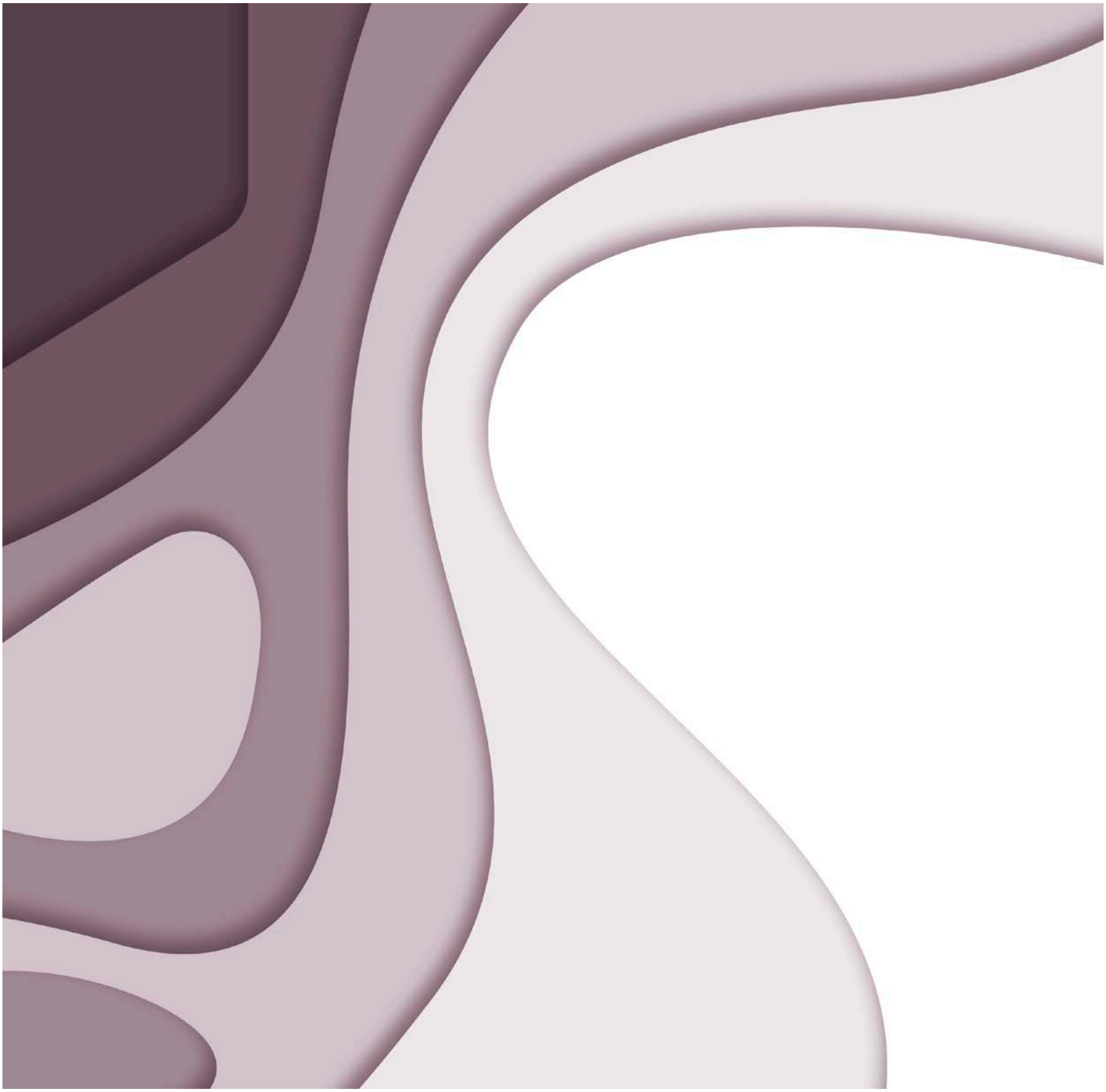
Metsä Board
Annual and Sustainability Report 2021



METSÄ BOARD
Annual and Sustainability Report 2021

The world needs solutions that support the circular economy, and fresh fibre paperboards meet this need.

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

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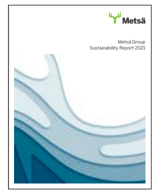
Metsä Board's Annual and Sustainability Report is published in English and Finnish. Metsä Board also publishes a Remuneration Report. The publications are available in PDF format at **www.metsaboard.com**

Metsä Group Brochure 2021

Metsä Group Annual Review 2021



Metsä Group Sustainability Report 2021

Metsä Board Annual and Sustainability Report 2021

The cover of this Annual and Sustainability Report is made from the MetsäBoard Prime FBB Bright folding boxboard we manufacture. We have produced its raw material, high-quality pulp, from wood grown in sustainably managed Northern European forests. The Annual and Sustainability Report was made in Finland and it is fully recyclable.

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The fully recyclable paperboard lid is a good example of an innovation supporting the circular economy.

30
We promote a diverse and equal corporate culture.

45
We helped our customers to improve the sustainability of their packaging with our Sustainability Services.

52 and 57
We advanced in our sustainability targets at several mills.

Packaging solutions that respect nature

The world needs more sustainable ways of packing – and for good reason. Population growth, urbanisation and climate change require solutions that respect nature. Our lightweight paperboards are the circular economy at its best. By taking advantage of the full potential of fibre-based materials, we help our customers to create more sustainable packaging and deliver better consumer experiences.

This is Metsä Board

We focus on premium fresh fibre paperboards and are a forerunner in sustainability. In 2021, our business development was strong and we decided on investments in sustainable and profitable growth.

Focus on sustainable fresh fibre paperboards

We focus on premium and recyclable fresh fibre paperboards, used primarily in consumer goods packaging and for various retail packaging solutions. The demand for these products is stable, regardless of economic cycles. Our main products include folding boxboards and food service boards as well as white kraftliners.

Strong position in a growing market

We are a leading producer of folding boxboard and white kraftliners in Europe, and globally the biggest producer of coated white kraftliners. In the United States, we are the largest supplier of folding boxboard. We estimate that the global demand for our main products will grow by an annual rate of roughly 2–3% in the long-term. Our customers include brand owners, converters, manufacturers of corrugated products and merchants.

Aiming for a fossil free future

We aim for fossil free production and products by the end of 2030. This requires investments and the exploration of alternative raw materials in cooperation with our partners. Our products support the circular economy and provide alternatives to plastic – they are light, recyclable and/or compostable.

We are part of Metsä Group

We are part of the profitable Metsä Group and benefit from the good availability of our main raw material, northern wood. Our self-sufficiency in pulp guarantees the consistent and high quality of the fibre and enables the growth of our paperboard business. Metsä Group's value chain, from the forest to the end products and further on to customer, operates according to the principles of sustainability and is circular economy at its finest.

METSÄ GROUP The parent company Metsäliitto Cooperative is composed of nearly 100,000 Finnish forest owners.

Sales EUR 6.0 billion

Personnel 9,500

WOOD SUPPLY AND FOREST SERVICES	METSÄ WOOD	METSÄ FIBRE	METSÄ BOARD	METSÄ TISSUE
	Wood Products	Pulp and sawn timber	Paperboard	Tissue and greaseproof papers
OWNERSHIP Metsäliitto Cooperative 100%	Metsäliitto Cooperative 100%	Metsäliitto Cooperative 50.1% **Metsä Board 24.9%** Itochu Corporation 25.0%	Metsäliitto Cooperative 48% (67% of votes) The company is listed on Nasdaq Helsinki.	Metsäliitto Cooperative 100%

METSÄ SPRING Innovation company

Comparable ROCE
%
18.7
Target > 12%

Paperboard capacity
2
million tonnes

Production units in Finland and Sweden
8

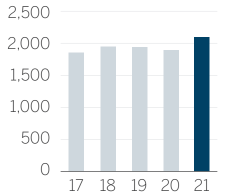
Personnel
2,389

Share of fossil free energy of total energy use
%
85

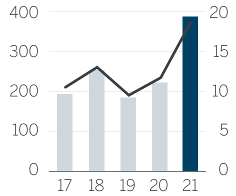
Share of certified wood fibre
%
83

Strong financial development in 2021

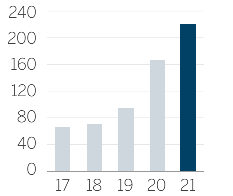
SALES
EUR million



COMPARABLE OPERATING RESULT
EUR million
% of sales

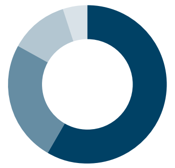


TOTAL INVESTMENTS
EUR million



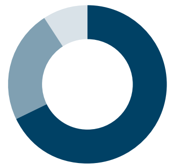
Most of the sales derive from folding boxboard and the EMEA region

SALES SPLIT BY PRODUCT
% of sales



Folding boxboard	57
White kraftliners	25
Market pulp	13
Other	5

SALES SPLIT BY REGION
% of sales



EMEA	67
Americas	27
APAC region	6

Source: Metsä Board's estimates

Significant recognitions for our sustainability work

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Read more at www.metsaboard.com

A strong year for Metsä Board

2021 was a successful year for Metsä Board despite the challenges posed by the COVID-19 pandemic. Our profitability was on a record high level and we promoted our growth and development projects successfully. With our products and services, we helped our customers to create increasingly sustainable packaging and deliver better consumer experiences. We continued our efforts to mitigate climate change, with the target of completely fossil free mills and products by the end of 2030.

Metsä Board's business was in a strong shape in 2021. Demand for our fresh fibre paperboards was at a record high in all our market areas, and price increases improved our profitability. Our paperboard delivery volumes grew by 6% from the previous year and exceeded 1.9 million tonnes. Our comparable return on capital employed was 18.7%, which is clearly above the long-term target level. With our strong performance, we were able to meet the challenges of rapid cost inflation and complications related to logistics. The cooperation agreement signed early in the year with Norra Skog, a Swedish forest owners' cooperative, made Metsä Board a net debt-free company and strengthened our sustainable wood management, particularly in Sweden.

A clear strategy yields results

We have a clear strategy which has proved its effectiveness during the COVID-19 pandemic and made us increasingly competitive. We focus on sustainable and premium paperboards, develop our services, and innovate new packaging solutions in cooperation with our partners. Our growth is profitable and sustainable. We enable and monitor to ensure that our personnel have the needed competence to implement the strategy. We also make sure that our personnel have the opportunity to develop and advance in their careers. We aim for zero accidents at work, but based on last year's development, we have room for improvement.

Sustainable and profitable growth through investments

We want to respond to the rapid growing demand for sustainable, high-quality packaging materials. In 2021, we made decisions on two investments, which together will increase our annual paperboard capacity by around 240,000 tonnes. We expect additional capacity to be fully available in our main markets from 2026 onwards. With these investments we strengthened our leading position in Europe and continue to grow in North America, where our sales are supported by competitive products, an efficient supply chain and excellent customer service. In 2022, we will start up a new recovery boiler and turbine at Husum. This will increase our self-sufficiency in electricity production, and further strengthen Husum's position as a sustainable platform for the development of first-class paperboard production.

Global leader in sustainability

We have set ourselves ambitious sustainability targets, which we aim to achieve by the end of 2030. Among other things, we are aiming for fully fossil free production and products. Achieving these targets requires investments and close cooperation with our partners. Combating climate change and securing forest biodiversity call for measures and development projects which we are implementing as part of Metsä Group.

Our determined sustainability work received valuable recognition when CDP, the global non-profit organisation, added Metsä Board to its 'A List' for combatting climate change and sustainable use of water resources and forests.

I am very proud of our achievement of the highest 'A List' in all three of CDP's environmental themes. It is an acknowledgement for our leadership in the fight against climate change and our uncompromising commitment to sustainability.

> ”We want to respond to the rapid growing demand for sustainable, high-quality packaging materials.

Long-term and focused R&D work in cooperation with customers

As the amount of packaging increases, we need resource-efficient and easily recyclable packaging solutions that we develop together with our customers and partners. Our high-quality lightweight paperboards help to reduce the carbon footprint of packaging throughout the packaging chain. Growth in the sales of our dispersion coated barrier paperboard, which reduces the use of plastic, has been rapid and we expect this trend to continue. Our Excellence Centre in Äänekoski, Finland, and our 360 Services deepen the R&D work we are carrying out with our customers.

A good outlook

As we head into 2022, the outlook for the global economy is favourable, although a prolonged COVID-19 pandemic and the functionality of the logistics chain are a source of uncertainty. I believe that the demand for our sustainably produced paperboards will remain strong as the circular economy and plastic reduction stay on the agenda of brand owners and consumers. This has been visible through our strong order book and the increased prices of our paperboards.

Metsä Board's Board of Directors proposes that a dividend of EUR 0.41 per share be distributed for 2021. The proposal is in line with our dividend policy and reflects the trust in our ability to keep generating a strong cash flow.

Success starts with people. I wish to extend my sincere thanks to our entire personnel for their work under the exceptional circumstances, and to all our partners for their excellent collaboration.

Mika Joukio
CEO

METSÄ BOARD
Annual and Sustainability Report 2021

Business operations and value creation

Sustainability

Financial development

Governance

Highlights in 2021

Paperboard demand was at a record high throughout the year, thanks to an increase in sales in the retail sector and e-commerce driven by the COVID-19 pandemic. Demand was also strengthened by the desire of brand owners to find more sustainable and easily recyclable packaging solutions and reduce the use of plastic.

We are responding to the growing demand for sustainable packaging materials

Metsä Board made an investment decision to increase the folding boxboard capacity at the Husum integrated mill in Sweden by 200,000 tonnes a year. We launched a development programme at the Kemi paperboard mill, which will increase the annual capacity of white kraftliners by roughly 40,000 tonnes.

We made progress in terms of our 2030 fossil free targets

We progressed towards fossil free mills by phasing out the use of peat in our energy generation at the Kyro mill and by reducing the use of peat at the Simpele mill. This cut the fossil-based carbon dioxide emissions of these mill to a significant degree. The new recovery boiler and turbine will start up in September 2022. Once in operation, the new recovery boiler will increase the mill's bioenergy generation and self-sufficiency in electricity.

New service package helps to make the most of paperboard

We launched the new 360 Services approach with which we help our customers improve the sustainability and performance of packaging throughout the value chain.

Programme to safeguard biodiversity

Metsä Group has been implementing its programme on the ecological sustainability of commercial forests since 2020, to secure the biodiversity of forest nature. With the nature management programme established in 2021, we are also taking part in improving the state of Finnish nature outside of commercial forests.

We helped our customers reduce the use of plastic

Reducing the amount of plastic waste is more important than ever, a fact visible in the solid growth in the demand for our dispersion-coated barrier paperboard. In cooperation with the Finnish start-up The Paper Lid Company, we also introduced a fully recyclable paperboard lid suitable for paper cups to the market.

'Metsä For All' promotes a more equal workplace

As part of Metsä Group, Metsä Board is committed to the development of a responsible culture that supports equality. The 'Metsä For All' vision describes the kind of workplace we want to be in the future. The personnel's equality training, the adoption of anonymous recruiting, and increasing the share of women in executive positions are examples of the practical measures we are taking in this area.

We won both the Finnish Circular Economy Award and the Finnish Quality Award

Metsä Board was presented with the circular economy award, the first in the world to be based on an external assessment. Laatukeskus Excellence Finland presented the award in recognition of our strategic sustainability work, which is reflected in our high level of competitiveness. We also won the Finnish Quality award.

METSÄ BOARD
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Our strategy highlights solutions that promote the circular economy

We are a leading European producer of premium fresh fibre paperboards and a forerunner in sustainability. Our decision making is guided by our profitability and sustainability targets and the ambition to increase shareholder value. Our goal is to maintain a strong financial position and distribute a competitive dividend to our owners. We reviewed our strategy at the end of 2021 and updated our strategic programmes.

Purpose

Advancing the bioeconomy and circular economy by efficiently processing northern wood into first-class products.

Vision

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

Strategy

We grow in fibre-based packaging materials and renew our industrial operations.

Values

Reliability	Cooperation
Responsible profitability	Renewal

Megatrends

Population growth	Urbanisation	Biodiversity loss
	Climate change	Digitalisation

Operating environment supports growing demand for fresh fibre paperboards

- Population growth, urbanisation and rising living standards drive packaging
- Global e-commerce continues to grow
- Availability and quality of recycled fibre is declining
- Regulation and consumer preferences favour fossil free packaging materials
- The requirements of the circular economy become more specific and drive the development of the industry

Our strategic programmes

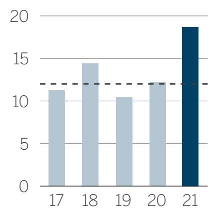
We implement our strategy through five strategic programmes that drive sustainable growth in fibre-based packaging materials and industrial efficiency.

- Premium supplier
- Effective innovation
- Safe and efficient operations and organic growth
- Leader in sustainability
- Motivated people

2021 2030

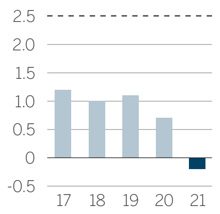
Our financial targets

COMPARABLE RETURN ON CAPITAL EMPLOYED
%



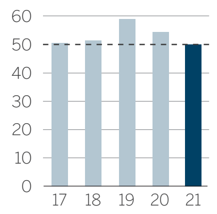
---- Target > 12%

INTEREST-BEARING NET DEBT / COMPARABLE EBITDA



---- Target < 2.5

DIVIDEND / NET RESULT



---- Target > 50%

We invest in sustainable and profitable growth

Metsä Board has significant investments ongoing to meet the growing demand for sustainable and premium packaging materials. In 2021–2022, the total investments will exceed EUR 500 million.

At the Husum integrated mill, we will increase the annual production capacity of folding boxboard with approximately 200,000 tonnes. We expect the investment be completed in the second half of 2023.

At the Kemi mill, a development programme is ongoing to increase the annual production capacity of white kraftliners by 40,000 tonnes. The development programme will also improve the energy efficiency per tonne of paperboard produced and reduce water use.

The ongoing pulp mill renewal at the Husum integrated mill will further strengthen Husum's position as an efficient and sustainable platform for a long-term development of premium paperboard production. The first phase of the renewal, the new recovery boiler and turbine, is expected to be completed in September 2022. In the second phase of the renewal, during 2020s, the mill's fibre line will be renewed.

We create value and well-being, with respect for nature

We help our customers achieve their sustainability targets with our packaging paperboards and our expert services that support the circular economy. We are continuously looking for opportunities to grow profitably and sustainably, and to generate value for our stakeholders with our operations.

Resources

People and partnerships

- 2,400 employees in 18 countries
- 62 apprentices
- Active cooperation with local communities and educational institutions

Production and supply chain

- More than 3,700 suppliers
- 8 production units in Finland and Sweden
- Deliveries to approximately 100 countries
- An efficient and global supply chain
- R&D expenditure EUR 6 million
- An Excellence Centre in Äänekoski, Finland, and a satellite centre in Norwalk, the United States

Natural resources

- 8.3 million m^3 of sourced wood of which 83% is certified
- 315,000 dry tonnes of purchased pigments, adhesives and other raw materials
- Total energy consumption 11.9. TwH of which 85% is fossil free
- Water intake 115 million m^3

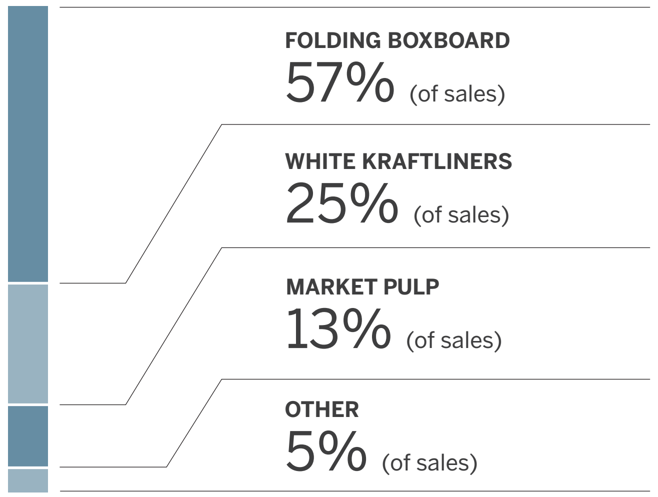
Economic capital

- Capital invested EUR 2.3 billion
- 55,000 shareholders in B series and 9,000 in A series

Business model

We focus on sustainable fresh fibre paperboards and innovative packaging solutions that support the circular economy. We are part of Metsä Group, and benefit from its unique value chain, from pure northern fibre to premium end products. Our holding in our associated company Metsä Fibre ensures our self-sufficiency in pulp.

OUR SALES IN 2021
EUR 2,084 million



Outputs

Sustainable products and services

- 1.9 million tonnes of premium fresh fibre paperboards
- 1.4 million tonnes of pulp and high-yield pulp
- 5 service entities that generate benefits throughout the packaging value chain (360 Services)

Emissions and side streams

- Fossil-based CO_2 emission 429,000 tonnes (Scope 1 and 2, market based)
- 99% of the used water is returned to the waterbodies after treatment
- More than 99% of production side streams are used as materials or energy

Read more on **pp. 48–49**

Impacts

Customers

- Recyclable and sustainably produced products with a smaller carbon footprint
- Innovative and material-efficient packaging solutions that help reduce the use of plastic
- Customer satisfaction NPS (Net Promoter Score) 40

Suppliers

- EUR 1.5 billion purchases from suppliers
- 98% of suppliers are committed to the Supplier Code of Conduct:

Personnel

- EUR 216 million paid to employees as wages and benefits
- 99% of the personnel have completed the Code of Conduct training

Shareholders

- A sustainable investment; several recognitions from ESG evaluations conducted by third parties
- EUR 146 million distributed to shareholders as dividends
- 18.7% comparable return on capital employed

Common value creation

- EUR 32 million paid income and property taxes
- Total investments EUR 220 million
- Aiming for 100% fossil free future, science-based targets

Further information on taxes on **p. 158**

METSÄ BOARD
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The COVID-19 pandemic has impacted consumer behaviour

The pandemic has shifted consumption from services to goods and accelerated the online shopping of groceries in particular. The amount of packaging materials ending up in homes has drawn consumers attention to recyclability of packaging. Metsä Board's pure, lightweight and easily recyclable paperboards made from renewable raw materials meet well with consumer requirements.

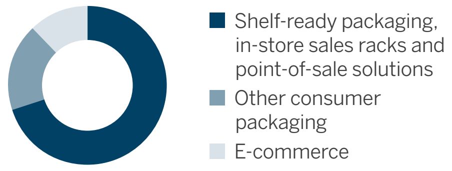
The effects of the COVID-19 pandemic on consumer behaviour and implications to Metsä Board

	The effects of the pandemic	Implications to Metsä Board
Eating habits	• At the beginning of the pandemic, eating moved from restaurants into homes. The consumption of ready-made meals and alcoholic beverages as well as cooking at home increased. • Eating at foodservice outlets has increased when the restrictions set due to the pandemic have eased.	• The majority of Metsä Board's paperboards are used in the packaging of foods. • Metsä Board's dispersion-coated barrier board is well suited for takeaway and fast food packaging.
Health and hygiene	• During the pandemic, consumers have paid special attention to general hygiene, holistic well-being and immunity.	• Demand for packaged products increased during the pandemic, but in the coming years, the focus will be on reducing over-packaging. • Demand for preventative consumer health products, such as vitamins and dietary supplements , will grow.
E-commerce	• E-commerce accounted for 19% of total retail trade in 2021. Growth in online groceries was exceptionally strong. • By 2025, e-commerce is expected to account for 23–24% of total retail trade (Source: eMarketer).	• The growth in e-commerce increases especially demand for corrugated materials. • The rising demand for experiences and sales promotion supports the use of white kraftliners. • As handling increases, so do the strength requirements for consumer packaging.
Reduction of packaging materials and plastic	• While the role of plastic in guaranteeing product safety was acknowledged during the pandemic, concern over its environmental hazards remains high. • Reuse, recyclability and compostability are key measures to decrease waste and littering of single-use items.	• Paperboards replace plastic in packaging. • Metsä Board's folding boxboards are lighter and have a smaller carbon footprint than competing paperboard grades. • Metsä Board's 360 Services help to improve sustainability of packaging and performance throughout the value chain.

Metsä Board's fresh fibre paperboards are especially used in food packaging

END USES OF FOLDING BOXBOARD
%

END USES OF WHITE KRAFTLINERS
%



Source: Metsä Board's estimates

Smarties switched to recyclable packaging

At the beginning of 2021 Nestlé announced that its popular Smarties brand is now using recyclable paper packaging for its confectionery products worldwide. This represents a transition of 90% of the Smarties range, as 10% was previously already packed in recyclable paper packaging. Smarties is the first global confectionery brand to switch to recyclable paper packaging, removing approximately 250 million plastic packs sold globally every year.

Smarties Giant Hexatube is a plastic-free pack, comprised of a one-piece construction made entirely from recyclable paperboard with an integrated cartonboard lid. The carton was produced by WestRock on MetsäBoard Pro FBB Bright lightweight paperboard. It won the Public Award at the 2021 European Carton Excellence Awards in September 2021.

(Source: Nestlé.com/Media/News)

Paperboards are replacing plastic in packaging.

We operate in a growing market

Paperboard market

Consumer trends support paperboard market growth

The global packaging market is valued at approximately EUR 900 billion, of which paperboard packaging accounts for roughly a third. Both fresh and recycled fibres are used in paperboard production, depending on end use requirements. Quality, product safety and hygiene requirements are decisive factors impacting the choice. Metsä Board uses only pure and safe fresh fibre in the production of paperboard.

Global demand for premium fresh fibre paperboard has grown by around 2–3% a year, and similar growth is expected in the next few years. The COVID-19 pandemic has intensified demand for pure and safe packaging materials, particularly for end uses in the food industry.

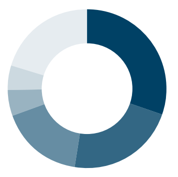
In 2021, demand for folding boxboard and white kraftliners was strong in almost all end uses in Metsä Board's main market areas Europe and North America.

Metsä Board has a well established position in the company's main markets, Europe and North America

	AMERICAS	EMEA	APAC
Regional emphasis	• Continued growth in North America	• Maintaining strong market position in Europe	• Focus on high quality packaging in selected end use segments
Paperboard deliveries in 2021 • share of all deliveries by region	27%	67%	6%
Demand outlook for folding boxboard and white kraftliners	• Limited local availability of lightweight high-quality folding boxboards and coated white kraftliners • Demand growth for recyclable and/or compostable food and food service packaging made from renewable raw materials • Growth of demand for retail-ready packaging in stores • Promotion and differentiation of brands in growing e-commerce	• Environmental awareness and regulation support the demand for recyclable packaging materials • Food safety requirements favour pure fresh fibre paperboards • Growth of demand for retail-ready packaging in stores • Growth of e-commerce • Weakened availability and higher price of recycled fibre	• Growth of the middle class increases consumers' purchasing power and demand for packaged products • China's import ban on recycled fibres increases demand for pulp and fresh fibre paperboards • Growth of local paperboard capacity boosts supply in China

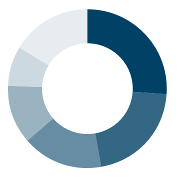
Metsä Board is Europe's largest producer of folding boxboard and white kraftliners

PRODUCERS OF FOLDING BOXBOARD IN EUROPE
Total capacity 4.5 million tonnes



Metsä Board	30%
Peer 1	22%
Peer 2	17%
Peer 3	5%
Peer 4	5%
Others	20%

EUROPEAN PRODUCERS OF WHITE KRAFTLINERS IN EUROPE
Total capacity 2.6 million tonnes



Metsä Board	26%
Peer 1	21%
Peer 2	16%
Peer 3	12%
Peer 4	8%
Others	16%

Sources: the companies' websites, RISI, Metsä Board's own estimates

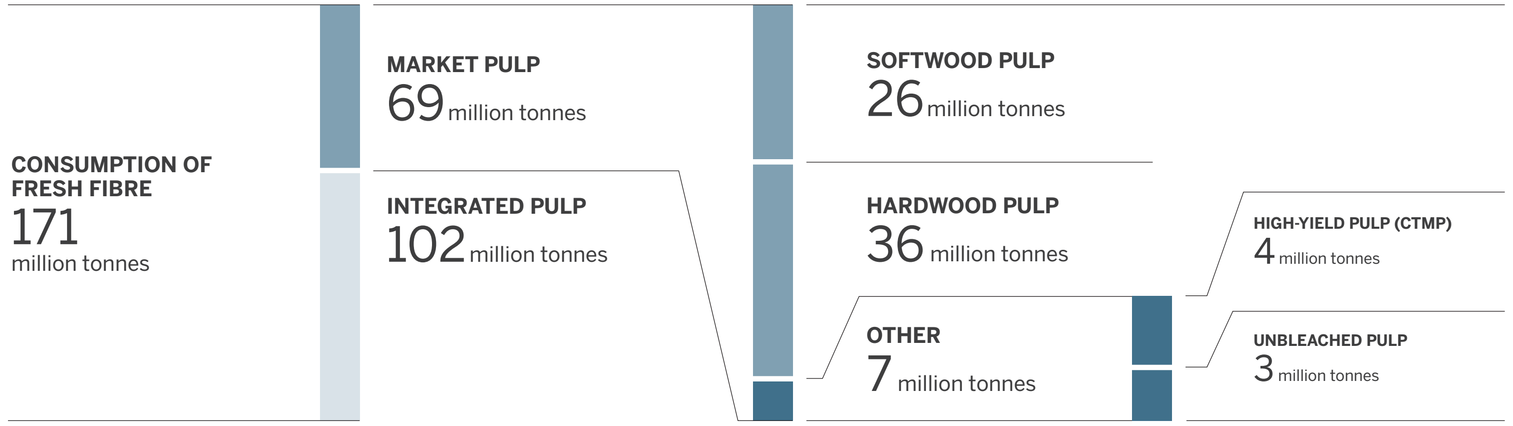
Metsä Board is the biggest producer of coated white kraftliners globally.

Pulp market

Global demand for market pulp amounts to approximately 69 million tonnes a year

Global consumption of pulp made from fresh fibre amounts to around 171 million tonnes a year, of which some 69 million tonnes is primarily bleached softwood and hardwood pulp sold to markets.

Global demand for the market softwood pulp important to Metsä Board is estimated to grow, with the growth driven particularly by China.



Source: Hawkins Wright

Metsä Board's associated company Metsä Fibre is a leading producer of market softwood pulp (NBSK)

Metsä Board aims to be self-sufficient in pulp, which ensures consistent high quality in paperboard production. Metsä Board produces chemical pulp and bleached chemo-thermomechanical pulp (BCTMP), which are used in our own paperboard production, and some sold as market pulp. In addition, Metsä Board has 24.9% holding in its associated company Metsä Fibre, which is a leading producer of wood-based bioproducts such as pulp, sawn timber, biochemicals and bioenergy. Metsä Fibre's annual capacity is approximately 3.3 million tonnes of pulp and 1.8 million cubic metres of sawn timber.The pulp produced by Metsä Board and Metsä Fibre is primarily softwood pulp.

Our R&D work considers the entire life cycle of a package

As the amount of packaging grows, we need resource-efficient and easily recyclable solutions. It is the common goal of customers and Metsä Board to make packaging lighter and to reduce plastic with renewable raw materials and reduce emissions.

Thanks to long-term focused development work, Metsä Board has a leading position in the quality and performance of paperboard materials. Both our folding boxboards and white kraftliners receive the highest quality assessments. In cooperation with our customers and partners, we invest strongly in innovative solutions to optimise performance throughout the life cycle of packages.

The development work centres on the paperboard's good printing and conversion properties as well as on reducing its weight, without compromising its strength. Lightweight paperboards are resource-efficient and help to reduce the carbon footprint of packaging throughout the chain.

The market has a strong need for recyclable solutions that can replace plastic

The dispersion-coated barrier paperboard we launched two years ago helps brand houses to reduce the use of plastic and make their packaging recyclable. The growth in the sales of this product was strong in 2021 in food industry end uses, including the packaging of confectionary, pastries and takeaway foods. The growth is also expected to continue.

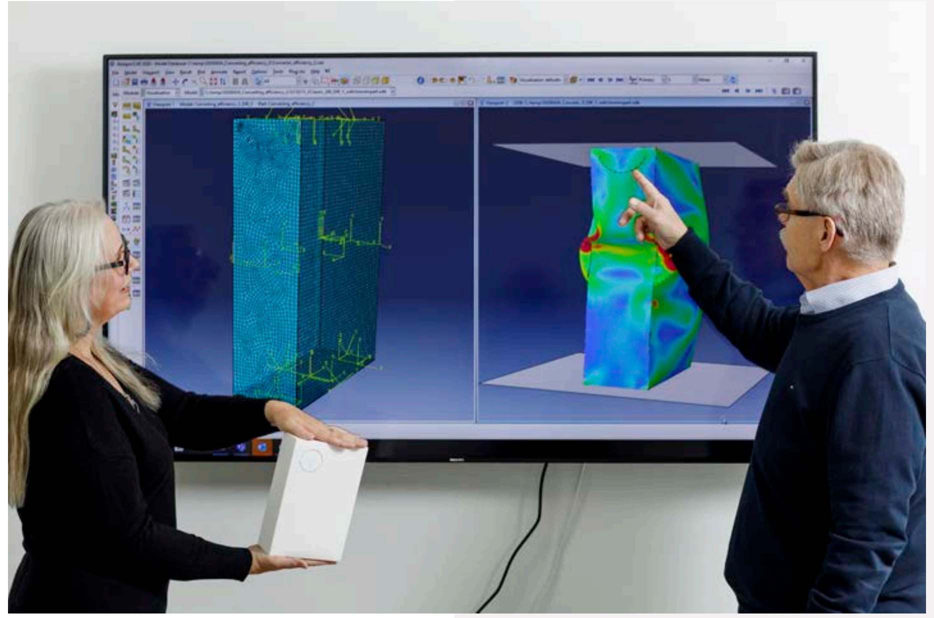
Metsä Board has launched a biobarrier programme. The starting point for the solutions and polymers to be developed is that they will be based on fossil free raw materials, according to our 2030 sustainability targets. Development work is done in collaboration with partners.

Deeper customer cooperation

We invest in service development which helps our customers to make the most of our paperboard and optimise the performance of packaging throughout its life cycle. Our new 360 Services cover five areas: Sustainability Service, Packaging Design Service, Technical Service,

Mars Wrigley UK's Maltesers boxes now fully recyclable

Mars Wrigley UK has replaced the old multi-layer box design, where the PE plastic liner covered the box, with a dispersion coated barrier paperboard. The company says the new design will reduce its annual plastic usage by 82 tonnes. The new Maltesers box uses Metsä Board's dispersion coated barrier board, which is fully recyclable, biodegradable and compostable.



We minimise the environmental impact of packaging with Dassault's simulation platform

The state-of-the-art 3D technology enables the simulation of the performance of materials and packaging under different conditions. Optimum material selections and packaging designs help to reduce carbon footprints. Compared to a physical prototype, 3D simulation allows us to come up with material and packaging design recommendations for customers 85% faster.

R&D Service as well as the Supply Chain and Digital Service. Examples of the above-mentioned services include carbon footprint calculations for packaging materials and computer-based packaging simulation, which enables the digital modelling of prototype packages as well as the optimisation of material and structural choices.

For over a year now, we have held development workshops at Metsä Board's Excellence Centre in Äänekoski, in which our teams of experts have developed new packaging solutions in cooperation with customers. The virtual workshops have brought together both Metsä Board's and customers' multi-skilled specialists on product development, sustainability and packaging design, for example. In 2021, we held 25 of these workshops.

ExpandFibre is progressing

Metsä Group and Fortum's ExpandFibre programme, which promotes the circular bioeconomy, moved forward in the form of concrete projects. The construction work of the 3D demo plant of Metsä Group's innovation company Metsä Spring and Valmet has progressed, and production is expected to start up during the first half of 2022. Metsä Board was actively involved in new research consortiums and projects focused on innovative packaging solutions. Three projects were kicked off in 2021, with topics ranging from the reuse of packaging to fossil free polymers for coating and a new paperboard folding technique intended for the implementation of novel applications. These projects involve a total of 44 partners – business enterprises, research institutions and public sector organisations.

AI facilitating improvements in production efficiency and process control

We employ artificial intelligence in production at our Kemi, Kyro and Simpele mills, and its use is also being tested at our other mills. AI allows us to anticipate process deviations, which improves a mill's efficiency and reduces quality deviations and idle time. It also allows operators to develop their own competence at the same time. At the Tako mill, we have tested the integration of our paperboard machine into our customer's production line. When the production lines interact with each other, the parameters can be optimised at both ends.

Our 2030 sustainability targets

Our sustainability targets guide our journey towards a fossil free circular economy and an increasingly responsible corporate culture.

Well-being

100% responsible corporate culture

0 accidents at work

Forests and wood

>90% certified wood fibre

Sustainable products

100% fossil free products

100% traceable raw materials

100% sustainable suppliers

Climate and environment

30% less of process water used per tonne produced

100% fossil free energy

>10% better energy efficiency

100% of side streams utilised

Progress in our 2030 targets

In 2021, we reduced the use of process water, increased the share of certified wood fibre, and invested in ensuring supplier responsibility. For safety at work, development was not in line with our targets.

TARGET	TARGET 2030	ACTUAL 2021	DEVELOPMENT IN LINE WITH TARGET
WELL-BEING			
A responsible corporate culture			
Ethics index of the Ethics barometer	100%	*	Moderate development
An accident-free working environment			
Total Recordable Injury Frequency (TRIF) per million hours worked	0	9.8	Room for development
FORESTS AND WOOD			
Certified wood fibre			
Share of certified fibre	> 90%	83%	Good development
SUSTAINABLE PRODUCTS			
Fossil free products			
Fossil free raw materials and packaging materials, share of dry tonnes	100%	99.2%	Moderate development
A sustainable supply chain			
Traceability of raw materials, share of total purchases	100%	98%	Good development
Suppliers' commitment to the Supplier Code of Conduct, share of total purchases	100%	98%	Good development
Supplier background check passed, share of total purchases	100%	92%	Good development
Supplier sustainability assessment passed, share of total purchases	100%	54%	Moderate development
CLIMATE AND ENVIRONMENT			
Fossil free mills and fossil free purchased energy			
Fossil-based carbon dioxide emissions, tonnes (Scope 1 and Scope 2, market based)	0 t	428,838 t	Good development
Share of fossil free energy	100%	85%	Good development
Resource-efficient production			
Improvement in energy efficiency from the 2018 level	>10%	+1.9%	Moderate development
Reduction in the use of process water per produced tonne from the 2018 level	-30%	-13.5%	Good development
Utilisation of side streams	100%	99.8%	Good development

* In 2021, we implemented the selected development actions based on the results of the previous Ethics barometer survey. The next Ethics barometer will be conducted in 2022.

Good development
Moderate development
Room for development

Our equality targets and 'Metsä For All' vision promote the equal treatment of our entire personnel.

Read more on **pp. 30–35**

Metsä Group's wood supply is responsible for all our wood supply and has set targets for securing biodiversity.

Read more on **pp. 38–43**

Our targets for reducing our greenhouse gas emissions have been approved by the Science Based Targets initiative.

Read more on **pp. 52–55**

Our targets support the UN's Sustainable Development Goals

Our sustainability targets and operating methods support the UN's Sustainable Development Goals. Of the 17 goals set by the UN, we have selected seven which we can influence the most with our own operations.

UN SUSTAINABLE DEVELOPMENT GOAL	OUR OPERATIONS
GOAL 6 Clean water and sanitation	Our mills are located in areas with ample water resources. We use only surface water in our production, and our water use does not weaken the availability of water for others. We use water sustainably and resource efficiently, and we aim to reduce the use of process water. Approximately 99% of the water we use is returned to waterbodies. Before that, all process waters are treated with the best available technology.
GOAL 7 Affordable and clean energy	We are a significant producer and user of renewable energy. Roughly half of the energy used by our mills is renewable, and we intend to stop the use of fossil-based energy in our production. We also aim to continue improving our energy efficiency.
GOAL 8 Decent work and economic growth	We invest in innovative and resource-efficient future packaging solutions. We provide employment for some 2,400 people, and our indirect employment impact is a lot bigger. We pay special attention to safety at work. Our target is zero accidents. We comply with high ethical standards and expect our partners to do the same.
GOAL 9 Industry, innovation and infrastructure	We continue to improve our resource efficiency and processes and invest in new, sustainable industrial concepts and technologies and in renewable energy. We aim for fossil free production both in terms of energy use and raw materials. We are actively involved in research, development and innovation networks.
GOAL 12 Responsible consumption and production	We promote the circular economy throughout the value chain. Our paperboard is made from renewable fresh fibre which is fully traceable and comes from sustainably managed forests. Our paperboards are light in weight and their production consumes less raw materials, energy and water than the production of heavier paperboard grades. The light weight is also an advantage in transport. After use, lightweight paperboards generate less waste than heavier packaging materials. All our paperboards are designed to be recyclable or compostable. They also provide an alternative to fossil-based packaging materials. In production, we put side streams to use in the recycling of materials or energy production, and our target is to generate no landfill waste at all. We prioritise the safety of both our employees and the consumers. We comply with standards that exceed the requirements set by legislation.
GOAL 13 Climate action	We promote a low-carbon economy by improving our energy efficiency and aiming for fossil free production. Our target is for all our mills to use only fossil free energy. We are also aiming for a fossil free future in terms of our raw materials and packaging materials. By sourcing wood solely from sustainably managed forests we ensure that forests grow more than they are used and function as carbon sinks.
GOAL 15 Life on land	All the wood raw material we use is traceable and comes from sustainably managed forests, which are either certified (PEFC, FSC®) or meet the criteria for controlled origin. Our target is to keep increasing the certified fibre's share out of all the wood fibre we use. Sustainable forest management does not cause deforestation rather, it supports biodiversity. We promote biodiversity in harvested areas with groups of retention trees, for example, and with high biodiversity stumps, buffer zones around natural waterbodies, by increasing the share of mixed forests and by protecting habitats.

Sustainability is part of everything we do

At Metsä Board, sustainability is based on compliance with good corporate governance, bearing social and environmental responsibility, respecting business ethics and human rights as well as the continuous improvement of operations with respect to all of the above. In addition to our own operations, we also expect sustainability from our suppliers, customers and other partners.

Our work and decision making are guided by Metsä Group's Code of Conduct, complemented, among other things, by policies concerning personnel, equality, environmental matters and information security. From our suppliers, we require a commitment to our Supplier Code of Conduct. All our mills apply quality, occupational health and safety, environmental and energy efficiency management systems (ISO 9001, ISO 45001, ISO 14001, ISO 50001) as well as the management and monitoring system ISO 22000 required by food safety. In addition, the mills which also produce paperboard for food packaging apply the FSSC 22000 food safety system.

We are party to a number of international commitments

We respect internationally recognised human rights in accordance with the United Nations' Universal Declaration of Human Rights and the International Labour Organization's (ILO) Declaration on Fundamental Principles and Rights at Work. We comply with legal reporting obligations, such as the United Kingdom's Modern Slavery Act, and do not approve child labour or forced labour. We are committed to operating according to the UN's principles concerning business operations and human rights, and we require the same from our business partners. We support the UN's Global Compact initiative and its principles of human rights, labour, the environment, and anti-corruption, as well as the UN CEO Water Mandate. Our sustainability targets, which extend to 2030, contribute, for our part, to the realisation of the UN's Sustainable Development Goals. Our targets for reducing greenhouse gas emissions have been approved by the Science Based Targets initiative. Our sustainability targets are presented on pages 22–23.

Sustainability is part of our strategy

At Metsä Board, the sustainability is monitored and supported by the company's Board of Directors, CEO and Corporate Management Team. Sustainability is incorporated in the strategy approved by the company's Board of Directors and

WE SUPPORT
UN GLOBAL COMPACT

in the company's long-term business and investment plans, risk assessments and annual action plans.

The Board discusses and approves the sustainability targets presented by the CEO and monitors their realisation on an annual basis. The sustainability targets are based on Metsä Group's strategic sustainability objectives and an extensive corporate responsibility materiality analysis, last completed at Metsä Group in 2018. The analysis accounted for the impact that Metsä Group's operations have on society and the environment, as well as the stakeholder perspective.

The CEO is responsible for the implementation of the sustainability measures in accordance with instructions provided by the Board. The CEO reports to the Board on key sustainability issues in several Board meetings each year. Important topics include the progress made in terms of the set targets, the planned measures and investments for achieving the targets, the results of external ESG evaluations, and an environmental review. The results of the company's risk assessment, including risks related to sustainability, are presented to the Board and the Audit Committee twice a year.

The company's Corporate Management Team prepares sustainability-related issues before they are presented to the Board by the CEO. Of the members of the Corporate Management Team, the Senior Vice President, Development, is responsible for research, product and business development, and sustainability. The SVP, Development, takes part in Metsä Group's Sustainability Process Management Team, and quarterly reports on the realised results of sustainability measures to the Sustainability Process Management Team . The CFO chairs Metsä Board's risk committee, which deals with sustainability-related risks as part of the company's general risk assessment.

The CEO; SVP, Development; and SVP, Production, have determined annual targets related to sustainability which impact the amounts of their personal remuneration. From 2022 onwards, all Metsä Board's employees will have an ESG target included in their personal performance bonus targets.

Metsä Board's Product Safety and Sustainability Director reports on the realisation of sustainability and development needs to the company's SVP, Development, and presents topical sustainability issues to the entire Corporate Management Team on a regular basis. The amount of the Product Safety and Sustainability Director's personal remuneration is impacted by targets related to the company's performance in sustainability matters.

