributed from the unrestricted equity reserve, totalling to EUR 0.24 per share. Dividend yield for 2019 has been calculated including the proposed equity distribution and using the B share closing price as of 31 December 2019.

Calculation of key ratios is presented on page 85.

Corporate governance statement

INTRODUCTION

This statement describing the corporate governance of Metsä Board Corporation (Metsä Board or Company) has been issued as a separate statement pursuant to the Securities Markets Act and the Finnish Corporate Governance Code 2020 and is published concurrently with the Company's financial statements and report of the Board of Directors. The Finnish Corporate Governance Code from 2020 is available at the website of the Finnish Securities Markets Association at www.cgfinland.fi.

Metsä Board is a Finnish public limited company whose A and B series shares are subject to public trading on the official list of NASDAQ OMX Helsinki Ltd. (Helsinki Stock Exchange). In its administration and governance Metsä Board applies Finnish laws, especially the Companies Act, the Company's Articles of Association and rules and regulations issued pursuant to laws, including those issued by the Financial Supervisory Authority and applying to listed companies. Metsä Board also complies with the rules and recommendations of the Helsinki Stock Exchange as applicable to listed companies.

Metsä Board prepares its financial statements and interim reports according to the International Financial Reporting Standards (IFRS). The financial statement documents are prepared and published in Finnish and English.

Metsä Board's headquarters are located in Espoo, Finland. The Company's registered domicile is Helsinki.

APPLICATION OF THE FINNISH CORPORATE GOVERNANCE CODE

As a Finnish listed company, Metsä Board applies the Finnish Corporate Governance Code of 2020, which became effective on 1 January 2020. Currently Metsä Board does not deviate from any single recommendation of the Code. This statement has been issued in compliance with the regulations concerning reporting content set out in the code. This statement has been reviewed by the Board of Directors' Audit Committee.

METSÄ BOARD'S GOVERNANCE STRUCTURE

The Company's statutory bodies include the General Meeting of Shareholders, the Board of Directors and the CEO. In addition, a Corporate Management Team assists the CEO in the operative management of the Company and in coordinating its operations. Members of the management team are not members of the Board of Directors. The tasks and responsibilities of the different corporate bodies are specified in the Finnish Companies Act.

Metsä Board has a function based organisation, including marketing and sales, production and technology, finance, business development and human resources. Function heads are member of the Corporate Management Team. Functions are supported by centralized support functions, most of which are common with other Metsä Group companies. support functions are based on specific service agreements, the terms of which are at arm's length.

GENERAL MEETING

The General Meeting of Shareholders is the Company's highest decision-making body where shareholders use their decision-making power. Each shareholder is entitled to participate in a General Meeting by following the procedure described in the notice to the General Meeting. According to the Companies Act, the General Meeting decides on the following matters, among others:

- amending the Articles of Association
- approving the financial statements
- profit distribution
- mergers and demergers
- acquisition and transfer of own shares
- appointing the members of the Board and specifying their and Board committee members' compensation
- appointing the auditor and specifying his compensation.

Shareholders are entitled to put forward a matter pertaining to the General Meeting to be addressed when the shareholder delivers a written request to this effect so well in advance that the matter can be included in the notice to the meeting. The Company has specified January 15th as the relevant deadline. In addition, a shareholder has a right to present questions on the items on the agenda of the General Meeting. A shareholder is entitled to participate in a General Meeting when he/she is included in the register of shareholders eight (8) working days before the General Meeting. An Annual General Meeting takes place each year in June at the latest. Notice to a General Meeting is served at the earliest three months and at the latest three weeks before the meeting by publishing it on the Company's website and by publishing the notice or a summary thereof in at least one Finnish newspaper of general circulation.

An Extraordinary General Meeting will convene if the Board finds it necessary, or if the auditor or shareholders representing at least 10 per cent.

CORPORATE GOVERNANCE IN METSÄ BOARD

BOARD OF DIRECTORS

The Board of Directors is responsible for the Company's administration and arranging the Company's operations properly according to applicable laws, the Articles of Association and good corporate governance. The general authority of the Board cover matters that are far-reaching and unusual, strategically significant or unusual and which therefore do not belong to the Company's day-to-day business operations. The Board supervises Metsä Board's operations and management and decides on strategy, major investments, the Company's organisation structure and significant financing matters. The Board supervises the proper arrangement of the Company's operations, and ensures that accounting and asset management control, financial reporting and risk management have been organised in an appropriate manner.

For its operation, the Board has a written working order. In accordance with the working order, the Board's tasks include:

- appointing the CEO and discharging him and ensuring that the CEO takes care of the Company's day-to-day administration in accordance with the regulations and guidelines given by the Board;
- establishing necessary committees, appointing their members and approving their working orders;
- addressing and approving the long range plan and corporate strategy;
- accepting the annual operational plan and budget;
- monitoring how the Company's accounting, asset management, risk control and financial reporting are arranged;
- deciding on significant investments, business acquisitions, divestments and closures of operations;
- deciding on considerable investments and financing arrangements;
- deciding on the transfer and pledging of the Company's significant real property;
- deciding on management authorizations and granting rights to represent the Company;
- monitoring that the Company's Articles of Association are complied with;
- convening the General Meeting and monitoring that the decisions taken by the General Meeting are implemented;
- signing and presenting the financial statements to the Annual General Meeting for approval, and preparing a proposal for the use of profits;
- approving key policies and guidelines, including the insider guidelines;
- publishing the financial statements bulleting as well as interim and half-year financial reports;
- publishing or authorizing the CEO to publish all inside information likely to have a significant effect on the value of the Company's shares, or which otherwise have to be made public according to the Finnish Securities Markets Act or the Rules of the Helsinki Stock Exchange.

The working order of the Board of Directors is presented in full on the Company's website (www.metsaboard.com/Investors/Corporate Governance). The Board can delegate matters in its general authority to the CEO and correspondingly take charge of decision-making in a task that belongs to the CEO's general authority.

On an annual basis, the Board assesses its own operation and the Company's governance and decides on any necessary changes.

The Board convenes on a regular basis. In the financial year 2019, the Board held a total of 13 meetings, two of which were telephone meetings. The attendance rate of the members was 100 per cent (98% in 2018 and 100% in 2017).

COMPOSITION, DIVERSITY AND INDEPENDENCE OF THE BOARD OF DIRECTORS

The composition and number of members of the Board of Directors must facilitate effective fulfilment of the Board's tasks. The composition of the Board of Directors takes into account the development phase of the Company, ownership structure, the special requirements of the industry and the needs of the Company's operations. Both genders are represented on the Board of Directors. A member of the Board must possess the competence required by the task and the opportunity to allocate sufficient time for the task.

