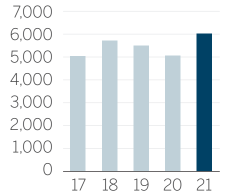
Metsä

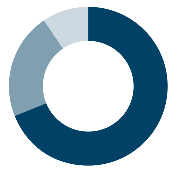
Metsä Group
Annual Review 2021

Key figures

SALES
EUR Million



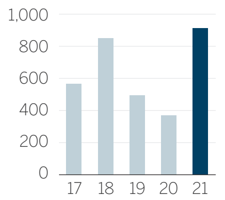
SALES BY MARKET AREA
%



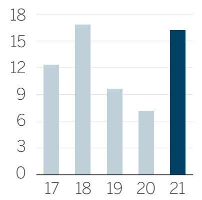
EMEA*	69
APAC**	21
Americas	9

* Europe, the Middle East and Africa
** Asia-Pacific

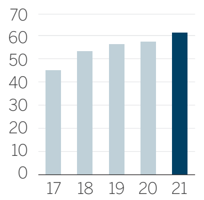
COMPARABLE OPEARTING RESULT
EUR Million



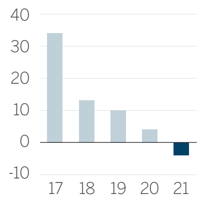
COMPARABLE ROCE
%



EQUITY RATIO
%



NET GEARING RATIO
%



Metsä Group uses wood from northern forests to produce high quality recyclable and environmentally friendly products for everyday life.

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

Contents

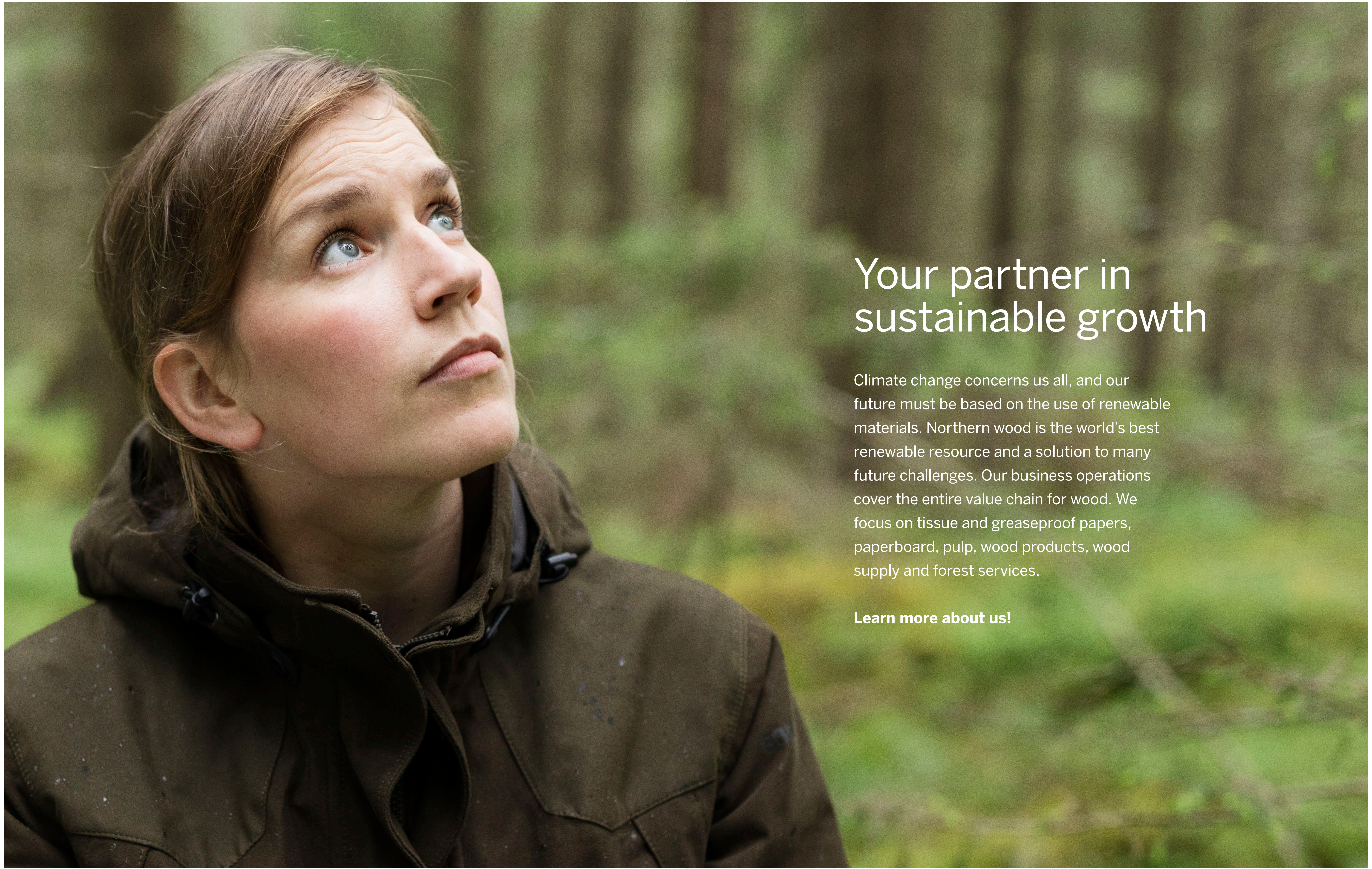
*part of the Report of the Board of Directors

METSÄ GROUP
Annual Review 2021

Group Financial Statements

Parent Company Financial Statements

Governance



Your partner in sustainable growth

Climate change concerns us all, and our future must be based on the use of renewable materials. Northern wood is the world's best renewable resource and a solution to many future challenges. Our business operations cover the entire value chain for wood. We focus on tissue and greaseproof papers, paperboard, pulp, wood products, wood supply and forest services.

Learn more about us!

An excellent result in a year of rapid changes

The rapid changes in our operating environment amplified by the coronavirus pandemic were widely visible in Metsä Group's operations. The Group's overall result was excellent. Our numerous development projects proceeded according to plan despite the pandemic.

As was the case last year, Metsä Board's paperboard business continued to deliver some of our strongest results. Metsä Fibre's pulp business returned to the path of strong performance, supported by the cycle of price increases in pulp which began in late 2020. The levels of demand and supply in the sawn timber market rose exceptionally high during the past year. Metsä Wood's Kerto® LVL and plywood products also benefited from strong demand, even though the business area's result did not improve significantly due to cost inflation. For Metsä Tissue's tissue papers, 2021 was a difficult year. Demand during the first half of the year continued to feel the impact of pandemic-related measures restricting the use of public spaces. The extremely steep increase in energy prices in Europe over the year led to the operating result showing a loss.

In general, the market staying strong even in this exceptional situation is an indication of our products' significance as part of people's everyday lives. The success story of products made from renewable materials continues. The success of the entire forest sector is based on the increasing demand for renewable raw materials and the consumer products made from them in economically strengthening market areas with growing populations. To be able to respond to this challenge created by consumer needs, we need to renew our operations and products continuously and genuinely. The ecological, social and economic perspectives of sustainability must be realised in everything we do. The rapid developments in the legislation regulating our operations and the use of our products require an active approach, with the aim of including the perspective of sustainable industries in political decision-making. We want to be part of the solution in combating climate change and the loss of biodiversity. At the same time, we must be able to fulfil our task as a promoter of society's economic wellbeing.

Growth through investments and innovations

The confidence in the bright future of forestry and the forest industry, as well as wood-based products, is evident in Metsä Group as the extensive development of products, operating methods and mills. Four large-scale mill investments were in their implementation phases in 2021. Test runs at Metsä Fibre's next-generation sawmill will begin in late spring 2022, and the new recovery boiler and turbine at Metsä Board's Husum integrated mill will start up during the third quarter. The significant increase to the capacity of Metsä Board's folding boxboard machine at Husum and Metsä Fibre's new bioproduct mill in Kemi will be completed in 2023. We have also announced our plans to renew the tissue paper mill in Mariestad, Sweden, and invest in a Kerto LVL mill in Äänekoski, Finland. We will proceed with our plans until the potential investment decisions, which would be made by the end of 2022. In the UK, we are strengthening our position in the tissue paper market and engaged in preparations for a local production unit investment.

Product renewal takes place both through the development of the existing product portfolio and the introduction of new products. Our textile fibre demo plant in Äänekoski has been producing a new fibre material for the markets throughout 2021. The demo plant for new packaging solutions, also located in Äänekoski, reached its start-up phase at the turn of the year. Through our innovation company Metsä Spring we have also invested in businesses developing new products related to the value chains of wood.

Success in our daily operations and multiple development projects is achieved with the strength of our professional personnel. A great many of our employees and partners have continued working at their workplaces throughout the pandemic. Mills cannot be operated remotely, and wood is not transported from our members' forests to mills without people. The work has been carried out under special arrangements. We have also worked remotely in those jobs where it is possible to do so. The disbandment of the workplace community and the reduction in the support and strength provided by colleagues are some of the challenges posed by remote working which we have learned to cope with during this exceptional time. It has been impressive to see how well Metsä Group employees have adapted to the exceptional time and uncertainty, while achieving our targets according to plan.

> ”
> The success story of products made from renewable materials continues.

Balancing ecological and economic aspects

The debate on the use and future of forests has continued in both Europe and Finland. We must be able to combine climate change mitigation that relies on increasing the amount of carbon bound in forests and wood products with the increasingly effective protection of forests' biodiversity values. Metsä Group and Metsäliitto Cooperative's owner-members aim to reconcile climate and ecological issues with forests' economic significance to both their owners and society at large.

Finnish forest management, with its strong tradition of family forestry, has proved to be an effective model in sustainability work over the decades. The social, ecological and economic perspectives of sustainability are realised every day in the work carried out at the forest estates of our members. Metsä Group's mission is to provide the members of our cooperative with services and the competence of our personnel so that they can take care of their forest assets in accordance with their goals.

The customer experience of forest owners remained at a record-high level, and we made many new forest asset management agreements. More than 50% of the wood purchased from private forests was bought through digital means. The pandemic highlighted the benefits of digital transactions. Metsäliitto Cooperative's profit distribution model was renewed, and we launched a new pricing method applied at thinning sites, stem volume-based pricing, which was received well by the market. Our programme focused on the ecological sustainability of commercial forests was expanded with measures related to the management and protection of herb-rich forests. We also launched a nature management programme with which we support development projects improving biodiversity and the state of waterways in Finland outside commercial forests.

Metsä Group is building a sustainable future for the forest industry

The Group continues its work as a developer of value chains extending from forest to customer. The strong financial result from 2021 supports our development projects, and the active feedback on development we receive from owner-members and customers will steer our future projects in the direction required by our stakeholders. Our roughly 9,500 employees and thousands of people at our partners work to promote a sustainable economy based on northern forests.

Ilkka Hämälä
President and CEO

Report of the Board of Directors 2021

Sales and result

EUR million	2021	2020	2019
Sales	6,017.0	5,054.9	5,473.4
EBITDA	1,213.7	679.3	789.7
- comparable EBITDA	1,211.2	670.9	799.0
Operating result	873.6	375.8	374.3
- comparable operating result	913.8	367.7	494.9
% of sales	15.2	7.3	9.0
Result before tax	831.7	330.1	315.7
Result for the period	657.0	262.2	238.9

Metsä Group's sales in January–December 2021 were EUR 6,017.0 million (1–12/2020: 5,054.9). Sales increased, mainly due to the sales prices of pulp, which were higher than in the previous year.

The comparable operating result was EUR 913.8 million (367.7), or 15.2% (7.3) of sales. The increase in the operating result is explained by the rise in the sales prices of pulp, among other things. The comparable operating result in January–December 2020 was weakened by the strikes at Finnish mills, which had a negative impact of roughly EUR 50 million.

Exchange rate fluctuations after hedging had a negative effect of approximately EUR 125 million on the operating result of the review period compared to the previous year.

Items affecting the comparability of the operating result in January–December totalled EUR -40.2 million (8.1). The items were related to the impairments of the existing Kemi pulp mill (-38.2); a capital gain from the sale of a land area unrelated to Metsä Board's business operations (7.0); the costs related to the chip conveyor fire at the Husum pulp mill (-4.5); and an impairment recognised in the Husum pulp mill's current paperboard production assets (-4.6).

Metsä Group's operating result (IFRS) was EUR 873.6 million (375.8). The share of the results of associated companies and joint ventures was EUR -2.2 million (3.1), financial income was EUR 1.0 million (3.2), exchange rate differences in financing were EUR -3.7 million (-2.3), and financial expenses totalled EUR 36.9 million (49.7).

The result before taxes was EUR 831.7 million (330.1), and taxes including changes in deferred tax liabilities totalled EUR 174.7 million (67.9). The Group's effective tax rate was 21.0% (20.6). The result for the review period was EUR 657.0 million (262.2).

The return on capital employed was 15.5% (7.2), and the return on equity was 15.1% (6.8). The comparable return on capital employed was 16.2% (7.1), and the comparable return on equity was 16.0% (6.6).

%	2021	2020	2019
Return on capital employed	15.5	7.2	7.3
- comparable ROCE	16.2	7.1	9.6
Return on equity	15.1	6.8	6.4
- comparable ROE	16.0	6.6	9.7

Balance sheet and financing

	2021	2020	2019
Equity ratio, %	61.1	57.2	56.2
Net gearing, %	-4	4	10
Net interest bearing liabilities, EUR million	-185	168	374

Metsä Group's liquidity has remained strong. Total liquidity at the end of the year was EUR 3,126.2 million (31 December 2020: 2,004.7). This consisted of EUR 1,334.5 million (1,212.9) in liquid assets and investments, and EUR 1,791.8 million (791.8) in off-balance sheet committed credit facility agreements.

The Group's liquidity reserve is complemented by uncommitted commercial paper programmes and credit facilities amounting to EUR 161.5 million (31 December 2020: 161.5) and by undrawn pension premium (TyEL) funds in the amount of EUR 371.4 million (31 December 2020: 356.9).

The EUR 1,000 million debt financing of Metsä Fibre's Kemi investment is composed of a EUR 500 million 10-year loan of which 80% is guaranteed by Finnvera; a EUR 200 million 10-year loan of which 95% is guaranteed by the Swedish Export Credit Agency EKN; a EUR 200 million 15-year loan granted by the EIB; and a EUR 100 million five-year green loan agreed on with eight banks. None of these loans has been drawn yet.

Metsä Tissue paid its EUR 150 million external bank loan.

Net cash flow from operations was EUR 1,023.0 million (667.4). A total of EUR 21.6 million in working capital was released (100.3). The addition of EUR 170.6 million in trade and other receivables as well as the addition of EUR 65.4 million in inventories increased working capital. The addition of EUR 257.7 million in trade payables and other liabilities decreased working capital.

The Group's equity ratio at the end of December was 61.1%, and its net gearing was -4% (31 December 2020: 57.2 and 4, respectively). Net interest-bearing liabilities were EUR -185 million (31 December 2020: 168).

At the end of December, the equity ratio of the parent company Metsäliitto Cooperative was 86.8%, and the net gearing was -21% (31 December 2020: 88.9 and -23, respectively).

In January–December, Metsäliitto Cooperative's members' capital increased by a total of EUR 126.5 million (119.6). The value of participation shares grew by EUR 9.6 million (8.5) and that of A additional shares by EUR 123.3 million (109.5). The value of B additional shares declined by EUR 6.4 million (grew by 1.5).

Personnel

	2021	2020	2019
Personnel, average	9,619	9,392	9,624
Personnel expenses, EUR million	680.4	615.0	630.4
Personnel at end of year	9,533	9,213	9,265
- of whom in Finland	5,329	5,055	4,929

In January–December, Metsä Group had an average of 9,619 employees (9,392). Personnel expenses were EUR 680.4 million (615.0). At the end of December, the Group employed 9,533 people (31 December 2020: 9,213) of whom 5,329 (5,055) were based in Finland and 4,204 (4,158) abroad. The turnover of permanent employees was 6.7% (6.2), and the average duration of employment for the whole personnel was 15.1 years (15.8). Personnel expenses totalled EUR 680.4 million (615.0), of which paid salaries and remuneration, including sharebased payments, were EUR 462.7 million (416.1).

The parent company Metsäliitto Cooperative employed 2,074 people at the end of December (31 December 2020: 1,973). The parent company paid EUR 103.5 million in salaries and remuneration (89.1).

Future retirements are being prepared for with retirement forecasts and resource plans based on the forecasts. When necessary, Metsä Group initiates apprenticeships and invests in on-the-job learning.

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

In December, Metsä Group made company-specific collective agreements with Paperworkers' Union, the Industrial Union and in terms of the chemical forest industry with the Trade Union Pro.

Members

At the end of December, Metsäliitto Cooperative had 92,534 members (31 December 2020: 95,449). During January–December, 3,480 new members joined the Cooperative, and 6,395 members cancelled their memberships. At the end of December, the forest area owned by the members totalled 5.229 million hectares (31 December 2020: 5.257).

Investments

EUR million	2021	2020	2019
Total investments	994.2	400.5	259.6
% of sales	16.5	7.9	4.7
Total investments in Finland	768.4	226.1	178.2

Metsä Group's total investments in January–December totalled EUR 994.2 million (400.5), of which investments in owned property, plant and equipment were EUR 964.6 million (362.5) and investments in leased property, plant and equipment were EUR 23.3 million (38.0). Total investments include EUR 6.2 million of acquired business operations.

Metsä Fibre's total investments were EUR 650.7 million (135.2), of which investments in own property, plant and equipment were EUR 647.2 million (132.0) and investments in leased property, plant and equipment were EUR 3.5 million (3.3).

Metsä Board's total investments amounted to 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%.

The most significant investment projects are covered in more detail under section "Business Development".

Business development

In September, Metsä Wood announced its plan to construct a new Kerto LVL mill in the expanding mill area at Äänekoski, Finland. The final investment decision is pending the completion of a local detailed plan for the area and an environmental permit. The value of the investment would be approximately EUR 200 million. The annual production capacity of the new mill, which would be constructed in phases between 2022 and 2026, would be approximately 150,000 cubic metres, and the volume of log procured from Finland around 375,000 cubic metres.

In 2019, Metsä Board began to renew the Husum pulp mill in phases. The investment cost of the first phase of the renewal, comprising a new recovery boiler and turbine, is approximately EUR 360 million. By the end of the financial period, the investments made totalled EUR 253 million. The start-up of the new recovery boiler and turbine will be slightly delayed compared to the original estimate. They are now expected to start up in September 2022, whereas according to the original estimate, this would have occurred during the first half of 2022. The first phase of the renewal is expected to improve Metsä Board's annual cash flow by some EUR 35 million as of 2023.

The plan is to replace the current fibre lines with a new fibre line during the second phase of the Husum pulp mill investment in the 2020s. 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 aim is to develop Metsä Board's pulp and energy production and promote a shift to fossil free production.

In 2021, Metsä Board initiated a 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 renewal and bottleneck investments in the paperboard production line. Metsä Board will also buy the modernised production line for unbleached pulp from Metsä Fibre. The pulp production line's annual capacity is roughly 180,000 tonnes a year. The development programme will reduce water use by 40% and energy use by 5% per tonne of paperboard produced. It is a significant step towards the company's 2030 sustainability targets.

Metsä Board will increase its annual folding boxboard capacity by 200,000 tonnes at the Husum integrated mill in Sweden. The investment will increase the capacity of folding boxboard machine BM1 to 600,000 tonnes a year. The additional capacity will become available on the market in 2024–2025. 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 some 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.

The construction of Metsä Fibre's new pine sawmill in Rauma began in May 2020. In 2021, the project progressed according to the planned overall schedule. The value of the investment is approximately EUR 200 million, and production is scheduled to start during the third quarter of 2022. The sawmill will be a worldwide forerunner in technology and efficiency. It is the largest ever sawmill investment in Finland. The annual capacity of the new unit will be 750,000 cubic metres of pine sawn timber, and the annual use of logs sourced in Finland at the sawmill is estimated to be around 1.5 million cubic metres. The sawmill will employ around 100 people directly and around 500 people across its direct value chain in Finland. The construction of the sawmill has a high degree of Finnish origin, around 70%, and the employment impact of the construction phase is 1,500 person-years. The sawn timber will be sold primarily to Europe and Asia.

In February 2021, Metsä Fibre made the final investment decision on the construction of the Kemi bioproduct mill. This is the largest ever investment in Finland in the history of the Finnish forest industry. The investment's cost estimate is around 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, and construction and installation work. The mill is set to be completed in the third quarter of 2023. It will use around 7.6 million cubic metres of pulpwood a year. The Kemi bioproduct mill will produce some 1.5 million tonnes of softwood and hardwood pulp a year as well as numerous other bioproducts. The new mill will replace the existing pulp mill in Kemi. An impairment of roughly EUR 38 million was recognised in the assets of the existing pulp mill as an item affecting comparability during the first quarter of 2021.

In May 2020, Metsä Tissue filed an environmental permit application with the Vänersborg Land and Environment Court pertaining to the company's plan to increase the production of fresh fibre-based tissue papers at the Mariestad mill in Sweden. The project is progressing according to plan, and the company expects the environmental permit to be issued during the third quarter of 2022 at earliest, at which point the company will be ready for the potential investment decision.

In the third quarter, Metsä Tissue announced that it is planning a significant investment in a new tissue paper mill in the United Kingdom. The annual production capacity of the new tissue paper mill would be 240,000 tonnes, and it would be built during various phases over a period of roughly 10 years. These plans are part of the company's Future Mill programme, the aim of which is world-class environmental performance in tissue paper production.

Business areas

Wood Supply and Forest Services

The sales of Wood Supply and Forest Services, i.e. Metsä Forest, in January–December totalled EUR 2,022.9 million (1–12/2020: 1,819.9), and the comparable operating result was EUR 36.4 million (22.4).

Wood Supply and Forest Services	2021	2020
Sales, EUR million	2,022.9	1,819.9
EBITDA, EUR million	46.9	32.6
- comparable EBITDA	46.9	32.6
Operating result, EUR million	36.4	22.4
- comparable operating result	36.4	22.4
% of sales	1.8	1.2
Comparable ROCE, %	20.2	12.8
Total investments, EUR million	7.2	16.9
Personnel at end of period	852	842

In Finland, the wood trade in private forests increased compared to the previous year. The growing demand for sawn timber increased the price of logs during the review period. The price of pulpwood increased during the year, but returned to the level at the start of the year towards the end of the review period. The weather conditions for harvesting were good.

Logwood prices fluctuated strongly in the Baltic Sea area, but the market situation in pulpwood was fairly stable during the review period. The export of roundwood softwood from Russia came to an end at the end of the review period.

In January–December, Metsä Forest bought all grades of wood through both standing and delivery sales across Finland. Metsä Forest purchased clearly more wood than in the previous year. Demand focused particularly on felling sites to be harvested when the ground is unfrozen. The purchasing of energy wood focused on crown wood. The majority of wood in Finland was purchased from members of Metsäliitto Cooperative. The sales of forest services were good.

Metsä Forest's deliveries to customers' production facilities were carried out according to plan. In January–December, Metsä Forest delivered a total of 35.3 million cubic metres (32.7) of wood to its customers. Approximately 86% of this was delivered to Finland's industrial sector.

During the review period, Metsä Forest adopted a new pricing method based on the stem volume of the trees to be removed at thinning sites. A total of 52% of the wood acquired by Metsä Forest from private forest owners was purchased through digital means. In the sales of forest management services, the figure was 58%. The pandemic highlighted the benefits of digital transactions.

Metsä Forest supplemented its ecological sustainability programme, launched in 2020, with a new policy emphasising the nature management of commercial herb-rich forests and the protection of best sites.

Wood Products Industry

The sales of Wood Products Industry, i.e. Metsä Wood, in January–December were EUR 580.1 million (1–12/2020: 429.1), and the comparable operating result was EUR 18.6 million (9.3).

Wood Products Industry	2021	2020
Sales, EUR million	580.1	429.1
EBITDA, EUR million	38.9	30.1
- comparable EBITDA	38.9	30.1
Operating result, EUR million	18.6	9.3
- comparable operating result	18.6	9.3
% of sales	3.2	2.2
Comparable ROCE, %	5.7	3.1
Total investments, EUR million	28.9	21.7
Personnel at end of period	1,658	1,551

Metsä Wood's sales in 2021 improved by 35% from the previous year. The sales of engineered wood products increased by 27%, and the euro-denominated sales of the UK business increased by 50%. Delivery volumes increased across all product categories and in the UK business. Sales prices rose across all product categories.

The profitability of business operations in 2021 improved clearly compared to the previous year, thanks to strong demand in all product categories and across the main markets. However, increased raw material, energy and logistics prices and challenges in the availability of birch logs affected profitability negatively. The coronavirus pandemic caused some disruptions in production and the supply chain during the second half of the year. Profitability during the comparison period 2020 was weakened by the labour market actions at Finnish mills and the coronavirus pandemic.

The market situation for the products of the UK upgrading business weakened steeply during the fourth quarter and the result declined significantly.

The continuous running time of Kerto LVL mills was adopted in January, supported by the recruitment of more than 50 people. Several production records were achieved during the year. The Punkaharju Kerto LVL mill achieved record-high total production figures in March, April and May. In March, total production volumes hit new record-high levels at the Pärnu plywood mill and the Äänekoski veneer mill.

Metsä Wood made a new multi-year distribution agreement on Kerto LVL products with France's leading importer and distributor, Groupe ISB. The cooperation based on the new agreement began in July.

A new manufacturing execution system was rolled out during the second quarter at the Kerto LVL mills in both Lohja and Punkaharju.

Pulp and Sawn Timber Industry

The sales of the Pulp and Sawn Timber Industry, i.e. Metsä Fibre, in January–December totalled EUR 2,628.1 million (1–12/2020: 1,826.5), and the comparable operating result was EUR 648.2 million (3.9).

Pulp and Sawn Timber Industry	2021	2020
Sales, EUR million	2,628.1	1,826.5
EBITDA, EUR million	772.5	128.2
- comparable EBITDA	772.5	128.2
Operating result, EUR million	613.7	3.9
- comparable operating result	648.2	3.9
% of sales	24.7	0.2
Comparable ROCE, %	32.6	0.2
Total investments, EUR million	650.7	135.2
Personnel at end of period	1,384	1,331

The 2021 sales and operating result increased from the previous year, mainly due to an increase in the sales prices and volumes of pulp and sawn timber. The weakening of the US dollar against the euro had a negative effect on both sales and the operating result.

The total delivery volume of Metsä Fibre's pulp was 3,058,000 tonnes (2,796,000).

Worldwide demand for market pulp declined compared to the previous year in both softwood and hardwood pulp, particularly in China. In contrast, the consumption of market pulp in Europe grew, especially in the printing and writing paper, paperboard, and speciality papers end-use segments. Logistical challenges strengthened the market position of European paper manufacturers in Europe, and correspondingly weakened the position of Chinese paper manufacturers in the global market. Chinese paper and paperboard production was strong in the first half of the year, but slowed down during the summer and autumn due to government-imposed energy restrictions and weaker-than-normal domestic demand. At the end of the year, pulp manufacturers' inventories were at a normal level. The average sales prices of Metsä Group's market pulp rose clearly during the first half of the year and levelled off by the second half. The euro strengthened by approximately 4% against the dollar.

The total delivery volume of Metsä Fibre's sawmills was 1,677,000 cubic metres (1,583,000).

Demand for sawn timber was good across all main markets until late summer. In many markets, demand exceeded supply, pushing the prices for sawn timber to record levels. During the autumn, customers' stocks grew, and demand for sawn timber took a downturn. Towards the end of the year, demand slowly recovered and strengthened at the turn of the year in all main markets. The stocks of both spruce and pine sawn timber producers were at normal levels at the turn of the year. The average prices of both pine and spruce sawn timber increased compared to the previous year.

In October 2021, the European Commission launched an investigation into Metsä Fibre as part of a wider EU-level antitrust investigation of companies active in the wood pulp sector. The investigation initiated by the Commission does not mean that Metsä Fibre is guilty of anticompetitive practices and is not in itself a sign of the investigation's outcome. Metsä Fibre is cooperating fully with the authorities in the investigation.

Paperboard Industry

The sales of the Paperboard Industry, i.e. Metsä Board, in January–December were EUR 2,084.1 million (1–12/2020: 1,889.5). Folding boxboard accounted for 57% of sales, while 25% of sales derived from white kraftliner, 13% from market pulp and 5% from other operations. The comparable operating result was EUR 386.6 million (221.2). Items affecting comparability totalled EUR 10.8 million.

Paperboard Industry	2021	2020
Sales, EUR million	2,084.1	1,889.5
EBITDA, EUR million	466.0	321.8
- comparable EBITDA	472.2	315.8
Operating result, EUR million	375.9	227.3
- comparable operating result	386.6	221.2
% of sales	18.6	11.7
Comparable ROCE, %	18.7	12.2
Total investments, EUR million	220.2	166.4
Personnel at the end of period	2,389	2,370

The comparable operating result in 2021 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's 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 the company's unused emission allowances, totalling roughly EUR 21 million (in 2020: EUR 6 million). Logistics costs and the maintenance costs of the 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 pandemic.

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

Total deliveries of paperboards were 1,922,000 (1,810,000) tonnes, of which 67% was delivered to the EMEA region, 27% to the Americas, and 6% to the APAC region. Metsä Board's deliveries of market pulp were 496,000 tonnes (521,000), of which 67% was delivered to the EMEA region and 33% to the APAC region. The associated company Metsä Fibre's share of Metsä Board's comparable operating result in January–December was EUR 123.0 million (-2.4).

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).

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.

Tissue and Greaseproof Papers

The sales of Tissue and Greaseproof Papers, i.e. Metsä Tissue, in January–December totalled EUR 946.7 million (1–12/2020: 1,011.9). Metsä Tissue's comparable operating result was EUR -9.7 million (113.8).

Tissue and Greaseproof Papers	2021	2020
Sales, EUR million	946.7	1,011.9
EBITDA, EUR million	35.9	160.1
- comparable EBITDA	35.9	157.8
Operating result, EUR million	-9.7	115.9
- comparable operating result	-9.7	113.8
% of sales	-1.0	11.2
Comparable ROCE, %	-1.6	19.8
Total investments, EUR million	63.3	53.1
Personnel at end of period	2,480	2,504

The full year result, which was clearly lower than in the previous year, was mainly due to higher raw material and energy costs as well as lower sales volumes.

The sales of tissue paper during the first half of the year lagged clearly behind the previous year, as the coronavirus restrictions reduced demand for professional products. The sales picked up during the third quarter and continued to be strong throughout the fourth quarter. The comparative figure for the previous year is higher due to the exceptional peak in demand caused by the coronavirus pandemic during the first quarter. The sales of greaseproof papers grew slightly from the previous year. Raw material and energy costs began to increase during the first half of the year and this increase accelerated during the second half of the year. Energy prices increased particularly steeply during the fourth quarter. The company was unable to pass on the increase in costs to the prices of end products, due to which the operating result shows a loss.

At the beginning of the fourth quarter, the company announced that it had abandoned the use of peat at the Mänttä mill. The peat has been replaced by renewable wood fuels, such as bark and other production side streams. In accordance with its sustainability targets, the company is making a shift to fossil free mills.

The coronavirus pandemic accelerated the problems related to availability and quality in the recycled raw material used in tissue paper production, particularly during the fourth quarter, which led to temporary curtailments in the recycled paper production at Metsä Tissue's Mariestad mill in Sweden. As a result, Metsä Tissue prioritised the production of fresh fibre products.

In cooperation with AFRY, Metsä Tissue studied the carbon footprint of toilet paper and the differences between the carbon footprints of fresh-fibre and recycled-fibre toilet papers at its eight European mills. Based on the products included in the company's calculations, the carbon footprint of a toilet paper roll made from fresh fibre is a fifth smaller than that of a recycled-fibre roll.

Research and development

Metsä Group's research, development and innovation operations focus on the development of products with high added value from northern wood and the promotion of industrial efficiency in line with the circular economy.

Research and development costs in 2021 totalled EUR 29.1 million (24.8), or 0.5% (0.5) of sales. The costs include direct expenses, excluding depreciations and operational investments. The research and development costs of MI Demo Oy, the joint venture of Metsä Spring and Itochu, totalled EUR 2.9 million.

EUR million	2021	2020
R&D expenses	29.1	24.8
% of sales	0.5	0.5

Our research and development work aims to create new products and services, exploit new technologies and ensure the competitiveness of Metsä Group's business operations. Our customers are at the centre of all development work, and the customer feedback we receive is taken advantage of in the continuous improvement of operations. Research and development operations also play an important role in the achievement of Metsä Group's sustainability objectives.

Metsä Group engages in active cooperation with universities, research institutes, the suppliers of technical solutions and high-growth companies. Metsä Group donated EUR 250,000 to both the University of Helsinki and the University of Oulu. The donations were allocated to the fields of natural science as well as agriculture and forestry in the University of Helsinki and to the field of technology in the University of Oulu. Metsä Group is also active in both national and the EU's research and development networks. The innovations and development programmes of these networks and partners play a key role in the development of new processes and products.

Metsä Group continues research and the building of innovation ecosystems as a co-driver, alongside Fortum, of the EUR 50 million ExpandFibre cooperation project, which advances the circular bioeconomy. The cooperation aims to develop technologies and business concepts with which to produce textile fibres and other new bioproducts from pulp made from straw and wood.

Metsä Group's innovation company Metsä Spring is tasked with finding and developing new forest-based bioeconomy and circular economy business concepts in cooperation with partners. Through Metsä Spring, Metsä Group invests competence and funds in business ideas that renew the Group's ecosystem over the long term. In 2021, Metsä Spring's operations were expanded by the establishment of a Group-level research and development function which supports the R&D work carried out by Metsä Group's business areas, develops the Group's internal cooperation and coordinates external R&D partnerships.

The demo plant owned by MI Demo, Metsä Spring and Itochu's joint venture, produces wood-based textile fibre with a direct dissolution method which utilises a new pulp-dissolving compound and is more environmentally friendly than the present manufacturing methods for textile fibre. Alongside the technology verification phase, Metsä Spring has numerous research projects underway in relation to the topic of textile fibre as part of the ExpandFibre project. The launch of the textile fibre brand Kuura and its positive results in the sustainability assessment of the environmental organisation Canopy and the textile fibre life-cycle analysis were the highlights of the year.

At Äänekoski, the demo plant for Metsä Spring's 3D fibre product reached its full height. The demo plant will test and develop a new type of manufacturing method for packaging. This wood-based fibre product could replace packaging made of plastic and aluminium.

Metsä Spring also invested in two start-up companies in 2021. Montinutra Oy intends to produce important ingredients for the cosmetics, food and pharmaceuticals industries by using forest industry side streams, such as sawdust, as its raw material. The other capital investment was made in Innomost Oy, which intends to use birch bark to produce ingredients for the sector manufacturing cosmetics and hygiene products and for other industrial applications.

Metsä Forest

Metsä Forest developed the customer experience in wood trade and forest services, and solutions that enhance forest operations and improve their ecological sustainability. Metsä Forest was also actively involved in the industry's joint research and development projects.

Over the year, Metsä Forest adopted a new pricing method applied at thinning sites. In the new method, a price based on stem volume is paid for the trees removed in a thinning. The method was developed to enable the optimisation of the wood's conversion value in all end-use market situations.

Metsä Forest participated in the "Towards sustainable peatland forestry" project coordinated by Natural Resources Institute Finland (Luke). The project seeks to improve the ecological and commercial sustainability of peatland. Metsä Forest was also involved in the projects of Luke and the University of Eastern Finland studying high biodiversity stumps' benefits to insects, wood-decay fungi and pollinators. Together with VTT, Metsä Forest published research results on how the disused fluidised bed sand of biopower plants could be put to use in the purification of peatland runoff. Metsä Forest published a new operational policy on the nature management of commercial herb-rich forests as part of its ecological sustainability programme, launched in 2020.