Sustainability is part of the entire personnel's daily work. The Product Safety and Sustainability Director leads a team of experts which works in close cooperation with production, wood supply, sourcing and logistics, HR, marketing and sales, communications, investor relations and legal affairs. Wood supply, as well as sourcing and legal affairs, are centralised in Metsä Group.

We also exercise due diligence in ensuring the sustainability of our value chain. Further information on this can be found on pages 44–46.

"We want to be a leader in sustainability. We pursue targets for development that allow us to advance sustainability systematically, by means of continuous improvement," says **Markku Leskelä**, SVP, Development, appointed to the Corporate Management Team in 2021.

SUSTAINABILITY GOVERNANCE AT METSÄ BOARD

Board of Directors

Corporate Management Team

Metsä Group Sustainability Process Management Team

Product Safety and Sustainability Director

Business functions

Sustainable and ethical operations, as well as compliance with the law, are the foundation of Metsä Board's business operations. The Code of Conduct and sustainability targets are based on Metsä Group's policies and strategic sustainability objectives.

We take part in advocacy as part of Metsä Group

We focus on promoting the role of forests, the forest industry, and wood-based products in mitigating climate change and securing biodiversity. We increase understanding of the bioeconomy as part of the circular economy, fresh fibre as an enabler of the fibre cycle, the benefits of wood fibre-based packaging materials, and of product and food safety.

Our advocacy efforts focus on developing regulations both at national and European Union level. Topics relevant for the paperboard and packaging industry at the EU level include the promotion of the circular economy, sustainable product policies as well as the revision of the Packaging and Packaging Waste Directive. We are also monitoring the implementation of the Single-Use Plastics Directive in EU member states.

We have a voice in several organisations

Metsä Board furthers the recyclability of fibre-based packaging and participates in the activities of the 4evergreen alliance, which brings together the entire packaging value chain. In 2021, our representatives were active in 4evergreen's Steering Group and Public Affairs and Advocacy Group.

We also promote fibre-based food packaging that is sustainable in terms of the environment and health, and participate in the activities of the European Paper Packaging Alliance (EPPA). As part of Metsä Group, we are an active member in the Confederation of European Paper Industries (Cepi), which supports the EU's goal of achieving climate neutrality by 2050. As of the beginning of 2022, the President and CEO of Metsä Group is acting as the Chair of Cepi.

We are involved in number of national-level trade and industry associations. The most important associations are the Finnish Forest Industries Federation and the Swedish Forest Industries Federation.

Metsä Group's parent company, Metsäliitto Cooperative, is registered with the EU Transparency Register, maintained by the European Parliament and European Commission, and has signed the register's Code of Conduct.

"It is essential to know what is happening in our operating environment," says **Ritva Mönkäre**, Metsä Board's Communications Manager (left), an opinion shared by the Brussels-based **Tytti Peltonen**, Vice President, Corporate Affairs at Metsä Group.

Disposable fibre packaging has environmental advantages

In 2021, EPPA published a life cycle assessment carried out by the independent consulting firm Ramboll, according to which the single-use fibre-based food and beverage packaging used in European quick service restaurants generates considerable environmental benefits compared to reusable tableware. During its life cycle, single-use fibre-based packaging generates less CO_2 emissions and consumes less water than reusable tableware, for example.

To learn more about the assessment, go to website eppa-eu.org

We invest in the well-being of children and youth

The focal points of our social engagement include promoting the well-being of children and young people, and reinforcing their relationship with nature. As part of Metsä Group, we support the physical activity of children and young people and offer coaching lessons to secondary school students within the framework of the "Nuorelle siivet" campaign, run by the Finnish Olympic Committee's Sports Academies. We also encourage children and youth to get to know forests and the forest industry in cooperation with 4H Finland and its local organisations. In addition, we visit secondary schools to share information about the opportunities offered by the forest industry, cooperate with many educational institutions, and provide summer jobs, traineeships and opportunities for the preparation of theses.

Paperboard deals at Yrityskylä

At Yrityskylä in Pirkanmaa province in Finland, ninth graders again played a game in which pupils playing the roles of imaginary members of Metsä Board's Corporate Management Team hammered out international deals on paperboard products. The game involved a total of 2,000 young people across Pirkanmaa. "It is important for us that children understand the forest industry's importance to Finland and the entire national economy, and see the industry's potential as a future employer. We want to send a strong message about the sustainability of our operations," says **Susanna Tainio,** Vice President, HR, Recruitment and HR Development at Metsä Group.

We improved road safety

Metsä Board's Äänekoski, Simpele, Joutseno and Kemi mills took part in Metsä Group's annual road safety campaign, based on the national road safety week. The aim was to inspire teachers and students, as well as their guardians, to think about road safety issues with the help of a road safety animation, among other things.

Climate change creates risks and opportunities

While the promotion of sustainability creates business opportunities for Metsä Board, climate change and biodiversity also involve risks. At Metsä Board, these risks particularly concern the use of forests, energy and water. Our reporting on these issues complies with the recommendations of TCFD.

The transition risks and opportunities arise from the transition to a low-carbon economy, i.e. compliance with the goals of the Paris Agreement of limiting global warming to less than 2, or preferably to 1.5, degrees.

	Risks and opportunities	Impact	Management
Regulation	The regulation aiming to combat climate change and reduce greenhouse gas emissions poses significant requirements for a new kind of production technology and results in changes to the pricing of energy and greenhouse gas emissions. This can increase costs in both production and transport.	↓	Metsä Board has set targets for improving energy efficiency and shift to the use of entirely fossil free energy in its production. We also encourage our suppliers to set targets for emission reductions.
	Regulation that emphasises the use of forests as carbon sinks and the protection of forests to secure biodiversity limits harvesting volumes.	↓	Metsä Group's wood supply has set targets, the achievement of which increases the sequestration of carbon in forests and helps secure the biodiversity of forests. We use our raw material resource-efficiently to avoid waste in production. Our aim is to make full use of the production side streams.
	Regulation that acknowledges that forest industry products can replace materials made from fossil-based raw materials, the production of which, furthermore, generates substantial amounts of fossil-based emissions.	↑	The main raw material of Metsä Board's products is renewable wood fibre and our target is for all our raw materials and packaging materials to be fossil free. The use of fossil free energy in production and the light weight of the products reduce their carbon footprint.
Markets and reputation	Consumers' critical attitude towards the use of forests – forests are seen as carbon sinks or as needing protection.	↓	All the wood fibre we use is traceable and sourced from sustainably managed forests which are certified or, at the least, meet the criteria for controlled wood. Metsä Board communicates openly on the impact of its operations and products with the help of life cycle assessments, for instance, and aims for active dialogue with customers, suppliers and other stakeholders.
	Consumers favour easily recyclable packaging made from a renewable, fossil free raw material.	↑	The main raw material of Metsä Board's products is renewable wood fibre and our target is for all our raw materials and packaging materials to be fossil free. The use of fossil free energy in production and the light weight of the products reduce their carbon footprint. All our paperboards are recyclable and/or compostable. Good packaging design allows us to further reduce the environmental impact of paperboard packaging and increase recyclability.
	Wood use is increasingly being directed to products other than paperboard products (other bio-based products).	↓	Metsä Board participates in projects that develop new types of wood fibre-based packaging solutions (such as ExpandFibre).
	Wood is Finland's most significant processed natural resource, providing a good basis for the bioeconomy, circular economy and innovations based on a renewable raw material.	↑	Metsä Board's main raw material is renewable and recyclable wood fibre. Paperboard already has an extensive recycling infrastructure, and Metsä Board actively participates in the activities of organisations promoting recycling (including 4evergreen and the European Paper Packaging Alliance).

The physical risks and opportunities involve changes in temperatures and precipitation, and they will materialise if climate change is not mitigated.

Acute changes	Risks and opportunities	Impact	Management
Extreme weather phenomena	Storms, drought and floods cause disruptions in production or complicate the transport of raw materials and products.	↓	Metsä Board prepares for the risks arising from extreme weather phenomena through both company and mill-level risk assessments. Examples of such measures include sufficient reserves of wood, the control of water levels with dam arrangements, and ensuring power distribution in exceptional situations. The supply chain is preparing for alternative partners or transport routes.
Chronic changes	**Risks and opportunities**	**Impact**	**Management**
Rising average temperature and changes in precipitation	The increased frequency of droughts weakens the availability of the process and cooling water needed by mills and causes production breaks.	↓	Metsä Board's mills are not located in high water risk areas, which supports the company's competitiveness in the face of climate change. The company's target to reduce the use of process water and enhance the recycling of water within the process also reduces the water risk.
	Increased precipitation and floods impair the quality of surface waters, thereby impairing the availability of process and cooling water and causing production breaks.	↓	Metsä Board has drawn up plans on how to secure paperboard deliveries in the event that production is interrupted at one of its mills.
	Harvesting conditions are complicated due to a lack of snow and frost and because of increased precipitation.	↓	Metsä Group actively monitors which areas allow harvesting and what are the alternative wood supply areas. When necessary, wood reserves can be increased during good harvesting conditions. Metsä Board's long-term contract with Norra Skog increases the delivery reliability of wood, particularly in Sweden.
	Damage caused by snow, storms, drought, forest fires, insects and fungi are increasing in forests, and changes are occurring in the prevalence of tree species. Alien species are likewise causing problems in forests.	↓	Metsä Group's wood supply provides sustainable forest management services which support forests' adaptation to climate change and help to secure the biodiversity of forests.
	Global warming is expected to increase the growth of forests and the wood removal, which will increase the availability of wood and lower the costs of wood supply.	↑	Cooperation and long-term wood supply contracts (with e.g. Norra Skog) will improve the delivery reliability of wood even further.

↓ Potential negative impact on business operations ↑ Potential positive impact on business operations

Further information on TCFD and risk management

Reporting on climate-related risks and opportunities in accordance with TCFD's recommendations can be found on pages **74–75** of the Board of Directors' report.

For a comprehensive description of Metsä Board's business risks, see pages **76–79** of the Report of the Board of Directors, and for a description of risk management, see pages **164–165** of the Corporate Governance Statement.

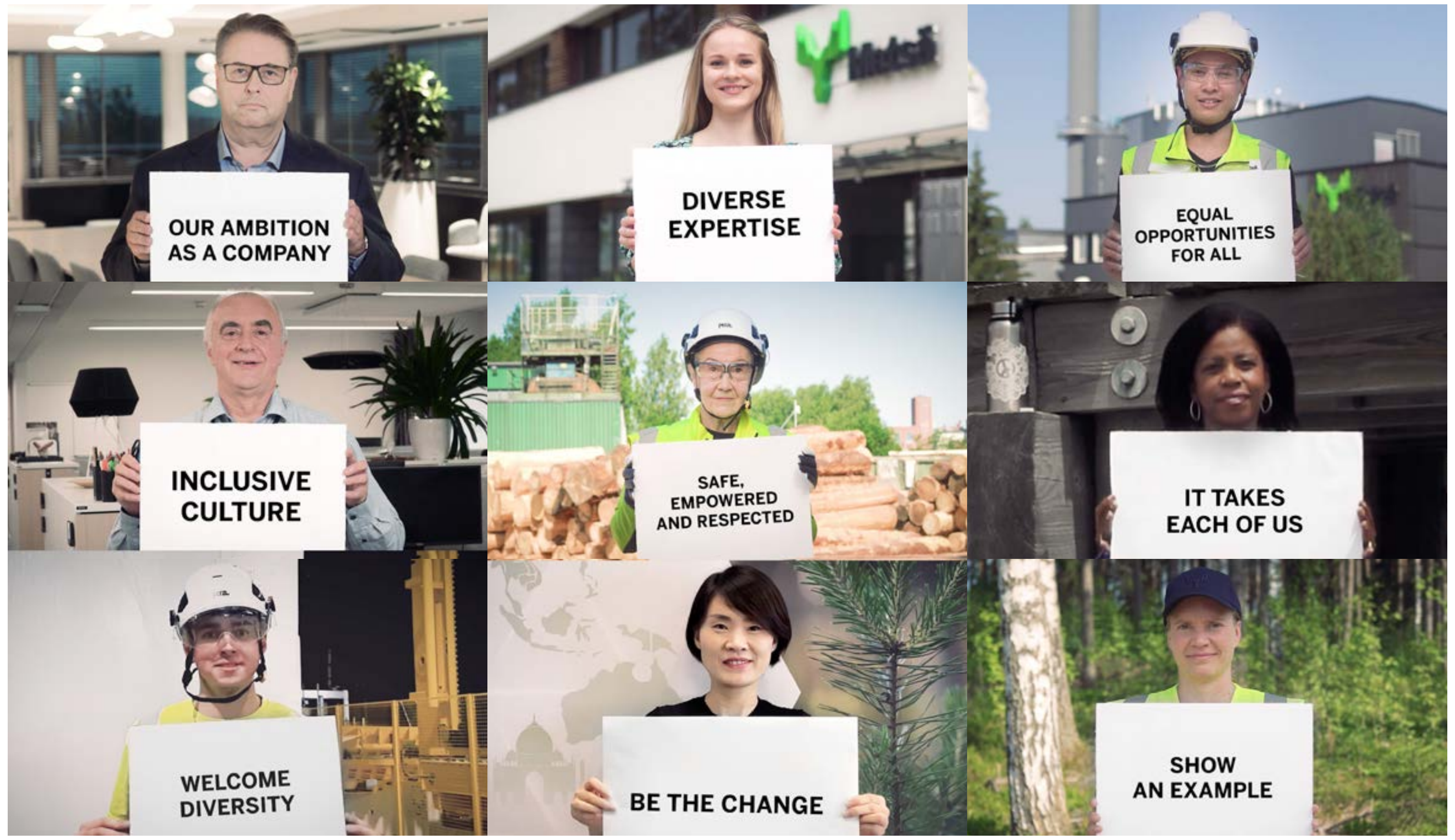
Read more about our business operations and climate change from the perspective of the EU taxonomy.

The reporting on how sustainable our business is from the perspective of climate change mitigation and adaptation to climate change, required by the European Union's taxonomy on sustainable finance, can be found on pages **75–76** of the Report of the Board of Directors.

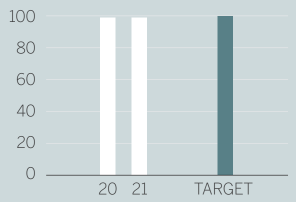
We are developing a responsible and equal corporate culture

WELL-BEING

We are committed to promoting a culture of doing the right thing and developing our workplace community and ways of working to achieve even better results in diversity and equality. Our development work is guided by common values, our Code of Conduct, and the 'Metsä For All' vision, published in 2021.



99% OF OUR PERSONNEL HAVE COMPLETED THE CODE OF CONDUCT ONLINE TRAINING



The Code of Conduct guides our way to work

Metsä Board is committed to Metsä Group's Code of Conduct. The commitment includes sustainability and a culture of doing the right thing, such as respecting human rights and anti-corruption and anti-bribery measures. The realisation of our principles and the personnel's sustainability skills are supported by regular training. In 2021, 99% of our personnel had completed the Code of Conduct online training.

We also require responsible conduct from our customers, suppliers and other partners. Read more about the background checks performed on our business partners (third-party due diligence) as a part of our Know Your Business Part process, and sustainability targets regarding the supply chain, see pages 44–46.

Theme-related UN goal

8 DECENT WORK AND ECONOMIC GROWTH

The Ethics barometer promotes a culture of doing the right thing

As part of our sustainability targets, we measure the responsibility of our corporate culture with an Ethics barometer, which covers the entire personnel and is conducted every other year. The Ethics barometer measures our personnel's experience of workplace ethics and allows us to identify development needs and risks related to our business ethics.

The Ethics barometer was conducted for the first time in 2020, when our ethics index was at 85%. The target is 100% by the end of 2030. To achieve this, we organised training on whistleblowing, the use of our Compliance and Ethics Channel, and the investigation process related to reports for the entire personnel in 2021. Corporate management, managers and HR personnel also participated in an in-depth Code of Conduct training session in autumn 2021, covering topics such as ethical blindness, favouritism, equality, and addressing and reporting grievances. A total of 248 people from Metsä Board participated in these in-depth trainings. The training topics were selected based on the development actions identified by the results of the Ethics barometer.

Several new controls for identifying conflict of interest in our recruitment and sourcing processes were introduced. Furthermore, we discussed practices that could increase the flexibility of working life with our personnel, adopted a remote working model, and made use of the results of the Ethics barometer in the determination of the 'Metsä For All' vision. The next Ethics barometer will be conducted in 2022.

Compliance and Ethics channel is available to all

We encourage our personnel and stakeholders to raise their concerns if they detect problems in our operations. Our Compliance and Ethics Channel is available in ten languages and its technological implementation is seen to by an independent third party. Reports can be made anonymously. We are committed to protecting the privacy of whistleblowers and do not condone any counter measures against whistleblowers.

All breaches and violations, as well as suspected breaches and violations, brought to the attention of the company are investigated. The investigations are led by the Compliance Committee, composed of the directors in charge of Metsä Group's legal affairs, compliance, and internal auditing. The Compliance Committee ensures that the consequences demanded by the results of each investigation are consistent in cases of equal gravity, and that the corrective measures are adequate. Any illegal activities detected

"Achieving the 'Metsä For All' vision requires the courage to shake up the status quo and question earlier practices. The change will not happen on its own accord. Instead, it needs to be managed just like any other thing key to business operations. It is up to us all to make sure that our personal actions correspond with the aim. It is the only way to make the change permanent," says **Tarja Tudor**, Metsä Group's Compliance Director.

are reported to the authorities. We ensure that the changes required by the EU Directive on the protection of whistleblowers are implemented in our Compliance and Ethics channel and the internal investigation of reported cases.

In 2021, Metsä Board became aware of a total of 10 (2020: 10) cases or suspicions related for example to conflicts of interest, inappropriate conduct or shortcomings in equal treatment. None of the cases resulted in legal proceedings or concerned corruption, bribery, or the use of child labour.

We respect human rights

Human rights issues are included in the Code of Conduct and equality training aimed at the entire personnel, and in the Know Your Business Partner training held for our sourcing and sales personnel.

A study conducted by an independent party concerning the human rights performance of 78 Finnish companies in relation to the United Nations Guiding Principles on Business and Human Rights (UNGP), was published in 2021. Metsä Group's results in the realisation of its human rights responsibility were average compared to the other companies assessed. The study found that targets for development could be found in both practical measures and on how those measures are communicated in public. Consequently, we continue to consider our human rights impact and the ways in which we could promote their realisation and prevent human rights-related risks in our operations.

We promote diversity, equality and inclusion

We want to ensure that personal characteristics – such as gender, age, ethnic background, sexual orientation or disability – have no impact on an individual's opportunity to succeed in working life. Diversity, equality and inclusion are promoted in the 'Metsä For All' vision' and measured according to set targets.

Our journey towards the 'Metsä For All' vision

Focus areas of the 'Metsä For All' vision in 2021–2023

EQUAL OPPORTUNITIES AND GENDER EQUALITY
- Increasing the share of women at different organisational levels
- Ensuring equal pay
- Gender-neutral professional titles

DIVERSITY
- Recruitment practices that support diversity
- Ensuring international skills in the organisation

INCLUSION AND CULTURAL CHANGE
- Developing our personnel's awareness and skills
- Supporting cultural change by means of communications
- Improving work-life balance

Our equality targets:

- By the year 2025, 25% of Metsä Group's leaders* are women (*Vice President or higher)
- We promote equality with a training programme targeted at the entire personnel
- There are no unjustifiable pay gaps between women and men

SHARE OF WOMEN AT METSÄ BOARD

	2021	2020	2019
Women's share of all employees, %	21.9	21.3	21.1
Women's share in manager positions [1], %	22.8	23.0	21.0
Women's share in executive management, VP, SVP or CEO, %	16.1	19.4	-
Women's share in Corporate Management Team, %	14.3	33.3	33.3
Women's share on Board of Directors, %	33.3	22.2	22.2

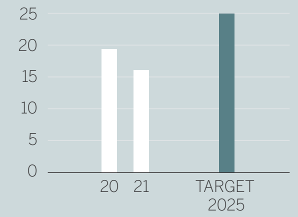
[1] Share of women within all managers. Figures do not include the subsidiary Hangö Stevedoring

REMUNERATION AT METSÄ BOARD AS A WHOLE AND BY PRODUCTION COUNTRY

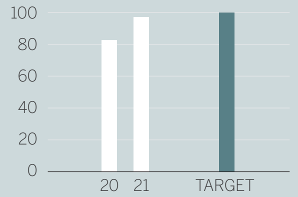
	Metsä Board	Finland	Sweden
Annual total earnings of person with highest wages compared to the average total earnings of other personnel	27.5	29.0	6.0
Women's total earnings compared to men's total earnings, white-collars [1]	0.9	1.0	0.9
Women's total earnings compared to men's total earnings, blue-collars	0.9	0.9	0.9

[1] Weighted average of women's total salary compared to men's total salary in the same job grade. Includes 97% of white-collar personnel

16% OF OUR MANAGEMENT ARE WOMEN
(VP, SVP or CEO)



97% OF OUR PERSONNEL HAVE COMPLETED THE TRAINING ON DIVERSITY, EQUALITY AND INCLUSION



We are developing our remuneration process and correcting unjustified pay gaps.

Diverse opportunities for growth and development

WELL-BEING

As an international, continuously developing company, Metsä Board aims to offer diverse opportunities for personal competence development, job rotation and career advancement.

An ethical and respectful corporate culture, management through clear objectives, allocation of responsibilities, and rapid decision making are our strengths. We want to offer our employees an equal-opportunity and forward-looking workplace community with a good team spirit, in which everyone has the chance to develop and advance in their career.

Goal-oriented leadership

Metsä Board has a bonus scheme based on the company's growth strategy and personal targets. It covers the entire personnel. When skilled people are in the right jobs and see the significance of their own contribution, it will prove motivational, increase well-being, and produce good results.

Our entire personnel is entitled to free occupational healthcare, and we encourage our employees to anticipate and assess their own working ability and health. Benefits related to well-being at work are equally available to permanent employees and employees with a fixed-term contract.

In terms of managing working abilities, we rely on operating models such as early support, which allow us to address and tackle potential working ability or well-being at work problems at an early stage. During the COVID-19 pandemic, we have provided everyone, in addition to other means for maintaining working ability, with the services of a website providing access to podcasts and guidance for improving personal well-being.

Remote working and virtual meetings have become routine practices during the pandemic, with everything from daily mill meetings, to bigger personnel briefings and the executive management's mill tours taking place virtually. Depending on the nature of each job, remote working and connections will be taken advantage of in the future.

A good team spirit as a strength

In 2021, Metsä Board conducted a renewed and more extensive personnel survey, aiming to find out employees' views on work, the workplace community, leadership, and the company as a whole. The survey was responded to by 75.4% of Metsä Board's employees.

The overall grade measuring job satisfaction, 72.9, was on par with the norm in Europe, 72.8. The key strengths of our workplace communities include the efficient functioning of teams, a good team spirit, and the active sharing of skills. All these are a wellspring for good work motivation. Key targets for development include possibilities for influencing operational development and access to information, as well as managers' activeness in addressing problems when necessary.

The Ethics barometer and personnel survey are carried out in alternate years. In 2022, we will be conducting the Ethics barometer to collect information on how realisation of our Code of Conduct is perceived in practice.

New talents

We recruit new talent with the help of collaborations with educational institutions, summer jobs, and apprenticeships in production and maintenance, for example. While managers play a key role as activators, each of us bears responsibility for our own development.

Competence mapping supports the development of multiple skills and creates the right kinds of indicators for measuring competence. With regular and consistent monitoring and planning, everyone can be provided with a personal plan to support their development, both at a personal and team level. The aim is to ensure the adoption of the agreed best practices at all our mills.

From summer employee to production manager

Production Manager **Malin Nygren's** career at Metsä Board has presented her with plenty of opportunities for professional development.

"I became interested in working at the Husum pulp and paperboard mill during my engineering studies. So, I applied for and got a summer job here. After graduation, I was hired as a development engineer. Since then, I've worked as a production engineer, laboratory manager, environmental manager, and the mill's assistant production manager. My career has been supported in various ways through leadership training and mentoring programmes.

As a manager, I want to lead by example, create good working conditions, and give my team members opportunities to develop in their roles.

I sincerely believe that pure fresh fibre is one of sustainable solutions of the future for global challenges, such as the realisation of a circular economy and mitigation of climate change. Together, we have what we potential to create something genuinely good."

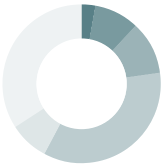
Personnel in
18 countries

New apprentices
29

Summer employees
244

MOST OF OUR EMPLOYEES WORK IN OUR PRODUCTION COUNTRIES

PERSONNEL'S AGE AND GENDER DISTRIBUTION



KEY PERSONNEL FIGURES

	2021	2020	2019
Total number of employees FTE 1) 2)	2,389	2,370	2,351
Blue-collars' share of employees, %	64.1	64.7	65.2
White-collars' share of employees, %	35.9	35.3	34.8
Share of permanent employees, %	91.9	94.0	92.5
Share of full-time employees, %	96.6	96.4	97.2
Average age, in years	46.1	46.4	46.2
Average years in service	17.8	18.6	18.7
Employee turnover, % 3)	5.2	4.5	7.7
Average hours of training per employee 2)	11.0	11.8	17.6
Average hours of training (blue-collars) 2)	9.5	8.8	-
Average hours of training (white-collars) 2)	13.7	16.0	-
Employees covered by the scope of a collective agreement, % 2)	72.2	78	-

1) Full-time equivalent FTE on 31 December
2) Subsidiary company Hangö Stevedoring is included
3) The figure includes also redundancies caused by restructuring of business

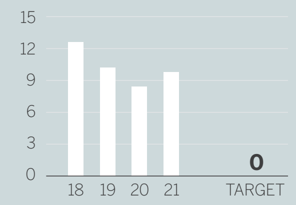
41 accidents too many

WELL-BEING

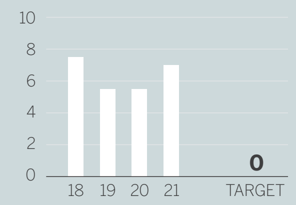
We engage in systematic work to reduce the number of accidents at work. Good examples of this include the adoption of a common set of occupational safety standards, more effective safety talks, and increasingly strong investments in training. However, the good progress made in occupational safety over recent years was not reflected in the 2021 results.

Our 2030 target:

TOTAL RECORDABLE INCIDENT FREQUENCY (TRIF)
per million hours worked



LOST-TIME ACCIDENT FREQUENCY RATE (LTA1)
per million hours worked



Our target is
0 accidents at work.

The safety of employees is Metsä Board's top priority. We manage associated risks by complying with the ISO 45001 standard on occupational health and safety, as well as the common safety management principles, daily management processes, occupational safety standards, and key safety guidelines applied throughout Metsä Group. These common principles and operating methods support operations in line with the ISO standard at our mills and are in accordance with our company's Code of Conduct and safety policy. The implementation of processes at our mills are monitored with annual internal audits. External annual audits are carried out in accordance with the ISO 45001 standard.

All our mills follow the 5S method to increase productivity, safety and well-being at work. Among other improvements, 5S has reduced the number of stumbles and trips, and the resulting accidents.

Our personnel play a key role in preventing risks related to occupational safety

Our personnel are actively involved in making observations about safety shortcomings, and participate in occupational safety training. In 2021, we organised additional training and communication at each mill to ensure that everyone complies with common safety standards in their work, every day.

All our mills has an occupational health and safety (OHS) committee which convenes regularly to promote the development of local safety at work. We have also set up safety development teams at some of our mills, who monitor the realisation of proactive safety work.

The risk management is supported by a health, safety, environment and quality (HSEQ) system, intended for the recording and monitoring accidents, safety observations, close calls, corrective measures, and safety talks.

In addition to safety matters, the same system works as a repository for entries concerning environmental matters and product safety. These observations can also be recorded by our partners. The HSEQ system is utilised in risk assessments as well as in internal and external audits.

Indicators for monitoring occupational safety

The safety key performance indicators are a valuable tool for developing safety. The key indicators are the TRIF indicator, which measures, in addition to accidents resulting in absences, the frequency of accidents requiring replacement work or medical treatment. The LTA1 indicator measures the frequency of accidents resulting in absences. We monitor the achievement of the internal targets of proactive occupational safety at each mill on a continuous basis. Proactive safety measures include safety observations, safety walks and safety talks.

In 2021, the frequency of accidents at work, or TRIF, was 9.8 (2020: 8.4), while the frequency of accidents resulting in absences was 7.0 (5.7). Safety at our mills developed in a negative direction, but safety in our port operations, at Hangö Stevedoring, improved from the previous year. The most common accidents consisted of injuries to hands in particular and feet.

In 2021, we will focus on developing safety involving hands and improve personal hazard identification with the aim of making everyone capable of identifying risks before they begin work. Metsä Board will also be adopting four new safety standards. At the Kyro mill, safety at work is improved by the production line's new winder, operational since late 2021. The Tako mill is also investing in a winder.

Safety requirements apply to our partners

We monitor that our partners comply with the ISO 45001 requirements. All of our external partners, such as cleaning and maintenance companies, working in our mill areas must complete safety inductions to be granted access passes to the areas. These inductions also apply to truck drivers, who deliver and pick up goods at the mills. We also hold regular information sessions on safety, such as safety talks, for partners. We investigate and report all accidents occurring for our partners in mill areas.

KEY SAFETY INDICATORS

	2021	2020	2019
Sickness absences, % of theoretical working hours	4.1	3.9	4.0
Total Recordable Injury Frequency (TRIF) per million hours worked	9.8	8.4	10.2
Lost-time accident frequency (LTA1) per million hours worked	7.0	5.7	5.5
Number of lost-time accidents (LTA1), external partners*	5	7	13
Accident severity rate	12.3	9.2	18.6
Accident severity rate, external partners	18.2	12.1	10.3
Number of fatal occupational accidents	0	0	0

The subsidiary Hangö Stevedoring is included in all figures.
* Our external partners working in a mill area.

Prioritising health and safety during the COVID-19 pandemic

"We continued to follow strict precautionary measures at our locations due to the COVID-19 pandemic. The goal was to ensure the health, safety and working ability of our employees, prevent the emergence of transmission chains and ensure the continuity of our business. We provided information on the maintenance of working ability in the form of webinars held by experts. The only visits we allowed to our mills have been related to either development projects or maintenance. Metsä Group's mills have also organised mass testing whenever a regional COVID-19 situation has arisen.

I am very proud of the commitment and flexibility shown by our personnel during the pandemic. Thanks to these measures, we have been able to avoid chains of transmission and production and deliveries run smoothly," says **Camilla Wikström**, Metsä Board's SVP, Human Resources.

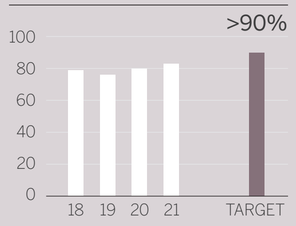
Sustainably managed forests serve many purposes

FORESTS AND WOOD

We always ensure the origin of the wood fibre we use, and source wood only from sustainably managed forests in which the renewal of forests and biodiversity are safeguarded.

Our 2030 target:

SHARE OF CERTIFIED WOOD FIBRE
%



Approximately
10%
of the world's forests are certified

MOST OF THE WOOD WE USE IS SOURCED FROM FINLAND AND SWEDEN

Finland	53%
Sweden	29%
Baltic countries	9%
Russia	9%

Theme-related UN goals

13 CLIMATE ACTION
15 LIFE ON LAND

The sustainable use of forests must account for all three criteria for sustainability: financial, ecological and social. The sustainable use of forests creates well-being, mitigates climate change, maintains biodiversity and prevents deforestation. The raw material provided by forests, wood fibre, is an important alternative to fossil-oil based raw materials, and forest industry products are significant in terms of the national economy of Metsä Board's home market: the forest industry generates roughly a fifth of Finland's export income.

We always verify the origin of wood fibre

Metsä Group's wood supply and forest services is responsible for our wood supply. The pulps used in paperboard production are manufactured in Metsä Board's own high-yield pulp and pulp mills, or our associated company Metsä Fibre's pulp mills. Knowing the origin of the wood fibre, self-sufficiency in pulp, and the control of chemicals at all stages of production ensure the availability of fibre, the consistently high quality of the products, and an uninterrupted chain of product safety.

We source wood solely from sustainably managed forests in Northern Europe. Our wood use in 2021 totalled 8.3 million cubic metres (2020: 8.2 million m³). The volume includes the wood used in Metsä Board's own production of pulp and high-yield pulp as well as the wood used in the pulp purchased from Metsä Fibre.

The wood we use always meets at least the criteria for PEFC Controlled Sources and FSC® Controlled Wood. This means that all parties involved in the processing of wood and pulp in our value chain comply with the requirements of the PEFC and FSC® Chains of Custody, and as a result all the wood fibre we use is traceable.

In 2021, 83% (80) of the wood fibre we used came from certified forests and 17% (20) from controlled forests. Our target is to increase the share of certified wood fibre to at least 90% of all the fibre we use by the end of 2030. The long-term wood delivery contract made with Norra Skog in 2020 increases the volume of certified wood fibre purchased from Sweden. The availability of certified wood fibre is nevertheless limited: some 10% of the world's forests are certified. In Finland, the certification rate is approximately 90%, and in Sweden over 60%.

All the wood fibre we use is traceable

All parties involved in the processing of wood and pulp in our value chain comply with the requirements of the PEFC and FSC® Chains of Custody. The wood fibre we use is therefore traceable. In addition to sustainable forest sites, we choose our partners responsibly.

PEFC/02-31-92
FSC® C001580

PEFC/02–31–92
FSC®-C001580

Customer	Paperboard, pulp and high-yield pulp mills	Wood supply and forest services	Forest owners
Forest certification and our Chain of Custody system give our customers the opportunity to tell their own clients about a product's sustainability. Certification and traceability ensure that the wood used in a product comes from sustainably managed forests.	The pulp used in paperboard production is manufactured in Metsä Board's own high-yield pulp and pulp mills or its associated company Metsä Fibre's pulp mills. These mills purchase all their wood from Metsä Group's wood supply. The mills record the volume, origin and certification of the wood they purchase, and ensure through calculations that the volume of certified products they sell corresponds with the volume of inbound certified wood. The certification details are shown in the orders and the related documents.	All wood can be traced with the help of maps, the details entered in data systems, and various documents. Metsä Group's wood supply calculates the share of certified wood and sells a corresponding volume of certified wood to the mills. We also require a sustainable origin from non-certified wood, and the wood always meets at least the requirements of PEFC Controlled Sources and FSC® Controlled Wood.	Most of the wood we use comes from PEFC or FSC®-certified Northern European forests. The forest owners have agreed to the requirements of forest certification. Metsä Group and external auditors verify the sustainable forest management by auditing harvesting sites, for example.

Sustainability is monitored with audits

For our customers to be able to purchase certified paperboard or pulp, both the forests and the Chain of Custody system must be certified.

Forest certifications define strict criteria for the ecological, social and economic sustainability of forest management. The requirements pertain, among other things, to the safeguarding of the forests' biodiversity, maintaining the forests' growth, and securing the rights of Indigenous people. Forest certification requires third parties to regularly audit the certified forest areas and the implemented measures. Metsä Group implements a policy according to which requirements related to the environment and quality are also complied with and monitored in non-certified forests, so that the criteria for controlled wood are met.

Metsä Board's Chain of Custody system is evaluated annually with Metsä Group's internal and third-party external audits. The audits monitor the operations of the wood suppliers and harvesting contractors as well as the traceability of the wood fibre within our own processes. The auditing covers a range of aspects related to environmental and social responsibility, such as the wood's legal origin, the securing of Indigenous people's rights, safety at work, and traceability and calculation practices, which should be in accordance with certification standards. This allows us to ensure the wood's sustainable origin and the share of certified wood used in our production. If deviations are observed in the audits, we implement the corrective measures immediately. In 2021, we developed our internal communications by compiling online training material which allows our mills to increase their personnel's knowledge about forest certifications.

> In 2021–2022, Metsä Group is participating in the 'Tekopöly' research project which studies the species relying on high biodiversity stumps in forests and which types of stumps are the most beneficial for the biodiversity of forests.

Targets for the sustainability of forest management

Further improvement of the ecological sustainability of forest nature is crucial. Because of this, Metsä Group has targets extending to 2030 on increasing the amount of carbon bound to forests and long-lived wood products, and safeguarding the biodiversity in forests.

To achieve these targets, Metsä Group launched an ecological sustainability programme focused on commercial forests in 2020. The programme aims to increase the carbon sinks of forests, safeguard biodiversity and develop the protection of water. In 2021, the programme's measures were complemented with a policy concerning the management of herb-rich forests, according to which Metsä Group's principal recommendation for herb-rich forests in commercial forests is nature management. For the best sites, it recommends voluntary conservation. Beyond commercial forests, biodiversity is promoted with the nature management programme established in 2021.

Metsä Group's 2030 targets concerning forests

Increasing the amount of carbon stored in forests by 30% (in hectares) from 2018	→	In 2021, the realisation was 3.8%.
Increasing the amount of carbon stored in products by 30% from 2018	→	In 2021, the amount of carbon stored in sawn timber and wood products was 1.2% smaller than in the comparison year 2018.
Securing the biodiversity of forests: Leaving retention trees on 100% of regeneration felling sites and making high biodiversity stumps on 90% of the sites	→	In 2021, retention trees were left in 94% in regeneration fellings carried out by Metsä Group, while high biodiversity stumps were made in 88% of thinnings and regeneration fellings carried out by Metsä Group.

Metsä Group's programmes for safeguarding biodiversity

Ecological sustainability programme – aimed at commercial forests

Key measures include increasing retention trees and decaying wood in forests; leaving cover thickets for animals; the mixed cultivation of pine and spruce instead of planting only one species; developing forest management, particularly on peatland; the nature site service aimed at forest owners falling under the scope of Metsä Group's FSC® group certificate; the policy on the management of herb-rich forests; and participating in research projects focused on the development of sustainable forest management.

Nature management programme – aimed at nature beyond commercial forests

In 2021–2030, Metsä Group will support regionally material and effective development projects improving biodiversity and the state of waterbodies in Finland with financial contributions and its own expertise. The projects may involve waterfowl habitats and wetlands, watercourses, small bodies of water and riparian habitats, pollinator habitats, or new water conservation methods.

The selected methods promote biodiversity

Increasing the amount of decaying wood in forests and favouring mixed forests are especially important for biodiversity. Decaying wood is increased by retaining all dead trees, preferably in groups, and by making high biodiversity stumps at thinning and regeneration felling sites. High biodiversity stumps are made by cutting a tree trunk at a height of 2–4 metres and leaving the upright stump to decay in the forest.

> The measures increase the amount of decaying and retention trees of different ages and species. This is vitally important for many birds, insects and fungi.

Given that mixed forests increase forests' biodiversity and resilience to storms and insect damage, Metsä Group provides forest owners with a forest regeneration service in which both spruce and pine are planted in the same area. Broad-leaved trees, such as birch, which spreads to stands naturally, should also be retained in forests.

Biodiversity can be increased by protecting habitats important for biodiversity from felling, and by leaving cover thickets for animals and buffer zones around natural waterways. Such buffer zones also prevent the run-off of soil and nutrients.

The policy concerning the nature management or protection of herb-rich forests directs management measures to where they have the most impact on biodiversity: herb-rich forests account for only 1–2% of the surface area of Finland's forests, but approximately 45% of endangered forest-dwelling species live primarily in the herb-rich forests.

Legislation acknowledges biodiversity

The legislation in Finland and in Sweden requires habitats important for biodiversity to be considered in connection to felling and harvesting. Certified and controlled forests involve additional requirements for the safeguarding of biodiversity.

Statutory protected forests account for some 10% of Finland's total forest area. According to a report by the European Union, more than half of Europe's strictly protected forests are located in Finland.

Forests act as carbon sinks thanks to their growth

Metsä Board's mills are located in Finland and Sweden, which are Europe's most forested countries. Forests cover approximately 75% of Finland's and 69% of Sweden's surface area. In both countries, at least half of the forests are owned privately by ordinary families, meaning that forests are a source of income for many people. This is why it is important to forest owners that their forests remain viable for future generations.

The volume of wood in the forests of Finland and Sweden has grown over the last few decades because the annual growth of forests surpasses the volume of harvesting and other removal of trees in forests. In Finland, for example, the annual growth of forests was 103.5 million cubic metres in 2014–2020, while the annual drain, including felling and trees that die for natural causes, amounted to 83% of the growth over the same period of time (Natural Resources Institute Finland).

In both Finland and Sweden, the law states that a forest must always be regenerated after harvesting. Forestry does not cause deforestation in our wood supply area. Rather, the permanent felling of trees results from other forms of land use, including infrastructure building and clearing land into fields.

Thanks to the growth of the forests, they act as carbon sinks and thereby mitigate climate change. Good forest management enhances carbon sequestration. In sustainable forest management, a forest is regenerated swiftly after harvesting, and the regeneration relies on rapidly growing seedlings or seeds that are best suited to the site. The seedling stands are thinned to create growth space for the best seedlings, and the forest is fertilised. At its best, a well-managed seedling stand in Southern Finland becomes a carbon sink at around the age of 15. Metsä Group aims to increase the amount of carbon stored in forests by actively offering forest management services to forest owners.

Different felling methods are needed

In light of current studies, periodic cover silviculture, which also includes regeneration felling, is the most risk-free option for a forest owner and yields the best financial return. Continuous cover forestry, in which only some of the trees are removed at any one time, is a good alternative, particularly on peatland, in the vicinity of waterbodies, in rugged pine stands, and in areas which already contain seedlings. There is no consensus on which method is better over the long term in terms of biodiversity and carbon sequestration, and more research is needed. Metsä Group provides forest owners with all harvesting methods – it is the forest owner who has the final say on their property.

Many EU policies have an impact on the use of forests

There are several projects under way in the European Union with a direct and indirect bearing on the use of forests within our wood supply area. EU policies place a strong emphasis on the carbon sinks of forests and the safeguarding of biodiversity. The most holistic view of forest use is provided by the EU Forest Strategy, which aims to reconcile the diverse commercial use of forests, their role as carbon sinks, the climate benefits of wood-based products, and the protection of forests and the safeguarding of their biodiversity. The EU Forest Strategy is not legally binding, but together with other EU initiatives and legislation, such as the Renewable Energy Directive, the Biodiversity Strategy for 2030, and the EU Taxonomy, it will guide the forest-related regulation of EU member states in the coming years.

The Forest Strategy acknowledges that forest industry products mitigate climate change by replacing materials whose production generates copious amounts of fossil-based emissions. At the same time, the further measures of the Forest Strategy, such as its policies regarding regeneration felling, may limit opportunities in the commercial use of forests. From the perspective of the forest industry, the effects of the EU Forest Strategy are indeed twofold, and it is possible that EU regulation with an impact on the use of forests will start to limit the availability of wood. It would also be important to consider the role of member states and the differences between forests across Europe in the implementation of the strategy.

Biodiversity makes forests stronger

Metsä Group, which is responsible for Metsä Board's wood supply, develops sustainable forest management methods continuously, and bases its practices on scientific studies. Together with Finnish forest owners, Metsä Group supports the retention of forests' viability by establishing mixed forests of pine and spruce. The use of two species of coniferous trees in forest regeneration promotes a forest's health and biodiversity. "Mixed forests of spruce and pine are more sustainable and diverse than forests of one tree species," says **Tiina Laine**, Forest Management Manager at Metsä Group.

The establishment of mixed forests makes sense in areas experiencing elk damage. Elk prefer pine seedlings over spruce seedlings. In addition, climate change exposes spruce to the European spruce bark beetle. "It has already caused considerable damage in Central Europe. As the climate warms and spruces suffer from drought, northern spruce stands may also begin to see more of this damage," says Laine. Mixed forests can also include naturally occurring broad-leaved trees left in suitable locations. "This results in the best possible growth conditions and promotes biodiversity." Metsä Group aims to regenerate forests soon after a felling. The faster a new viable seedling stand is achieved, the earlier the forest can begin to bind carbon.

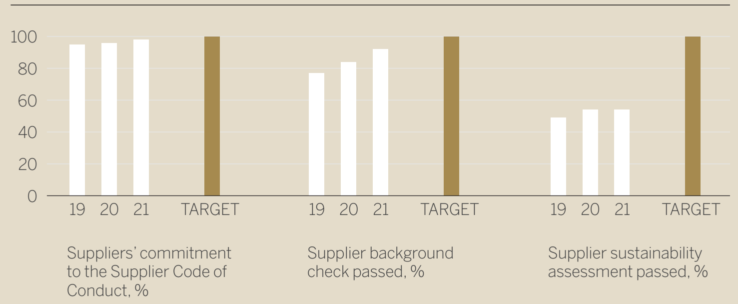
We develop the sustainability of our supply chain and products

SUSTAINABLE PRODUCTS

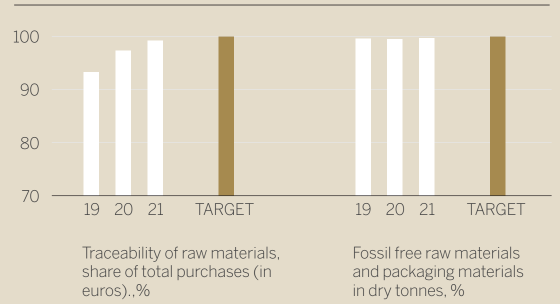
The sustainability of packaging is the sum of many things. This is why we invest in traceable, fossil free raw materials, a sustainable supply chain, and the holistic assessment of the environmental impact our paperboards.