The Board recognizes the benefits to the Company and its shareholders of a diverse and broad Board composition. Diversity supports the Board's open work atmosphere and decision-making. The Board is responsible for the company's administration and the proper arrangement of its operations. A key task of the Board is also to support and challenge the operative management from various perspectives in a consistent and predictable manner. The successful working by the Board and its Committees requires a diverse composition, knowledge and experience base as well as taking into account the personal qualities of individual members. Metsä Board has identified that key diversity factors for the company include industry knowledge, experience from different fields of business and the international business scene. In addition, varying educational backgrounds, management experience from different business sectors and a varying age and gender structure have been identified as items promoting diversity. Metsä Board's target is to have both genders represented at the Board. Further, diversity shall correspond to and support the company's then current development stage and respond to the Company's and its business' future development needs. The Board evaluates the successful implementation of these targets as part of its and its Nomination and Compensation Committee's normal operation.

According to the Articles of Association, a minimum of five and a maximum of ten ordinary members shall be appointed to the Board of Directors by the shareholders at the Annual General Meeting for a one-year period at a time. The number of consecutive terms is not limited. At present, the Board has nine members.

The Board appoints a Chairman and a Vice Chairman from among its members. The Annual General Meeting of 2017 appointed the following persons as members of the Board of Directors:

- Mr Hannu Anttila, born 1956, independent of the Company, M.Sc. (Econ.), member since 2018, 131,177 B-shares
- Mr Martti Asunta, born 1955, Vice Chairman, independent of the Company, M.Sc. (For.), member since 2008, 55,903 B-shares
- Ilkka Hämälä, born 1959, Chairman, M.Sc. (Eng.), member since 2018, 218,717 B-shares
- Ms Kirsi Komi, born 1963, independent member, L.L.M., member since 2010, 73,012 B-shares
- Mr Kai Korhonen, born 1951, independent member, M.Sc. (Eng.), member since 2008, 209,782 B-shares
- Ms Liisa Leino, born 1960, independent member, M.Sc. (Nutrition), member since 2009, 177,657 B-shares
- Mr Jussi Linnaranta, born 1972, independent of the Company, M.Sc. (Agr.), member since 2017, 14,187 B-shares.
- Mr Juha Niemelä, born 1946, independent member, M.Sc. (Econ.), member since 2007, 171,657 B-shares
- Mr Veli Sundbäck, born 1946, independent member, L.L.M., member since 2013, 62,677 B shares

These ownerships include shares possibly owned by controlled entities as at 31 December 2019.

A majority of the members of the Board of Directors are independent of both the Company and its significant shareholders. As President and CEO of Metsä Group Chairman Hämälä is dependent on both the Company and its majority shareholder Metsäliitto

Cooperative. Martti Asunta and Jussi Linnaranta are members of the Board of Metsäliitto Cooperative and consequently dependent on a significant shareholder. Hannu Anttila is, based on a general evaluation, independent of the Company but until the summer of 2020 dependent on his former employer Metsäliitto Cooperative. Juha Niemelä, Liisa Leino and Kai Korhonen have each served on the Board for more than 10 consecutive years but are considered as independent of the Company and its significant shareholders, based on the Board's general evaluation.

The Board's Nomination and Compensation committee proposes to the Annual General Meeting convened for March 28, 2018 that current Board members Anttila, Hämälä, Komi, Korhonen, Linnaranta, Leino and Sundbäck be re-elected for a new term and further that Jukka Moisio and Timo Saukkonen be elected as new members. Further information on existing and proposed Board members is available on the Company's website at (www.metsaboard.com/Investors/Corporate Governance).

BOARD COMMITTEES

Board committees provide assistance to the Board of Directors, preparing matters for which the Board is responsible. The Board of Directors appoints an Audit Committee and a Nomination and Compensation Committee from among its members. Every year after the Annual General Meeting, the Board of Directors appoints each committee's chairman and members. The Board of Directors and its committees can also seek assistance from external advisors.

Final decisions concerning matters related to the tasks of the committees are made by the Board of Directors on the basis of committee proposals, excluding proposals on Board composition and compensation made directly to the General Meeting by the Nomination and Compensation Committee.

AUDIT COMMITTEE

The Audit Committee is responsible for assisting the Board of Directors in ensuring that the company's financial reporting, calculation methods, annual financial statements and other financial information made public by the Company are correct, balanced, transparent and clear. On a regular basis, the Audit Committee reviews the internal control and management systems and monitors the progress of financial risk reporting and the auditing of the accounts. The Audit Committee assesses the efficiency and scope of internal auditing, the company's risk management, key risk areas and compliance with applicable laws and regulations. The committee gives a recommendation to the Board concerning the appointment of auditors to the Company. The Audit Committee also processes the annual plan for internal auditing and the reports prepared on significant auditing.

The Audit Committee consists of four Board members. Since the Annual General Meeting of 2019, Kai Korhonen has been chairman of the Audit Committee with Hannu Anttila, Kirsi Komi and Veli Sundbäck as members. Korhonen, Komi ja Sundbäck are independent of the Company and its significant shareholders while Anttila is independent only of the Company.

The committee members must have adequate expertise in accounting and financial statement policies. The Audit Committee convenes on a regular basis, at least four times a year, including meeting with the Company's auditor. The committee chairman provides the Board with a report on each meeting of the Audit Committee. The tasks and responsibility areas have been specified in the committee's working order which the Board has approved (www.metsaboard.com/Investors/Corporate Governance).

When necessary, the following persons are also represented in the Audit Committee meetings as summoned by the Committee: the auditor, Chief Executive Officer and Chief Financial Officer as well as other management representatives and external advisors.

The Audit Committee convened four times during 2019 and the attendance rate of the members was 100 per cent (94% in 2018 and 100% in 2017).

NOMINATION AND COMPENSATION COMMITTEE

The task of the Nomination and Compensation Committee is to assist the Board of Directors in matters related to the appointment and compensation of the company's CEO, a possible Deputy CEO and the senior management and prepare matters related to the reward schemes for management and employees. In addition, the Committee prepares for the Annual General Meeting a proposal on the number of Board members, Board composition and Board member compensation. The Committee also recommends, prepares and proposes to the Board the CEO's (and a Deputy CEO's) nomination, salary and compensation, and further evaluates and provides the Board and the CEO with recommendations concerning management rewards and compensation systems.

The Committee consists of five Board members. It convenes on a regular basis at least four times a year. The Committee chairman presents the proposals issued by the Committee to the Board. The tasks and responsibilities of the Nomination and Compensation committee have been specified in the committee's working order, which the Board approves (www.metsaboard.com/Investor Relations/Corporate Governance).