Metsä Forest continued to develop the Metsäverkko service, which was renewed extensively last year. Metsä Forest began the renewal of its ERP and wood supply planning (S&OP) systems. Metsä Forest continued its preparations for wood supply of the Kemi bioproduct mill and Rauma sawmill investments by developing new operational models for the measuring, transport and warehousing of wood. Metsä Forest also participated in the activities of Northern Finland's joint Winter Premium project, which is examining the feasibility of having weight restrictions for transporting wood that change according to the weather conditions. The development of new driver training concepts and student recruitment models also continued in cooperation with educational institutions and the authorities.

In 2021, Metsä Forest actively developed the operating methods of safety and wellbeing-at-work and adopted the ISO 45001 standard in Finland.

Metsä Wood

The major themes in Metsä Wood's product development in 2021 for both plywood and Kerto LVL products were surveying and testing new raw materials that support sustainability, particularly in terms of bio-based glues and coatings. In addition, the company searched solutions for making the use of wood material more efficient. The development of Kerto LVL products focused on new products, especially those serving construction. The company also focused on developing the products used in modular wood structures for different purposes.

Metsä Wood's focus was also on developing durable plywood surface solutions for customers in the construction and transport industries. The research into biologically sustainable, environmentally friendly and fireproof products also continued.

The development of Metsä Wood's digital services has continued actively. The company drew up user-friendly tools and published dimensioning tables for the quick pre-dimensioning of Kerto LVL products in multiple construction solutions, accounting for local construction methods. It also prepared a carbon stock counter for our products.

To increase the use of wood in construction, the development has focused on hybrid construction. Metsä Wood has developed new hybrid elements that combine wood and concrete in cooperation with its partners. The core of a concrete sandwich wall element, for instance, has been replaced with a Kerto LVL panel. This reduces the construction's carbon footprint without changes to the current construction method. The hybrid elements aim to introduce wood construction to urban areas and high-rise buildings, for example, to an increasing degree. Hybrid elements were used for the first time in the Rauma sawmill project.

Metsä Fibre

The development of new fibre-based products continued in the ExpandFibre joint research project, including the development of biocomposite fibres and research into the use of new chemical solutions in fibre processing. Metsä Fibre is developing new fibre products for both existing and new applications and value chains.

The impact that closing water cycles have on pulp purity was modelled to support the development of product quality at the Kemi bioproduct mill. The use of ultrasound was piloted for measuring the quality of sawn timber.

In the development of future pulp technology, Metsä Fibre launched a new long-term project to define a technological pathway for a pulp mill free of wastewater discharges. The technological opportunities and constraints have been identified, and further work prioritised for the coming years. Regarding the bioproduct concept, Metsä Fibre continued to work with Veolia Nordic to evaluate methods for refining methanol from raw methanol from pulp mills. The project will reach its final stage in early 2022.

Metsä Board

As the amount of packaging grows, resource-efficient and easily recyclable solutions are needed. Metsä Board's development work is focused on the paperboard's good printing and converting 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.

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

Workshops in which new packaging solutions are developed in cooperation with customers have been held at Metsä Board's Excellence Centre in Äänekoski for over a year now. In 2021, 25 workshops were held.

Metsä Board launched the 360 Services concept, which helps customers make the most of their paperboard and optimise a package's performance throughout its life-cycle. 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.

Metsä Tissue

In 2021, Metsä Tissue focused on the further development of an efficient product portfolio and on evaluating new technology from the perspective of sustainable production. At the beginning of 2021, the company launched new marketing concepts for its Lambi, Serla, Tento and Katrin brands, harmonising the product specifications between different markets at the same time. The review work concerning Metsä Tissue's Future Mill programme progressed, with the aim of improving the efficiency and quality of tissue paper production over the long term. In addition, Metsä Tissue piloted and took into production projects focused on increasing the use of recycled plastic in packaging materials.

■ Statement on non-financial information

Business model

Metsä Group consists of Metsäliitto Cooperative, its two businesses Metsä Forest and Metsä Wood, and the cooperative's subsidiaries Metsä Fibre, Metsä Board and Metsä Tissue. At the end of 2021, Metsäliitto Cooperative held around 48% of the listed company Metsä Board's shares and around 67% of the votes. Metsäliitto Cooperative's holding in Metsä Fibre's shares is approximately 50%. Metsä Tissue is a fully-owned subsidiary of Metsäliitto Cooperative. Owned by nearly 100,000 forest owners, Metsäliitto Cooperative is the parent company of Metsä Group.

Through the cooperative's owner-members, Metsä Group has access to a considerable reserve of premium-quality raw material, providing operations with a stable, long-term foundation. Metsä Group's business operations focus on wood supply and forest services, wood products, pulp, fresh fibre paperboards, and tissue and greaseproof papers. Metsä Group's mills are located in Finland, Sweden, Estonia, Russia, Poland, Slovakia, the United Kingdom and Germany. The Group's main market area is Europe and it pursues growth especially in North America, Asia and Oceania. Approximately 71% of sales derived from the EMEA region, while 20% of sales derived from the APAC region and 9% from the Americas. Metsä Group employs approximately 9,500 (9,200) persons in some 30 countries.

Metsä Group is committed to promoting sustainability and mitigating climate change.

Metsä Group operates resource-wisely, according to the principles of the circular bioeconomy. Sustainability is a strategic part of the management of the Group's and its business areas' operations and their continuous improvement. Metsä Group's values and Code of Conduct guide its sustainability management and help ensure that its business is conducted ethically. The Code of Conduct covers, among other things, matters related to the personnel and social responsibility, respecting human rights and the company's anti-corruption and anti-bribery activities, the prevention of misconduct, sustainable forest management in its entirety and environmental matters related to operations.

The cooperative's Board of Directors is the highest governing body in the administrative structure managing sustainability. The Board of Directors approves the policies and long-term strategic sustainability objectives steering the company's operations and internal control. It is also responsible for ensuring that the Group's objectives are met. The President and CEO is responsible for the strategic management of sustainability as a whole. The business areas' boards of directors or the cooperative's Board of Directors approve and are responsible for the sustainability objectives in each business area. The sustainability process management team is responsible for the implementation of sustainability measures and their monitoring within business areas and support functions. The Group's Sustainability Report contains an extensive account of its sustainability management, development and results.

Based on Metsä Group's materiality analysis, the main material themes of responsibility are:

- Occupational safety
- Local and social impact
- Sustainable forest management
- Resource efficiency
- Renewable energy
- Emissions into air and water
- Water use
- Circular economy and new bioproducts
- Responsible supply chain
- Product safety

The Group's strategic sustainability objectives extending up to 2030 are in line with the material sustainability goals of the business operations and support the UN's Sustainable Development Goals. To achieve these ambitious objectives, Metsä Group needs to make substantial investments, develop and harmonise operations, and adopt new solutions.

The sustainability of suppliers is managed and monitored with the help of risk analyses, background checks, audits and self-evaluations as well as suppliers' commitment to Metsä Group's Supplier Code of Conduct. These account for matters related the environment, corruption, the use of child labour and human rights violations, among others. The goal is for the supply chain to be 100% sustainable and for the origin of our raw materials to be known with a 100% accuracy by 2030. In 2021, 96% (94) of the Group's suppliers, based on purchase volume, were committed to Metsä Group's Supplier Code of Conduct (or to the suppliers' own equivalent codes), and Metsä Group knew the origin, at minimum the manufacturing country, of 92% (91) of the total purchases of raw materials and packaging materials.

We introduced our revised supplier evaluation surveys in 2021 and began piloting supplier audits in accordance with the new process. After the reform, safety-at-work and environmental aspects now play an increasingly important part in the evaluation, audit and selection of suppliers.

We have also organised a number of training sessions related to sustainability for our sourcing and logistics personnel.

The environment

Policies and management, quality and certification systems

- Metsä Group's Code of Conduct
- Metsä Group's Supplier Code of Conduct
- Metsä Group's Environmental Policy
- Metsä Group's principles of environmental management
- ISO 9001
- ISO 14001
- ISO 50001
- FSC®[1)]
- PEFC[2)]
- UN Global Compact

Climate change impacts Metsä Group's operations and development as well as the development of its operating environment. Metsä Group considers the importance of climate change mitigation at every stage of the value chain – in forests, production units and products.

One of Metsä Group's sustainability targets is to increase the amount of carbon bound in forests and stored in products by 30% compared to 2018. The Group supports the strong growth of forests with sustainable forest management measures. In 2021, the Group carried out forest and seedling management on a total of 33,556 hectares, an increase of 3.8% from the reference year. Metsä Group has set itself the goal of increasing the amount of carbon-storing, long-lived wood products. In 2021, these products stored 1,631,376 tonnes of CO_2 (1,505,510). To secure the biodiversity of forest nature, Metsä Group has been implementing its programme on the ecological sustainability of commercial forests since 2020. With the nature management programme established in 2021, Metsä Group is also taking part in improving the state of Finnish nature outside of commercial forests.

The wood Metsä Group uses is always traceable and originates from certified or controlled forests. Of the wood used in 2021, 88% (87) was either PEFC or FSC® certified. High biodiversity stumps were left, at the forest owner's permission, in more than 88% (84) of regeneration and thinning sites. Retention trees were left in 94% (94) of regeneration harvesting sites, and they are left in all regeneration sites that fall under forest certification. In the long term, high stumps and retention trees

1) FSC-C014476
2) PEFC/02-31-03

	2021	2020	2019
People and management			
Code of Conduct training's coverage among the entire personnel, %	98	96	95
Ethics barometer %	-	84.4	-
Revised personnel survey, %	76.6	-	-
Lost-time accident frequency (LTA1) per million hours worked	5.4	5.1	5.9
TRIF	8.1	8.7	17.0
Fatal occupational accidents	0	0	1
Forest; carbon binding and biodiversity			
Increasing the amount of carbon bound in forests; %	3.8	0	0
Growth in forest regeneration %	-3	-11	+0
Seedling management areas (%); target +30% in 2018–2030	+13	+14	+0
Increasing the amount of carbon stored in products in 2018–2030; target 30%	-1.2	-8.9	-4.3
Leaving high biodiversity stumps on thinning and regeneration sites (%); 2030 target 90%	88	84	79
Leaving groups of retention trees on regeneration harvesting sites (%); 2030; target 100%	94	94	94
Share of certified wood used by the Group	88	87	85
Production units %			
fossil free mills, share of fossil free fuels; target 100%	90	90	90
utilisation of production side streams; target 100%	93	93	92
increasing the efficiency of process water use; target -25% in 2018–2030	-5.3	0.2	-2
Products and delivery chain, %			
Fossil free raw materials and packaging materials; target 100%	99.6	99.6	99.7
Proportion of sustainable suppliers; target 100%			
Commitment to the Supplier Code of Conduct	96	94	92
Compliance assessed sustainability practices	88	78	59
assessed *	45	48	47
Traceability of raw materials; target 100%	92	91	87

*) Supplier assessments targeted based on risk. Of all our purchases, 45.5% have been assessed. Purchases from suppliers that do not meet our requirements account for around 0.7% of our overall purchases. We require these suppliers to adopt corrective measures.

increase the volume of standing and fallen decayed wood in forests and support the biodiversity of forest nature by providing a habitat for a wide range of organisms and animal species.

In production, Metsä Group is aiming for fossil free mills by 2030. As the use of fossil fuels in production is discontinued, fossil-based carbon dioxide emissions will also fall to zero (Scope 1). In 2021, our direct Scope 1 emissions totalled 652,000 tonnes (676,000) of fossil carbon dioxide (CO_2). Our emissions from purchased electricity and heating (Scope 2) amounted to 474,000 tonnes (494,000) of fossil carbon dioxide (CO_2).

In 2021, 90% (90) of the fuels used by Metsä Group were bio-based (Scope 1). Biogenic CO_2 emissions from production totalled 9,916,156 tonnes (9,550,810) (Scope 1).

In terms of process water, our target is a 25% reduction per tonne produced from the 2018 level. In 2021, the use of process water per tonne produced decreased by 5.4% (0.2) from the 2018 level. The use of water has decreased thanks to investments and more efficient processes. For example, when the Äänekoski bioproduct mill started up, our water use per tonne produced decreased substantially.

The Group aims to make full use of production side streams. In 2021, we utilised 93% (93) of production side streams, around half of which was used to produce energy. Side streams are used primarily as raw material and secondarily as energy. Metsä Group continues its work to reduce the volume of landfill waste.

Some environmental permit limits were exceeded at the Group's production units in 2021. No such environmental deviations or infringement of permit limits that would have caused significant environmental impacts, complaints, compensation or poor media publicity occurred at Metsä Group's mills in 2021. However, an accidental discharge (oil spill) related to an oil burner occurred at Metsä Board's Husum mill in September, which called for corrective measures and generated media publicity in Sweden. Metsä Board has supported the incident's investigation, and the clean-up of the oil from the sea and shoreline with all the necessary resources. It has also maintained a dialogue with the key stakeholders, such as local residents and authorities.

All of the Group's production units have an ISO 9001 quality system and an ISO 14001 environmental system in place, as well as a Chain of Custody system enabling reliable verification of the amount of certified wood in the products. In addition, the ISO 50001 energy efficiency system is in place in several of the Group's production units.

Sustainability and the fossil free approach also guide Metsä Group's product development. Our goal is that the Group will not use any raw materials or packaging materials based on fossil oil by 2030. Of the raw materials and packaging materials used by the end of 2021, 99.6% (99.6) were fossil free. The fossil free solutions pursued would replace, among other things, the oil-based latex used in paperboards and the phenol-based glues used in wood products.

The Group's subsidiaries are subject to environmental responsibilities related to former industrial activities at sites that have since been closed, sold or leased, and from decommissioned landfill sites. Financial provisions for the costs of land rehabilitation work have been made in cases where it has been possible to measure the Group's liability for land contamination and any post-treatment obligations.

Taxonomy

Metsä Group and Metsä Board will report their taxonomy alignment for 2021 based on the criteria for climate change mitigation and adaptation. We will report our taxonomy-eligible activities and their share of our annual sales, capital expenditure (CapEx) and operational expenditure (OpEx). Further details about taxonomy compliance can be found in Metsä Group's Sustainability Report and the Report of Metsä Board's Board of Directors.

A summary of Metsä Group's taxonomy-eligible activities	Annual sales, %	Capital expenditure, %	Operational expenditure, %	Notes
Taxonomy-eligible activities	7.8	32.7	28.4	In our opinion, part of the assessed taxonomy-eligible activities will also be taxonomy-aligned.
Taxonomy-non-eligible activities	92.2	67.3	71.6	Metsä Group's core business does not currently come under the scope of the taxonomy.

Social responsibility, HR matters, human rights

Policies and management systems
- Metsä Group's Code of Conduct
- Metsä Group's Supplier Code of Conduct
- Equality Policy
- HR policy
- Guidelines for wellbeing and safety at work
- ISO 45001
- Metsä Group Modern Slavery Act Transparency Statement
- UN Global Compact

Metsä Group 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. We are committed to operating according to the UN's principles concerning business operations and human rights, and we expect the same from our business partners. We are also committed to ensuring that there are no occurrences child labour, forced labour, human trafficking or any other form of modern slavery in our business operations and delivery chain. In 2017, we conducted a study on the human rights risks related to our operations. We have continued to develop our operations on the basis of the results so that we can prevent negative human rights effects linked to our delivery chain and own operations increasingly efficiently and promote the realisation of human rights within our own sphere of influence. 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. 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.

As a responsible employer, Metsä Group promotes management practices based on values and leadership that supports growth. Taking care of the personnel's wellbeing, health and working capacity throughout their careers plays a key role, and performance at work is supported with a wide range of measures. At Metsä Group, everyone has the opportunity to demonstrate their own competence and participate in development work. In 2021, the voluntary turnover rate of permanent employees was 3.5% (2.7).

Metsä Group pays special attention to ethics and the promotion of a culture of doing things right. Of the Group's personnel, 98% (96) have completed an online course on the Code of Conduct, which also includes central perspectives pertaining to human rights and social responsibility. In addition, more than 1,000 people participated in the advanced Code of Conduct training organised for all supervisors and the HR personnel.

A responsible corporate culture is one of Metsä Group's strategic sustainability goals. We conducted our first ethics barometer gauging the responsibility of our corporate culture in 2020. The target set for the ethical index resulting from the barometer is 100% by 2030. In the future, the ethics barometer and the Organisation Functionality Survey will be organised in alternate years. The revised personnel survey conducted in 2021 indicated that our employees have strong confidence in the company's future and that our teams work efficiently. The employees' opportunity to influence operational development emerged as an area in need of development. The response rate was 76.7.

The ethical index representing the responsibility of corporate culture was good at 84.4% (the target is 100%). Our employees value ethical operations, and overall, Metsä Group was considered to act ethically. We initiated a considerable number of development measures in 2021 to address the issues raised in the ethics barometer. The development measures numbered 450 in all, 98% of which were recorded as being completed in 2021.

The unusual circumstances resulting from the coronavirus pandemic impacted the competence development of personnel. Most personnel training sessions were offered virtually. Supervisors and managers were supported with remote management coaching, for example. Bulletins aimed at the entire personnel sought to support working capacity and mental wellbeing. Coaching in change management got underway due to the programme aiming to harmonise business processes. Early-support discussions and the measures agreed during them support any employees having difficulty coping with their work at as early a stage as possible.

Metsä Group invests in a high-quality recruitment process that aims to ensure that the best talent in the industry seeks employment in the Group. We will continue to systematically develop our recruitment process promoting the equality of job applicants, as well as our collaboration with educational institutions. In addition to sponsored classes and school collaboration, young people are offered the opportunity to visit the Group's production units or felling sites through the 4H cooperation. The Group also supports entrepreneurship training provided to young people.

Metsä Group continued its active participation in such initiatives as the Mahdollisuuksien metsä school campaign.

The coronavirus pandemic was accounted for in various ways in the Group. At the onset of the pandemic, the Group shifted to remote working in all jobs that allowed for it. The mills and offices have followed strict special arrangements which minimise close contact along passageways, in cafeterias and staff facilities and at workstations. Employees have been provided with detailed instructions on hygiene and the use of masks. The special arrangements also apply to suppliers visiting the mills. Tests carried out on Metsä Group's personnel in Finland amounted to some EUR 10 million in 2021. Comprehensive testing was also carried out in connection with annual maintenance shutdowns for everyone entering the unit. A negative test result taken no more than 72 hours before arrival at Metsä Group's unit was an absolute requirement for all visitors and contractors.

Metsä Group complies with an equality policy, the principles of which apply to recruitment, career opportunities, training and remuneration, for example. 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 through the Metsä for All vision, defined in 2021, which is assessed using the equality targets set in 2020. Our equality targets are:

- Women account for 25% of Metsä Group's management (Vice President or higher) by 2025; the 2021 figure was 22% (19.6)
- No unexplainable wage gaps between women and men
- We promote equality with a training programme that covers the entire personnel

Systematic efforts in safety at work support the continuous development of operations and the achievement of the Group's objectives. High-quality proactive safety work, risk identification, intervention in unsafe working and the importance of personal risk assessments play a key role. The long-term objective is zero accidents by 2030. In 2021, the total recordable incident frequency was 8.1 (8.7) and the lost-time accident frequency increased by 5.8% from the previous year to 5.4 (5.1). Absences due to illness within the Group amounted to 4.2% (4.0) of the theoretical regular working hours. The target in terms of sickness absenteeism is less than 3%.

All our products are produced according to good and safe production practices. All of Metsä Fibre's pulp mills and Metsä Board's mills as well as nearly all of Metsä Tissue's mills have either ISO 22000, FSSC 22000, BRC or IFS as their certified food safety system.

Anti-corruption and anti-bribery activities

Policies and management systems

- Metsä Group's Code of Conduct
- Metsä Group's Supplier Code of Conduct
- UN Global Compact

Metsä Group's Code of Conduct prohibits corruption and bribery. Metsä Group is committed to anti-corruption and bribery measures in both is own operations and in relation to its partners. Metsä Group's Supplier Code of Conduct also includes a corresponding prohibition. Anti-corruption and anti-bribery efforts contribute to Metsä Group's 2030 sustainability objectives concerning a responsible corporate culture and delivery chain.

A review of anti-corruption and anti-bribery principles forms an essential part of the company's Code of Conduct training. The training is mandatory for the entire personnel. In 2021, we continued to develop processes related to the identification of suppliers, customers and other partners as well as the requirements of trade (Know Your Business Partner), which allow for the more efficient identification and management of risks related to the sustainability of delivery chains and trade policy changes. The backgrounds of partners are checked using a centralised service model which aims to identify risks related to business transactions – such as trade sanctions, money laundering and information related to human rights violations – in advance and, on the other hand, react to any changes and negative findings as effectively as possible.

Compliance and ethics channel

Our personnel and stakeholders can report any shortcomings they observe via Metsä Group's compliance and ethics channel, which is available in ten different languages on Metsä Group's website. The reports can be submitted anonymously. Every breach or violation, and suspected breach or violation, which the company becomes aware of is investigated. Any such investigation is led by the Compliance Committee, composed of the directors in charge of legal affairs, compliance, and internal audit, which is also charged with ensuring that the consequences dictated by the outcome of each investigation are commensurate in cases of similar severity and that the corrective measures are adequate. Any detected illegal activities are reported to the authorities.

In 2021, a total of 54 (52) incidents were brought to the attention of the Compliance Committee. The cases involved suspected misconduct, data protection and data security, shortcomings in equal treatment, and a variety of other personnel-related events.

Risk descriptions

The risks related to the environmental, human 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 under the section Risk management and risks.

Risk management and risks

Metsä Group's risk management is systematic and proactive, and it assesses and manages business-related risks, threats and opportunities. Risk management is governed by the risk management policy confirmed by the Board of Directors of Metsä Group's parent company Metsäliitto Cooperative, and by Metsä Group's corporate governance system.

Metsä Group's business operations systematically assess strategic, operational, financial and liability risks. Key risks are accounted for in the business operations' planning processes, and management measures are drawn up to prepare for the risks. In addition, the Metsä Group's Executive Management Team reviews the most significant risks as part of its executive management work.

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

The results of the risk management process are reported to the Board of Directors and the Board's Audit Committee on a regular basis. The risk assessments conducted in 2021 identified the following risks and uncertainties with a potential impact on Metsä Group's business operations and profitability.

Development of the world economy

The development of the world economy is still marked by uncertainty. The coronavirus pandemic has been complicated by virus variants and the rapidly rising number of infections. The uncertainty caused by the pandemic is also sustained by the restrictions reinstated by different governments, differences in vaccination coverage and uncertainty over the duration of vaccine efficacy. A protracted pandemic may weaken the growth outlook of the world economy and consumer demand in all of Metsä Group's market areas and thereby reduce demand for the group's products. A continuation of the pandemic may also cause disruptions in the Group's business operations and threaten their continuity. A weaker cash position or slower payment behaviour of the Group's customers may also impact Metsä Group's cash flow and lead to credit losses.

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, and 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 introduce uncertainty to the world economy.

Significance of the Chinese market

China is a significant market area for Metsä Group and especially for 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. Should the slowing growth of the Chinese economy continue or the relations between the EU and China deteriorate, this could affect the demand for the Group's products on the Chinese market and consequently the profitability of Metsä Group and its business operations.

Restrictions and sanctions affecting international trade

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. Any sanctions and restrictions on international trade may have an impact on the demand for Metsä Group's products and the group's profitability.

Sustainability

Sustainability is an integral part of Metsä Group's business, and we aim to be a forerunner in ecological and operational sustainability. The different areas of sustainability, especially climate change and loss of biodiversity, also involve risks. Climate risks can be divided into transitional risks and physical risks. Transitional risks are caused by the transition to a low-carbon economy, and physical risks relate to changes in temperatures and rainfall, for example. In Metsä Group's business operations, these climate risks relate to wood supply and the use of energy and water, in particular.

Climate change mitigation and the transition to low-carbon economy are emphasised in Metsä Group's sustainability objectives. Transitioning to fully fossil-free energy in production, abandoning fossil-based raw materials, making more efficient use of energy and water, and securing strong forest growth and carbon sequestration are at the core of these objectives. The measures taken to reach these objectives help Metsä Group to control climate risks. At the same time, they open up new possibilities for Metsä Group in a changed operating environment.

Safeguarding forest biodiversity and using forests sustainably for various wood products are very important strategic aspects for the Group's wood supply and business operations. Forest protection must be increased to safeguard forest biodiversity, which, in turn, poses risks for wood supply. As a responsible operator, Metsä Group also wants to improve the protection of forest biodiversity in commercial forests by increasing and retaining the amount of decaying wood important to endangered species. All wood sourced by Metsä Group comes from sustainably managed forests, and this is verified by certification or controlled in other ways. Metsä Group also implements its ecological sustainability programme in commercial forests jointly with forest owners In 2021, Metsä Group launched a new nature management programme outside commercial forests with the goal of safeguarding biodiversity and improving the state of waterways in Finland.

Increasing EU regulation poses risks for the commercial use of forests for Metsä Group and its wood supply. There are many different vegetation zones in the EU area, and each zone has its own characteristic forests. The forests of each zone, as well as the forest management practices best suited to them, differ from one another. However, EU-based regulation concerning forests in the EU area and their use has become clearly more detailed, treating different areas in a similar way. This trend increases the risk for poorly suited regulation also applying to forests from which Metsä Group obtains raw material.

Risks associated with the availability of financing

At Metsä Group, the main financial risks in business operations are primarily related to currencies, interest rates, liquidity, counterparty risks and the use of derivative instruments. Financial risks are governed according to the financial policy confirmed by the Board of Directors of Metsäliitto Cooperative. The goal is to secure sales margins, reduce uncertainty, improve predictability, balance the cash flow and give business units time to adjust their operations to the changed circumstances.

Access to capital and the price of capital are largely dependent on the conditions prevailing in the financial market and the Group's own financial situation. Metsä Group's good financial situation and the stability of the financial market have kept the availability and price of financing at a good level. Should access to financing grow weaker or were its price to increase significantly, it could also have a negative impact on the cost and availability of the external capital needed by the Group.

Metsä Group prepares for the refinancing risk by utilising a variety of financing sources, by scheduling loans to have a balanced maturity profile and by starting refinancing processes well before the loans mature. The Group's liquidity is strong. At the end of 2021, Metsä Group had credit facilities of approximately EUR 1,790 million.

Changes in members' capital and additional members' capital

A member of Metsäliitto Cooperative who wishes to cancel their membership is entitled to receive a refund of their participation share payment and the additional contribution payment. The member may also receive a refund of the additional contributions based on a written claim. Based on the Cooperative's rules, the amount of members' participation share payments and additional contributions that can be refunded is equivalent to one third of the distributable equity in accordance with the most recent balance sheet adopted by the Annual General Meeting. Refunds of members' capital that are larger than usual may have an adverse effect on Metsä Group's financial position.

Competitive environment

In the global market for forest industry products, the balance of supply and demand has a significant impact on the market prices of products. Changes in the economic situation, an increase in the capacity of competitors and competition over market shares may reduce the market prices of products. Product prices may increase as a result of cuts in capacity or industry consolidation. Significant currency fluctuations also have an impact on the market balance of forest industry products and companies' competitiveness.

Market situation of pulp

The result of the pulp business has a significant impact on the profitability of Metsä Group as a whole. Metsä Fibre's pulp production capacity is more than 3 million tonnes of bleached softwood and hardwood pulp per year. In addition, Metsä Board produces pulp in Husum for both internal paperboard production and the market. Structural changes in customers' pulp use, increasing competition and new production capacity in the global pulp market may have a negative impact on the market price of pulp and the group's delivery volumes and thereby on the results of Metsä Group.

Credit risks and other counterparty risks

The management of credit risks related to commercial activities is the responsibility of the business areas and Metsä Group's centralised credit control. Credit control defines the internal credit limits set for customers and the payment terms together with the management of business operations. Despite the pandemic, Metsä Group'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 confirmed by the Board of Directors of Metsä Group's parent company, Metsäliitto Cooperative. The operational management of the Group and the business operations participate in the assessment of credit risks and in making final decisions on credit, if needed.

In money market investments, derivatives and loans, only counterparties that have been defined in the Group's financial policy, meet the creditworthiness criteria or have been separately designated by a Board decision are approved.

Business development

Metsä Group's business operations are developed, for example, with the help of new production technology, efficiency programmes, product development, the modernisation of product portfolios, customer segmentation, value-added services and the harmonisation of business processes. The objectives of business development projects and investments include growing the business, expanding the product portfolio, strengthening the market position and promoting sustainability objectives. Should the costs of the development projects and investments substantially exceed the estimates, should their completion be delayed or should the production-related or commercial targets not be reached, the impact could be adverse on the results of the business and the whole Group.

The Group's venture capital company Metsä Spring seeks and develops new business ideas with the potential of functioning as part of Metsä Group's business ecosystem in the future. Metsä Spring invests in the further development of the Group's own ideas and in external start-ups that are aiming to introduce new products to the market. Investments are made in high-risk ventures, such as the Äänekoski textile fibre demo plant and the 3D fibre product demo plant to be completed in 2022. If the development projects invested in are technically or commercially unsuccessful, there may be a risk of a write-down of the investment.

Cost and availability risks of production inputs

Significant or unforeseen changes in the cost of Metsä Group's most important production inputs, such as wood, energy and chemicals, and problems with their availability, may reduce profitability, threaten the continuity of operations and put the implementation and life-cycle profitability of planned development investments at risk. In addition, the availability of transport capacity and a steep increase in market prices may negatively affect Metsä Group's profitability. Changes in exchange rates may also have an effect on the costs of some production inputs. Metsä Group aims to hedge against these risks with long-term delivery agreements and the related derivative agreements.

Changes in legislation or regulations, such as the EU's climate and environmental policy, single-use plastics directive and increasing new requirements to limit carbon dioxide or other emissions, may increase production costs and weaken the Group's profitability.

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. Regular risk management work is carried out with insurance companies to reduce the risk of production interruption, and the business areas, mills and Group services have drawn up contingency plans in preparation for the realisation of continuity risks. Metsä Group's crisis management plan guides management in crisis situations within the Group, business areas and mills.

Personnel risks

Metsä Group pays attention to ensuring the availability and retention of qualified personnel. The Group prepares for risks related to generational shifts and other personnel risks by means of management coaching, personnel development programmes, successor plans and the development of its employer image. The maintenance of working capacity, successor planning and having multiskilled employees are also part of the management of personnel risks. During the coronavirus pandemic, the Group has adopted several measures to protect employees from infections and to secure the continuity of business.

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 cyberattacks, 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.

Liability risks

The business involves liability risks, such as contractual, environmental and product liability risks. Liability risks are mitigated by way of unified business processes, contract training, management practices, quality control and transparent operations.

Governance

Metsäliitto Cooperative is a Finnish cooperative and the parent company of Metsä Group. It is owned by 92,543 forest-owner members. On 31 December 2021, the combined forest area owned by the members totalled 5,229,000 hectares.

Metsäliitto Cooperative's governing bodies are the Representative Council, the Supervisory Board, the Board of Directors and the CEO, who acts as the President and CEO of Metsä Group. The members of Metsäliitto Cooperative elect the members of the Representative Council in an election held every four years. The members of the Supervisory Board are elected by the Representative Council. The Supervisory Board elects the members of Metsäliitto Cooperative's Board of Directors, and the Board of Directors appoints the CEO of Metsäliitto Cooperative and the President and CEO of Metsä Group.

The Representative Council uses the supreme decision-making power belonging to the members of Metsäliitto Cooperative in matters it is responsible for pursuant to the law and the rules of Metsäliitto Cooperative. The rules of Metsäliitto Cooperative specify the tasks of the Supervisory Board. Its main task is to ensure that Metsäliitto Cooperative is managed in accordance with the rules and the decisions of the Representative Council and the Supervisory Board.

According to the rules of Metsäliitto Cooperative and in accordance with legislation, the Board of Directors is charged with ensuring that Metsäliitto Cooperative and Metsä Group's operations and governance are appropriately arranged. The Board of Directors has authority over strategic and other decisions with far-reaching consequences. In the 2021 financial period, Metsäliitto Cooperative's Board of Directors was composed of seven members until 24 March 2021, and thereafter eight members. According to the overall assessment by the Board of Directors, all members of the Board were independent of Metsäliitto Cooperative. The Board of Directors convened 18 times in 2021, and the percentage of attendance in the meetings by Board members was 99%. Metsäliitto Cooperative has a CEO, who also acts as the President and CEO of Metsä Group, unless otherwise decided by the Supervisory Board. The President and CEO is charged with the management of the operations of Metsä Group in accordance with the law and the rules of the Cooperative, as well as the decisions and instructions of the administrative bodies. The President and CEO is assisted by the Group's Executive Management Team.

Metsäliitto Cooperative's Board of Directors has determined the principles applicable to the diversity of the Board. According to the principles, the successful management of the tasks of the Board of Directors requires a diverse composition, diverse competence and experience. It is Metsäliitto Cooperative's goal that both genders be represented on the Board of Directors.

The Supervisory Board's Nomination Committee observes the principles concerning diversity when preparing proposals for the Supervisory Board on the composition of the Board of Directors. The realisation of the principles is reported on yearly in the Corporate Governance Statement.

A separate Corporate Governance Statement has been issued and published simultaneously with the financial statements and this Report of the Board of Directors.

The coronavirus pandemic

The safety of Metsä Group's employees, partners and local communities is important. Metsä Group keeps a close eye on the development of the coronavirus pandemic and is updating its policies and instructions on the basis of the guidelines issued by the authorities.

Most of the group's work occurs in production units that do not allow remote working. In respect of jobs which do allow remote working, Metsä Group's recommendation for remote working remains valid. Only visits to Metsä Group's locations that are essential and necessary for business continuity – such as visits related to maintenance and investment work – are possible. Personnel and investment project personnel located in areas where the virus is spreading are tested regularly. All external employees are tested before they begin working at the mills.

Metsä Group's products include pulp, paperboard and tissue papers. These products are important for a functioning society, given that they promote hygiene and consumer safety, and protect consumer goods.

To ensure the continuity of operations, Metsä Group's various business areas have drawn up contingency plans for any further deterioration of the pandemic.

Metsä Group's resources have remained normal throughout the coronavirus pandemic. Production and deliveries have run normally, barring a few exceptions.

EU taxonomy

The taxonomy is a classification system for sustainable economic activity created for the financial markets by the European Union regulation 2020/852 from the beginning of 2022. Its goal is to increase investment that is considered sustainable and to direct capital increasingly to these investments and operations.

In accordance with the taxonomy decree, Metsä Group reports for the financial year 2021 to what extent the Group's business is eligible for the first two environmental objectives – mitigating climate change and adapting to climate change.

Metsä Group's main products and related businesses, such as the production of pulp and paperboard, are not included in the classification criteria of taxonomy. Therefore, the share of Metsä Group's taxonomic operations is small. Metsä Group does not have the timetable and scope of which its main products and businesses could fall within the scope of taxonomy. At the center of Metsä Group's objectives is to mitigate climate change and adapt business to a low carbon future. The target is completely fossil free production and products by the end of 2030. Metsä Group focuses its actions in the sustainable use of forests, resource efficiency of processes and minimizing waste and emissions in accordance with the principles of circular economy.

Events after the review period

On 28 April 2021, Metsäliitto Cooperative's Representative Council approved the changes to be made in the Cooperative's rules according to which new Metsä1 additional shares may be issued. The new Metsä1 additional shares will replace the A additional shares as the target of investment as of the beginning of 2022. New A and B additional shares can no longer be subscribed as of 1 January 2022, excluding a member's possibility to subscribe A additional shares with equity bonuses earned prior to 2022. The A and B additional shares held by members will remain valid under the existing terms and conditions. A member may convert their A additional shares into Metsä1 additional shares with a conversion ratio of 1:1. Requests for the conversion of A additional shares have been accepted as of 1 October 2021, and the conversions based on requests received during 2021 were carried out on 1 January 2022, when a total of 680 million A additional shares were converted into Metsä1 additional shares.