Our 2030 target:

WE ARE KEEPING AN INCREASINGLY CLOSE EYE ON THE SUSTAINABILITY OF OUR SUPPLIERS
%



A SIZEABLE SHARE OF OUR RAW MATERIALS ARE ALREADY TRACEABLE AND FOSSIL FREE
%



* The calculation method has been changed and the figures have been corrected retrospectively. Percentages now include purchases where suppliers have passed a background check or sustainability assessment. Previously, we reported the proportion of all purchases for which suppliers have been made a background check or sustainability assessment.

It is important for us that our customers, suppliers and other partners also operate sustainably. In ensuring sustainability, we follow due diligence as part of the Know Your Business Partner process. The background checks included in the process provide us with a better understanding of who we are working with and thereby allow us to reduce the risk of participating in illegal activities. The checks cover the background of a customer, supplier, or other partner in terms of trade sanctions, money laundering, corruption, human rights violations, and other key risks.

We use local suppliers whenever possible. In 2021, 78% of all our purchases (2020: 75%) originated from Finland or Sweden, in which our production units are located.

Our sourcing process includes a number of risk management tools:

- The minimum requirements for our suppliers are detailed in our Supplier Code of Conduct. They constitute a part of our purchasing agreements, and our target is for all our suppliers to commit to the Supplier Code of Conduct. The agreements may furthermore contain other sustainability requirements.
- In our supplier selection process, we assess the sustainability risks of all our suppliers with the help of country risk classifications. We also analyse category-specific risks.
- The majority of our suppliers are subject to the Know Your Business Partner background check, in addition to which key suppliers and potentially risky suppliers are subject to a separate sustainability assessment.
- Metsä Group or an external party audits some of the suppliers.
- We investigate the origin of our raw materials and packaging materials with product safety questionnaires.
- We monitor the development of sustainability in terms of the suppliers for whom we have recommended development measures.

Theme-related UN goals

We measure the sustainability of our supply chain

The sustainability of our supply chain is ensured with respect to wood and fibre (pp. 38–43) as well as other raw materials and services. The sustainability of suppliers supplying something other than wood or fibre is ensured in the context of Metsä Group's centralised purchasing process. These include the suppliers of chemicals, machines, equipment, transport, and other services.

In 2021, suppliers commited to the Supplier Code of Conduct covered 98% (96) of our total purchases. Suppliers that have passed the Know Your Business Partner background checks accounted for 92% (84) of our total purchases. In terms of the separate sustainability assessment concerning our key suppliers and potentially risky suppliers, our requirements are met by 54% (53) of our suppliers, calculated according to our total purchases.

We supplement the monitoring of our suppliers' sustainability with audits conducted at their premises. These audits include questions related to environmental and social responsibility. In 2020–2021, we conducted fewer of these audits than usual, due to restrictions related to the COVID-19 pandemic. In 2021, an external party audited 17 of our suppliers, and in 2020, Metsä Group and an external party audited a total of 21 suppliers.

Guylian's chocolate packaging awarded a certification logo

Choosing sustainably produced packaging materials and communicating about packaging sustainability to consumers is increasingly important for our customers. Metsä Board's sustainability services provide reliable fact-based information to support decision making.

Our team of experts worked in close cooperation with the Belgian chocolatier Guylian to help them understand the forest certification process and define the matters that the use of PEFC certification logo on packaging requires. Guylian is continuously pursuing means by which to make its business and products more sustainable, and sustainable packaging materials are an important part of this development.

In our Science Based Targets, we are committed to 70% of our non-fibre suppliers and of the logistics operators related to our customer deliveries, measured as a share of our total purchases, setting themselves targets in accordance with the SBTi by 2024. We have supported the achievement of this target by our company's internal training, supplier-specific meetings, and by serving as a partner in the Climate Ambition Accelerator programme of the UN Global Compact Finland network. By the end of 2021, 16% (5) of our suppliers belonging to the target group had set targets in accordance with the SBTi.

We also require our suppliers to meet our requirements with regard to the purity and safety of products. Read more about product safety (pp. 50–51).

We trace the origin of raw materials

We continue to improve the traceability of chemicals, other raw materials, and our products' packaging materials. Because if this, we ask our suppliers to indicate the manufacturing location of the raw materials we purchase in our product safety questionnaires.

We aim to know the country in which every raw material and packaging material we use is made by the end of 2030, and in terms of some raw materials, we try to trace the details on origin even further back. In 2021, we knew the origin – at least the country of manufacture – with regard to 98% (97) of the total purchases of raw materials and packaging materials.

99% of our raw materials are fossil free

Our products are already made primarily from a renewable raw material. Our main raw material, wood fibre, accounts for 93% of all our raw materials. In addition, the production of our paperboards relies on raw materials based on natural minerals, such as kaolin, and fossil oil-based materials, including latex, and PE coating, particularly in food service packaging. We are looking for alternatives to fossil-based raw materials, and our aim is to use solely fossil free raw materials and packaging materials by the end of 2030. In 2021, 99% (99) of our raw materials and products' packaging materials per dry tonne were fossil free.

> Consumers use around 160 million packages made from Metsä Board's folding boxboard every day. By reducing the weight of paperboard by 1%, you can achieve material savings equal to approximately 1.6 million packages a day.

We improve the efficiency of our transports

Given that the majority of our products are sold to somewhere else than Finland or Sweden, the transport distances are often long. We minimise the environmental impact of logistics with careful route planning and by developing more efficient operating methods.

As far as possible, we favour the alternatives that generate the least amount of emissions, such as marine and rail transports instead of road transports. In 2021, 39% (38) of our transports conducted as sea transports, 38% (36) on road, and 6% (7) on rail, while 17% (19) related to port and warehouse operations, measured by logistics costs. As of 2021, we have been shifting from road to maritime transport by starting direct shipping routes from the Kemi industrial area to Central Europe, near our customers. As of 2022, some of the maritime transport departing from Kemi will be carried out with low-emission LNG vessels. We will also be re-routing our transport headed to the Iberian Peninsula as of 2022. This will reduce the average transport journey on this route by roughly 7% per tonne of paperboard.

Life cycle assessments help our customers in the selection of packaging materials

The environmental impact of our products arises over a product's entire life cycle: from the sourcing of the raw materials, production, transports as well as from the product's further processing and its disposal after use. Our lightweight paperboards, made resource-efficiently and primarily from a renewable raw material, respond well to the needs of the circular economy. All our paperboards are recyclable, and with good packaging design and by participating in initiatives supporting recycling, we aim for our products to be recycled after use (p. 49).

The life cycle assessments of our products produce vital information for our customers, who want their material selections to reduce the environmental impact of their packaging. At the same time, the life cycle assessments help us to further improve our products' environmental performance.

We always carry out our products' life cycle assessments and the comparisons between different materials in accordance with the ISO 14040 and ISO 14044 standards. Our calculations account for the environmental impact attributable to the production of raw materials and energy, sourcing and transports as well as our own production. The aspects most relevant in terms of paperboard packaging are the energy used in its production and the light weight of the paperboard itself. As we shift to the use of 100% fossil free energy in our production, the carbon footprint of our products will become even smaller. At its best, the carbon footprint of packaging made from our fresh fibre paperboard is more than 50% smaller than that of recycled fibre or solid bleached board packaging of equivalent stiffness (Ecoinvent database). Fresh fibre paperboard also offers significant climate benefits compared to plastic. For example, according to an independent study, the climate impact of a paperboard box for cherry tomatoes is 83% smaller than the impact of a box made from recycled plastic (Natural Resources Institute Finland). Read more about our product development and services (pp. 18–19).

Recognition for skills in the circular economy

Metsä Board won the Finnish Circular Economy Award and the Finnish Quality Award in the evaluation of Laatukeskus Excellence Finland. The awards are based on the international model of the European Foundation for Quality Management (EFQM). According to the external panel of judges, clarity in defining a direction, strategy implementation as well as in performance monitoring and reporting strengthens the company's competitiveness from the perspective of the circular economy. The circular economy evaluation carried out by Laatukeskus Excellence Finland included interviews with approximately 70 Metsä Board employees from across the organisation and a thorough review of Metsä Board's processes and operating methods. "The circular economy is at the core of our operations, and I was delighted to notice how visible it really is at every level of our organisation," says **Anne Uusitalo**, Metsä Board's Product Safety and Sustainability Director.

In the Circulytics assessment, Metsä Board achieved the general grade of B (on a scale from E to A). The assessment, provided by the Ellen MacArthur Foundation, supports businesses in their transition towards a circular economy. According to the assessment, the circular economy is clearly visible in our strategy and the skills level of our personnel, as well as in our sustainable use of water. By further increasing the share of certified wood in our wood use, we will be even better prepared to meet the challenges of the circular economy.

The entire life cycle of fresh fibre supports the circular economy

SUSTAINABLE PRODUCTS

In accordance with the principles of a circular economy, we invest continuously in the viability of forests and the resource efficiency of our processes, and in generating as little waste and emissions as possible, and keeping materials in circulation for extended periods of time.

Our main raw material is renewable and traceable wood

- We always ensure that the wood fibre we use meets the requirements of the PEFC and FSC® Chain of Custody systems and that it comes from certified or controlled forests, in which the biodiversity and regeneration after harvesting are ensured.

Our production is resource efficient

- We utilise more than 99% of our production side streams.
- We circulate water at our paperboard mills an average of 12–14 times and at our BCTMP mills, up to 30 times. We continue to increase the efficiency of our water use.
- Three of our mills already make use of artificial intelligence, which enables us to increase the consistency of our paperboard quality and reduce the consumption of energy and raw materials.

99% of our raw materials are fossil free

- Wood 8.3 million m³
- Process chemicals 8,646 dry tonnes
- Coatings, binders and pigments 314,727 dry tonnes
- Packaging materials 35,738 dry tonnes

85% of the energy we use is fossil free

From our energy consumption calculated as primary energy:

- Self-generated energy 5.4 TWh
- Purchased energy 6.4 TWh

100% surface water

- Surface water 115 million m³
- We do not operate in high water risk areas.

Read more about mill-specific information and capacities on page **60**.

We aim to reduce our Scope 1 and 2 emissions to zero

Bio-based CO_2 1,712,639 tonnes
Fossil-based CO_2 (Scope 1+2) 428,838 tonnes
Fossil-based CO_2 (Scope 3) 1,854,840 tonnes
Sulphur and nitrogen compounds and particles

Products

- Paperboard, 1,920,000 tonnes
- Pulp and BCTM, 1,362,000 tonnes
- Bioenergy
- Bioproducts, such as tall oil

We reduce the environmental impact of packaging

- At its best, the carbon footprint of packaging made from our fresh fibre paperboard is more than 50% smaller than that of recycled fibre or solid bleached board packaging of equivalent stiffness (Ecoinvent database).
- The optimal use of materials, and designing a package fit for purpose and to be recycled to reduce the overall environmental impact.

More than 80% of paper and paperboard packaging is recycled*

- All our paperboards are recyclable and/or compostable, depending on the local recycling systems.
- We further the recyclability of our products through active participation in organisations such as 4evergreen and in the European Paper Packaging Alliance.

Approximately 99% of the water is returned to waterbodies

- 58.7 million cubic metres of treated wastewater
- Emissions: COD, BOD, nitrogen and phosphorus compounds, solids, AOX compounds
- Cooling water

Side streams and waste mainly to reuse

- Utilised by-products 49,603
- Waste to materials use 46,250 tonnes
- Waste to energy 60,423 tonnes
- Landfill waste 337 tonnes
- Hazardous waste 1,558 tonnes

*) Collected for recycling in Europe and the United States (Sources: Eurostat and the EPA)

Fresh fibre paperboard is a safe and sustainable choice

SUSTAINABLE PRODUCTS

Safety is one of the key properties for food contact materials. With comprehensive product safety work Metsä Board wants to make sure that consumers can enjoy safe groceries packed in our materials.

All Metsä Board paperboards are produced from renewable fresh fibres, which are naturally pure, traceable and recyclable. Fresh fibre paperboards do not alter odour or taint properties of the packed products, and they are the safest choice for wood-based food packaging and other sensitive packaging end uses.

We know our raw materials

The whole production chain from the forest to the board mill is coved by Metsä Group's business model. Controlled production chain ensures that we know exactly the origin of our paperboards' raw materials.

In our paperboard production processes only carefully selected chemicals are being used. Each chemical goes through a very detailed inspection: chemicals must meet the requirements of relevant legislations, e. g. food contact material regulations. Every chemical used at a mill has passed comprehensive occupational safety and environmental assessments. Our fresh fibre products do not contain unknown chemicals, such as printing ink traces, which can cause problems when using recycled fibre based materials.

Safe paperboard is produced in clean production environment

Since our paperboards are part of the food supply chain, our product safety practice criteria are equally high compared to the food industry. Our mills follow good manufacturing practices (GMP), which are required for all food contact materials. Additionally, all Metsä Board mills have certified ISO 22000 food safety management systems in place. Mills producing food contact materials have also been certified according to the requirements of FSSC 22000 food safety management system.

In addition to the product safety requirements for our own production, we also require our suppliers and subcontractors to meet equal standards. This way we can ensure the cleanliness and safety of the products in all stages of the supply chain. With regular product safety questionnaires, audits and follow-up we make sure that the risks are controlled through the whole production and supply chain.

Safe product fulfills the requirements

Direct food contact materials are regulated strictly all over the world. Metsä Board confirms the product safety properties by ensuring compliance with relevant regulations affecting on its market areas: Europe, Americas and Asia. Our global team of product safety experts continuously follows the development of relevant regulations and requirements. The competence of our personnel is maintained with regular trainings.

Our products are tested regularly in accredited laboratories to meet quality and product safety standards. Laboratory analyses together with detailed internal risk analyses form the basis for our Product Safety Statement, which includes product specific information covering the product safety and compliance properties of our products.

On an EU level, food contact material risks and recalls are monitored and reported through RASFF notifications. There were no product safety related RASFF notifications or recalls regarding Metsä Board products during 2021.

Our paperboard protects COVID-19 vaccines

The coronavirus pandemic has increased the need for packaging solutions that are sustainable, safe and clean, and that meet the criteria for good manufacturing practices. In demanding medical applications, such as vaccine packaging, the paperboard packaging must also withstand extreme temperatures as low as -70 degrees and protect the injection bottles throughout transportation and storage.

The Chinese pharmaceutical companies Sinovac (Beijing) and Sinopharm (Wuhan) approved MetsäBoard Pro FBB Bright paperboard as the material of choice for their COVID-19 vaccine packaging. Thanks to their good cleanliness and strength properties, Metsä Board's paperboards are perfectly suited for vaccine packaging. "It's an honour for Metsä Board to be actively contributing its share to combating the pandemic", commented **Andy Zhong**, Metsä Board's local sales manager.

Product safety related risks are managed through the whole production and supply chain

Raw materials	Production	Product safety	Transportation	Converting	Consumer safety
All wood raw material used in our production comes from controlled or certified forests and is traceable. The chemicals we use are carefully chosen and safe for use. Chemical suppliers are required to answer to Metsä Group product safety questionnaire annually.	Our mills work according to Good Manufacturing Practices (GMP), and certified food safety management systems ISO/FSSC 22000 are in place. Their status is verified annually during internal and external audits.	The products are tested regularly for quality and product safety properties in internal and external laboratories. Different end uses are taken into account, especially food packaging.	By careful packaging, supply chain control and regular auditing we ensure that our products stay safe and clean during transportation and storage.	High quality paperboards guarantee high performance in converting. Trouble-free production diminishes product safety risks during different stages of converting.	The most important function of food packaging material is to ensure, that packed food stays safe for consumers' use. Laboratory testing together with detailed internal risk analyses form the basis for our Product Safety Statement.

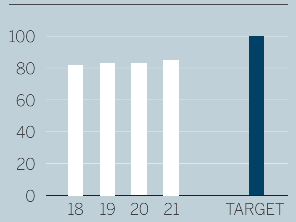
Our climate targets are leading the way towards a fossil free future

CLIMATE AND ENVIRONMENT

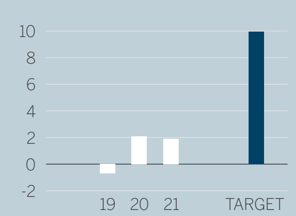
Climate change mitigation requires significant investments which will adapt our operations to the low-carbon future. Our target is fully fossil free production.

Our 2030 target:

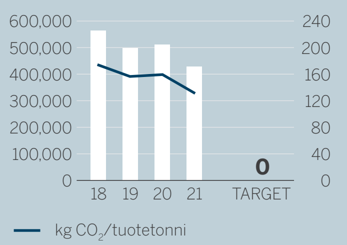
SHARE OF FOSSIL FREE ENERGY
%



ENERGY EFFICIENCY
%



FOSSIL-BASED CO_2 EMISSIONS (SCOPE 1+2, MARKET-BASED)
t kg/t



We made progress in our fossil free target at Kyro and Simpele

Metsä Board Kyro has replaced peat with renewable energy in its energy generation. The Kyro power plant aims to use primarily wood-based fuels – such as chips, bark, and sawdust – generated alongside Metsä Group's production and wood supply. Abandoning the burning of peat reduces the share of fossil fuels used by the power plant from a quarter to approximately a tenth of the total. The abandoning of peat has required investments, thanks to which the production of the paperboard mill's energy and local district heat will generate even less fossil-based carbon dioxide emissions in the future.

The Simpele mill has reduced the use of peat to a considerable degree. The mill aims to replace all the peat it uses with a renewable fuel during 2022.

Theme-related UN goals

CO_2 EMISSIONS IN 2018–2021

	2021	2020	2019	2018
Fossil-based CO_2 emissions (Scope 1), t	255,467	240,036	248,274	288,579
Indirect fossil-based CO_2 emissions (Scope 2, market-based), t	173,371	272,115	250,742	275,048
Indirect fossil-based CO_2 emissions (Scope 2, location-based), t	306,555	373,816	374,409	416,789
Indirect fossil-based CO_2 emissions (Scope 3), t	1,854,840	1,847,773*	1,026,896	1,058,455
Bio-based CO_2-emissions, t	1,712,639	1,812,952	1,815,179	1,837,299
Fossil-based CO_2 emissions (Scope 1 + Scope 2, market-based), kg CO_2/tonne produced	130.6	159.4	156.5	174.6

* The increase in Scope 3 emissions after 2019 is explained by changes in calculation methodology in 2020: two new categories (Processing of sold products and End of life treatment of sold products) were added in the calculations. Calculation methodology related to purchased chemicals was also updated. Data for 2020 have been revised compared to the previously reported figure.

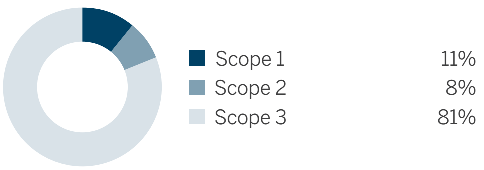
We want to play our part to meet the strictest requirements of the Paris Agreement, which aims to limit global warming to 1.5 degrees. Our target is for our production units not to use any fossil fuels at all by the end of 2030, and for them not to purchase any fossil-based energy. Once we achieve this, our direct and indirect fossil-based carbon dioxide emissions (Scope 1 and 2) will fall to zero. Our target has been approved by the Science Based Targets initiative. Our reduction target for the emissions of our value chain (Scope 3) also meets the strictest requirements of the SBTi.

In addition to our earlier emission reductions, we have reduced our fossil-based CO_2 emissions (Scope 1 and Scope 2) by 25% per tonne produced from 2018. In 2021, our Scope 1 emissions nevertheless increased from the previous year. The reason for this was a fire which broke out on the chip conveyor belt at the Husum pulp mill, due to which the mill had to use oil instead of a renewable fuel for two months. In 2021, fossil-free energy accounted for 85% of our total energy consumption (2020: 83). Most of this consisted of renewable energy, which was produced from the fractions generated by our processes and wood supply, such as black liquor, bark, and logging residue.

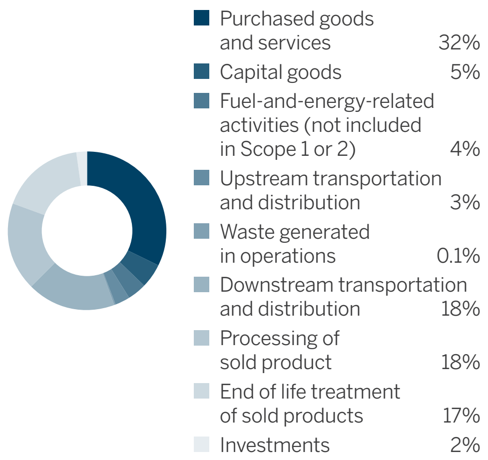
The value chain plays a significant role

The emissions of our value chain (Scope 3) make up 81% of all our fossil-based carbon dioxide emissions. A significant portion of the emissions in our value chain is attributable to the production of the raw materials we purchase (including pulp, binders, pigments, and process chemicals) and the further processing and transport of the products we sell, and their disposal at the end of their life cycles. The reduction of these emissions is more challenging for us than the measures pertaining to our own mills. We encourage our key suppliers to set themselves emission reduction targets in accordance with the SBTi. We also favour low-emission modes of transport, wherever possible (pp. 44–47).

THE MAJORITY OF OUR FOSSIL-BASED CO_2 EMISSIONS ARE GENERATED BY OUR VALUE CHAIN



THE PRODUCTION OF OUR RAW MATERIALS AND THE HANDLING OF THE SOLD PRODUCTS GENERATE THE MOST SCOPE 3 EMISSIONS



The calculation methodologies for the categories are explained in Metsä Board's CDP reporting.

METSÄ BOARD
Annual and Sustainability Report 2021

A fossil free roadmap for all mills

Our roadmap aiming for entirely fossil free energy is composed of mill-specific investments and measures with which we phase out fossil-based energy sources and continue to improve the efficiency of energy and process water use.

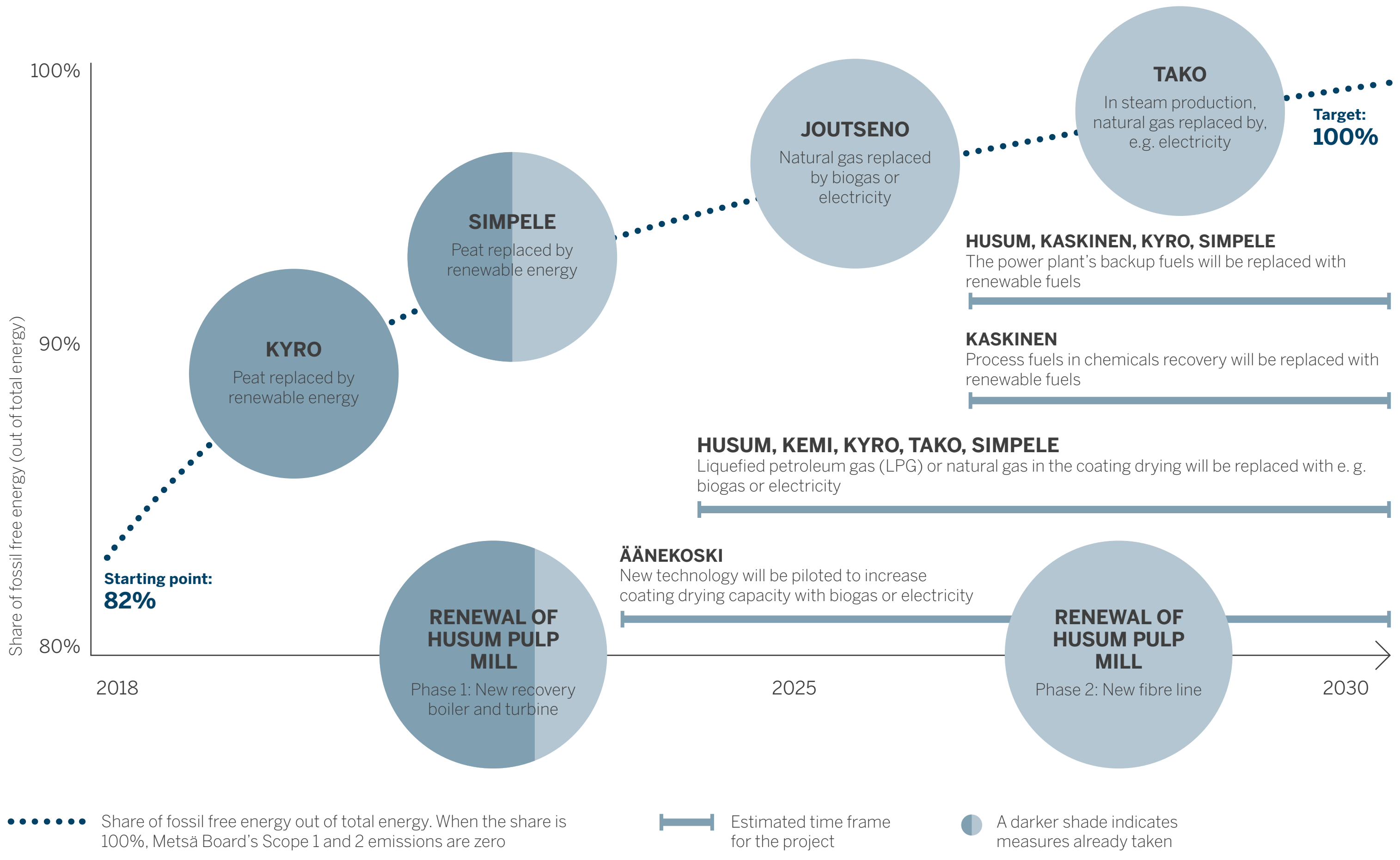
The fossil fuels used in our own energy generation (natural gas, liquefied petroleum gas, peat, and oil) will be replaced by renewable fuels or by energy generated by fossil free means. We will also switch to renewable or fossil free alternatives in terms of purchased energy.

In 2021, we implemented several measures improving energy efficiency at our mills, the most important of which were improving the efficiency of the evaporation plant at the Husum pulp mill and increasing the dry matter content of black liquor, the development of the drying hood ventilation of paperboard machine 1 and the energy recovery of condensates at the Tako mill, and the renewal of the boiler feedwater pump at the Simpele power plant. By the end of 2021, we had improved energy efficiency by 1.9% (2.1) compared to the 2018 base year. In the summer of 2021, efforts to improve energy efficiency were slowed down by a fire which broke out on the chip and bark conveyor belt of the Husum pulp mill.

Water use also makes a difference, given that the use of process water and wastewater treatment consumes energy, and thereby generates emissions. Read more about how we are reducing our water use (pp. 56–59).

Roadmap for fossil free mills by the end of 2030

Key measures, according to plan, for reducing fossil-based carbon dioxide emissions to zero. Some of the projects still lack a final investment decision and the times shown are indicative. The purchasing of power and heat will shift to fossil free energy sources.



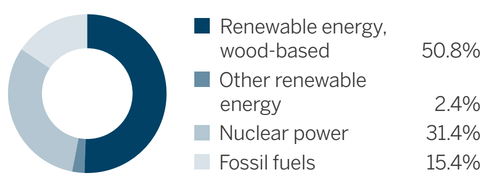
The generation of renewable energy and self-sufficiency in electricity will increase at Husum

The first phase in the renewal of the Husum pulp mill, which involves the renewal of the recovery boiler and turbine, will increase the mill's generation of renewable energy, and increase its self-sufficiency in electricity from approximately 40% to around 80%. In addition, the use of heavy fuel oil as a backup fuel will reduce, and by 2030, the necessary backup fuels will be replaced with renewable alternatives. The energy source used in the recovery boiler is the wood-based black liquor generated alongside pulp production. The new recovery boiler and turbine will start up in 2022.

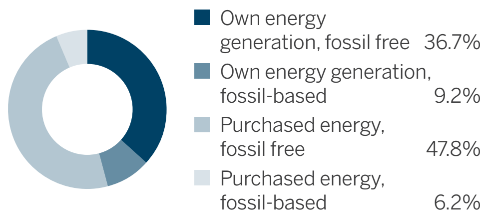
Metsä Board's self-sufficiency in electricity is set to grow over the next few years

In 2021, some 60% of Metsä Board's electricity consumption was covered by the company's own generation, electricity purchased from Pohjolan Voima, and electricity purchased from associated company Metsä Fibre. The rest, 40%, was purchased directly from the market. The company hedges against electricity's market-price risk in accordance with its commodity hedging policy. The company estimates its self-sufficiency in electricity to grow from roughly 60% to more than 90% by the end of 2024. The self-sufficiency in electricity will increase due to, among other things, the adoption of the new recovery boiler at Metsä Board's Husum mill, the start-up of the new nuclear power plant OL3 at Olkiluoto, and Metsä Fibre's new bioproduct mill in Kemi.

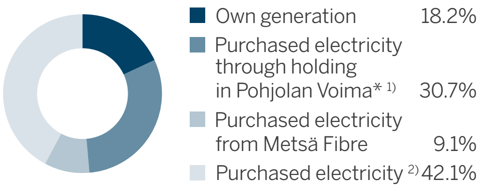
ENERGY CONSUMPTION BY ENERGY SOURCE IN 2021
11.9 TWh (Primary energy)



ENERGY CONSUMPTION BY SOURCING METHOD IN 2021
11.9 TWh (Primary energy)



ELECTRICITY CONSUMPTION BY SOURCING METHOD IN 2021
2.4 TWh



1) Pohjolan Voima Oyj is a non-listed company which delivers power and heat to its shareholders at cost price. Metsä Board has a 3.2% holding in Pohjolan Voima.
2) Most of the electricity purchased from the market is nuclear power or hydropower.

ENERGY CONSUMPTION

	2021	2020	2019	2018
Energy consumption, GWh (as primary energy)	11,860	11,844	11,699	11,675
Energy consumption, GWh (according to GRI)	8,428	8,355	8,398	8,643

Previously reported energy consumption figures have been revised for hydropower and GHG Protocol requirements.

Energy consumption has been calculated as the consumption of primary energy, which describes the consumed energy and the amount of energy needed to generate it. Purchased electricity is converted into primary energy by dividing the amount of purchased electricity with the assumed efficiencies of the energy generation: traditional fuels 0.4; nuclear power 0.33; hydro, wind and solar power 1. Purchased heat is calculated by the actual fuel consumption of nearby power plants.

When calculated according to the GRI methodology, Metsä Board's energy consumption is 8.4 TWh. Rather than taking into account the efficiency factors of power and heat, this calculation method sums up the renewable fuel, or biomass (4.3 TWh), non-renewable fuel (1.1 TWh), self-generated hydropower (0.03 TWh, as well as purchased electricity (2.0 TWh) and purchased heat (1.0 TWh, net), consumed at the mills.

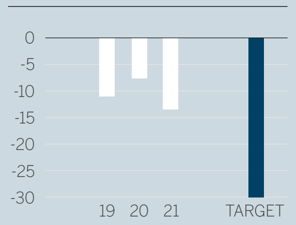
Resource-efficient production reduces environmental impacts

CLIMATE AND ENVIRONMENT

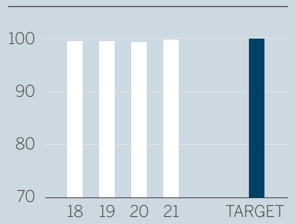
We monitor our environmental impact closely. We invest in making our use of water and side streams more efficient, which supports the circular economy, the management of water resources as well as the achievement of our energy and climate targets.

Our 2030 target:

WE HAVE REDUCED THE USE OF PROCESS WATER BY -13.5% PER TONNE PRODUCED FROM THE 2018 LEVEL
%



WE UTILISE MORE THAN 99% OF OUR SIDE STREAMS
%



Environmental management with precise targets and practices

Our operations are guided by the principles of our environmental policy, which concerns, among other things, sustainable forest management, environmental responsibility, the continuous improvement of our operations, resource efficiency, and our suppliers' sustainability. All our mills operate within the framework of mill-specific environmental permits issued by the authorities. The permits define maximum limits for discharges into bodies of water and emissions into the atmosphere. The permits also set limits for environmental noise and minimum requirements for the monitoring of emissions and reporting on them. Before initiating any major projects, such as new production lines, we carry out the environmental impact assessment required by law, in which we listen to the perspectives of residents and other stakeholders.

All our production units comply with certified management systems in terms of quality, the environment, and energy, among other things. In accordance with the management systems, our production units are subject to regular risk assessments as well as internal and third-party audits. We measure and develop our performance according to our ambitious sustainability targets, which exceed the requirements set by law.

The majority of our emissions into the air result from the energy production needed for the manufacture of pulp, high-yield pulp, and paperboard. Besides the climate impact of carbon dioxide, our key climate emissions consist of sulphur and nitrogen oxides, which cause acidification. We also measure particulate concentrations from our mills' flue gases, and in the production of chemical pulp, we monitor malodorous sulphur compounds. Our mills may also have local noise impacts.

Our wastewater discharges are largely the result of our products' production process. The key indicators to be monitored include the biological and chemical oxygen demand (BOD, COD), the amount of nutrient discharges (phosphorus and nitrogen) with an impact on eutrophication, the amount of solids, and the chlorine-containing AOX compounds generated in the bleaching of pulp. Our mills' impact on water bodies is typically small compared to the diffuse source input attributable to agriculture and forestry as well as scattered settlement. In Finland, for instance, only 3–4% of nutrient emissions derive from the pulp and paper industry (the Finnish Forest Industries Federation).

We use the best available technology in our production and continuously monitor that our mills operate in compliance with the environmental permits issued to them. Any deviations and the corrective measures pertaining to them are reported to the authorities. In 2021, Metsä Board's production units recorded some cases in which permit conditions were exceeded at a monthly and an annual level. Our mill-specific emissions and deviations from the conditions of environmental permits are reported on pages 60–61 of this Annual and Sustainability Report. There was also an oil spill at the Husum mill on 16–17 September, which originated from the mill's oil burner. To minimise any environmental damage, Metsä Board has supported the investigation of the incident, and the clean-up of the oil from the sea and the shores with all the necessary resources. It has also maintained a dialogue with the key stakeholders, such as residents and authorities.

Our water use became more efficient

We aim to optimise the water use in our processes and enhance the recycling of water within the production process continuously, with the aim of reducing the need to abstract new raw water. This allows us to both minimise wastewater discharges and save energy, which reduces our climate impact. It also reduces our water risk (pp. 28–29).

All of the process and cooling water we use is sourced from nearby surface waters, such as rivers and lakes. The maximum volumes for water sourcing are defined in the water sourcing permit issued by the authorities. Given that all our mills are located in Finland and Sweden, and moreover in areas with plenty of water, we do not source any water at all from areas with a high or extremely high baseline water stress (WRI Aqueduct Water Risk Atlas). After use, the process water is carefully treated before it is returned to the waterbodies. Given that the cooling water flows within its own, closed cycle, it always remains clean. Our water consumption is very small in proportion to the volume of water we use: of all the water we use, some 99% is returned to waterbodies after use. The rest, 1%, either evaporates during the process or is bound to products.

The Husum integrated mill accounts for roughly 40% of our water use, which is why the renewal of the Husum pulp mill will reduce our water use significantly by the end of 2030.

In 2021, Metsä Board's use of fresh water amounted to 115 million cubic metres (2020: 114 million m^3), of which roughly half was used in the process and the other half in the cooling of equipment. In addition to our earlier reduction in water use, we aim to reduce the use of process water by a further 30% per tonne produced in 2018–2030. In 2021, the use of process water per tonne produced reduced by 13.5% (-7.7) compared to 2018, thanks to our mills' high-capacity utilisation rate and a number of small development measures.

To achieve the 2030 target, we have defined mill-specific measures by which to enhance the recycling of water and reduce the sourcing of raw water from waterbodies. The Simpele paperboard mill, for example, will invest in the renewal of its stock preparation and white-water system in 2021–2023. This will reduce both the use of process water and energy. In Kemi, the paperboard mill's development programme in 2021–2023 will reduce the mill's water use by approximately 40% and energy consumption by around 5% per tonne of paperboard produced. The Husum integrated mill accounts for roughly 40% of our water use, which is why the renewal of the Husum pulp mill will reduce Metsä Board's water use significantly by 2030.

We are already making use of almost all side streams

As part of Metsä Group, we can make full use of our wood raw material. Metsä Group's production units use the most valuable parts of trees, such as the thick logs to produce wood products for the purposes of the construction industry. The thinner parts of tree trunks and the younger trees harvested from thinning sites are the main raw material of pulp used in paperboard. Bark and branches are used in the production of bioenergy.

We improve our recovery methods continuously, so as not to generate waste in the production of pulp and paperboard. Disc filters allow us to enhance the recycling of process water and thereby reduce the loss of fibre material, for example. We are also looking for new ways to reuse production side streams and use organic waste for energy production. Our target is to put all production side streams into use in such a way that our processes will not generate any landfill waste at all after 2030. Our biggest challenge is to find applications for the green liquor dregs generated in pulp production, and we are currently studying potential solutions to achieve this.

In 2021, we used 99.8% (99.3) of our side streams. Side streams consist of process waste and by-products generated during production, such as the ash used in fertilisers. The utilisation of side streams does not apply to any hazardous waste nor municipal or construction waste. Of the side streams, 56% were reused as materials and 44% in energy production.

Our operations also generate hazardous waste, municipal waste, and construction waste which is not included in the 100% utilisation target we have set. Of all waste generated in our operations, 43% was directed to materials reuse, 56% was used as energy, 0.3% was delivered to landfills, and approximately 1% to the treatment of hazardous waste.

WATER USE, BY-PRODUCTS AND WASTE, 2018–2021

	2021	2020	2019	2018
Water sourcing, 1,000 m^3	115,095	113,633	100,967	105,921
Of sourced water used as process water, 1,000 m^3	59,551	62,037	59,381	65,662
Wastewater discharges generated from process water, 1,000 m^3	58,738	58,891	59,326	65,662
Utilised by-products, tonnes	49,603	69,913	37,026	28,959
Utilised waste, tonnes	106,673	104,045	162,428	164,626
Landfill waste, tonnes	337	1,124	1,502	1,611
Hazardous waste, tonnes	1,558	685	936	1,146

Woodio manufactures bathroom products from a wood composite. The birch chips generated as a side stream of Metsä Board's Joutseno high-yield pulp mill are an important raw material of the wood composites. Woodio is a Finnish startup company, in which Metsä Group's innovation company Metsä Spring has made a capital investment.

METSÄ BOARD
Annual and Sustainability Report 2021

MILL-SPECIFIC INFORMATION

Mills	Joutseno	Kaskinen	Kemi	Kyro	Simpele	Tako	Äänekoski	Husum	Others [6]	Total
COUNTRIES	FINLAND	FINLAND	FINLAND	FINLAND	FINLAND	FINLAND	FINLAND	SWEDEN		
PERSONNEL										
Number of employees, FTE [1]	58	84	121	161	266	201	193	671	634	**2,389**
Total Recordable Injury Frequency (TRIF) [2]	31.6	13.7	4.8	10.8	14.8	14.0	12.0	6.0	-	**9.8**
Lost-time accident frequency (LTA1) [3]	10.5	13.7	0.0	10.8	10.6	5.6	9.0	3.4	-	**7.0**
Sickness absences, % [4]	4.6	2.9	4.6	2.9	3.9	5.8	4.8	4.1	-	**4.1**
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		
ISO 45001	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)										
Biogenic carbon (CO_2)	0	176,464	0	0	172,473	0	0	1,363,701		**1,712,639**
Fossil carbon (CO_2)	27,238	6,502	6,335	4,702	54,636	74,622	0	81,433		**255,467**
Sulphur (SO_2) [5]	0	12	0	0	72	0	0	211		**295**
Total reduced sulphur (TRS)	0	0	0	0	0	0	0	60		**60**
Nitrogen oxides (NO_2)	14	95	3	2	147	46	0	872		**1,180**
Particles	10	11	0	0	1	0	0	205		**228**
DISCHARGES TO WATER (t)										
Adsorbable organic halogen (AOX)	0	0	0	0	0	0	0	47		**47**
Chemical Oxygen demand (COD)	681	1,156	320	157	524	168	426	7,056		**10,488**
Biological oxygen demand (BOD)	4	59	37	14	89	56	190	309		**758**
Total phosphorus	0	2	1	0	2	1	0	21		**29**
Total nitrogen	3	22	23	15	13	1	7	184		**268**
Total suspended solids	25	223	110	58	93	33	72	931		**1,544**
WATER USE (1,000 m^3)										
Water sourcing	6,142	16,656	10,405	4,140	27,506	3,520	5,002	41,724		**115,095**
Waste water flow	579	3,847	8,291	3,253	4,591	2,622	3,417	32,136		**58,738**
WASTE AND BY-PRODUCTS (T)										
Utilised by-products and waste	11,662	20,744	5,378	16,940	22,246	4,769	2,819	71,717		**156,276**
Landfill waste	0.0	4.7	328	3.7	0.05	0.0	0.0	0.0		**337**
Hazardous waste	27	35	2	1,028	65	80	15	306		**1,558**

1) Full-time equivalent on 31 December 2021
2) Total recordable incident frequency per million worked hours
3) LTA1 frequency rate. Accidents at work resulting to at least one day sick leave per million worked hours.
4) % of theoretical working time
5) SO_2 calculation contains also TRS (Husum)
6) Includes personnel from sales and logistics operations, management and subsidiaries. Production, emissions and waste originate from Äänevoima's production of energy sold for external use. Personnel figures of Others are included in Metsä Board's total figures.

License codes: PEFC/02–31–92 and FSC®-C001580

An independent external assurance has been performed for the data in the table as part of Metsä Group's Sustainability Report (limited assurance).

PRODUCTION CAPACITIES

Board mills

Tonnes	Country	Machines	Folding boxboard	White kraftliner	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	300,000		300,000
Kemi	Finland	1		425,000	425,000
Husum	Sweden	2	400,000	250,000	650,000
Total		8	1,360,000	675,000	2,035,000

Pulp and BCTMP mills

Tonnes	Country	Chemical pulp	BCTMP	Total
Husum	Sweden	730,000		730,000
Joutseno	Finland		350,000	350,000
Kaskinen	Finland		390,000	390,000
Total		730,000	740,000	1,470,000

Metsä Fibre pulp mills [1]

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.

ENVIRONMENTAL PERMIT LIMIT VIOLATIONS

In 2021, there were no environmental incidents or permit violations at Metsä Board's mills that would have caused significant environmental impacts, and that would have been followed by claims, compensations or significant media coverage. However, in September, there was an accidental oil spill from an oil burner at the Husum mill, which required action and caused media publicity in Sweden. To minimise any environmental damage, Metsä Board has supported the incident's investigation, and the clean-up of the oil from the sea and the shores with all the necessary resources. It has also maintained a dialogue with the key stakeholders, such as authorities and residents. All incidents that have caused violations of monthly, quarterly or annual permit limit values are detailed with description and corrective actions in the table below. The authorities have been informed and corrective actions have been taken in all cases.

Unit	Incident	Corrective actions
Simpele	The COD emissions exceeded the permit limit in February, and the phosphorus emissions exceeded the permit limit in February, March and April due to problems with compressors, nutrient dosing and cold weather (four incidents in total during spring).	Optimisation of nutrient dosage and application parameters. Maintenance.
Simpele	The COD emissions exceeded the permit limit in December, and the phosphorus emissions exceeded the permit limit in November and December due to process failures at the treatment plant (three incidents in total in autumn). The annual limit for phosphorus was also exceeded.	Process optimisation and development project for effluent treatment.
Kaskinen	The phosphorus emissions exceeded the permit limit in April due to losses of solids. Sludge treatment problems caused the high age of the sludge. At the same time, a large amount of municipal water came for wastewater treatment.	Maintenance, sludge age control and nutrient dosage.
Kyro	The permit limit for solids was exceeded in December. This was due to a high solids load to the waste water treatment plant caused by a process failure in the paperboard production.	Optimum precaution.

Disclosure in accordance with the SASB Standard

Our reporting concerning 2021 follows the SASB Standard for Pulp and Paper Products, which falls under the scope of the SASB topic Renewable Resources and Alternative Energy. References to more detailed information are given in the table.