Since the Annual General Meeting of 2019, Ilkka Hämälä has been chairman of the Nomination and Compensation Committee with Martti Asunta, Liisa Leino, Jussi Linnaranta and Juha Niemelä as members.

The Nomination and Compensation Committee convened three times during 2019 and all members participated in all meetings (the attendance rate was 100% also in 2018 and 2017).

CHIEF EXECUTIVE OFFICER

Chief Executive Officer Mika Joukio, M.Sc.(Eng.), born 1964, is responsible for the daily management of the Company's administration according to the guidelines and instructions given by the Board. In addition, the CEO is responsible for ensuring that the Company's accounting has been carried out according to applicable laws and that asset management has been organised in a reliable manner. The CEO manages the Company's daily business and is responsible for controlling and steering the functions.

The CEO has a written CEO contract approved by the Board. The Board monitors the CEO's performance and provides a performance evaluation once a year. The CEO is covered by the Finnish Employees' Pension Act, which provides for a pension compensation based on service years and earnings. Basic salary, rewards and fringe benefits are included in the calculation, but not stock option or share plan based income. The Company has commissioned an extra pension insurance policy for the CEO, entitling the CEO to retire at the age of 62. The policy entitles the CEO to receive pension compensation equal to 60 per cent of his salary at the time of retirement (calculated in accordance with Finnish pension laws) on the basis of a five-year-period preceding the moment of retirement.

The Board appoints and discharges the CEO. The Board can discharge the CEO without a specific reason. The CEO can also resign from his assignment. The mutual term of notice is six months. The Board may, however, decide to discharge the CEO without a period of notice. When the service contract of the CEO is terminated by the Board, the CEO is entitled to receive discharge compensation equal to his 12-month salary.

DEPUTY TO THE CEO

The Board can at its discretion appoint a Deputy to the CEO. The Deputy to the CEO is responsible for carrying out the CEO's tasks when the CEO is unable to perform his duties. For the time being no Deputy to the CEO has been appointed.

CORPORATE MANAGEMENT TEAM

In the operative management of Metsä Board, the CEO is assisted by the Corporate Management Team, which consists of Mika Joukio, CEO, together with function heads Ari Kiviranta (Business Development), Jussi Noponen (Finance and Control), Sari Pajari (Marketing and Sales), Harri Pihlajaniemi (Production and Technology) and Camilla Wikström (Human Resources), who all report to the CEO.

Each Corporate Management Team member has a written employment or service contract, With the exception of the CEO members of the Corporate Management Team have no extraordinary pension arrangements which would deviate from applicable pension legislation. The term of notice of Corporate Management team members is six months.

The Corporate Management Team's tasks and responsibilities include planning investments, specifying and preparing the Company's strategic guidelines, allocating resources, controlling routine functions as well as preparing several matters to be reviewed by the Board.

The Corporate Management Team convenes at the Chairman's invitation once a month, as a rule, and also otherwise when necessary.

The Corporate Management Team members' owned the Company's shares at the end of the financial year 2019 were as follows:

Mika Joukio	297,700 B-shares
Ari Kiviranta	45,000 B-shares
Jussi Noponen	73,000 B-shares
Sari Pajari	66,075 B-shares
Harri Pihlajaniemi	0 shares
Camilla Wikström	17,807 B-shares

Possible controlled entities of management team members do not hold shares in the Company.

INTERNAL CONTROL, INTERNAL AUDITING AND RISK MANAGEMENT

Profitable business requires that operations are monitored continuously and with adequate efficiency. Metsä Board's internal management and control procedure is based on the Finnish Companies Act, regulations and recommendations for listed companies, the Articles of Association and the company's own approved principles and policies. The functionality of the company's internal control is evaluated by the company's internal auditing. Internal control is carried out throughout the organisation. Internal control methods include internal guidelines and reporting systems. The following describes the principles, objectives and responsibilities of Metsä Board's internal control, risk management and internal auditing.

INTERNAL CONTROL

Being a listed company, Metsä Board's internal control is steered by the Finnish Companies Act and the Securities Market Act, other laws and regulations applicable to the operations and the rules and recommendations of the Helsinki Stock Exchange, including the Corporate Governance Code. External control is carried out by Metsä Board's auditor and the authorities.

In Metsä Board, internal control covers financial reporting and other monitoring. Internal control is implemented by the Board and operative management as well as the entire personnel. Internal control aims to ensure achieving the goals and objectives set for the company; economical, appropriate and efficient use of resources; correct and reliable financial information and other management information; adherence to external regulations and internal policies; security of operations, information and property in an adequate manner; and the arrangement of adequate and suitable manual and IT systems to support operations.

Internal control is divided into (i) proactive control, such as the specification of corporate values, general operational and business principles; (ii) daily control, such as operational systems and work instructions related to operational steering and monitoring; and (iii) subsequent control, such as management evaluations and inspections, comparisons and verifications with the aim of ensuring that the goals are met and that the agreed operational and control principles are followed. The corporate culture, governance and the approach to control together create the basis for the entire process of internal control.

MONITORING OF THE FINANCIAL REPORTING PROCESS, CREDIT CONTROL AND AUTHORISATION RIGHTS

The financial organisations of the functions and the central administration are responsible for financial reporting. The units and functions report the financial figures each month. The functions' control functions check their units' monthly performance and report them further to central administration. Functions' profitability development and business risks and opportunities are discussed in monthly meetings attended by senior management of the Company and of the function in question. The result will be reported to the Board and the Corporate Management Team each month. The Board presents the Financial Statements to the Annual General Meeting for approval, approves the financial statement bulletin and quarterly reports and decides on their publication. The Company's internal guidelines provide detailed descriptions on the reporting and control rules and the reporting procedure.

Credit control in Metsä Board has been centralised under a Credit Committee, which convenes at least each quarter. The development of trade receivables is monitored in each sales company by credit controllers under the supervision of the Group VP of Credits. Counterparty-specific credit limits are set within the boundaries of the credit policy confirmed by the Board in cooperation with centralised credit control and business area management. The development of credit risks is reported to the Board on a regular basis.

Authorisation rights concerning expenses, significant contracts and investments have been specified continuously for different organisation levels according to the decision-making authority policy confirmed by the Board and the authority separately granted by the CEO and other management personnel. Investment follow-up is carried out by the Group's financial administration according to the investment policy confirmed by the Board. After pre-approval, investments are taken to the management teams of the functions and the Corporate Management Team within the framework of the annual investment plan. Most significant investments are separately submitted for Board approval. Investment follow-up reports are compiled each quarter.

INTERNAL AUDITING

Internal auditing assists the Board and CEO with their control tasks by evaluating the quality of internal control maintained in order to achieve the Company's objectives. In addition, internal auditing supports the organisation by evaluating and ensuring the functionality of business processes, risk management and the management and administration systems.