Near-term outlook

The demand for wood focuses on regeneration and thinning stands to be harvested when the ground is unfrozen. Purchases of winter stands are steered according to need and the weather conditions. In energy wood, the demand focuses on crown wood and energy wood trunks. Demand for forest management services is expected to remain good.

The demand for and price development of Kerto LVL and plywood products is expected to remain good in the main markets, as construction activities remain robust. An increase and strong fluctuations in costs nevertheless introduce uncertainty to profitability. In Metsä Wood UK, demand is expected to experience seasonal improvement compared to the previous quarter.

Demand for long-fibre market pulp is expected to remain good in Europe and to grow in Asia. The global shortage in containers, impacting the Asian deliveries of European and North American producers, will place further strain on the Asian markets. The demand for sawn timber is expected to become stronger across all the main markets in the spring.

The demand for Metsä Board's paperboards is expected to remain good in the company's main market areas in Europe and the United States. The average prices of Metsä Board's folding boxboard and white kraftliners are expected to rise. Paperboard delivery volumes in January–March 2022 are expected to increase compared to October–December 2021. No large-scale maintenance shutdowns at mills are set to take place in January–March 2022. Cost inflation is expected to continue.

Uncertainty about the impact that the pandemic will have on the short-term demand for products will continue in the countries in which Metsä Tissue operates. Demand for tissue paper products is expected to grow as restrictions imposed due to the pandemic continue to be lifted. Demand for greaseproof papers is expected to continue to grow slightly. To restore profitability, the company is responding to an increase in the costs of raw materials, energy and other costs with price increases and surcharges.

Metsä Group's comparable operating result is in January–March 2022 expected to be roughly at the same level as in October–December 2021.

Proposal of the board of directors on the use of the surplus on the balance sheet

Metsäliitto Cooperative's Board of Directors has decided to propose that an interest of 6.0% for 2021 be paid on the participation share capital invested by members (6.0% for 2020) and that an interest of 5.0% (5.0) on additional capital A and 1.0% (1.0) on additional capital B be paid for 2021. The Board of Directors also proposes that a surplus reimbursement of EUR 0.15 per cubic metre of industrial roundwood received from a member over the past four concluded financial periods be distributed. The surplus reimbursement will be paid primarily as Metsä1 additional shares, but in money for the part corresponding to the tax-at-source to be carried in terms of each member. The proposed payment date is 12 May 2022. If the member entitled to the surplus reimbursement resigns from the cooperative before the date of payment, this share of the surplus reimbursement shall not be distributed. In total, the proposed profit distribution would be approximately EUR 80 million (66), of which the surplus reimbursement based on the wood trade would be approximately 10%.

Consolidated statement of comprehensive income

EUR million	Note	1–12/2021	1–12/2020
Sales	2.1, 2.2	6,017.0	5,054.9
Change in stocks of finished goods and work in progress		-8.0	-31.1
Other operating income	2.1, 2.3	85.3	57.3
Materials and services	2.1, 2.4	-3,866.4	-3,440.1
Employee costs	2.1, 3	-680.4	-615.0
Depreciation, amortisation and impairment charges	2.1, 4.1, 4.2	-340.1	-303.5
Other operating expenses	2.1, 2.4	-333.8	-346.7
Operating result		873.6	375.8
Share of results from associated companies and joint ventures	7.1	-2.2	3.1
Net exchange gains/losses	5.2	-3.7	-2.3
Other financial income	5.2	1.0	3.2
Interest and other financial expenses	5.2	-36.9	-49.7
Result before tax		831.7	330.1
Income taxes	6	-174.7	-67.9
Result for the period		657.0	262.2
Other comprehensive income	5.1, 6		
Items that will not be reclassified to profit and loss			
Items relating to adjustments of defined benefit plans		4.2	-8.9
Fair value of financial assets through other comprehensive income		-7.7	-68.1
Income tax relating to items that will not be reclassified		-0.9	15.6
Total		-4.4	-61.4
Items that may be reclassified subsequently to profit and loss			
Cash flow hedges		-15.6	23.9
Currency translation differences		-0.8	-5.5
Share of comprehensive income of joint venture Income tax relating to items that may be reclassified		3.1	-4.6
Total		-13.4	13.7
Other comprehensive income, net of tax		-17.8	-47.7
Total comprehensive income for the period		639.3	214.5
Result attributable to:			
Members of parent company		373.8	177.5
Non-controlling interest		283.2	84.7
		657.0	262.2
Total comprehensive income attributable to:			
Members of parent company		371.6	149.1
Non-controlling interest		267.7	65.3
		639.3	214.5

The notes are an integral part of these financial statements.

Consolidated balance sheet

EUR million	Note	31.12.2021	31.12.2020
ASSETS			
Non-current assets			
Goodwill	4.1	431.6	434.1
Other intangible assets	4.1	229.1	221.0
Tangible assets	4.2	3,557.8	2,920.7
Biological assets	4.3	3.5	3.2
Investments in associated companies and joint ventures	7.1	63.6	69.3
Other investments	4.4	197.9	205.5
Other non-current financial assets	5.3	34.4	17.7
Deferred tax receivables	6	37.7	27.1
Derivative finacial instruments	5.7	5.5	
		4,561.0	3,898.6
Current assets			
Inventories	4.5	1,038.3	965.9
Accounts receivables and other receivables	4.6	882.6	680.4
Tax receivables based on the taxable income for the period		15.1	2.4
Derivative finacial instruments	5.7	49.0	58.7
Cash and cash equivalent	5.4	1,334.5	1,212.9
		3,319.4	2,920.4
Assets classified as held for sale	7.2	11.0	32.3
Total assets		7,891.4	6,851.3
MEMBERS' FUNDS AND LIABILITIES			
Equity attributable to members of parent company			
Members' capital	5.1	1,447.1	1,322.4
Translation differences	5.1	-34.2	-35.9
Fair value and other reserves	5.1	706.2	711.3
Retained earnings		1,455.3	1,093.7
		3,574.4	3,091.5
Non-controlling interest	7.1	1,240.3	822.7
Total members' funds		4,814.6	3,914.2
Non-current liabilities			
Deferred tax liabilities	6	302.5	289.9
Post employment benefit obligations	3.5	86.2	85.5
Provisions	4.9	11.9	15.8
Borrowings	5.5	861.1	1,098.3
Other liabilities	4.7	9.1	2.3
Derivative financial instruments	5.7	10.0	22.8
		1,280.8	1,514.7
Current liabilities			
Provisions	4.9	3.4	2.8
Current borrowings	5.5	301.0	272.9
Accounts payable and other liabilities	4.8	1,404.9	1,103.8
Tax liabilities based on the taxable income for the period		35.9	6.3
Derivative financial instruments	5.7	44.1	18.9
		1,789.2	1,404.7
Liabilities classified as held for sale	7.2	6.8	17.7
Total liabilities		3,076.8	2,937.1
Total members' funds and liabilities		7,891.4	6,851.3

The notes are an integral part of these financial statements.

Consolidated statement of changes in members' funds

		Equity attributable to members of parent company						
EUR million	**Note**	**Members' capital**	**Translation differences**	**Fair value and other reserves**	**Retained earnings**	**Total**	**Non-controlling interest**	**Total**
Members' funds 1.1.2020		1,199.0	-30.7	728.7	1,029.8	2,926.8	848.5	3,775.3
Result for the period					177.5	177.5	84.7	262.2
Other comprehensive income, net after tax	5.1, 6		-5.3	-17.7	-5.4	-28.4	-19.3	-47.7
Total comprehensive income			-5.3	-17.7	172.1	149.1	65.3	214.5
Transactions with owners								
Interest on members' capital and dividends paid	5.1				-63.5	-63.5	-40.3	-103.8
Change in members' capital	5.1	123.4			-12.5	111.0		111.0
Transfer from retained earnings to the reserve for invested unrestricted equity	5.1	0.0		0.0		0.0	-25.8	-25.8
Share based payments	3.3				-8.4	-8.4	-1.0	-9.5
Acquired shares from non-controlling interest, which did not change the controlling right	7.1			0.2	-23.4	-23.2	-27.1	-50.3
Sold shares from non-controlling interest, which did not change the controlling right	7.1			0.0	-0.4	-0.4	3.1	2.7
Members' funds 31.12.2020		1,322.4	-35.9	711.3	1,093.7	3,091.5	822.7	3,914.2
Members' funds 1.1.2021		1,322.4	-35.9	711.3	1,093.7	3,091.5	822.7	3,914.2
Result for the period					373.8	373.8	283.2	657.0
Other comprehensive income, net after tax	5.1, 6		1.7	-5.2	1.3	-2.2	-15.5	-17.8
Total comprehensive income			1.7	-5.2	375.1	371.6	267.7	639.3
Transactions with owners								
Interest on members' capital and dividends paid	5.1				-59.0	-59.0	-18.5	-77.5
Change in members' capital	5.1	124.7			-16.0	108.7		108.7
Transfer from retained earnings to the reserve for invested unrestricted equity	5.1			0.1		0.1	-29.6	-29.5
Share based payments	3.3				-1.0	-1.0	0.6	-0.5
Acquired shares from non-controlling interest, which did not change the controlling right	7.1				-1.7	-1.7		-1.7
Sold shares from non-controlling interest, which did not change the controlling right	7.1			0.0	64.3	64.3	197.4	261.6
Members' funds 31.12.2021		1,447.1	-34.2	706.2	1,455.3	3,574.4	1,240.3	4,814.6

The notes are an integral part of these financial statements.

Consolidated cash flow statement

EUR million	Note	1–12/2021	1–12/2020
Cash flow from operating activities			
Result for the period		657.1	262.2
Adjustments to the result [1]		529.0	405.2
Interest received		0.8	2.9
Interest paid		-28.9	-37.3
Dividends received		3.0	3.1
Other financial items, net		-6.0	-9.1
Income taxes paid		-153.7	-59.9
Change in working capital [2]		21.6	100.3
Net cash flow from operating activities		1,023.0	667.4
Cash flow arising from investing activities			
Acquisition of shares in subsidiaries, net of cash	7.1	0.4	-0.1
Acquisition of associated companies and joint ventures		-1.3	-1.1
Acquisition of other shares		-0.4	-3.0
Investments in tangible and intangible assets		-962.2	-364.8
Proceeds from disposal of shares in subsidiaries, net of cash	7.1	24.7	-3.4
Proceeds from disposal of shares in associated companies and joint ventures			0.0
Proceeds from disposal of other shares		0.2	0.2
Proceeds from sale of tangible and intangible assets		35.9	16.0
Change in non-current receivables, net		-1.6	-1.0
Net cash flow arising from investing activities		-904.2	-357.2
Cash flow arising from financing activities			
Change in members' capital		110.5	107.2
Non-controlling interest acquired	7.2		-50.4
Non-controlling interest sold	7.2	261.2	
Increase in non-current liabilities	5.5	2.9	33.2
Decrease in non-current liabilities	5.5	-259.0	-134.7
Change in current liabilities, net	5.5	0.6	-3.1
Change in current interest-bearing receivables, net	5.5	-0.7	-0.5
Return of capital		-29.6	-25.8
Interest on members' capital and dividends paid		-84.7	-112.2
Net cash flow arising from financing activities		1.2	-186.4
Change in cash and cash equivalents		120.0	123.8
Cash and cash equivalents at beginning of period		1,212.9	1,090.0
Translation differences		0.9	-1.8
Change in cash and cash equivalents		120.0	123.8
Value adjustments of investment funds included in cash and cash equivalents.		0.7	0.9
Cash and cash equivalents of assets classified as held for sale			0.0
Cash and cash equivalents at end of period	5.4	1,334.5	1,212.9

The notes are an integral part of these financial statements.

EUR million	1–12/2021	1–12/2020
NOTES TO CONSOLIDATED CASH FLOW STATEMENT		
[1] Adjustments to the result		
Taxes	174.6	67.9
Depreciation, amortisation and impairment charges	340.1	303.5
Biological assets	-0.2	-0.3
Share of profit from associated companies and joint ventures	2.2	-3.1
Gains and losses on sale of non-current financial assets	-32.1	-12.8
Finance costs, net	39.6	48.8
Pension liabilities and provisions	-5.3	-5.1
Other adjustments	10.1	6.4
Total	529.0	405.2
[2] Change in working capital		
Change in inventories	-65.4	7.1
Change in accounts receivables and other receivables	-170.6	-1.0
Change in accounts payable and other liabilities	257.7	94.2
Total	21.6	100.3

The notes are an integral part of these financial statements.

Notes to consolidated financial statements

1. Accounting principles

Main operations

Metsäliitto Cooperative and its subsidiaries comprise a group ("Metsä Group" or "Group") in which operations are organised into five business segments: Wood Supply and Forest Services, Wood Products Industry, Pulp and Sawn Timber Industry, Paperboard Industry, and Tissue and Greaseproof Papers.

The Group's parent company is Metsäliitto Cooperative. The parent company is domiciled in Helsinki, and its registered address is Revontulenpuisto 2, 02100 Espoo, Finland. A copy of the consolidated financial statements can be obtained from the website www.metsagroup.com or the parent company's head office at Revontulenpuisto 2, 02100 Espoo, Finland.

These financial statements were authorised for issue by Metsäliitto Cooperative's Board of Directors on 10 February 2022. According to the Finnish Co-operatives Act, the Representative Council has the right to accept, reject or decide to amend the financial statements at the Annual General Meeting after their date of publication.

Accounting principles

Metsä Group's consolidated financial statements have been prepared in accordance with the International Financial Reporting Standards (IFRS), applying the standards and interpretations that had been approved by the EU and were effective on 31 December 2021. The notes to the consolidated financial statements also comply with the requirements of Finnish accounting and Community legislation supplementing the IFRS rules.

The consolidated financial statements are presented in millions of euros.

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 operations is discussed in the Board of Directors' report. The impact of the pandemic on the determination of sales receivables and cash impairments is described in note 5.6, Financial risk management, counterparty risk

Amendments to standards applied during the 2021 financial period

IAS 38 Intangible Assets – Configuration or customisation costs in a cloud computing arrangement (effective immediately). The agenda decision clarifies how to recognise the configuration or customisation costs of an SaaS (Software as a Service) supplier. The agenda decision discusses whether an intangible asset may be recognised and if not, how to recognise the configuration or customisation costs. The agenda decision has an impact on the determination of the acquisition cost of the Group's intangible assets. Other amendments to standards do not have a material impact on the consolidated financial statements.

Other standard amendments will not have a material impact on the consolidated financial statements.

New and amended standards to be applied in future financial periods

Amendments to IAS 16 Property, Plant and Equipment – Proceeds before intended use (effective for financial periods beginning on or after 1 January 2022). According to the amendments, the revenue accumulated from the sales of products created by the use of an unfinished tangible asset must be recognised through profit and loss. The amendments have an impact on the determination of the acquisition cost of the Group's tangible assets and the notes to be presented.

Other standard amendments will not have a material impact on the consolidated financial statements.

Transactions 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.

More 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.

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
Pension obligations	3.5 Pension obligations
Intangible and tangible assets	4.1 Intangible assets 4.2 Tangible assets
Leases	4.2 Tangible assets
Valuation of growing trees	4.3 Biological assets
Financial instruments measured at fair value	4.4 Other investments
Valuation of inventories	4.5 Inventories
Valuation of accounts receivables	4.6 Accounts receivables and other receivables
Provisions	4.9 Provisions
Income taxes	6 Income taxes
Contingent liabilities from legal disputes and claims	8.1 Commitments and contingencies

2. Profitability

2.1 Segment information

Accounting principles

Operating segments

Metsä Group's operating segments are comprised of the Group's business areas. The operating segments are reported consistently, with the internal reports submitted to the President and CEO. The President and CEO is in charge of allocating resources to the operating segments and evaluating their performance.

The segments report in line with the same accounting principles as the Group. All intra-segment transactions are based on market prices and are eliminated on consolidation.

Comparable key figures

Extraordinary and material items not included in ordinary business operations have been eliminated in the comparable operating result. 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.

Wood Supply and Forest Services

Metsä Forest provides premium wood for Metsä Group's production units and its other industrial customers. It offers owner-members of the parent company, Metsäliitto Cooperative, comprehensive services in wood trade and forest and nature management. Metsä Forest invests in developing sustainable forest management methods and digital services provided for forest owners.

Wood Products Industry

Metsä Wood is one of Europe's leading manufacturers of engineered wood products. The company processes valuable log wood into environmentally friendly products for construction and transport industry, which are both megatrend-driven businesses of the future. Metsä Wood's main products are Kerto LVL, birch and spruce plywood and sawn timber upgrades. Material-efficient wood products store carbon and play an important role in combating climate change.

Pulp and Sawn Timber Industry

Metsä Fibre is a leading producer of bioproducts, biochemicals and bioenergy. Metsä Fibre is the world's leading producer of bleached softwood pulp and a major producer of sawn timber. Metsä Fibre's bleached softwood and birch pulps have been developed for the manufacture of paperboards, tissue and printing paper as well as speciality paper. Spruce sawn timber and pine sawn timber are used primarily in the construction industry. The company also develops and continuously expands the range of bioproducts produced from the side streams of pulp production.

Paperboard Industry

Metsä Board is a leading European producer of premium and lightweight fresh fibre paperboard. The company's folding boxboard and food service boards as well as white kraftliners offer sustainable, recyclable and safe solutions for consumer goods, retail-ready and food service packaging. All of the wood raw material used by Metsä Board comes from sustainably managed Northern European forests, which guarantees the high and consistent quality of the fibre. The global sales network provides services to customers worldwide, including brand owners, converters and merchants.

Tissue and Greaseproof Papers

Metsä Tissue is one of the leading tissue paper suppliers in Europe to households and professionals and one of the leading greaseproof paper suppliers globally. The company innovates products and services that make everyday life cleaner, easier and more hygienic, in an environmentally sustainable manner. The company's brands are Lambi, Serla, Tento, Mola, Katrin and SAGA. In addition to its own brands, the company develops and manufactures a range of supplier label products as well as tailored customer label products for leading European retailers.

Other operations

Other operations include Metsä Group head office functions, the companies Metsä Group Treasury Oy and Metsä Spring Ltd., and the holding function of Metsäliitto Cooperative as well as Kemi Shipping Ltd.

Operating segments 2021

EUR million	Wood Supply and Forest Services	Wood Products Industry	Pulp and Sawn Timber Industry	Paperboard Industry	Tissue and Greaseproof Papers	Other operations	Eliminations	Group total
External sales	522.1	560.2	2,014.3	1,973.8	946.0	0.5		6,017.0
Internal sales	1,500.7	19.8	613.8	110.3	0.8	9.5	-2,254.8	0.0
Sales total	2,022.9	580.1	2,628.1	2,084.1	946.7	10.0	-2,254.8	6,017.0
Operating result	36.4	18.6	613.7	375.9	-9.7	-18.8	-142.5	873.6
Items affecting comparability			-34.5	-10.8		4.1	0.9	-40.2
Comparable operating result	36.4	18.6	648.2	386.6	-9.7	-22.8	-143.4	913.8
Share of results from associated companies and joint ventures								-2.2
Finance costs, net								-39.6
Income taxes								-174.7
Result for the period								657.0
Assets	335.4	441.7	2,610.7	2,384.6	819.1	239.5	-290.4	6,540.6
Assets classified as held for sale				11.0				11.0
Unallocated assets								1,339.8
Total assets								7,891.4
Liabilities	239.1	98.1	525.6	508.0	311.1	155.3	-290.4	1,546.7
Liabilities classified as held for sale				6.8				6.8
Unallocated liabilities								1,523.3
Total liabilities								3,076.8
Total investments	7.2	28.9	650.7	220.2	63.3	42.0	-18.2	994.2
Depreciation	10.5	20.3	124.3	85.6	45.6	6.2	4.9	297.4
Impairments			34.5	4.6			3.7	42.7
Personnel, average	857	1,666	1,428	2,461	2,541	666		9,619

Segment's assets = intangible and tangible assets, investments in associated companies and joint ventures, inventories, accounts receivables and other non-interest-bearing receivables (excl. interest and tax items). Segment's liabilities = accounts payable, advance payments and other non-interest-bearing liabilities (excl. interest and tax items)

Items affecting comparability in operating result

2021 EUR million	Wood Supply and Forest Services	Wood Products Industry	Pulp and Sawn Timber Industry	Paperboard Industry	Tissue and Greaseproof Papers	Other operations	Eliminations	Group total
Other operating income				12.2		4.1	-4.1	12.2
Share of profit from associated companies and joint ventures				-8.7			8.7	0.0
Depreciations			-34.5	-4.6			-3.7	-42.7
Other operating expenses				-9.7				-9.7
Total	0.0	0.0	-34.5	-10.8	0.0	4.1	0.9	-40.2

The result of **the Pulp and Sawn Timber Industry segment** includes a EUR -34.5 million impairment related to the tangible assets of Metsä Fibre's existing pulp mill in Kemi.

The Paperboard Industry segment's other operating income includes the capital gain of EUR 7.0 million from the sale of Metsä Board's land area unrelated to business operations and EUR 5.2 million in insurance claims received for the production losses attributable to a fire at Metsä Board's Husum mill. The share of results from associated companies and joint ventures includes a EUR -6.9 million impairment related to the tangible assets of Metsä Fibre's existing pulp mill in Kemi and EUR -1.8 million in taxes recognised on the basis of a tax audit at Metsä Fibre's Italian subsidiary. Impairments include a EUR -4.6 million impairment related to Metsä Board Husum's existing paperboard production assets and other operating expenses include EUR -9.7 million in costs related to the fire on the chip conveyor belt at Metsä Board's Husum pulp mill.

The result of **the Other operations segment** includes the EUR 4.1 million capital gain from the sale of Metsä Group's head office in Tapiola, Espoo.

Eliminations include the EUR -4.1 million elimination of the capital gain from the head office; the EUR 6.9 million elimination of the impairment and the EUR 1.8 million elimination of taxes included in Metsä Board's result; and the EUR -3.7 million impairment related to the tangible assets of Metsä Fibre's existing pulp mill in Kemi.

Operating segments 2020

EUR million	Wood Supply and Forest Services	Wood Products Industry	Pulp and Sawn Timber Industry	Paperboard Industry	Tissue and Greaseproof Papers	Other operations	Eliminations	Group total
External sales	441.8	412.6	1,374.9	1,814.1	1,011.2	0.3		5,054.9
Internal sales	1,378.1	16.5	451.6	75.4	0.7	8.2	-1,930.6	0.0
Sales total	1,819.9	429.1	1,826.5	1,889.5	1,011.9	8.5	-1,930.6	5,054.9
Operating result	22.4	9.3	3.9	227.3	115.9	-7.1	4.2	375.8
Items affecting comparability				6.0	2.0	-0.6	0.6	8.1
Comparable operating result	22.4	9.3	3.9	221.2	113.8	-6.5	3.6	367.7
Share of results from associated companies and joint ventures								3.1
Finance costs, net								-48.8
Income taxes								-67.9
Result for the period								262.2
Assets	321.9	358.3	1,996.5	2,076.8	784.1	244.0	-260.5	5,521.2
Assets classified as held for sale						32.3		32.3
Unallocated assets								1,297.8
Total assets								6,851.3
Liabilities	217.4	69.4	418.5	366.5	294.5	134.6	-260.5	1,240.4
Liabilities classified as held for sale						17.7		17.7
Unallocated liabilities								1,678.9
Total liabilities								2,937.1
Total investments	16.9	21.7	135.2	166.4	53.1	7.3	-0.1	400.5
Depreciation	10.2	20.8	124.3	94.5	44.3	6.0	3.4	303.5
Personnel, average	859	1,543	1,375	2,455	2,558	604		9,392

Segment's assets = intangible and tangible assets, investments in associated companies and joint ventures, inventories, accounts receivables and other non-interest-bearing receivables (excl. interest and tax items). Segment's liabilities = accounts payable, advance payments and other non-interest-bearing liabilities (excl. interest and tax items).

Items affecting comparability in operating result

2020 EUR million	Wood Supply and Forest Services	Wood Products Industry	Pulp and Sawn Timber Industry	Paperboard Industry	Tissue and Greaseproof Papers	Other operations	Eliminations	Group total
Other operating income				6.0	5.7			11.8
Changes in invetories					-0.3			-0.3
Employee costs					-0.1			-0.1
Depreciations					-0.3			-0.3
Other operating expenses					-3.0	-0.6	0.6	-3.0
Total	0.0	0.0	0.0	6.0	2.0	-0.6	0.6	8.1

Other operating income of **the Paperboard Industry segment** includes EUR 6.0 million disposal gains from sold non-business related land area.

The Tissue and Greaseproof papers operating result includes EUR -1.3 million of items related to divestment of Metsä Tissue's napkin business. EUR 3.3 million are related to the insurance indemnity paid to Metsä Tissue's company in Poland and its divestment of fixed assets.

Geographical segments

The sales of geographical segments are presented based on the location of the customer. Segment assets and total investments are presented based on geographical location of the assets.

	Sales		Non-current assets		Total investments	
EUR million	2021	2020	2021	2020	2021	2020
Finland	987.9	880.7	3,512.7	3,002.0	768.4	226.1
Germany	535.5	511.1	161.7	154.2	27.1	17.5
Great Britain		321.5		25.9		3.6
Italy	186.9	159.8	0.5	0.9	0.1	0.5
Sweden	231.2	195.7	628.6	506.2	176.9	138.7
France	195.3	145.0	0.2	0.5	0.2	0.0
Poland	142.8	128.4	58.2	63.1	2.8	4.2
Other EU countries	712.8	649.2	94.1	100.3	5.2	7.2
EU Total	2,992.4	2,991.5	4,456.0	3,853.1	980.7	397.7
Great Britain	449.1		49.4		10.6	
Turkey	166.6	153.8	0.0		0.0	
Norway	165.0	106.6	0.4	0.4	0.2	0.5
Other Europe	203.5	173.4	15.7	15.4	2.2	1.7
Europe total	3,976.7	3,425.4	4,521.5	3,868.9	993.7	399.9
China	1,013.6	749.0	0.8	1.3	0.3	0.5
USA	479.8	413.1	1.0	1.2	0.1	0.1
Other countries	546.9	467.4	0.1	0.1	0.0	0.0
Total	6,017.0	5,054.9	4,523.4	3,871.5	994.2	400.5

The transition period related to the United Kingdom's withdrawal from the EU ended on 31 December 2020.

Personnel at year end

	2021	2020
Finland	5,329	5,055
Sweden	1,235	1,225
Germany	949	959
Poland	433	440
Great Britain	483	442
Slovak	305	313
Russia	305	309
Baltic countries	230	217
Other Europe	151	146
Europe total	9,421	9,105
Other countries	112	108
Total	9,533	9,213

Information on most important customers

EUR 951.5 million (696.7) of sales is from one external customer. That part belongs to pulp and sawn timber industry and paperboard industry segments.

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 invoices vary to some extent geographically and in different business areas, but the payment time 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.

It is the management's view that groupings pursuant to operating segments and geographical distribution best describe the nature, amount and timing of sales income as well as the uncertainty related to the said income. The sales of operating segments and geographic areas pursuant to the location of customers is presented in Note 2.1, Segment information.

Sales by market area

EUR million	2021	2020
EMEA		
Finland	987.9	880.7
Other EU	2,004.5	2,110.8
Other Europe	984.2	433.9
Middle East and Africa	184.3	159.6
EMEA total	4,161.0	3,585.0
APAC	1,289.5	969.6
Americas	566.5	500.3
Sales total	6,017.0	5,054.9

The transition period related to the United Kingdom's withdrawal from the EU ended on 31 December 2020.

2.3 Other operating income

EUR million	2021	2020
Gains on disposals	33.8	15.6
Rental income	1.6	2.5
Service revenue	2.8	4.1
Government grants	29.5	21.7
Sales of scrap and waste	1.7	1.0
Other	15.8	12.4
Total	85.3	57.3

EUR million	2021	2020
Gains on disposals		
Metsä Board's land area not related to business operations	7.0	6.0
Metsä Board's emission allowances	21.3	6.2
Metsä Wood's emission allowances	4.4	0.3
Other	1.1	3.0
Total	33.8	15.6

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

In 2021, public subsidies and claims include EUR 3.2 million in emissions trading compensations and EUR 16.8 million in insurance claims received for the property damage and production losses caused by the fire at Metsä Board's Husum mill.

In 2020, government grants and allowances included EUR 13.0 million in emissions trading compensation. In addition, in 2020, public grants and compensation included EUR 3.9 million in insurance compensation received by Metsä Tissue's Polish company and compensation related to the coronavirus pandemic.

2.4 Operating expenses

EUR million	2021	2020
Materials and services		
Materials, consumables and goods		
Purchases	2,665.9	2,291.1
Change in inventories	-64.4	24.6
External services		
Logistics expenses	784.5	715.3
Other external services	480.4	409.1
Materials and services, total	3,866.4	3,440.1
Employee costs	680.4	615.0
Depreciations and impairment charges	340.1	303.5
Other operating expenses		
Rents and other property costs	35.9	31.6
Purchased services	175.8	209.3
Losses on fixed asset disposals	1.0	0.4
Other operating expenses	121.1	105.4
Other operating expenses total	333.8	346.7

Information on personnel costs is presented in Note 3.1 and information on depreciations and impairment charges in Notes 4.1 and 4.2.

Among other operating expenses are energy costs, marketing and advertising costs and administrative expenses.

Other operating expenses include an expense of EUR 2.1 million related to the sale of Metsä Tissue's napkin business in 2020 and an expense of EUR 0.8 million related to insurance indemnity of Metsä Tissue's Polish company.

The group's R&D expenses recorded as an expense in 2021 were EUR 18.8 million (19.7).

Principal auditor's fees

Fees of principal auditor, KPMG Oy Ab

EUR million	2021	2020
Audit	1.3	1.2
Auditors' opinions	0.0	0.0
Tax services		0.0
Other services	0.3	0.1
Total	1.6	1.3

In 2021 fees paid to other auditors than KPMG were EUR 1.4 million (2.1).

3. Remuneration

3.1 Employee costs

EUR million	2021	2020
Wages and salaries	446.9	409.8
Share-based payments	10.1	6.3
Other long-term remuneration	5.7	
Pension costs		
Defined benefit plans	2.5	2.4
Defined contribution plans	59.5	52.0
Other employee costs	155.7	144.4
Employee costs total	680.4	615.0

3.2 The management's salaries, remuneration and pension costs

Top management consists of the members of the Supervisory Board, Board of Directors and Group Executive Management Team including the President and CEO.

Remuneration paid to top management

EUR million	2021	2020
Salaries and fees	4.9	4.4
Share-based payments	4.7	5.2
Pension costs		
Defined benefit plans	3.6	2.9
Defined contribution plans	0.7	0.6
Total	14.0	13.2

Remuneration paid to members of the Supervisory Board and pension benefits

	Salaries and fees		Pension benefits	
EUR	2021	2020	2021	2020
Paajanen Juha, Chair	77,600	78,300	12,113	10,884
Siponen Ahti, Deputy Chair	33,600	33,600	5,245	4,682
Members total	191,600	146,800		
Total	302,800	258,700	17,358	15,566

Remuneration paid to the members of the Board of Directors and Pension benefits

	Salaries and fees		Pension benefits	
EUR	**2021**	**2020**	**2021**	**2020**
Linnaranta Jussi, Chair	170,840	163,940	29,231	25,369
Saukkonen Timo, Deputy Chair	83,200	83,800	12,988	11,699
Heikkilä Taavi, as of 1.1.2021	65,600		10,240	
Hiltunen Arto, until 31.12.2021	82,800	86,600	14,035	12,078
Mäkimattila Mikko	72,400	68,400	12,388	10,527
Parpala Juha	66,800	68,700	10,427	9,979
Pärssinen Nina, as of 24.3.2021	48,200		7,524	
Salonen Ilkka	84,000	83,900	13,112	11,704
Total	673,840	555,340	109,945	81,356
Former members of the Board of Directors				
Björkenheim Johan, until 31.12.2020	1,600	68,300	250	9,506
Mörttinen Leena, until 21.10.2020		57,100		8,255
Asunta Martti, Chair until 31.12.2019		1,400		242
Total	675,440	682,140	110,195	99,358

Salaries and remuneration paid to the President and CEO and other members of the Executive Management Team and pension benefits

EUR	**2021** President and CEO Ilkka Hämälä	**2020** President and CEO Ilkka Hämälä	**2021** Other Executive Management Team	**2020** Other Executive Management Team
Salaries and remuneration				
Base salary including fringe benefits [1]	860,671	821,984	2,254,601	1,999,959
remuneration paid by other Group companies	132,160	131,860		
Short-term incentives [2]	208,627	208,406	434,776	340,242
Special rewards [3]			60,000	
Long-term incentives [4]	1,493,780	1,127,271	2,668,919	2,186,152
Deferred long-term incentives [5]			495,693	1,901,905
Total	2,695,238	2,289,521	5,913,990	6,428,257
Pension costs				
Supplementary defined benefit pension plan	2,683,020	1,896,529	955,598	1,034,308
Contribution-based statutory arrangement	181,068	162,690	431,704	318,108
Total	2,864,088	2,059,220	1,387,302	1,352,416
Salaries and remuneration as well as pension costs in total	5,559,326	4,348,741	7,301,291	7,780,673

1) Base salary paid by Metsäliitto Cooperative which includes a housing benefit, company phone and car benefit, extended healthcare, travel and accident insurance as well as other minor fringe benefits.
2) The 2021 payment concerns performance in 2020; the 2020 payment concerns performance in 2019.
3) Special rewards paid on a project related to the divestment of a 30% share in the Husum pulp mill to Norra Skog.
4) 2021: performance period 2018–2020; 2020: performance period 2017–2019. Ilkka Hämälä: the remuneration paid in 2020 includes the rewards earned from his previous position as CEO of Metsä Fibre Oy.
5) Rest of the Management Team: in 2021, deferred long-term incentives from previous years totalling EUR 495,693 was paid in accordance with the conditions of payment the decision of the Board of Directors, while EUR 1,901,905 was paid in 2020.

Based on a decision by the Board of Directors, the President and CEO may be paid a short-term incentive based on defined financial criteria and strategic targets. The earning period of the incentive is 12 months. In 2020 and 2019, the remuneration possibility of the President and CEO's short-term incentive scheme was , at the target level, 37.5%, and at the maximum level, 93.75% of the fixed annual salary.

Based on a decision by the Board of Directors, members of Metsä Group's Management Team may be paid a short-term incentive based on defined financial criteria and strategic targets. The earning period of the incentive is 12 months. In 2020 and 2019, the remuneration possibility of the short-term incentive system of members of Metsä Group's Management Team was, at the target level, 30%, and at the maximum level, 75% of the fixed annual salary.

The term of notice of Ilkka Hämälä is 12 months. When the contract of the President and CEO is terminated by the Board, The President and CEO is entitled to a severance pay corresponding to 12 months l salary. No severance compensation is paid if the contract is terminated by the President and CEO. The terms of notice of other members of the Group Executive Management Team is six months. For other members of the Group Executive Management Team, the period of additional severance compensation varies from six to twelve months in case of severance due to other reasons than member related.

Ilkka Hämälä's retirement age is in accordance with the Employees' Pension Act. Hämälä also belongs to Metsä Group's pension insurance for Group management. The President and CEO's level of pension is 60% of the total salary under the Employees' Pension Act calculated on the basis of the five-year period preceeding retirement. If the employment relationship with Metsä Group ends before retirement age, the President and CEO is entitled to a paid-up policy.

Some of the members of the Executive Management Team have a separate benefit-based pension agreement with a retirement age of 62. The level of pension is 60% of the total salary under the Employees' Pensions Act, calculated on the basis of the five-year period preceding retirement. If the employment relationship with Metsä Group ends before retirement age, the member is entitled to a paid-up policy. At the end of 2021 a benefit-based pension agreement was for 4 members of the Executive Management Team.

There are no loan receivables, guarantees or other liabilities from the members of the Group Executive Management Team.