CODE	ACCOUNTING METRIC	CATEGORY	COMMENTS AND REFERENCES
Greenhouse gas emissions			
RR-PP-110a.1.	Gross global Scope 1 emissions	Quantitative	255,467 tonnes of fossil-based Scope 1 carbon dioxide emissions. We also disclose biogenic carbon dioxide emissions as well as fossil-based Scope 2 and Scope 3 carbon dioxide emissions (p. 53). The emissions of other greenhouse gases are estimated to be very low and immaterial in terms of the disclosures.
RR-PP-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets.	Discussion and analysis	Our target is to reduce our Scope 1 and Scope 2 emissions by 100% from the baseline year of 2018 by the end of 2030. According to the target, all our mills will abandon the use of fossil-based energy sources, and thereby our fossil-based Scope 1 and Scope 2 emissions will reduce to zero. In 2018–2021, our Scope 1 and 2 emissions per tonne produced reduced by 25%. Further information about our progress in this respect and on our plan for achieving the target can be found on pages 52–55.
Air quality			
RR-PP-120a.1	NO_x (excluding N_2O)	Quantitative	1,180 tonnes (as NO_2)
	SO_2	Quantitative	295 tonnes
	Volatile Organic Compounds (VOCs)	Quantitative	Our production processes do not generate substantial amounts of VOCs and Metsä Board is not obligated to measure them regularly. This is why Metsä Board does not consider VOCs material in terms of the disclosures.
	Particulate matter (PM)	Quantitative	228 tonnes
	Hazardous Air Pollutants (HAPs)	Quantitative	Our production processes do not generate substantial amounts of HAPs and Metsä Board is not obligated to measure them regularly. This is why Metsä Board does not consider HAPs material in terms of the disclosures.
Energy management			
RR-PP-130a.1	Total energy consumed	Quantitative	The amount of energy consumed by the company was (8,428 GWh) according to the GRI calculation method. Alternatively, the consumption may be expressed as primary energy consumption (11,860 GWh), which is higher, because the calculation accounts for the efficiency of the energy generation. In accordance with the established practice, we disclose energy consumption as gigawatt hours and based on lower heating values. Further information on energy can be found on page 55.
	Percentage grid electricity	Quantitative	25%
	Percentage from biomass	Quantitative	67%
	Percentage from other renewable energy	Quantitative	3% In addition to renewable energy sources, nuclear power produced without fossil fuels plays an important role in achieving our fossil free target.
	Total self-generated energy	Quantitative	4,489 GWh (including energy sold), of which 80% renewable energy.
	Risks and uncertainties related to the use of biomass as an energy source.	Discussion and analysis	The biomass we use is mainly based on the use of the black liquor, bark, and logging residue generated in the context of our production and wood supply. We have performed a risk analysis in terms of the biomass, and all the biomass we use is climate neutral in accordance with EU regulations and meets the EU's sustainability criteria. Should the sustainability criteria change in the long run, some additional costs may be allocated to biomass's energy use.

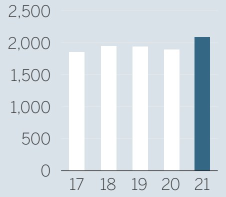
CODE	ACCOUNTING METRIC	CATEGORY	COMMENTS AND REFERENCES
Water management			
RR-PP-140a.1	Total water withdrawn	Quantitative	115,095 (1,000 m³), 100% of the process and cooling water is surface water. Small amount of domestic water is groundwater (0.05% of all water).
	Total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	Quantitative	Our water consumption is minor in proportion to the volume of water we use: approximately 99% of all the water we use is returned to waterbodies after use. The rest, roughly 1%, either evaporates during the process or is bound to products. 0% of the water comes from areas with high or extremely high baseline water stress (WRI Aqueduct Water Risk Atlas).
RR-PP-140a.2	Description of water management risks and discussion of strategies and practices to mitigate those risks	Discussion and analysis	All our mills are located in areas with ample water resources, due to which our water use does not impair the availability of water to other parties. Risk assessments are carried out regularly at our production units in accordance with certified management systems. Climate change may also cause water-related risks in the future. Our target of reducing the use of process water by 30% per tonne produced by the end of 2030 reduces our water risk. Further information on water use and risk management is available on pages 28–29 and 56–58.
Supply chain management			
RR-PP-430a.1	Percentage of wood fibre sourced from (1) third-party certified forestlands and percentage to each standard and (2) meeting other fibre sourcing standards and percentage to each standard	Quantitative	83% of the wood fibre we use comes from PEFC or FSC®-certified forests, and 17% of the fibre meets the criteria for PEFC Controlled Sources and FSC® Controlled Wood. All of the wood fibre we use is therefore traceable. In our view the properties of PEFC-certified and FSC®-certified wood fibre are not materially different, due to which we do not disclose their percentages separately. Further information is available on page 38–40.
RR-PP-430a.2	Amount of recycled and recovered fibre procured	Quantitative	0 tonnes Metsä Board produces premium paperboards made from pure, traceable fresh fibre also suitable for demanding end uses requiring a high level of hygiene. Our life cycle assessments have shown the carbon footprint of packaging made from our fresh fibre paperboard to be at its best more than 50% smaller than that of packaging made from recycled fibre of equal stiffness. Further information is available on page 46–47.
Activity metrics			
RR-PP-000.A	Pulp production	Quantitative	1,362,000 tonnes (chemical pulp and BCTMP)
RR-PP-000.B	Paper production	Quantitative	1,920,000 tonnes (folding boxboard and white kraftliners)
RR-PP-000.C	Total wood fibre sourced	Quantitative	8.3 million m³. It is our company's established custom to indicate volume as cubic metres, rather than as tonnes. Further information is available on page 38–39.

Contents

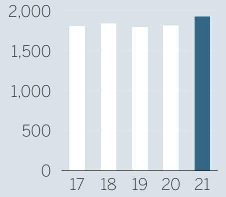
This is voluntary published pdf report, so it does not fulfill the disclosure obligation pursuant to Section 7:5§ of the Securities Markets Act.

Key figures

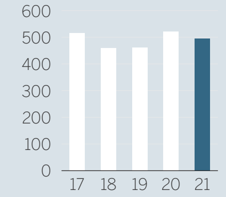
SALES
EUR million



PAPERBOARD DELIVERIES
1,000 tonnes

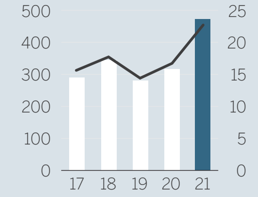


METSÄ BOARD'S MARKET PULP DELIVERIES [1)]
1,000 tonnes

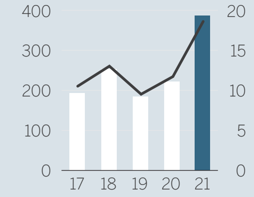


[1)] includes chemical pulp and high-yield pulp (BCTMP)

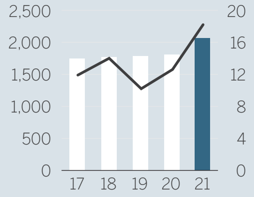
COMPARABLE EBITDA
EUR million,
% of sales



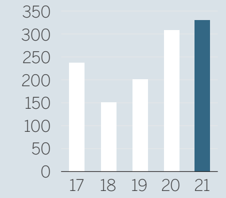
COMPARABLE OPERATING RESULT
EUR million,
% of sales



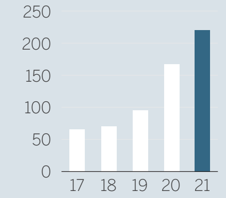
CAPITAL EMPLOYED, EUR million
RETURN ON CAPITAL EMPLOYED, %



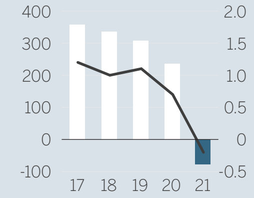
CASH FLOW FROM OPERATIONS
EUR million



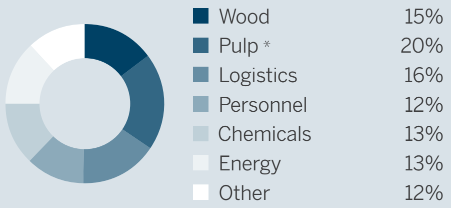
TOTAL INVESTMENTS
EUR million



INTEREST-BEARING NET DEBT, EUR million
INTEREST-BEARING NET DEBT / EBITDA, COMPARABLE

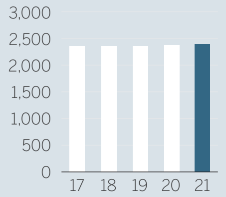


TOTAL COSTS 2021
EUR 1.7 billion



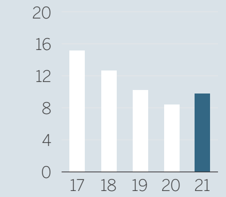
*) Pulp: Metsä Board purchases all external pulp from its associated company Metsä Fibre, of which Metsä Board owns 24.9%. Metsä Fibre's pulp cost structure in 2021: wood 57%, chemicals 11%, logistics 10%, personnel 5%, other 17%.

PERSONNEL AT THE END OF PERIOD



Development of key figures per share can be found on page 153.

TOTAL RECORDABLE INJURY FREQUENCY (TRIF)
per million hours worked



Report of the Board of Directors 2021

Metsä Board's business

Metsä Board is a leading European producer of fresh fibre paperboards and a forerunner in sustainability. The company focuses on premium lightweight fresh fibre paperboards, used primarily in consumer product packaging and in the various packaging solutions of the retail sector. Metsä Board's annual paperboard capacity is around 2 million tonnes. In addition, company produces chemical pulp and bleached high-yield pulp (BCTMP) for own use and to be sold as market pulp. The annual capacity for pulp and BCTMP is roughly 1.4 million tonnes. In addition, Metsä Board owns 24.9 per cent of its associated company Metsä Fibre. Like Metsä Board, Metsä Fibre is part of Metsä Group, and is a leading producer of wood-based bioproducts such as pulp, sawn timber, biochemicals and bioenergy. Metsä Board has sales to over 100 countries and has approximately 2,400 employees in 18 countries.

Strategy and financial targets

Metsä Board aims to grow in a controlled manner, accounting for the prevailing market situation. This growth will be based on skilled people, the industry's leading products and innovative packaging solutions. The company expects global demand for premium fresh fibre paperboard to grow by around 2–3% a year.

Metsä Board's decision-making is steered by profitability and sustainability targets, and by the increase of shareholder value. The company focuses on the continuous improvement of cost-effectiveness and on customer accounts which benefit from the high performance of the company's products and services. The objective is to distribute a competitive dividend and retain a strong balance sheet.

In 2021, Metsä Board's financial targets and dividend policy remained unchanged.

- The comparable return on capital employed (ROCE) is, at minimum, 12%.
  Actual in 2021 was 18.7%.
- A ratio of interest-bearing net liabilities to comparable EBITDA of, at maximum, 2.5.
  Actual in 2021 was -0.2.

In accordance with its dividend policy, 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 on the dividend for the 2021 financial year corresponds to 50% of the result for the financial period.

Operating environment

Paperboards

Global megatrends impact the operations of businesses and set requirements for the safety, quality, sustainability and recyclability of packaging. Pure and easily recyclable fresh fibre paperboards made from renewable raw materials replace non-renewable packaging materials like plastic. The coronavirus pandemic has shifted consumption from services to goods and accelerated the demand for consumer packaging across nearly all end uses. E-commerce has also grown significantly, especially in foodstuffs. Metsä Board expects global demand for premium fresh fibre paperboard to grow by around 2–3% a year in the future.

In 2021, the deliveries and market prices of European producers of folding boxboard and white kraftliners increased from the previous year. Metsä Board's share of the total deliveries by European folding boxboard producers was 34% (35), and 56% (57) of exports from Europe.

In the United States, the production of solid bleached boxboard for local consumption was stable, while the production of food service paperboard grew. The market prices of solid bleached boxboard and food service paperboards increased.

Market pulp

Metsä Board and its associated company Metsä Fibre sell mainly softwood pulp to Europe, the Middle East, Africa and Asia. In the long run, demand for market pulp will be supported by the global growth in demand for packaging and hygiene products made from renewable materials.

In Europe, demand for long-fibre pulp was supported particularly by the increased consumption of paperboard and the increase in the capacity utilisation rates of printing paper mills. The market prices of pulp increased in Europe.

In China, the strong demand for market pulp during the first half of the year weakened after the summer. The decline in demand was attributable to paper and paperboard mills' extensive production shutdowns resulting from state-imposed restrictions on energy use, lower-than-normal domestic consumption and a decline in the exports of paper and paperboard products, brought on by increased logistics costs. Demand picked up towards the end of the year. Market prices of pulp increased in China.

Sales

Metsä Board's sales in 2021 were EUR 2,084.1 million (2020: 1,889.5). Sales increased due to higher prices of paperboard and market pulp as well as higher delivery volumes of paperboard.

Result

The comparable operating result was EUR 386.6 million (221.2), and the operating result was EUR 375.9 million (227.3). Items affecting comparability during the financial period totalled EUR 10.8 million and comprised the following items: a EUR 7.0 million capital gain from the sale of a land area unrelated to business operations; a EUR -6.9 million impairment recognised in the assets of Metsä Fibre's Kemi pulp mill; EUR -1.8 million recognised in taxes as a result of the tax audit in Metsä Fibre's subsidiary in Italy; a EUR -4.6 million impairment recognised in the current paperboard production assets in Husum; and EUR -4.5 million in costs related to the chip conveyor fire at the Husum pulp mill.

The comparable operating result of the financial period improved due to the higher prices of paperboard and market pulp and the higher delivery volumes of paperboard. The profitability of the comparison year was burdened by the paper industry strike which concerned Metsä Board's mills in Finland and all Metsä Fibre pulp mills. The strike's negative effect on the operating result in 2020 was approximately EUR 20 million. The 2021 financial period was also subject to approximately EUR 9 million less in depreciations than the previous financial period.

Cost inflation was rapid in 2021. The prices of raw materials, especially those of latex, PE coatings and packaging materials, increased. Energy costs were higher due to the nearly record high market price of electricity. The prices of other sources of energy also increased. The higher energy prices were partly set off by sale of the company's unused emission allowances, totalling roughly EUR 21 million (in 2020: EUR 6 million). Logistics

Key figures

	2021	2020	2019
Sales, EUR million	2,084.1	1,889.5	1,931.8
EBITDA, EUR million	466.0	321.8	294.5
comparable, EUR million	472.2	315.8	279.0
EBITDA, % of sales	22.4	17.0	15.2
comparable, % of sales	22.7	16.7	14.4
Operating result, EUR million	375.9	227.3	180.8
comparable, EUR million	386.6	221.2	184.4
Operating result, % of sales	18.0	12.0	9.4
comparable, % of sales	18.6	11.7	9.5
Result before taxes, EUR million	365.8	212.3	165.6
comparable, EUR million	376.6	206.3	169.2
Result for the period, EUR million	314.0	170.1	144.6
comparable, EUR million	326.6	165.3	145.8
Earnings per share, EUR	0.82	0.48	0.41
comparable, EUR	0.85	0.46	0.41
Return on equity, %	19.4	12.5	10.9
comparable, %	20.2	12.1	11.0
Return on capital employed, %	18.2	12.6	10.2
comparable, %	18.7	12.2	10.4
Equity ratio at the end of the period, %	63	60	59
Net gearing at the end of the period, %	-4	17	23
Interest-bearing net liabilities/comparable EBITDA	-0.2	0.7	1.1
Shareholders' equity per share at the end of the period, EUR	4.78	3.89	3.76
Interest-bearing net liabilities at the end of the period, EUR million	-78.4	235.5	307.8
Total investment, EUR million	220.2	166.4	98.9
Net cash flow from operations, EUR million	329.6	307.7	200.5
Personnel [1]	2,389	2,370	2,351

1) at the end of the period

Delivery and production volumes

1,000 t	2021	2020	2019
Delivery volumes			
Folding boxboard	1,296	1,223	1,207
White kraftliner	627	587	584
Metsä Board's market pulp[1]	496	521	460
Metsä Fibre's market pulp[2]	762	696	745
Production volumes			
Folding boxboard	1,272	1,249	1,242
White kraftliner	634	591	574
Metsä Board's pulp[1]	1,362	1,371	1,373
Metsä Fibre's pulp[2]	747	702	734

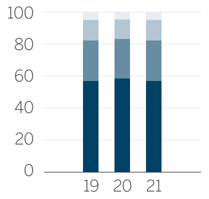
1) Includes chemical pulp and high-yield pulp (BCTMP).
2) Equal to Metsä Board's 24.9% holding in Metsä Fibre.

costs and the maintenance costs of mills were likewise at a higher level than in the year before. Other fixed costs increased due to higher personnel expenses and healthcare costs related to the prevention of the coronavirus pandemic, for example.

Exchange rate fluctuations, including hedges, had a negative impact of around EUR 56 million on the operating result compared to the previous year.

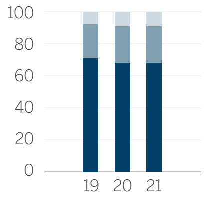
The associated company Metsä Fibre's share of Metsä Board's comparable operating result in January–December was EUR 123.0 million (-2.4). Metsä Fibre's profitability improved due to the increased prices and delivery volumes of market pulp. The demand for sawn timber was likewise strong in the company's main markets and prices increased clearly compared to the previous year.

SALES SPLIT BY PRODUCT
%



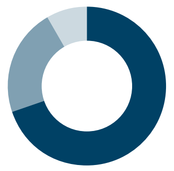
Folding boxboard
White kraftliner
Market pulp
Others

SALES SPLIT BY REGION
%



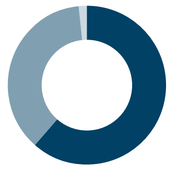
EMEA
Americas
APAC

DELIVERIES OF FOLDING BOXBOARD BY REGION IN 2021 (2020)
1,000 tonnes



EMEA region	906 (866)
Americas region	282 (274)
APAC region	108 (83)

DELIVERIES OF WHITE KRAFTLINER BY REGION IN 2021 (2020)
1,000 tonnes



EMEA region	385 (369)
Americas region	233 (210)
APAC region	9 (9)

Financial income and expenses totalled EUR -10.0 million (-14.9), including foreign exchange rate differences from accounts receivable, accounts payable, financial items and the valuation of currency hedging instruments, totalling EUR -2.3 million (-3.4). The interest expenses of financial liabilities decreased in 2021, given that the interest expenses of ongoing investments were capitalised in the cost of investments.

The result before taxes was EUR 365.8 million (212.3). The comparable result before taxes was EUR 376.6 million (206.3). Income taxes amounted to EUR 51.8 million (42.2).

Earnings per share were EUR 0.82 (0.48). The comparable earnings per share were EUR 0.85 (0.46). The return on equity was 19.4% (12.5), and the comparable return on equity was 20.2% (12.1). The return on capital employed was 18.2% (12.6), and the comparable return on capital employed was 18.7% (12.2).

Business development

Impacts of coronavirus pandemic on Metsä Board's business operations

The coronavirus pandemic has shifted consumption from services to goods and increased the consumption of products used at home. This has increased the demand for packaging materials, especially in food and other daily consumer goods – the main end uses for Metsä Board's paperboards. The pandemic has also accelerated sales in e-commerce, which has increased the demand for white kraftliners. In 2021, the demand for Metsä Board's fresh fibre paperboards was record high in nearly all end uses.

Metsä Board's production and deliveries have run smoothly during the pandemic. While the number of individual infections began to rise late in the year, chains of transmission were avoided due to restrictions.

The company continues to employ precautionary measures that aim to ensure the health of employees and the continuity of business operations, and to prevent the spread of the virus. Despite the precautionary measures, a prolonged pandemic could lead to disruptions in production or the supply chain.

Metsä Board's financial position is very good. The maturity structure of the loans is healthy, and the company has adequate liquidity. Metsä Board's paperboard product portfolio has responded to the changes in demand resulting from the pandemic, and the cash flow, which has remained strong, has supported the financial headroom.

Paperboard sales

Metsä Board's paperboard deliveries in January–December totalled 1,922,000 tonnes (1,811,000). Paperboard deliveries grew in all Metsä Board's market areas compared to the previous year.

The demand for folding boxboard was very strong across all end uses in 2021. Customers' interest in Metsä Board's dispersion-coated barrier paperboard increased markedly, and the growth in delivery volumes is expected to continue in 2022. Demand for white kraftliners was supported by the brisk retail sector and the growth in online commerce. In addition to strong demand, the market situation in Europe tightened due to the reduced import volumes of paperboard, especially from Asia.

Metsä Board increased the prices of folding boxboard and white kraftliners several times during the financial period in all market areas.

Paperboard prices, particularly the average prices of folding boxboard, are expected to continue to rise, given that some of the increases did not take effect until the beginning of 2022.

Market pulp sales

Metsä Board's deliveries of market pulp were 496,000 (521,000) tonnes, of which 67% was delivered to the EMEA region, and 33% to the APAC region. Delivery volumes were negatively impacted by the fire at the Husum pulp mill's chip conveyor in the summer.

The associated company Metsä Fibre's total pulp deliveries grew, totalling 3,000,000 tonnes (2,796,000). Around 50% of Metsä Fibre's market pulp is sold in the EMEA region and 50% in the APAC region, where China accounts for a significant share. Metsä Board holds 24.9% of Metsä Fibre.

Production

The production volume of paperboards during the financial period totalled 1,906,000 tonnes (1,840,000), while the combined production volume of pulp and high-yield pulp amounted to 1,362,000 tonnes (1,371,000).

A fire which broke out on the chip conveyor of the Husum pulp mill on 18 June closed Husum's pulp production for approximately four weeks. Paperboard production was run at a lower-than-normal capacity following the pulp mill's shutdown. The production losses resulting from the fire amounted to roughly 50,000 tonnes in pulp and roughly 30,000 tonnes in paperboard.

Production in the comparison year was limited by the paper industry's strike, which lasted for more than two weeks and involved all Metsä Board paperboard and BCTMP mills in Finland. The loss in paperboard production during the strike was roughly 65,000 tonnes, and the loss in BCTMP production some 34,000 tonnes.

The durations of all annual maintenance shutdowns remained at the planned levels in 2021. The modernisation of the finishing area carried out at the Kyro mill resulted in a 2–3-week loss in production.

Corporate acquisitions and disposals

Metsä Board sold a 30% minority share of the Husum pulp mill to a Swedish forest owners' cooperative Norra Skog. The transaction was completed on 4 January 2021, and it reduced Metsä Board's net debt by approximately EUR 260 million. The arrangement improves wood management at the Husum mill and allows the company to focus its development investments on paperboard.

Metsä Board signed an agreement on 16 December 2021, according to which company will sell the entire share capital of its fully owned subsidiary Oy Hangö Stevedoring Ab to Euroports Finland Oy. The transaction is expected to be completed in the first quarter of 2022. The gain on sale will be reported as an item affecting comparability and will not have a material impact on Metsä Board's key financials.

After the financial period, on 1 January 2022, Metsä Board acquired all the shares in Hämeenkyrön Voima Oy held by Pohjolan Voima Oyj and DL Power Oy, part of Leppäkoski Group. Following the arrangement, Metsä Board owns 100% of Hämeenkyrön Voima Oy. The arrangement will not have a significant impact on Metsä Board's financial key figures.

Cash flow

Net cash flow from operations in 2021 was EUR 329.6 million (1–12/2020: 307.7). Working capital decreased by EUR 49.5 million (decreased by 37.9). Cash flow from operations was supported by the strong paperboard business.

Balance sheet and financing

Metsä Board's equity ratio at the end of the financial period was 63% (31 December 2020: 60) and the net gearing ratio was -4% (17). The ratio of interest-bearing net liabilities to comparable EBITDA in the previous 12 months was -0.2 (0.7).

At the end of the financial period, interest-bearing liabilities totalled EUR 448.6 million (31 December 2020: 452.4). Non-euro-denominated loans accounted for 1.5% of loans and floating-rate loans for 10.6%, with the rest being fixed-rate loans. The average interest rate on liabilities was 2.3% (2.3), and the average maturity of non-current liabilities was 4.7 years (5.7). The interest rate maturity of loans was 45.3 months (52.0).

At the end of the financial period, interest-bearing net debt totalled EUR -78.4 million (31 December 2020: 235.5).

Metsä Board's liquidity has remained strong. At the end of the financial period, the available liquidity was EUR 916.0 million (31 December 2020: 605.8), consisting of the following items: liquid assets and investments of EUR 524.2 million, a syndicated credit facility (revolving credit facility) of EUR 200.0 million, and other committed credit facilities of EUR 191.8 million. The pricing of the syndicated credit facility is linked to the company's sustainability targets and a reduction in the specific consumption of water and energy.

Of the liquid assets, EUR 496.4 million consisted of short-term deposits with Metsä Group Treasury, and EUR 27.8 million were cash funds and investments. Other interest-bearing receivables amounted to EUR 2.7 million. In addition to items reported as liquidity, the liquidity reserve is complemented by Metsä Group's internal undrawn short-term credit facility of EUR 150.0 million and undrawn pension premium (TyEL) funds of EUR 215.9 million

The fair value of long-term investments was EUR 181.0 million at the end of the financial period (31 December 2020: 186.9). 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 financial period, an average of 8.1 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 2020: 7.9). The degree of hedging during the period varied between seven and nine 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.

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 positive outlook.

Investments

Total investments during the review period were EUR 220.2 million (166.4), of which investments in own property, plant and equipment were EUR 216.1 million (159.4) and investments in leased property, plant and equipment were EUR 4.1 million (7.0). Out of the total investments, the maintenance investments accounted for approximately 22% and development investments 78%.

Renewal of the Husum pulp mill

In 2019, Metsä Board started the first phase of the renewal of the Husum pulp mill which includes a new recovery boiler and turbine. The investment value of the first phase is approximately EUR 360 million. By the end of the financial period, the investments made in the project totalled approximately EUR 253 million.

The start-up of the new recovery boiler and turbine will be slightly delayed. The company estimates the recovery boiler and turbine to start up in September 2022. According to the earlier estimate, this would have taken place in the first half of 2022. The delay is attributable to delay in installation work.

The first phase of the renewal is expected to improve Metsä Board's annual cash flow by some EUR 35 million as of 2023.

During the second phase of the renewal, later in the 2020s, the current fibre lines are planned to be replaced with a new fibre line.

The renewal project 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 develop Metsä Board's energy production and enable a shift towards fossil free mills.

Development programme of the Kemi paperboard mill

In 2021, Metsä Board initiated the development programme for the Kemi paperboard mill, which produces white-top kraftliner. The programme's investment cost is approximately EUR 67 million, and the mill's annual paperboard capacity will increase by around 40,000 tonnes. The investments will take place in 2021–2023.

The programme includes a series of modernisation and bottleneck investments in the paperboard machine. As part of the programme, Metsä Board will also buy a modernised production line for unbleached pulp from Metsä Fibre. The production line's annual capacity is roughly 180,000 tonnes.

The development programme will also reduce water use by 40% and energy use by 5% per tonne of paperboard produced and represents a significant step towards the company's sustainability targets set for 2030.

Increasing the paperboard capacity at Husum

Metsä Board will increase its folding boxboard capacity by 200,000 tonnes per year at the Husum integrated mill in Sweden. Following the investment, the folding boxboard capacity of paperboard machine BM1 will be 600,000 tonnes per year. The value of the investment is approximately EUR 210 million. It will take place in 2021–2024, with an emphasis on 2022 and 2023.

The investment is expected to increase Metsä Board's annual sales by approximately EUR 200 million. In addition, the investment is expected to have a positive impact of approximately EUR 50 million on the company's annual comparable EBITDA. The company expects to achieve the growth and improved result in full in 2026.

Husum's port concept will be reviewed separately, taking into account the growing logistics volumes in the entire integrated mill, and the potentially necessary investments will be decided at a later date..

Associated company Metsä Fibre's Kemi bioproduct mill

Metsä Board's associated company Metsä Fibre is building a new bioproduct mill in Kemi. The new bioproduct mill will produce annually some 1.5 million tonnes of softwood and hardwood pulp as well as other bioproducts. The investment's cost estimate is roughly EUR 1.85 billion. This estimated cost has increased from the original EUR 1.6 billion due to price increases affecting raw materials, especially steel, as well as construction and installation work. The bioproduct mill is expected to be completed in 2023.

The bioproduct mill will not use any fossil fuels, and its electricity self-sufficiency will be 250%. The pulp production capacity includes the existing pulp production line for unbleached pulp used in the production of white kraftliner, with an annual capacity of roughly 180,000 tonnes. The new mill will replace the current pulp mill in Kemi, with an annual capacity of about 620,000 tonnes.

The financing of Metsä Fibre's bioproduct mill is composed of internal financing and debt. Metsä Board will not invest equity in Metsä Fibre to finance the project.

R&D, innovations and new products

As the amount of packaging grows, we need resource-efficient and easily recyclable solutions. Metsä Board's development work focuses on the paperboard's printing and conversion properties as well as on reducing its weight, without compromising its strength. Lightweight paperboards are resource-efficient and help reduce the carbon footprint of packaging throughout the value chain.

In 2021, sales of Metsä Board's dispersion-coated barrier paperboard in food end uses were strong, and this growth is expected to continue. Company continues to develop barrier solutions and is investigating their commercial potential in food and food service applications. The development of barrier solutions is also part of the ExpandFibre programme, Fortum and Metsä Group's EUR 50 million programme promoting the circular bioeconomy.

The Excellence Centre at Äänekoski, which began its operations in 2020, has organised workshops for developing new packaging solutions in cooperation with customers. In 2021, the Excellence Centre held 25 development workshops.

Examples of Metsä Board's new 360 Services include carbon footprint calculations for packaging materials and computer-based packaging simulation, which enables the digital modelling of prototype packages as well as the optimisation of material and structural choices.

Metsä Group's innovation company Metsä Spring and Valmet Oyj are building a demo plant in Äänekoski. The plant will produce new kinds of 3D fibre products directly from wood fibre pulp, without intermediate phases. End uses will be in food packaging. The first test runs were carried out during the fourth quarter of 2021.

Metsä Board's research and development costs in 2021 totalled EUR 6.0 million (8.6), or 0.3% (0.5) of sales. The costs include direct expenses, excluding depreciations and operational investments.

Disclosure of non-financial information

Business model

Metsä Board is part of Metsä Group, and benefits from Metsä Group's unique value chain, from pure northern fibre to end products. The company produces premium recyclable fresh fibre paperboards, used mainly in consumer product packaging. The business model focuses on sustainable and profitable growth as well as value creation for all stakeholders. Metsä Board relies on global cooperation with its customers and technology partners in product and service development emphasising innovation and sustainability.

Metsä Board's eight production units are located in Finland and Sweden, close to its main raw material, high-quality northern wood fibre. The raw wood is sourced centrally through Metsä Group from Finland, Sweden, the Baltic countries and Russia. The wood is sourced only from sustainably managed forests, in which the regeneration of the forests and biodiversity is safeguarded. Most of the wood purchased in Finland comes from forests owned by Metsäliitto Cooperative's owner-members. In Sweden, the company has a long-term wood delivery agreement with the Swedish forest owner cooperative Norra Skog.

Metsä Board is part of Metsä Group, the parent company of which is Metsäliitto Cooperative. Metsäliitto Cooperative holds 48.2% of Metsä Board's shares and 67.4% of the voting rights conferred by shares. Metsä Board, on the other hand, owns 24.9% of its associated company, Metsä Fibre. Metsä Board's own pulp production and holding in Metsä Fibre together ensure the company's self-sufficiency in pulp as well as end products of a consistently high quality.

Sustainability principles

Metsä Board is a forerunner in sustainability and advances the bio- and circular economy. Climate change mitigation and the efficient use of resources are strong drivers of the company's operations. The company aims for fossil free production and products by the end of 2030. Resource-efficiently produced lightweight, recyclable and/or compostable products support the circular economy and offer alternatives to plastic. The promotion of sustainability includes compliance with good corporate governance, bearing social and environmental responsibility, respecting business ethics and human rights as well as the continuous improvement of operations in all 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: 1) well-being; 2) forests and wood; 3) sustainable products and a sustainable supply chain; and 4) the climate and the environment. The sustainability targets are based on Metsä Board's business strategy, Metsä Group's strategic sustainability targets and materiality analysis on corporate responsibility, which was last completed in 2018. The analysis took into account the impacts of Metsä Group's operations on society and the environment, as well as stakeholders' perspectives.

Policies, management systems and sustainability management

Work and decision making at Metsä Board are guided by Metsä Group's Code of Conduct, complemented by policies concerning competition law, the personnel, equality, environmental matters and information security, among other things. Suppliers are also expected to commit to our Supplier Code of Conduct. All Metsä Board mills apply quality, occupational health and safety, environmental and energy efficiency management systems (ISO 9001, ISO 45001, ISO 14001, ISO 50001), as well as the management and monitoring system ISO 22000 required by food safety. In addition, the mills which also produce paperboard for food packaging apply the FSSC 22000 food safety system.

At Metsä Board, the realisation of sustainability is supported and monitored by the company's Board of Directors, CEO and Corporate Management Team. Sustainability is incorporated into the strategy approved by the company's Board of Directors and the company's long-term business and investment plans, risk assessments and annual action plans.

The Board discusses and approves the sustainability targets presented by the CEO and monitors their implementation. The CEO is responsible for the implementation of the sustainability measures in accordance with instructions provided by the Board. Sustainability reviews are discussed by Metsä Board's Corporate Management Team and Board of Directors several times a year. The SVP, Development, takes part in the Metsä Group Sustainability Process Management Team and reports on the realised results of the sustainability measures to the Sustainability Process Management Team quarterly. Annual targets related to sustainability have been set to the CEO; SVP, Development; and SVP, Production, which impact the amounts of their individual remuneration.

International commitments and recognitions

Metsä Board respects internationally recognised human rights in accordance with the UN's Universal Declaration of Human Rights and the ILO Declaration on Fundamental Principles and Rights at Work. The company is committed to operating according to the UN's principles concerning business operations and human rights and requires the same from its business partners. The company also supports the UN's Global Compact initiative and its principles on human rights, labour, the environment and anti-corruption. Metsä Board's sustainability targets contribute to the realisation of the UN's Sustainable Development Goals. The company's targets for reducing greenhouse gas emissions have been approved by the Science Based Targets initiative and accord with the Business Ambition for 1.5°C commitment. Metsä Board has achieved excellent scores in assessments related to the environment, social responsibility and governance carried out by MSCI, Sustainalytics, Ecovadis and CDP, among others. In 2021, the CDP included Metsä Board in its highest A Lists with respect to all three of its environmental themes: climate change; water security; and forests.

Non-financial key figures

	2021	2020	Target for 2030
Personnel[1)]			
Coverage of Code of Conduct training, %	99	99	100
Total Recordable Injury Frequency (TRIF) per million hours worked	9.8	8.4	0
Lost-time accident frequency (LTA1) per million hours worked	7.0	5.7	0
Raw materials and supply chain			
Share of certified wood fibre, %	83	80	> 90
Suppliers' commitment to the Supplier Code of Conduct, % of total purchases	98	96	100
Supplier background check passed, % of total purchases	92	84	100
Supplier sustainability assessment passed, % of total purchases	54	53	100
Traceability of raw materials, % of total purchases	98	97	100
Share of fossil-free raw materials and packaging materials, % of dry tonnes	99.2	99.3	100
The environment			
Fossil-based CO_2 emissions (Scope 1), t	255,467	240,036	0
Indirect fossil-based CO_2 emissions (Scope 2, market-based), t	173,371	272,115	0
Indirect fossil-based CO_2 emissions (Scope 2, location-based), t	306,555	373,816	[2)]
Indirect fossil-based CO_2 emissions (Scope 3), t	1,854,840	1,847,773	[3)]
Bio-based CO_2 emissions, t	1,712,639	1,812,952	[4)]
Share of fossil free energy (Scope 1 + 2), %	85	83	100
Improvement in energy efficiency from 2018 level, %	+1.9	+2.1	+10
Reduction in the use of process water per produced tonne compared to 2018 level, %	-13.5	-7.7	-30
Utilisation of production side streams, %	99.8	99.3	100

1) The figures include the subsidiary Hangö Stevedoring Oy.
2) The amount of location-based Scope 2 emissions is dependent on the energy mix in Metsä Board's production countries.
3) SBTi-approved targets for 2024.
4) The bioenergy we use is climate neutral according to current EU regulation and meets the requirements of the EU's sustainability criteria.

Personnel and safety at work

At the end of the financial period, the number of personnel was 2,389 (31 December 2020: 2,370), of whom 1,416 (1,422) were based in Finland. In January–December, Metsä Board employed 2,461 people on average (1–12/2020: 2,455). Personnel expenses in January–December totalled EUR 216.0 million (196.9).

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. Future retirements are prepared for with retirement forecasts and resource plans drawn up on their basis. 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 the sharing of know-how. The company aims 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.

The company conducts a personnel survey, measuring job satisfaction, and an ethics barometer, measuring the personnel's view on the realisation of the Code of Conduct in practice, in alternate years. The overall score measuring job satisfaction in the renewed personnel survey conducted in 2021 was 72.9, which was on a par with Europe's general norm of 72.8, used as a benchmark.

Metsä Board aims for zero accidents at work. In 2021, the Total Recordable Incident Frequency, or TRIF, was 9.8 (2020: 8.4), while the Lost-time accident frequency, or LTA1, was 7.0 (5.7). The frequency of accidents at mills increased, but in the port operations of Hangö Stevedoring, safety developed positively. The most typical accidents consisted of injuries to hands and feet. Accidents are prevented with the aid of common safety-at-work standards, proactive measures – such as safety observations, safety walkthroughs and safety training – and investments improving safety. All Metsä Board mills and the company's head office apply the 5S method, which aims to increase productivity, safety and wellbeing at work.

Operations during the COVID-19 pandemic

Metsä Board applies precautionary measures in proportion to the situation and partly exceeding those required by the authorities. The principal objectives have been to ensure the health and safety of personnel, prevent the spread of the virus and secure business continuity. Metsä Board's production and deliveries have run without interruptions during the pandemic, and chains of transmission have been avoided. The pandemic has not resulted in changes to the company's sustainability targets.

The mills and offices have followed strict special arrangements which minimise close contact along passageways, in cafeterias and staff facilities and at workstations. Personnel have been provided with detailed instructions on hygiene and the use of masks. The special arrangements also apply to suppliers visiting the mills. The mills have also organised mass testing whenever a regional COVID-19 situation has required it. Company personnel with jobs that allow it have worked remotely throughout the pandemic. The possibility of remote working will continue after the pandemic. Employees' working ability and the maintenance of their working capacity has been supported by virtual guidance.

Respecting human rights, equality as well as anti-corruption and anti-bribery measures

Metsä Board expects its personnel to comply with the applicable legislation, operate fairly and make ethically sound decisions. The Code of Conduct and the related training programme seek to strengthen the culture of doing the right thing, help the personnel identify ethically challenging situations and encourage them to report any shortcomings they observe.

Code of Conduct training has been completed by 99% (99) of the company's personnel. The Code of Conduct commits to a respect for human rights, for example, and measures against corruption and bribery. Human rights issues are also included in the equality training aimed at the entire personnel and in the Know Your Business Partner training organised for the sourcing and sales staff. Partners are likewise expected to abide by a code of conduct. The company has continued to develop its processes on the basis of the human rights risk survey initiated in 2017 to prevent human rights risks connected to its operations and supply chain

Metsä Board is committed to developing a culture of equality in which everyone has the opportunity to succeed in their career and be an accepted member of the workplace community. Personal characteristics – such as gender, age, ethnic background, sexual orientation or disability – have no impact on an individual's opportunity to succeed in the workplace community. Metsä Board promotes the diversity, equality and inclusion of its personnel with the Metsä For All vision published in 2021 and with the help of set targets. Among other things, the targets support gender equality in the workplace community and diversity in recruitment.

Metsä Group has a joint Compliance and Ethics Channel through which personnel and stakeholder representatives can anonymously report any shortcomings they detect. All breaches and violations, as well as suspected breaches and violations, brought to the attention of the company are investigated. Such investigations are led by the compliance committee. In 2021, Metsä Board was informed of a total of 10 (10) cases involving conflicts of interest, inappropriate behaviour or shortcomings in equal treatment, for example. None of the cases has resulted in legal proceedings or concerned corruption, bribery or the use of child labour.

Raw materials and supply chain

The sustainability of Metsä Board's raw materials and supply chain is ensured within separate processes in respect of wood fibre and other raw materials and services.

Metsä Board's wood supply is ensured by Metsä Group's wood supply and forest services. The wood fibre's sustainability and traceability are ensured by practices which meet the requirements of the PEFC Chain-of-Custody and FSC® Chain-of-Custody systems. All the wood raw material used by the company is traceable and comes from either certified or controlled, sustainably managed northern European forests, in which the regeneration of forests and biodiversity is safeguarded. Metsä Board aims for certified wood to account for at least 90% of all the wood used by the company by 2030. During the financial period, 83% (80) of the wood came from certified forests.

The sourcing of other raw materials and services is centralised in Metsä Group, where the group-wide sourcing process ensures that the partners operating in the group's supply chain operate sustainably. This aims to minimise risks related to the environment, health, corruption, for example, the use of child labour and human rights violations in the supply chain.

Metsä Board's minimum requirements for purchasing agreements include the supplier's commitment to Metsä Group's Supplier Code of Conduct or the supplier's equivalent code of conduct. The purchasing agreements may also contain other sustainability requirements. The supplier selection process includes a risk analysis, which covers a review of the suppliers' country and category risks and compliance with laws. Metsä Board complies with third-party due diligence in the Know Your Business Partner background check, which covers a review of a supplier's background 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. Key suppliers and any risky suppliers are further requested to respond to a sustainability assessment questionnaire. Every year, Metsä Group and external auditors audit some of Metsä Board's suppliers. In 2021, Metsä Group conducted 0 (12) audits, and an external party 17 (9), on Metsä Board's suppliers' premises. The pandemic impacted on the number of the audits. Based on the assessments and the results of the audits, the suppliers are informed of any deviations and given recommendations. They also serve as a basis for monitoring suppliers expected to improve their sustainability management In 2021, safety at work and environmental issues were more extensively considered in the assessments, the audits and the selection of suppliers. The auditors were also trained to identify risks related to social responsibility, such as those involving forced labour and labour exploitation.

In 2021, we knew the origin – at least the country of manufacture – with regard to 98% (97) of the total purchases of raw materials and packaging materials. The systematic collection of origin data continues to be developed. The proportion of fossil free raw materials, including the packaging materials of the company's own products, was 99.2% (99.3).

In its Science Based Targets, Metsä Board is committed to 70% of its non-fibre suppliers and of the logistics operators related to its customer deliveries, measured as a share of the company's purchasing costs, setting themselves targets in accordance with the SBTi by 2024. In 2021, 16% (5) of the company's suppliers within the target group had done so.

Climate and the environment

Metsä Board aims to use only fossil free energy by the end of 2030. In essence, this refers to a situation in which the company's mills do not use fossil fuels or purchase energy generated with fossil fuels, meaning that the target for fossil-based CO_2 emissions (Scope 1 and Scope 2) is zero. In 2021, 85% (83) of the energy used by Metsä Board was fossil free. The company has reduced its fossil-based CO_2 emissions (Scope 1 and Scope 2) per tonne produced by 25% in 2018–2021. In terms of energy efficiency, Metsä Board aims for a minimum improvement of 10% in 2018–2030. In 2021, energy efficiency improved by 1.9% (2.1) compared to 2018.

To achieve the fossil free target, the company has drawn up an investment and action plan applicable to all its mills. In accordance with the plan, peat was replaced by renewable energy in the energy generation of the Kyro mill in 2021. The use of peat at the Simpele mill was reduced, and the aim there is to phase out the use of peat altogether during 2022. The renewal of the recovery boiler and turbine at the Husum pulp mill progressed. Once completed, the investment will increase the mill's generation of renewable energy and increase its electricity self-sufficiency from around 40% to approximately 80%. In addition, the use of heavy fuel oil as a backup fuel will reduce, and by 2030, the necessary support fuels will be replaced with renewable alternatives.

The emissions of the value chain (Scope 3) make up 81% of Metsä Board's fossil-based carbon dioxide emissions. The target is that 70% of the non-fibre suppliers and logistics operators related to customer deliveries, measured as a share of the company's purchasing costs, would set themselves targets in accordance with the SBTi by 2024.

Metsä Board's water use in 2021 amounted to 115 million cubic metres (114), of which 59.6 million cubic metres (62.0) was process water. Surface water accounted for 100% of the process and cooling water. Metsä Board does not abstract any water at all from areas with a high baseline water stress (WRI Aqueduct Water Risk Atlas). Of all the water used by the company, roughly 99% is returned to the waterbodies after use. The aim is to reduce the use of process water by 30% per tonne produced in 2018–2030. In 2021, the use reduced by 13.5% (7.7) compared to 2018. To reduce its water use, the company has defined mill-specific measures for increasing the efficiency of water recycling and reducing the intake of raw water. The Husum integrated mill accounts for approximately 40% of the water use. The renewal of the Husum pulp mill will therefore significantly reduce Metsä Board's water use by 2030. 99.8% (99) of production side streams was used as materials or energy. The target stands at 100%.

Environmental responsibilities and obligations

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 where it has been possible to measure the company's liability for land contamination. Metsä Board's environmental liabilities in 2021 totalled EUR 2.7 million (3.4), and its environmental expenses amounted to EUR 13.3 million (16.3). 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. There was an oil spill at the Husum mill on September, which originated from the mill's oil burner. To minimise any environmental damage, Metsä Board has supported the incident's investigation, and the clean-up of the oil from the sea and the shores with all the necessary resources. Company has also maintained a dialogue with the key stakeholders, such as residents and authorities. In addition, Metsä Board's production units recorded in 2021 some cases in which permit conditions were exceeded at a monthly or a yearly level. These were reported to the authorities in accordance with the relevant requirements.

Risk descriptions

The risks related to the environmental, personnel and social issues, respect for human rights as well as the anti-corruption and anti-bribery activities reviewed above are described in more detail in the Board of Directors' Report in the section Most significant risks and uncertainties section. Metsä Board's risks related to climate change and biodiversity loss relate in particular to the use of forests, energy and water, which the company reports in accordance with the TCFD recommendations.

Disclosures in accordance with the TCFD recommendations

Metsä Board's disclosures concerning climate-related risks and opportunities in accordance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) are compiled in the table below. The references to more detailed information are indicated with abbreviations: (AR) Annual Report, (BDR) Board of Directors' Report, (FS) Financial Statements, (CG) Corporate Governance Statement.