The key task of internal auditing is to assess the efficiency and suitability of internal control concerning the company's functions and units. In its assignment, internal auditing evaluates how well the operational principles, guidelines and reporting systems are adhered to, how property is protected and how efficiently resources are used. Internal auditing also acts as an expert in development projects related to its task area and prepares special reports at the request of the Audit Committee or operative management.

Internal auditing operates under the supervision of the Audit Committee and the CEO. Audit observations, recommendations and the progress of measures are reported to the management of the target audited, the company management and the auditor. Every six months, internal auditing reports its auditing measures, plans and operations to the Audit Committee. Internal auditing applies in its tasks a working order approved by the Board of Directors.

The action plan of internal auditing is prepared for one calendar year at a time. The aim is to allocate the auditing to all functions and units at certain intervals. Auditing is annually allocated to areas that are in a key position regarding the evaluated risk and the company's objectives at the time. The topicality and appropriateness of the action plan are processed with the Company's management every six months.

The scope and coordination of the auditing operations are ensured through regular communication and information exchange with other internal assurance functions and the auditor. When necessary, internal auditing uses external service providers for temporary additional resourcing or special expertise for carrying out demanding evaluation tasks.

RISK MANAGEMENT

Risk management is an essential part of Metsä Board's standard business planning and leadership. Risk management belongs to daily decision-making, operations follow-up and internal control, and it promotes and ensures that the objectives set by the Company are met.

Linking business management efficiently with risk management is based on the operational principles confirmed by the Board; the aim of the principles is to maintain risk management as a process that is well defined, understandable and sufficiently practical. Risks and their development are reported on a regular basis to the Board's Audit Committee. Centralised risk management also takes care of the coordination and competitive bidding of Metsä Board's insurance coverage.

The most crucial objective of risk management is to identify and evaluate those risks, threats and opportunities which may have an impact on the implementation of the strategy and on how short-term and long-term objectives are met. The businesses regularly evaluate and monitor the risk environment and related changes as part of their normal operational planning. The risks identified and their control is reported to the Audit Committee and the Board at least twice a year. Business risks also involve opportunities, and they can be utilised within the boundaries of the agreed risk limits. Conscious risk-taking decisions must always be based on an adequate evaluation of the risk-bearing capacity and the profit/loss potential, among other things, which shall be conducted before any pre-planning and execution phases of projects and investments.

Risk management responsibilities in Metsä Board are divided among different functions. The Board is responsible for the Company's risk management and approves the Company's risk management policy; the Audit Committee evaluates the levels and procedures of the Company's risk management and the essential risk areas and provides the Board with related proposals. The CEO and the Management Team are responsible for the specification and adoption of the risk management principles. They are also responsible for ensuring that the risks are taken into account in the company's planning processes and that risk reporting is adequate and appropriate. The Vice President of Risk Management reports to the CFO and is responsible for the Company's risk management process development, coordination, the implementation of risk evaluation and the essential insurance decisions. Businesses and support functions identify and evaluate the essential risks related to their own areas of responsibility in their planning processes, prepare for them, take necessary preventive action and report on the risks as agreed.

Metsä Board's essential risk management elements include implementing a comprehensive corporate risk management process that supports the entire business, protecting property and ensuring business continuity, corporate security and its continuous development, as well as crisis management and continuity and recovery plans. According to the risk management policy and principles, adequate risk management forms a necessary part of the preliminary review and implementation stages of projects which are financially or otherwise significant.

The tasks of Metsä Board's risk management are to

- ensure that all identified risks with an impact on personnel, customers, products, property, information assets, corporate image, corporate responsibility and operational capacity are controlled according to applicable laws and on the basis of best available information and financial aspects
- ensure that the company's objectives are met
- fulfil the expectations of stakeholders
- protect property and ensure disruption-free business continuity
- optimise the profit/loss possibility ratio
- ensure the management of the company's overall risk exposure and minimise the overall risks.

The most significant risks and uncertainties that the company is aware of are described in the Report of the Board of Directors.

AUDITING

According to Metsä Board's Articles of Association, the company has one auditor who shall be an auditing firm authorised by the Central Chamber of Commerce of Finland. The General Meeting appoints the auditor each year. The Audit Committee together with the Audit Committee of the parent entity Metsäliitto Cooperative arranged in 2011 a tender for the auditing services. As a result of the tendering, the Company's long-term auditor Pricewaterhouse Coopers Oy was at the 2012 Annual General Meeting changed to KPMG Oy Ab. Pursuant to the decision of the Annual General Meeting of 2019, KPMG Oy Ab acts as the Company's auditor and appointed Kirsi Jantunen, APA, as the new auditor with main responsibility. Pursuant to EU's Audit Directive an audit entity may act as a company's auditor for a maximum of 10 years, following which audit services shall be subject to tendering. Should the same auditor be re-elected in the tendering, it may proceed as the company's auditor for another 10 years at maximum. Thereafter the auditor must be changed. The Audit committee controls the appointment procedure of the auditors and provides the Board and the General Meeting with a recommendation for the appointment of the auditor.

In 2019, KPMG Oy Ab received EUR 196,064 (EUR 234,389 in 2018 and EUR 240,258 in 2017) in auditing compensation, KPMG internationally received altogether EUR 413,528 (EUR 410,642 in 2018 and EUR 401,359 in 2017) and other auditing firms outside Finland were paid EUR 23,484 (EUR 40,984 in 2018 and EUR 36,844 in 2017). In addition, KPMG has received EUR 34,327 (EUR 6,825 in 2018 and EUR 22,449 in 2017) for services not related to the actual auditing of the accounts.

INSIDER ADMINISTRATION

Metsä Board group complies in insider matters with Finnish laws, namely the Securities Markets Act, the Regulation N:o 596/2014 by the European Parliament and the Commission on market abuse (MAR) and supporting orders and regulations as well as the insider guidelines of NASDAQ OMX Helsinki Ltd. (Helsinki Stock Exchange) (https://business.nasdaq.com/Docs/Nasdaq-Helsinki-Guidelines-for-Insiders_FI_upcoming%20version.pdf). The Board has based on the above rules approved the Company's own insider guidelines.

Pursuant to MAR Article 14 and Chapter 51 of the Penal Code, a person who possesses inside information shall not (i) engage or attempt to engage in insider dealing by acquiring or transferring financial instruments in his own name or on behalf of a third party, (ii) recommend that another person engage in insider dealing or induce another person to engage in insider dealing, (iii) unlawfully disclose inside information to another person, unless such disclosure is made as part of carrying out normal work duties. The purpose of insider management is to enable a transparent ownership of the Company's securities by the Company's insiders, while simultaneously maintaining public trust in the trading with the Company's securities and their price formation. The Company recommends only long-term investments. Insiders are being trained at regular intervals.