3.3 Share-based payments

Accounting principles

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

The effect of the arrangements on profit is presented under personnel expenses.

During the review period, the company had four active share incentive schemes: the share incentive scheme for 2014, which the Board of Directors decided to adopt on 6 February 2014, the performance-based share incentive scheme 2017–2021 and the commitment-based share incentive scheme, both of which the company's Board of Directors decided to adopt on 10 January 2017, and the performance-based share incentive scheme 2020–2024, which the Board of Directors decided to adopt on 12 December 2019, as part of the incentive and key personnel retention programme. The impact of the share incentive schemes on the 2021 consolidated income statement was EUR 10.1 million (6.3).

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

The schemes offer the target group the opportunity to receive as an incentive Metsä Board Corporation's B-series shares for three performance periods of three calendar years each for achieving the targets set for their performance criteria. The performance 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 amount of reward earned for the performance period for the share incentive scheme 2014 and the performance-based share incentive scheme 2017–2021 will be paid on the basis of the achievement of the performance criteria after the end of the performance period in March. In addition to the shares, the reward includes a cash component, which covers the taxes and tax-like charges resulting from the reward to the key employees. The total number of shares allocated under the performance-based share incentive scheme 2020–2024 includes both a share component and a cash component. Similarly, the reward is paid in shares and partly in cash, and the aim is for the cash contribution to cover taxes and tax-like charges at the time of payment. The reward will not be paid if the person's employment ended before the end of the performance period.

In addition, the scheme includes a two-year restriction period. If the employment relationship of a key employee ends during the restriction period, the key employee should, as a rule, return the transferred shares to the company without consideration.

Based on the realisation of the criteria of the 2018–2020 performance period, 631,802 Metsä Board Corporation's B-series shares and a cash portion to cover the taxes and tax-like charges incurred from the bonus were paid at the time of the transfer of the shares.

In 2016, the company changed the terms of the schemes by setting a cap proportionate to the employees' salaries on the reward paid for the performance periods 2014–2016 and 2015–2017. Payment of the portion of the reward exceeding the cap will be deferred and paid fully in cash in the coming years, when the cap allows for this. As of the 2016–2018 performance period, a cap proportionate to the employees' salaries is in use. The portion of the reward exceeding the cap will be cut permanently. On the balance sheet date, the liability for the performance periods 2014–2016 and 2015–2017 reflects the deferred portion of the reward that will be paid later, provided that the employment criteria is met, as well as the interest accrued.

Commitment-based share incentive scheme 2017–2021

The scheme offers key employees in the target group the opportunity to receive Metsä Board Corporation's B-series shares, provided that the participant's employment relationship remains in force and continues in force until the end of the restriction period. The scheme has restriction periods of 12 to 36 months. As a rule, rewards are not paid if the participant's employment relationship ends during the restriction period. In 2021, 6,000 Metsä Board Corporation's B-series shares and a cash portion to cover the taxes and tax-like charges incurred from the bonus were paid at the time of the transfer of the shares.

The basic information and events of the share-based incentive schemes

2021	Share incentive scheme 2014	Share incentive schemes 2017–2021	Share incentive schemes 2020–2024
Maximum number of shares	4,800,000	4,257,773	1,044,438
Criterias	Equity ratio, ROCE, EBIT-factor/EBIT	Equity ratio, ROCE, EBIT	Equity ratio, ROCE, EBIT
Number of key persons (31.12.2021)	6	88	26
Share price at grant date, EUR *)	0.00	5.20	8.01
Fair value at end of financial period, EUR million	0.0	17.9	5.6
Expense 2021, share-based payment, recognised as equity, EUR million	0.0	8.7	1.4
Liabilities, share-based payment, at the end of financial period, EUR million	0.9	6.8	4.1
Amounts 1 Jan, 2021 **)			
Outstandind at the beginning of period	0	3,585,116	590,788
Changes during the period			
Shares granted	0	16,250	472,406
Shares forfeited	0	73,458	45,347
Shares exercised	0	1,003,569	0
Shares expired	0	592,792	0
Amounts 31 Dec, 2021			
Outstanding at the end of period	0	1,931,547	1,017,847

*) The fair value of the share-based payment at the time of transfer was the market price of Metsä Board Corporation's B share less the amount of dividend to be distributed before the payment of the reward in accordance with the consensus estimates. The fair value of the share-based payment is recognised as an amount based on the best possible estimate of the amount of the reward to which a right is expected to be established.

**) The amounts of share rewards shown in the table are net amounts for the share-based incentive scheme 2014 and the share-based incentive scheme 2017–2021. That is, they reflect the number of shares earned or granted on the basis of share bonuses. In addition to these, the remuneration includes a cash portion to cover taxes and tax-like charges at the time of payment of the remuneration. For the share-based incentive scheme 2020–2024, the amounts of share bonuses shown in the table are gross amounts, i.e. they reflect the total number of shares and cash shares to be issued on the basis of share bonuses. The remuneration is paid partly in shares and partly in cash. The cash contribution aims to cover taxes and tax-like charges at the time of payment of the fee.

3.4. Other long-term remuneration

Accounting principles

Other long-term remuneration is treated in the Group in the same manner as the bonuses included in other long-term fringe benefits.

The long-term remuneration scheme of Metsä Group for 2020–2024 is based on three-year earning periods (2020–2022, 2021–2023 and 2022–2024), each followed by a two-year restriction period. The earning criteria, the targets set for them at the beginning of each earning period and the executives covered by the scheme are decided by the Board of Directors. The attainment of the targets established for an earning period determines the proportion of the remuneration to be paid to the executives. The Board is furthermore entitled to cut, partly or in full, the remuneration based on the system, provided that certain criteria related to the development of the Group's result and equity ratio are not met, or if the amount of remuneration would exceed the maximum remuneration specified for the executive concerned. In addition to meeting the earning criteria, rewarding is based on a synthetic share, whose value is calculated on the basis of the total value of Metsä Group. The possible remuneration is paid in cash after the restriction period, and it includes all statutory taxes and any other tax-like levies. If an executive's service or employment contract terminates during the earning or restriction period, the executive forfeits, as a rule, his/her right to the remuneration.

The possible reward from Metsä Group's long-term remuneration scheme for the performance periods 2020–2022 and 2021–2023 are based on the development of Metsä Group's return on capital employed (ROCE, %) as specified by the Board of Directors. Minimum levels have been set for the Group's operating result (EBIT) and equity ratio. The maximum remuneration level of the President and CEO is 250% of their fixed annual salary (cutter level 325% of fixed annual salary). The maximum remuneration level for the other members of Metsä Group's Management Team is 140% or 210% of their fixed annual salary (the cutter level is 180% or 270% of the fixed annual salary). During the 2021–2023 performance period, Metsä Group's long-term remuneration scheme covers 69 people (December 2021), including all the members of Metsä Group's Management Team and other directors in key group positions (excluding Metsä Board, which has its own share-based remuneration scheme). Based on the scheme, a total of 1,106,166 synthetic shares (gross) can be earned for the performance period 2020–2022 and a total of 1,106,993 synthetic shares (gross) can be earned for the performance period 2021–2023. The value of the reward includes taxes and other charges arising from the reward at the time of payment. The impact of other long-term remuneration schemes on the 2021 consolidated income statement was EUR 5.7 million (0.0).

3.5. Pension 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 obligation items to be recognised as expenses during the financial period is based on the use of actuarial assumptions, which involves the management's 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 liability and the number of items to be recognised as expenses.

Pension and other post-employment benefits

EUR million	2021	2020
Liabilities in balance sheet		
Defined benefit pension plans	85.4	84.5
Defined contribution pension plans	0.9	1.0
Total	86.2	85.5
Surplus of funded plans in assets (Note 5.3)	-26.1	-13.1

Defined benefit pension plans

The Group's most significant defined benefit pension plans are in Germany, Great Britain, Finland and Sweden.

The Group has several additional defined benefit pension plans in Germany. The arrangements grant old-age pensions, disability pensions and family pensions exceeding the statutory pension security to eligible employees, officials, senior management and former owners of the local company. 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 to 30 years to receive a full pension. With employees, all service years after the age of 18 are taken into consideration. Some of the pension arrangements are closed.

The defined benefit plans in Germany are unfunded. The defined benefits plans in Great Britain 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 actively participates in the operations of the foundation's investment committee.

In Finland, the Group has additional pension arrangements that are regarded as benefit plans. Depending on the date on which their contract began, some members of Metsä Group's Executive Management Team have separate, defined benefit-based supplementary pension insurance policies, with a retirement age of 62. The level of the pension is a maximum of 60% of the total salary pursuant to the Employees Pensions Act, calculated on the basis of the five-year period preceding retirement. If their employment relationship with Metsä Group ends before retirement age, members of the Executive Management Team are entitled to a paid-up policy.

The defined benefit pension plan in Sweden concerns officials born in 1978 or earlier. The arrangement grant old-age pensions, family pensions and disability pensions. The amount of pension depends on the salary in which the future salary increases, length of service, promotions and other important factors like changes on the labour market are considered. The defined benefit plans in Sweden are unfunded. The obligation has a guarantee liability.

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

Amounts recognised in balance sheet

EUR million	2021	2020
Present value of funded obligations	181.1	182.4
Fair value of plan assets	-186.2	-181.8
Deficit (+) / surplus (-)	-5.1	0.5
Present value of unfunded obligations	64.4	70.9
Net liabilities (+) / net assets (-) of defined benefit plans	59.3	71.4
Defined benefit-based pension liabilities on the balance sheet, net	85.4	84.5
Defined benefit-based pension assets on the balance sheet, net	-26.1	-13.1

Changes in defined benefit obligations during 2021

EUR million	Present value	Fair value of plan assets	Total
1.1.2021	253.2	-181.8	71.4
Current service cost	2.9		2.9
Administrative costs	2.3	-1.8	0.4
Interest expense (+) or interest income (-)	-0.4		-0.4
Income (-) and losses from settlement	-0.1		-0.1
Total amount recognised in profit and loss	4.7	-1.8	2.9
Remeasurements in other comprehensive income			
The return on plan assets, excl. amounts included in interest		-2.8	-2.8
Gains (-) and losses (+) from change in demographic assumptions	-0.6		-0.6
Gains (-) and losses (+) from change in financial assumptions	-6.4		-6.4
Experience gains and losses	3.2		3.2
Total remeasuments in other comprehensive income	-3.7	-2.8	-6.5
Translation differences	7.1	-8.5	-1.4
Contribution			
From employers		-4.4	-4.4
From plan participants	0.0	0.0	0.0
Payments from plans			
Benefit payments	-15.2	12.4	-2.8
Settlements	-0.7	0.9	0.2
31.12.2021	245.5	-186.2	59.3

Changes in defined benefit obligations during 2020

EUR million	Present value	Fair value of plan assets	Total
1.1.2020	246.3	-181.3	64.9
Current service cost	2.5		2.5
Interest expense (+) or interest income (-)	3.4	-2.8	0.6
Income (-) and losses from settlement	-0.1		-0.1
Total amount recognised in profit and loss	5.8	-2.8	3.0
Remeasurements in other comprehensive income			
The return on plan assets, excl. amounts included in interest		-5.9	-5.9
Gains (-) and losses (+) from change in demographic assumptions	-2.2		-2.2
Gains (-) and losses (+) from change in financial assumptions	21.0		21.0
Experience gains and losses	-3.8		-3.8
Total remeasuments in other comprehensive income	15.0	-5.9	9.1
Translation differences	-4.8	6.7	1.9
Contribution			
From employers		-3.9	-3.9
From plan participants	0.0	0.0	0.0
Payments from plans			
Benefit payments	-8.5	5.5	-3.1
Settlements	-0.5		-0.5
31.12.2020	253.2	-181.8	71.4

Defined benefit pension plans and plan assets by country in 2021

EUR million	Germany	Great Britain	Finland	Sweden	Other countries	Total
Present value of obligations	31.0	99.5	68.6	32.1	14.3	245.5
Fair value of plan assets		-125.6	-52.6		-8.1	-186.2
Total	31.0	-26.1	16.0	32.1	6.3	59.3

Defined benefit pension plans and plan assets by country in 2020

EUR million	Germany	Great Britain	Finland	Sweden	Other countries	Total
Present value of obligations	35.8	105.6	65.5	33.8	12.6	253.2
Fair value of plan assets		-116.8	-57.4		-7.6	-181.8
Total	35.8	-11.2	8.1	33.8	4.9	71.4

Significant actuarial assumptions 2021

	Germany	Great Britain	Finland	Sweden	Other countries
Discount rate, %	0.7–1.3	1.8–1.9	0.2–1.2	1.9	0.7–1.5
Salary growth rate, %	3.0	2.8	2.0	3.0	1.0–2.5
Pension growth rate, %	1.8	3.4	2.2–2.4	2.3	2.0–2.3

Significant actuarial assumptions 2020

	Germany	Great Britain	Finland	Sweden	Other countries
Discount rate, %	0.2–1.1	1.2	-0.1–0.8	1.0	1.5
Salary growth rate, %	3.0	2.3	2.0	3.0	2.0
Pension growth rate, %	1.7–1.8	2.9–3.5	1.4–1.6	1.5	1.8

Sensitivity of benefit obligation to changes in essential weigted assumptions 2021

		Impact on benefit obligation	
	Change of assumption	Increase	Decrease
Discount rate, %	0.5%	5.9% decrease	6.6% increase
Increase in salary growth rate	0.5%	1.0% increase	1.3% decrease
Increase in pension growth rate	0.5%	6.1% increase	5.7% decrease
		Increase in assumption in one year	Decrease in assumption in one year
Life expectancy		3.9% 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

EUR million	2021	%	2020	%
Qualifying insurance policies	1.9	1	2.1	1
Cash and cash equivalents	0.9	1	0.5	0
Investments funds	130.8	70	121.9	67
Funds in insurance companies	52.6	28	57.4	32
Total	186.2	100	181.8	100

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

Volatility of assets

The Group works to reduce investment risk by diversifying the assets in the arrangement to different asset types, such as shares, properties and government and corporate bonds. A considerable portion of the assets included in the arrangement in Great Britain consists of shares that are expected to provide a better long-term return than corporate bonds, although in the short-term they generate volatility and risks.

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 bonds issued by the companies. A decline in the discount rate increases the arrangement's liabilities.

Inflation risk

The majority of the plans' benefit obligations are linked to inflation, and higher inflation will lead to higher liabilities although, in most cases, caps on the level of inflationary increases are in place to protect the plan against extreme inflation.

Life expectancy

The majority of the arrangement obligations is related to producing lifetime benefits for members, so the expected increase in life expectancy will increase the arrangement obligations.

The contribution made to defined benefit plans following the termination of employment is expected to be EUR 8.6 million in the 2022 financial period.

The weighted average duration of the defined benefit obligation is 15.8 years (15.9).

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.

Depreciation of goodwill is not recognised. Instead, it is tested annually for impairment 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. Intangible assets for which a useful life cannot be determined, such as brands acquired in the context of corporate acquisitions or trademarks, are not subject to depreciation, but tested annually for impairment.

The residual value of an asset, the useful life and depreciation method are checked 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. The research and development costs recognised as expenses are presented in Note 2.4, Operating expenses.

Computer software

Costs related to developing and building 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, over 5–20 years.

EUR million	Goodwill	Other intangible assets	Construction in progress	Total
Acquisition cost, 1 Jan. 2021	434.1	520.6	18.9	973.7
Translation differences	-2.5	0.8		-1.8
Increase		5.5	24.9	30.4
Acquisitions		4.7		4.7
Decrease		-4.1	-0.8	-5.0
Transfers between items		0.8	-0.6	0.1
Assets classified as held for sale		0.0		0.0
Acquisition cost, 31 Dec. 2021	431.6	528.2	42.3	1 002.1
Accumulated depreciation and impairment charges, 1 Jan. 2021	0.0	-318.6	0.0	-318.6
Translation differences		-0.7		-0.7
Accumulated depreciation on deduction and transfers		-1.4		-1.4
Depreciation for the period		0.0		0.0
Impairments		-20.8		-20.8
Accumulated depreciation and impairment charges, 31 Dec. 2021	0.0	-341.4	0.0	-341.4
Book value, 1 Jan. 2021	434.1	202.1	18.9	655.1
Book value, 31 Dec. 2021	431.6	186.8	42.3	660.7

Acquired businesses include Kemi Shipping Oy and the assets classified as held for sale the tangible assets of Oy Hangö Stevedoring Ab. Further information on the transaction is available in Note 7.2

EUR million	Goodwill	Other intangible assets	Construction in progress	Total
Acquisition cost, 1 Jan. 2020	429.4	553.7	9.1	992.2
Translation differences	4.8	-2.6		2.2
Increase		7.8	13.9	21.7
Acquisitions		0.1		0.1
Decrease		-41.6		-41.6
Transfers between items		3.3	-4.1	-0.9
Acquisition cost, 31 Dec. 2020	434.1	520.6	18.9	973.7
Accumulated depreciation and impairment charges, 1 Jan. 2020	0.0	-334.7	0.0	-334.7
Translation differences		2.1		2.1
Accumulated depreciation on deduction and transfers		36.3		36.3
Impairments		-22.3		-22.3
Accumulated depreciation and impairment charges, 31 Dec. 2020	0.0	-318.6	0.0	-318.6
Book value, 1 Jan. 2020	429.4	219.0	9.1	657.5
Book value, 31 Dec. 2020	434.1	202.1	18.9	655.1

In 2021, other intangible assets include EUR 140.7 million in brands and trademarks with an unlimited useful life (140.7). The most significant of these is the pulp brand Metsä, allocated to the Pulp and Sawn Timber Industry, whose carrying value was EUR 134.8 million in 2021 (134.8). In addition, Tissue and Greaseproof Papers include EUR 5.9 million in brands and trademarks with an unlimited useful life (5.9).

Goodwill allocated to segments

EUR million	2021	2020
Wood Supply and Forest Services	2.4	2.4
Wood Products Industry	0.7	0.7
Pulp and Sawn Timber Industry	3.9	3.9
Paperboard Industry	12.4	12.4
Tissue and Greaseproof Papers	31.5	34.1
Other operations	390.4	390.4
Eliminations	-9.7	-9.7
Total	431.6	434.1

Other operations include goodwill of EUR 389.8 million related to the Metsä Fibre acquisition and EUR 0.6 million related to the acquisition of Metsä Tissue.

Goodwill allocated in impairment testing

EUR million	2021	2020
Wood Supply and Forest Services	2.4	2.4
Wood Products Industry	0.7	0.7
Pulp and Sawn Timber Industry		
Pulp and Sawn Timber Industry	3.9	3.9
Other operations	389.8	389.8
Eliminations	-3.8	-3.8
Pulp and Sawn Timber Industry total	390.0	390.0
Paperboard Industry	12.4	12.4
Tissue and Greaseproof Papers		
Tissue and Greaseproof Papers	31.5	34.1
Other operations	0.6	0.6
Eliminations	-5.9	-5.9
Tissue and Greaseproof Papers total	26.2	28.7
Total	431.6	434.1

Impairment of assets

Accounting principles

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 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 symmetrically. In connection with the recognition of the impairment loss, the useful life of the depreciated asset is re-evaluated. An impairment loss recognised for an asset other than goodwill is reversed if a change has taken place in the estimates used to determine the recoverable amount of the asset. However, the maximum reversal of an impairment loss amounts to no more than the carrying amount of the asset if no impairment loss had been recognised. An impairment loss recognised on goodwill is not reversed under any circumstances.

Key estimates and judgements

Future cashflows

The recoverable amounts of cash-generating units are based on calculations of value in use. The management's key estimates in the calculations concern the development of delivery volumes and sales prices, the development of costs related to key raw material costs and other costs, as well as the discount rate and the long-term growth rate.

Metsä Group 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 (%)
Pulp and Sawn Timber Industry	390.0	134.8	5.83	5.49	2.0	1.5
Paperboard industry						
Folding boxboard	8.7		5.78	5.41	2.0	1.5
Linerboard	3.7		5.78	5.41	2.0	1.5
Market pulp			5.78	5.41	2.0	1.5
Tissue and Greaseproof Papers						
Tissue papers	24.7	5.9	5.49	5.41	2.0	1.0
Greaseproof papers	2.5		5.49	5.41	2.0	1.0

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.

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 769 thousand tonnes (1,040) of emission allowances free of charge. In addition, it purchased 192 thousand tonnes (20) of emission allowances on the market and sold 527 thousand tonnes (242) of emission allowances to the market. On the balance sheet date, the Group had 1,344 thousand tonnes (1,587) of emission allowances. It also had 235 thousand tonnes of free allowances for 2021, which had not yet been entered in the emissions trading register on 31 December 2021 due to a delay in the allocation. Emissions during the financial period totalled 662 thousand tonnes (700).

In 2021, capital gains from the sale of emission allowances totalled EUR 25.9 million (6.7) and the costs arising from emission allowances were EUR 3.9 million (1.7). The balance sheet at the end of the period includes EUR 0.0 million (0.3) in provisions related to emission allowances. At the end of the period, the market value of the emission allowances was EUR 79.61 per tonne (32.04) and their total value including the delayed emission allowances was EUR 125.7 million (50.8).

4.2. Property, plant and equipment

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. External capital expenses resulting directly from the acquisition, construction or manufacture of an item of property, plant or equipment that meet the conditions are activated as part of the acquisition cost of property, plant and equipment.

If a piece of property, plant or equipment consists of several parts with differing useful lives, each part is handled as a separate item. In that case, the expenses related to replacing the part 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 are in accordance with the definition of property, plant and equipment. Otherwise, such commodities are classified as inventories.

Significant investments in renovations and improvements are capitalised on the balance sheet and depreciated over the remaining useful life of the main commodity related to such investments. Repair and maintenance costs are recognised as expenses when they are realised.

Property, plant and equipment is depreciated on a straight-line basis over the following estimated useful lives. Owned land and water areas are not subject to depreciations.

Estimated useful lives:

Buildings and construction	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	3–10 years

The residual value of an asset, the financial useful life and depreciation method are checked 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.

Public subsidies related to the acquisition of commodities 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, the right-of-use item and the corresponding liability of the lease is recognised. Paid rents are divided into liabilities and finance costs. The finance cost is included in profit or loss over the lease term in such a way that the interest rate of the remaining debt balance is the same during each period. The right-of-use asset is subject to straight-line depreciations over the asset's economic life or the lease term, depending on which of them is shorter.

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

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

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

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 69.1 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	60.7	9.2	1,508.8	46.1	6,018.7	100.1
Translation differences	0.2	0.0	-1.1	0.3	-29.1	-0.1
Additions	1.0	0.4	11.2	6.8	99.6	16.0
Acquisitions		0.7	24.1	0.2	9.8	0.0
Decrease	-2.1	-0.1	-67.0	8.0	-63.7	-15.4
Transfers between items	0.5		12.9		34.9	
Assets classified as held for sale		-0.5	-10.8		-19.5	0.0
Acquisition cost, 31 Dec. 2021	60.3	9.7	1,478.1	61.5	6,050.7	100.6
Accumulated depreciation and impairment charges 1 Jan. 2021	-0.5	-1.0	-842.0	-16.8	-4,304.7	-30.3
Translation differences	0.0	0.0	1.0	-0.2	23.2	0.0
Accumulated depreciation on deduction and transfers		0.1	46.5	5.5	55.9	14.8
Assets classified as held for sale		-0.1	7.3		15.1	0.0
Depreciation for the period		-0.7	-47.5	-11.7	-191.5	-18.1
Impairments	0.0		-21.5		-20.3	
Accumulated depreciation and impairment charges 31 Dec. 2021	-0.5	-1.8	-856.2	-23.2	-4,422.2	-33.4
Book value, 1 Jan. 2021	60.2	8.2	666.9	29.3	1,714.0	69.8
Book value, 31 Dec. 2021	59.8	7.9	621.9	38.3	1,628.5	67.2

	Other tangible assets	Construction in progress	Total	Total	
EUR million	**Owned**	**Owned**	**Owned**	**Leased**	**Total**
Acquisition cost, 1 Jan. 2021	142.4	300.0	8,030.6	155.4	8,186.0
Translation differences	0.1	-4.5	-34.4	0.3	-34.1
Additions	1.6	823.6	937.0	23.2	960.2
Acquisitions	0.6		34.4	0.9	35.3
Decrease	-1.7	-0.4	-134.8	-7.5	-142.3
Transfers between items	0.7	-49.1	-0.1	0.0	-0.1
Assets classified as held for sale	-0.4		-30.6	-0.6	-31.2
Acquisition cost, 31 Dec. 2021	143.3	1,069.5	8,802.0	171.8	8,973.7
Accumulated depreciation and impairment charges 1 Jan. 2021	-70.1	0.0	-5,217.3	-48.0	-5,265.3
Translation differences	-0.1		24.1	-0.2	23.9
Accumulated depreciation on deduction and transfers	-0.7		101.7	20.4	122.1
Assets classified as held for sale	0.3		22.7	-0.1	22.6
Depreciation for the period	-7.1		-246.1	-30.5	-276.6
Impairments	-0.9		-42.7	0.0	-42.7
Accumulated depreciation and impairment charges 31 Dec. 2021	-78.6	0.0	-5,357.6	-58.4	-5,416.0
Book value, 1 Jan. 2021	72.3	300.0	2,813.3	107.4	2,920.7
Book value, 31 Dec. 2021	64.7	1,069.5	3,444.4	113.4	3,557.8

Acquired businesses include Kemi Shipping Oy and the assets classified as held for sale the tangible assets of Oy Hangö Stevedoring Ab. Further information on the transaction is available in Note 7.2

A decision to build a new bioproduct mill in Kemi was made in February 2021. Metsä Group recognised a EUR 38.2 million impairment in relation to the tangible assets of the existing pulp mill in Kemi. The impairments also include a EUR 4.6 million impairment recognised in the current paperboard production assets of Metsä Board's Husum pulp mill, which the company plans to replace in the investment increasing the mill's folding boxboard capacity.

The Nordic real estate investment company NREP bought Metsä Group's head office in Tapiola, Espoo, in January 2021. In connection with the transaction, Metsäliitto Cooperative concluded a long-term lease agreement for the site. The head office property was classified as an asset held for sale on 31 December 2020. Further information on the transaction is available in Note 7.2 (Acquisitions, assets classified as held for sale and operations disposed of).

	Land and water areas		Buildings and constructions		Machinery and equipment	
EUR million	**Owned**	**Leased**	**Owned**	**Leased**	**Owned**	**Leased**
Acquisition cost, 1 Jan. 2020	57.8	9.0	1,485.1	64.5	5,908.8	74.4
Translation differences	0.0	0.0	-1.9	-1.4	48.3	0.4
Additions	5.4	0.9	17.0	5.2	77.8	32.4
Acquisitions			0.2		0.5	
Decrease	-2.5	-0.6	-13.4	-13.9	-66.5	-6.7
Transfers between items	0.1		21.8	-8.3	50.0	-0.3
Assets classified as held for sale			0.0		0.0	
Acquisition cost, 31 Dec. 2020	60.7	9.2	1,508.8	46.1	6,018.7	100.1
Accumulated depreciation and impairment charges 1 Jan. 2020	-2.3	-0.7	-809.0	-19.4	-4,132.2	-17.4
Translation differences	0.0		0.3	0.3	-40.8	-0.2
Accumulated depreciation on deduction and transfers	2.0	0.4	13.1	12.3	66.8	5.9
Depreciation for the period	-0.3	-0.7	-46.3	-9.8	-198.5	-18.5
Accumulated depreciation and impairment charges 31 Dec. 2020	-0.5	-1.0	-842.0	-16.8	-4,304.7	-30.3
Book value, 1 Jan. 2020	55.5	8.3	676.1	45.0	1,776.6	56.9
Book value, 31 Dec. 2020	60.2	8.2	666.9	29.3	1,714.0	69.8

	Other tangible assets	Construction in progress	Total	Total	
EUR million	**Owned**	**Owned**	**Owned**	**Leased**	**Total**
Acquisition cost, 1 Jan. 2020	143.3	122.7	7,717.7	147.8	7,865.5
Translation differences	-1.1	6.0	51.2	-1.0	50.2
Additions	1.9	237.8	339.9	38.4	378.3
Acquisitions			0.7	0.0	0.7
Decrease	-4.2	-1.8	-88.4	-21.2	-109.6
Transfers between items	2.5	-64.8	9.5	-8.7	0.9
Assets classified as held for sale			0.0	0.0	0.0
Acquisition cost, 31 Dec. 2020	142.4	300.0	8,030.6	155.4	8,186.0
Accumulated depreciation and impairment charges 1 Jan. 2020	-67.5	0.0	-5,011.0	-37.5	-5,048.5
Translation differences	0.7		-39.9	0.1	-39.8
Accumulated depreciation on deduction and transfers	3.7		85.7	18.5	104.2
Depreciation for the period	-7.0		-252.1	-29.1	-281.2
Accumulated depreciation and impairment charges 31 Dec. 2020	-70.1	0.0	-5,217.3	-48.0	-5,265.3
Book value, 1 Jan. 2020	75.8	122.7	2,706.8	110.3	2,817.0
Book value, 31 Dec. 2020	72.3	300.0	2,813.3	107.4	2,920.7

In 2021, a total of EUR 11.8 million (0.7) in borrowing costs was capitalised. The average interest rate applied to capitalisation was 2.11% (1.80).

Leases

EUR million	2021	2020
Costs related to short-term leases	5.8	2.9
Costs of leases in which the underlying asset is of low value	11.7	9.7
Interest expenses	3.6	3.5
Cash outflow for leases	33.9	31.9

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).

4.3. Biological assets

Accounting principles

Metsä Group's biological assets (growing trees) are measured at fair value less the estimated expenses from a sale. The fair value of a stand of trees is based on the current value of expected cash flows (income and expenses) and the change in fair value is recognised in operating result. Young trees are measured at acquisition cost. The measurement of the biological assets of Metsä Group's associated companies is in line with the Group's accounting principles. The fair value of biological assets is categorised at Level 3.

Key estimates and judgements

Fair value measurement

The management's estimates of the growth, felling and price development of trees, as well as the discount rates applied, have a key effect on the measurement of the fair value of trees. The calculation of income from felling and silvicultural costs is based on the prevailing price level and the company's view of the future trend in prices and costs. The calculations also take account of limits related to environmental protection.

EUR million	2021	2020
At 1 Jan.	3.2	2.9
Purchases during the period	0.0	0.0
Sales during the period	0.0	-0.1
Harvested during the period	0.0	-0.1
Gains/losses arising from changes in fair values	0.2	0.5
At 31 Dec.	3.5	3.2

The Group has two associated companies that own biological assets. The Group owns 19.8% of Finsilva Oyj, which in 2021 had forest assets to a fair value of EUR 417.2 million (405.8). The Group's share of this is EUR 82.5 million (80.2). The Group also owns 25% of Suomen Metsäsijoitus Oy, which had forest assets to a fair value of EUR 32.9 million (33.4). The Group's share of this is EUR 8.2 million (8.4).

Metsä Group has long-term forest lease agreements in Russia and Latvia. The agreements have not been recognised in the balance sheet, because their price or fixed price determination basis is not defined in the agreements. The price is determined by the government usually once a year or, in some cases, more frequently. In practice, the price follows the auction prices for short-term felling rights. Long-term felling rights are primarily used for ensuring the availability of wood.

4.4. 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. The Group classifies the shares in Pohjolan Voima Oyj as financial assets recognised at fair value in other comprehensive income. The changes in the fair value of these financial assets are presented in the fair value reserve, taking into account the tax impact. Changes in fair value are not transferred from equity to profit or 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 quoted shares are based on the share price on the balance sheet date. The fair values of shares other than publicly quoted shares are determined using various valuation models, such as the price levels or recent transactions and valuation methods based on the current 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 investment measured with the measurement model is the Group's investment in the shares of Pohjolan Voima Oyj, classified under Other investments. The value of these shares is measured as the current value of discounted cash flows. Key factors affecting cash flows include the price of electricity, inflation expectations and the discount rate. The energy prices for the first six years are rolling 12-month averages of electricity futures prices. The prices for subsequent years are based on a long-term market price forecast. The carrying amount of the Group's shares in Pohjolan Voima was EUR 191.6 million on the balance sheet on 31 December 2021. The carrying amount of these shares is estimated to change by EUR -10.9 million and EUR 12.1 million if the rate used for discounting the cash flows changes by 0.5 % from the rate estimated by the management. The carrying amount of the shares is estimated to change by EUR 80.2 million if the energy prices applied in the fair value calculation differ by 10 % from the rate estimated by the management.

EUR million	2021	2020
Quoted shares		0.0
Pohjolan Voima Oyj	191.6	199.4
Other non-quoted shares	6.3	6.1
Total	197.9	205.5

The most important shareholding of non-quoted companies consists of a 3.7% stake in Finnish energy company Pohjolan Voima Oy, that 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 the market prices.

The Group's B shares and G10 shares in Pohjolan Voima entitle it to an approximately 5.2% share of the energy generated by the Olkiluoto Nuclear Power Plant (OL1 and OL2) and a 84.0% share of the energy generated by Hämeenkyrön Voima, respectively. The Group also has an approximately 2.0% share of Olkiluoto 3, currently in deployment phase, through Pohjolan Voima's B2 shares.

In November 2020, Metsä Group participated in the shareholder loan of Pohjolan Voima Oyj with EUR 3.0 million, corresponding to its holding, to fund the completion of the Olkiluoto 3 project. The loan retains the current level of Metsä Group's portion of OL3 power. The unsecured loan does not have a maturity date, its repayment and interest payments depend on a decision of the debtor company's Board of Directors, and the loan capital can be converted into 54,427 new B2 series shares in Pohjolan Voima Oyj. The loan capital is repayable in the event of bankruptcy only with a priority poorer than that of all other creditors. The shareholder loan is recognised in Metsä Group's financial statements as an equity investment in Pohjolan Voima Oyj and measured at fair value in the same manner as a shareholding through other comprehensive income.

The holding of Pohjolan Voima Oyj shares is recognised quarterly at fair value for each series of shares using the discounted cash flow method. The WACC used was 3.14% (2.87) and for the Olkiluoto 3 in deployment phase 3.14% (3.87). The acquisition value of shares in Pohjolan Voima Oyj is EUR 45.0 million (45.0) and the fair value EUR 191.6 million (199.4). The fair value of nuclear power shares was EUR 166.9 million (175.9), hydroelectric power shares (A-shares) EUR 12.7 million (11.4) and G10-shares EUR 12.0 million (12.0).

The shareholder agreement of Pohjolan Voima prevents free selling of shares with others than shareholders.

4.5 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. The cost of debt is not included in the acquisition cost.

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

Key estimates and judgements

The Group regularly reviews its inventories for situations where the inventories contain downgraded items or their market value falls 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	531.6	460.9
Work in progress	20.7	20.0
Finished goods and goods for sale	430.8	439.9
Advance payments	55.2	45.2
Total	1,038.3	965.9

In 2021, EUR 1.5 million (0.6) was recorded as a cost when the book value of inventories was reduced to match their net realisation value. In the income statement, the expenses are entered under materials and services.

METSÄ GROUP
Annual Review 2021

4.6 Accounts receivables 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 determination of the impairment of trade receivables is subject to the model based on expected credit losses. 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 a customer's financial position weakens so that it affects their solvency, further impairment losses may need to be recognised for future periods. The impacts of the Covid-19 pandemic on determining the impairment of sales receivables is discussed in Note 5.6, Management of financial risks, counterparty risk.

EUR million	2021	2020
Current financial assets through profit and loss at fair value		
1 January	0.0	0.0
Transfers from non-current	3.8	
Change in fair value	0.2	
31 December	4.0	0.0
Investments in associated companies and joint ventures	2.6	1.9
Trade receivables from others		
Trade receivables	731.1	563.9
Impairment	-3.2	-4.1
Total	727.9	559.8
Loan receivables	2.9	3.8
Other receivables	101.6	64.8
Accrued income	43.5	50.1
Trade receivables and other receivables, total	882.6	680.4

Case-specific impairments and impairments determined by applying the model based on expected credit losses deducted from accounts receivables.