Governance	
Disclose the organisation's governance around climate-related risks and opportunities	
a) Describe the Board's oversight of climate-related risks and opportunities.	AR: Sustainability governance pp. 24–25 CG: Risk management pp.164–165
b) Describe the management's role in assessing and managing climate-related risks and opportunities.	AR: Sustainability governance pp. 24–25 CG: Risk management pp.164–165

Strategy	
Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation's business operations, strategy and financial planning where such information is material.	
a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.	The identified climate-related risks and opportunities concern mainly the medium-term (1–5 years) and long-term (more than five years) future. Weather-related risks such as dry summers and rainy winters may also occur in the short term (0–1 years). AR: Strategy pp. 10–11 AR: Operating environment pp. 14–17 AR: Product and service development pp. 18–19 AR: Climate-related risks and opportunities pp. 28–29 AR: Sustainable products pp. 44–49 BDR: Most significant risks and uncertainties pp. 76–79 CG: Risk management pp. 164–165
b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	AR: Strategy pp. 10–11 AR: Sustainability governance pp. 24–25 AR: Climate-related risks and opportunities pp. 28–29 BDR: Most significant risks and uncertainties pp. 76–79 CG: Risk management pp.164–165
c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	Metsä Board is already adapting its operations to a low-carbon economy and is committed to the target of limiting global warming to 1.5 °C compared to the pre-industrial era. The company aims for zero fossil carbon dioxide emissions (Scope 1 and Scope 2) by the end of 2030. Practical adaptation measures have been carried out in the sourcing of fuels and purchased energy, for example. The company has continued to analyse climate-related scenarios and examined the potential effects of transitional and physical risks and opportunities on its business. Metsä Board employs, among others, analyses based on the RCP 2.6, RCP 4.5 and RCP 8.5 scenarios (Representative Concentration Pathways). AR: Product and service development pp. 18–19 AR: Climate-related risks and opportunities pp. 28–29 AR: Sustainable products pp. 44–49 AR: Climate and the environment pp. 52–59 BDR: Most significant risks and uncertainties pp. 74–79

Risk management	
Disclose how the organisation identifies, assesses and manages climate-related risks.	
a) Describe the organisation's processes for identifying and assessing climate-related risks.	Climate-related risks have been integrated into Metsä Board's overall risk management: AR: Sustainability governance pp. 24–25 BDR: Most significant risks and uncertainties pp. 76–79 CG: Risk management pp. 164–165
b) Describe the organisation's processes for managing climate-related risks.	BDR: Most significant risks and uncertainties pp. 76–79 CG: Risk management pp.164–165
c) Describe how the processes for identifying, assessing and managing climate-related risks are integrated into the organisation's overall risk management.	Climate-related risks have been integrated into Metsä Board's overall risk management: AR: Sustainability governance pp. 24–25 BDR: Most significant risks and uncertainties pp. 76–79 CG: Risk management pp.164–165 Climate-related risks are assessed as part of Metsä Board's assessment process for overall risks. The results of the risk assessment are presented to the Board of Directors and the Audit Committee twice a year. The risks are assessed with a risk matrix which accounts for the magnitude of a risk's potential financial impact and the likelihood of the risk's materialisation.

Metrics and targets	
Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.	
a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.	AR: Sustainability targets pp. 20–23 AR: Sustainable products pp. 44–49 AR: Climate and the environment pp. 52–59
b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas emissions and the related risks.	Scope 1, Scope 2 and Scope 3 emissions: AR: Climate and the environment pp. 52–55
c) Describe the targets used by the organisation to manage climate related risks and opportunities and performance against targets.	AR: Sustainability targets pp. 20–23 AR: Sustainable products pp. 44–49 AR: Climate and the environment pp. 52–59

EU taxonomy

General

The Taxonomy is a classification system for the financial market based on Regulation (EU) 2020/852, valid as of the beginning of 2022, listing economic activities sustainable in terms of climate and the environment. The Taxonomy aims to direct money to sustainable investments in such a way that the EU can achieve the ambitious emission reduction targets it has set for itself. Technical screening criteria and limit values, based on which an activity can be considered sustainable, are determined for each of these defined economic activities.

The European Commission has stated that the Taxonomy is subject to continuous development and that the Commission will begin the task of determining the technical screening criteria by determining them for the economic activities in which the improvements to be carried out will have the greatest impact on the climate and environment. Metsä Board's main business operations, the paperboard and market pulp, are not currently included in the Taxonomy. Therefore company's taxonomy-eligible economic activities account for only a minor share, especially of its sales. Metsä Board is currently unaware of the schedule and extent to which the Taxonomy's scope may come to cover the company's main economic activities.

Climate change mitigation and adapting the business to a low-carbon future are at the core of Metsä Board's objectives. The company aims for entirely fossil free production and products by the end of 2030. In accordance with the principles of the circular economy, the company invests in the sustainable use of forests and the resource efficiency of its processes. In addition, Metsä Board focuses on minimising waste and emissions and keeping materials in circulation for extended periods of time. Metsä Board's products offer an alternative to products made from fossil-based raw materials.

Reporting on taxonomy eligibility

The Taxonomy defines six sustainable environmental objectives against which different economic activities are assessed. These environmental objectives are: (a) climate change mitigation; (b) climate change adaptation; (c) the sustainable use and protection of water and marine resources; (d) the transition to a circular economy; (e) pollution prevention and control; and (f) the protection and restoration of biodiversity and ecosystems.

Metsä Board discloses for the financial year 2021 on the extent to which the company's business is eligible in relation to the first two environmental objectives - climate change mitigation and climate change adaptation - in accordance with the EU Taxonomy's regulations. These disclosures concerning the taxonomy-eligible economic activities comprise their share of the turnover (sales), capital expenditure and operating expenditure.

As of the 2022 financial year, Metsä Board will disclose both the taxonomy-eligible economic activities and their alignment with the Taxonomy. The Taxonomy-aligned disclosures focus on how well the economic activity in question supports the confirmed environmental objectives. An economic activity is considered Taxonomy-aligned if it makes a substantial contribution to one of the defined environmental objectives and causes no significant harm to the other objectives. In addition, the economic activity must meet minimum social safeguards -criteria.

Metsä Board's taxonomy-eligible economic activities in 2021

Economic activity	Turnover	Capital expenditure	Operating expenditure
4.20. Cogeneration of heat/cool and power from bioenergy	0.1%	59.0%	7.5%
4.24. Production of heat/cool from bioenergy	0.0%	0.2%	1.2%
5.1. Construction, extension and operation of water collection, treatment and supply systems	0.0%	0.0%	0.4%
5.3. Construction, extension and operation of waste water collection and treatment	0.0%	0.2%	0.7%
5.5. Collection and transport of non-hazardous waste in source segregated fractions	0.0%	0.0%	2.1%
Taxonomy-eligible activities, total	0.1%	59.4%	11.9%
Taxonomy-non-eligible activities, total	99.9%	40.6%	88.1%

Calculation principles for shares of taxonomy-eligible economic activities

In the taxonomy-eligible turnover, Metsä Board includes the sales of products and services that is included in Metsä Board's reported sales. The production of the taxonomy-eligible economic activities is used almost entirely in Metsä Board's operations, due to which these activities generate very little sales to be reported.

The taxonomy-eligible capital expenditure includes mainly investments in the renewal of the Husum pulp mill's recovery boiler and turbine in class 4.20, Cogeneration of heat/cool and power from bioenergy. The other taxonomy-eligible capital expenditure consist of replacement investments in the bioenergy-based production of heat and the water treatment carried out at the Kaskinen and Simpele mills. Metsä Board includes additions to tangible and intangible fixed assets in the financial period's capital expenditure, including any right-of-use assets recognised based on long-term lease agreements.

The taxonomy-eligible operating expenditure includes research and development expenditure recognised as costs and the maintenance costs of production units and property, supplemented by the costs of waste management and short-term lease agreements. The expenditure includes both costs of external service and the wages, employers' contributions included, of Metsä Board's own personnel. The operating expenditure related to the recovery of chemicals and heat at the Husum pulp mill under class 4.20 make up the most significant proportion of the taxonomy-eligible operating costs. The operating expenditure of the bioenergy-based heat production of the Kaskinen pulp mill is disclosed in class 4.24. The operating expenditure related to water treatment and waste management is accumulated from all Metsä Board mills.

Most significant risks and uncertainties

Metsä Board's risk management is systematic and proactive, and it assesses and manages business-related risks, threats and opportunities. Metsä Board's Board of Directors is responsible for the company's risk management and approves its risk management policy. Metsä Board's business operations systematically assess strategic, operational, financial and liability risks. Key risks are accounted for in the planning processes of the business operations and they are prepared for with management measures. In addition, the Corporate Management Team reviews the most significant risks as part of its management-team work.

Risks that exceed the Metsä Board's risk-bearing capacity have been transferred with insurance, derivatives and other contracts to insurance companies, banks and other counterparties. Significant liability risks are covered with the group's property, interruption, liability, transport damage, cyber and credit insurance policies.

Identified risks and the means by which they are managed are reported to the company's Board of Directors and the Board of Directors' Audit Committee at least twice a year. The following risks and uncertainties with a potential impact on Metsä Board's business operations and profitability were identified in the risk assessments carried out in 2021.

Market risks

Coronavirus pandemic

The coronavirus pandemic continues to cause uncertainty in the world economy and Metsä Board's business environment. The uncertainty caused by the pandemic is sustained by the virus variants, the restriction and lockdown measures imposed by governments, differences in vaccination coverage and uncertainty over the duration of vaccine efficacy. A prolonged pandemic could reduce the demand for Metsä Board's products and cause disruptions in the company's production or operational chains. On the other hand, the accommodative monetary policy during the pandemic, combined with the positive economic impacts of the recovery from the pandemic, may lead to an overheating of the economy. The unwinding of the situation may have sudden negative effects on the world economy and thereby on the demand for Metsä Board's products and its profitability. In addition, customers' weaker cash position or slower payment behaviour may have an impact on the company's cash flow and lead to credit losses. The pandemic may also incur additional costs, should the availability of transport capacity weaken, for example.

Uncertainty in the development of the world economy

In addition to changes in the situation with the pandemic, the world economy in 2022 will be affected by a continuation of the tension between the United States and China, the development of China's economy, accelerated inflation, the tightening monetary policies of central banks as well as disruptions in global supply and delivery chains. An increase in the tensions between the United States and Russia and the adoption of any new sanctions could also cause uncertainty in the world economy.

Significance of the Chinese market

China is a significant market area, especially for Metsä Board's associated company Metsä Fibre. China's economic growth has slowed down due to the country's strict restriction measures, troubles in its real estate sector and an energy shortage in the industrial sector. Problems in China's industrial sector may increase the problems and costs of global delivery chains. The relations between the EU and China are burdened by bilateral sanctions and differing views on multiple issues. Any further slowdown in the growth of the Chinese economy or deterioration in the relations between the EU and China could have a negative effect on the demand for market pulp or paperboards in China and thereby on Metsä Board's profitability.

Changes in the operating environment

Metsä Board operates in an industry where the balance between supply and demand, and any changes to it, impact 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 the demand for Metsä Board's paperboards. An increase in competitors' capacities or the expansion of product ranges may lower the price levels of end products and have a negative effect on Metsä Board's profitability. Any significant changes in exchange rates may also influence products' market balance and companies' competitiveness.

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 operations. The restrictions imposed on products that contain single-use plastics guide the development of Metsä Board's products. The acceptability of plastic-free single serving products also involves risks. In addition, the acceptability and taxation of various packaging materials involve regulatory risks.

Pulp market situation

Structural changes in customers' pulp use, increasing competition and new production capacity in the global pulp market may have a negative impact on pulp delivery volumes and market prices and thereby on Metsä Board's profitability. 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. The effects of regional conflicts may be manifested as mass migrations and in terrorism based on extremist ideologies. The predictability of these risks is poor, and their impact may also emerge either very rapidly or over a long period of time.

Restrictions on international trade and sanctions

Potential changes in the industrial and trade policies of leading industrialised countries, the materialisation of geopolitical risks or an escalation of geopolitical risks may lead to more extensive measures restricting trade or the use of international sanctions. The possible consequences of these include a slowdown in the recovery and growth of the world economy and even a curtailment of global trade flows. Sanctions and restrictions on international trade could have negative effects on the demand for Metsä Board's products and the company's profitability.

Operational risks

Sustainability and climate risks

Promoting sustainability supports Metsä Board's business and its development, but climate change and the loss of biodiversity, in particular, also involve risks. At Metsä Board, these risks involve especially forests as well as the use of energy and water, and if materialised, the risks could have a negative impact on Metsä Board's business. Climate risks are divided into 1) transition risks, i.e., the risks arising from the transition to a low-carbon economy and 2) physical risks, which involve changes in temperatures and precipitation, and which will arise if climate change is not mitigated.

The most important transition risks include increasing regulation, as well as market and reputational risks, if the company fails to effectively respond to the changed market environment. The regulation aiming to combat climate change and reduce greenhouse gas emissions may result in demands for new technology and impact the pricing of energy and greenhouse gas emissions, thereby increasing costs. In addition, safeguarding carbon sinks and the biodiversity of forest nature with increasing regulations causes risks for using forests. The supply and demand of products in a low-carbon economy may also differ from the current situation.

Physical climate risks can be further divided into acute weather phenomena and more permanent changes. Extreme weather phenomena – such as storms, droughts and floods – may cause disruptions in production or impede the transport of raw materials and products. In the long term, both an increase in the frequency of droughts and increased precipitation and floods may weaken the availability of the process water needed by mills and result in production suspensions. The risk is mitigated by the fact that all Metsä Board mills are located in northern areas with ample water. As the climate grows warmer, the most significant physical risks influencing forests and the availability of wood raw material will be the weakening of harvesting conditions as winters get shorter and insect damage increases.

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 objectives 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 the objectives help Metsä Board to manage climate risks. At the same time, they open new opportunities for Metsä Board in the changed operating environment and meet the needs of the circular economy. To safeguard biodiversity and protect waterways, Metsä Group's wood supply has established programmes for ecological sustainability and nature management in forestry. All wood sourced by Metsä Group comes from sustainably managed forests, and this is verified by certification or controlled in some other way.

Metsä Board's reporting on climate risks and opportunities in line with TCFD recommendations can be found in the section Statement on non-financial information.

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 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 may be impacted by, for instance, large-scale fires, significant equipment malfunctions, serious accidents, extreme weather phenomena and environmental damage. Employees falling ill due to infectious diseases, any persisting malfunctions in IT systems, labour disputes, delivery problems and availability issues in the most important raw materials and disruptions in the logistics chain may furthermore suspend the entire business or parts thereof.

Interruptions in production or the supply chain may influence the continuity of customer service and delivery reliability. If such interruptions continue for a long period of time, the resulting financial losses may be very substantial and result in the permanent loss of customers. 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.

The business is also developed by modernising the production technology, efficiency programmes, product development and harmonising business processes. If the costs of development projects and investments are significantly exceeded, their completion is delayed, or their productive or commercial objectives are not met, this could negatively affect the company's profitability.

Business ethics
Business ethics in general, as well as the prevention of human rights violations, conflicts of interest, misuses, corruption, bribery and money laundering, have been identified as requiring continuous development. The company carries out an ethics barometer aimed at the entire personnel every other year. The anonymous Compliance and Ethics Channel and the functionality of the related investigation process are also key tools in the identification and management of compliance-related risks. As part of its continuous sustainability work, the company develops processes involving the identification of its suppliers and customers which allow for more effective risk identification and management.

Cost and availability risks of production inputs
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 have an effect on 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 transport and other logistics costs and the weak availability of transport 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.

Corporate security risks
Risks to corporate security include shortcomings and neglect in personal safety and security and safety at work and in the management of financial misconduct, any negative information manipulation and cyber threats, threats affecting the supply chains, and the adequacy of internal control. Operating processes related to corporate security and the guidelines, training and internal control related to the management of threat factors are developed continuously, and exercises on the management of crisis situations are organised on a regular basis.

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 80 million on Metsä Board's annual operating result. Correspondingly, the Swedish krona strengthening by 10% would have a negative impact of approximately EUR 50 million. The British pound strengthening by 10% would have a positive impact of approximately EUR 10 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 2021. 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 Note 5.6 to the consolidated financial statements (Management of financial risks).

Legal proceedings
In the autumn of 2015, the Finnish Tax Administration, in its assessment of the 2014 taxation, refused the deductibility of certain losses related to the cross-border merger of a French subsidiary in Metsä Board Corporation's 2014 taxation.

Metsä Board appealed the decision issued by the Tax Administration, as the company believes the losses to be deductible. The Tax Administration's Adjustment Board dismissed the company's appeal in March 2018. In February 2021, the Administrative Court of Helsinki dismissed the appeal made by the company on the Adjustment Board's decision. In its decision of September 2021, the Supreme Administrative Court did not grant Metsä Board leave to appeal the matter, due to which the dismissal of the Administrative Court of Helsinki remains valid, and the case is closed.

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, three of whom are women. A majority of Board members (six of nine) are independent of both the company and its biggest shareholders. Three members of the Board of Directors are not independent of Metsäliitto Cooperative. During the 2021 financial period, the Board of Directors held a total of 13 meetings, at which the attendance rate of Board members was 99% (100 in 2020).

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 company's Corporate Governance Statement.

Resolutions of the 2021 AGM
The Annual General Meeting held on 25 March 2021 adopted the company's financial statements for the financial year 2020 and decided to distribute a dividend of EUR 0.10 per share and capital in the amount of EUR 0.16 per share from the reserve for invested non-restricted equity, totalling EUR 0.26 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 Vice Chair is paid EUR 80,000 and each member of the Board is paid EUR 62,500, and that a meeting fee of EUR 800 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 Board members as nine (9) and elected the following persons as members of the Board of Directors: Hannu Anttila, teollisuusneuvos (Finnish honorary title); Raija-Leena Hankonen-Nybom, M.Sc. (Economics); Erja Hyrsky, M.Sc. (Economics); Ilkka Hämälä, M.Sc. (Technology); Kirsi Komi, LL.M.; Jussi Linnaranta, M.Sc. (Agriculture); Jukka Moisio, M.Sc. (Economics); Timo Saukkonen, M.Sc. (Agriculture); and Veli Sundbäck, LL.M. The Board members' term of office continues until the end of the next Annual General Meeting.

Further information about the decisions made by the Annual General Meeting and materials related to the meeting is available on the company's website at https://www.metsaboard.com/Investors/General-Meeting/General-Meeting-2021/Pages/default.aspx.

Shares
Metsä Board has two share series. At the end of the year, the number of A shares was 32,802,175 and B shares was 322,710,571. Each A share carries twenty (20) votes and each B share one (1) vote at the Annual General Meeting. All shares entitle to equal dividends.

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. During the financial year 84,976 Metsä Board A shares were converted into B shares. Metsä Board did not receive any flagging notifications during 2021. The company does not hold any treasury shares.

At the end of the financial period, the closing price for Metsä Board's B share on Nasdaq Helsinki was EUR 8.61, the highest price EUR 11.01 and lowest price was EUR 7.50. At the end of the financial period, the price for Metsä Board's A share on the Nasdaq Helsinki was EUR 9.38. The share's highest and lowest prices in 2020 were EUR 11.00 and EUR 8.50, respectively.

In 2021, the average daily trading volumes of the B and A shares on the Nasdaq Helsinki were 389,117 shares and 7,153 shares. The total trading volume of the B share was EUR 896 million and the total trading volume of the A share was EUR 17 million.

At the end of the financial period, the market value of all Metsä Board's shares was EUR 3.1 billion, of which the market value of the B shares and the A shares accounted for EUR 2.8 billion and EUR 0.3 billion, respectively.

At the end of the review period, Metsäliitto Cooperative held 48% (31 December 2020: 48) of all shares, and the votes conferred by these shares accounted for 67% (67) of the total votes. International and nominee-registered investors held approximately 14% (16) of all shares.

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. 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% of all shares in the company. The authorisation is valid until 23 March 2022. The authorisation was fully unused on 31 December 2021.

Near-term outlook

Demand for folding boxboard and white kraftliners is expected to remain good in Metsä Board's main market areas in Europe and North America. The average prices of paperboards are expected to rise in the first quarter of 2022.

Global challenges with the availability of transport equipment will increase logistics costs. The higher prices of especially energy and certain chemicals will increase other production costs.

Demand for long-fibre market pulp is expected to remain good in Europe. In China, demand for market pulp strengthened towards the end of 2021. However, the weakened corona situation and China's strict policies might cause some uncertainty in demand. The global bottlenecks in logistics will continue to impact pulp deliveries to Asia from all market pulp producing areas.

Events after the financial period

On 1 January 2022, Metsä Board acquired all the shares in Hämeenkyrön Voima Oy held by Pohjolan Voima Oyj and DL Power Oy, part of Leppäkoski Group. Following the arrangement, Metsä Board owns 100% of Hämeenkyrön Voima Oy. The arrangement will not have a significant impact on Metsä Board's financial key figures.

The start-up of the Husum pulp mill's new recovery boiler and turbine will be delayed. The company expects the new recovery boiler and turbine to start up in September 2022. The earlier estimate was the first half of 2022.

Board of Directors' proposal for dividend

The distributable funds of the parent company on 31 December 2021 were EUR 651.3 million, of which the retained earnings for the financial year are EUR 440.6 million.

The Board of Directors proposes to the Annual General Meeting to be held on 24 March 2022 that a dividend of EUR 0.41 per share be distributed for the 2021 financial period.

The proposed dividend corresponds to 50% of the earnings per share for 2021. The amount of dividend totals EUR 145.8 million.

The dividend will be paid to shareholders who are registered in the company's shareholders register held by Euroclear Finland Oy on the dividend payment record date of 28 March 2022. The Board of Directors proposes 7 April 2022 as the dividend payment date.

Consolidated statement of comprehensive income

EUR million	Note	1–12/2021	1–12/2020
Sales	2.1, 2.2, 7.3	2,084.1	1,889.5
Change in stocks of finished goods and work in progress		11.9	-38.7
Other operating income	2.3, 7.3	57.0	33.3
Materials and services	2.4, 7.3	-1,461.0	-1,225.4
Employee costs	3	-216.0	-196.9
Share of result of associated company	7.2, 7.3	114.4	-2.4
Depreciation, amortisation and impairment charges	4.1, 4.2	-90.2	-94.5
Other operating expenses	2.4	-124.4	-137.5
Operating result		375.9	227.3
Share of profit from associated companies and joint ventures	7.2	0.0	-0.1
Net exchange gains/losses	5.2	-2.3	-3.4
Other financial income	5.2, 7.3	0.2	0.4
Interest and other financial expenses	5.2, 7.3	-7.9	-11.9
Result before tax		365.8	212.3
Income taxes	6	-51.8	-42.2
Result for the period		314.0	170.1
Other comprehensive income			
Items that will not be reclassified to profit or loss	5.1		
Actuarial gains/losses on defined benefit pension plans	3.4	3.0	-3.7
Financial assets at fair value through other comprehensive income	4.3	-5.8	-70.3
Share of profit from other comprehensive income of associated company		-0.1	0.4
Income tax relating to items that will not be reclassified		-0.8	15.0
Total		-3.7	-58.6
Items that may be reclassified to profit or loss	5.1		
Cash flow hedges		-11.0	17.6
Translation differences		-4.8	6.2
Share of profit from other comprehensive income of associated company		-3.8	0.7
Income tax relating to items that may be reclassified		2.2	-3.4
Total		-17.4	21.1
Other comprehensive income, net of tax		-21.1	-37.5
Total comprehensive income for the period		292.8	132.6
Result for the period attributable to			
Shareholders of parent company		292.1	170.1
Non-controlling interest		21.9	
		314.0	170.1
Total comprehensive income for the period attributable to			
Shareholders of parent company		272.4	132.6
Non-controlling interest		20.4	
		292.8	132.6
Adjusted average number of shares, thousands		355,513	355,513
Basic and diluted earnings per share for result for the period attributable to the shareholders of parent company, EUR		0.82	0.48

The notes are an integral part of these financial statements.

Consolidated balance sheet

EUR million	Note	31 DEC 2021	31 DEC 2020
ASSETS			
Non-current assets			
Goodwill	4.1	12.4	12.4
Other intangible assets	4.1	6.2	6.7
Tangible assets	4.2	935.0	824.7
Investments in associated companies and joint ventures	7.2	479.0	369.0
Other investments	4.3, 5.7	181.0	186.9
Other non-current financial assets	5.3	15.3	10.8
Deferred tax receivables	6	8.4	7.5
		1,637.2	1,417.9
Current assets			
Inventories	4.4	382.6	360.0
Accounts receivable and other receivables	4.5, 7.3	331.5	276.7
Current income tax receivables		1.0	0.7
Derivative financial instruments	5.7	34.0	33.3
Cash and cash equivalent	5.4, 7.3	524.2	214.0
		1,273.4	884.6
Assets classified as held for sale	7.2	11.0	
Total assets		2,921.5	2,302.5
SHAREHOLDERS' EQUITY AND LIABILITIES			
Equity attributable to shareholders of parent company	5.1		
Share capital		557.9	557.9
Translation differences		-27.2	-24.9
Fair value and other reserves		118.3	136.6
Reserve for invested unrestricted equity		208.9	265.8
Retained earnings		841.5	448.4
		1,699.4	1,383.8
Non-controlling interests		146.2	
Total shareholders' equity		1,845.6	1,383.8
Non-current liabilities			
Deferred tax liabilities	6.	96.2	97.5
Post employment benefit obligations	3.4	13.7	13.4
Provisions	4.8	2.0	3.7
Borrowings	5.5, 5.6, 5.7	437.0	444.8
Other liabilities	4.6	1.5	1.9
Derivative financial instruments	5.7	1.7	3.4
		552.1	564.7
Current liabilities			
Provisions	4.8	1.0	1.0
Current borrowings	5.5, 5.6, 5.7	10.0	7.6
Accounts payable and other liabilities	4.7, 7.3	467.5	340.4
Current income tax liabilities		19.9	0.1
Derivative financial instruments	5.7	18.6	4.9
		517.0	354.0
Liabilities classified as held for sale	7.2	6.8	
Total liabilities		1,076.0	918.7
Total shareholders' equity and liabilities		2,921.5	2,302.5

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-control-ling interest	Total shareholders' equity
Shareholders' equity, 1 Jan 2021		557.9	-24.9	136.6	265.8	448.4	1,383.8		1,383.8
Result for the period						292.1	292.1	21.9	314.0
Other comprehensive income net of tax total	5.1		-2.3	-18.3		1.0	-19.7	-1.5	-21.1
Comprehensive income total			-2.3	-18.3		293.1	272.4	20.4	292.8
Transactions with non-controlling interests	7.1					134.4	134.4	125.7	260.2
Share based payments	3.3					1.1	1.1		1.1
Related party transactions									
Dividends and capital distribution	5.1				-56.9	-35.6	-92.4		-92.4
Shareholders' equity, 31 Dec 2021		557.9	-27.2	118.3	208.9	841.5	1,699.4	146.2	1,845.6
Shareholders' equity, 1 Jan 2020		557.9	-29.1	175.5	315.5	318.2	1,338.0		1,338.0
Result for the period						170.1	170.1		170.1
Other comprehensive income net of tax total	5.1		4.2	-38.9		-2.8	-37.5		-37.5
Comprehensive income total			4.2	-38.9		167.3	132.6		132.6
Share based payments	3.3					-1.5	-1.5		-1.5
Related party transactions									
Dividends and capital distribution	5.1				-49.8	-35.6	-85.3		-85.3
Shareholders' equity, 31 Dec 2020		557.9	-24.9	136.6	265.8	448.4	1,383.8		1,383.8

The notes are an integral part of these financial statements.

Business operations and value creation

Sustainability

Financial development

Governance

Consolidated cash flow statement

EUR million	Note	1–12/2021	1–12/2020
Cash flow from operating activities			
Result for the period		314.0	170.1
Adjustments to the result, total		11.8	140.6
Interest received		0.1	0.1
Interest paid		-11.2	-11.4
Dividends received		0.0	21.9
Other financial items, net		-3.6	-6.3
Income tax paid		-31.1	-45.2
Change in working capital		49.5	37.9
Net cash flow from operations		329.6	307.7
Cash flow from investing activities			
Acquisition of other shares		0.0	-2.2
Capital expenditure		-213.7	-154.2
Proceeds from disposal of other shares		0.2	0.1
Proceeds from sale of tangible and intangible assets		30.4	14.5
Change in non-current receivables, net		0.2	-0.2
Net cash flow from investing		-183.0	-142.0
Cash flow from financing activities			
Changes in non-controlling interests		261.2	
Proceeds from non-current interest bearing liabilities		0.0	33.2
Payment of non-current interest bearing liabilities		-7.2	-32.0
Change in current liabilities	5.5	-0.4	-0.3
Change in non-current non-interest bearing liabilities, net		-0.4	-0.1
Dividend paid and capital distribution		-92.4	-85.3
Net cash flow from financing		160.7	-84.4
Change in cash and cash equivalents		307.3	81.3
Cash and cash equivalents at beginning of period		214.0	134.2
Translation adjustments		3.0	-1.5
Change in cash and cash equivalents		307.3	81.3
Cash and cash equivalents at end of period	5.4	524.2	214.0
Adjustments to the result, total			
Taxes		51.7	42.2
Depreciation, amortisation and impairment charges		90.2	94.5
Share of result from associated companies and joint ventures		-114.4	2.5
Gains and losses on sale of non-current assets		-28.2	-14.0
Finance costs, net		10.0	14.9
Post-employment benefit obligations and provisions		-0.7	-1.0
Other adjustments		3.2	1.5
Adjustments to the result, total		11.8	140.6
Change in working capital			
Inventories		-19.3	17.7
Accounts receivables and other receivables		-53.9	26.1
Accounts payable and other liabilities		122.7	-5.8
Change in working capital		49.5	37.9

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 2021 Metsäliitto Cooperative owned 48.0 per cent of the shares, and the voting rights conferred by these shares were 67.5 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 10 February 2022. 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 2021. 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.

Coronavirus pandemic

The impact of the coronavirus pandemic on business has been discussed in the Report of the Board of Directors. The impacts of the coronavirus pandemic on determining the impairment of sales receivables as well as cash and cash equivalents are discussed in Note 5.6, Management of financial risks, counterparty risk.

Amendments to standards applied during the 2021 financial period

The amendments to standards and interpretations that entered into force at the beginning of 2021 have no material impacts on the consolidated financial statements.

New and amended standards to be applied during future financial periods

Amendments to IAS 16, Property, Plant and Equipment - Proceeds before Intended Use (to be applied during the financial periods beginning on 1 January 2022 or thereafter). The amendment prohibits deducting from the cost of an item of property, plant and equipment any proceeds from selling items produced while bringing that asset to the location and condition necessary for it to be capable of operating in the manner intended by management. Instead, the proceeds from selling such items, and the cost of producing those items, are recognised in profit or loss. The amendments will impact the definition of the acquisition cost of the Group's tangible assets and the notes to be presented.

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
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	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
Germany	161.4	147.4	3.4	3.7	0.1	-0.4
Italy	134.6	120.6	0.5	0.8	0.1	0.5
Sweden	100.5	84.0	551.9	432.6	164.2	122.1
Finland	132.6	101.8	1,057.5	961.8	55.1	43.4
United Kingdom		79.1		7.0		0.0
Spain	79.6	69.4	0.2	0.4		
France	77.5	53.7	0.2	0.5	0.2	0.0
Poland	91.7	73.1	0.1	0.1	0.0	0.1
The Netherlands	28.7	77.5				
Belgium	23.0	17.7	1.1	1.5	0.0	0.1
Other EU	141.1	129.4				
EU total	970.6	953.7	1,614.9	1,408.4	219.8	165.8
Turkey	90.3	103.8	0.0		0.0	
United Kingdom	102.9		12.2		0.0	
Russia	116.5	95.2	0.1	0.2	0.0	0.0
Norway	3.3	3.6				
Other Europe and Middle East	41.2	35.6				
USA	401.4	365.0	1.0	1.2	0.1	0.1
Canada	25.2	17.2				
Asia	173.7	148.0	0.5	0.6	0.2	0.4
Other countries	159.0	167.4	0.0	0.1	0.0	0.0
Total	2,084.1	1,889.5	1,628.8	1,410.4	220.2	166.4

Non-current assets include all non-current assets with the exception of derivative financial instruments and deferred tax assets. The transition period related to the United Kingdom's withdrawal from the EU ended on 31 December 2020.

Personnel at year end

By country	2021	2020
Finland	1,416	1,422
Sweden	712	691
Belgium	64	58
Germany	49	51
USA	63	60
Singapore	12	12
Other countries	73	76
Total	2,389	2,370

Personnel average

By country	2021	2020
Finland	1,490	1,486
Sweden	711	714
Belgium	61	58
Germany	49	50
USA	61	57
Singapore	12	11
Other countries	76	80
Total	2,461	2,455

Information on most important customers

There were no customers with revenue exceeding 10 per cent of total Group revenue in 2021 and 2020.

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 sees geographical distribution of sales as describing 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	2021	2020
Germany	161.4	147.4
Italy	134.6	120.6
Sweden	100.5	84.0
Turkey	90.3	103.8
Finland	132.6	101.8
United Kingdom	102.9	79.1
Russia	116.5	95.2
Spain	79.6	69.4
France	77.5	53.7
Poland	91.7	73.1
Norway	3.3	3.6
The Netherlands	28.7	77.5
Belgium	23.0	17.7
Rest of EMEA	266.7	254.9
EMEA	1,409.3	1,281.8
USA	401.4	365.0
Canada	25.2	17.2
Rest of Americas	55.6	58.5
Americas	482.2	440.7
APAC	192.6	167.0
Total	2,084.1	1,889.5

2.3 Other operating income

EUR million	2021	2020
Gains on disposal	28.7	14.2
Rental income	1.2	1.2
Service revenue	4.5	3.4
Government grants and allowances	17.6	9.9
Scrap and waste sale	0.3	0.1
Other operating income	4.8	4.5
Total	57.0	33.3

Gains on disposal

EUR million	2021	2020
Emission rights	21.3	6.2
Sale of non-business related land area	7.0	6.0
Other	0.4	1.9
Total	28.7	14.2

The government grants and compensation relate to the compensation for training, healthcare and research costs, insurance indemnities and energy aid. Government grants and allowances include the EUR 16.8 million insurance claim paid to Metsä Board's Husum pulp mill in 2021.

2.4 Operating expenses

EUR million	2021	2020
Materials and services		
Raw materials and consumables		
Purchases during the financial year	1,117.6	898.4
Change in inventories	-10.0	25.5
External services		
Logistics cost	271.1	244.1
Other external services	82.4	57.4
Total	1,461.0	1,225.4
Depreciation, amortisation and impairment charges		
Depreciation, amortisation and impairment charges total	90.2	94.5
Employee costs		
Employee costs total	216.0	196.9
Other operating expenses		
Rents and other real estate expenses	17.4	12.3
Purchased services	43.1	69.7
Losses on sale of non-current assets	0.5	0.2
Other operating expenses	63.3	55.3
Total	124.4	137.5

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

Other operating expenses include e.g. energy costs, real estate costs, marketing and advertising costs and administrative costs.

Research and development expenses excluding depreciations were EUR 6.0 (6.6) million. The reporting of research and development expenses has been clarified and the figures for the comparison year have been adjusted accordingly.

Auditor fees

The fees of the group's auditor KPMG

EUR million	2021	2020
Audit	0.4	0.4
Auditors' opinions	0.0	0.0
Tax services		
Other services		0.0
Total	0.4	0.4

In 2021 fees to other auditors than KPMG amounted to EUR 0.4 (0.1) million.

3. Remuneration

3.1 Employee costs

EUR million	2021	2020
Wages and salaries	136.9	123.1
Share-based payments	3.2	1.4
Pension costs		
Defined benefit plans	0.4	0.3
Defined contribution plans	17.1	18.7
Other social security costs	58.3	53.5
Social security costs total	75.9	72.5
Employee costs total	216.0	196.9

3.2 The management's salaries, remuneration and pension expenses

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

The management's salaries, remuneration and pension expenses

EUR	2021	2020
Salaries and other remuneration	2,093,350.95	1,820,308.99
Share-based payments (long-term remuneration)	2,044,228.93	2,449,410.62
Pension costs		
Defined benefit plans	402,966.82	476,611.79
Defined contribution plans	307,833.93	191,951.86
Total	4,848,380.63	4,938,283.26

Remuneration paid to the members of the Board of Directors of the parent company and their shareholding

	Shareholding shares	2021 Renumeration EUR	2020 Renumeration EUR	2021 Defined contribution EUR	2020 Defined contribution EUR
Ilkka Hämälä, chairman	213,381	109,360	109,060	16,931	14,784
Martti Asunta, Vice chairman (until 11 June 2020)			7,700		1,268
Jussi Linnaranta, Vice chairman (from 11 June 2020)	25,192	94,240	93,940	15,996	14,151
Hannu Anttila	143,942	76,600	77,000	13,005	11,622
Hankonen-Nybom Raija-Leena (from 23 May 2021)	4,446	77,400		11,989	
Hyrsky Erja (from 25 March 2021)	5,823	71,000		12,048	
Kirsi Komi	81,610	76,600	77,000	11,864	10,475
Kai Korhonen (until 25 March 2021)		8,000	86,600		
Liisa Leino (until 25 March 2021)		5,600	76,300	873	10,380
Jukka Moisio (from 11 June 2020)	8,598	76,600	68,600	11,864	9,228
Juha Niemelä (until 11 June 2020)		0	7,700		
Timo Saukkonen (from 11 June 2020)	13,198	76,600	68,600	11,864	9,228
Veli Sundbäck	71,275	76,600	76,300		
Total	567,465	748,600	748,800	106,435	81,135

Metsä Board's Annual General Meeting 2021 decided, that about one half of the remuneration will be paid in cash while the other half is paid in company's B shares.

The remuneration of the Management Team consists of a fixed monthly salary and remuneration based on short-term and long-term remuneration schemes. The CEO is also covered by a defined benefit pension plan.

The monthly salary of CEO Mika Joukio is EUR 41,390. The salary includes car and phone benefits and extended insurance cover for travel and accidents. In 2019 and 2020, the reward option for the CEO's short-term compensation plan was at the target level of 30 per cent and at the maximum level of 75 per cent of the fixed annual salary.

Salaries and remuneration paid to the CEO and other members of the Corporate Management Team

EUR	2021 CEO	2020 CEO	2021 Other Management Team	2020 Other Management Team
Salaries and remuneration				
Basic salary including fringe benefits [1]	518,981	511,158	1,176,977	1,119,875
Short-term performance bonus [2]	135,341	64,903	202,052	124,372
Lump sum [3]	30,000		30,000	
Long-term share-based incentive [4]	874,336	572,876	953,396	771,934
Deferred long-term share-based incentive [5] [6]	7,902	658,981	208,595	445,620
Total	1,566,560	1,807,918	2,571,020	2,461,802
Pension Costs				
Supplemental defined benefit pension plan	402,967	476,612		
Contribution-based statutory arrangement	94,026	52,856	213,808	139,095
Total	496,993	529,468	213,808	139,095
Salaries and remuneration as well as pension costs in total	2,063,553	2,337,386	2,784,828	2,600,897

1) Basic salary may include car and telephone benefits, extended health, travel and accident insurance cover, and minor other benefits in kind.
2) The 2021 payment concerns performance in 2020; the 2020 payment concerns performance in 2019.
3) Lump sum for a project related to the sale of a 30% stake in the Husum pulp mill to Norra Skog.
4) 2021: earning period 2018–2020; 2020: earning period 2017–2019.
5) In 2021 Delayed long-term rewards were paid in accordance with the terms and conditions and the decision of the Board of Directors totalling EUR 7,902 (658,981).
6) In 2021 Delayed long-term rewards were paid in accordance with the terms and conditions and the decision of the Board of Directors totalling EUR 208,595 (445,620).

In 2019 and 2020, the reward option for the short-term compensation plan for members of the Management Team was at the target level of 20 or 25 per cent and at the maximum level of 50 or 62.5 per cent of the fixed annual salary.

The Board of Directors decides on the criteria of the short-term remuneration system. Remuneration is based on defined financial criteria and targets supporting strategy.

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 mainly 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. 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.

The Corporate Management Team members have no pension arrangements differing from statutory pensions. The Group has no off balance sheet pension liabilities on behalf of management.

Key management had any loans outstanding from the company or its subsidiares 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 of which the company Board of Directors decided to adopt on 10 January 2017 and Performance based share incentive scheme 2020–2024 which the company Board of Directors decided to adopt on 12 December 2019, 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 3,193,961 in 2021 (2020: EUR 1,404,744).

Share incentive scheme 2014, Performance based share incentive scheme 2017–2021 and Performance based share incentive scheme 2020–2024

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, 2019–2021, 2020–2022, 2021–2023 and 2022–2024. The bonus awarded under the share incentive scheme 2014 and performance based share incentive plan 2017–2021 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. The number of shares allocated under the performance share plan 2020–2024 includes both the share and the cash portion. Accordingly, the reward is paid partly in shares and partly in cash and the cash portion is intended to cover taxes and tax-like payments. The bonus is not paid if the person's employment ends before the end of the earning period. In addition, the scheme includes a two-year commitment period. If the key employee's employment ends during the commitment period, the key person must, as a rule, return the delivered shares to the Company free of charge.

Based on the fulfillment of the criteria for the earning period 2018–2020, 132,229 Metsä Board Oyj B shares and a cash contribution were paid to cover taxes and tax-like payments arising from the reward at the time of the transfer of the shares.

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 2015–2017 reflects the value of deferred compensation and interest accrued thereon to be paid later when the employment criterion is fulfilled.

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

31 Dec 2021	2015–2017	Total
Key characteristics		
Shares allocated to the scheme, shares	427,500	427,500
Grant date(s)	27.2.2015, 1.11.2016	
Criteria	Equity ratio, ROCE, EBIT multiplier	
Personnel (31 December 2021)		1
Factors used to determine fair value (EUR) [1]		
Share price at grant date	5.85	
Share fair value at grant date	5.12	
Annual dividend assumption in fair value measurement	0.14	
Share price at payment date / balance sheet date	7.46	
Fair value on balance sheet date		0
Effect on result and financial position (EUR)		
Expense in 2021, share-based payments settled as equity	0	0
Share-based payments settled in cash, unpaid part, estimate	96,422	96,422
Number of shares 1 January 2021 [2]		
Outstanding at the beginning of the period	0	0
Changes during the year		
Shares granted	0	0
Shares forfeited	0	0
Shares exercised	0	0
Shares expired	0	0
Number of shares 31 December 2021		
Outstanding at the end of the period	0	0

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

	Performance based share incentive scheme 2017–2021			
31 Dec 2021	**2017–2019**	**2018–2020**	**2019–2021**	**Total**
Key characteristics				
Shares allocated to the scheme, shares	269,167	275,278	280,694	825,139
Grant date(s)	6.4.2017, 7.9.2017	9.4.2018, 25.9.2018	2.4.2019, 13.6.2019, 12.8.2019	
Criteria	Equity ratio, ROCE ja EBIT	Equity ratio, ROCE ja EBIT	Equity ratio, ROCE ja EBIT	
Personnel (31 December 2021)				27
Factors used to determine fair value (EUR) [1]				
Share price at grant date	6.37	8.64	5.82	
Share fair value at grant date	5.92	7.84	5.20	
Annual dividend assumption in fair value measurement	0.23	0.27	0.31	
Share price at payment date / balance sheet date	4.86	8.62	8.62	
Fair value on balance sheet date	-	2,198,400	1,926,418	4,124,818
Effect on result and financial position (EUR)				
Expense in 2021, share-based payments settled as equity	490,193	412,870	927,307	1,830,371
Share-based payments settled in cash, unpaid part, estimate	-	-	1,707,225	1,707,225
Number of shares 1 January 2021 [2]				
Outstanding at the beginning of the period	183,687	256,389	280,694	720,770
Changes during the year				
Shares granted	0	0	6,667	6,667
Shares forfeited	0	0	6,667	6,667
Shares exercised	183,687	0	0	183,687
Shares expired	0	124,160	0	124,160
Number of shares 31 December 2021				
Outstanding at the end of the period	0	132,229	280,694	412,923

Key characteristics of Performance based share incentive scheme 2020–2024 are summarised in the table below:

	Performance based share incentive scheme 2020–2024		
31 Dec 2021	**2020–2022**	**2021–2023**	**Total**
Key characteristics			
Shares allocated to the scheme, shares	590,788	453,650	1,044,438
Grant date(s)	27.1.2021, 18.6.2021	27.1.2021, 18.6.2021	
Criteria	Equity ratio, ROCE ja EBIT	Equity ratio, ROCE ja EBIT	
Personnel (31 December 2021)			26
Factors used to determine fair value (EUR) [1]			
Share price at grant date	5.46	8.93	
Share fair value at grant date	4.66	8.10	
Annual dividend assumption in fair value measurement	0.27	0.27	
Share price at payment date / balance sheet date	8.61	8.61	
Fair value on balance sheet date	2,234,013	3,357,586	5,591,600
Effect on result and financial position (EUR)			
Expense in 2021, share-based payments settled as equity	742,746	620,844	1,363,590
Share-based payments settled in cash, unpaid part, estimate	2,182,800	1,881,076	4,063,876
Number of shares 1 January 2021 [2]			
Outstanding at the beginning of the period	590,788	0	590,788
Changes during the year			
Shares granted	18,756	453,650	472,406
Shares forfeited	20,978	24,369	45,347
Shares exercised	0	0	0
Shares expired	0	0	0
Number of shares 31 December 2021			
Outstanding at the end of the period	588,566	429,281	1,017,847

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. 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	2021	2020
Liabilities recognised in balance sheet		
Defined benefit pension plans	13.4	13.1
Defined contribution pension plans	0.3	0.3
Total	13.7	13.4
Surplus of funded plans in assets	-12.2	-7.5

Defined benefit pension plans

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

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.