Following the MAR becoming effective on 3 July 2017, the Company no longer has a register of public insiders and the Company no longer maintains a permanent company-specific insider register. The Company shall, when required and by decision of the Chairman of the Board of Directors, set up a project-specific insider register to cover all persons who are involved in the preparation of a specific project containing insider information.

The Company's managers with a duty to notify include members of the Board of Directors and the CEO. The holdings of such managers and their related parties is public. Each of them have an individual duty vis-à-vis the Company and the competent supervisory authority to notify all transactions executed with the shares and other financial instruments of Metsä Board. Metsä Board will publish all such notifications by means of a stock exchange release.

Trading in the Company's shares and other financial instruments is prohibited during a period starting at the end of each reporting period and lasting until the results release has been published (always at minimum 30 days; "closed window"). This prohibition applies not only to managers with a duty to notify but also to such other persons specified by the Company who participate in the preparation of financial reports.

RELATED PARTY TRANSACTIONS

The Board of Directors has determined the principles applicable to the review and evaluation of business transactions with related parties. The Company's business activities include contractual relationships with the parent entity Metsäliitto Cooperative and affiliated companies Metsä Fibre Oy and Metsä Tissue Oyj. The most significant of these include raw material (such as wood and pulp) sourcing and acting in jointly operated integrated mill sites. The Board decides on contractual relationships with related parties, unless they relate to the Company's regular business and are of minor importance. In situations where the Board of Directors addresses a business relationship or other contractual relationship or connection to Metsäliitto Cooperative or the Company's affiliated companies, the Board of Directors shall, as a rule, act without those of its members who are dependent on Metsäliitto Cooperative or the relevant affiliated company. The Audit Committee follows up and analyses contractual relationships between the Company and its related parties.

To assess the independence and impartiality of the members of the Board of Directors, the members shall notify the Company of circumstances that may have an impact on the member's ability to act without conflict of interest. As at 31 December 2019, neither the Board members, nor the Company's CEO or the Corporate Management Team members had monetary loans from the Company or its subsidiaries. No security arrangements or significant business relations existed between these persons (including their related parties as defined in IFRS) and the Company during 2019.

Salary and remuneration report

This salary and remuneration report of Metsä Board Corporation (Metsä Board or the Company) has been issued for a last time pursuant to recommendations concerning reporting of the Finnish Corporate Governance Code 2016. The description on remuneration principles and decision-making is updated on a regular basis, once every calendar year as a starting point, in connection with the annual Corporate Governance Statement. A report specifying the fees paid out during the previous financial year is also published concurrently. Any fees paid out during 2020 will be reported in accordance with the Finnish Corporate Governance Code 2020 by means of a renewed Remuneration Report.

DECISION-MAKING ORDER AND PRINCIPLES OF REMUNERATION

GENERAL

The purpose of Metsä Board's management compensation system is to compensate management in a fair and competitive way for a successful and profitable implementation of the Company's strategy. The objective of remuneration is also to encourage management in the development of the Company's strategy and business to thereby act for the benefit the Company in the long run. The Board approves the forms and basis of the compensation systems as well as the measures and targets applied. The Board's Nomination and Compensation Committee assists the Board in matters relating to management remuneration, conditions of employment and engagement of management members as well as prepares Board decisions relating to management remuneration.

The Company currently uses a short-term incentive system for management and personnel as well as a long-term incentive system for management and key employees.

BOARD OF DIRECTORS

The General Meeting decides on the remuneration of the Board of Directors. The Nomination and Compensation Committee presents to the Annual General Meeting proposals for the remuneration of the Board of Directors, taking into account the Company's financial standing at a given time and, among other things, remuneration guidelines in other comparable companies. The Committee consults, if necessary, the majority shareholder, who has the decisive vote at the General Meeting as regards Board remuneration.

CHIEF EXECUTIVE OFFICER

The Board of Directors appoints and discharges the CEO and decides on the CEO's compensation and other terms of service. The Board can discharge the CEO without a specific reason. The CEO can also resign from his assignment. The mutual term of notice is six months. The Board may, however, decide to discharge the CEO without a period of notice. When the service contract of the CEO is terminated by the Board, the CEO is entitled to receive a severance pay equal to the CEO's 12-month salary. The CEO receives a monthly salary including a car, mobile phone and insurance benefits. The Board may, in accordance with the CEO's service contract, decide that the CEO receives an annual short-term incentive. In 2019 the maximum amount available from the short-term incentive system amounted to 75 per cent of the CEO's annual base salary. From 2018 on the other hand the maximum level of a short-term incentive amounted to 58.33 per cent of the CEO's annual base salary.

The CEO is covered by the Finnish Employees' Pensions Act, which provides for a pension compensation based on service years and earnings. The CEO is entitled to the supplementary defined benefit pension insurance, with a retirement age of 62. According to the supplementary pension insurance the maximum level of pension is 60 per cent of the CEO's total salary under the Employees' Pensions Act, calculated on the basis of a five-year-period preceding the moment of retirement. In case the CEO's service with the Company terminates before his retirement, the CEO is entitled to a free policy.

CORPORATE MANAGEMENT TEAM

The CEO decides on the compensation of other Corporate Management Team members in cooperation with the Board Chairman and in accordance with the principles approved and guidelines given by the Board.

Also other Corporate Management Team members have written employment contracts. The period of notice of Corporate Management Team members is six months. Termination of employment due to reasons not attributable to the executive entitles members of the Corporate Management Team to receive, as a rule, severance pay equal to their six-month salary.

Other than the CEO, Corporate Management Team members have no extraordinary pension arrangements which would deviate from applicable pension legislation. The Corporate Management Team members are covered by the Finnish Employees' Pensions Act, which provides for a pension compensation based on service years and earnings.

LONG-TERM REMUNERATION

Performance share plan 2014–2018: The Board decided in February 2014 to continue the share ownership plan for management. The plan consisted of three three-year performance periods, namely calendar years 2014-2016, 2015–2017 and 2016–2018. The aim of the plan is to combine the objectives of shareholders and executives in order to increase the value of the Company, to commit the executives to perform the mutual strategy, and to offer them a competitive reward plan based on share ownership. At the beginning of each performance period, the Board of Directors decided on the earnings criteria, defined performance targets and a target group. The plan's reward from the performance periods 2014-2016 and 2015-2017 was based partly on Metsä Board Group's equity ratio at the end of the period as well as the development of return on capital employed (ROCE) and operating results (EBIT), and partly based on corresponding indicators for Metsä Group. The reward for the performance period 2016-2018 was based on the development of Metsä Board Group's and Metsä Group's return on capital employed (ROCE) with certain minimum levels set for EBIT and equity ratio.