EUR million	2021	2020
At 1 Jan.	4.1	2.9
Increases	0.1	5.0
Decreases	-1.0	-3.8
At 31 Dec.	3.2	4.1

The Group has recognised EUR 0.0 million (1.3) of impairment losses from accounts receivables in 2021.

Age distributions of accounts receivables less impairments

EUR million	2021	2020
Not overdue	702.6	533.0
Overdue		
less than 30 days	26.8	27.5
between 31–60 days	0.6	1.2
between 61–90 days	0.5	0.3
between 91–180 days	-0.8	-1.3
more than 180 days	-1.9	-0.9
At 31 Dec.	727.9	559.8

4.7 Other liabilities

EUR million	2021	2020
Other non-current liabilities		
Advance payments	1.1	1.5
Accounts payables	0.6	
Other non-current liabilities		0.1
Accruals and deferred income	7.4	0.7
Total	9.1	2.3

4.8 Accounts payable and other liabilities

EUR million	2021	2020
Advance payments received	8.5	9.2
Accounts payable, Supply Chain Finance schemes	309.7	239.8
Other accounts payable	580.7	417.7
Other liabilities	69.0	52.3
Accrued expenses		
Customer discounts	61.7	58.8
Purchase-related items	190.5	162.8
Employee costs	112.1	92.8
Other accrued expenses	72.6	70.5
Total	1,404.9	1,103.8

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.

4.9 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 current 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 include mainly warranty provisions, liabilities resulting from disputes and employment affairs as well as other contractual obligations.

Key estimates and judgements

The determination of the amount of provisions and the criteria for their recognition involves the management's judgement.

EUR million	Restructuring	Environ-mental obligations	Other provisions	Total
1.1.2021	0.3	13.4	4.8	18.6
Translation differences	0.0		0.1	0.1
Increases	0.0	0.2	1.6	1.8
Utilised during the year		-1.6	-1.9	-3.5
Unused amounts reversed	0.0	-0.7		-0.7
Transfers between the categories		-0.5	0.5	0.0
Transfers to assets held for sale			-1.0	-1.0
31.12.2021	0.4	10.7	4.2	15.2
Long tem provisions	0.1	9.5	2.3	11.9
Short term provisions	0.2	1.2	1.9	3.4
Total	0.4	10.7	4.2	15.2

Transfers to assets classified as held for include Oy Hangö Stevedording Ab's other provisions. More information provided in note 7.2.

EUR million	Restructuring	Environ-mental obligations	Other provisions	Total
1.1.2020	2.7	14.0	5.2	21.8
Translation differences	0.0	0.0	-0.3	-0.3
Increases	0.3	0.2	1.5	1.9
Utilised during the year	-1.5	-1.7	-1.5	-4.8
Unused amounts reversed	-0.1	-0.1		-0.1
Transfers between the categories	-1.0	1.0		0.0
31.12.2020	0.3	13.4	4.8	18.6
Long tem provisions	0.1	11.9	3.8	15.8
Short term provision	0.3	1.5	1.1	2.8
Total	0.3	13.4	4.8	18.6

Environmental and other reservations are expected to mainly be discharged by 2030.

5. Capital structure and financial risks

5.1 Equity

Accounting principles

Members' capital consists of participation shares and additional shares.

Under IFRIC 2 Members' Shares in Co-operative Entities and Similar Instruments, shares for which the co-operative does not have an unconditional right to refuse redemption in accordance with the cooperative's rules are classified as financial liabilities. The rules of Metsäliitto Cooperative specify the maximum amount of members' capital that may be redeemed annually. One third of the distributable surplus shown on the most recently adopted balance sheet may be used for refunds of participation and additional shares. This share of members' capital is recognised as a financial liability in the financial statements. The part regarded as a financial liability of the interest paid on members' capital has been recognised in financial expenses.

Changes in members' capital

EUR million	Participation shares	Additional shares A	Additional shares B	Total
Members' capital at 1 Jan. 2021	228.9	943.6	149.9	1,322.4
Paid-in members' capital	7.9	109.1	4.5	121.5
Entry of interest on shares	0.6	43.4		44.1
Fund increase related to an equity bonus		7.0		7.0
Refund of share payments	-7.9	-36.3	-10.9	-55.1
Accelerated refund of participation shares	8.9			8.9
Transfers to current interest-bearing liabilities	1.0	-4.9	2.1	-1.8
Members' capital at 31 Dec. 2021	239.6	1,062.0	145.6	1,447.1
Members' capital at 1 Jan. 2020	218.1	834.4	146.4	1,199.0
Paid-in members' capital	8.1	77.3	12.6	98.0
Entry of interest on shares	0.9	46.8		47.6
Fund increase related to an equity bonus		5.3		5.3
Refund of share payments	-7.5	-19.9	-11.1	-38.5
Accelerated refund of participation shares	7.1			7.1
Transfers to current interest-bearing liabilities	2.2	-0.4	2.0	3.8
Members' capital at 31 Dec. 2020	228.9	943.6	149.9	1,322.4

Transfers to current interest-bearing liabilities

EUR million	Participation shares	Additional shares A	Additional shares B	Total
31.12.2021	29.4	130.2	17.8	177.4
Change	1.0	-4.9	2.1	-1.8
31.12.2020	30.4	125.3	19.9	175.6
Change	2.2	-0.4	2.0	3.8
31.12.2019	32.6	124.9	21.9	179.4

The par value of a participation share is EUR 1.00. The subscription price of a participation share is equivalent to its par value unless otherwise decided by the Representative Council or the Board of Directors, authorised by the Representative Council. A member's obligation to acquire participation shares is determined as specified in the by-laws of the Cooperative on the basis of the surface area and location of their forestland. No member is obligated to acquire more than 30,000 participation shares.

According to the by-laws of Metsäliitto, a member of Metsäliitto Cooperative whose participation shares have been paid for in full is entitled to subscribe for additional shares as per the conditions defined in the by-laws and specified by Metsäliitto's Board of Directors. According to the by-laws, there are four types of additional shares: A additional shares, B additional shares, Metsä1 additional shares, and Metsä2 additional shares. The par value of an additional share is EUR 1.00 (one euro). There is a minimum of one and a maximum of 1,500 million A additional shares. There is minimum of one and a maximum of 300 million B additional shares. There is no limit on the maximum number of Metsä1 additional shares and Metsä2 additional shares.

Until 31 December 2021, the quantity of A additional shares that a member has been able to subscribe for has been equal to the net amount of the wood trade income they have received from Metsäliitto Cooperative or equal to the amount of the interest on the member's participation shares or additional shares distributed by Metsäliitto Cooperative.

Until 31 December 2021, a member has been able to subscribe for the number of B additional shares they want. However, the maximum number of paid B additional shares that a member is able to have at any one time is 1.5 million.

As of 1 January 2022, the quantity of Metsä1 additional shares that a member can subscribe for will be equal to the net amount of the wood trade income they receive from Metsäliitto Cooperative or equal to the amount of the interest on the member's participation shares or additional shares distributed by Metsäliitto Cooperative.

Metsä1 additional shares will automatically convert to Metsä2 additional shares 10 years as of the end of the calendar year during which a Metsä1 additional share to be converted was subscribed for, or if it was transferred without consideration, received, unless their validity has been extended with a wood trade as specified in the cooperative's by-laws.

Upon application, an A additional share can be converted into a Metsä1 additional share so that the applicant is given several Metsä1 additional shares equal to the number of the A additional shares subject to the conversion in exchange for the A additional shares.

Based on a decision of the Board of Directors, Metsäliitto Cooperative is entitled to redeem all Metsä1 and/or Metsä2 additional shares or part of them. In the event of a possible redemption, the redemption price of an additional share is the share's par value, i.e. EUR 1.00 (one euro).

The amount paid for A additional shares, as well as for Metsä1 and Metsä2 additional shares, is returned to a member six (6) months, and the amount paid for B additional shares, eighteen (18) months, from the end of the financial period during which the membership ended or the Cooperative received the member's request in writing to reduce the number of additional shares, nevertheless accounting for what is specified in the Cooperative's by-laws with regard to the maximum amount of returns. Metsäliitto Cooperative's Board of Directors is entitled, based on its discretion, to delay the return of the amounts or par value paid for Metsä1 and Metsä2 additional shares during the Cooperative's operations, provided that the Board of Directors, based on an extensive review, considers the payment of the return to jeopardise the Cooperative's solvency or its retention at an adequate level.

By investing income from wood trades or interest on shares from Metsäliitto Cooperative in A additional shares until 31 December 2021, or in Metsä1 additional shares as of 1 January 2022, a member may earn equity bonuses in such a way that each additional share subscribed for includes a single equity bonus. An equity bonus means the right to subscribe for one new additional share for the wood trade receivable to be settled during the period of use equal to the two calendar years following the calendar year of the additional share subscription in such a way that the subscriber of the share themselves pays at least 75% of the subscription price of the new additional share, or a portion larger than this confirmed by the Board of Directors. The remaining portion of the subscription price of the additional share is paid for the member in the form of a fund increase by Metsäliitto. According to the authorisation approved by the Cooperative's Representative Council on 22 November 2021, a maximum of EUR 100 million of the Cooperative's surplus may be transferred to the additional members' capital as a fund increase of additional share subscriptions made with equity bonuses.

As of 1 January 2022, Metsäliitto Cooperative will not issue new A and B additional shares, excluding any A additional shares which a member may choose to subscribe for with equity bonuses earned prior to 2022 during their period of use.

Use of surplus and distribution of other funds

Surplus may be distributed to the members. Interest or other returns on Metsäliitto Cooperative's surplus may be distributed to the members. Funds may also be distributed to the members in other ways in accordance with Chapter 16, section 1 of the Cooperatives Act. The distribution of funds and the grounds for such distribution is decided on by the Cooperative's Representative Council. Based on a decision by the Representative Council, funds may also be distributed as additional shares of Metsäliitto Cooperative.

If surplus is returned to a member because of how the member has used Metsäliitto's services during their membership, the distribution is divided in proportion to the volume of industrial roundwood Metsäliitto Cooperative has received from its members during a minimum of two (2) and a maximum of six (6) of the most recently ended financial periods.

Interest on members' capital and reimbursement of surplus

After the balance sheet date, the Board of Directors has proposed that EUR 71.6 million be distributed as interest on members' capital (66.3) and EUR 8.0 million as reimbursement of surplus, determined based on the volume of industrial roundwood received in the last four full financial periods. The surplus reimbursement will be paid primarily as Metsä1 additional shares, but in money for the part corresponding to the tax-at-source to be carried in terms of each member. In 2021, EUR 7.2 million (8.4) of the interest on members' capital was treated as financial expenses.

Translation differences

Translation differences include the differences arising from the translation of subsidiaries' financial statements in currencies other than euro. The gains and losses from the hedging of net investments in such subsidiaries, excluding deferred taxes, are also included in translation differences, provided that the conditions for hedge accounting are met. The Group ended its equity hedging in 2016.

Translation differences

EUR million	2021	2020
In balance sheet		
SEK	-18.2	-9.4
RUB	-22.1	-24.7
GBP	-3.5	-8.5
PLN	-7.1	-6.6
SKK	11.2	11.2
USD	3.3	0.3
Others	2.1	1.7
Total	-34.2	-35.9
In consolidated statement of comprehensive income		
SEK	-14.0	21.5
RUB	3.5	-12.1
GBP	5.3	-4.0
PLN	-0.4	-3.8
USD	6.2	-5.9
Others	-1.3	-1.2
Total	-0.8	-5.5

Fair value and other reserves

EUR million	2021	2020
Fair value reserve	37.4	42.7
Revaluation reserve	1.2	1.2
Revaluation surplus	94.9	94.9
General reserve	71.4	71.4
Legal reserve and reserves stipulated by the rules	0.1	0.1
Reserve for invested unrestricted equity	501.2	501.1
Total	706.2	711.3

Fair value reserve

The reserve include the effective portion of fair value based on hedge accounting applied to interest, currency and commodity derivatives and the fair value change of other investments less deferred tax.

Revaluation reserve

Revaluation of land and bonds in non-current assets are recognised in the revaluation reserve.

Revaluation surplus

The revaluation surplus include the fair value of the previous holdings in Metsä Fibre which arised from the allocation of fair value of the acquired Metsä Fibre shares in 2009.

Legal reserve and reserves stipulated by the Articles of Association / Rules

Legal reserve and reserves stipulated by the Articles of Association have been created and accumulated as a result of resolution by the Annual General Meeting of shareholders/representatives.

Reserve for invested unrestricted equity

The reserve for invested unrestricted equity includes other investments in equity and the share issue price to a sum especially decided not to be recognised in the share capital.

Other comprehensive income, net of tax 2021

	Equity attributable to members of parent company					
EUR million	Translation differences	Fair value and other reserves	Retained earnings	Total	Non-controlling interest	Total
Items relating to adjustments of defined benefit plans			2.6	2.6	1.6	4.2
Fair value of financial assets through other comprehensive income		-4.0		-4.0	-3.7	-7.7
Income tax relating to items that will not be reclassified		0.8	-1.4	-0.6	-0.3	-0.9
Cash flow hedges						
Currency flow hedges						
gains and losses recorded in equity		-8.1		-8.1	-14.9	-23.0
transferred to adjust sales		-26.0		-26.0	-18.1	-44.1
transferred to adjust purchases		2.4		2.4		2.4
Interest flow hedges						
gains and losses recorded in equity		10.0		10.0	5.5	15.4
transferred to adjust financial items		2.1		2.1		2.1
Commodity hedges						
gains and losses recorded in equity		38.0		38.0	31.9	69.9
transferred to adjust purchases		-20.9		-20.9	-17.5	-38.5
Total		-2.5		-2.5	-13.1	-15.6
Translation differences	1.7			1.7	-2.6	-0.8
Income tax relating to items that may be reclassified		0.5		0.5	2.6	3.1
Other comprehensive income, net of tax	1.7	-5.2	1.3	-2.2	-15.5	-17.8

Other comprehensive income, net of tax 2020

	Equity attributable to members of parent company					
EUR million	Translation differences	Fair value and other reserves	Retained earnings	Total	Non-controlling interest	Total
Items relating to adjustments of defined benefit plans			-6.9	-6.9	-2.0	-8.9
Fair value of financial assets through other comprehensive income		-32.7		-32.7	-35.4	-68.1
Fair value of financial assets through other comprehensive income		6.5	1.5	8.0	7.6	15.6
Income tax relating to items that will not be reclassified						
Cash flow hedges						
gains and losses recorded in equity		3.7		3.7	15.0	18.7
transferred to adjust sales		3.8		3.8	0.3	4.1
transferred to adjust purchases		5.9		5.9		5.9
Interest flow hedges						
gains and losses recorded in equity transferred to adjust financial items		-1.8		-1.8	-0.9	-2.6
Commodity hedges						
gains and losses recorded in equity		-8.0		-8.0	-7.1	-15.1
transferred to adjust purchases		6.9		6.9	6.0	12.9
Total		10.5		10.5	13.3	23.9
Translation differences	-5.3			-5.3	-0.2	-5.5
Income tax relating to items that may be reclassified		-2.0		-2.0	-2.6	-4.6
Other comprehensive income, net of tax	-5.3	-17.7	-5.4	-28.4	-19.3	-47.7

5.2 Financial income and expenses

Accounting principles

Interest income and costs are recognised in amortised cost with the effective interest rate method.

Dividend yield is recognised when the right to a dividend has arisen.

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 rate differences		
Commercial items	12.6	-11.3
Hedging, no hedge accounting	-16.1	8.9
Others	-0.2	0.1
Exchange rate differences total	-3.7	-2.3
Other financial income		
Interest income on loans, other receivables and cash and cash equivalents	1.0	3.2
Dividend income		0.0
Other financial income total	1.0	3.2

EUR million	2021	2020
Interest and other financial expenses		
Valuation of financial assets and liabilities		
Gains and losses on financial assets or liabilities at fair value through profit or loss	1.2	1.4
Gains / losses on change in value of financial assets	0.0	0.0
Gains / losses on derivatives, no hedge accounting	0.0	0.1
Gains / losses on derivatives, in cash flow hedges	-2.0	0.3
Total	-0.8	1.7
Interest income from financial liabilities	-30.7	-45.7
Other financial expenses	-5.4	-5.7
Interest and other financial expenses total	-36.9	-49.7
Financial income and expenses total	-39.6	-48.8

In 2021, the change in the value of financial items included a one-off EUR -2.1 million change in value from the reversal of Metsä Tissue's EUR 75 million interest rate swaps, related to the early repayment of a long-term loan. The interest expenses of financial liabilities were lower in 2021, given that the interest expenses of ongoing investments were capitalised into the investments' acquisition cost.

5.3 Other financial assets

EUR million	2021	2020
Other non-current financial assets		
Loan receivables	4.2	1.1
Defined benefit plans (Note 3.5)	26.1	13.1
Other receivables and accrued income	4.2	3.4
Total	34.4	17.7

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 Group has classified short-term money market investments and bank assets that are in line with its financial policy as cash and cash equivalents. The determination of the impairment of cash and cash equivalents is subject to the model based on expected credit losses. The expected credit losses are reviewed for the following 12 months. The impacts of the Covid-19 pandemic on determining the impairment of cash and cash equivalents is discussed in Note 5.6, Management of financial risks, counterparty risk.

EUR million	2021	2020
Financial assets at fair value througt profit and loss	459.1	246.8
Current investments	321.8	347.3
Cash at bank and in hand	553.6	618.8
Total	1,334.5	1,212.9

5.5 Financial liabilities and interest-bearing net liabilities

Accounting principles

Financial liabilities are 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 financial liabilities

EUR million	2021	2020
Non-current interest-bearing financial liabilities		
Bonds	248.8	248.6
Loans from financial institutions	356.4	609.1
Lease liabilities	105.9	90.5
Other liabilities	150.0	150.0
Total	861.1	1,098.3

EUR million	2021	2020
Current interest-bearing financial liabilities		
Current portion of long-term debt	124.2	97.0
Current loans	-0.7	2.1
Other liabilities	177.5	173.8
Total	301.0	272.9
Assets classified as held for sale	1.5	17.4
Interest-bearing financial liabilities, total	1,163.6	1,388.7

Short-term loans include Oy Hangö Stevedoring Ab's intra-group interest-bearing loan of EUR 0.9 million transferred to assets classified as held for sale.

Interest-bearing financial assets

EUR million	2021	2020
Non-current interest-bearing financial assets		
Loan receivables	4.2	1.1
Other receivables	2.8	2.9
Total	7.0	4.0
Current interest-bearing financial assets		
Financial assets at fair value through profit and loss	459.1	246.8
Loan receivables	6.9	3.8
Current investments at amortised cost	321.8	347.3
Cash at bank and in hand	553.6	618.8
Total	1,341.3	1,216.7
Assets classified as held for sale, interest-bearing receivables		0.3
Interest-bearing financial assets, total	1,348.3	1,221.0
Interest-bearing net liabilities, total	-184.7	167.7

Changes in liabilities and current interest-bearing receivables reported in the cash flow from financing activities in 2021

			Non-cash impact changes				
EUR million	**1 Jan. 2021**	**Cash impact changes**	**Aquired / sold businesses**	**Changes in exchange rates**	**Changes in leases**	**Other changes**	**31 Dec. 2021**
Non-current interest-bearing financial liabilities including the current portion							
Bonds	248.6					0.2	248.8
Loans from financial institutions	681.9	-228.7	2.2	-0.2		-0.2	455.0
Lease liabilities	114.8	-30.3	0.9	0.1	46.8	-0.7	131.6
Other liabilities	150.0	-3.1				3.1	150.0
Total	1,195.3	-262.1	3.1	-0.2	46.8	2.4	985.4
Non-current non-interest bearing liabilities	2.3	6.0	0.6	0.1			9.1
Current interest-bearing liabilities							
Current liabilities	2.1	-1.2		0.0		-1.6	-0.7
Other liabilities	173.8	1.8				1.8	177.5
Total	175.9	0.6	0.0	0.0	0.0	0.2	176.7
Current interest-bearing loan receivables	-3.8	-0.7		-4.0		1.6	-6.9
Total	1,369.8	-256.2	3.7	-4.1	46.8	4.2	1,164.3

Changes in liabilities and current interest-bearing receivables reported in the cash flow from financing activities in 2020

			Non-cash impact changes				
EUR million	**1 Jan. 2020**	**Cash impact changes**	**Aquired / sold businesses**	**Changes in exchange rates**	**Changes in leases**	**Other changes**	**31 Dec. 2020**
Non-current interest-bearing financial liabilities including the current portion							
Bonds	248.5					0.1	248.6
Loans from financial institutions	727.6	-47.7	0.4	0.5		1.1	681.9
Pension loans	25.3	-25.3					0.0
Lease liabilities	117.1	-28.4		-0.9	27.0		114.8
Other liabilities	150.0						150.0
Total	1,268.6	-101.5	0.4	-0.4	27.0	1.2	1,195.3
Non-current non-interest bearing liabilities	2.3	0.0		0.1			2.3
Current interest-bearing liabilities							
Current liabilities	7.0	-5.0				0.1	2.1
Other liabilities	179.5	1.9				-7.5	173.8
Total	186.4	-3.1	0.0	0.0	0.0	-7.4	175.9
Current interest-bearing loan receivables	-1.3	-0.5				-1.9	-3.8
Total	1,455.9	-105.2	0.4	-0.3	27.0	-8.0	1,369.8

Bonds

EUR million	**Interest, %**	**2021**	**2020**
2017–2027	2.750	248.8	248.6

In September 2017, Metsä Board issued an unsecured bond of EUR 250 million. The bond matures on 29 September 2027 and carries a fixed coupon rate of 2.75%. The loan has a senior status.

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 Group. 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 Group'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 specialised in finance and functions as the Group's internal bank. Metsäliitto Cooperative's holding is 100% 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 foreign currency exposure of Metsä Group 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 revenue 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 62%, share of Swedish krona is 18% and share of pound is 8%. 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 essential currencies, where Metsä Group has currency risk are CAD, DKK, NOK and RUB. The hedging policy is to keep the balance sheet exposure and 50% of annual cash flow of contracted or estimated currency flows consistently hedged. The amount of hedging may deviate from the normal level by 40% in either direction. 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: 7.3) being 114% of the hedging norm (102). During the reporting period, the hedging level has varied between 7 and 9 months (6–8) being between 101 and 114% of the norm (96–104). The dollar's hedging level was 8.2 months (6.7) being 116% of the hedging norm (93). The Swedish krona's hedging level was 9.5 months (10.1) being 139% of the hedging norm (138). The pound's hedging level was 7.5 months (7.4) being 100% of the hedging 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 the 50% 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 total amount of limits set for the Group companies' foreign currency risk is EUR 22.4 million (32.4) and the sum of VaR figures of the Group companies is at the end of the reporting period EUR 8.4 million (6.1) and average during the period has been EUR 5.6 million (6.7).

Hedging of foreign exchange transaction exposure

31.12.2021	Annual transaction exposure								
	USD	GBP	SEK	NOK	DKK	RUB	Other long	Other short	Total
Transaction exposure, net (mill. currency units)	1,957	185	-5,222	832	481	-8,107			
Transaction exposure, net (EUR million)	1,727	220	-509	83	65	-95	69		2,769
Transaction exposure hedging (EUR million)	-1,188	-138	404	-48	-30	54	0		-1,860
Hedging at the end of the year (months)	8.2	7.5	9.5	6.8	5.6	6.8	0.0		8.1
Average hedging in 2021 (months)	7.3	7.4	10.2	6.8	5.7	7.2	0.9		7.6
Average rate of hedging at the end of the year	1.1609	0.8567	10.2066						

31.12.2020	Annual transaction exposure								
	USD	GBP	SEK	NOK	DKK	RUB	Other long	Other short	Total
Transaction exposure, net (mill. currency units)	1,697	187	-4,360	838	572				
Transaction exposure, net (EUR million)	1,383	208	-434	80	77	-71	55		2,309
Transaction exposure hedging (EUR million)	-770	-128	364	-45	-38	44	-24		-1,414
Hedging at the end of the year (months)	6.7	7.4	10.1	6.8	5.9	7.5	5.3		7.3
Average hedging in 2020 (months)	6.9	7.2	10.3	6.3	6.1	1.5	7.3		7.3
Average rate of hedging at the end of the year	1.1911	0.9041	10.5628						

FOREIGN CURRENCY BREAKDOWN OF CURRENCY EXPOSURE, %

Net investments in a foreign entity

31.12.2021	Equity exposure				
	USD	GBP	SEK	Others	Total
Equity exposure (mill. currency units)	112	74	7,787		
Equity exposure (EUR million)	99	88	760	130	1,077

31.12.2020	Equity exposure				
	USD	GBP	SEK	Others	Total
Equity exposure (mill. currency units)	93	66	5,886		
Equity exposure (EUR million)	76	73	587	119	855

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 Swedish krona and the British pound. 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 interest duration norm based on the Group's financial policy is twelve months. The average duration of loans was high 45.6 months (2020: 39.9) at the end of the year. During the reporting period duration has varied between 39 and 51 months (39–44). Of interest-bearing liabilities 13% (16) is subjected to variable rates and the rest to fixed rates and the average interest rate at the end of 2021 was 2.8% (2.7). At the end of 2021, an increase of one per cent in interest rates would decrease interest rate costs of the next 12 months by EUR 7.0 million (7.0).

The Group is applying cash flow hedge accounting in accordance with IFRS 9 to all interest rate swaps by which floating-rate financing has been converted to fixed-rate financing. The gross nominal volume of interest rate swaps at the time of financial statements is EUR 766.4 million (487.6) and the maturity of interest rate swap contracts varies between 1–11 years (1–10). The amount of interest rate swaps has increased through EUR 400 million agreements to hedge the loans of Metsä Fibre Kemi's investment.

Interest rate risk

	2021	2020
Loan amount (EUR million)	987	1 196
Duration (months)	45.6	39.9
Average interest rate (%)	2.8	2.7
Interest rate sensitivity (EUR million)	-7.0	-7.0

Re-pricing structure of loans

EUR million	31.12.2021
1–4/2022	-96
5–8/2022	113
9–12/2022	264
2023	170
2024	176
2025	276
>2025	1,276

EUR million	31.12.2020
1–4/2021	51
5–8/2021	-15
9–12/2021	160
2022	70
2023	119
2024	65
>2024	746

Interest rate sensitivity is an estimate of the effect of an interest rate change of 1% on net interest cost based on year-end exposure. The duration includes committed credit facilities of EUR 1,192 million and attached interest rate swaps related to investments of Metsä Board and Metsä Fibre. These are also included in the re-pricing distribution of loans. Interest rate risk exposure does not include the part of Metsäliitto Cooperative subscribed capital that is recognized as short-term interest-bearing liability.

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 and risk management policy approved by Board of Directors of Metsä Group companies. 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 is applied to all commodity hedging. According to the commodity hedging policy an 80% 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% in either direction. Hedges based on previous policy are gradually maturing. The Group Board of Directors makes significant strategic decisions.

Metsä Group'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 Group 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. Approximately a quarter of mills' purchase of fuel is based on natural gas. Metsä Group is hedging the price risk of natural gas purchases as financial hedges and by physical fixed-price contracts. Metsä Group 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 Group is not hedging its pulp price risk.

Hedging of electricity price risk exposure

GWh	31.12.2021	31.12.2020
Electricity exposure, net 2022	1,474	1,758
Electricity hedging 2022	258	652
Hedging at the end of the year 2021 (%)	17	37
Average price of hedging at the end of the year (EUR/MWh)	34.53	29.68

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. The calculation includes hedging of electricity bought. Metsä Fibre is not included, as it does not hedge its surplus electricity position.

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% of the Group's liquidity requirement for the first 12 months and 50–100% of the following 12–24 months liquidity requirement. The objective is that at the most 20% of the Group's loans, including committed credit facilities, is allowed to mature within the next 12 months and at least 25% 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 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. The Group is using short-term working capital financing related to account receivables and account payables. The debt financing of Metsä Fibre's Kemi investment of EUR 1,000 million consists of EUR 500 million 10 year-loan guaranteed by Finnvera with an 80% risk share, EUR 200 million 10-year loan guaranteed by the Swedish Eksportkreditnämnd (EKN) with a 95% risk share, EUR 200 million 15-year loan by the European Investment Bank (EIB) and EUR 100 million five-year Green Term Loan with eight commercial banks. The draw downs of the loan package have not yet started. Metsä Fibre has renewed its unused EUR 200 million committed credit facility (RCF) until 2026. Metsä Board has for Husum investments loan agreements of totally EUR 225.0 million, of which EUR 33.2 million has been drawn down and EUR 191.8 million has not been drawn down.

Metsä Group's liquidity has remained strong. The available liquidity was EUR 3,126.2 million (2,004.7) at the end of the reporting period, of which EUR 1,334.5 million (1,212.9) was liquid funds and investments and EUR 1,791.8 million (791.8) committed credit facilities. The Group had also at its disposal short-term, uncommitted commercial paper programmes and credit lines amounting to EUR 161.5 million (161.5) and undrawn pension premium (TyEL) funds of EUR 371.4 million (356.9). At the end of 2021, the liquidity reserve covers fully the forecasted financing need of 2022 and

2023. 5% (15) of long-term loans and committed facilities fall due in a 12 month period and 74% (64) have a maturity of over four years. The average maturity of long-term loans is 4.3 years (4.4). The share of short-term financing of the Group's interest bearing liabilities is 15% (13).

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. Liquidity reserve is partially maintained in the form of committed credit facilities, although the strengthened liquidity position has increased the counterparty risk during the last years. 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 especially the used commercial paper counterparties. Derivatives trading is regulated by the standardised ISDA contracts made with the counterparties. The Group has applied expected credit loss model in accordance with IFRS 9 to calculate the impairment of financial assets.

The Group's accounts receivable carry a counterparty risk that the Group may incur losses should the counterparty be unable to meet its commitments. Credit risk attached to accounts receivable is managed on the basis of the credit risk management policies approved by operative management. Accounts receivable performance is followed by Group Credit Risk Management Team and reported monthly to 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. Operative management reviews and sets all major credit limits which are not supported by credit insurance and/ or other security according to Credit Risk Management Policies. 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.

The portion of overdue client receivables of all sales receivables of Metsä Group is at the time of financial statements 3.0% (4.5), of which 0.0% (0.0) is overdue between 90–180 days and 0.0% (0.4) over 180 days. Additionally Metsä Group 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 valid reasons. The specification of doubtful receivables is in the Notes no. 4.6. 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 net of credit insurance on accounts receivables from external debtors outstanding at period end. The impact of COVID-19 pandemic was also taken into account. The expected credit loss percentages are business area specific and vary between 0.0–0.4% (0.0–0.5).

The geographical structure of the accounts receivable is diversified and is reflecting the external sales structure presented in the Segment information. Largest sources of credit risk exist in Finland, Germany, United Kingdom, Italy, Hong Kong, Sweden, USA, China, Poland and France. Top ten countries represent around 68% of (67) external customer receivables. The share of largest individual customer (individual companies or groups of companies under common ownership) credit risk exposure of the Group at the end of 2021 was about 7% (4) of total accounts receivable. About 2% (22) of accounts receivable was owed by ten largest customer groups (individual companies or groups of companies under common ownership). At the end of 2021, Metsä Group's trade receivables were for a very large part covered by credit insurance or other security, such as letters of credit.

Managing the capital

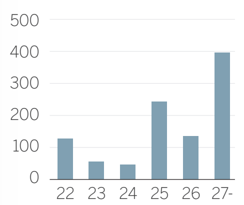
Terms capital and capital structure are used to describe investments made in the company by its owners and retained earnings (together equity) and debt capital (liabilities) as well as the relation between them. In managing its capital structure, the Group aims at maintaining an efficient capital structure that ensures the Group's operational conditions in financial and capital markets in all circumstances despite the fluctuations typical to the sector. Certain central target values, which correspond to standard requirements set by financing and capital markets, have been defined for the capital structure. The Group's capital structure is regularly assessed by the Group's Board of Directors and its Audit Committee.

The Group monitors the development of its capital structure mainly through equity ratio. The objective of the Group on long term basis is to maintain its equity ratio at the minimum level of 40% (temporary deviation allowed).

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
Net gearing ratio, %	-4	4
Equity ratio, %	61.1	57.2
Interest-bearing liabilities	1,163.6	1,388.7
- interest-bearing financial assets	1,348.3	1,221.0
Interest-bearing net liabilities	-184.7	167.7.
Member's funds	3,574.4	3,091.5
+ non-controlling interests	1,240.3	822.7
Total	4,814.6	3,914.2
Total assets	7,891.4	6,851.3
- advanced payments received	9.6	10.7
Total	7,881.8	6,840.6

REPAYMENT OF NON-CURRENT LOANS
EUR million



The debt financing of Metsä Group is arranged so that Metsä Board, Metsä Fibre and Metsä Tissue each have required loans to cover the financial needs of the sub-Groups formed by them and that the loans of the companies in question were independent of each other. Likewise Metsäliitto Cooperative has separately arranged financing to cover the financial needs of the parent company and Metsä Forest and Metsä Wood.

In Metsä 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 1,000 million financing package of Metsä Fibre Kemi investment net gearing may not exceed 110% until September 2021 and since then 100% in relation to the share capital. Accordingly the covenant conditions of EUR 225 million financing package of Metsä Board Husum investments net gearing may not exceed 100% in relation to the share capital. All Group companies have been in compliance with its covenants during the accounting periods 2021 and 2020. In case Metsäliitto Cooperative or any of its subsidiaries could not meet its obligations as defined by the above mentioned key ratios 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.

Market risk sensitivity 31 December

IMPACT ON EQUITY EXPOSURE AND ANNUAL TRANSACTION EXPOSURE

	Impact on financial assets and liabilities		Impact on net equity of foreign entities		Impact on annual transaction exposure (cash flow)		Impact on annual transaction ex-posure (cash flow) incl. hedging	
EUR million	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
Interest rate risk (100 bp rise in interest rates)								
Effect on profit	-3.1	-1.3			7.0	7.0	33.4	23.3
Effect on other change in equity	29.5	17.6						
Commodity risk (electricity price + 20%)								
Effect on profit					-11.2	-3.1	-8.9	-0.7
Effect on other change in equity	2.2	2.4						
FX risk (USD - 10%)								
Effect on profit	-3.8	1.2			-172.7	-138.3	-54.0	-61.4
Effect on other change in equity	102.3	63.1	-9.9	-7.6				
FX risk (GBP - 10%)								
Effect on profit	1.0	0.3			-22.0	-20.8	-8.3	-8.0
Effect on other change in equity	10.9	10.3	-8.8	-7.3				
FX risk (SEK - 10%)								
Effect on profit	1.3	0.4			50.9	43.4	10.6	7.0
Effect on other change in equity	-36.4	-31.8	-74.3	-57.8				

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

IFRS 7 requires an entity to disclose a sensitivity analysis for each type of market risk to which the entity is exposed at the reporting date, showing how profit or loss and equity would have been affected by changes in the relevant risk variable that were reasonably possible at that date. The Group has recognized interest rates, electricity prices and foreign exchange rates as its key market risks and has set 1% interest rate rise, 20% rise in electricity price and 10% weakening of USD, GBP and SEK as reasonably possible risk variables. These currencies represent almost 90% 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.