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

Amounts in balance sheet

EUR million	2021	2020
Present value of funded obligations	53.2	59.1
Fair value of plan assets	-62.8	-64.8
Deficit (+) / surplus (-)	-9.6	-5.7
Present value of unfunded obligations	10.8	11.3
Deficit (+) / surplus (-) of defined benefit pension plans, total	1.2	5.6
Defined benefit-based pension liabilities on the balance sheet, net	13.4	13.1
Defined benefit-based pension assets on the balance sheet, net	-12.2	-7.5

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Change in defined benefit pension obligations in 2021

EUR million	Present value of obligation	Fair value of plan assets	Total
1 Jan 2021	70.4	-64.8	5.6
Current service cost	0.4		0.4
Administrative costs			
Interest expense (+) or interest income (-)	0.6	-0.6	0.0
Past service cost	-0.4		-0.4
Total amount recognised in profit and loss	0.6	-0.6	0.0
Remeasurements in other comprehensive income			
Return on plan assets, excluding amounts included in interest income or expense		-2.4	-2.4
Gains (-) and losses (+) from change in demographic assumptions	-0.1		-0.1
Gains (-) and losses (+) from change in financial assumptions	-1.9		-1.9
Experience gains (-) and losses (+)	1.2		1.2
Total remeasurements in other comprehensive income	-0.7	-2.4	-3.1
Translation differences	3.1	-3.6	-0.5
Contributions			
Employers		-0.3	-0.3
Plan participants	0.0	0.0	0.0
Payments from plans			
Benefit payments	-8.7	8.1	-0.6
Settlements	-0.8	0.9	0.1
31 Dec 2021	64.0	-62.8	1.2

Change in defined benefit pension obligations in 2020

EUR million	Present value of obligation	Fair value of plan assets	Total
1 Jan 2020	68.9	-67.5	1.4
Current service cost	0.3		0.3
Administrative costs			
Interest expense (+) or interest income (-)	1.0	-1.1	-0.1
Past service cost			
Total amount recognised in profit and loss	1.4	-1.1	0.2
Remeasurements in other comprehensive income			
Return on plan assets, excluding amounts included in interest income or expense		-0.6	-0.6
Gains (-) and losses (+) from change in demographic assumptions	0.2		0.2
Gains (-) and losses (+) from change in financial assumptions	6.9		6.9
Experience gains (-) and losses (+)	-2.3		-2.3
Total remeasurements in other comprehensive income	4.7	-0.6	4.2
Translation differences	-2.3	2.9	0.6
Contributions			
Employers		-0.3	-0.3
Plan participants	0.0	0.0	0.0
Payments from plans			
Benefit payments	-2.3	1.8	-0.6
Settlements			
31 Dec 2020	70.4	-64.8	5.6

Defined benefit pension obligation and plan assets by country in 2021

EUR million	Germany	United Kingdom	Finland	Other countries	Total
Present value of obligation	9.9	39.0	11.2	3.9	64.0
Fair value of plan assets		-51.2	-9.7	-1.9	-62.8
Total	9.9	-12.2	1.5	2.0	1.2

Defined benefit pension obligation and plan assets by country in 2020

EUR million	Germany	United Kingdom	Finland	Other countries	Total
Present value of obligation	10.4	44.5	11.4	4.1	70.4
Fair value of plan assets		-51.5	-11.3	-2.1	-64.8
Total	10.4	-6.9	0.2	1.9	5.6

Significant actuarial assumptions 2021

	Germany	United Kingdom	Finland	Belgium
Discount rate, %	0.74	1.85	0.82	0.70
Salary growth rate, %	3.00	2.80	0.00	1.00
Pension growth rate, %	1.75	3.35	2.36	2.00

Significant actuarial assumptions 2020

	Germany	United Kingdom	Finland	Belgium
Discount rate, %	0.74	1.20	0.38	0.30
Salary growth rate, %	3.00	2.30	0.00	1.00
Pension growth rate, %	1.75	3.10	1.40	1.70

Sensitivity of benefit obligation to changes in essential weighted assumptions 2021

	Change of assumption	Impact on benefit obligation: Increase	Impact on benefit obligation: Decrease
Discount rate	0.5%-points	5.6% decrease	6.2% increase
Salary growth rate	0.5%-points	0.4% increase	0.3% decrease
Pension growth rate	0.5%-points	5.2% increase	4.8% decrease

	One year increase in assumption	One year decrease in assumption
Life expectancy	4.0% increase	3.9% 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:

	2021 EUR million	2021 %	2020 EUR million	2020 %
Qualifying insurance policies	1.9	3%	2.1	3%
Cash and cash equivalents	0.8	2%	0.2	0%
Investment funds	50.4	80%	51.3	79%
Funds held by Insurance company	9.7	15%	11.3	17%
Total	62.8	100%	64.8	100%

The most considerable risks related to Defined benefit plans are as follows:

Volatility of assets

The Group works to reduce investment risk by diversifying the assets in the arrangement to different 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 2022. The weighted average duration of the defined benefit obligation is 14.4 years (15.1).

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.

Research and development costs

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.

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.

Configuration and customisation costs in the deployment of cloud services are recognised as expenses if they do not result in intangible assets. If the services received by the group are separable, the costs are recognised as expenses when the supplier modifies the application. If the services received by the group are not separable, the costs are recognised as expenses when the supplier provides access to the application during the term of the agreement.

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 2021	12.4	123.4	0.6	136.4
Translation differences		-0.1		-0.1
Increases		0.5	1.0	1.5
Decreases		-0.2		-0.2
Transfers between asset categories		0.6	-0.6	
Acquisition cost, 31 Dec 2021	12.4	124.2	1.0	137.6
Accumulated amortisation and impairment charges, 1 Jan 2021		-117.4		-117.4
Translation differences		0.1		0.1
Accumulated amortisation on decreases and transfers		0.2		0.2
Amortisation for the period		-2.0		-2.0
Impairment charges for the period				
Accumulated amortisation and impairment charges, 31 Dec 2021		-119.1		-119.1
Book value, 1 Jan 2021	12.4	6.1	0.6	19.1
Book value, 31 Dec 2021	12.4	5.1	1.0	18.5

EUR million	Goodwill	Other intangible assets	Construction in progress	Total
Acquisition cost, 1 Jan 2020	12.4	130.5	1.4	144.3
Translation differences		0.3		0.3
Increases		0.7	0.0	0.7
Decreases		-8.1		-8.1
Transfers between asset categories		0.0	-0.8	-0.8
Acquisition cost, 31 Dec 2020	12.4	123.4	0.6	136.4
Accumulated amortisation and impairment charges, 1 Jan 2020		-123.1		-123.1
Translation differences		-0.2		-0.2
Accumulated amortisation on decreases and transfers		8.1		8.1
Amortisation for the period		-2.2		-2.2
Impairment charges for the period				
Accumulated amortisation and impairment charges, 31 Dec 2020		-117.4		-117.4
Book value, 1 Jan 2020	12.4	7.4	1.4	21.2
Book value, 31 Dec 2020	12.4	6.1	0.6	19.1

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.

Emission allowances

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.

In 2021 the Group received 501 thousand tonnes of emission allowances free of charge (606). In addition the Group has sold 310 thousand tonnes to the market (217). At balance closing date the group had emission allowances of 1,011 thousand tonnes (1,060). In addition, the Group has 47 thousand tonnes of emission allowances in 2021, which were not yet on the allowance register on 31 December 2021 due to the delay in allocation. 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 2021, the Group sold emission allowances for EUR 21.3 million (6.2). On the balance sheet date, the fair market value of an emission right was EUR 79.61 per tonne (32.04) and total value of owned rights including delayed allowances approximately EUR 84.2 million (34.0).

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 cash flows

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.

Impairment testing 2021

Metsä Board carries out impairment testing once a year, during the fourth quarter, based on the situation on 30 September, or more frequently if signs of a possible impairment are detected.

The group did not recognise impairments based impairment testing in 2021. In the testing carried out in 2021, a somewhat potential change in any individual key assumption would not lead to the recognition of an impairment.

The group's key impairment testing and key assumptions in the situation on 30 September 2021:

Cash-generating unit	Goodwill EUR million	Brand EUR million	Discount rate after taxes on 30 September 2021	Discount rate after taxes on 30 September 2020	Long-term growth rate on 30 September 2021	Long-term growth rate on 30 September 2020
Paperboard industry						
Folding boxboard [1]	29.5	2.5	5.78%	5.41%	2.0%	1.5%
Liner [1]	28.1	3.0	5.78%	5.41%	2.0%	1.5%
Market pulp [1]			5.78%	5.41%	2.0%	1.5%

[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.

The recoverable amounts of the cash-generating units being tested are based on five-year forecasts and the resulting, steadily growing cash flows. The initial value used for the key assumptions of the cash flows – prices and variable costs – after the forecast period is the average of the five-year forecast period. The value used for delivery volumes and fixed costs is the value of the forecast period's fifth year. The key testing assumptions are management estimates and forecasts obtained from external sources of information.

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.

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

The Group has leased various land areas, properties, equipment and vehicles. When the leased asset is available for the Group's use, A fixed asset item and a 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 leased fixed 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. The leased fixed 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.

Key estimates and judgments

Estimates concerning the residual value and useful life of property, plant and equipment, as well as the selection of the depreciation method, require significant management judgement.

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 2.0 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. 2021	17.0	2.3	410.7	10.8	2,557.8	21.9
Translation differences	0.0		-2.6	0.2	-27.2	-0.2
Additions	0.0	0.3	1.6	1.4	40.5	2.5
Decrease	-1.8	-0.6	-11.5	-2.1	-27.7	-8.5
Transfers between items	0.5		3.0		19.7	
Acquisition cost, 31 Dec. 2021	15.7	2.0	401.2	10.2	2,563.2	15.7
Accumulated depreciation and impairment charges 1 Jan. 2021	-0.5	-0.2	-282.1	-4.8	-2,066.3	-9.7
Translation differences	0.0		2.0	-0.1	22.0	0.1
Accumulated depreciation on deductions and transfers		0.1	0.6	1.5	7.7	8.5
Assets held for sale		-0.1	7.3		15.1	
Depreciation for the period		-0.3	-7.9	-2.0	-67.4	-5.0
Impairments						
Accumulated depreciation and impairment charges 31 Dec. 2021	-0.5	-0.5	-280.0	-5.4	-2,093.5	-6.2
Book value, 1 Jan. 2021	16.5	2.1	128.7	6.0	491.4	12.2
Book value, 31 Dec. 2021	15.2	1.4	121.3	4.8	469.7	9.5

	Other tangible assets	Construction in progress	Total	Total	
EUR million	**Owned**	**Owned**	**Owned**	**Leased**	**Total**
Acquisition cost, 1 Jan. 2021	24.8	158.4	3,168.7	35.0	3,203.7
Translation differences	-0.2	-4.5	-34.5	0.0	-34.5
Additions	0.4	172.2	214.6	4.1	218.7
Decrease	-0.4	1.6	-39.7	-11.2	-50.9
Transfers between items	-1.6	-21.7			
Acquisition cost, 31 Dec. 2021	23.0	306.1	3,309.2	27.8	3,337.0
Accumulated depreciation and impairment charges 1 Jan. 2021	-15.4		-2,364.3	-14.7	-2,379.0
Translation differences	0.2		24.2	0.0	24.2
Accumulated depreciation on deduction and transfers			8.4	10.1	18.4
Assets held for sale	0.3		22.7	-0.1	22.6
Depreciation for the period	-0.9		-76.2	-7.4	-83.6
Impairments			-4.6		-4.6
Accumulated depreciation and impairment charges 31 Dec. 2021	-15.9		-2,389.8	-12.2	-2,401.9
Book value, 1 Jan. 2021	9.4	158.4	804.4	20.2	824.7
Book value, 31 Dec. 2021	7.2	306.1	919.4	15.6	935.0

Assets held for sale include Oy Hangö Stevedoring Ab's assets. For more information on assets held for sale, see Note 7.2.

	Land and water areas		Buildings and constructions		Machinery and equipment	
EUR million	**Owned**	**Leased**	**Owned**	**Leased**	**Owned**	**Leased**
Acquisition cost, 1 Jan. 2020	14.6	2.5	391.8	10.9	2,416.9	16.2
Translation differences	0.0		4.8	-0.2	50.9	0.5
Additions	4.9	0.3	4.9	0.0	28.0	6.6
Decrease	-2.6	-0.6	2.9	0.1	43.8	-1.1
Transfers between items			6.4		18.2	-0.3
Acquisition cost, 31 Dec. 2020	17.0	2.3	410.7	10.8	2,557.8	21.9
Accumulated depreciation and impairment charges 1 Jan. 2020	-0.5	-0.3	-267.3	-2.3	-1,906.2	-5.1
Translation differences	0.0		-3.8	0.1	-40.8	-0.2
Accumulated depreciation on deductions and transfers		0.4	-2.9	-0.1	-44.3	0.9
Depreciation for the period		-0.3	-8.1	-2.4	-75.1	-5.3
Impairments						
Accumulated depreciation and impairment charges 31 Dec. 2020	-0.5	-0.2	-282.1	-4.8	-2,066.3	-9.7
Book value, 1 Jan. 2020	14.2	2.2	124.5	8.5	510.7	11.1
Book value, 31 Dec. 2020	16.5	2.1	128.7	6.0	491.4	12.2

	Other tangible assets	Construction in progress	Total	Total	
EUR million	**Owned**	**Owned**	**Owned**	**Leased**	**Total**
Acquisition cost, 1 Jan. 2020	24.6	60.9	2,908.9	29.6	2,938.5
Translation differences	0.4	5.8	61.9	0.3	62.2
Additions	0.4	120.5	158.6	7.0	165.6
Decrease	-1.2	-4.6	38.2	-1.6	36.6
Transfers between items	0.6	-24.1	1.1	-0.3	0.8
Acquisition cost, 31 Dec. 2020	24.8	158.4	3,168.7	35.0	3,203.7
Accumulated depreciation and impairment charges 1 Jan. 2020	-14.8		-2,188.8	-7.7	-2,196.5
Translation differences	-0.3		-44.9	-0.2	-45.1
Accumulated depreciation on deduction and transfers	0.9		-46.2	1.2	-45.1
Depreciation for the period	-1.2		-84.4	-8.0	-92.4
Impairments					
Accumulated depreciation and impairment charges 31 Dec. 2020	-15.4		-2,364.3	-14.7	-2,379.0
Book value, 1 Jan. 2020	9.8	60.9	720.1	21.8	742.0
Book value, 31 Dec. 2020	9.4	158.4	804.4	20.2	824.7

Leases

EUR million	2021	2020
Costs related to short-term leases	1.1	0.3
Costs of leases in which the underlying asset is of low value	3.9	1.3
Interest expenses	0.5	0.6
Cash outflow for leases	7.6	8.4

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 invests its folding boxboard capacity at Husum in Sweden. When the investment is completed, some of the board mill's machinery and equipment will be taken out of service. In 2021 there were an impairment loss of EUR 4.6 million recognised in the assets that will be taken out of service.

Borrowing costs

Borrowing costs capitalised in 2021 totalled to EUR 4.0 million (0.2). The average interest rate used in capitalisation was 2.1% (1.0%).

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 the present value of discounted cash flows. Key factors affecting cash flows include the price of electricity, inflation expectations and the discount rate. The 12-month moving average of electricity futures prices has been used as the energy price for the first six years. Subsequent prices are based on a long-term market price forecast. In 2020 Group discontinued the use of previous bench-mark transactions in Pohjolan Voima Oyj's shares as a valuation basis and increased the discount rates used in the valuation model based on projected cash flows to reflect prevailing circumstances.

The carrying amount of the Group's shares in Pohjolan Voima was EUR 177.6 million on the balance sheet on 31 December 2021. The carrying value of other investments is estimated to change by EUR -8.7 million and EUR 9.5 million should the rate used for dis-counting the cash flows change by 0.5 percentage points from the rate estimated by the management. The carrying value of other investments is estimated to change by EUR 67.1 million should the energy prices used in calculating the fair value differ by 10% from the prices estimated by the management.

EUR million	2021	2020
Pohjolan Voima Oyj	177.6	183.4
Other unlisted shareholdings	3.4	3.5
Other investments total	181.0	186.9

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 deployment phase 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 November 2020, Metsä Board participated in the shareholder loan of Pohjolan Voima Oyj with EUR 2.2 million, corresponding to its holding, to fund the comple-tion of the Olkiluoto 3 project. The loan retains the cur-rent level of Metsä Board's portion of OL3 power. The unsecured loan does not have a maturity date, its re-payment and interest payments depend on a decision of the debtor company's Board of Directors, and the loan capital can be converted into 40,011 new B2 series shares in Pohjolan Voima Oyj. The loan capital is re-payable in the event of bankruptcy only with a priority poorer than that of all other creditors.

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 3.14 (2020: 2.87) per cent and 3.14 per cent (3.87) for the Olkiluoto 3 currently under deployment phase.

The acquisition cost of shares in Pohjolan Voima Oyj is EUR 40.2 million (40.2) and the fair value EUR 177.6 million (183.4), which can be allocated to different shares as follows: The fair value of nuclear power shares totals EUR 165.6 million (171.3) 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 realisable 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	2021	2020
Raw materials and consumables	162.3	147.5
Finished goods	211.7	201.1
Advance payments	8.6	11.4
Inventories total	382.6	360.0

The value of Metsä Board inventories was not reduced through write-downs in 2021 or in 2020.

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. The impacts of the corona pandemic on determining the impairment of sales receivables is discussed in Note 5.6, Management of financial risks, counterparty risk.

Accounts receivable and other non-interest bearing receivables

EUR million	2021	2020
From Group companies		
Accounts receivable	26.6	17.0
Other receivables		
Prepayments and accrued income	0.0	0.0
Total	26.7	17.0
From associated companies and joint ventures		
Accounts receivable	0.3	0.2
From others		
Accounts receivable	245.8	208.4
Impairment	-2.5	-3.0
Total	243.3	205.4
Other receivables	46.5	26.5
Prepayments and accrued income	14.7	27.7
From others total	304.5	259.6
Accounts receivable and other receivables total	331.5	276.7

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	2021	2020
Value 1 Jan	3.0	2.1
Increase	0.0	4.6
Decrease	-0.5	-3.7
Value 31 Dec	2.5	3.0

Credit losses recognised during 2021 were EUR 0.0 million (0.3) .

Age distribution of accounts receivable less impairments

EUR million	2021	2020
Not overdue	236.3	195.6
Overdue		
Less than 30 days	8.0	10.1
Between 31 and 60 days	-0.2	0.4
Between 61 and 90 days	0.0	0.0
Between 91 and 180 days	-0.4	-0.4
Over 180 days	-0.3	-0.2
Total	243.3	205.4

4.6 Other liabilities

EUR million	2021	2020
Non-current liabilities to Group companies		
Non-current liabilities		
Advance payments received	1.1	1.5
Accruals and deferred income	0.5	0.4
Total	1.5	1.9

4.7 Accounts payable and other liabilities

EUR million	2021	2020
Advance payments received	4.0	4.5
Accounts payable, Supply Chain Finance schemes	76.3	55.3
Other accounts payable	222.2	172.0
Other liabilities	12.9	12.8
Accruals and deferred income		
Customer discounts	26.3	20.6
Purchase-related items	50.2	23.4
Employee costs	32.7	29.9
Other accrued expenses	43.0	21.8
Total	467.5	340.4

With financing banks, Metsä Group has established Supply Chain Finance (SCF) schemes aimed at a few key suppliers. In the schemes, the suppliers are offered the option of selling their Metsä Group receivables to a bank providing the SCF scheme. The SCF schemes partly replace the earlier advance payment arrangements, and their aim is not to cause a significant deviation from Metsä Group's normal payment terms.

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.

Key estimates and judgements
The determination of the amount of provisions and the conditions for their recognition involves management's judgment.

Provisions

EUR million	Restructuring	Environmental	Other	Total
1 Jan 2021	0.2	3.4	1.0	4.7
Translation differences	0.0			0.0
Increases			0.0	0.0
Utilised during the year		-0.7		-0.7
Unused amounts reversed		0.0		0.0
Transfers to assets held for sale			-1.0	-1.0
31 Dec 2021	0.2	2.7	0.0	3.0
Non-current		2.0	0.0	2.0
Current	0.2	0.8	0.0	1.0
Total	0.2	2.7	0.0	3.0
1 Jan 2020	1.2	3.5	1.2	5.8
Translation differences	0.0		0.0	0.1
Increases		0.0		0.0
Utilised during the year	-1.0		-0.2	-1.2
Unused amounts reversed		-0.1		-0.1
31 Dec 2020	0.2	3.4	1.0	4.7
Non-current		2.7	1.0	3.7
Current	0.2	0.8	0.0	1.0
Total	0.2	3.4	1.0	4.7

Half of non-current provisions are estimated to be utilised by the end of 2025 and the rest in 2030s. The decrease in restructuring provision in 2020 relates to usage of Husum plant efficiency improvement programme 2018 provision. Decrease in environmental obligations in 2020 is mainly due to updated estimate of fair value of environmental provision.

Assets held for sale include Oy Hangö Stevedoring Ab's assets. For more information on assets held for sale, see Note 7.2.

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 2020	51.9	506.0	557.9
Conversion of A shares into B shares	-0.3	0.3	
31 Dec 2020	51.6	506.3	557.9
Conversion of A shares into B shares	-0.1	0.1	
31 Dec 2021	51.5	506.4	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 2020	33,087,647	322,425,099	355,512,746
Conversion of A shares into B shares	-200,496	200,496	
31 Dec 2020	32,887,151	322,625,595	355,512,746
Conversion of A shares into B shares	-84,976	84,976	
31 Dec 2021	32,802,175	322,710,571	355,512,746

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

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 2021 or in 2020.

	Cumulative translation		Translation differences in other comprehensive income	
EUR million	2021	2020	2021	2020
SEK	-27.6	-17.6	-10.0	14.1
RUB *	7.0	-7.7	0.7	-2.3
USD	-6.5	0.4	6.1	-5.9
CNY				-0.9
GBP	0.1	-0.7	0.5	-0.4
Others	-0.2	0.7	0.4	-0.3
Total	-27.2	-24.9	-2.3	4.2

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

Fair value and other reserves

EUR million	2021	2020
Fair value reserve	116.6	135.0
Legal reserve and reserves stipulated by the Articles of Association	1.7	1.7
Total	118.3	136.6

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.

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.

Reserve for invested unrestricted equity

EUR million	2021	2020
Reserve for invested unrestricted equity	208.9	265.8

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 0.41 per share be distributed for the 2021 financial year.

Other comprehensive income after taxes 2021

Milj. euroa	Equity attributable to members of parent company: Translation differences	Fair value and other reserves	Retained earnings	Total	Non-controlling interest	Total equity
Items that will not be reclassified to profit or loss						
Actuarial gains/losses on defined benefit pension plans			3.0	3.0		3.0
Financial assets at fair value through other comprehensive income		-5.8		-5.8		-5.8
Share of profit from other comprehensive income of associated company		-0.1	0.0	-0.1		-0.1
Income tax relating to items that will not be reclassified		1.2	-2.0	-0.8		-0.8
Total		-4.7	1.0	-3.7		-3.7
Items that may be reclassified to profit or loss						
Cash flow hedges						
Currency hedges						
Gains and losses recorded in equity		-40.8		-40.8	1.5	-39.4
Transferred to adjust Sales		0.3		0.3	-0.9	-0.6
Interest hedges						
Gains and losses recorded in equity		1.2		1.2		1.2
Transferred to adjust net financial items						
Commodity hedges						
Gains and losses recorded in equity		61.4		61.4		61.4
Transferred to adjust purchases		-33.7		-33.7		-33.7
Share of profit from other comprehensive income of associated company		-4.3		-4.3		-4.3
Cahs flow hedges total		-15.9		-15.9	0.6	-15.3
Translation differences	-2.9			-2.9	-1.9	-4.8
Share of profit from other comprehensive income of associated company	0.6			0.6		0.6
Translation differences total	-2.3			-2.3	-1.9	-4.2
Income tax relating to items that may be reclassified		2.3		2.3	-0.1	2.2
Total	-2.3	-13.6		-15.9	-1.5	-17.4
Other comprehensive income, net of tax	-2.3	-18.3	1.0	-19.6	-1.5	-21.1

Other comprehensive income after taxes 2020

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			-3.7	-3.7
Financial assets at fair value through other comprehensive income		-70.3		-70.3
Share of profit from other comprehensive income of associated company		0.4		0.4
Income tax relating to items that will not be reclassified		14.1	0.9	15.0
Total		-55.8	-2.8	-58.6
Items that may be reclassified to profit or loss				
Cash flow hedges				
Currency hedges				
Gains and losses recorded in equity		39.3		39.3
Transferred to adjust Sales		-19.7		-19.7
Interest hedges				
Gains and losses recorded in equity		-0.7		-0.7
Transferred to adjust net financial items		0.0		0.0
Commodity hedges				
Gains and losses recorded in equity		-12.8		-12.8
Transferred to adjust purchases		11.5		11.5
Share of profit from other comprehensive income of associated company		2.7		2.7
Cahs flow hedges total		20.3		20.3
Translation differences	6.2			6.2
Share of profit from other comprehensive income of associated compa-ny	-2.0			-2.0
Translation differences total	4.2			4.2
Income tax relating to items that may be reclassified		-3.4		-3.4
Total	4.2	16.9		21.1
Other comprehensive income, net of tax	4.2	-38.9	-2.8	-37.5

5.2 Financial income and expenses

Accounting principles

Interest income and expenses are recognised using the effective interest rate method.

Dividend income is recognised when the right to receive a payment is established.

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	2021	2020
Exchange differences		
Commercial items	4.9	-7.0
Hedging, hedge accounting not applied	-7.2	3.7
Other items	0.0	0.0
Exchange differences total	-2.3	-3.4
Other financial income		
Interest income on loans, other receivables and cash and cash equivalents	0.2	0.3
Dividend income	0.0	0.0
Other financial income total	0.2	0.4
Valuation of financial assets and liabilities		
Impairment gains and losses from financial assets	0.0	0.0
Gains and losses on derivatives, hedge accounting not applied		
Valuation total	0.0	0.0
Interest expenses on financial liabilities carried at amortised cost using the effective interest method	-6.9	-11.1
Other financial expenses	-0.9	-0.8
Interest and other financial expenses, total	-7.9	-11.9
Valuation of financial assets and liabilities and interest and other financial expenses, total	-7.9	-11.9

Interest expenses on financial liabilities have decreased in 2021 due to the capitalisation of interest expenses on ongoing investments as part of the acquisition cost of investments.

5.3 Other financial assets

EUR million	2021	2020
Other non-current financial assets		
Loan receivables	2.7	2.9
Defined benefit pension plans (Note 3.5)	12.2	7.5
Other receivables and accrued income	0.3	0.3
Total	15.3	10.8

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. The impacts of the corona pandemic on determining the impairment of sales receivables is discussed in Note 5.6, Management of financial risks, counterparty risk.

EUR million	2021	2020
Financial assets carried at amortized cost	1.3	1.0
Cash at hand and in bank	26.4	8.2
Deposits to Metsä Group Treasury Oy	496.4	204.7
Total	524.2	214.0

5.5 Borrowings ja net debt

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 Liabilities

EUR million	2021	2020
Non-current interest-bearing financial liabilities		
Bonds	248.8	248.6
Loans from financial institutions	178.4	182.1
Lease liabilities	9.8	14.1
Other liabilities		
Total	437.0	444.8
Current interest-bearing financial liabilities		
Current portion of non-current debt	10.0	6.2
Current liabilities to group companies		1.3
Total	10.0	7.6
Liabilities classified as held for sale, interest-bearing liabilities	1.5	
Interest-bearing financial liabilities total	448.6	452.4

Current liabilities to group companies include EUR 0.9 million of Oy Hangö Stevedorig Ab's intra-group interest-bearing debt transferred to assets held for sale.

Interest-bearing assets

EUR million	2021	2020
Non-current interest-bearing financial assets		
Loan receivables	2.7	2.9
Current interest-bearing financial assets		
Current investments at amortized cost	1.3	1.0
Cash at hand and in bank	26.4	8.2
Deposits to Metsä Group Treasury Oy	496.4	204.7
Total	524.2	214.0
Interest-bearing financial assets total	527.0	216.9
Interest-bearing net debt	**-78.4**	**235.5**

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 2021

			Non-cash changes			
EUR million	**1 Jan 2021**	**Cash flows**	**Changes in foreign exchange rates**	**New finance leases**	**Other changes**	**31 Dec 2021**
Non-current interest-bearing liabilities incl. Current portion						
Bonds	248.6				0.2	248.8
Loans from financial institutions	182.1				0.2	182.3
Pension loans						
Finance lease liabilities	20.4	-7.2	-0.1	3.4	-0.7	15.9
Total	451.1	-7.2	-0.1	3.4	-0.2	447.0
Non-current non-interest bearing liabilities	1.9	-0.4	0.0		0.0	1.5
Current interest-bearing liabilities	1.3	-0.4			-0.9	0.0
Total	454.3	-8.0	-0.1	3.4	-1.1	448.6

Other changes consists of Oy Hangö Stevedoring Ab's liabilities transferred to assets held for sale and of accrual of effective interest during the financial year on financial liabilities valued.

Cash and non-cash changes in financial liabilities 2020

			Non-cash changes			
EUR million	**1 Jan 2020**	**Cash flows**	**Changes in foreign exchange rates**	**New finance leases**	**Other changes**	**31 Dec 2020**
Non-current interest-bearing liabilities incl. Current portion						
Bonds	248.5	0.0			0.1	248.6
Loans from financial institutions	148.8	33.2			0.0	182.1
Pension loans	24.1	-24.1				
Finance lease liabilities	21.8	-7.8	0.1	6.3	0.0	20.4
Total	443.3	1.3	0.1	6.3	0.1	451.1
Non-current non-interest bearing liabilities	1.8	-0.1	0.1		0.0	1.9
Current interest-bearing liabilities	1.6	-0.3			0.0	1.3
Total	446.7	1.0	0.2	6.3	0.1	454.3

Bonds

EUR million	Interest %	2021	2020
2017–2027	2.75	248.8	248.6
Total		248.8	248.6

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.

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 currencies, where Metsä Board has currency risk are among others 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 8.1 months on average (2020: 7.9) being 117 per cent of the hedging norm (112). During the reporting period, the hedging level has varied between 7 and 9 months (7–9) being between 108 and 118 per cent of the norm (107–115). The dollar's hedging level was 7.7 months (6.6) being 113 per cent of the norm (97). The Swedish krona's hedging level was 9.3 months (10.0) being 135 per cent of the norm (139). The pound's hedging level was 7.5 months (7.8) 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 has applied 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 9.0 million (12.5) and the VaR is at the end of the reporting period EUR 4.4 million (3.9). Average during the period has been EUR 3.6 million (3.8).

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 24 months since 2021. Earlier norm was 12 months average duration. The duration can, however, deviate between 6 to 36 months from the hedging policy norm so that the decision of a larger deviation has to be made by the Board of Directors. The average duration of loans was high 45.3 months at the end of the year (52.0). During the reporting period duration has varied between 44 and 53 months (51–56). Duration is lengthened by the 10 year bond of EUR 250 million. Of interest-bearing liabilities 11 per cent (13) is subjected to variable rates and the rest to fixed rates and the average interest rate at the end of 2021 is 2.3 per cent (2.3). At the end of 2021, an increase of one per cent in interest rates would decrease net interest rate costs of the next 12 months by EUR 5.0 million (2.2).

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) and the maturity of interest rate swap contracts varies between 1–4 years (1–5).

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 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. According to the commodity hedging policy 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 electricity exposure of Metsä Board is stabilizing after Olkiluoto 3 -project is getting ready and thanks to the investment in Husum pulp mill. Therefore the need to hedge the electricity exposure is ending during the year 2022. The hedge strategy has been 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 the company is hedging the price risk of natural gas purchases by using financial hedges. Metsä Board is hedging also the gas oil, heavy fuel oil and 0.5% 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. Metsä Board has for Husum investments EIB loan agreement of EUR 125.0 million, which has not been drawn down and Finnvera guaranteed loan agreement of EUR 100.0 million, of which EUR 33.2 million has been drawn down and EUR 66.8 million has not been drawn down.

Metsä Board's liquidity has remained strong. At the end of the review period, available liquidity was EUR 916.0 million (605.8), consisting of following items: liquid assets and investments of EUR 524.2 million (214.0), a syndicated credit facility (revolving credit facility) of EUR 200.0 million (200.0), and other committed credit facilities of EUR 191.8 million (191.8). Of the liquid assets, EUR 496.4 million consisted of short-term deposits with Metsä Group Treasury (204.7), and EUR 27.8 million were cash funds and investments (9.3). Other interest-bearing receivables amounted to EUR 2.7 million (2.9). In addition, Metsä Board's liquidity reserve is complemented by Metsä Group's internal undrawn short-term credit facility of EUR 150.0 million (150.0) and undrawn pension premium (TyEL) funds of EUR 215.9 million (212.3). At the end of 2021, the liquidity reserve covers fully the forecasted financing need of 2022–2023. 2 per cent (1) of long-term loans and committed facilities fall due in a 12 month period and 69 per cent (88) have a maturity of over four years. The average maturity of long-term loans is 4.7 years (5.7). The share of short-term financing of the Group's interest bearing liabilities is 0.0 per cent (0.3).

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. Cash and cash equivalents, and other investments have been spread to several banks, commercial papers of several institutions and money market funds. During the reporting period, credit risks of financial instruments did not result in any losses. 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 applied expected credit loss model in accordance with IFRS 9 to calculate the impairment of financial assets.

TThe 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 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 and credit ratings agencies. Credit limits are approved according to credit risk management policy with approval limits of varying values across the Group. 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. The Customer Credit & Compliance Committee reviews and sets all major credit limits which are not supported by credit insurance and/ or other security. Despite the continuation of the COVID-19 pandemic, credit risk proved to be at a normal level. That notwithstanding, reviews of customer credit risks were continued at an increased level during the course of the year.

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 net credit loss provisions for the year were nil (2020: EUR 0.3 million). The portion of overdue client receivables of all accounts receivable is at the time of financial statements 2.1 per cent (3.8), of which 0.0 per cent (0.0) is overdue between 90 - 180 days and 0.5 per cent (0.9) 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 calculations were adjusted to take in to account the impact of COVID-19 pandemic. The expected credit loss percentage is 0.4 per cent of receivables (0.5).

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, Sweden, Turkey, Poland, Germany, Russia, United Kingdom, Finland and Spain (around 65 per cent of total external receivables (68)). 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 2021 represented 7 per cent (5) of total external accounts receivable. 33 per cent (31) of accounts receivable was owed by ten largest customer groups (individual companies or groups of companies under common ownership). At the end of 2021, there was around 0.4 per cent (1.0) shortfall of credit insurance limits beyond usual 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 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 2021 the long-term financial targets have been kept constant.

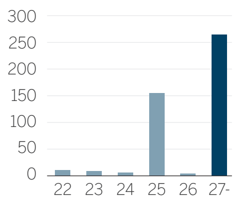
The key ratios describing the capital structure and the capital amounts used for the calculation of the key ratio were on 31.12.2021 and 31.12.2020 the following:

EUR million	2021	2020
Interest-bearing net liabilities/comparable EBITDA	-0.2	0.7
Net gearing ratio, %	-4	17
Interest-bearing borrowings	448.6	452.4
./. Liquid funds	524.2	214.0
./.Interest-bearing receivables	2.7	2.9
Net interest bearing liabilities	-78.4	235.5
Equity attributable to shareholders of parent company	1,699.4	1,383.8
+ Non-controlling interest	146.2	
Total Equity	1,845.6	1,383.8

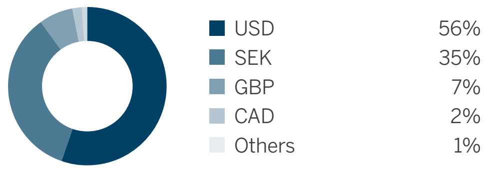
In Group`s certain financial contracts financial covenants have been set regarding financial performance and capital structure. Other covenants in the Group's loan agreements are customary terms and conditions including for example a negative pledge, restrictions on major asset disposals, limitations on subsidiary indebtedness, restrictions on changes of business and mandatory prepayment obligations upon a change of control of the Group. According to the covenant conditions of EUR 225 million financing package of Husum investments net gearing may not exceed 100 per cent in relation to the share capital. The Group has been in compliance with its covenants during the accounting periods 2021 and 2020. 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. The interest margin of Metsä Board´s EUR 200 million syndicated credit limit (revolving credit facility) has been linked to results of environmental objectives set by the company.

REPAYMENT OF NON-CURRENT LOANS
EUR million



BREAKDOWN OF CURRENCY EXPOSURE
%



Hedging of foreign exchange transaction exposure 31.12.2021

EUR million	Annual transaction exposure							
	USD	GBP	SEK	AUD	CAD	Other long	Other short	Total
Transaction exposure, net (mill. currency units)	920	80	-5,296	11	37			
Transaction exposure, net (EUR million)	812	95	-517	7	26	3	0	1,460
Transaction exposure hedging (EUR million)	-520	-59	400	0	0	0	0	-980
Hedging at the end of the year (months)	7,7	7,5	9,3	0,0	0,0			8,1
Average hedging in 2021 (months)	6,9	7,6	10,0	1,3	1,0			7,9
Average rate of hedging at the end of the year	1,1655	0,8550	10,2117					

Hedging of foreign exchange transaction exposure 31.12.2020

EUR million	Annual transaction exposure							
	USD	GBP	SEK	AUD	CAD	Other long	Other short	Total
Transaction exposure, net (mill. currency units)	761	80	-4,188	22	14			
Transaction exposure, net (EUR million)	620	89	-417	14	9	3	0	1,152
Transaction exposure hedging (EUR million)	-339	-58	347	-7	-4	0	0	-755
Hedging at the end of the year (months)	6.6	7.8	10.0	6.4	5.0			7.9
Average hedging in 2020 (months)	6.7	7.5	10.3	10.3	6.1			8.0
Average rate of hedging at the end of the year	1,1873	0,9066	10,5698					

Net investments in a foreign entity 31.12.2021

EUR million	Equity exposure				
	USD	GBP	SEK	Others	Total
Equity exposure (mill. currency units)	112	8	5,892		
Equity exposure (EUR million)	99	10	575	3	685

Net investments in a foreign entity 31.12.2020

EUR million	Equity exposure				
	USD	GBP	SEK	Others	Total
Equity exposure (mill. currency units)	93	6	4,084		
Equity exposure (EUR million)	76	6	407	4	493

Interest rate risk / duration and re-pricing structure of loans (incl. interest rate derivatives) 31.12.2021

				31 Dec 21 Re-pricing structure of interest rates of loans						
Loan amount (EUR million)	Duration [1] (months)	Average interest rate (%)	Interest rate sensitivity [2] (EUR million)	1–4/2022	5–8/2022	9–12/2022	2023	2024	2025	>2025
449	45,3	2,3	-5,0	-97	9	157	76	35	84	377

Interest rate risk / duration and re-pricing structure of loans (incl. interest rate derivatives) 31.12.2020

				31 Dec 20 Re-pricing structure of interest rates of loans						
Loan amount (EUR million)	Duration [1] (months)	Average interest rate (%)	Interest rate sensitivity [2] (EUR million)	1–4/2021	5–8/2021	9–12/2021	2022	2023	2024	>2024
452	52,0	2,3	-2,2	-98	3	151	7	57	6	326

[1] The duration has been calculated including EUR 192 million of undrawn loans related to investments, which are also included in the re-pricing structure.
[2] 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

GWh	31 Dec 21	31 Dec 20
Electricity exposure, net 2021	555	850
Electricity hedging 2021	135	367
Hedging at the end of the year 2021 (%)	24	43
Average price of hedging at the end of the year 2021 (e/MWh)	32,07	24,10

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 2021

	31 Dec 21	Impact on equity exposure and annual transaction exposure		
MEUR	**Impact on financial assets and liabilities**	**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			5.0	7.0
Effect on other change in equity	2.0			
Commodity risk (electricity price + 20%)				
Effect on profit			-5.5	-3.7
Effect on other change in equity	1.9			
FX risk (USD - 10%)				
Effect on profit	-0.0		-81.2	-29.2
Effect on other change in equity	46.5	-9.9		
FX risk (GBP - 10%)				
Effect on profit	0.1		-9.5	-3.6
Effect on other change in equity	4.7	-1.0		
FX risk (SEK - 10%)				
Effect on profit	0.8		51.7	11.7
Effect on other change in equity	-36.1	-57.5		

Market risk sensitivity 2020

	31 Dec 20	Impact on equity exposure and annual transaction exposure		
MEUR	**Impact on financial assets and liabilities**	**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			2.2	5.3
Effect on other change in equity	3.0			
Commodity risk (electricity price + 20%)				
Effect on profit			-5.8	-3.7
Effect on other change in equity	2.0			
FX risk (USD - 10%)				
Effect on profit	-0.5		-62.0	-28.1
Effect on other change in equity	29.7	-7.6		
FX risk (GBP - 10%)				
Effect on profit	0.1		-8.9	-3.1
Effect on other change in equity	4.4	-0.6		
FX risk (SEK - 10%)				
Effect on profit	0.2		41.7	7.0
Effect on other change in equity	-30.7	-40.7		

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 recognised 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 98 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 2021

EUR million	2022	2023	2024	2025	2026	2027–	Total
Bonds						248.8	248.8
Loans from financial institutions	3.9	3.9	3.9	153.2	3.9	13.5	182.3
Finance lease liabilities [1]	6.6	4.6	2.6	1.4	0.4	2.6	18.1
Non-current interest-bearing liabilities total	10.5	8.5	6.5	154.6	4.3	264.9	449.3
Current interest-bearing liabilities	0.0						0.0
Total liabilities	10.5	8.5	6.5	154.6	4.3	264.9	449.3
Interest payments	8.6	8.5	8.5	7.5	7.0	7.2	47.3
Guarantee agreements	0.2	0.4	0.1	0.1		1.2	2.0
Derivatives							
Currency derivative, liabilities	1,085.4						1,085.4
Currency derivative, receivables	-1,068.9						-1,068.9
Interest rate swaps, liabilities	0.9	0.4	0.3	0.1			1.7
Commodity derivatives, liabilities	0.1						0.1
Commodity derivatives, receicables	-32.0						-32.0
Derivatives, net	-14.5	0.4	0.3	0.1			-13.7

Cash flows of installments and interest payments of financial liabilities 2020

EUR million	2021	2022	2023	2024	2025	2026–	Total
Bonds						248.6	248.6
Loans from financial institutions		3.9	3.9	3.9	153.0	17.4	182.1
Finance lease liabilities [1]	6.7	5.3	3.9	2.4	1.2	2.9	22.3
Non-current interest-bearing liabilities total	6.7	9.2	7.8	6.3	154.2	268.9	453.1
Current interest-bearing liabilities	1.3						
Total liabilities	8.0	9.2	7.8	6.3	154.2	268.9	454.4
Interest payments	8.6	8.6	8.5	8.5	7.5	14.2	55.9
Guarantee agreements	0.8	0.2			0.1	2.4	3.5
Derivatives							
Currency derivative, liabilities	963.6						963.6
Currency derivative, receivables	-988.0						-988.0
Interest rate swaps, liabilities	1.0	0.9	0.7	0.5	0.2		3.4
Commodity derivatives, liabilities	0.4	0.1					0.4
Commodity derivatives, receicables	-4.3	0.0					-4.3
Derivatives, net	-27.3	1.0	0.7	0.5	0.2	0.0	-24.9

[1] Cash flows from lease liabilities include both debt repayment and financing expense.

The balance sheet value of lease liabilities on December 31, 2021 was EUR 15.9 million (20.4). The balance sheet value of currency derivative liabilities on 31 December 2021 was EUR 2.0 million (4.6) and the value of currency derivative receivables was EUR 18.5 million (29.0).