A performance period is followed by a two-year restriction period during which an executive is not entitled to transfer or dispose the shares received. If an executive terminates their employment or service contract during the restriction period, the executive is obliged to return the shares already earned. If the Company terminates the employment or service contract (other than due to reasons attributable to the executive) during the restriction period or the contract is agreed to be terminated, the executive may keep the shares subject to the transfer restriction and the said restriction discontinues.

The amounts of rewards were limited. Where the reward exceeded the executive's annual salary (and for the CEO, the CEO's annual salary multiplied by two), the exceeding part was not paid. On top the Company paid in money an amount covering the applicable withholding tax and related payments resulting from the reward to an executive. Rewards earned for the performance periods 2014–2016, 2015–2017 and 2016–2018 have been described below under "Remuneration Report 2019".

Performance share plan 2017–2021: The Board decided in January 2017 to continue the performance share plan for management. The plan consists of three three-year performance periods, namely calendar years 2017–2019, 2018–2020 and 2019–2021. At the beginning of each performance period, the Board of Directors decides on the earnings criteria and defines performance targets. The potential reward from the plan for the performance periods is based 50% on the development of Metsä Board Group's return on capital employed (ROCE) and 50% on the corresponding indicator for Metsä Group. The Board further has the right to limit rewards from the plan, in whole or in part, if defined earnings or equity ratio criteria are not met.

If the reward would exceed the executive's annual salary (or in case of the CEO, the CEO's annual salary multiplied by two), the exceeding part is not paid. A performance period is followed by an approximately two-year restriction period during which an executive is not entitled to transfer or dispose the shares received. If an executive terminates their employment or service contract during the restriction period, the executive is obliged to return the shares already earned. If the Company terminates the employment or service contract (other than due to reasons attributable to the executive) during the restriction period or the contract is agreed to be terminated, the executive may keep the shares subject to the transfer restriction and the said restriction discontinues.

The potential reward is paid in Metsä Board Corporation's series B shares as follows: for the performance period 2017-2019 in the spring of 2020 (allocation as at the end of 2019 up to 230,105 shares), for the performance period 2018¬–2020 in the spring of 2021 (allocation as at the end of 2019 up to 248,855 shares), and for the performance period 2019–2021 in the spring of 2022 (allocation as at the end of 2019 up to 279,132 shares). On top the Company pays in money an amount covering the applicable withholding tax and related payments resulting from the reward to an executive.

Corporate Management Team members as well as other key employees of Metsä Board formed the target group in December 2019. Changes in participants during the performance period such as changes in Corporate management Team members in September 2017 and May 2019 have an effect on the maximum amount.

Performance share plan 2020–2024: The Board of Directors of Metsä Board has resolved in January 2020 to continue the performance share plan directed to group executives. The purpose of the plan is to align the objectives of the shareholders and executives in order to increase the value of Metsä Board, to commit the executives to perform the mutual strategy and to offer them a competitive reward plan based on share ownership. The plan 2020–2024 consists of three performance periods, namely calendar years 2020–2022, 2021–2023 and 2022–2024. The Board of Directors determines the performance criteria and related target levels at the beginning of each performance period. Reaching the targets set for the performance criteria shall determine the proportion of the maximum reward payable to the executives. The potential reward for the performance period 2020–2022 is based on the development of Metsä Board's (50%) and Metsä Group's (50%) return on capital employed (ROCE, %), as determined by the Board of Directors. The Board of Directors is entitled to reduce the rewards fully or partly if defined earnings or equity ratio criteria are not met, or if the reward should exceed the maximum reward limit defined for each executive individually. The reward of the CEO is 270 per cent of the CEO's annual base salary at the maximum and the reward of other Corporate Management Team members is 130 per cent of their annual base salary at the maximum.

The reward consists of a proportion to be paid in Metsä Board Corporation's series B shares and a cash proportion. The cash proportion refers to an amount used to cover the taxes to be withheld from the reward. The proportion paid in shares refers to the net reward after the withholding of taxes and other expenses payable for the reward. The potential reward shall be mainly paid in the spring following the end of the performance period. The performance period is followed by a two-year restriction period, during which executives are not allowed to sell or otherwise transfer the shares received. Should executive's employment end during the performance or restriction period, executive shall principally lose the right to reward.

At the beginning of the performance period 2020–2022, the plan covers 25 participants, including the members of the Executive Management Team as well as other key employees of Metsä Board. The rewards to be paid on the basis of the plan for the performance period 2020–2022 will amount to 590,788 shares (gross). The final amount of the reward consists of Metsä Board Corporation's series B shares as well as the taxes and other expenses payable for the reward. The estimated market value of the plan's first performance period, including taxes and other expenses, is approximately EUR 3.6 million.

REMUNERATION REPORT 2019

BOARD OF DIRECTORS

The Annual General Meeting held in March 2019 resolved to keep the Board's remuneration unchanged such that the Chairman received an annual remuneration of EUR 95,000, the Vice Chairman EUR 80,000 and members EUR 62,500. One half of the remuneration was decided to be paid in cash while the other half was to be paid in the Company's B-series shares acquired from the stock exchange between 1 and 30 April 2019. As a result, the Chairman received 7,920, the Vice Chairman 6,670 and each Board member 5,211 B-series shares at EUR 5.9968 per share. Board members are not allowed to transfer these shares within a two-year period from the relevant General Meeting. The amount of cash consideration corresponds to estimated withholding tax. In addition, the Annual General Meeting resolved to pay to the members a remuneration of EUR 700 per each attended Board and committee meeting. Further, the Annual General Meeting decided that an additional monthly compensation of EUR 800 be paid to the Chairman of the Audit Committee. Travel expenses of the Board are compensated in accordance with the Company's travel policy. Board remuneration is taken into account when determining pension.

The Nomination and Compensation Committee of the Board of Directors proposes to the Annual General Meeting of 26 March 2020 that the remuneration of the members of the Board of Directors be kept unchanged. The Committee additionally proposes that one half of the annual remuneration be paid in the company's B-class shares to be acquired from public trading between 1 and 30 April 2020 and that the transfer of these shares would be restricted for a period of two years. The Committee finally proposes that an additional monthly remuneration of EUR 800 be paid to the Audit Committee Chairman also going forward. The Board's annual remuneration has been paid in shares and cash since 2009.