Maturity of repayment and interest payment of financial liabilities 2021

EUR million	2022	2023	2024	2025	2026	2027–	Total
Bonds and debentures						248.8	248.8
Loans from financial institutions	98.5	31.8	26.8	176.4	22.2	99.2	455.0
Lease liabilities *)	28.9	23.1	19.0	15.6	12.5	47.9	147.0
Other non-current interest-bearing liabilities				50.0	100.0		150.0
Non-current interest-bearing liabilities, total	127.4	54.9	45.8	242.0	134.7	396.0	1,000.8
Current interest-bearing liabilities	176.7						176.7
Financial liabilities total	304.2	54.9	45.8	242.0	134.7	396.0	1,177.5
Financial expenses total	19.3	18.2	18.0	16.9	11.8	7.2	91.4
Guarantees agreements	6.9	2.4	5.2	0.2	0.0	1.3	16.0
Derivative financial instrument							
Currency derivatives, liabilities	2,977.5						2,977.5
Currency derivatives, assets	-2,946.4						-2,946.4
Interest rate swaps, liabilities	4.2	2.7	1.6	0.8	0.4	0.5	10.0
Interest rate swaps, assets	0.5	0.7	-0.3	-0.9	-1.3	-4.1	-5.5
Commodity derivatives, liabilities	0.1						0.1
Commodity derivatives, assets	-36.1						-36.1
Derivatives, net of cash	-0.3	3.4	1.3	-0.1	-1.0	-3.7	-0.4

Maturity of repayment and interest payment of financial liabilities 2020

EUR million	2021	2022	2023	2024	2025	2026–	Total
Bonds and debentures						248.6	248.6
Loans from financial institutions	72.8	102.3	181.6	27.1	175.7	122.4	681.9
Lease liabilities *)	27.3	20.2	15.4	12.3	10.3	44.7	130.2
Other non-current interest-bearing liabilities					50.0	100.0	150.0
Non-current interest-bearing liabilities, total	100.1	122.5	196.9	39.4	236.1	515.7	1,210.8
Current interest-bearing liabilities	175.9						175.9
Financial liabilities total	276.0	122.5	196.9	39.4	236.1	515.7	1,386.7
Financial expenses total	22.2	21.0	18.7	18.0	16.9	19.0	115.9
Guarantees agreements	2.1	6.9	2.1	3.3	0.2	2.4	17.1
Derivative financial instrument							
Currency derivatives, liabilities	2,483.3						2,483.3
Currency derivatives, assets	-2,518.7						-2,518.7
Interest rate swaps, liabilities	5.8	4.8	4.1	3.3	2.1	2.7	22.7
Commodity derivatives, liabilities	0.4	0.1					0.5
Commodity derivatives, assets	-4.8						-4.8
Derivatives, net of cash	-34.1	4.9	4.1	3.3	2.1	2.7	-17.0

*) The cash flows of lease liabilities include both payments and the finance costs.

On 31 December 2021, the balance sheet value of lease agreement liabilities was EUR 131.6 million (114.8). On 31 December 2021, the balance sheet value of currency derivative liabilities EUR 44.0 million (18.5), while that of currency derivative receivables was EUR 12.9 million (53.9).

5.7 Fair values of financial assets and liabilities

Classification and fair value of financial assets and liabilities in 2021

EUR million	Note	Fair value through profit and loss	Fair value throuhg other comprehensive income	Amortised cost	Book value total
Financial assets					
Other non-current investments	4.4		197.9		197.9
Other non-current financial assets	5.3			34.4	34.4
Accounts receivables and others	4.6	4.0		878.6	882.6
Cash and cash equivalent	5.4	459.1		875.4	1,334.5
Derivative financial instruments	5.7	2.0	52.5		54.5
Assets classified as held for sale	7.1			2.1	2.1
Total		465.1	250.4	1,790.5	2,506.0
Fair value total		465.1	250.4	1,790.5	2,506.0
Financial liabilities					
Non-current interest-bearing liabilities	5.5			861.1	861.1
Other non-current liabilities	4.7			8.0	8.0
Current interest-bearing liabilities	5.5			301.0	301.0
Accounts payable and others	4.8			1,284.3	1,284.3
Derivative financial instruments	5.7	1.9	52.2		54.1
Liabilities classified as held for sale	7.1			5.5	5.5
Total		1.9	52.2	2,459.8	2,513.9
Fair value total		1.9	52.2	2,490.3	2,544.4

Classification and fair value of financial assets and liabilities in 2020

EUR million	Note	Fair value through profit and loss	Fair value throuhg other comprehensive income	Amortised cost	Book value total
Financial assets					
Other non-current investments	4.4	0.0	205.5		205.5
Other non-current financial assets	5.3			17.7	17.7
Accounts receivables and others	4.6			680.4	680.4
Cash and cash equivalent	5.4	246.8		966.1	1,212.9
Derivative financial instruments	5.7	2.4	56.3		58.7
Assets classified as held for sale	7.1			0.4	0.4
Total		249.3	261.8	1,664.5	2,175.6
Fair value total		249.3	261.8	1,664.5	2,175.6
Financial liabilities					
Non-current interest-bearing liabilities	5.5			1,098.3	1,098.3
Other non-current liabilities	4.7			0.8	0.8
Current interest-bearing liabilities	5.5			272.9	272.9
Accounts payable and others	4.8			1,001.7	1,001.7
Derivative financial instruments	5.7	1.7	40.0		41.7
Liabilities classified as held for sale	7.1			17.5	17.5
Total		1.7	40.0	2,391.3	2,433.0
Fair value total		1.7	40.0	2,427.0	2,468.7

Accounts receivables and other receivables do not include advance payments, deferred taxes or periodisations of employee costs (Note 4.6). Accounts payable and other financial liabilities do not include advance payments, deferred tax liabilities or periodisations of employee costs (Note 4.8).

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 0.0–6.0% (0.0–6.0). The fair value of accounts and other receivables and account payables and other liabilities are not essentially deviating from the carrying amounts in the balance sheet.

Fair value hierarchy of financial assets and liabilities

Accounting principles

Financial assets and financial liabilities measured at fair value are classified as follows:

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

Level 2 Fair value is based on inputs observable for the asset either directly or indirectly.

Level 3 Fair value is based on company estimates and not on market data.

The fair value measurement of financial assets at fair value recognised under other items of comprehensive income is described in Note 4.4.

The fair values of electric power, natural gas, propane and fuel oil derivatives are measured on the basis of publicly quoted market prices (Level 1). The fair values currency forwards and currency options are determined on the basis of market prices at the closing date of the reporting period. The fair values of interest rate swaps are measured applying a method based on the current value of future cash flows, supported by market interest rates on the closing date of the reporting period and other market inputs (Level 2). The fair value of financial instruments not traded in an active market is determined using various measurement methods. Discretion is used in choosing the methods and making assumptions based primarily on the market conditions prevailing on the closing date of the reporting period (Level 3).

Fair value hierarchy of financial assets and liabilities

2021

EUR million	Note	Level 1	Level 2	Level 3	Total
Financial assets recognised at fair value					
Other non-current financial assets	4.4			197.9	197.9
Current financial assets through profit and loss at fair value	5.4	463.0			463.0
Derivative financial assets	5.7	13.4	41.1		54.5
Financial liabilities recognised at fair value					
Derivative financial liabilities	5.7	0.1	54.0		54.1
Financial assets not recognised at fair value					
Cash and cash equivalent	5.4		875.4		875.4
Financial liabilities not recognised at fair value					
Non-current interest-bearing financial liabilities	5.5		891.3		891.3
Current interest-bearing financial liabilities	5.5		301.3		301.3

2020

EUR million	Note	Level 1	Level 2	Level 3	Total
Financial assets recognised at fair value					
Other non-current financial assets	4.4	0.0		205.5	205.5
Current financial assets through profit and loss at fair value	5.4	246.8			246.8
Derivative financial assets	5.7	2.8	55.9		58.7
Financial liabilities recognised at fair value					
Derivative financial liabilities	5.7	0.5	41.2		41.7
Financial assets not recognised at fair value					
Cash and cash equivalent	5.4		966.1		966.1
Financial liabilities not recognised at fair value					
Non-current interest-bearing financial liabilities	5.5		1,133.5		1,133.5
Current interest-bearing financial liabilities	5.5		273.4		273.4

Other non-current financial assets measured at fair value based on level 3

EUR million	2021	2020
Opening balance	205.5	271.1
Total gains and losses in profit and loss	-0.1	-0.2
Total gains and losses in other comprehensive income	-7.7	-68.1
Purchases	0.4	3.0
Settlements	-0.1	-0.3
Transfers to assets classified as held for sale	0.0	0.0
Closing balance	197.9	205.5

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 Group currently applies hedge accounting only to cash flows. 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 with floating interest rates from 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), propane, light fuel oil, heavy fuel oil 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 commodity derivatives are determined on the basis of publicly quoted market prices.

Management of financial risks and effectiveness of hedging

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. Early repayments of loans may cause an inefficiency situation where the hedging interest rate swaps are reversed or taken out from hedge accounting, and the change in fair value is recognised as financial items in comprehensive income.

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

Derivatives 2021

	Nominal value	Fair value			Fair value	
EUR million		**Assets**	**Liabilities**	**Fair value total**	**Fair value through profit and loss**	**Fair value through other comprehensive income**
Interest rate swaps	766.4	5.5	10.0	-4.5		-4.5
Interest rate derivatives, total	766.4	5.5	10.0	-4.5	0.0	-4.5
Currency forward agreements	2,933.5	12.9	44.0	-31.1	0.2	-31.2
Currency derivatives, total	2,933.5	12.9	44.0	-31.1	0.2	-31.2
Electricity derivatives	5.4	5.8		5.8		5.8
Oil derivatives	17.1	3.7	0.0	3.7		3.7
Natural gas and propane derivatives	17.9	26.7	0.1	26.6		26.6
Commodity derivatives, total	40.4	36.1	0.1	36.0	0.0	36.0
Derivatives total	3,740.3	54.5	54.1	0.4	0.2	0.3

Derivatives 2020

	Nominal value	Fair value			Fair value	
EUR million		**Assets**	**Liabilities**	**Fair value total**	**Fair value through profit and loss**	**Fair value through other comprehensive income**
Interest rate swaps	487.6		22.7	-22.7	0.0	-22.7
Interest rate derivatives, total	487.6	0.0	22.7	-22.7	0.0	-22.7
Currency forward agreements	2,464.8	53.9	18.5	35.5	0.8	34.7
Currency derivatives, total	2,464.8	53.9	18.5	35.5	0.8	34.7
Electricity derivatives	12.1	0.6	0.4	0.2		0.2
Oil derivatives	12.3	1.3	0.1	1.2		1.2
Natural gas and propane derivatives	10.9	2.9	0.0	2.8		2.8
Commodity derivatives, total	35.3	4.8	0.5	4.3	0.0	4.3
Derivatives total	2,987.7	58.7	41.7	17.0	0.7	16.3

Changes in fair values and profit and loss impacts will be presented in note 5.1

Economic effect of the net settlement of instruments under master netting agreements executed in 2021

	Financial derivatives on-balance sheet	Assets and liabilities related to master netting agreements	Net risk
Derivative assets	54.5	19.4	35.1
Derivative liabilities	-54.1	-19.4	-34.6

Economic effect of the net settlement of instruments under master netting agreements executed in 2020

	Financial derivatives on-balance sheet	Assets and liabilities related to master netting agreements	Net risk
Derivative assets	58.7	28.4	30.3
Derivative liabilities	-41.7	-28.4	-13.3

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.

Maturity distributions of derivatives 2021

EUR million	1–6 months	6–12 months	1–5 years	Over 5 years	Cash flow subject to hedging in total
Interest-rate derivatives subject to hedge accounting	22.1	22.1	403.6	318.7	766.4
Currency derivatives subject to hedge accounting	1,419.3	389.4			1,808.7
Currency derivatives not subject to hedge accounting	226.0				226.0
Commodity derivatives subject to hedge accounting	20.7	19.7			40.4

Maturity distributions of derivatives 2020

EUR million	1–6 months	6–12 months	1–5 years	Over 5 years	Cash flow subject to hedging in total
Interest-rate derivatives subject to hedge accounting	22.1	22.1	351.7	89.7	485.6
Interest-rate derivatives not subject to hedge accounting	0.1	2.0			2.0
Currency derivatives subject to hedge accounting	1,139.8	228.6			1,368.4
Currency derivatives not subject to hedge accounting	247.3				247.3
Commodity derivatives subject to hedge accounting	17.2	16.1	1.9		35.3

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 issued 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 judgements

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 forecasts 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	-160.1	-64.9
Income taxes for previous periods	-11.2	-0.1
Change in deferred taxes	-3.2	-2.9
Other	-0.1	-0.1
Total	-174.7	-67.9

The taxes of previous financial periods in 2021 include EUR -9.6 million in taxes recognised on the basis of the tax audit conducted at Italian subsidiaries.

Income tax reconciliation

EUR million	2021	2020
Result before taxes	831.7	330.1
Computed tax at Finnish statutory rate	166.3	66.0
Difference between Finnish and foreign rates	-3.4	1.8
Tax exempt income	-5.2	-2.7
Non-deductible expenses	3.5	3.5
Impairment of goodwill		
Restatement of deferred taxes from previous years	1.3	1.3
Previous years tax losses used during the period	-1.5	-1.5
Unrecognised deferred tax receivables from tax losses	0.1	-0.1
Share of profit from associated companies and joint ventures	0.5	-0.7
Income taxes for previous periods	11.2	0.1
Other	1.9	0.4
Income tax expense	174.7	67.9
Effective tax rate, %	21.0	20.6

Taxes included in other comprehensive income 2021

EUR million	Before tax	Tax effect	After tax
Items that will not be reclassified to profit and loss			
Items relating to adjustments of defined benefit plans	4.2	-2.4	1.8
Fair value of financial assets through other comprehensive income	-7.7	1.5	-6.2
Total	-3.5	-0.9	-4.4
Items that may be reclassified subsequently to profit and loss			
Cash flow hedges	-15.6	3.1	-12.6
Currency translation differences	-0.8		-0.8
Other items			
Total	-16.4	3.1	-13.4

Taxes included in other comprehensive income 2020

EUR million	Before tax	Tax effect	After tax
Items that will not be reclassified to profit and loss			
Items relating to adjustments of defined benefit plans	-8.9	2.0	-6.9
Fair value of financial assets through other comprehensive income	-68.1	13.6	-54.5
Total	-77.0	15.6	-61.4
Items that may be reclassified subsequently to profit and loss			
Cash flow hedges	23.9	-4.6	19.2
Currency translation differences	-5.5		-5.5
Other items			
Total	18.4	-4.6	13.7

Deferred tax assets and tax liabilities

Reconciliation of deferred tax assets and liabilities in 2021

EUR million	1 January 2021	Charged in income statement	Charged in other items of comprehensive income	Translation differences and others	31 December 2021
Deferred tax assets in balance sheet					
Pension obligations and other provisions	15.3	-0.1	0.4	-0.3	15.4
Intercompany margins	11.8	3.2		0.2	15.2
Unused tax losses and tax credit	21.5	-5.0		0.1	16.6
Financial instruments	8.9	0.0	1.8	-0.1	10.6
Other temporary differences	7.8	3.7	0.0	0.1	11.5
Total	65.3	1.9	2.2	0.0	69.4
Offset from deferred tax liabilities	-38.2	10.4	-4.0	0.1	-31.7
Deferred tax assets on the balance sheet	27.1	12.3	-1.7	0.1	37.7
Deferred tax liabilities in balance sheet					
Pension obligations	1.4	1.4	5.2	0.1	8.1
Appropriations and untaxed provisions	235.5	5.9		-1.2	240.2
Acquired net assets and biological assets recognised at fair value	48.3	-3.3			45.0
Other investments recognised at fair value	28.8		-1.5		27.3
Financial instruments	7.8	0.4	-1.2	0.0	6.9
Hedge of net investments in foreign operations	0.0	0.2		-0.2	0.0
Other temporary differences	6.3	0.4	0.0	0.0	6.7
Total	328.1	5.1	2.3	-1.3	334.2
Offset from deferred tax assets	-38.2	10.4	-4.0	0.1	-31.7
Deferred tax liabilities on the balance sheet	289.9	15.5	-1.6	-1.3	302.5

Reconciliation of deferred tax assets and liabilities in 2020

EUR million	1 January 2020	Charged in income statement	Charged in other items of comprehensive income	Translation differences and others	31 December 2020
Deferred tax assets in balance sheet					
Pension obligations and other provisions	15.1	-1.3	1.5	0.1	15.3
Intercompany margins	12.5	-0.4		-0.3	11.8
Other investments recognised at fair value	0.0		0.0		0.0
Unused tax losses and tax credit	9.1	12.5		0.0	21.5
Financial instruments	9.9	0.0	-1.3	0.2	8.9
Other temporary differences	11.7	-3.2	-0.5	-0.2	7.8
Total	58.4	7.5	-0.4	-0.2	65.3
Offset from deferred tax liabilities	-30.7	-9.1	2.6	-1.0	-38.2
Deferred tax assets on the balance sheet	27.7	-1.7	2.3	-1.1	27.1
Deferred tax liabilities in balance sheet					
Pension obligations	2.7	-0.6	-0.5	-0.1	1.4
Appropriations and untaxed provisions	221.5	12.4	0.0	1.6	235.5
Acquired net assets and biological assets recognised at fair value	50.8	-2.5			48.3
Other investments recognised at fair value	42.5		-13.6		28.8
Financial instruments	4.1	0.3	3.3	0.1	7.8
Hedge of net investments in foreign operations	0.0	-0.6	0.6		0.0
Other temporary differences	5.2	1.5	-0.5	0.1	6.3
Total	326.8	10.4	-10.7	1.7	328.1
Offset from deferred tax assets	-30.7	-9.1	2.6	-1.0	-38.2
Deferred tax liabilities on the balance sheet	296.1	1.3	-8.1	0.7	289.9

On 31 December 2021, the Group had EUR 41.6 million (105.7) of net tax losses, EUR 12.7 million (21.5) of which were recorded as deferred tax assets. The net tax losses were incurred in Slovakia, Germany and Poland. The management expects the companies to generate taxable income in the future from which the losses can be deducted.

The operating losses whose use involves uncertainty and which have therefore not been recognised as deferred tax assets totalled EUR 133.8 million (550.5) on 31 December 2021. Tax losses on 31 December 2021 were incurred in Germany and Poland. Unrecognised deferred tax assets from losses totalled EUR 41.7 million (125.7) on 31 December 2021. Changes during the period are mainly related to the resolution of the dispute mentioned in Note 8.1.

On 31 December 2021, the Group had EUR 175.4 million of net tax losses, EUR 167.6 million of which will not expire. EUR 7.0 million of the losses will expire during the period 2022–2026 and the remaining EUR 0.8 million at a later date.

7. Group structure

7.1 Group companies

Subsidiaries and joint operations

Accounting principles

Subsidiaries

In addition to the parent company Metsäliitto Cooperative, the consolidated financial statements include all 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 gains 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 members' funds 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.

METSÄLIITTO COOPERTIVE	Country	Group's holding %
Subsidiaries		
Kemi Shipping Oy	Finland	100.00
Kumpuniemen Voima Oy	Finland	53.97
Metsa Forest Latvia SIA	Latvia	100.00
Metsa Group Asia Co. Ltd	China	100.00
Metsä Board Oyj [1]	Finland	47.99
Metsä Fibre Oy	Finland	62.05
Metsa Forest Eesti AS	Estonia	100.00
Metsa Forest Sverige AB	Sweden	100.00
Metsa Group Services Sp. z.o.o.	Poland	100.00
Metsä Group Treasury Oy	Finland	100.00
Metsä Spring Oy	Finland	100.00
Metsä Tissue Oyj	Finland	100.00
Metsa Wood Deutschland GmbH	Germany	100.00
Metsa Wood Eesti AS	Estonia	100.00
Metsa Wood Holland B.V.	Netherlands	100.00
Metsa Wood Schweiz AG	Switzerland	100.00
Metsa Wood UK Ltd	Great Britain	100.00
Metsa Wood USA Inc.	USA	100.00
OOO Metsa Forest Podporozhye	Russia	100.00
OOO Metsa Forest St. Petersburg	Russia	100.00
OOO Petrovles-Podporozhye	Russia	100.00
Joint operations		
Lohjan Biolämpö Oy [2]	Finland	51.00

METSÄ FIBRE GROUP	Country	Group's holding %
Subsidiaries		
Metsä Fibre GmbH	Germany	100.00
Metsä Fibre S.r.l.	Italy	100.00
OOO Metsä Svir	Russia	100.00
Oy Silva Shipping Ab	Finland	100.00
Äänevoima Oy	Finland	100.00

METSÄ BOARD GROUP	Country	Group's holding %
Tytäryritykset		
Husum Pulp AB	Sweden	70.00
Metsa Board (Middle East & Africa) Ltd	Cyprus	100.00
Metsa Board Americas Corporation	USA	100.00
Metsa Board Australia and New Zealand Pty Ltd	Australia	100.00
Metsa Board Hong Kong Ltd	Hong Kong	100.00
Metsa Board Ibéria S.A.	Spain	100.00
Metsa Board Italia S.r.l.	Italy	100.00
Metsa Board Singapore Pte Ltd	Singapore	100.00
Metsa Board UK Ltd	Great Britain	100.00
Metsa Board Benelux n.v./s.a	Belgium	100.00
Metsa Board Deutschland GmbH	Germany	100.00
Metsa Board France S.A.S.	France	100.00
Metsa Board International Oy	Finland	100.00
Metsa Board NL Holding B.V.	Netherlands	100.00
Metsa Board Polska Sp. Z o.o.	Poland	100.00
Metsa Board Sverige AB	Sweden	100.00
Metsa Board Turkey LLC	Turkey	100.00
OOO Metsä Board Rus	Russia	100.00
Oy Hangö Stevedoring Ab	Finland	100.00

METSÄ TISSUE GROUP	Country	Group's holding %
Subsidiaries		
Dambi AB	Sweden	100.00
Metsa Tissue Czech s.r.o.	Czech Republic	100.00
Metsa Tissue Krapkowice Sp. z.o.o.	Poland	100.00
Metsa Tissue Poland Sp. z.o.o.	Poland	100.00
Metsa Tissue Slovakia s.r.o.	Slovakia	100.00
Metsa Tissue Ukraine LCC	Ukraine	100.00
Metsa Greaseproof Papers GmbH	Germany	100.00
Metsä Greaseproof Papers Oy	Finland	100.00
Metsa Tissue A/S	Denmark	100.00
Metsa Tissue AB	Sweden	100.00
Metsa Tissue AS	Norway	100.00
Metsa Tissue GmbH	Germany	100.00
Metsa Tissue Hungary Kft.	Hungary	100.00
Metsa Tissue Immobilienverwaltungs GmbH	Germany	100.00
Metsa Tissue Ltd	Great Britain	100.00
Joint operations		
Katrinefors Kraftvärme AB [2]	Sweden	50.00

1) Holding 67.45% by number of votes.
2) The primary goal for the arrangement is to produce energy to the parties and the liabilities of the arrangement are actually paid from the cash flow arising from the produced energy bought.

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**
Metsä Fibre Group	Finland	37.95	37.91	168.8	-6.0	670.0	506.5
Metsä Board Group [1]	Finland	52.01	51.84	114.3	90.7	569.6	315.6
Other subsidiaries				0.1	-0.1	0.6	0.6
				283.2	84.7	1,240.3	822.7

1) Non-controlling interest's holding by votes 32.55% (32.60).

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.

Metsä Board's sale of 30% of the Husum pulp mill to Norra Skog was concluded on 4 January 2021. Following the arrangement, the non-controlling interests' share increased by EUR 195.4 million and their earnings by EUR 64.7 million.

The acquisition cost of the shares in Metsä Tissue Corporation held by Metsäliitto Cooperative was adjusted in 2021. The adjustment is related to a share transaction which took place on 2 February 2017 and with which 9% of the shares were acquired, and after which Metsäliitto Cooperative held 100% of Metsä Tissue Corporation's shares. The acquisition cost was adjusted with Germany's Real Estate Transfer Tax (RETT) liability, which arose as a result of the share acquisition. As a result of the adjustment, earnings decreased by EUR 1.7 million.

In January–March 2020, Metsäliitto Cooperative acquired Metsä Board Corporation B shares to a value of EUR 50.4 million from the market on the basis of the Board of Directors' authorisation at an average price of EUR 5.03 per share. After the acquisition, the Group owns 48.49% of Metsä Board Corporation. Following the arrangement, the non-controlling interests' share decreased by EUR 27.1 million and their earnings by EUR 23.4 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 interests:

EUR million	2021	2020
Sale of a 30% share in Metsä Board's Husum pulp mill	64.7	
Metsä Tissue Oyj's adjustment	-1.7	
Acquisition of Metsä Board shares		-23.4
From other businesses	-0.5	-0.4
Net impact on equity	62.6	-23.8

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

	Metsä Fibre Group		Metsä Board Group	
EUR million	**2021**	**2020**	**2021**	**2020**
Sales	2,628.1	1,826.5	2,084.1	1,889.5
Result for the period	461.0	-21.9	292.1	170.1
Non-controlling interest's share of the result	168.8	-6.0	114.3	90.7
Total comprehensive income for the period	457.0	-8.9	292.8	132.6
Non-controlling interest's share of the total comprehensive result	163.0	-4.3	104.7	69.7
Dividends paid to non-controlling interest		21.9	18.5	18.4
Non-current assets	2,157.8	1,678.5	1,637.2	1,417.9
Current assets	865.8	838.3	1,273.4	884.6
Non-current liabilities	507.3	600.3	552.1	564.7
Current liabilities	624.7	470.3	517.0	354.0
Net assets	1,891.6	1,446.2	1,841.4	1,383.8
Net cash flow from operating activities	622.5	164.1	329.6	307.7
Net cash flow arising from investing activities	-646.4	-132.2	-183.0	-142.0
Net cash flow arising from financing activities	25.4	-29.9	-128.3	-163.0
Change in cash and cash equivalents	1.5	2.1	18.3	2.7

The numbers are presented before Metsä Group eliminations. The subgroup's internal items are eliminated.

METSÄ GROUP
Annual Review 2021

Associated companies and joint ventures

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% 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 associated companies and joint ventures are processed using the equity method, and they are initially recognised at cost. The Group's shares in associated companies and joint ventures also include the goodwill measured at the time of acquisition, less any impairment. The Group's share of the profits or losses of associated companies and joint ventures is recognised in the income statement after the operating profit, which reflects the operative nature of these companies. Correspondingly, the Group's share of changes in other comprehensive income items of 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 associated companies and joint ventures. Unrealised gains 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.

EUR million	2021	2020
Investments in associated companies and joint ventures		
At 1 Jan.	69.3	68.3
Share of results	-2.2	3.1
Dividends received	-3.0	-3.1
Increases	1.3	3.1
Decreases	-1.7	0.0
Translations differences	0.0	-2.1
At 31 Dec.	63.6	69.3
Amounts in income statement		
Associated companies	3.3	8.4
Joint ventures	-5.6	-5.3
Total	-2.2	3.1
Amounts in balance sheet		
Associated companies	60.0	58.4
Joint ventures	3.6	10.8
Total	63.6	69.3

On 17 November 2021, Metsä Group acquired Stora Enso's holding in Kemi Shipping Oy and now owns all of Kemi Shipping Oy. Kemi Shipping Oy was previously treated as a joint venture in in the Group's consolidated financial statements.

In 2019, Metsä Spring Oy made a EUR 1.4 million equity investment in Woodio Oy, which develops and manufactures entirely waterproof wood composites. In 2020, Metsä Spring Oy participated in the company's second round of financing by EUR 1.1 million.

Information on principal associated companies

EUR million	Business	Country	Holding, % 2021	Holding, % 2020
Finsilva Oyj	Forest	Finland	19.8	19.8

Summary of financial information of principal associated companies

EUR million	2021	2020
Finsilva Oyj		
Sales	25.8	26.7
Result for the period	21.2	40.3
Dividends received from associated company	2.9	2.9
Non-current assets	452.6	439.7
Current assets	8.2	13.9
Non-current liabilities	196.1	194.1
Current liabilities	3.1	4.7
Net assets	261.6	254.9
Reconciliation of financial information against book value in group balance sheet:		
Group's share of net assets	51.7	50.4
Book value of associated company in balance sheet	51.7	50.4

Summary of financial information of other than principal associated companies

EUR million	2021	2020
The Group's share of results	-0.8	0.4
Book value in The Group balance sheet	8.3	8.0

The Group has no principal joint ventures.

7.2 Acquisitions, assets classified as held for sale and operations disposed of

Accounting principles

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

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

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

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.

Acquired businesses

On 17 November 2021, Metsä Group acquired Stora Enso's holding in Kemi Shipping Oy and now owns all of Kemi Shipping Oy. Kemi Shipping Oy was previously treated as a joint venture in in the Group's consolidated financial statements. The impact of the revaluation of the previous holding and the difference on consolidation from the acquisition amount to a total of EUR 0.9 million, which has been recorded in other operating income.

According to the management's estimates, the impact of Kemi Shipping Oy on Metsä Group's sales or operating result in the period 1 January–31 December 2021 would have been minor had the acquisition been carried out on 1 January 2021.

There were no other material business acquisitions in 2021 or 2020.

Acquired businesses total

EUR million	Note	2021 Posted values	2020 Posted values
Other intangible assets	4.1	0.3	0.0
Tangible assets	4.2	5.9	0.5
Long term financial assets		0.2	
Inventories		0.1	
Accounts receivables and other receivables		1.9	0.1
Cash and cash equivalent		1.2	
Total assets		9.6	0.6
Borrowings		3.1	0.4
Accounts payable and other liabilities		3.2	0.0
Total liabilities		6.3	0.5
Net assets		3.3	0.1
Previously owned share of net assets		1.7	
Acquisitions cost		0.7	0.1
Other operating income		0.9	0.0
Acquisition price		-0.7	-0.1
Cash and cash equivalents in subsidiaries		1.2	0.0
Net cash flow arising on acquisitions		0.4	-0.1

The book values of acquired assets and liabilities are equivalent to fair values.

Assets classified as held for sale

On 16 December 2021, Metsä Board and Euroports signed an agreement on Metsä Board selling all the shares 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 assets held for sale are recognised at book value on 31 December 2021.

In 2019, Metsäliitto Cooperative's Board of Directors decided to initiate measures to sell the head office in Tapiola, Espoo. The transaction was closed on 21 January 2021. The assets held for sale are recognised at book value on 31 December 2020.

Assets classified as held for sale total

EUR million	Note	2021	2020
Other intangible assets	4.1	0.0	
Tangible assets	4.2	8.6	31.9
Non-current financial assets		0.0	
Tax receivables		0.2	
Inventories		0.1	
Accounts receivables and other receivables		2.1	0.1
Cash and cash equivalent	5.4		0.3
Total assets		11.0	32.3
Deferred tax liabilities	6	0.4	
Provisions	4.9	1.0	0.2
Borrowings	5.5	1.5	17.4
Accounts payables and other liabilities		3.9	0.1
Net cash flow arising on disposals		6.8	17.7

Disposed operations

Disposed subsidiaries, businesses and joint ventures

The Nordic real estate investment company NREP bought Metsä Group's head office in Tapiola, Espoo, in January 2021. In connection with the transaction, Metsäliitto Cooperative concluded a long-term lease agreement for the site. A EUR 1.6 million capital gain after tax was recognised in the result of the transaction , which had a positive cash flow impact of EUR 24.5 million. In addition, the buyer paid a EUR 3.7 million loan receivable in connection with the transaction. A EUR 25.8 million lease liability of the lease agreement was recognised in the Group's balance sheet. Of the capital gain, EUR 10.8 million was recognised in the acquisition cost of leased fixed asset items, which reduces future depreciations. The head office property was classified as an asset held for sale on 31 December 2020.

On 23 December 2019, Metsä Tissue announced that it had agreed to sell its napkin business to keeeper Group, part of the Mutares Group. The transaction covered the properties, machinery, equipment and inventories of the Stotzheim mill, located in Germany, as well as the Fasana and Mondial brands. The transaction was closed on 29 February 2020. The transaction had a negative cash flow impact of EUR 3.4 million in 2020.

Divested operations, total

EUR million	Note	2021	2020
Intangible assets andproperty, plant and equipment	4.1, 4.2	32.1	
Deferred tax receivables	6	0.0	
Current receivables		0.1	
Financial assets		0.3	
Total assets		32.5	0.0
Provisions	4.9	0.2	
Current borrowings		17.4	
Current liabilities		0.1	
Total liabilities		17.8	0.0
Net assets		14.8	0.0
Adjustment of capital gain on leased non-current asset		10.9	
Expert fees paid		0.3	
Total		25.9	0.0
Capital gain after tax		1.5	
Transaction price paid in cash		25.2	
Expert fees paid		-0.3	
Cash and cash equivalents of divested subsidiary		-0.3	
Repayment of current receivables		3.7	
Cash flow impact		28.4	-3.4

7.3 Related party transactions

The Group's related parties include associated companies and joint ventures. Also the members of the Board of Directors, the members of the Group Executive Management. Team and the President and CEO as well as their close family members are considered as related parties. Transactions with related parties are based on market prices.

The management's salaries, remuneration and pension expenses are presented in Note 3.2

Transactions with associated companies and joint ventures

EUR million	2021	2020
Sales	17.8	16.5
Purchases	114.4	109.8
Non-current receivables	0.8	
Accounts receivables and other receivables	4.5	3.0
Accounts payable and other liabilities	7.2	10.0

8. Other notes

8.1 Commitments and contingencies

Pending disputes

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.

During the past few years companies belonging to Metsä Group have acted as sellers in many share transactions giving normal seller's securities. It is not impossible that demands against these companies are made regarding the given securities and that these securities could result in extra costs for the companies.

Contingent liabilities

EUR million	2021	2020
Own liabilities for which collateral has been provided	11.3	29.5
Floating charges	0.5	3.0
Real estate mortgages		227.9
Chattels mortgages	0.8	
Total collateral provided for own liabilities	1.3	230.9
Leases not yet commenced to which the Group is committed	18.0	
Other commitments given on own behalf	22.7	7.7
Commitments given on the behalf of associated companies and joint ventures	0.1	0.4
Total	42.0	239.0

Commitments related to property, plant and equipment

EUR million	2021	2020
Payments due in following 12 months	738.8	123.3
Payments due later	414.7	42.0
Total	1,153.5	165.2

8.2 Events after the financial period

On 28 April 2021, Metsäliitto Cooperative's Representative Council approved the changes to be made in the Cooperative's rules according to which new Metsä1 additional shares may be issued. The new Metsä1 additional shares will replace the A additional shares as the target of investment as of the beginning of 2022. New A and B additional shares can no longer be subscribed as of 1 January 2022, excluding a member's possibility to subscribe A additional shares with equity bonuses earned prior to 2022. The A and B additional shares held by members will remain valid under the existing terms and conditions. A member may convert their A additional shares into Metsä1 additional shares with a conversion ratio of 1:1. Requests for the conversion of A additional shares have been accepted as of 1 October 2021, and the conversions based on requests received during 2021 were carried out on 1 January 2022, when a total of 680 million A additional shares were converted into Metsä1 additional shares.