5.7 Classification and fair values of financial assets and liabilities

Classification and fair values of financial assets and liabilities 2021

EUR million	Note	Fair value through profit and loss	Fair value through other comprehensive income	Amortised cost	Total carrying amount
Financial assets					
Other non-current investments	4.3	3.4	177.6		181.0
Other non-current financial assets	5.3			15.3	15.3
Accounts receivable and other receivables	4.5			331.5	331.5
Cash and cash equivalents	5.4	0.0		524.2	524.2
Derivative financial instruments	5.7	0.5	33.5		34.0
Assets classified as assets held for sale	7.2			2.1	2.1
Total carrying amount		3.9	211.1	873.1	1,088.1
Total fair value		3.9	211.1	873.1	1,088.1
Financial liabilities					
Non-current interest-bearing financial liabilities	5.5			437.0	437.0
Other non-current financial liabilities	4.7			0.5	0.5
Current interest-bearing financial liabilities	5.5			10.0	10.0
Accounts payable and other liabilities	4.7			430.9	430.9
Derivative financial instruments	5.7	0.6	19.6		20.3
Liabilties classified as held for sale	7.2			5.5	5.5
Total carrying amount		0.6	19.6	883.9	904.1
Total fair value		0.6	19.6	913.1	933.4

Classification and fair values of financial assets and liabilities 2020

EUR million	Note	Fair value through profit and loss	Fair value through other comprehensive income	Amortised cost	Total carrying amount
Financial assets					
Other non-current investments	4.3	3.5	183.4		186.9
Other non-current financial assets	5.3			10.8	10.8
Accounts receivable and other receivables	4.5			276.7	276.7
Cash and cash equivalents	5.4			214.0	214.0
Derivative financial instruments	5.7	0.6	32.6		33.3
Total carrying amount		4.1	216.0	501.5	721.6
Total fair value		4.1	216.0	501.5	721.6
Financial liabilities					
Non-current interest-bearing financial liabilities	5.5			444.8	444.8
Other non-current financial liabilities	4.7			0.4	0.4
Current interest-bearing financial liabilities	5.5			7.6	7.6
Accounts payable and other liabilities	4.7			306.0	306.0
Derivative financial instruments	5.7	1.1	7.2		8.4
Total carrying amount		1.1	7.2	758.7	767.1
Total fair value		1.1	7.2	791.7	800.1

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 0.3–1.4 per cent (31 December 2020: 0.3–2.1). 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 and 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 2021

		31 Dec 2021			
EUR million	Note	Level 1	Level 2	Level 3	Total
Financial assets at fair value					
Other non-current investments	4.3	0.0		181.0	181.0
Derivative financial assets	5.7	9.3	24.7		34.0
Financial liabilities measured at fair value					
Derivative financial liabilities	5.7	0.1	20.2		20.3
Financial assets not measured at fair value					
Cash and cash equivalents	5.4		524.2		524.2
Financial liabilities not measured at fair value					
Non-current interest-bearing financial liabilities	5.5		466.3		466.3
Current interest-bearing financial liabilities	5.5		10.0		10.0

Fair value hierarchy of financial assets and liabilities 2020

		31 Dec 2020			
EUR million	Note	Level 1	Level 2	Level 3	Total
Financial assets at fair value					
Other non-current investments	4.3			186.9	186.9
Derivative financial assets	5.7	2.3	30.9		33.3
Financial liabilities measured at fair value					
Derivative financial liabilities	5.7	0.4	8.0		8.4
Financial assets not measured at fair value					
Cash and cash equivalents	5.4		214.0		214.0
Financial liabilities not measured at fair value					
Non-current interest-bearing financial liabilities	5.5		477.8		477.8
Current interest-bearing financial liabilities	5.5		7.6		7.6

Other non-current investments measured at fair value based on level 3 valuation

EUR million	2021	2020
Value 1 Jan	186.9	255.1
Total gains and losses in profit and loss	-0.1	-0.1
Total gains and losses in other comprehensive income	-5.8	-70.3
Purchases		2.2
Sales	0.0	-0.1
Transfers out from Level 3	0.0	
Value Dec 31.	181.0	186.9

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 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, liquefied natural gas (LNG), natural gas, propane, light, heavy and 0.5% 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 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. Premature loan withdrawals or 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 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 2021

EUR million	Nominal value	Fair value: Derivative assets	Derivative liabilities	Fair value net	Fair value through profit and loss	Fair value through other comprehensive income
Interest rate swaps	100.0	0.0	1.7	-1.7	0.0	-1.7
Interest rate derivatives	100.0	0.0	1.7	-1.7	0.0	-1.7
Currency forward contracts	1,066.9	2.0	18.5	-16.5	-0.2	-16.3
Currency derivatives	1,066.9	2.0	18.5	-16.5	-0.2	-16.3
Electricity derivatives	4.4	4.9	0.0	4.9		4.9
Oil derivatives	17.1	3.7	0.0	3.7		3.7
Natural gas and propane derivatives	14.6	23.5	0.1	23.4		23.4
Commodity derivatives	36.1	32.0	0.1	31.9		31.9
Derivatives total	1,203.0	34.0	20.3	13.7	-0.2	13.9

Derivatives 2020

EUR million	Nominal value	Fair value: Derivative assets	Derivative liabilities	Fair value net	Fair value through profit and loss	Fair value through other comprehensive income
Interest rate swaps	100.0		3.4	-3.4		-3.4
Interest rate derivatives	100.0		3.4	-3.4		-3.4
Currency forward contracts	959.1	29.0	4.6	24.4	-0.5	24.9
Currency derivatives	959.1	29.0	4.6	24.4	-0.5	24.9
Electricity derivatives	9.8	0.6	0.3	0.3		0.3
Oil derivatives	12.3	1.3	0.1	1.2		1.2
Natural gas and propane derivatives	8.3	2.4	0.0	2.3		2.3
Commodity derivatives	30.4	4.3	0.4	3.9		3.9
Derivatives total	1,089.4	33.3	8.4	24.9	-0.5	25.4

Changes in the value of hedge accounting and the effects on profit or loss are presented in Note 5.1 Equity.

Economic effect of the net settlement of instruments under master netting agreements executed

	2021			2020		
	Financial derivatives on-balance sheet	**Assets and liabilities related to master netting agreements**	**Net risk**	**Financial derivatives on-balance sheet**	**Assets and liabilities related to master netting agreements**	**Net risk**
Derivative assets	34.0		34.0	33.3		33.3
Derivative liabilities	-20.3		-20.3	-8.4		-8.4

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 2021

EUR million	1–6 months	6–12 months	1–5 years	over 5 years	Hedged cash flow total
Interest rate derivatives, hedge accounting			100.0		100.0
Currency rate derivatives, hedge accounting	672.4	204.1			876.5
Currency derivatives, no hedge accounting	82.0				82.0
Commodity derivatives, hedge accounting	18.5	17.6			36.1

Cash flow hedge maturities 2020

EUR million	1–6 months	6–12 months	1–5 years	over 5 years	Hedged cash flow total
Interest rate derivatives, hedge accounting			100.0		100.0
Currency rate derivatives, hedge accounting	548.9	110.9			659.8
Currency derivatives, no hedge accounting	100.5	0.0	0.0		100.5
Commodity derivatives, hedge accounting	15.2	14.2	1.0		30.4

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	2021	2020
Income taxes for the financial period	48.6	41.8
Income taxes from previous periods	3.2	0.2
Change in deferred taxes	0.1	0.2
Income taxes total	51.8	42.2

Income tax reconciliation

EUR million	2021	2020
Result before tax	365.8	212.3
Calculated tax at Finnish statutory rate of 20.0%	73.2	42.5
Change in Swedish company tax rate from 21.4% to 20.6%		-1.1
Effects of differences between Finnish and non-Finnish tax rates	1.0	0.2
Tax exempt income	-1.4	-0.4
Non-deductible expenses	0.2	0.1
Previous years tax losses on which no deferred tax asset has been recognised used during period	-0.5	-0.3
Adjustments to previously recognised deferred taxes	-1.1	0.7
Losses from subsidiaries, on which no deferred tax asset has been recognised		0.0
Share of result from associate companies and joint ventures	-22.9	0.5
Income taxes from previous periods	3.2	0.2
Other items	0.1	-0.1
Income taxes total	51.8	42.2
Effective tax rate, %	14.2	19.9

Income taxes from previous periods include EUR 2.3 million in taxes recorded on the basis of a tax audit of an Italian subsidiary.

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

Deferred tax assets and liabilities 2021

EUR million	1 Jan 2021	Charged to income statement	Charged to other comprehensive income	Translation differences	Sold subsidiaries	31 Dec 2021
Deferred tax assets						
Pension obligations and provisions	4.2	-0.2	0.0	0.0	-0.2	3.8
Intercompany margins	4.5	-1.2		0.1		3.4
Unused tax loss carry-forwards	0.6	4.2		0.0		4.8
Other temporary differences	2.4	-0.3	0.0	0.1		2.2
Total	11.8	2.5	-0.1	0.2	-0.2	14.2
Netting against liabilities	-4.3	-1.6	0.0	0.1		-5.8
Deferred tax assets in balance sheet	7.5	0.9	0.0	0.2	-0.2	8.4
Deferred tax liabilities						
Pension obligations	1.3	-0.1	2.0	0.1		3.3
Depreciation differences and appropriations	61.2	2.4		-0.6	-0.4	62.6
Other investments recognised at fair value	28.4		-1.2			27.2
Financial instruments	6.7	0.3	-2.2	0.0		4.8
Net investments in foreign operations		0.1		-0.1		
Other temporary differences	4.2	-0.1	0.0	0.0		4.1
Total	101.8	2.6	-1.4	-0.6	-0.4	102.0
Netting against receivables	-4.3	-1.6	0.0	0.1		-5.8
Deferred tax liabilities in balance sheet	97.5	1.0	-1.4	-0.6	-0.4	96.2

Deferred tax assets and liabilities 2020

EUR million	1 Jan 2020	Charged to income statement	Charged to other comprehensive income	Translation differences	Sold subsidiaries	31 Dec 2020
Deferred tax assets						
Pension obligations and provisions	4.1	-0.2	0.4	0.0		4.2
Intercompany margins	3.8	0.9		-0.2		4.5
Unused tax loss carry-forwards	0.6					0.6
Other temporary differences	3.7	-0.7	-0.5	-0.1		2.4
Total	12.3	0.0	-0.2	-0.3		11.8
Netting against liabilities	-5.5	2.2	0.0	-1.0		-4.3
Deferred tax assets in balance sheet	6.7	2.2	-0.2	-1.2		7.5
Deferred tax liabilities						
Pension obligations	2.1	-0.1	-0.6	-0.1		1.3
Depreciation differences and appropriations	63.4	-3.4	0.0	1.2		61.2
Other investments recognised at fair value	42.5		-14.1			28.4
Financial instruments	2.9	0.3	3.4	0.1		6.7
Net investments in foreign operations		-0.9		0.9		
Other temporary differences	0.3	4.3	-0.5	0.1		4.2
Total	111.2	0.2	-11.8	2.2		101.8
Netting against receivables	-5.5	2.2	0.0	-1.0		-4.3
Deferred tax liabilities in balance sheet	105.6	2.4	-11.8	1.2		97.5

The Group has recognised deferred tax assets related to operating loss carry-forwards for EUR 0.8 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 90 million (506) in Germany. The unrecognised deferred tax assets for these loss carry forwards is about EUR 29 million (113). Loss carry-forwards do not expire. The change in the financial year is mainly related to the resolution of the dispute mentioned in Note 8.1.

7. Group structure

7.1 Group companies

Accounting principles

Subsidiaries

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.

Subsidiaries and joint operations 31 December 2021

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	1,250,691.84
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 Turkey LLC	Turkey	100.00	400	1,201.25
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
Total				3,371,949.19

	Country	Holding, %	Number of shares	Book value EUR
Subgroup in other countries				
Metsä Board Sverige Ab				
Husum Pulp Ab	Sweden	70.00	85,664	206,421,294.03

Material subsidiaries

Metsä Board has two material subsidiaries:

- Metsä Board Sverige AB

Metsä Board Sverige AB is located in Örnsköldsvik, Sweden. Metsä Board Sverige AB produces folding boxboard and kraftliner. Metsä Board Sverige AB's sales were EUR 446 million (601). The company's capacity is 250,000 tonnes of liner and 400,000 tonnes of folding boxboard.

- Husum Pulp AB

Husum Pulp Ab was established in 2020. The pulp business of Metsä Board Sverige Ab was transferred to the company on December 31, 2020. Husum Pulp AB produces pulp for Metsä Board Sverige Ab and to the market. The company's sales were EUR 379 million and capacity 730,000 tonnes of chemical pulp. A 30% minority stake in the company was sold to the Swedish forest owners' cooperative Norra Skog and the transaction was completed on January 4, 2021.

Non-controlling interest's shares

Principal non-controlling interest's shares

		Non-controlling interest Holding, %		Non-controlling interest Share of result, EUR million		Non-controlling interest Share of equity, EUR million	
EUR million	**Country**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
Husum Pulp AB	Sweden	30.0%		21.9		146.2	

Business transactions with non-controlling interest

Accounting principles

Changes in the parent company's holdings in subsidiaries that do not cause the parent company to lose its control over the subsidiary are processed as business transactions concerning equity.

The sale of a 30 percent stake in the Husum pulp mill to Norra Skog was completed on January 4, 2021. Following the arrangement, the non-controlling interests' share inceased by EUR 125.7 million and retained earnings by EUR 134.4 million

In 2021 and 2020 there were no other significant acquisitions or sales of non-controlling interests.

Impact on parent company's equity from transactions with non-controlling interest:

EUR million	2021	2020
The sale of a 30 percent stake in the Husum pulp mill, Husum Pulp AB		
Net effect in equity	134.4	

Summary of financial information of subsidiaries with a substantial non-controlling interest

	Husum Pulp Ab	
EUR million	**2021**	**2020**
Sales	378.8	
Result for the period	75.3	
Non-controlling interest's share of the result	22.6	
Non-controlling interest's share of the total comprehensive result	-1.5	
Dividends paid to non-controlling interest		
Non-current assets	313.2	
Current assets	273.7	
Non-current liabilities	7.1	
Current liabilities	85.4	
Net assets	494.3	
Net cash flow from operating activities	68.8	
Net cash flow arising from investing activities	-133.8	
Net cash flow arising from financing activities	190.2	
Change in cash and cash equivalents	125.3	

The numbers are presented before eliminations.

Accounting principles

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. Investments in associates and joint ventures are accounted for using the equity method and are initially recognized 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 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 associate 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.

Investments in associate companies and joint ventures

EUR million	2021	2020
Value 1 Jan	369.0	392.4
Share of results from associated companies and joint ventures		
Share of result from Metsä Fibre	114.4	-2.4
Share of results from other associated companies and joint ventures	0.0	-0.1
Dividends received		-21.8
Decreases	-0.5	
Share of other comprehensive income from associated companies and joint ventures		
Fair value reserve	-4.4	3.1
Translation differences and other changes in equity	0.6	-2.2
Investments in associated companies and joint ventures 31 Dec	479.0	369.0

Amounts recognised in income statement

EUR million	2021	2020
Associate companies	114.4	-2.4
Joint ventures	0.0	-0.1
Amounts recognised in income statement total	114.4	-2.5

Amounts recognised in balance sheet

EUR million	2021	2020
Associate companies	479.0	368.5
Joint ventures		0.5
Amounts recognised in balance sheet total	479.0	369.0

The carrying amount of associated companies at 31 December 2021 includes goodwill of EUR 45.2 million (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	2021	2020
Sales	2,628.1	1,826.5
Result for the period	472.4	-13.4
Other comprehensive income	-15.4	4.5
Total comprehensive income for the period	457.0	-8.9
Dividend received		21.8
Non-current assets	1,966.9	1,473.2
Current assets	865.8	838.4
Non-current liabilities	469.1	543.5
Current liabilities	624.7	486.1
Net assets	1,738.9	1,282.1

Reconciliation of financial information for Metsä Fibre to the value recognised in consolidated balance sheet

EUR million	2021	2020
Group's share of net assets	433.0	319.2
Goodwill	45.2	45.2
Other purchase price allocations at acquisition	5.1	5.6
Other adjustments	-4.5	-1.7
Carrying value of associated company in consolidated balance sheet	478.8	368.3

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	2021	2020
Share of result from other associated companies	0.0	0.0
Carrying value in consolidated balance sheet	0.2	0.1

Joint ventures

Kemishipping Oy offers logistics services in Kemi, Finland. At the end of November 2021, Metsä Board sold the joint venture Kemishipping Oy to Metsäliitto Cooperative. The transaction resulted in a sales loss of EUR 0.3 million.

EUR million	2021	2020
Sales	13.5	12.9
Result for the period	-0.1	-0.5
Result for the period includes the following items:		
Depreciation, amortisation and impairment charges	1.3	1.4
Interest expenses	0.1	0.1
Income taxes	0.0	0.1
Dividends received from Joint Ventures		
Non-current assets		6.1
Current assets		3.5
Non-current liabilities		2.3
Current liabilities		3.9
Net assets		3.4
Group's share of net assets		0.5
Joint venture carrying value in consolidated balance sheet		0.5

7.2 Non-current assets held for sale

Accounting principles

Assets held for sale are recognised at the lower of the book value or fair value less expenses arising from the divestment. Depreciation is not recognised on assets held for sale after classification.

Assets classified as held for sale

Metsä Board and Euroports have signed an agreement on 16 December 2021, according to which Metsä Board Corporation will sell the entire share capital of its fully owned subsidiary Oy Hangö Stevedoring Ab to Euroports Finland Oy. The transaction is expected to be completed in the first quarter of 2022. Hangö Stevedoring is a port operator in the Port of Hanko. The company has approximately 180 employees and its sales in 2020 were approximately EUR 20 million.

Assets classified as held for sale total

EUR million	2021	2020
Intangible and tangible assets	8.6	
Accounts receivable and other receivables	2.4	
Total assets	11.0	
Provisions	1.0	
Borrowings	1.5	
Accounts payable and other liabilities	4.3	
Total liabilities	6.8	

7.3 Related party transactions

Related parties include Metsä Board's ultimate parent company Metsäliitto Cooperative, which owns 48 per cent of Metsä Board's shares and 67 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 117.7 million (113.4) and pulp purchases from Metsä Fibre Oy EUR 336.9 million (249.1). 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 0.4 million in 2021 (0.5).

Transactions with parent company and sister companies

	Transactions with parent company		Transactions with sister companies	
EUR million	2021	2020	2021	2020
Sales	13.7	6.8	96.6	68.6
Other operating income	3.9	2.9	1.1	1.0
Purchases	149.5	140.5	547.7	458.2
Share of result from associated companies			114.4	-2.4
Dividend income		0.0	0.0	
Interest income			0.0	0.1
Interest expense			1.0	0.9
Receivables				
Accounts receivable and other receivables	3.8	0.9	56.9	49.3
Cash equivalents			496.4	204.7
Liabilities				
Accounts payable and other liabilities	9.5	10.5	74.3	44.3

Transactions with associated companies and joint ventures

EUR million	2021	2020
Sales	0.2	0.5
Purchases	4.2	3.0
Receivables		
Other non-current financial assets		
Accounts receivable and other receivables	0.3	0.2
Liabilities		
Accounts payable and other liabilities	0.7	0.6

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

In the autumn of 2015, the Finnish Tax Administration, in its assessment of the 2014 taxation, refused the deductibility of certain losses related to the cross-border merger of a French subsidiary in Metsä Board Corporation's 2014 taxation.

Metsä Board appealed the decision issued by the Tax Administration, as the company believes the losses to be deductible. The Tax Administration's Adjustment Board dismissed the company's appeal in March 2018. In February 2021, the Administrative Court of Helsinki dismissed the appeal made by the company on the Adjustment Board's decision. In its decision of September 2021, the Supreme Administrative Court did not grant Metsä Board leave to appeal the matter, due to which the dismissal of the Administrative Court of Helsinki remains valid, and the case is closed.

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	2021	2020
Own liabilities for which collateral has been provided		
Pledges granted		
Real estate mortages		192.8
Total collateral provided for own liabilities		192.8
Leases not yet commenced to which the Group is committed	18.0	
Other commitments given on own behalf	1.5	2.8
Commitments given on the behalf of others		0.1
Total	19.5	195.7

Commitments include granted pledges, mortgages and floating charges as well as guarantees.

Investment commitments

EUR million	2021	2020
Payments due in following 12 months	80.6	60.4
Payments due later	1.9	
Total	82.4	60.4

Commitments related to property, plant and equipment concern the first phase of the modernisation of the Husum pulp mill and an investment to increase Husum's folding box-board capacity.

Other information

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

8.2 Events after the financial period

On 1 January 2022, Metsä Board acquired all the shares in Hämeenkyrön Voima Oy held by Pohjolan Voima Oyj and DL Power Oy, part of Leppäkoski Group. Following the arrangement, Metsä Board owns 100% of Hämeen-kyrön Voima Oy. The arrangement will not have a significant impact on Metsä Board's financial key figures.

The start-up of the Husum pulp mill's new recovery boiler and turbine will be delayed. The company ex-pects the new recovery boiler and turbine to start up in September 2022. The earlier estimate was the first half of 2022.

Parent company

Income statement

EUR	NOTE	1.1.–31.12.2021	1.1.–31.12.2020
Sales	2	1,389,003,575.21	1,262,298,497.02
Change in stocks of finished and unfinished products		18,978,903.15	-3,581,989.63
Other operating income	3.4	40,474,541.15	36,169,588.08
Materials and services			
Materials, consumables and goods			
Purchases during the financial period		-820,695,309.71	-655,650,971.36
Changes in stocks		1,622,173.39	3,084,733.82
External services	5	-220,006,720.05	-184,687,540.74
Employee costs	5	-103,737,173.86	-96,195,043.20
Depreciations and impairment charges	3.6	-49,811,731.10	-51,242,262.32
Other operating expenses	3.5	-101,053,305.55	-111,572,081.32
		-1,293,682,066.88	-1,096,263,165.12
Operating profit/loss		154,774,952.63	198,622,930.35
Financial income and expenses	7		
Income from group companies		5,644,555.11	33,578,546.16
Income from investments in other non-current assets		855.00	1,980.00
Other interest and financial income		16,028.55	2,614.49
Exchange rate differences		-4,792,233.25	6,263,249.69
Interest expenses and other financial expenses		-10,861,550.10	-11,306,180.32
		-9,992,344.69	28,540,210.02
Profit/loss before appropriations and taxes		144,782,607.94	227,163,140.37
Appropriations			
Change in depreciation differences	6	-16,340,995.30	-9,066,231.37
Group contribution		391,363.11	1,160,000.00
		-15,949,632.19	-7,906,231.37
Income taxes	8	-25,358,945.30	-38,800,726.87
Profit/loss for the financial period		103,474,030.45	180,456,182.13

Parent company

Balance sheet

EUR	Note	31.12.2021	31.12.2020
ASSETS			
Intangible assets	9		
Intangible assets		4,865,929.32	12,657,981.63
Other intangible assets		278,744.68	366,412.56
Advance payment and construction in progress		1,020,133.10	635,869.44
		6,164,807.10	13,660,263.63
Tangible assets	9		
Land and water areas		29,491,684.80	31,282,413.06
Buildings and constructions		123,703,859.97	128,739,857.83
Machinery and equipment		236,913,618.20	227,344,444.31
Other tangible assets		6,638,072.18	7,065,754.44
Advance payment and construction in progress		18,957,755.83	20,641,731.56
		415,704,990.98	415,074,201.20
Investments	10		
Shares in group companies		535,378,815.29	535,378,815.29
Receivables from group companies		305,699,997.81	306,190,496.80
Shares in associated companies		86,429,409.33	86,429,409.33
Other shares and holdings		178,311,058.30	184,224,295.61
Other receivables		5,002.00	35,222.52
		1,105,824,282.73	1,112,258,239.55
Total non-current assets		1,527,694,080.81	1,540,992,704.38
CURRENT ASSETS			
Inventories			
Materials and consumables		50,227,009.35	48,604,835.96
Finished products		153,937,534.52	134,958,631.37
Advance payments		4,695,368.34	7,334,704.15
		208,859,912.21	190,898,171.48
NON-CURRENT RECEIVABLES	11		
Receivables from group companies			
Receivables from group companies		19,511,624.05	79,726,537.97
		19,511,624.05	79,726,537.97
Current receivables	11		
Accounts receivables		136,478,748.63	118,264,583.91
Receivables from group companies		350,842,606.92	210,760,985.45
Receivables from associated companies		289,849.64	199,805.19
Other receivable		33,700,472.97	17,934,171.78
Prepayments and accrued income		7,928,830.79	24,299,436.72
		529,240,508.95	371,458,983.05
Total receivables		548,752,133.00	451,185,521.02
Cash and cash equivalents		24,353,833.76	5,542,571.15
Total current assets		781,965,878.97	647,626,263.65
TOTAL ASSETS		2,309,659,959.78	2,188,618,968.03

EUR	Note	31.12.2021	31.12.2020
EQUITY AND LIABILITIES			
SHAREHOLDERS' EQUITY	12		
Share capital		557,881,540.40	557,881,540.40
Other reserves			
Reserve for invested unrestricted equity		210,639,481.81	267,521,521.17
Value adjustment reserve		116,464,042.72	134,374,020.36
Profit/loss for previous financial periods		337,173,372.47	192,268,464.93
Profit/loss for the financial period		103,474,030.45	180,456,182.13
		1,325,632,467.85	1,332,501,728.99
APPROPRIATIONS			
Accumulated depreciation difference	6	164,304,292.58	147,963,297.28
PROVISIONS	13	3,760,116.35	4,476,995.67
LIABILITIES			
Non-current liabilities	15		
Bonds		249,517,437.02	249,433,483.02
Loans from financial institutions		179,316,176.48	183,225,000.00
Advance payments		1,082,432.10	1,515,404.91
Deferred tax liability	8, 14	28,363,930.89	32,698,049.43
Liabilities to group companies		1,691,108.71	3,361,597.67
		459,971,085.20	470,233,535.03
Current liabilities	16		
Pension premium loans		3,908,823.52	0.00
Advance payments		2,521,860.77	1,756,007.02
Accounts payable		154,123,561.95	119,759,541.04
Liabilities to group companies		83,855,599.29	49,863,035.29
Liabilities to participating companies		704,619.73	379,727.97
Other liabilities		19,896,953.06	6,612,960.98
Accruals and deferred income		90,980,579.48	55,072,138.76
		355,991,997.80	233,443,411.06
Total liabilities		815,963,083.00	703,676,946.09
Total shareholdes' equity and liabilities		2,309,659,959.78	2,188,618,968.03

Parent company accounts

Cash flow statement

EUR	1.1.–31.12.2021	1.1.–31.12.2020
CASH FLOW FROM OPERATING ACTIVITIES		
Profit/loss before appropriations and taxes	144,782,607.94	227,163,140.37
Adjustments to profit/loss [a)]	37,829,380.81	14,139,599.44
Interest received	5,625,765.02	8,356,030.38
Interest paid	-10,387,182.18	-10,714,750.12
Dividends received	35,336.84	25,226,848.20
Other financial items, net	-5,487,515.15	-1,478,801.92
Income taxes paid	-13,806,989.91	-43,029,488.89
Change in net working capital [b)]	60,201,890.97	-5,971,666.18
Net cash flow from operating activities	218,793,294.34	213,690,911.28
INVESTMENTS		
Acquisition of other shares	0.00	-2,240,616.00
Investments in tangible and intangible assets	-52,139,088.99	-43,947,568.55
Proceeds from disposal of other shares	210,000.00	65,008.00
Proceeds from sale of tangible and intangible assets	30,349,351.55	14,718,563.46
Increase and decrease of non-current receivables, net	60,245,134.44	-0.01
Total cash flow from investing activities	38,665,897.00	-31,404,613.10
CASH FLOW BEFORE FINANCIAL ACTIVITIES	257,459,191.34	182,286,298.18
Cash flow from financial activities		
Dividend paid and other profit distribution	-92,433,313.95	-85,323,059.04
Proceeds from non-current liabilities	0.00	33,225,000.00
Payment of non-current liabilities	0.00	-23,348,214.35
Increase or decrease in interest bearing current receivables, net	-147,374,614.78	-105,605,473.93
Group contribution	1,160,000.00	1,050,000.00
	-238,647,928.73	-180,001,747.32
CHANGES IN CASH AND CASH EQUIVALENTS	18,811,262.61	2,284,550.86
Cash and cash equivalents opening balance	5,542,571.15	3,258,020.29
Change in cash and cash equivalents	18,811,262.61	2,284,550.86
Cash and cash equivalents closing balance	24,353,833.76	5,542,571.15
a) Adjustments to profit/loss		
Depreciations and impairment charges	49,811,731.10	51,242,262.32
Financial income and expenses	9,992,344.69	-28,540,210.02
Gains or losses on sale of fixed assets	-21,257,815.66	-8,471,235.75
Change in provisions	-716,879.32	-91,217.11
Total	37,829,380.81	14,139,599.44
b) Change in net working capital		
Inventories	-17,961,740.73	625,796.71
Change in current receivables, non-interest bearing	-14,579,980.26	6,022,320.09
Change in current liabilities, non-interest bearing	92,743,611.96	-12,619,782.98
Total	60,201,890.97	-5,971,666.18

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).

Metsä Board Plc has transactions with other companies in the Group. These are described in more detail in the notes to the consolidated financial statements in section 7.3. Transactions with related parties are based on market prices.

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 unrealised 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 unrealised 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 realisable 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 realisable 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 recognised in the income statement in line with the nature of the expense item and in the mandatory provisions of the balance sheet.

EUR	2021	2020

2. Sales by region

	2021	2020
Finland	93,016,225.27	70,750,494.84
Other EU-countries	620,765,028.16	674,947,752.34
Other European countries	258,084,428.42	162,720,555.65
Other countries	417,137,893.36	353,879,694.19
Total	1,389,003,575.21	1,262,298,497.02

The transitional period for the United Kingdom's secession from the EU ended on 31 December 2020. Turnover in the United Kingdom has been included in the Other European countries group since 1 January 2021.

3. Exceptional items

	2021	2020
Other operating income		
Proceeds from selling of land	7,007,417.18	6,039,731.85
	7,007,417.18	6,039,731.85
Employee costs		
Refund from pension	0.00	-581,739.51
	0.00	-581,739.51
Exceptional items in income statement	7,007,417.18	5,457,992.34

4. Other operating income

	2021	2020
Rental income	1,051,500.39	1,053,576.83
Service revenue	14,641,881.77	14,038,890.30
Gains on disposal	21,367,326.91	8,561,323.35
Government grants and allowances	787,581.19	9,884,268.49
Scrap and waste sale	255,568.97	93,693.78
Others	2,370,681.92	2,537,835.33
	40,474,541.15	36,169,588.08

5. Operating expenses

	2021	2020
External services		
Distribution costs	149,817,832.97	139,431,896.81
Other external services	70,188,887.08	45,255,643.93
	220,006,720.05	184,687,540.74
Employee costs		
Wages and salaries for working hours	62,526,946.89	59,481,772.98
Share based payments	2,004,301.44	1,265,646.93
Social security expenses		
Pension expenses	13,676,031.03	14,935,467.02
Other social security expenses	25,529,894.50	21,777,803.20
	103,737,173.86	96,195,043.20

On December 31, 2021, 19 employees of the parent company Metsä Board Plc are covered by the share-based incentive plan. The system for the earning period 2019–2021 it is possible to earn a total of 255,694 (net), for the earning period 2020–2022 a total of 494,010 (gross) and a total of 359,410 (gross) Metsä Board's Series B earnings for the earning period 2021–2023 shares.

Management salaries and fees and pension obligations are described in Note 3.2 to the consolidated financial statements.
Management's share-based payments are described in section 3.3 of the notes to the consolidated financial statements.

	2021	2020
The average number of personnel during the financial period in the parent company	1,219	1,218
Other operating expenses		
Rental and other property costs	12,758,855.97	10,839,928.55
Purchases of services	64,063,910.41	79,978,131.97
Losses on disposal of non-current assets	109,511.25	90,087.60
Other expenses		
Voluntary social costs	4,686,272.21	2,658,151.88
Fixed energy costs	9,688,348.45	9,367,338.76
Traveling expenses	230,641.07	345,627.91
Insurances	2,406,028.29	2,009,099.23
Advertising and marketing expenses	2,252,894.58	1,626,306.97
Others	4,856,843.32	4,657,408.45
	101,053,305.55	111,572,081.32
Fees of principal auditor		
Audit fees	196,064.00	196,064.00
Auditor's opinions	4,930.00	760.00
	200,994.00	196,824.00

The principal auditor is KPMG Oy Ab.

6. Depreciation and impairment charges

EUR	2021	2020
Planned depreciation		
Intangible rights	1,487,864.06	1,641,719.87
Other intangible assets	87,667.88	120,150.34
Buildings and constructions	8,469,149.47	8,742,569.99
Machinery and equipment	38,997,457.55	39,975,101.43
Other tangible assets	769,592.14	762,720.69
Total	49,811,731.10	51,242,262.32
Change in depreciation difference	16,340,995.30	9,066,231.37
Total depreciation	66,152,726.40	60,308,493.69
Depreciation difference at the beginning of the financial year	147,963,297.28	138,897,065.91
Change in depreciation differences	16,340,995.30	9,066,231.37
Depreciation difference at the end of the financial year	164,304,292.58	147,963,297.28

7. Financial income and expenses

EUR	2021	2020
Income from investments in non-current assets		
Dividend income		
From Group companies	34,481.84	25,224,868.20
From others	855.00	1,980.00
	35,336.84	25,226,848.20
Interest income on investments in non-current assets		
From Group companies	5,580,610.15	6,331,028.39
	5,580,610.15	6,331,028.39
Total income from non-current assets	5,615,946.99	31,557,876.59
Other interest and financial income		
Interest income from Group companies	29,463.12	2,022,649.57
Other interest income	15,691.75	2,352.42
Other financial income	336.80	262.07
	45,491.67	2,025,264.06
Exchange rate differences recognised in financial income and expenses		
Exchange rate differences on sales	3,481,677.43	-2,350,438.98
Exchange rate differences on purchases	-545,443.31	358,683.24
Exchange rate differences on financing	-7,728,467.37	8,255,005.43
	-4,792,233.25	6,263,249.69
Impairment losses on investments in non-current assets	0.00	5,316.53
Interest and other financial expenses		
Interest expenses for the same group companies	-1,011,035.11	-891,984.39
Other interest expenses	-8,902,440.98	-9,387,119.08
Other financial expenses	-948,074.01	-1,032,393.38
Total interest expenses and other financial expenses	-10,861,550.10	-11,311,496.85
Financial income and expenses total	-9,992,344.69	28,540,210.02

8. Income taxes

EUR	2021	2020
Taxes for the financial year	25,557,347.96	38,781,516.74
Taxes for previous financial years	-341,778.52	966.71
Deferred taxes	143,375.86	18,243.42
	25,358,945.30	38,800,726.87

9. Intangible and tangible assets

EUR	2021	2020
Intangible rights		
Acquisition costs 1.1.	117,493,533.02	117,255,065.98
Increases	458,238.69	9,946,350.49
Decreases	-7,529,650.20	-9,707,883.45
Transfers between items	635,869.44	0.00
Acquisition costs 31.12.	111,057,990.95	117,493,533.02
Accumulated depreciation and impairment charges 1.1.	-104,835,551.39	-102,976,859.65
Accumulated depreciation of deductions and transfers	131,353.82	-216,971.87
Depreciation and write-downs for the financial period	-1,487,864.06	-1,641,719.87
Accumulated depreciation and impairment 31.12.	-106,192,061.63	-104,835,551.39
Book value 31.12.	4,865,929.32	12,657,981.63
Goodwill		
Acquisition costs 1.1.	24,970,634.39	24,970,634.39
Acquisition costs 31.12.	24,970,634.39	24,970,634.39
Accumulated depreciation and impairment charges 1.1.	-24,970,634.39	-24,970,634.39
Accumulated depreciation and impairment 31.12.	-24,970,634.39	-24,970,634.39
Book value 31.12.	0.00	0.00
Other intangible assets		
Acquisition costs 1.1.	7,878,550.92	15,724,698.18
Decreases	-31,574.17	-7,846,147.26
Acquisition costs 31.12.	7,846,976.75	7,878,550.92
Accumulated depreciation and impairment charges 1.1.	-7,512,138.36	-15,238,135.28
Accumulated depreciation of deductions and transfers	31,574.17	7,846,147.26
Depreciation and write-downs for the financial period	-87,667.88	-120,150.34
Accumulated depreciation and impairment 31.12.	-7,568,232.07	-7,512,138.36
Book value 31.12.	278,744.68	366,412.56
Advance payments and work in progress		
Acquisition costs 1.1.	635,869.44	1,383,677.21
Increases	1,020,133.10	45,880.00
Transfers between items	-635,869.44	-793,687.77
Acquisition costs 31.12.	1,020,133.10	635,869.44
Intangible assets total		
Acquisition costs 1.1.	150,978,587.77	159,334,075.76
Increases	1,478,371.79	9,992,230.49
Decreases	-7,561,224.37	-17,554,030.71
Transfers between items	0.00	-793,687.77
Acquisition costs 31.12.	144,895,735.19	150,978,587.77
Accumulated depreciation and impairment charges 1.1.	-137,318,324.14	-143,185,629.32
Accumulated depreciation of deductions and transfers	162,927.99	7,629,175.39
Depreciation and write-downs for the financial year	-1,575,531.94	-1,761,870.21
Accumulated depreciation and impairment charges 31.12.	-138,730,928.09	-137,318,324.14
Book value 31.12.	6,164,807.10	13,660,263.63
Land and water areas		
Acquisition costs 1.1.	31,282,434.04	28,976,841.96
Increases	3,000.00	2,681,077.36
Decreases	-1,793,728.26	-375,485.28
Acquisition costs 31.12.	29,491,705.78	31,282,434.04
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.	29,491,684.80	31,282,413.06

EUR	2021	2020
Buildings and constructions		
Acquisition costs 1.1.	308,253,184.06	295,270,714.76
Opening balance adjustment	0.00	6,458,935.50
Increases	1,510,233.98	4,690,025.74
Decreases	-598,747.98	-4,550,431.22
Transfers between items	1,922,917.63	6,383,939.28
Acquisition costs 31.12.	311,087,587.69	308,253,184.06
Accumulated depreciation and impairment charges 1.1.	-179,513,326.23	-168,841,361.55
Opening balance adjustment	0.00	-6,458,935.50
Accumulated depreciation of deductions and transfers	598,747.98	4,529,540.81
Depreciation and write-downs for the financial year	-8,469,149.47	-8,742,569.99
Accumulated depreciation and impairment 31.12.	-187,383,727.72	-179,513,326.23
Book value 31.12.	123,703,859.97	128,739,857.83
Machinery and equipment		
Acquisition costs 1.1.	1,240,170,683.48	1,155,859,703.19
Opening balance adjustment	0.00	87,438,189.37
Increases	31,110,627.78	15,911,955.47
Decreases	-7,582,216.10	-37,256,639.55
Transfers between items	17,456,003.66	18,217,475.00
Acquisition costs 31.12.	1,281,155,098.82	1,240,170,683.48
Accumulated depreciation and impairment charges 1.1.	-1,012,826,239.17	-922,669,587.92
Opening balance adjustment	0.00	-87,109,446.12
Accumulated depreciation of deductions and transfers	7,582,216.10	36,927,896.30
Depreciation and write-downs for the financial year	-38,997,457.55	-39,975,101.43
Accumulated depreciation and impairment 31.12.	-1,044,241,480.62	-1,012,826,239.17
Book value 31.12.	236,913,618.20	227,344,444.31
Other tangible assets		
Acquisition costs 1.1.	13,862,872.09	13,752,403.75
Increases	341,745.97	346,120.38
Decreases	0.00	-555,452.57
Transfers between items	163.91	319,800.53
Acquisition costs 31.12.	14,204,781.97	13,862,872.09
Accumulated depreciation and impairment charges 1.1.	-6,797,117.65	-6,589,849.53
Accumulated depreciation of deductions and transfers	0.00	555,452.57
Depreciation and write-downs for the financial year	-769,592.14	-762,720.69
Accumulated depreciation and impairment 31.12.	-7,566,709.79	-6,797,117.65
Book value 31.12.	6,638,072.18	7,065,754.44
Advance payments and work in progress		
Acquisition costs 1.1.	20,641,731.56	31,410,056.94
Increases	17,695,109.47	13,359,201.66
Transfers between items	-19,379,085.20	-24,127,527.04
Acquisition costs 31.12.	18,957,755.83	20,641,731.56
Total tangible assets		
Acquisition costs 1.1.	1,614,210,905.23	1,525,269,720.60
Opening balance adjustment	0.00	93,897,124.87
Increases	50,660,717.20	36,988,380.61
Decreases	-9,974,692.34	-42,738,008.62
Transfers between items	0.00	793,687.77
Acquisition costs 31.12.	1,654,896,930.09	1,614,210,905.23
Accumulated depreciation and impairment charges 1.1.	-1,199,136,704.03	-1,098,100,819.98
Opening balance adjustment	0.00	-93,568,381.62
Accumulated depreciation of deductions and transfers	8,180,964.08	42,012,889.68
Depreciation and write-downs for the financial year	-48,236,199.16	-49,480,392.11
Accumulated depreciation and impairment 31.12.	-1,239,191,939.11	-1,199,136,704.03
Book value 31.12.	415,704,990.98	415,074,201.20

EUR	2021	2020

10. Investments

EUR	2021	2020
Shares in Group companies		
Acquisitions costs 1.1.	535,378,815.29	535,378,815.29
Acquisitions costs 31.12.	535,378,815.29	535,378,815.29
Shares in participating companies		
Acquisitions costs 1.1.	86,429,409.33	86,429,409.33
Acquisitions costs 31.12.	86,429,409.33	86,429,409.33
Other shares and holdings		
Acquisitions costs 1.1.	184,224,295.61	252,435,976.80
Increases	0.00	2,240,616.00
Decreases	-5,913,237.31	-70,452,297.19
Acquisitions costs 31.12.	178,311,058.30	184,224,295.61
Total investments and holdings		
Acquisitions costs 1.1.	806,032,520.23	874,244,201.42
Increases	0.00	2,240,616.00
Decreases	-5,913,237.31	-70,452,297.19
Acquisitions costs 31.12.	800,119,282.92	806,032,520.23
Receivables from Group companies		
Acquisitions costs 1.1.	306,190,496.80	301,618,572.70
Increases	0.00	4,571,924.10
Decreases	-490,498.99	0.00
Acquisitions costs 31.12.	305,699,997.81	306,190,496.80
Other receivables		
Acquisitions costs 1.1.	35,222.52	35,222.52
Decreases	-30,220.52	0.00
Acquisitions costs 31.12.	5,002.00	35,222.52
Receivables total		
Acquisitions costs 1.1.	306,225,719.32	301,653,795.22
Increases	0.00	4,571,924.10
Decreases	-520,719.51	0.00
Acquisitions costs 31.12.	305,704,999.81	306,225,719.32
Investments total		
Acquisitions costs 1.1.	1,112,258,239.55	1,175,897,996.64
Increases	0.00	6,812,540.10
Decreases	-6,433,956.82	-70,452,297.19
Acquisitions costs 31.12.	1,105,824,282.73	1,112,258,239.55

11. Receivables

EUR	2021	2020
Non-current receivables		
Receivables from group companies		
Loans receivables	19,511,624.05	79,726,537.97
	19,511,624.05	79,726,537.97
Total non-current receivables	19,511,624.05	79,726,537.97
Current receivables		
Receivables from group companies		
Accounts receivable	42,204,078.56	43,898,813.17
Loans receivables	278,895,200.81	131,520,586.04
Other receivables	-536,314.82	1,170,305.62
Prepayments and accrued income	30,279,642.37	34,171,280.62
	350,842,606.92	210,760,985.45
Receivables from participating companies		
Accounts receivable	289,849.64	199,805.19
	289,849.64	199,805.19
Receivables from others		
Accounts receivable	136,478,748.63	118,264,583.91
Other receivables	33,700,472.97	17,934,171.78
Prepayments and accrued income	7,928,830.79	24,299,436.72
	178,108,052.39	160,498,192.41
Total current receivables	529,240,508.95	371,458,983.05
Accrued income from group companies, current, specification		
Derivatives	28,920,689.87	32,539,914.86
Accrued interests	1,358,952.50	1,631,365.76
	30,279,642.37	34,171,280.62
Accrued income from others, current, specification		
Accrued personnel costs	41,175.43	6,471.75
Energy and other taxes	2,474,456.57	12,583,236.96
Others	5,413,198.79	11,709,728.01
	7,928,830.79	24,299,436.72
Total receivables	548,752,133.00	451,185,521.02

12. Shareholders' equity

EUR	2021	2020
Restricted equity		
Share capital 1.1.		
A-shares	51,607,529.31	51,922,153.80
B-shares	506,274,011.09	505,959,386.60
	557,881,540.40	557,881,540.40
Conversion of A shares into B shares		
A-shares	-133,346.95	-314,624.49
B-shares	133,346.95	314,624.49
	0.00	0.00
Fair value reserve 1.1.	134,374,020.36	171,598,515.80
Changes	-17,909,977.64	-37,224,495.44
Fair value reserve 31.12.	116,464,042.72	134,374,020.36
	674,345,583.12	692,255,560.76
Unrestricted equity		
Reserve for invested unrestricted equity 1.1.	267,521,521.17	317,293,305.61
Return of invested unrestricted equity	-56,882,039.36	-49,771,784.44
Reserve for invested unrestricted equity 31.12.	210,639,481.81	267,521,521.17
Retained earnings 1.1.	372,724,647.06	227,819,739.53
Dividends	-35,551,274.60	-35,551,274.60
Profit for the financial period	103,474,030.45	180,456,182.13
Retained earnings 31.12.	440,647,402.91	372,724,647.06
	651,286,884.72	640,246,168.23
Equity total 31.12	1,325,632,467.84	1,332,501,728.99
Distributable funds		
Reserve for invested unrestricted equity	210,639,481.81	267,521,521.17
Profit from previous financial periods	337,173,372.46	192,268,464.93
Profit for the financial period	103,474,030.45	180,456,182.13
Distributable funds	651,286,884.72	640,246,168.23

EUR	2021	2020
13. Provisions		
Provisions for pension		
1.1.	843,168.00	843,168.00
31.12.	843,168.00	843,168.00
Provisions for unemployment pension cost		
1.1.	196,086.09	242,063.20
Decrease	-23,371.43	-45,977.11
31.12.	172,714.66	196,086.09
Provisions for environmental obligations		
1.1.	3,437,741.58	3,482,981.58
Increase	29,091.00	29,091.00
Decrease	-722,598.89	-74,331.00
31.12.	2,744,233.69	3,437,741.58
Total provisions		
1.1.	4,476,995.67	4,568,212.78
Increase	29,091.00	29,091.00
Decrease	-745,970.32	-120,308.11
31.12.	3,760,116.35	4,476,995.67
14. Deferred tax assets and liabilities		
Deferred tax assets		
Mandatory provisions	752,023.27	895,399.14
	752,023.27	895,399.14
Deferred tax liabilities		
Valuation of Pohjolan Voima Oyj shares at fair value	27,247,173.05	28,407,818.26
Financial instruments	1,868,781.12	5,185,630.30
	29,115,954.17	33,593,448.56
Deferred tax assets (+) and liabilities (-), net	-28,363,930.90	-32,698,049.42

The deferred tax liability for accrued depreciation in 2021 was EUR 32.9 million (29.6).