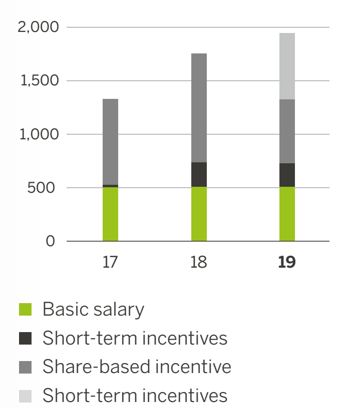
CHIEF EXECUTIVE OFFICER

The monthly salary of CEO Mika Joukio is EUR 40,609 (December 2019). The salary includes car and mobile phone benefits and an extended health, travel and accident insurance benefits. In 2019 the CEO Joukio received a total of:

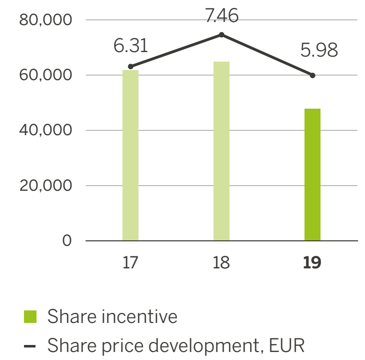
- EUR 1,959,527 in salary, incentives and other benefits, including long-term incentives (EUR 1,766,254 in 2018 and EUR 1,339,476 in 2017), of which
- EUR 511,552 (EUR 510,397 in 2018 and EUR 506,662 in 2017) was fixed compensation;
- EUR 218,168 (EUR 232,933 in 2018 and EUR 25,199 in 2017) was short-term incentives; and
- EUR 604,104 (EUR 1,022,925 in 2018 and EUR 807,615 in 2017) was long-term incentives from the performance period 2016-2018. In addition, a total of EUR 625,703 of deferred long-term incentives from the previous performance periods were paid.

The short-term incentive is determined by the Board and was based on the Company's EBIT and cash flow, Metsä Group's corresponding indicators and on personal targets. The cost to the Company of the CEO's supplementary defined benefit pension insurance was in 2019 EUR 538,995.

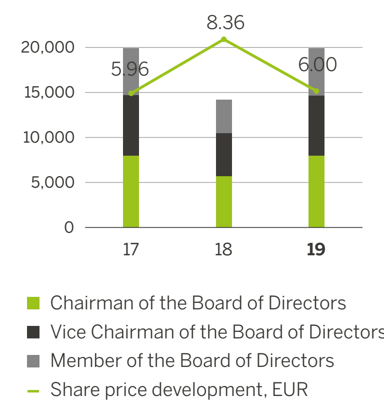
COMPENSATION OF THE CEO
EUR 1,000



SHARE REMUNERATION OF THE CEO
SHARES



BOARD OF DIRECTORS' SHARE REMUNERATION
SHARES



CORPORATE MANAGEMENT TEAM

In 2019, other Corporate Management Team members received a total of:

- EUR 2,647,410 (EUR 2,305,601 in 2018 and EUR 1,889,801 in 2017) in salary and incentives of which
- EUR 1,116,592 (EUR 1,023,773 in 2018 and EUR 974,431 in 2017) were fixed salaries and benefits (insurance, car and mobile phone);
- EUR 361,728 (EUR 340,878 in 2018 and EUR 66,393 in 2017) was short-term incentives ; and
- EUR 641,564 was long-term incentives from the performance period 2016–2018 (EUR 940,950 in 2018 and EUR 848,977 in 2017). In addition, a total of EUR 527,526 of deferred long-term incentives from previous performance periods were paid.

The members of the Corporate Management Team were in 2019 entitled to short-term incentive equal to a maximum of 50 per cent of their respective annual base salaries. The short-term incentive is defined and decided by the Board and the CEO and was based on the Company's and its functions' revenue and other targets, and on personal targets.

LONG-TERM REMUNERATION

The Board confirms the outcomes of the long-term share based incentive system based on principles, indicators and scales approved by it. The Board confirmed:

- in February 2018 that the result for the performance period 2015–2017 was 117.1 per cent (taking into account the EBIT multiplier), based on which a total of 250,516 B-series shares were paid to participants. Of these 103,000 were paid to CEO Joukio. The payment of a part of the total reward was deferred in accordance with the system terms;
- in February 2019 that the result for the performance period 2016–2018 was 63.6 per cent, based on which a total of 131,792 B-series shares were paid to participants. Of these 47,700 were paid to CEO Joukio.

In addition, the reward includes a cash portion covering taxes and other tax-related costs.

From left: Juha Niemelä, Hannu Anttila, Jussi Linnaranta, Martti Asunta, Liisa Leino,Kai Korhonen, Ilkka Hämälä, Veli Sundbäck and Kirsi Komi

Board of Directors

Read more **www.metsaboard.com/Investors/Board-of-Directors**

ILKKA HÄMÄLÄ

b. 1961

M.Sc (Eng.) Metsä Group, President and CEO

Chairman of the Board since 2018

Not independent of the company or its significant shareholder

Shares owned in Corporation 31 Dec 2019: 218,797 B shares

MARTTI ASUNTA

b. 1955

M.Sc. (Forestry) Metsäneuvos (Finnish honorary title)

Member and Vice Chairman of the Board since 2008

Independent of the company. Not independent of the company's significant shareholder

Shares owned in Corporation 31 Dec 2019: 55,903 B shares

HANNU ANTTILA

b. 1955

M.Sc. (Econ.)

Member of the Board since 2018

Independent of the company. Not independent of the company's significant shareholder

Shares owned in Corporation 31 Dec 2019: 131,177 B shares

KIRSI KOMI

b. 1963

LL.M., Master of Laws

Member of the Board since 2010

Independent of the company and of its significant shareholders

Shares owned in Corporation 31 Dec 2019: 73, 012 B shares

KAI KORHONEN

b. 1951

M.Sc. (Eng.), eMBA

Member of the Board since 2008

Independent of the company and of its significant shareholders

Shares owned in Corporation 31 Dec 2019: 209,782 B shares

LIISA LEINO

b. 1960

M.Sc. (Nutrition) Teollisuusneuvos (Finnish honorary title)

Member of the Board since 2009

Independent of the company and of its significant shareholders

Shares owned in Corporation 31 Dec 2019: 177,657 B shares

JUSSI LINNARANTA

b. 1972

M.Sc (Agriculture and Forestry) Agronomist

Member of the Board since 2017

Independent of the company. Not independent of the company's significant shareholder

Shares owned in Corporation 31 Dec 2019: 14,187 B shares

JUHA NIEMELÄ

b. 1946

M.Sc. (Econ), Doctor of Sciences in Economics and Technology h.c., Vuorineuvos (Finnish honorary title)

Member of the Board since 2007

Independent of the company and of its significant shareholders

Shares owned in Corporation 31 Dec 2019: 171,657 B shares

VELI SUNDBÄCK

b. 1946

LL.M., Master of Laws Ambassador

Member of the Board since 2013

Independent of the company and of its significant shareholders

Shares owned in Corporation 31 Dec 2019: 62,677 B shares

From left: Jussi Noponen, Harri Pihlajaniemi, Mika Joukio, Camilla Wikström, Sari Pajari and Ari Kiviranta

Corporate Management Team

Read more **www.metsaboard.com/Investors/CEO-and-other-management**

MIKA JOUKIO

b. 1964

M.Sc. (Tech), MBA
Chief Executive Officer

Metsä Group employee since 1990.