Parent company income statement

(Finnish accounting standard, FAS)

EUR	Note	1.1.–31.12.2021	1.1.–31.12.2020
SALES	2	1,997,268,295.18	1,797,325,324.16
Change in stocks of finished and unfinished products		-836,621.99	2,276,696.50
Production for own use		170,948.18	129,673.86
Other operating income	3, 4	102,602,774.06	82,151,102.74
Materials and services			
Materials, consumables and goods			
Purchases during the financial period		-1,330,745,563.54	-1,194,025,840.33
Changes in inventories		15,448,473.58	-11,697,737.14
External services	5	-478,189,912.77	-423,484,644.47
Employee costs	5	-153,917,637.26	-131,819,023.07
Depreciations and impairment charges	3, 6	-19,399,470.54	-18,740,237.75
Other operating expenses	3, 5	-100,292,640.90	-84,895,795.89
		-2,067,096,751.43	-1,864,663,278.65
OPERATING RESULT		32,108,644.00	17,219,518.61
Financial income and expenses	7		
Income from Group companies		65,373,856.06	65,764,957.66
Income from participating interest		3,009,641.25	3,109,641.25
Income from other financial investments		3,587,900.24	4,500,838.06
Other interest and financial income		994,867.33	1,288,914.22
Exchange rate differences		952,115.17	-1,268,769.74
Interest expenses and other financial expenses		-1,843,388.55	-3,242,565.06
		72,074,991.50	70,153,016.39
RESULT BEFORE APPROPRIATIONS AND TAXES		104,183,635.50	87,372,535.00
Appropriations			
Change in depreciation differences	6	-10,665,452.52	-12,467,516.50
Group contribution		-1,765,000.00	-840,000.00
		-12,430,452.52	-13,307,516.50
INCOME TAXES	8	-4,008,306.87	-1,109,130.20
RESULT FOR THE FINANCIAL PERIOD		87,744,876.11	72,955,888.30

Parent company balance sheet

EUR	Note	31.12.2021	31.12.2020
ASSETS			
NON-CURRENT ASSETS			
Intangible assets	9		
Intangible assets		11,670,981.51	15,506,852.61
Goodwill		0.00	106,501.20
Other intangible assets		102,577.59	191,855.40
Advance payment and construction in progress		22,228,644.50	7,992,012.87
		34,002,203.60	23,797,222.08
Tangible assets	9		
Land and water areas		7,596,450.07	7,821,203.07
Buildings and constructions		43,049,061.15	41,138,809.73
Machinery and equipment		109,607,142.38	108,175,273.02
Other tangible assets		6,732,854.36	7,695,312.23
Advance payment and construction in progress		4,931,896.95	4,055,521.88
		171,917,404.91	168,886,119.93
Investments	10, 11, 20		
Shares in Group companies		1,977,833,087.43	1,776,982,843.13
Receivables from Group companies		15,781,795.03	89,750,483.00
Shares in Associated companies		7,671,974.36	28,585,544.17
Other shares and holdings		2,071,493.91	1,789,124.40
		2,003,358,350.73	1,897,107,994.70
Total non-current assets		**2,209,277,959.24**	**2,089,791,336.71**
CURRENT ASSETS			
Inventories			
Materials and consumables		136,204,330.89	120,755,857.30
Unfinished products		1,872,788.11	1,876,337.68
Finished products		6,524,738.47	7,357,810.89
Advance payments		38,508,999.92	29,656,882.98
		183,110,857.39	159,646,888.85
Non-current receivables	12		
Receivables from Group companies		43,125,000.00	37,087,500.00
Deferred tax	15	232,155.48	50,600.32
		43,357,155.48	37,138,100.32
Current receivables	12		
Accounts receivables		69,265,384.27	65,408,082.78
Receivables from Group companies		564,551,540.01	541,768,187.96
Receivables from Associated companies		1,657,616.98	918,294.74
Other receivables		6,515,784.66	3,057,574.25
Prepayments and accrued income		6,432,197.73	4,137,030.81
		648,422,523.65	615,289,170.54
Total receivables		**691,779,679.13**	**652,427,270.86**
Cash and cash equivalents		**0.00**	**255 052.56**
Total current assets		**874,890,536.52**	**812,329,212.27**
TOTAL ASSETS		**3,084,168,495.76**	**2,902,120,548.98**

EUR	Note	31.12.2021	31.12.2020
MEMBERS' FUNDS AND LIABILITIES			
MEMBERS' FUNDS	13		
Members' capital			
Participation shares		268,929,335.82	259,301,775.40
Additional shares A		1,192,180,495.67	1,068,874,435.76
Additional shares B		163,415,363.60	169,838,173.50
Transfer of refundable members' capital to liabilities for the waiting period		-123,180,005.60	-78,068,398.80
Other reserves			
Reserve for invested unrestricted equity		500,333,298.63	500,260,257.36
General reserve I		3,939,904.28	3,939,904.28
General reserve II		67,401,740.00	67,401,740.00
Value adjustment reserve		-681,648.37	120,284.71
Retained earnings		444,573,381.29	453,933,072.76
Result for the financial period		**87,744,876.11**	**72,955,888.30**
		2,604,656,741.43	**2,518,557,133.27**
Appropriations			
Accumulated depreciation difference	6	**64,173,032.31**	**53,507,579.79**
Provisions	14	**308,716.92**	**403,357.52**
LIABILITIES			
Non-current liabilities	16		
Other liabilities		48,228,169.00	20,582,399.00
		48,228,169.00	20,582,399.00
Current liabilities	17		
Loans from financial institutions		9,974.39	0.03
Advance payments		3,209,625.46	2,278,646.39
Accounts payable		138,971,000.78	105,768,817.48
Payables to Group companies		18,224,398.68	21,043,643.11
Payables to participating interest		649,535.83	2,241,814.92
Other liabilities		87,399,005.12	69,673,861.86
Accruals and deferred income		118,338,295.84	108,063,295.61
		366,801,836.10	309,070,079.40
Total liabilities		**415,030,005.10**	**329,652,478.40**
TOTAL SHAREHOLDES' EQUITY AND LIABILITIES		**3,084,168,495.76**	**2,902,120,548.98**

Parent company cash flow statement

EUR	31.12.2021	31.12.2020
Cash flow from operating activities		
Operating result	32,108,644.00	17,219,518.61
Adjustments to result [a)]	12,984,412.69	18,883,571.48
Interest received	4,582,538.57	5,789,453.18
Interest paid	-1,375,412.99	-2,671,761.72
Dividends received	68,383,726.31	68,874,898.01
Other financial items, net	-428,602.47	-1,069,525.12
Taxes paid	-2,831,311.38	-785,402.24
Change in working capital [b)]	6,789,384.55	1,922,752.12
	120,213,379.28	108,163,504.32
Cash flow arising from investing activities		
Acquisition of shares	-228,379,400.01	-50,651,039.60
Investments in tangible and intangible assets	-32,914,700.43	-27,407,951.50
Proceeds from disposal of shares and businesses	26,752,088.74	2,780,746.54
Capital distribution	27,296,859.68	24,169,491.16
Proceeds from sale of tangible and intangible assets	2,395,703.23	84,037.19
Increase and decrease of non-current receivables, net	68,962,500.00	27,034.38
	-135,886,948.79	-50,997,681.83
Cash flow before financial activities	**-15,673,569.51**	**57,165,822.49**
Cash flow arising from financial activities		
Interest paid on members' capital	-66,277,120.72	-71,939,229.89
Increase in non-current liabilities	-99,356.33	99,356.33
Increase or decrease in interest bearing current liabilities, net	9,974.36	-1,636,757.54
Increase or decrease in interest bearing current receivables, net	-28,760,373.01	-90,910,037.94
Increase in members' capital	110,545,392.65	107,172,664.56
	15,418,516.95	-57,214,004.48
Change in cash and cash equivalents	**-255,052.56**	**-48,181.99**
Cash and cash equivalents at beginning of period	255,052.56	303,234.55
Change in cash and cash equivalents	-255,052.56	-48,181.99
Cash and cash equivalents at end of period	**0.00**	**255,052.56**
[a)] Adjustments to operating result		
Depreciations and impairment charges	19,399,470.54	18,740,237.75
Gains or losses on sale of fixed assets	-6,320,417.25	292,149.74
Change in provisions	-94,640.60	-148,816.01
Total	12,984,412.69	18,883,571.48
[b)] Change in working capital		
Inventories	-23,463,968.54	12,616,591.73
Current receivables, non-interest bearing	-4,531,435.03	-34,263,821.15
Current liabilities, non-interest bearing	34,784,788.12	23,569,981.54
Total	6,789,384.55	1,922,752.12

Notes to the parent company financial statements

1. Accounting principles

Metsäliitto Cooperative's financial statements have been prepared in accordance with Finnish Accounting Standards (FAS).

Transaction in foreign currency

Transactions in foreign currency have been recognised at the exchange rate on the day of the transaction. At the balance sheet date, receivables and liabilities denominated in foreign currency have been translated into euros at the exchange rate quoted by the European Central Bank at the balance sheet date. Net exchange gains/losses have been recognised to financial income and expenses in the income statement.

Derivative financial instruments

Metsäliitto Cooperative is using derivative financial instruments only for hedging from currency, interest and commodity risks. As from the beginning of year 2018 financial derivatives has been valuated to present value by using alternative procedure according to Finnsih accounting act., chapter 5 § 2a. Governance and principles applied for financial derivatives has been introduced in Group financial statement notes of the accounts 5.6 and 5.7.

Sales

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

Long-term compensations

Share-based payments and other long-term compensations are booked to period, where employee has indelible right to the granted shares.

Pensions and pension funding

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

Leasing

Lease payments are treated as rental expenses.

Income taxes

Income tax in the income statement include the income tax of the taxable result for the period, adjustments to taxes of previous period and deferred taxes. Deferred taxes are caclulated from temporary differences due to differences in assets and liabilities bookkeeping value compared to taxable value. Deferred tax has been calculated by using tax base confirmed by Finnish tax authorities.

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	10–40 years
Medium heavy machinery	10–20 years
Lightweight machinery and equipment	3–15 years
Other tangible assets	3–10 years

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

Inventories

Inventories are measured at acquisition cost or a lower net realisable value. In measuring inventories, the FIFO principle is observed or, alternatively, the weighted average price method. The acquisition cost of finished goods and work in progress include raw materials, direct wages and salaries, depreciation and other direct cost as well as a product focused share of variable and fixed production costs at normal level of production. Net realisable value is the estimated sales price less cost of production and sales.

Provisions

Future costs and losses to which the company is committed and which are likely to be realised are included in the income statement under the appropriate expense heading and in the balance sheet under provisions for future costs whenever the precise amount and the time of occurrence are not known.

Appropriations

The Finnish tax legislation offers the possibility to deduct expenses prematurely from the profit for the financial period and to transfer them to the balance sheet as provisions. The items are taken into account in tax filings only if they have been entered in the accounts. These items are presented in the appropriations in the income statement. The most substantial of these appropriations is the depreciation difference on fixed assets.

Terminology

In its financial reporting, Metsäliitto Cooperative has started to primary use the word "result" to describe the financial result. Secondary the words "profit" or "loss" can be used, if the word "result" for some reason does not fit in the context. The term "surplus" and "deficit" can also be used if there is a need to show a connection to the Cooperatives Act or to the rules of the cooperative.

EUR	2021	2020

2. Sales

Finland	1,713,088,028.34	1,557,742,367.50
Other EU-countries	166,272,768.75	169,160,624.40
Other European countries	55,982,336.66	20,431,334.31
Other countries	61,925,161.43	49,990,997.95
Total	1,997,268,295.18	1,797,325,324.16

Transfer period concerning Great Britain exit from EU ended 31.12.2020. As from 1.1.2021 sales to Great Britain is included to group Other European countries.

3. Extraordinary items

Other operating income		
Gain on sales of apartment shares	5,449,630.69	0.00
	5,449,630.69	0.00
Other operating expenses		
Loss on sales of apartment shares	1,381,345.71	0.00
Disposal of Eläkesäätiö insurance operations to OP bank	0.00	645,321.73
	1,381,345.71	645,321.73
Extraordinary items in income statement	4,068,284.98	-645,321.73

4. Other operating income

Rental income, external	968,723.15	1,646,714.34
Service revenue, external	91,559,768.55	78,531,679.36
Gains from sale of tangible and intangible assets	7,711,986.51	64,595.11
Other operating income	2,362,295.85	1,908,113.93
Total	102,602,774.06	82,151,102.74

Gains on sales of assets include year 2021 EUR 2,072,500.00 gains on sales of emission rights and EUR 5,449,630.69 gains on sales of apartment shares.

5. Operating expenses

External services		
Distribution costs	247,654,091.66	222,126,799.84
Other external services	230,535,821.11	201,357,844.63
Total	478,189,912.77	423,484,644.47
Employees costs		
Wages, salaries and fees	95,708,254.19	84,987,611.12
Share based expenses	4,104,996.98	4,115,714.77
Other long term expenses	3,662,859.64	0.00
Social security expenses		
Pension expenses	23,614,709.58	18,415,288.06
Other social security expenses	26,826,816.87	24,300,409.12
Total	153,917,637.26	131,819,023.07
Salaries and remunerations paid to management		
Chief Executive Officer and Managing director, Deputy Managing Director	3,437,716.23	2,956,675.47
Board members and executive group	675,440.00	682,140.00
Board of governors, fees	302,800.00	258,700.00
Total	4,415,956.23	3,897,515.47

On 31 December 2021, the share-based fee arrangement is concerning 42 persons of the parent company Metsäliitto Cooperative, and from the latest earning period 2019–2021, it is possible to earn total 627,363 Metsä Board B-series shares.

Other long-term reward arrangement is concerning 43 persons of the parent company Metsäliitto Cooperative on 31 December 2021. From the arrangement earning period 2020–2022, it is possible to earn total 699,510 synthetic shares, and from the earning period 2021–2023 total 694,167 synthetic shares.

Additional information of share-based payments are presented in Group's Note 3.3. and other fees paid to management are presented in Group's Note 3.4.

Directors' pension commitments

President and CEO Ilkka Hämälä's age of retirement is according to the Finnish Act of employer retirement. Ilkka Hämälä is also a participant in the arrangement of Metsä Group directors' benefit based additional pension. Based on additional pension arrangement, the level of the President and CEO's pension is maximum 60% of the total salaries under employee pension, which is calculated according to previous 5 year period salaries before retirement. If President and CEO's employment at Metsä Group is terminated before retirement, he/she is entitled to paid-up policy. Some Metsäliitto Coopeartive's directors have, depending on employment start, separate benefit based additional pension insurance, where retirement age is 62 years. Management's salaries, wages and pension commitments are presented in Group's Note 3.2.

The President and CEO, the members of the Board of Directors and their deputies and other similar institutions key persons have not been granted loans and no guarantees or other guarantees have been issued for them.

	2021	2020
Average amount of personnel	2,072	1,987

EUR	2021	2020
Other operating expenses		
Rents and other property expenses	8,727,782.66	7,337,994.30
Services bought	70,128,052.37	57,859,195.85
Loss on sale of non-current assets	1,391,569.26	99,304.44
Other operating expenses		
Voluntary social costs	4,299,283.52	3,009,784.06
Travel expenses	4,217,272.10	4,532,946.47
Advertising and Marketing Costs	3,753,721.11	3,994,781.72
Other	7,774,959.88	8,061,789.05
Total	100,292,640.90	84,895,795.89
Auditor's fee		
Audit	208,369.08	206,369.10
Auditors' opinions	6,100.00	2,700.00
Tax services	0.00	20,000.00
Other service	134,928.75	19,000.00
Total	349,397.83	248,069.10

The auditor is KPMG Oy Ab.

6. Depreciation and impairment charges

EUR	2021	2020
Depreciation according to plan		
Intangible rights	5,174,028.15	4,943,211.29
Goodwill	106,501.20	106,501.21
Other intangible assets	89,277.81	189,293.69
Land area	0.00	277,173.70
Buildings and constructions	2,672,424.26	2,156,207.49
Machinery and equipment	10,227,304.68	9,995,222.81
Other tangible assets	1,129,934.44	1,072,627.56
	19,399,470.54	18,740,237.75
Depreciations and impairment charges total	19,399,470.54	18,740,237.75
Change in deprciation differences	10,665,452.52	12,467,516.50
Total depreciation	30,064,923.06	31,207,754.25
Depreciation difference at the beginning of the financial year	53,507,579.79	41,040,063.29
Change in deprciation differences	10,665,452.52	12,467,516.50
Depreciation difference at the end of the financial year	64,173,032.31	53,507,579.79

7. Financial income and expenses

EUR	2021	2020
Income from non-current investments		
Dividend income		
From Group companies	65,373,856.06	65,764,957.66
From participating interests	3,009,641.25	3,109,641.25
From others	229.00	299.10
Total	68,383,726.31	68,874,898.01
Interest income from non-current assets		
From Group companies	3,587,671.24	4,500,538.96
Total	3,587,671.24	4,500,538.96
Total income from non-current assets	71,971,397.55	73,375,436.97
Other interest and financial income		
Interest income from Group companies	959,333.55	1,079,539.33
Other interest income	35,533.78	209,374.89
Total	994,867.33	1,288,914.22
Exchange rate differences recognized in financial income and expenses		
Exchange rate differences on sales	389,552.27	-210,119.64
Exchange rate differences on purchases	-18,671.28	-19,304.25
Exchange rate differences on financing	581,234.18	-1,039,345.85
Total	952,115.17	-1,268,769.74
Interest and other financial expenses		
Interest expenses for the same Group companies	-63,328.64	-109,664.07
Other interest expenses	-1,312,084.35	-1,677,343.20
Other financial expenses for the same Group companies	0.00	-884,754.45
Other financial expenses	-467,975.56	-570,803.34
Total	-1,843,388.55	-3,242,565.06
Financial income and expenses total	72,074,991.50	70,153,016.39

8. Income taxes

EUR	2021	2020
Taxes for the period	3,959,759.64	1,062,418.27
Taxes for previous periods	-1,706.43	16,948.72
Deferred taxes	18,928.11	29,763.21
Other direct taxes	31,325.55	0.00
Total	4,008,306.87	1,109,130.20

9. Intangible and tangible assets

EUR	2021	2020
Intangible rights		
Acquisition costs 1.1.	73,434,621.93	82,164,576.39
Increases	1,201,157.05	395,654.71
Decreases	-722,307.38	-12,631,961.99
Transfers between items	137,000.00	3,506,352.82
Acquisition costs 31.12.	74,050,471.60	73,434,621.93
Accumulated depreciation and impairment charges 1.1.	-57,927,769.32	-65,616,520.02
Accumulated depreciation of deductions and transfers	722,307.38	12,631,961.99
Depreciation and write-downs for the financial year	-5,174,028.15	-4,943,211.29
Accumulated depreciation and impairment on 31.12.	-62,379,490.09	-57,927,769.32
Book value 31.12.	11,670,981.51	15,506,852.61
Goodwill		
Acquisition costs 1.1.	1,074,965.47	1,074,965.47
Acquisition costs 31.12.	1,074,965.47	1,074,965.47
Accumulated depreciation and impairment charges 1.1.	-968,464.27	-861,963.06
Depreciation and write-downs for the financial year	-106,501.20	-106,501.21
Accumulated depreciation and impairment on 31.12.	-1,074,965.47	-968,464.27
Book value 31.12.	0.00	106,501.20
Other intangible assets		
Acquisition costs 1.1.	4,507,964.70	5,494,478.04
Increases	0.00	5,148.70
Decreases	-40,365.10	-991,662.04
Acquisition costs 31.12.	4,467,599.60	4,507,964.70
Accumulated depreciation and impairment charges 1.1.	-4,316,109.30	-5,118,477.65
Accumulated depreciation of deductions and transfers	40,365.10	991,662.04
Depreciation and write-downs for the financial year	-89,277.81	-189,293.69
Accumulated depreciation and impairment on 31.12.	-4,365,022.01	-4,316,109.30
Book value 31.12.	102,577.59	191,855.40
Advance payments and work in progress		
Acquisition costs 1.1.	7,992,012.87	5,826,357.09
Increases	15,048,483.77	5,672,008.60
Decreases	-811,852.14	0.00
Transfers between items	0.00	-3,506,352.82
Acquisition costs 31.12.	22,228,644.50	7,992,012.87

EUR	2021	2020
Intangible assets total		
Acquisition costs 1.1.	87,009,564.97	94,560,376.99
Increases	16,249,640.82	6,072,812.01
Decreases	-1,574,524.62	-13,623,624.03
Transfers between items	137,000.00	0.00
Acquisition costs 31.12.	101,821,681.17	87,009,564.97
Accumulated depreciation and impairment charges 1.1.	-63,212,342.89	-71,596,960.73
Accumulated depreciation of deductions and transfers	762,672.48	13,623,624.03
Depreciation and write-downs for the financial year	-5,369,807.16	-5,239,006.19
Accumulated depreciation and impairment on 31.12.	-67,819,477.57	-63,212,342.89
Book value 31.12.	34,002,203.60	23,797,222.08
Land and water areas		
Acquisition costs 1.1.	7,821,203.07	8,106,781.86
Increases	52,000.00	2,548.00
Decreases	-276,753.00	-288,126.79
Acquisition costs 31.12.	7,596,450.07	7,821,203.07
Accumulated depreciation and impairment charges 1.1.	0.00	0.41
Accumulated depreciation of deductions and transfers	0.00	277,173.29
Depreciation and write-downs for the financial year	0.00	-277,173.70
Accumulated depreciation and impairment on 31.12.	0.00	0.00
Book value 31.12.	7,596,450.07	7,821,203.07
Buildings and constructions		
Acquisition costs 1.1.	89,944,130.54	80,001,526.60
Increases	2,275,788.95	10,985,853.55
Decreases	-256,735.02	-1,918,493.06
Transfers between items	2,306,886.73	875,243.45
Acquisition costs 31.12.	94,270,071.20	89,944,130.54
Accumulated depreciation and impairment charges 1.1.	-48,805,320.81	-47,565,075.99
Accumulated depreciation of deductions and transfers	256,735.02	915,962.67
Depreciation and write-downs for the financial year	-2,672,424.26	-2,156,207.49
Accumulated depreciation and impairment on 31.12.	-51,221,010.05	-48,805,320.81
Book value 31.12.	43,049,061.15	41,138,809.73
Machinery and equipment		
Acquisition costs 1.1.	319,800,225.86	316,565,911.96
Increases	10,657,942.93	23,374,434.96
Decreases	-2,169,010.39	-22,672,629.04
Transfers between items	-675,172.06	2,532,507.98
Acquisition costs 31.12.	327,613,986.34	319,800,225.86
Accumulated depreciation and impairment charges 1.1.	-211,624,952.84	-212,000,677.79
Accumulated depreciation of deductions and transfers	3,845,413.56	10,370,947.76
Depreciation and write-downs for the financial year	-10,227,304.68	-9,995,222.81
Accumulated depreciation and impairment on 31.12.	-218,006,843.96	-211,624,952.84
Book value 31.12.	109,607,142.38	108,175,273.02

EUR	2021	2020
Other tangible assets		
Acquisition costs 1.1.	17,536,610.32	16,012,425.15
Increases	106,362.75	994,222.82
Decreases	-290,627.39	-927,574.10
Transfers between items	1,739,727.38	1,457,536.45
Acquisition costs 31.12.	19,092,073.06	17,536,610.32
Accumulated depreciation and impairment charges 1.1.	-9,841,298.09	-9,696,244.63
Accumulated depreciation of deductions and transfers	-1,387,986.17	927,574.10
Depreciation and write-downs for the financial year	-1,129,934.44	-1,072,627.56
Accumulated depreciation and impairment on 31.12.	-12,359,218.70	-9,841,298.09
Book value 31.12.	6,732,854.36	7,695,312.23
Advance payments and work in progress		
Acquisition costs 1.1.	4,055,521.88	5,202,374.68
Increases	4,384,817.12	3,718,435.08
Transfers between items	-3,508,442.05	-4,865,287.88
Acquisition costs 31.12.	4,931,896.95	4,055,521.88
Total tangible assets		
Acquisition costs 1.1.	439,157,691.67	425,889,020.25
Increases	17,476,911.75	39,075,494.41
Decreases	-2,993,125.80	-25,806,822.99
Transfers between items	-137,000.00	0.00
Acquisition costs 31.12.	453,504,477.62	439,157,691.67
Accumulated depreciation and impairment charges 1.1.	-270,271,571.74	-269,261,998.00
Accumulated depreciation of deductions and transfers	2,714,162.41	12,491,657.82
Depreciation and write-downs for the financial year	-14,029,663.38	-13,501,231.56
Accumulated depreciation and impairment on 31.12.	-281,587,072.71	-270,271,571.74
Book value 31.12.	171,917,404.91	168,886,119.93

No capitalized interest expenses in 2021 or 2020.

10. Investments

EUR	2021	2020
Shares in Group companies		
Acquisions costs 1.1.	1,776,982,843.13	1,755,996,908.68
Increases	229,707,315.00	50,378,167.00
Decreases	-28,857,070.70	-29,392,232.55
Acquisions costs 31.12.	1,977,833,087.43	1,776,982,843.13
Shares in participating companies		
Acquisions costs 1.1.	28,585,544.17	32,190,524.76
Increases	0.00	272,872.60
Decreases	-20,913,569.81	-3,877,853.19
Acquisions costs 31.12.	7,671,974.36	28,585,544.17
Other shares and holdings		
Acquisions costs 1.1.	1,789,124.40	1,948,079.33
Increases	357,000.01	0.00
Decreases	-74,630.50	-158,954.93
Acquisions costs 31.12.	2,071,493.91	1,789,124.40
Total investments and holdings		
Acquisions costs 1.1.	1,807,357,511.70	1,790,135,512.77
Increases	230,064,315.01	50,651,039.60
Decreases	-49,845,271.01	-33,429,040.67
Acquisions costs 31.12.	1,987,576,555.70	1,807,357,511.70
Receivables from Group companies		
Acquisions costs 1.1.	89,750,483.00	90,586,655.77
Increases	1,031,312.03	0.00
Decreases	-75,000,000.00	-836,172.77
Acquisions costs 31.12.	15,781,795.03	89,750,483.00
Receivables total		
Acquisions costs 1.1.	89,750,483.00	90,586,655.77
Increases	1,031,312.03	0.00
Decreases	-75,000,000.00	-836,172.77
Acquisions costs 31.12.	15,781,795.03	89,750,483.00
Investments total		
Acquisions costs 1.1.	1,897,107,994.70	1,880,722,168.54
Increases	231,095,627.04	50,651,039.60
Decreases	-124,845,271.01	-34,265,213.44
Acquisions costs 31.12.	2,003,358,350.73	1,897,107,994.70

11. Fair values of financial investment in non-current assets

EUR	2021	2020
Stock exchange listed shares		
Book value	626,193,432.79	654,949,830.77
Fair value	1,488,701,657.38	1,476,431,105.60
Difference	-862,508,224.59	-821,481,274.83

The fair value of the listed Metsä Board Corporation shares exceeds the book value by EUR 862.5 million at 31st December 2021.

12. Receivables

EUR	2021	2020
Non-current receivables		
Receivables from group companies		
Loans	43,125,000.00	37,087,500.00
Total	43,125,000.00	37,087,500.00
Receivables from others		
Deferred tax assets	232,155.48	50,600.32
Total	232,155.48	50,600.32
Total non-current receivables	43,357,155.48	37,138,100.32
Current receivables		
Receivables from group companies		
Accounts receivable	61,913,467.29	66,438,892.06
Loans	499,587,227.00	470,826,853.99
Prepayments and accrued income	3,050,845.72	4,502,441.91
Total	564,551,540.01	541,768,187.96
Receivables from participating companies		
Accounts receivable	1,657,616.98	918,294.74
Total	1,657,616.98	918,294.74
Receivables from others		
Accounts receivable	69,265,384.27	65,408,082.78
Other receivables	6,515,784.66	3,057,574.25
Prepayments and accrued income	6,432,197.73	4,137,030.81
Total	82,213,366.66	72,602,687.84
Total current receivables	648,422,523.65	615,289,170.54
Accrued income from group comapnies, current, specification		
Derivative receivables	366,383.89	729,973.16
Group contribution, receivable	205,000.00	1,280,000.00
ICT-services	1,941,129.83	1,682,767.96
Interest receivables	186,039.65	344,961.58
Others	352,292.35	464,739.21
Total	3,050,845.72	4,502,441.91
Accrued income from others, current, specification		
Insurances	26,897.98	60,516.64
License receivables	5,694,862.73	3,479,785.97
Others	710,437.02	596,728.20
Total	6,432,197.73	4,137,030.81
Total receivables	691,779,679.13	652,427,270.86

13. Members' funds

EUR	2021	2020
Members' capital		
Participation shares 1.1.	259,301,775.40	250,794,853.31
Paid-in members' capital	7,927,707.00	8,058,484.09
Subscription from interests to members' capital	641,255.99	862,226.66
Refund of members' capital	-7,889,344.18	-7,512,499.12
Accelerated refund of basic shares	8,947,941.61	7,098,710.46
Total *)	268,929,335.82	259,301,775.40
Transfer of refundable members' capital to liabilities for the waiting period	-3,298,080.64	-3,842,889.01
Participation shares 31.12.	265,631,255.18	255,458,886.39
Additional shares A 1.1.	1,068,874,435.76	959,332,111.21
Paid-in additional shares	111,917,608.65	77,344,064.40
Subscription from interests to additional shares	43,432,746.00	46,786,082.00
Equity bonus based fund amendment	4,237,353.28	5,313,838.81
Refund of additional shares	-36,281,648.02	-19,901,660.66
Total	1,192,180,495.67	1,068,874,435.76
Transfer of refundable members' capital to liabilities for the waiting period	-51,936,420.66	-41,539,711.62
Additional shares A 31.12.	1,140,244,075.01	1,027,334,724.14
Additional shares B 1.1.	169,838,173.50	168,302,206.31
Paid-in additional shares	4,474,874.60	12,642,495.50
Refund of additional shares	-10,897,684.50	-11,106,528.31
Total	163,415,363.60	169,838,173.50
Transfer of refundable members' capital to liabilities for the waiting period	-67,945,504.30	-32,685,798.17
Additional shares B 31.12.	95,469,859.30	137,152,375.33
Other reserves		
Reserve for invested unrestricted equity 1.1.	500,260,257.36	500,217,714.04
Refund of A-equity bonus	73,041.27	42,543.32
Reserve for invested unrestricted equity 31.12.	500,333,298.63	500,260,257.36
General reserve I 1.1.	3,939,904.28	3,939,904.28
General reserve I 31.12.	3,939,904.28	3,939,904.28
General reserve II 1.1.	67,401,740.00	67,401,740.00
General reserve II 31.12.	67,401,740.00	67,401,740.00
Value adjustment reserve 1.1.	120,284.71	-636,717.61
Addition	0.00	757,002.32
Decrease	-801,933.08	0.00
Value adjustment reserve 31.12.	-681,648.37	120,284.71
Profit/loss for previous financial year 1.1.	526,888,961.06	538,327,395.25
Interest paid	-66,277,120.72	-71,939,229.89
Used for accelerated refund of participation shares	-8,947,941.61	-7,098,710.46
Used for A-equity bonus	-7,090,517.44	-5,356,382.14
Profit/loss for previous financial year 31.12.	444,573,381.29	453,933,072.76
Profit/loss for the period	87,744,876.11	72,955,888.30
Total members' funds	2,604,656,741.43	2,518,557,133.27

EUR		2021	2020
*)	Unpaid participation shares		
	Total called-up members' capital	219,839,012.00	222,810,975.00
	Participation shares paid	-223,492,406.00	-223,112,292.00
	Unpaid participation shares	-3,653,394.00	-301,317.00
	The amount available for redemption of capital		
	Participation shares **)	268,929,335.82	259,301,775.40
	Additional shares A **)	1,192,180,495.67	1,068,874,435.76
	Additional shares B **)	163,415,363.60	169,838,173.50
	Reserve for invested unrestricted equity	500,333,298.63	500,260,257.36
	Retained earnings	532,318,257.40	526,888,961.06
	Depreciation difference less tax liability	51,338,425.85	42,806,063.83
	Total	2,708,515,176.97	2,567,969,666.91
**)	Transfer of refundable members' capital to liabilities for the waiting period	123,180,005.60	78,068,398.80

In accordance with Metsäliitto Cooperative's rules under Section 16 one third of the distributable funds shown in the balance sheet confirmed for the preceding financial period can be used for refunding of participation shares and additional shares.

Additional information of basic and additional shares has been introduced in Group financial statement note 5.1

14. Provisions

EUR	2021	2020
Provisions for pension		
1.1.	34,778.00	36,398.00
Decrease	-1,094.00	-1,620.00
31.12.	33,684.00	34,778.00
Provisions for unemployment pension costs		
1.1.	244,579.52	391,775.53
Increase	0.00	59,712.46
Decrease	-93,546.60	-206,908.47
31.12.	151,032.92	244,579.52
Other provisions		
1.1.	124,000.00	124,000.00
31.12.	124,000.00	124,000.00
Total provisions		
1.1.	403,357.52	552,173.53
Increase	0.00	59,712.46
Decrease	-94,640.60	-208,528.47
31.12.	308,716.92	403,357.52

15. Deferred tax receivables and liabilities

EUR	2021	2020
Deferred tax receivables		
Provisions	61,743.38	80,671.50
Financial instruments	170,412.10	0.00
Netting against liability	0.00	-30,071.18
Total	232,155.48	50,600.32
Deferred tax liabilities		
Financial instruments	0.00	-30,071.18
Netting against receivable	0.00	30,071.18
Total	0.00	0.00
Deferred tax receivables in balance sheet	232,155.48	50,600.32

Deferred tax of depreciation difference not posted to balance sheet in 2021 is 12.8 million euros (10.7).

16. Non-current liabilities

EUR	2021	2020
Liabilities to Group companies		
Other liabilities	0.00	99,356.33
Total	0.00	99,356.33
Liabilities to others		
Other liabilities		
Transfer of refundable members' capital to liabilities for the waiting period, additional shares B	48,228,169.00	20,483,042.67
Total	48,228,169.00	20,483,042.67
Total non-current liabilities	48,228,169.00	20,582,399.00

17. Current liabilities

EUR	2021	2020
Liabilities from Group companies		
Advance payment	4,686,537.70	7,334,704.20
Accounts payable	10,203,677.30	10,392,631.34
Other liabilities	1,333,720.49	576,323.46
Accruals and deferred income	2,000,463.19	2,739,984.11
Total	18,224,398.68	21,043,643.11
Liabilities from participating interests		
Accounts payable	649,535.83	2,241,814.92
Total	649,535.83	2,241,814.92
Liabilities from other		
Advance payment	3,209,625.46	2,278,646.39
Accounts payable	138,971,000.78	105,768,817.48
Other liabilities		
Due members' capital transferred to liabilities during the waiting period	74,951,836.60	57,585,356.13
Other liabilities	12,457,142.91	12,088,505.76
Accruals and deferred income	118,338,295.84	108,063,295.61
Total	347,927,901.59	285,784,621.37
Total current liabilities	366,801,836.10	309,070,079.40

Current liabilities include due members' capital transferred to liabilities		
Participation shares	3,298,080.64	3,842,889.01
Additional shares A	51,936,420.66	41,539,711.62
Additional shares B	19,717,335.30	12,202,755.50
Total	74,951,836.60	57,585,356.13
Accruals and deferred income, current, external		
Personnel expenses	39,680,403.09	30,582,028.77
Accruals of purchases	63,462,870.71	64,716,442.45
Pension insurance premiums	2,661,077.95	2,176,769.97
Other insurance premiums	959,852.46	785,833.23
Others	11,574,091.63	9,802,221.19
Total	118,338,295.84	108,063,295.61

18. Financial Instruments

Financial derivatives 2021

EUR	Nominal value	Fair value			Fair value	
		Assets	**Liabilities**	**Fair value total**	**Fair value with Profit/Loss impact**	**with Fair value to Fair value reserve**
Currency forward agreements	72,157,122.64	366,383.89	1,333,720.49	-967,336.60	-115,276.14	-852,060.46
Currency derivates total	**72,157,122.64**	**366,383.89**	**1,333,720.49**	**-967,336.60**	**-115,276.14**	**-852,060.46**
Derivatives total	72,157,122.64	366,383.89	1,333,720.49	-967,336.60	-115,276.14	-852,060.46

Financial derivatives 2020

EUR	Nominal value	Fair value			Fair value	
		Assets	**Liabilities**	**Fair value total**	**Fair value with Profit/Loss impact**	**with Fair value to Fair value reserve**
Currency forward agreements	67,275,989.43	729,973.16	576,323.46	153,649.70	3,293.81	150,355.89
Currency derivates total	**67,275,989.43**	**729,973.16**	**576,323.46**	**153,649.70**	**3,293.81**	**150,355.89**
Derivatives total	67,275,989.43	729,973.16	576,323.46	153,649.70	3,293.81	150,355.89

All derivative agreements of Metsäliitto Cooperative have been made in hedging purpose, and cash flow hedge accounting according to IFRS 9 has been applied in major part of the agreements financial statements of Metsäliitto Cooperative. Only the part of currency derivatives that is related to hedging of the accounts receivables and the accounts payable is not directed to hedge accounting. Currency derivatives have been made to hedge Wood Products Industry's and Wood Supply and Forest Services' currency cash flow, and they mature fully during 2022.