	2021	2020
15. Non-current liabilities		
Liabilities to group companies		
Accrued liabilities		
Derivatives	1,691,108.43	3,361,597.67
	1,691,108.43	3,361,597.67
Other liabilities		
Bonds	249,517,437.02	249,433,483.02
Loans from financial institutions	179,316,176.48	183,225,000.00
Deferred tax liabilities	28,363,930.89	32,698,049.43
Advance payments	1,082,432.10	1,515,404.91
	458,279,976.49	466,871,937.36
Non-current liabilities total	459,971,084.92	470,233,535.03

Bond and debentures

Bond	Nominal value	Interest %	2021	2020
2017–2027	250,000,000.00	2.75	249,517,437.02	249,433,483.02
	250,000,000.00		249,517,437.02	249,433,483.02

Metsä Board Oyj has an undrawn EIB loan agreement of EUR 125 million signed in 2020 for Husum's investments and a EUR 100 million loan agreement guaranteed by Finnvera, of which EUR 33.2 million has been drawn down and EUR 66.8 million has not been drawn down.

Non-current liabilities and repayment

	Liabilities to group companies	Bonds	Loans from financial institutions	Other loans	Total
2022			0.00		0.00
2023			3,908,823.52		3,908,823.52
2024			3,908,823.52		3,908,823.52
2025			153,908,823.52		153,908,823.52
2026			3,908,823.52		3,908,823.52
2027–		249,517,437.02	13,680,882.40		263,198,319.42
Total	0.00	249,517,437.02	179,316,176.48	0.00	428,833,613.50

EUR	2021	2020
16. Current liabilities		
Liabilities from Group companies		
Accounts payable	63,200,799.16	44,124,848.19
Accruals and deferred income	20,654,800.27	5,738,187.10
	83,855,599.43	49,863,035.29
Liabilities from participating interests		
Accounts payable	704,619.73	379,727.97
	704,619.73	379,727.97
Liabilities from other		
Premium pension loans	3,908,823.52	0.00
Advance payment	2,521,860.77	1,756,007.02
Accounts payable	154,123,561.95	119,759,541.04
Other liabilities	19,896,953.06	6,612,960.98
Accruals and deferred income	90,980,579.48	55,072,138.76
	271,431,778.78	183,200,647.80
Total current liabilities	355,991,997.94	233,443,411.06
Accruals and deferred income to group companies, current, specification		
Derivatives	18,589,770.35	4,749,964.04
Others	2,065,029.92	988,223.06
	20,654,800.27	5,738,187.10
Accruals and deferred income, current, external		
Personnel expenses	27,813,139.51	24,385,420.58
Accruals of purchases	28,729,281.88	7,998,028.05
Discounts	18,065,576.49	15,023,668.87
Interests	2,093,172.00	2,093,172.00
Taxes	11,623,372.28	0.00
Others	2,656,037.32	5,571,849.26
	90,980,579.48	55,072,138.76

17. Financial Instruments

Financial derivatives 2021

	Nominal value	Fair value			Fair value	
EUR		Derivative assets	Derivative liabilities	Total	Fair value through profit and loss	Fair value through fair value reserve
Interest rate swaps	100,000,000.00		1,691,108.57	-1,691,108.57	0.00	-1,691,108.43
Total interest rate derivatives	100,000,000.00		1,691,108.57	-1,691,108.57	0.00	-1,691,108.43
Currency forward agreements	1,066,871,526.94	2,033,435.72	18,507,293.72	-16,473,858.00	-157,510.75	-16,316,347.25
Currency option agreements	0.00	0.00	0.00	0.00	0.00	0.00
Currency derivates total	1,066,871,526.94	2,033,435.72	18,507,293.72	-16,473,858.00	-157,510.75	-16,316,347.25
Electricity derivatives	0.00	0.00	0.00	0.00	0.00	0.00
Oil derivatives	17,103,868.80	3,658,212.43	4,129.93	3,654,082.50	0.00	3,654,082.50
Other commodity derivatives	14,030,062.80	23,229,041.72	78,346.70	23,150,695.02	0.00	23,150,695.02
Commodity derivatives	31,133,931.60	26,887,254.15	82,476.63	26,804,777.52	0.00	26,804,777.52
Derivatives total	1,198,005,458.54	28,920,689.87	20,280,878.92	8,639,810.95	-157,510.75	8,797,321.84

Financial derivatives 2020

	Nominal value	Fair value			Fair value	
EUR		Derivative assets	Derivative liabilities	Total	Fair value through profit and loss	Fair value through fair value reserve
Interest rate swaps	100,000,000.00		3,361,597.67	-3,361,597.67	0.00	-3,361,597.67
Total interest rate derivatives	100,000,000.00		3,361,597.67	-3,361,597.67	0.00	-3,361,597.67
Currency forward agreements	959,055,983.54	28,982,108.06	4,588,914.69	24,393,193.37	-479,508.43	24,872,701.80
Currency option agreements	0.00	0.00	0.00	0.00	0.00	0.00
Currency derivates total	959,055,983.54	28,982,108.06	4,588,914.69	24,393,193.37	-479,508.43	24,872,701.80
Electricity derivatives	1,010,304.05	29,500.95	39,025.00	-9,524.05	0.00	-9,524.05
Oil derivatives	12,278,325.00	1,322,834.33	122,024.35	1,200,809.98	0.00	1,200,809.98
Other commodity derivatives	7,181,221.20	2,205,471.52	0.00	2,205,471.52	0.00	2,205,471.52
Commodity derivatives	20,469,850.25	3,557,806.80	161,049.35	3,396,757.45	0.00	3,396,757.45
Derivatives total	1,079,525,833.79	32,539,914.86	8,111,561.71	24,428,353.15	-479,508.43	24,907,861.58

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 1–4 years and entered into to hedge the floating rate interest payments. Currency derivatives contracts concluded to hedge currency cash flows mature fully during 2021. 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 2021. 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 consolidated Group accounts.

The fair value hierarchy of financial assets and liabilities 2021

EUR	Level 1	Level 2	Level 3	Total
Financial assets at fair value				
Other shares and holdings			178,311,058.30	178,311,058.30
Derivative financial assets	4,195,295.69	24,725,394.18		28,920,689.87
Financial liabilities measured at fair value				
Derivative financial liabilities	82,476.63	20,198,402.29		20,280,878.92

The fair value hierarchy of financial assets and liabilities 2020

EUR	Level 1	Level 2	Level 3	Total
Financial assets at fair value				
Other shares and holdings			184,224,295.61	184,224,295.61
Derivative financial assets	2,234,972.47	30,304,942.39		32,539,914.86
Financial liabilities measured at fair value				
Derivative financial liabilities	39,025.14	8,072,536.57		8,111,561.71

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	2021	2020
For own liabilities		
Real estate mortgages	0.00	192,779,000.00
For affiliated companies		
Guarantees	2,045,966.00	3,455,798.00
For associated and joint ventures		
Guarantees	0.00	78,815.00
Leasing commitments		
Payments due in following 12 months	1,939,543.43	1,579,013.73
Payments due later than 1 year	4,913,625.50	5,334,441.43
Total		
Real estate mortgages	0.00	192,779,000.00
Guarantees	2,045,966.00	3,534,613.00
Leasing commitments	6,853,168.93	6,913,455.16
Total commitments	8,899,134.93	203,227,068.16
Commitments related to property, plant and equipment		
Payments due in following 12 months	5,793,673.55	0.00
Payments due later	1,856,148.10	0.00
	7,649,821.65	0.00

19. Shares and holdings

Shares and holdings are presented in Note 7.2. of consolidated financial statements.

The Board's proposal to the Annual General Meeting for the distribution of funds

The distributable funds of the company are EUR 651,286,884.72 of which retained earnings constitute EUR 337,173,372.46 and profit for the period EUR 103,474,030.45.

The Board of Directors proposes the following to the Annual General Meeting regarding the distribution of funds:

Dividend of EUR 0.41 per share be paid, or in total	145,760,225.86
To be left in the unrestricted shareholders' equity	505,526,658.86
Distributable funds of the company	651,286,884.72

The Board of Directors proposes that the dividend will be paid on 7th April, 2022.

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 10th February 2022

Ilkka Hämälä	Hannu Anttila	Raija-Leena Hankonen-Nybom
Erja Hyrsky	Kirsi Komi	Jussi Linnaranta
Jukka Moisio	Timo Saukkonen	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, 2021. 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 position, financial performance and cash flows in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU
- the financial statements give a true and fair view of the parent company's financial performance and financial position in accordance with the laws and regulations governing the preparation of 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

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 954 million and represent 33 percent of the consolidated total assets. The carrying value of construction in progress under the tangible assets amounts to EUR 306 million. Tangible and intangible assets are allocated to cash-generating units and tested for impairment annually or more frequently should there be an indication of impairment. 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 as well as testing of the financial controls over investments. 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 383 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 and 5.7 to the consolidated financial statements)	
The financial liabilities amount to EUR 447 million, accounting for 15 percent of the consolidated balance sheet. In addition, the Group has off-balance sheet committed credit facility agreements amounting to EUR 392 million. The Group hedges financial risks with interest rate and foreign currency derivatives and their nominal values amounted to EUR 1,167 million at the end of the financial year. Due to the significance of the financial and derivative contracts and large number of transactions, 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 in relation to IFRS requirements, 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. 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.

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.

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

The Board of Directors and the Managing Director are responsible for the preparation of consolidated financial statements that give a true and fair view in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU, and of financial statements that give a true and fair view in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements. The Board of Directors and the Managing Director are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board of Directors and the Managing Director are responsible for assessing the parent company's and the group's ability to continue as a going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting. The financial statements are prepared using the going concern basis of accounting unless there is an intention to liquidate the parent company or the group or cease operations, or there is no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Financial Statements

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

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

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the parent company's or the group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of the Board of Directors' and the Managing Director's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the parent company's or the group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the parent company or the group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events so that the financial statements give a true and fair view.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

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

Other Reporting Requirements

Information on our audit engagement

We were first appointed as auditors by the Annual General Meeting on 28 March 2012, and our appointment represents a total period of uninterrupted engagement of 10 years.

Other Information

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

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. With respect to the report of the Board of Directors, our responsibility also includes considering whether the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

In our opinion, the information in the report of the Board of Directors is consistent with the information in the financial statements 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.

Helsinki, February 10, 2022

KPMG Oy Ab
Kirsi Jantunen
Authorized Public Accountant, KHT

Business operations and value creation

Sustainability

Financial development

Governance

Shares and shareholders

Metsä Board's shares

Metsä Board has two series of shares. At the end of 2021, there were 32,802,175 A shares and 322,710,571 B shares. Each series A share entitles its holder to twenty (20) votes at a General Meeting of Shareholders, and each series B share entitles the holder to one (1) vote. On 31 December 2021, the company's share capital was EUR 557,881,540.40. 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. During the review period, a total of 84,976 of Metsä Board Corporation's A shares were converted to B shares. Metsä Board did not receive notifications of major holdings in 2021. The company does not hold any treasury shares.

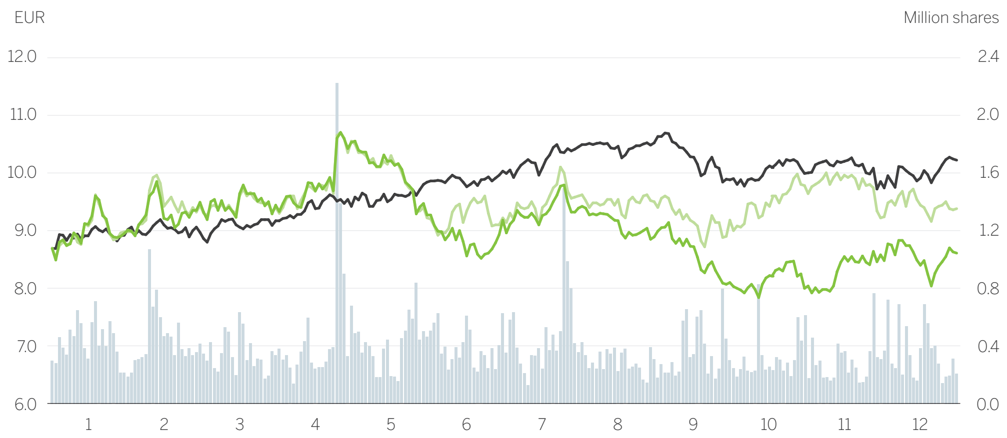
Basic information on Metsä Board's shares

	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 2021	32,802,175	322,710,571

Trading on the Nasdaq Helsinki in 2021 (2020)

	Metsä Board's A share	Metsä Board's B share
Closing price on 31 December, EUR	9.38 (8.64)	8.61 (8.62)
Lowest price, EUR	8.50 (4.80)	7.50 (4.47)
Highest price, EUR	11.00 (8.80)	11.01 (8.79)
Average price, EUR	9.48 (6.88)	9.14 (6.12)
Average daily trading volume, no. of shares	7,153 (6,980)	389,117 (616,002)
Total trading volume, no. of shares	1,802,589 (1,758,863)	98,057,575 (155,232,570)
Market capitalisation, EUR million	308 (300)	2,779 (2,800)

Share price development 2021



Source: Euroland

Major shareholders, 31 December 2021[1)]

	Shareholders	A series No. of shares	B series No. of shares	No. of shares	Total shares %	Votes %
1	Metsäliitto Cooperative	25,767,605	144,831,768	170,599,373	47.99	67.45
2	Varma Pension Insurance Company	2,203,544	15,041,485	17,245,029	4.85	6.04
3	Ilmarinen Mutual Pension Insurance Company	1,250,000	10,221,394	11,471,394	3.23	3.60
4	Etola Erkki Olavi	0	6,150,000	6,150,000	1.73	0.63
5	Elo Mutual Pension Insurance Company	0	3,789,094	3,789,094	1.07	0.39
6	Evli Finnish Small Cap Fund	0	3,030,000	3,030,000	0.85	0.31
7	OP Finland Small Firms Fund	0	3,011,356	3,011,356	0.85	0.31
8	State Pension Fund	0	3,000,000	3,000,000	0.84	0.31
9	OP Finland	0	2,882,522	2,882,522	0.81	0.29
10	OP Life Assurance Company Ltd	0	1,094,762	1,094,762	0.31	0.13
11	Danske Invest Finnish Equity Fund	0	1,000,000	1,000,000	0.28	0.10
12	Etola Mikael Kristian	0	880,000	880,000	0.25	0.09
13	Etola Markus Eeriki	0	850,000	850,000	0.24	0.09
14	Veritas Pension Insurance Company Ltd.	0	850,000	850,000	0.24	0.09
15	Säästöpankki Kotimaa Mutual Fund	0	827,600	827,600	0.23	0.08
16	Sr Nordea Pro Suomi	0	810,737	810,737	0.23	0.08
17	Maa- ja Metsätaloustuottajain Keskusliitto MTK ry	756,551	778,403	11,732,872	0.22	1.20
18	Sr Aktia Capital	0	754,841	754,841	0.21	0.08
19	FIM Fenno Sijoitusrahasto	0	738,097	738,097	0.21	0.07
20	Säästöpankki Pienyhtiöt	0	731,643	731,643	0.21	0.07

1) Shareholders in the book entry system

Shares

	A share				B share			
Number of shares	Number of Shareholders	%	Number of shares	%	Number of Shareholders	%	Number of shares	%
1–10	1,706	18.17	9,609	0.03	3,972	7.29	25,319	0.01
11–100	3,732	39.76	188,550	0.58	15,504	28.45	808,167	0.25
101–1,000	3,405	36.27	1,234,040	3.76	24,623	45.19	9,827,424	3.05
1,001–10,000	520	5.54	1,200,988	3.66	9,416	17.28	25,978,734	8.05
10,001–100,000	20	0.21	371,288	1.13	867	1.59	19,857,614	6.15
100,001–	4	0.04	29,797,700	90.84	105	0.19	266,213,313	82.49
Total	9,387	100.00	32,802,175	100.00	54,487	100.00	322,710,571	100.00

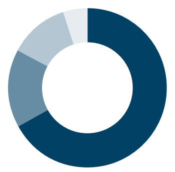
Split of shareholdings and voting rights, 31 December 2021

SPLIT OF SHAREHOLDINGS
%

Metsäliitto Cooperative	48
Finnish institutions	19
Finnish private investors	19
Foreign owners*	14

* includes nominee registered

SPLIT OF VOTING RIGHTS
%



Metsäliitto Cooperative	67
Finnish institutions	16
Finnish private investors	12
Foreign owners*	5

* includes nominee registered

Dividend policy

Metsä Board aims to distribute at least 50% of the result for the financial period in dividends every year. The Board of Directors proposes that a dividend of EUR 0.41 per share be distributed for the 2021 financial period, corresponding to 50% of the earnings per share in 2021.

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% 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 2021.

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% would not, however, obligate Metsä Board to offer its shares in Metsä Fibre Oy for sale.

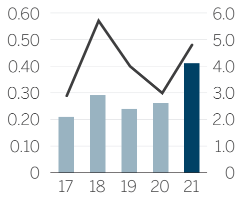
Shareholdings of the members of the Board of Directors and CEO on 31 December 2021

		Holding
Ilkka Hämälä	Chair of the Board of Directors	213,381 B shares
Jussi Linnaranta	Vice Chair of the Board of Directors	25,192 B shares
Hannu Anttila	Member of the Board of Directors	143,942 B shares
Raija-Leena Hankonen-Nybom	Member of the Board of Directors	4,446 B shares
Erja Hyrsky	Member of the Board of Directors	5,823 B shares
Kirsi Komi	Member of the Board of Directors	81,610 B shares
Jukka Moisio	Member of the Board of Directors	8,598 B shares
Timo Saukkonen	Member of the Board of Directors	13,198 B shares
Veli Sundbäck	Member of the Board of Directors	71,275 B shares
Mika Joukio	CEO	300,000 B shares

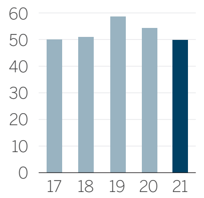
Share holdings of the Corporate Management Team members are presented on page 161.

DIVIDEND
EUR

— Dividend yield, %



DIVIDEND / NET RESULT
%



Price development and number of shares

		2021	2020	2019	2018	2017
Adjusted share prices, EUR						
A share	high	11.00	8.80	7.98	10.10	7.28
	low	8.50	4.80	5.46	6.00	5.43
	closing	9.38	8.64	6.14	6.14	7.13
	average	9.48	6.88	6.56	8.36	6.35
B share	high	11.01	8.79	6.65	10.30	7.36
	low	7.50	4.47	3.86	4.98	5.34
	closing	8.61	8.62	6.00	5.12	7.15
	average	9.14	6.12	5.26	7.95	6.37
Trading volume at Nasdaq Helsinki, number of shares						
A share		1,802,589	1,758,683	694,519	2,227,788	1,491,973
% of total number of shares		5.5	5.3	2.1	6.3	4.2
B share		98,057,575	155,232,570	220,170,829	180,834,626	172,937,862
% of average number of shares		30.4	48.1	68.3	56.5	54.1
Number of shares at year end						
A share		32,802,175	32,887,151	33,087,647	35,358,794	35,886,682
B share		322,710,571	322,625,595	322,425,099	320,153,952	319,626,064
Total		355,512,746	355,512,746	355,512,746	355,512,746	355,512,746
Number of shares at year end		355,512,746	355,512,746	355,512,746	355,512,746	355,512,746
Market capitalisation at year end, EUR million		3,086.2	3,065.2	2,136.1	1,856.3	2,539.6
Number of shareholders, B shares		54,904	48,165	50,420	45,341	43,268

Key figures

EUR million	2021	2020	2018	2017	2016
Earnings per share					
Result before tax	365.8	212.3	165.6	224.2	170.8
– Income taxes	-51.8	-42.2	-21.0	-20.8	-20.3
= Result for the period	314.0	170.1	144.6	203.4	150.5
– Average number of shares	355,512,746	355,512,746	355,512,746	355,512,746	355,512,746
Earnings per share, basic and diluted, EUR	0.82	0.48	0.41	0.57	0.42
Shareholders' equity per share, EUR	4.78	3.89	3.76	3.72	3.28
Dividend per share, EUR	0.41 [1]	0.26	0.24	0.29	0.21
Payout ratio, %	49.9	54.3	58.5	50.9	50.0

Metsä Board shares have no nominal value.

	2021	2020	2018	2017	2016
Dividend yield, % of closing price					
A share	4.4 [1]	3.0	3.9	4.7	2.9
B share	4.8 [1]	3.0	4.0	5.7	2.9
Price/earning ratio (P/E ratio)					
A share	11.4	18.1	15.0	10.8	17.0
B share	10.5	18.0	14.6	9.0	17.0
Price to book value (P/BV), %					
A share	196.2	222.0	163.3	165.1	217.4
B share	180.1	221.5	159.6	137.6	217.8

[1] The Board of Directors has proposed that a dividend of EUR 0.41 per share be distributed for the 2021 financial year.

Calculation of key ratios

Alternative performance measures

Key figure		Definition	Justification for the use of the key figure
Profitability			
Operating result	=	Result before income tax, financial income and expenses, exchange gains and losses and share of results from associated companies and joint ventures	The key figure describes the Group's ability to produce a profit from its business, and it is independent of the company's capital structure
EBITDA	=	Operating result before depreciation, amortisation and impairment losses	The key figure shows how much margin is left over from the Group's sales after deducting the variable and fixed costs of business before depreciation, amortisation and impairment
Return on equity (%)	=	Result before income tax - income taxes / Shareholder's equity (average)	The key figure describes the Group's ability to produce a profit with the assets invested in the Group by shareholders
Return on capital employed (%)	=	Result before income taxes + net exchange differences and other financial expenses / Balance total + non-interest bearing liabilities (average)	The key figure describes the Group's ability to produce a profit on the capital invested, from the point of the party investing the capital
Financial position			
Equity ratio (%)	=	Shareholder's equity / Balance total - advance payments received	The key figure describes the Group's capital structure, solvency and ability to take care of its commitments in the long run
Net gearing ratio (%)	=	Interest-bearing net liabilities / Shareholder's equity	The key figure describes the Group's capital structure and financial position
Interest-bearing net liabilities	=	Interest-bearing liabilities – cash and cash equivalents and interest-bearing receivables	The key figure describes the Group's indebtedness
Other			
Total investments	=	Investments in owned and leased fixed assets and investments in business combinations	The key figure describes the Group's application of funds for maintaining and renewing its production machinery and plants and for expanding its business with corporate acquisitions
Interest cover	=	Net cash flow arising from operating activities + net interest expenses / Net interest expenses	The key figure describes the Group's ability to meet its debt obligations

Share performace indicators

Key figure		Definition
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 the end of the period
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) (%)	=	Share price at 31 December / Earnings per share
P/BV (%)	=	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 the end of period

The presentation of earnings per share is regulated by the Decree of the Ministry of Finance on the Regular Duty of Disclosure of an Issuer of a Security. In addition, the earnings per share ratio is regulated by the IAS 33 standard.

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 utilisation, 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. Items affecting comparability include material gains and losses on disposals of assets, impairment and impairment reversals in accordance with IAS 36 "Impairment of Assets", corporate divestments and acquisitions, adjustment measures and other restructuring measures and their adjustments, costs arising from extensive and unforeseeable interruptions in production and the compensation received for them 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 items affecting comparability

EUR million	2021	2020
Operating result	375.9	227.3
Depreciation, amortisation and impairment charges	90.2	94.5
EBITDA	466.0	321.8
Items affecting comparability		
Other operating income	-12.2	-6.0
Share of results of associated companies	8.7	
Other operating expense	9.7	
Total	6.2	-6.0
EBITDA, comparable	472.2	315.8
Depreciation, amortisation and impairment charges	-90.2	-94.5
Items affecting comparability		
Impairment charges and reversals of impairments	4.6	
Operating result, comparable	386.6	221.2
Share of results of associated companies and joint ventures	0.0	-0.1
Net financial items	-10.0	-14.9
Result before income tax, comparable	376.6	206.3
Income taxes	-51.8	-42.2
Income taxes related to items affecting comparability	1.9	1.2
Result for the period, comparable	326.6	165.3

"+" sign items = expense affecting comparability
"-" sign items = income affecting comparability

Items affecting comparability during the financial period totalled EUR 10.8 million and comprised the following items: a EUR 7.0 million capital gain from the sale of a land area unrelated to business operations; a EUR -6.9 million impairment recognised in the assets of Metsä Fibre's Kemi pulp mill; EUR -1.8 million recognised in taxes as a result of the tax audit in Metsä Fibre's sub-sidiary in Italy; a EUR -4.6 million impairment recog-nised in the current paperboard production assets in Husum; and EUR -4.5 million in costs related to the chip conveyor fire at the Husum pulp mill. In addition, EUR -2.3 million of taxes affecting comparability are reported in the taxes of previous financial years based on the tax audit of the Italian subsidiary.

Items affecting comparability in 2020 totalled EUR 6.0 million and comprised disposal gains from sold non-business related land area.

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 active. As an example of this Metsä Board started enhanced cooperation with Finnish Tax Administration during 2021. Tax issues are managed by Metsä Group's tax function and taxes are in the scope of Board of Directors' Audit Committee's 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	2021	2020
Finland	15.0	43.9
Sweden	11.9	2.0
Other countries	5.6	0.6

Quarterly data

EUR million	Full year 2021	Full year 2020	Quarterly IV/2021	III/2021	II/2021	I/2021	IV/2020	III/2020	II/2020	I/2020
Sales	2,084.1	1,889.5	518.5	516.1	555.8	493.7	473.1	471.2	473.1	472.1
	2021	**2020**	**IV/2021**	**III/2021**	**II/2021**	**I/2021**	**IV/2020**	**III/2020**	**II/2020**	**I/2020**
Operating result, comparable	386.6	221.2	91.3	104.0	102.5	88.8	64.5	62.5	60.5	33.8
	2021	**2020**	**IV/2021**	**III/2021**	**II/2021**	**I/2021**	**IV/2020**	**III/2020**	**II/2020**	**I/2020**
Operating result	375.9	227.3	90.8	99.4	103.7	82.0	64.5	62.5	66.5	33.8
Share of profit from associated companies	0.0	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exchange gains/losses	-2.3	-3.4	-0.6	-0.3	-1.1	-0.4	-0.2	-1.3	-0.2	-2.0
Other financial income and expenses	-7.7	-11.5	0.6	-2.8	-2.8	-2.7	-2.8	-3.0	-2.8	-2.9
Result before tax	365.8	212.3	90.7	96.4	99.8	78.9	61.5	58.1	63.9	28.9
	2021	**2020**	**IV/2021**	**III/2021**	**II/2021**	**I/2021**	**IV/2020**	**III/2020**	**II/2020**	**I/2020**
Operating result, % of sales	18.0	12.0	17.5	19.3	18.6	16.6	13.6	13.3	14.1	7.2

1,000 t	Full year 2021	Full year 2020	Quarterly IV/2021	III/2021	II/2021	I/2021	IV/2020	III/2020	II/2020	I/2020
Deliveries										
Folding boxboard	1,296	1,223	300	319	348	329	297	318	310	298
White kraftliner	627	587	143	156	166	162	144	143	148	152
Metsä Fibre's pulp [1]	496	521	120	104	156	116	158	107	126	130
Metsä Board's pulp	762	696	203	178	185	196	207	168	156	165
	2021	**2020**	**IV/2021**	**III/2021**	**II/2021**	**I/2021**	**IV/2020**	**III/2020**	**II/2020**	**I/2020**
Production										
Folding boxboard	1,272	1,249	295	317	318	342	317	311	333	288
White kraftliner	634	591	155	155	160	164	168	137	156	130
Metsä Fibre's pulp [1]	1,362	1,371	335	335	329	362	359	335	348	329
Metsä Board's pulp	747	702	183	184	194	186	174	188	193	148

[1] Corresponds to Metsä Board's ownership of 24.9 per cent in Metsä Fibre.

Ten years in figures

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Income statement, eur million										
Sales	2,084	1,890	1,932	1,944	1,849	1,720	2,008	2,008	2,019	2,108
- change, %	10.3	-2.2	-0.1	5.2	7.5	-14.3	-0.0	-0.5	-4.2	-15.2
EBITDA, comparable	472	316	279	344	289	231	283	236	208	186
- % of sales	22.7	16.7	14.4	17.7	15.6	13.4	14.1	11.8	10.3	8.8
Operating result	376	227	181	246	207	132	199	117	114	221
Operating result, comparable	387	221	184	252	193	137	180	137	104	75
- % of sales	18.6	11.7	9.5	13.0	10.5	8.0	9.0	6.8	5.2	3.6
Result for the period	314	170	145	203	150	90	137	69	64	171
Balance sheet, eur million										
Balance sheet total	2,922	2,302	2,270	2,284	2,226	2,194	2,220	2,149	2,097	2,581
Equity attributable to shareholders of parent company	1,699	1,384	1,338	1,323	1,167	1,052	1,029	841	850	851
Interest bearing net liabilities	-78	236	308	335	358	464	333	427	597	625
Key figures per share and distribution										
Dividend and equity distribution, EUR million	145.8[1]	92.4	85.3	103.1	74.7	67.5	60.4	39.4	29.5	19.7
Dividend and equity distribution per share, EUR	0.41[1]	0.26	0.24	0.29	0.21	0.19	0.17	0.12	0.09	0.06
Payout ratio including equity distribution, %	49.9[1]	54.31	58.5	50.9	50.0	76.0	43.6	57.1	47.4	11.3
Dividend yield, %	4.8[1]	3.0	4.0	5.7	2.9	2.8	2.5	2.7	2.9	2.7
Key figures – profitability										
Return on capital employed (ROCE), comparable, %	18.7	12.2	10.4	14.4	11.2	8.1	11.3	9.1	6.4	4.8
Return on equity, comparable, %	20.2	12.1	11.0	16.7	12.4	9.0	12.9	10.4	6.5	5.3
Key figures – balance sheet and financing										
Interest bearing net liabilities / EBITDA, comparable	-0.2	0.7	1.1	1.0	1.2	2.0	1.2	1.8	2.9	3.4
Equity ratio, %	63.3	60.3	59.1	58.1	52.6	48.2	46.5	39.2	40.7	33.2
Net gearing, %	-4	17	23	25	31	44	32	51	70	73
Net cash flow from operations, EUR million	330	308	201	151	236	77	247	198	82	-2
Net interest expense, EUR million	8	12	14	19	36	26	26	42	60	70
Interest cover	42.7	27.6	15.4	9.0	7.6	4.0	10.4	5.7	2.4	1.0
Other key figures										
Gross investments, EUR million	220	166	95	70	65	162	178	44	67	66
Depreciation, amortisation and impairment losses, EUR million	90	95	114	92	92	102	104	126	101	100
R & D expenditure, EUR million [2]	6	9	9	6	6	6	8	6	5	5
- % of sales	0.3	0.5	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.2
Personnel, average	2,461	2,455	2,433	2,435	2,456	2,588	2,851	3,200	3,245	3,552
- in Finland	1,490	1,486	1,458	1,433	1,441	1,552	1,538	1,542	1,560	1,634
Paperboard deliveries, 1,000 t	1,922	1,810	1,792	1,830	1,803	1,568	1,404	1,256	1,141	1,062

Dividend and key figures per share for years 2012–2014 have been issue-adjusted. The rights issue factor was 1.030627.

[1] The Board of Directors has proposed that a dividend of EUR 0.41 per share be distributed for the 2021 financial year. Dividend yield for 2021 has been calculated including the proposed equity distribution and using the B share closing price as of 31 December 2021.
[2] The reporting of research and development expenses has been clarified and the figures for 2019–2021 are comparable.

Calculation of key ratios is presented on page 130.

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.cgifinland.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 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 Nasdaq Helsinki 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 centralised 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.

Corporate governance in Metsä Board

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/her 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 15 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% of all shares deliver a written request to this effect in order to process a specified matter.

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:

- monitoring that the Company's Articles of Association are complied with;
- 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 Company's values, 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;
- 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;
- deciding on the remuneration schemes and their criteria and terms and conditions;
- 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 shal 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 2021, the Board held a total of 13 meetings. Due to Covid-19 pandemic, meetings were held by using a number of different methods of participation. The attendance rate of the members was 99% (100% in 2020 and 100% in 2019), such that Raija-Leena Hankonen-Nybom was absent from one meeting while the others attended all the meetings.

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 of Directors has adopted itself specific diversity principles, which are available on the company's website (https://www.metsaboard.com/MaterialArchive/Corporate-governance/Metsa-Board-board-diversity-principles.pdf).The Board recognises the benefits to the Company and its shareholders of a diverse and broad Board composition. Diversity supports the Board's open work atmosphere, independent role 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. Diversity shall further support the Company's each development stage and correspond to the future needs of the development of the Company and its business.

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. 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 Chair and a Vice Chair from among its members. The Annual General Meeting of 2021 appointed the following persons as members of the Board of Directors:

- Mr Hannu Anttila, born 1955, independent of the Company and of its significant shareholders, M.Sc. (Econ.), member since 2018, 143,942 B shares
- Ms Raija-Leena Hankonen-Nybom, born 1960, independent of the company's significant shareholder. Not independent of the company. M.Sc. (Econ.), APA-degree, member since 2021, 4,446 B shares
- Ms Erja Hyrsky, born 1979, independent of the Company and of its significant shareholders, M.Sc. (Econ.) member since 2021, 5,823 B shares
- Mr Ilkka Hämälä, born 1961, Chair, M.Sc. (Eng.), member since 2018, 213,381 B shares
- Ms Kirsi Komi, born 1963, independent of the Company and of its significant shareholders, L.L.M., member since 2010, 81,610 B shares
- Mr Jussi Linnaranta, born 1972, independent of the Company, M.Sc. (Agr.), member since 2017, 25,192 B shares
- Mr Jukka Moisio, born 1961, independent of the Company and of its significant shareholders, M.Sc. (Econ.), MBA, member since 2020, 8,598 B-shares
- Mr Timo Saukkonen, born 1963, independent of the Company, M.Sc. (For.), member since 2020, 13,198 B shares
- Mr Veli Sundbäck, born 1946, independent of the Company and of its significant shareholders, L.L.M., member since 2013, 71,275 B shares

These ownerships include shares possibly owned by controlled entities as at 31 December 2021.

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 Chair Hämälä is dependent on both the Company and its majority shareholder Metsäliitto Cooperative. Jussi Linnaranta and Timo Saukkonen are members of the Board of Metsäliitto Cooperative and consequently dependent on a significant shareholder. Raija-Leena Hankonen-Nybom is the Company's previous auditor in charge and is consequently considered dependent on the Company until the Annual General Meeting of 2022. Kirsi Komi has served on the Board for more than 10 consecutive years but is considered 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 23, 2022 that current Board members Anttila, Hankonen-Nybom, Hyrsky, Hämälä, Linnaranta, Moisio, Saukkonen and Sundbäck be re-elected for a new term and further that M.S.S.(Econ) Mari Kiviniemi be elected as a new member. 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 chair 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 2021, Raija-Leena Hankonen-Nybom has been Chair of the Audit Committee with Hannu Anttila, Kirsi Komi and Jukka Moisio as members. All members apart from the Chair are independent of the Company and its significant shareholders.

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 chair 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 2021 and all members participated in all meetings (the attendance rate was 95% in 2020 and 100% in 2019).

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 chair 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 2021, Ilkka Hämälä has been Chair of the Nomination and Compensation Committee with Erja Hyrsky, Jussi Linnaranta, Timo Saukkonen and Veli Sundbäck as members.

The Nomination and Compensation Committee convened five times during 2021 and all members participated in all meetings (the attendance rate was 100% also in 2020 and 2019).

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% 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 (Technology), Markku Leskelä (Development), Jussi Noponen (Sales and Supply Chain), Harri Pihlajaniemi (Production and Technology), Henri Sederholm (Finance) 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 Chair'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 2021 were as follows:

Mika Joukio	300,000 B shares
Ari Kiviranta	31,000 B shares
Markku Leskelä	9,885 B shares
Jussi Noponen	66,062 B shares
Harri Pihlajaniemi	28,672 B shares
Henri Sederholm	33,249 B shares
Camilla Wikström	29,080 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 Nasdaq Helsinki, 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-engineering 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. The Risk Committee conducts twice each year a risk review, the results of which the CEO presents to the Board following a review by the Corporate Management Team. The Risk Committee consists of the CFO acting as Chair, SVP Production, SVP Development, VP Risk Management and VP Group Accounting. 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 and 2021 respectively tenders for auditing services. As a result of the tendering of 2011, the Company's long-term auditor PricewaterhouseCoopers Oy was at the 2012 Annual General Meeting changed to KPMG Oy Ab. Pursuant to the decision of the Annual General Meeting of 2021, KPMG Oy Ab acts as the Company's auditor and appointed Kirsi Jantunen, APA, as the new auditor with main responsibility. As a result of the tendering of 2021 the Board of Directors proposes to the Annual General Meeting of 2022 that KPMG Oy Ab be appointed as the Company's auditor. 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 2021 audit fees were paid as follows: KPMG Oy Ab received EUR 196,064 (EUR 196,064 in 2020 and EUR 196,064 in 2019); KPMG internationally received altogether EUR 437,212 in 2021 (EUR 402,322 in 2020 and EUR 413,528 in 2019); and Other auditing firms outside Finland were paid EUR 20,641 (EUR 23,484 in 2020 and EUR 23,484 in 2019). In addition, KPMG has received EUR 0 (EUR 3,581 in 2020 and EUR 34,327 in 2019) for services not related to the actual auditing of the accounts.

Insider Administration

Metsä Board and its group comply 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 Helsinki Ltd. (Helsinki Stock Exchange) (www.nasdaq.com/solutions/rules-regulations-helsinki). 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 2016, 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 Chair 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 Corporation. The most significant of these include raw material (such as wood and pulp) sourcing and acting in jointly operated integrated mill sites. 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 2021, 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 2021.

Metsä Board's Board of Directors

Read more at **www.metsaboard.com**

ILKKA HÄMÄLÄ

b. 1961

M.Sc (Eng.)
Vuorineuvos
(Finnish honorary title)
Metsä Group, President and CEO

Chair of the Board since 2018

Not independent of the company or its significant shareholder

Shares owned in Metsä Board Corporation 31 Dec. 2021:
213,381 B shares

JUSSI LINNARANTA

b. 1972

M.Sc. (Agriculture and Forestry)
Agronomist

Member of the Board since 2017
Vice Chair of the Board since 2020

Independent of the company.
Not independent of the company's significant shareholder

Shares owned in Metsä Board Corporation 31 Dec. 2021:
25,192 B shares

HANNU ANTTILA

b. 1955

M.Sc. (Econ.)
Teollisuusneuvos
(Finnish honorary title)

Member of the Board since 2018

Independent of the company and of its significant shareholders

Shares owned in Metsä Board Corporation 31 Dec. 2021:
143,942 B shares

RAIJA-LEENA HANKONEN-NYBOM

b. 1960

M.Sc. (Econ.)
Authorized Public Accountant degree

Member of the Board since 2021

Independent of the company.
Not independent of the company's significant shareholder

Shares owned in Metsä Board Corporation 31 Dec. 2021: 4,446 B shares

ERJA HYRSKY

b. 1979

M.Sc. (Econ.)

Member of the Board since 2021

Independent of the company and of its significant shareholders

Shares owned in Metsä Board Corporation 31 Dec. 2021:
5,823 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 Metsä Board Corporation 31 Dec. 2021:
81,610 B shares

JUKKA MOISIO

b. 1961

M.Sc. (Econ.), MBA

Member of the Board since 2020

Independent of the company and of its significant shareholders

Shares owned in Metsä Board Corporation 31 Dec. 2021:
8,598 B shares

TIMO SAUKKONEN

b. 1963

M.Sc. (Agriculture and Forestry)
Forester

Member of the Board since 2020

Independent of the company.
Not independent of the company's significant shareholder

Shares owned in Metsä Board Corporation 31 Dec. 2021:
13,198 B shares

VELI SUNDBÄCK

b. 1946

LL.M., Master of Laws

Member of the Board since 2013

Independent of the company and of its significant shareholders

Shares owned in Metsä Board Corporation 31 Dec. 2021:
71,275 B shares

Metsä Board's Corporate Management Team

Read more at **www.metsaboard.com**

MIKA JOUKIO

b. 1964

M.Sc. (Tech), MBA
Chief Executive Officer

Metsä Group employee since 1990. Chair of Metsä Board Corporate Management Team since 2014

Shares owned in Metsä Board Corporation 31 Dec. 2021: 300,000 B shares

HENRI SEDERHOLM

b. 1978

M.Sc. (Econ.)
Chief Financial Officer

Metsä Group employee since 2003. Member of Metsä Board Corporate Management Team since May 2021.

Shares owned in Metsä Board Corporation 31 Dec. 2021: 33,249 B shares

JUSSI NOPONEN

b. 1975

M.Sc. (Tech)
Senior Vice President, Sales and Supply Chain

Metsä Group employee since 2000. Member of Metsä Board Corporate Management Team since 2016

Shares owned in Metsä Board Corporation 31 Dec. 2021: 66,062 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. 2021: 28,672 B shares

ARI KIVIRANTA

b. 1963

D.Sc. (Tech)
Senior Vice President, Technology

Metsä Group employee since 1993. Member of Metsä Board Corporate Management Team since 2014

Shares owned in Metsä Board Corporation 31 Dec. 2021: 31,000 B shares

MARKKU LESKELÄ

b. 1962

PhD.
Senior Vice President, Development

Metsä Group employee since 2016. Member of Metsä Board Corporate Management Team since October 2021.

Shares owned in Metsä Board Corporation 31 Dec. 2021: 9,885 B shares

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. 2021: 29,695 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.

Investors website

More information on Metsä Board as an investment as well as the company's strategy, operating environment, financials and governance can be found on the company's website at www.metsaboard.com/investors.

Investor relations in 2021

The COVID-pandemic had a strong impact on Metsä Board's investor relations activities in 2021. All investor and analyst meetings were held virtually, avoiding contacts. The company also participated in virtual investor conferences organised by brokerage firms.

The 2021 AGM was held with extraordinary meeting procedures. It was only possible to attend the meeting by voting in advance and asking questions and possible counter proposals in advance.

In connection with the publication of interim reports, Metsä Board organises a conference call in which the CEO and CFO present the interim report and the audience can ask questions. Presentation materials and recordings of the conference call are available on the company's Investors website.

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 2021: ABGSC, Carnegie, Danske Equities, DnB, Inderes, Kepler Cheuvreux, Nordea Markets, OP, SEB and UBS. The contact details of the analysts and some of the consensus forecasts are available on the company's Investors website. Metsä Board is not responsible for the content, accuracy or scope of the analysts' views.

Annual general meeting in 2022

The registration period and advance voting period commence on 2 March 2022 at 12 noon. EET, after the deadline for delivering counter-proposals to be put to a vote has expired. A shareholder, who is registered in the Company's shareholders' register and who wishes to participate in the general meeting by voting in advance, must register for the general meeting by giving a prior notice of participation and by delivering his/her votes no later than on 18 March 2022 at 4 p.m. EET, by which time the notice and votes must be received. When registering, requested information such as the name, personal identification number or company identification number, address and telephone number of the shareholder, as well as requested information on a possible proxy representative (name, personal identification number), must be notified. The personal data submitted to Euroclear Finland Ltd. will be used only in connection with the general meeting and with the processing of related registrations.

Shareholders with a Finnish book-entry account can register and vote in advance on certain matters on the agenda during the period 2 March 2022 at 12 noon–18 March 2022 at 4 p.m. EET in the following manners:

a) electronically via the Company's website at www.metsaboard.com/AGM2022.

The shareholder's book-entry account number is required for the electronic advance voting. Terms and instructions for electronic advance voting are available on the website; or

b) by mail or e-mail by sending the voting instructions form available on the Company's website to Innovatics Oy, Yhtiökokous / Metsä Board Oyj, Ratamestarinkatu 13 A, 00520 Helsinki or by e-mail to agm@innovatics.fi.

Profit distribution

The Board of Directors proposes to the Annual General Meeting to be held on 24 March 2022, a dividend of 0.41 euros per share be distributed for the financial year 2021.

The distribution will be paid to shareholders who on the record date for the distribution, 28 March 2022, 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 2022.

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

METSÄ BOARD CORPORATION
P.O. Box 20
FI-02020 METSÄ, Finland
Visiting address: Revontulenpuisto 2 A
02100 Espoo, Finland

Financial reporting in 2022

Silent period	Financial report	Publication date
1 January–9 February 2022	Financial Statements Bulletin 2021	10 February 2022
1 April–27 April 2022	Interim Report for January–March 2022	28 April 2022
1 July–27 July 2022	Half-Year Financial Report for January–June 2022	28 July 2022
1 October–26 October 2022	Interim Report for January–September 2022	27 October 2022

Metsä

Together we make the perfect package

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PEFC/02-31-92