Chairman of Metsä Board Corporate Management Team since 2014.

Shares owned in Metsä Board Corporation 31 Dec 2019: 297,700 B shares

ARI KIVIRANTA

b. 1963

D.Sc. (Tech)
Senior Vice President, Development

Metsä Group employee since 2000.

Member of Metsä Board Corporate Management Team since 2016

Shares owned in Metsä Board Corporation 31 Dec 2019: 45,000 B shares

JUSSI NOPONEN

b. 1975

M.Sc. (Tech)
Chief Financial Officer

Metsä Group employee since 2000.

Member of Metsä Board Corporate Management Team since 2016

Shares owned in Metsä Board Corporation 31 Dec 2019: 73,000 B shares

SARI PAJARI

b. 1968

M.Sc. (Tech)
Senior Vice President, Sales and Marketing

Metsä Group employee since 2007.

Member of Metsä Board Corporate Management Team since 2011.

Shares owned in Metsä Board Corporation 31 Dec 2019: 66,075 B shares

HARRI PIHLAJANIEMI

b. 1970

M.Sc. (Tech)
Senior Vice President, Production

Metsä Group employee since 2017.

Member of Metsä Board Corporate Management Team since 2017.

Shares owned in Metsä Board Corporation 31 Dec 2019: No ownership

CAMILLA WIKSTRÖM

b. 1970

M.Sc. (Tech)
Senior Vice President, Human Resources

Metsä Group employee since 2002.

Member of Metsä Board Corporate Management Team since 2019.

Shares owned in Metsä Board Corporation 31 Dec 2019: 17,807 B shares

Investor relations and investor information

The task of Metsä Board's Investor Relations is to ensure that the market receives accurate and sufficient information in order to determine the value of Metsä Board's shares. The Investor Relations function engages in active dialogue with representatives of the capital markets and is responsible for the planning and implementation of the company's financial and investor communication. The activities of Investor Relations also include collecting feedback from investors and market information for Metsä Board's management and Board of Directors. Meetings with investors and analysts are primarily attended to by the Vice President for Investor Relations, the CFO and the CEO. All requests from investors are handled in a centralised manner by Investor Relations. During the silent period, the company will not provide comments on the company's financial situation or outlook, or the market environment.

INVESTOR RELATIONS IN 2019

In 2019, Metsä Board management met regularly with institutional investors in Europe and North America. There were more than 30 roadshow days, conferences or other group meetings, organised by brokerage firms. During a roadshow day or conference day, the company meets on average five to ten institutional investors. In November, Metsä Board held an Analyst Day at Kirkniemi Manor in Lohja, Finland. In addition, the company held several group and on-on-one meetings as well as conference calls with investor and analysts. During the year, Metsä Board involved in two public events targeted at private investors in Finland.

The 2019 Annual General Meeting was held in March at Finlandia Hall in Helsinki with approximately 250 shareholders attending.

In August, Metsä Board's management, accompanied with its North American customers, participated in the Nasdaq stock market opening bell ceremony in New York. The event could be followed online.

In connection with the publication of interim reports, Metsä Board organises a conference call in which the CEO presents the interim report and the audience can ask questions. Presentation materials and recordings of the conference call are available on the company's website at www.metsaboard.com/Investors. Metsä Board's investor communication makes use of social media through Twitter and LinkedIn accounts.

ANALYST COVERAGE

At least the following brokerage firms conducted analyses of Metsä Board in 2019: ABGSC, Carnegie, Danske Equities, Evli Bank, Handelsbanken, Inderes, Kepler Cheuvreux, Nordea Markets, OP, Pareto Securities, SEB and UBS. The contact details of the analysts and some of the consensus forecasts are available on the company's website. Metsä Board is not responsible for the content, accuracy or extent of the analysts' views.

ANNUAL GENERAL MEETING IN 2020

Metsä Board Corporation's Annual General Meeting will be held at Finlandia Hall, Congress Wing, Hall A, Mannerheimintie 13 E (M1), Helsinki, on Thursday 26 March 2020 at 3 p.m. EET. Shareholders wishing to take part in the Annual General Meeting and to exercise their right to vote must be registered in the company's shareholders' register held by Euroclear Finland Ltd. on 16 March 2020 (the record date of the Annual General Meeting), and must register for the meeting by 11 a.m. on 23 March 2020 at the latest. This can be done via the company's website at www. metsaboard.com; by emailing metsaboard. AGM@metsagroup.com; by calling +358 10 465 4102 on weekdays between 10 a.m. and 11 a.m.; or by mail to Metsä Board Corporation, Legal Services/Nenonen, P.O. Box 20, 02020 METSÄ, Finland. Any proxy documents should be delivered in connection to the registration.

BOARD OF DIRECTORS' PROPOSAL FOR DISTRIBUTION OF PROFIT

The Board of Directors proposes to the Annual General Meeting to be held on 26 March 2020, a dividend of 0.10 euros per share be distributed for the financial year 2019, and further that 0.14 euros per share be distributed from the unrestricted equity reserve, altogether 0.24 euros per share. The distribution will be paid to shareholders who on the record date for the distribution, 30 March 2020, are recorded in the shareholders' register held by Euroclear Finland Ltd. The Board of Directors propose that the distribution is to be paid on 7 April 2020.

CONTACT DETAILS FOR INVESTOR RELATIONS

Katri Sundström, Vice President, Investor Relations
tel. +358 10 462 0101
katri.sundstrom@metsagroup.com

General questions and comments related to investor relations can be emailed to:
metsaboard.investors@metsagroup.com.

Metsä Board has a global sales network. To locate contact details of Metsä Board sales offices, please visit company website www.metsaboard.com/contacts.

Business ID 0635366-7

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FINANCIAL REPORTING IN 2020

Silent period	Financial report	Publication date
1 January – 11 February 2020	Financial Statements Bulletin 2019	Wednesday 12 February 2020
1–28 April 2020	Interim Report for January–March 2020	Wednesday 29 April 2020
1–29 July 2020	Half-Year Report for January–June 2020	Thursday 30 July 2020
1–28 October 2020	Interim Report for January–September 2020	Thursday 29 October 2020

Make the most of Metsä

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The cover of this Annual Report is MetsäBoard Prime FBB Bright folding boxboard. The pure fresh fibre used in our lightweight premium paperboards is a renewable raw material, fully traceable to sustainably managed northern forests.

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