Description of the Group finance risk control and principles applied to derivatives is added to the Group financial statement notes 5.6 and 5.7.

Fair values

EUR

The fair value hierarchy of financial assets and liabilities 2021	**Level 1**	**Level 2**	**Level 3**	**Total**
Financial liabilities recognised at fair value				
Derivative liabilities		1,333,720.49		1,333,720.49

The fair value hierarchy of financial assets and liabilities 2020	**Level 1**	**Level 2**	**Level 3**	**Total**
Financial liabilities recognised at fair value				
Derivative liabilities		576,323.46		576,323.46

Description of fair value financial assets and liabilities classification principles is added to the Group financial statement note 5.7.

19. Commitments and contingencies

Commitments and contingencies

During latest 12 months there has not been any legal prodeedings or arbitrations that have or will have considerable impact on financial status of Metsäliitto Osuuskunta. Metsäliitto Osuuskunta has no information of any other future legal prodeedings.

EUR	2021	2019
Commitments and contingencies		
For own and for affiliated companies		
Guarantees and counter-indemnities	556,116,913.00	559,830,933.00
Leasing commitments		
Less than 12 months	10,140,064.03	7,731,151.10
For later years	53,675,824.09	34,176,060.57
Total		
Guarantees and counter-indemnities	556,116,913.00	559,830,933.00
Leasing commitments	63,815,888.12	41,907,211.67
Commitments total	619,932,801.12	601,738,144.67
Investment commitments		
Less than 12 months	9,365,682.07	1,401,477.40
For later years	2,405,493.33	689,110.98
Total	11,771,175.40	2,090,588.38

20. Shares on 31 December 2021

	Country	**Parent company share of ownership, %**	**Group share ownership, %**	**Number of shares**	**Net book value, EUR**
Affiliated companies					
Kemi Shipping Oy	Finland	100.00		280,000	3,022,400.00
Kumpuniemen Voima Oy	Finland	53.97		34	462,368.79
Metsa Forest Latvia SIA	Latvia	100.00		670	3,258,886.72
Metsä Board Oyj [1)]	Finland	47.99		170,599,373	626,193,432.79
Metsä Fibre Oy	Finland	50.10	62.05	38,135	769,718,680.09
Metsä Forest Eesti AS	Estonia	100.00		150,000	1,145,825.66
Metsä Forest Sverige AB	Sweden	100.00		5,000	702,510.62
Metsä Group Asia Co. Ltd	China	100.00			1,792,420.12
Metsä Group Services Sp. z.o.o.	Poland	100.00		100	1,999,627.68
Metsä Group Treasury Oy	Finland	100.00		50,000	10,236,220.47
Metsä Spring Oy	Finland	100.00		100	25,200,000.00
Metsä Tissue Oyj	Finland	100.00		9,118,588	453,120,491.68
Metsä Wood Deutschland GmbH	Germany	100.00			11,947,611.09
Metsä Wood Eesti AS	Estonia	100.00		1,000	30,000,000.00
Metsä Wood Holland B.V.	Netherlands	100.00			142,949.02
Metsä Wood Schweiz AG	Switzerland	100.00		200	750,000.00
Metsä Wood UK Ltd	Great Britain	100.00		30,000,000	32,579,303.45
Metsä Wood USA Inc.	USA	100.00		1,000	0.00
OOO Metsa Forest Podporozhye	Russia	100.00			4,579,386.79
OOO Metsa Forest St. Petersburg	Russia	100.00		100	980,972.46
Total					**1,977,833,087.43**

1) Parent company share of votes 67.45%

Associated companies	Country	Parent company share of ownership, %	Group share ownership, %	Number of shares	Net book value, Eur
Finsilva Oyj	Finland	19.77		19 064 275	5 719 282.50
Lohjan Biolämpö Oy	Finland	51.00		867 000	868 360.00
Metsäteho Oy	Finland	24.00		40	67 275.17
Perkaus Oy	Finland	33.33		2 500	5 774.64
Suomen Metsäsijoitus Oy	Finland	25.00		23 850	1 011 282.05
Total					**7 671 974.36**

Other shares	Country	Parent company share of ownership, %	Group share ownership, %	Number of shares	Net book value, Eur
Ab Sydösterbottens Ishall-Suupohjan Jäähalli Oy	Finland	9.49		50	0.00
Asunto Oy Tapiolan Jalava, shares 2107–2219	Finland			113	592,857.42
Asunto Oy Tapiolan Jalava, shares 2220–2259	Finland			40	357,000.00
Asunto Oy Tapiolan Jalava, shares 417–528	Finland			112	562,647.36
Asunto Oy Tapiolan Jalava, storages	Finland				6,588.35
Asunto Oy Tapiolan Tammi, storages	Finland				3,122.13
Botniagolf Oy	Finland			1	0.00
CLIC Innovation Oy	Finland			119	150,000.00
E-P:n Sahojen Oy	Finland	2.22		8	0.00
Estonia Golf & Country Club	Estonia			2	23,851.54
Finnforest-Nexfor B.V.	Netherlands	100.00		90,000	0.00
Harjattula Golf Oy	Finland			1	8,543.96
Kainuun Puhelinosuuskunta (KPO)	Finland			3	905.69
Kerigolf Oy	Finland			2	504.56
Kiinteistö Oy Puhoksen Lastu	Finland	9.00		74	12,065.00
Kiinteistö Oy Tapiolan Jalopuupysäköinti, ap 447	Finland			1	35,502.71
Kiinteistö Oy Tapiolan Jalopuupysäköinti, ap 448	Finland			1	35,502.71
Laiva Oy Matkailu (Suomen Hopealinja Oy)	Finland			12	149.86
Messilä Golf Oy	Finland			2	18,796.68
Misawa Homes of Finland	Finland			400	67,275.17
Osuuskunta KPY	Finland			100	0.00
Oy Nordgolf Ab	Finland			2	12,834.10
Oy Telefooni Invest Ab	Finland			2	0.01
Parikkalan Valo Oy	Finland			172	0.00
Pohjois-Hämeen Puhelin Oy	Finland			300	5,459.26
Pohjolan Voima Oy	Finland			3	1,320.80
Suomen Puukauppa Oy	Finland	10.5		1,401	153,505.00
Tawastia Colf & Country Club	Finland			1	17,497.14
Tennis Tapiola Oy	Finland			35	5,413.76
The Finnish Club and Sauna Ltd	Great Britain			100	150.70
Vapaa-ajan keskus Parra Oy	Finland	3.46		167	0.00
Total					**2,071,493.91**

The Board of Directors' proposal for the distribution of profit

Metsäliitto Cooperative

		EUR
All the disposal of the Representative Council		
reserve for invested unrestricted equity		500,333,298.63
value adjustment reserve		-681,648.37
retained earnings from previous year		444,573,381.29
result for the period		87,744,876.11
Distributable funds total		1,031,969,907.66
The Board of Directors proposes		
an interest of		
6.0% to be distributed on participation shares	13,525,631.25	
5.0% to be distributed on additional shares A	56,458,298.76	
1.0% to be distributed on additional shares B	1,628,941.90	71,612,871.91
a transfer to the reserve for invested unrestricted equity		7,956,985.77
to be retained in retained earnings		952,400,049.98
Total		1,031,969,907.66

If the Representative Council approves the above proposal, the members' funds will be	
Members' funds	
Members' capital	
Participation shares	268,929,335.82
Additional shares A *)	1,192,180,495.67
Additional shares B	163,415,363.60
Metsä1 additional shares *)	7,201,072.12
Due members' capital transferred to liabilities for the waiting period	-123,180,005.60
Other reserves	
Reserve for invested unrestricted equity	500,333,298.63
General reserve I	3,939,904.28
General reserve II	67,401,740.00
Value adjustment reserve	-681,648.37
Retained earnings	452,748,399.72
Total members' funds	2,532,287,955.87

*) Does not include transfers of A additional shares to Metsä1 additional shares implemented on 1 January 2022.

No material changes have been taken place in respect of the cooperative's financial position after the balance sheet date. The liquidity of the cooperative is good and in the opinion of the Board of Directors, the proposed profit distribution would not compromise the liquidity of the cooperative.

Espoo, 10 February 2022

Jussi Linnaranta Chair	Timo Saukkonen Deputy Chair	Taavi Heikkilä
Mikko Mäkimattila	Juha Parpala	Nina Pärssinen
Ilkka Salonen	Jussi Vanhanen	Ilkka Hämälä President and CEO

Auditor's Report

This document is an English translation of the Finnish auditor's report. Only the Finnish version of the report is legally binding.

To the members of Metsäliitto Cooperative

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of Metsäliitto Cooperative (business identity code 0116300-4) 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 cooperatives'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 cooperative'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.

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 cooperative 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 cooperative and the Group companies are in compliance with laws and regulations applicable in Finland regarding these services, and we have not provided any prohibited non-audit services referred to in Article 5 (1) of regulation (EU) 537/2014. The non-audit services that we have provided have been disclosed in note 2.4 to the consolidated financial statements.

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

Materiality

The scope of our audit was influenced by our application of materiality. The materiality is determined based on our professional judgement and is used to determine the nature, timing and extent of our audit procedures and to evaluate the effect of identified misstatements on the financial statements as a whole. The level of materiality we set is based on our assessment of the magnitude of misstatements that, individually or in aggregate, could reasonably be expected to have influence on the economic decisions of the users of the financial statements. We have also taken into account misstatements and/or possible misstatements that in our opinion are material for qualitative reasons for the users of the financial statements.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. The significant risks of material misstatement referred to in the EU Regulation No 537/2014 point (c) of Article 10(2) are included in the description of key audit matters below.

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

THE KEY AUDIT MATTER	HOW THE MATTER WAS ADDRESSED IN THE AUDIT
Valuation of tangible and intangible assets (Refer to notes 4.1 and 4.2 to the consolidated financial statements)	
Tangible and intangible assets total EUR 4.2 billion and represent 53% of the consolidated total assets. Thereof the goodwill balance amounts to EUR 0.4 billion. The carrying value of construction in progress under the tangible assets amounts to EUR 1.1 billion consisting of several significant investment projects. Tangible and intangible assets are allocated to cash-generating units and tested for impairment annually or more frequently if there are indications 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 Cooperative'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.
Valuation of inventories (Refer to note 4.5 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 1.0 billion 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 1.2 billion, accounting for 15 percent of the consolidated balance sheet. In addition, the Group has off-balance sheet committed credit facility agreements amounting to EUR 1.8 billion. The Group hedges financial risks with interest rate and foreign currency derivatives and their nominal values amounted to EUR 3.7 billion 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, selecting transactions for testing on a sample basis as well as reconciling the balance sheet values at the balance sheet date to external confirmations. 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 management and monitoring of access rights. Our audit procedures extensively consisted of several substantive procedures as well as data analysis relating to the most significant balances on the income statement and on the balance sheet.

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

The Board of Directors and the CEO 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 CEO 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 CEO are responsible for assessing the parent cooperative'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 cooperative 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 cooperative'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 CEO'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 cooperative'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 cooperative 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 Representative Council of Metsäliitto Cooperative on 3 May 2012, and our appointment represents a total period of uninterrupted engagement of 10 years.

Other Information

The Board of Directors and the CEO 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 use of the surplus shown on the balance sheet is in compliance with the Cooperative Act. We support that the Members of the Supervisory Board and of the Board of Directors as well as the CEO of the parent cooperative should be discharged from liability for the financial period audited by us.

Helsinki, 10 February 2022
KPMG Oy Ab

Kirsi Jantunen
Authorized Public Accountant, KHT

Comparable key ratios and calculation of key ratios

Comparable key figures

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 Group's case International Financial Reporting Standards as adopted in the EU pursuant to Regulation (EC) No 1606/2002. Performance measures presented in this report qualify as alternative performance measures under the ESMA guidelines.

Metsä Group sees the presentation of alternative performance measures as providing users of financial statements with an improved view of the company's financial performance and position, including among other things the efficiency of its capital utilization, operational profitability and debt servicing capabilities.

Reconciliation of operating result under IFRS and comparable operating result as well as EBITDA and comparative EBITDA is presented in this report. Comparable return on capital employed has been calculated using the same adjustments as the comparable operating result, and it has been further adjusted with financial items affecting comparability when applicable. Metsä Group considers the key figures derived in this manner to improve the 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 Group's view, comparable performance measures better reflect the underlying operational performance of the company by eliminating the result effect arising from items and transactions outside ordinary course of business.

Reconciliation of operating result and EBITDA

EUR million	2021	2020
Operating result (IFRS)	873.6	375.8
Depreciation and impairment charges	340.1	303.5
EBITDA	1,213.7	679.3
Items affecting comparability:		
Paperboard Industry	6.2	-6.0
Tissue and Greaseproof Papers		-2.3
Others	-4.1	0.6
Eliminations	-4.6	-0.6
Total	-2.5	-8.4
Comparable EBITDA	1,211.2	670.9
Depreciation and impairment charges	-340.1	-303.5
Items affecting comparability		
Depreciation:		
Tissue and Greaseproof Papers		0.3
Impairment charges and reversals:	42.7	
Pulp and Sawn timber industry	34.5	
Paperboard Industry	4.6	
Eliminations	3.7	
Comparable operating profit	913.8	367.7

Reconciliation by expense and income

EUR million	2021	2020
Operating result (IFRS)	873.6	375.8
Depreciation and impairment charges	340.1	303.5
EBITDA	1,213.7	679.3
Items affecting comparability		
Other operating income	-12.2	-11.8
Change in inventories		0.3
Employee costs		0.1
Other operating expenses	9.7	3.0
Total	-2.5	-8.4
Comparable EBITDA	1,211.2	670.9
Depreciation and impairment charges	-340.1	-303.5
Items affecting comparability		
Depreciation		0.3
Impairment charges and reversals	42.7	
Comparable operating profit	913.8	367.7

Items with "+" sign = expenses affecting comparability
Items with "–" sign = income affecting comparability

The description of items affecting comparability is in Note 2.1, Segment information.

Calculation of key ratios

Comparable key figures		Specification	The grounds for using key figures
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 charges	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 (%) ROE	=	Result before tax - income taxes / Members' funds total (average)	The key figures describe the Group's ability to produce a profit with the assets invested in the Group by shareholders
Return on capital employed (%) ROCE	=	Result before tax -/+ net exchange gains/losses + interest 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
FINANCING			
Equity ratio (%)	=	Members' funds total / Total assets - 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 / Members' funds total	The key figure describes the Group's capital structure and financial position.
Interest-bearing net liabilities	=	Interest-bearing liabilities - cash and cash equivalent - interest-bearing receivables	The key figure describes the Group's indebtedness
OTHERS			
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

Quarterly data

EUR million	Yearly		Quarterly							
Income statement	**2021**	**2020**	**QIV/2021**	**QIII/2021**	**QII/2021**	**QI/2021**	**QIV/2020**	**QIII/2020**	**QII/2020**	**QI/2020**
Sales by segments										
Wood Supply and Forest Services	2,022.9	1,819.9	502.6	497.2	506.6	516.5	469.0	449.5	470.8	430.6
Wood Products Industry	580.0	429.1	141.3	141.8	156.2	140.7	116.6	121.5	103.6	87.3
Pulp and Sawn Timber Industry	2,628.1	1,826.5	721.5	693.1	652.3	561.1	528.3	458.5	428.1	411.5
Paperboard Industry	2,084.1	1,889.5	518.5	516.1	555.8	493.7	473.1	471.2	473.1	472.1
Tissue and Greaseproof Papers	946.7	1,011.9	259.2	239.4	224.5	223.6	257.8	237.2	224.2	292.7
Other operations	10.0	8.5	3.2	2.4	2.1	2.2	2.0	2.2	1.8	2.6
Eliminations	-2,254.8	-1,930.6	-586.1	-575.2	-555.3	-538.3	-489.8	-495.2	-502.0	-443.7
Sales total	**6,017.0**	**5,054.9**	**1,560.2**	**1,514.8**	**1,542.3**	**1,399.6**	**1,357.2**	**1,245.0**	**1,199.7**	**1,253.0**
Operating result by segments										
Wood Supply and Forest Services	36.4	22.4	10.0	11.3	6.7	8.4	8.9	6.2	3.9	3.4
Wood Products Industry	18.6	9.3	-0.7	5.4	6.8	7.0	4.7	6.6	1.3	-3.3
Pulp and Sawn Timber Industry	613.7	3.9	182.3	225.9	168.0	37.6	-8.0	17.1	16.0	-21.3
Paperboard Industry	375.9	227.3	90.8	99.4	103.7	82.0	64.5	62.5	66.5	33.8
Tissue and Greaseproof Papers	-9.7	115.9	-23.2	-3.7	0.7	16.4	29.9	23.3	23.6	39.1
Other operations	-18.8	-7.1	-9.5	-0.2	-1.4	-7.7	-10.7	4.5	-1.0	0.1
Eliminations	-142.5	4.2	-28.6	-64.7	-41.3	-8.0	7.5	-4.3	-8.3	9.3
Operating result total	**873.6**	**375.8**	**221.2**	**273.4**	**243.2**	**135.8**	**96.8**	**115.9**	**102.1**	**61.1**
Operating result, comparable	913.8	367.7	219.8	278.0	242.1	173.9	94.0	115.3	96.1	62.4
-"-, % of sales	15.2	7.3	14.1	18.3	15.7	12.4	6.9	9.3	8.0	5.0
Share of results from associated companies and joint ventures	-2.2	3.1	-0.8	-0.8	2.1	-2.7	3.3	-1.9	1.2	0.5
Net exchange gains/losses	-3.7	-2.3	-0.9	-0.1	-2.4	-0.3	-1.4	0.4	-1.0	-0.3
Financial income and expenses	-35.9	-46.5	-4.0	-9.8	-10.6	-11.4	-10.4	-11.3	-9.8	-15.1
Result before tax	**831.8**	**330.1**	**215.4**	**262.6**	**232.3**	**121.4**	**88.3**	**103.1**	**92.5**	**46.2**
Income taxes	-174.7	-67.9	-51.1	-52.4	-47.8	-23.4	-16.1	-22.2	-18.5	-11.1
Result for the period	**657.0**	**262.2**	**164.3**	**210.2**	**184.5**	**98.0**	**72.2**	**80.9**	**74.0**	**35.1**

Operating result, comparable	**2021**	**2020**	**QIV/2021**	**QIII/2021**	**QII/2021**	**QI/2021**	**QIV/2020**	**QIII/2020**	**QII/2020**	**QI/2020**
Wood Supply and Forest Services	36.4	22.4	10.0	11.3	6.7	8.4	8.9	6.2	3.9	3.4
Wood Products Industry	18.6	9.3	-0.7	5.4	6.8	7.0	4.7	6.6	1.3	-3.3
Pulp and Sawn Timber Industry	648.2	3.9	182.3	225.9	168.0	72.1	-8.0	17.1	16.0	-21.3
Paperboard Industry	386.6	221.2	91.3	104.0	102.5	88.8	64.5	62.5	60.5	33.8
Tissue and Greaseproof Papers	-9.7	113.8	-23.2	-3.7	0.7	16.4	27.1	22.7	23.6	40.5
Other operations and eliminations	-166.3	-2.9	-39.9	-64.9	-42.6	-18.9	-3.2	0.2	-9.3	9.4
Total	**913.8**	**367.7**	**219.8**	**278.0**	**242.1**	**173.9**	**94.0**	**115.3**	**96.1**	**62.4**

Key ratios	**2021**	**2020**	**QIV/2021**	**QIII/2021**	**QII/2021**	**QI/2021**	**QIV/2020**	**QIII/2020**	**QII/2020**	**QI/2020**
Equity ratio, %	61.1	57.2	61.1	60.5	59.5	57.6	57.2	56.6	56.4	56.2
Net gearing ratio, %	-4	4	-4	-1	-1	-2	4	10	11	12
Interest-bearing net liabilities, EUR million	-185	168	-185	-66	-59	-68	168	381	423	449
Return on capital employed, %	15.5	7.2	14.7	18.5	17.2	9.8	7.7	8.9	8.1	4.8
Comparable, %	16.2	7.1	14.7	18.8	17.2	12.6	7.4	8.8	7.6	4.9
Return on equity, %	15.1	6.8	13.9	18.5	17.1	9.7	7.5	8.6	8.0	3.8
Comparable ROE, %	16.0	6.6	14.6	18.8	17.0	12.7	7.3	8.5	7.5	3.9

Five years in figures

EUR million	2021	2020	2019	2018	2017
Sales	6,017	5,055	5,473	5,709	5,040
EBITDA	1,214	679	790	1,128	831
- "-, comparable	1,211	671	799	1,133	820
% of sales	20,1	13,3	15,0	19,9	16,3
Operating result	874	376	374	843	581
- "-, comparable	914	368	495	849	566
% of sales	15,2	7,3	9,0	14,9	11,2
Result for the period	657	262	239	613	404
Non-current assets	4,561	3,899	3,867	4,019	4,004
Inventories	1,038	966	980	991	782
Other current assets	2,281	1,955	1,848	1,883	1,802
Total assets	7,891	6,851	6,727	6,893	6,588
Members' funds	3,574	3,092	2,927	2,751	2,234
Non-controlling interest	1,240	823	849	905	727
Non-current liabilities	1,281	1,515	1,561	1,506	2,019
Current liabilities	1,789	1,405	1,375	1,731	1,608
Total members' funds and liabilities	7,891	6,851	6,727	6,893	6,588
Return on capital employed, %	15,5	7,2	7,3	16,6	12,6
- "-, comparable	16,2	7,1	9,6	16,8	12,3
Return on equity, %	15,1	6,8	6,4	18,5	14,5
- "-, comparable	16,0	6,6	9,7	18,7	14
Equity ratio, %	61,1	57,2	56,2	53,1	45
Net gearing ratio, %	-4	4	10	13	34
Net cash flow from operating activities	1,023	667	485	761	749
Interest-bearing liabilities	1,164	1,389	1,469	1,553	2,073
Interest-bearing financial assets	1,348	1,221	1,096	1,089	1,080
Interest-bearing net liabilities	-185	168	374	463	993
Total investments	994	401	260	275	631
Depreciation and impairment charges	340	304	416	285	250
Personnel, average	9,619	9,392	9,624	9,464	9,399
Personnel, at the end of year	9,533	9,213	9,265	9,310	9,126
of whom in Finland	5,329	5,055	4,929	4,834	4,764

Calculation of key ratios and definition of comparable key ratios is presented on page 104.

Corporate Governance Statement 2021

Introduction

This statement concerning Metsä Group's Corporate Governance has been given as a separate report and published simultaneously with Metsä Group's Financial Statements and the Board of Directors' Report. Metsäliitto Cooperative is a Finnish cooperative and the parent company of Metsä Group. In this statement, Metsäliitto Cooperative is referred to when a matter is discussed from the parent company's point of view only. The decision-making and administration of Metsä Group companies complies with the Cooperatives Act, the Limited Liability Companies Act, the Securities Markets Act, the rules of the cooperative, procedures approved by the administrative bodies, and the policies and guidelines approved by the Board of Directors of Metsäliitto Cooperative and the Executive Management Team of the Group. Metsäliitto Cooperative's rules are available in full on Metsä Group's website under "Metsä Group's corporate governance principles". Metsä Group prepares its financial statements and interim reports in accordance with the International Financial Reporting Standards (IFRS). The financial statements are published in Finnish and English. Metsä Group's head office is located in Espoo, Finland. The registered office of the parent company, Metsäliitto Cooperative, is located in Helsinki, Finland.

Corporate Governance Code

Metsä Group's parent company Metsäliitto Cooperative complies with the Finnish Corporate Governance Code issued by the Securities Market Association; however, it takes into account the special characteristics of the cooperative form of incorporation, stating the deviations from the code and their rationale. In accordance with the opinion issued by the Finnish Central Chamber of Commerce in January 2006, corporations with an extensive ownership base, extensive operations or considerable regional or national significance should comply with the Corporate Governance Code to the extent possible, taking their special characteristics into consideration in accordance with the "comply or explain" principle. The Finnish Corporate Governance Code is available on the website of the Securities Market Association at www.cgfinland.fi/en/.

The corporate governance system of Metsä Group's parent company Metsäliitto Cooperative deviates from the recommendations Corporate Governance Code as follows:

- According to the Corporate Governance Code, the members of the Board of Directors are elected by the Annual General Meeting. According to the rules of Metsäliitto Cooperative, the members of the Board of Directors are elected by the Supervisory Board. Thus, the election of Metsäliitto Cooperative's Board of Directors deviates from the recommendation of the Corporate Governance Code on the election of the Board of Directors. The competence regulations that deviate from the recommendation ensure that cooperative corporate governance is realised.
- According to the Corporate Governance Code, the members of the Board of Directors are elected for a term of office of one year at a time. According to the rules of Metsäliitto Cooperative, the term of office of the members of the Board of Directors is three years at a time. The board members' three-year term of office has been deemed necessary to secure the continuity of decision-making.

Main administrative bodies

Metsäliitto Cooperative's administrative bodies are the Representative Council, Supervisory Board, Board of Directors and the CEO, who also acts as the President and CEO of Metsä Group. The bodies separately specified below in this statement assist the administrative bodies in their decision-making and prepare their decisions. According to the rules of Metsäliitto Cooperative, the administrative personnel of Metsäliitto Cooperative must not work for companies or other organisations operating either directly or indirectly in the same sector as the cooperative or its Group companies or participate in the administration of such companies or organisations.

Representative Council

The Representative Council uses the supreme decision-making power belonging to the members in Metsäliitto Cooperative in matters assigned to it by law and rules. The Representative Council substitutes for the meeting of the cooperative in Metsäliitto Cooperative. The meeting of the Representative Council discusses the matters specified in the Cooperatives Act and the rules of Metsäliitto Cooperative as well as other matters mentioned in the invitation to the meeting.

The main tasks of the Representative Council are to:

- Decide on adopting the financial statements;
- Decide on the distribution of profit to the members;
- Decide on discharging the Supervisory Board, Board of Directors and Managing Director/President and CEO from liability;
- Elect the members of the Supervisory Board and the auditors and to decide on their remuneration.

A full member of Metsäliitto Cooperative can be elected to the Representative Council. Persons who are employed by the Cooperative or its Group company or who are members of Metsäliitto's Supervisory Board or Board of Directors are not eligible to stand for election to the Representative Council. The election of the Representative Council is carried out every four years by postal voting, a communications link or some other technical means. Each member has one vote. The election is carried out by election districts so that the number of representatives elected from each district equals the number of Metsäliitto Cooperative members on the list of voters for the district in question who are entitled to vote on 1 January of the election year, divided by 2,300 and the remainder counted as one. The election districts are confirmed by the Supervisory Board and as a rule, they are determined according to Metsäliitto Cooperative's district organisations. In accordance with the rules, the Representative Council convenes once a year in the spring. The Representative Council, the Supervisory Board or the Board of Directors may decide to arrange an extraordinary meeting. An extraordinary meeting must also be convened if demanded by at least one tenth of the Representative Council members. Unless otherwise required by the Cooperatives Act for certain matters, the Representative Council is convened by the Supervisory Board at least seven days before the meeting with a written invitation to the meeting sent to every member of the Representative Council, which must mention the matters to be discussed in the meeting. Each Representative Council member has one vote in the meeting. Amending the rules of Metsäliitto Cooperative requires that the amendment proposal is supported by a minimum of two-thirds of the members present at the meeting of the Representative Council. In addition to the members of the Representative Council, the President and CEO of Metsä Group, the Chair of the Board of Directors and, as a general rule, the members of the Board of Directors and Supervisory Board are present at meetings of the Representative Council. In addition, the auditors are also present at the Annual General Meeting of the Representative Council. The composition of the Representative Council is presented on Metsä Group's website under "Metsäliitto Cooperative governance and Metsä Group management".

District Committees

In accordance with the rules of Metsäliitto Cooperative, there is a District Committee in each wood supply district. The District Committee comprises the members of the Representative Council, Supervisory Board and Board of Directors elected from the District's area, as well as candidates not elected in the election of the representative council, in the order of their personal number of votes. Each District has twice as many committee members as the number of representatives elected from the District's area, but always with a minimum of five (5) candidates not elected to the Representative Council in the election. The guidelines approved by the Supervisory Board specify the tasks of the District Committee. According to the regulations, the main task of the district council is to promote communication and interaction between the members and the Metsäliitto Cooperative wood supply district in question through its operations.

Supervisory Board

The rules of Metsäliitto Cooperative specify that the Supervisory Board is a part of Metsäliitto's administrative model. This aims to ensure the realisation of sufficient governance by the owners and the commitment of the members to the Cooperative's decision-making. Strategic and other far-reaching decisions, however, belong to the powers of Metsäliitto Cooperative's Board of Directors, and operational management to the executive management. The rules of the Cooperative specify the tasks of the Supervisory Board. The main task of the Supervisory Board is to ensure that the Cooperative is managed in accordance with the rules and the decisions of the Representative Council and the Supervisory Board.

In addition to this, the Supervisory Board:

- Elects and dismisses members of Metsäliitto Cooperative's Board of Directors and decides on their remuneration;
- Gives the Board of Directors instructions in far-reaching matters and matters of importance in principle;
- Issues an opinion on the financial statements to the Representative Council.

The Supervisory Board elects a Chair and Deputy Chair from among its members for one year at a time and invites a secretary. The Supervisory Board convenes when summoned by the chair as often as necessary, or as proposed by the Board of Directors. The Supervisory Board constitutes a quorum when more than half of the members are present. The opinion favoured by the majority will be the final decision. If the votes are even, the chair has the casting vote, and even elections are decided by lot. The Supervisory Board comprises a minimum of twenty and a maximum of thirty members elected by the Representative Council from among the members of the Cooperative. Metsäliitto Cooperative's personnel may elect a maximum of five members to the Supervisory Board. In addition, the Representative Council may, at the proposal of the Supervisory Board, elect a maximum of three expert members to the Supervisory Board. The term of office of a member of the Supervisory Board begins after the Annual General Meeting of the Representative Council that elected him or her and runs until the Annual General Meeting of the Representative Council three years later. The purpose of the three-year term of office is to ensure continuity in decision-making. Regional equality is taken into consideration when electing the members of the Supervisory Board. A member of the Board of Directors may not be a member of the Supervisory Board. The composition of the Supervisory Board is presented on Metsä Group's website under "Metsäliitto Cooperative governance and Metsä Group management".

Nomination Committee of the Supervisory Board

A special Nomination Committee elected from among the members of the Supervisory Board prepares the election of the members of the Board of Directors in accordance with procedures approved for it. In addition, the Nomination Committee makes a proposal for the fees paid to the Board of Directors. The Nomination Committee comprises six members of the Supervisory Board as well as the Chair and the Deputy Chair of the Supervisory Board. The Chair of the Supervisory Board acts as the Chair of the Nomination Committee, and the secretary of the Board of Directors acts as the secretary. The Committee may invite the Chair of the Board of Directors to attend their meetings as an expert member. The Supervisory Board elected the following persons to the Nomination Committee in its meeting held on 28 April 2021: Matti Alatalo, Mats Brandt, Teuvo Hatva, Ville Hirvonen, Jari Laineenoja and Ilkka Uusitalo. Furthermore, Juha Paajanen, Chair of the Supervisory Board, and Ahti Siponen, Deputy Chair, are members of the Nomination Committee on the basis of their position.

Information on the meetings of the Supervisory Board in 2021

In 2021, there were 34 members on the Supervisory Board, four of them being personnel representatives elected by different personnel groups. There were no expert members on the Supervisory Board in 2021. The Supervisory Board convened four times, and the members' attendance rate was 98%.

Board of Directors

According to the rules of Metsäliitto Cooperative and in accordance with legislation, the Board of Directors is charged with ensuring that Metsäliitto Cooperative and Metsä Group's operations and administration are appropriately arranged. The Board of Directors has drawn up a charter for its operations that specifies in greater detail the operating principles followed in the decision-making of the Board of Directors. The charter is available in full on Metsä Group's website under "Metsä Group's corporate governance principles."

The tasks of the Board of Directors include:

- Appointing and dismissing the CEO, who also serves as the President and CEO of Metsä Group, unless otherwise decided by the Board of Directors;
- Confirming the tasks of the CEO/President and CEO and the terms of their service contract, and monitoring that they take care of the Cooperative's running administration in accordance with the instructions and orders of the Board of Directors;
- Appointing and dismissing the directors immediately subordinate to the CEO and the President and CEO, if appointed;
- Deciding on how share payments are collected and on the issue of additional shares and their terms and conditions;
- Approving the strategy and annual budget of the Cooperative and the Group, and supervising compliance with them;
- Signing the financial statements and consolidated financial statements, and presenting them to the Supervisory Board for audit;
- Preparing matters to be processed at the meetings of the Supervisory Board;
- Deciding on the remuneration and other benefits of the CEO/President and CEO and other senior management on the proposal of the Compensation Committee;
- Deciding on other matters that, taking into account the extent and quality of the operations of the Cooperative, are unusual and far-reaching.

The Board of Directors elects a chair and a possible deputy chair from amongst its members for one year at a time. The chair of the Supervisory Board has the right to attend the Board of Directors' meetings. The Board of Directors convenes as summoned by the chair, as often as necessary. The President and CEO prepares the meetings of the Board of Directors. The Board of Directors is quorate when more than half the members of the Board are present. If the votes are equal, the chair has the casting vote. Minutes must be kept of the meetings of the Board of Directors. The Board of Directors regularly appraises its operation and procedures by conducting an annual self-assessment.

Metsäliitto Cooperative's Board of Directors on 31 December 2021

Member of the Board of Directors	Member of the Board of Directors since	Year of birth	Education	Participation (own, under common ownership and by controlled corporations) in Metsäliitto Cooperative on 31 December 2021 (EUR)	Shares (own and by controlled corporations) in Metsä Board Corporation on 31 December 2021 (pcs)
Jussi Linnaranta Chair	2017	1972	M.Sc. (Agriculture and Forestry), agronomist	131,556	25,192 (B share)
Timo Saukkonen Deputy Chair	2007	1963	M.Sc. (Agriculture and Forestry), forest manager	149,453	13,198 (B share)
Taavi Heikkilä	2021	1962	M.Sc. (Econ.), vuorineuvos (Finnish honorary title)	0	0
Arto Hiltunen	2007	1958	M.Sc. (Econ.)	1,170	-
Mikko Mäkimattila	2020	1971	M.Sc. (Agriculture and Forestry), agronomist	78,254	-
Juha Parpala	2009	1967	Agrologist	40,902	1,087 (B share)
Nina Pärssinen	2021	1961	LL.M.	670	-
Ilkka Salonen	2018	1965	M.Sc. (Econ.)	109,405	-

Composition and term of office of the Board of Directors

The Supervisory Board elects the Board of Directors of Metsäliitto Cooperative. The Board of Directors comprises a minimum of five and a maximum of eight members. A Board member's term of office commences at the beginning of the calendar year following the meeting of the Supervisory Board that elected them and runs for three years at a time. When preparing the nominations of the members of the Board of Directors, the Supervisory Board's Nomination Committee considers their qualifications, experience and available time, and also ensures that the composition of the Board includes diverse expertise. In 2021, the Chair of the Board of Directors was Jussi Linnaranta, the Deputy Chair was Timo Saukkonen and the members were Taavi Heikkilä, Arto Hiltunen, Mikko Mäkimattila, Juha Parpala, Nina Pärssinen as of 24 March 2021 and Ilkka Salonen. In its meeting held in October 2021, Metsäliitto Cooperative's Supervisory Board re-elected the outgoing member Timo Saukkonen for a new three-year term and elected Jussi Vanhanen as a new member. Arto Hiltunen was not available for re-election. According to the decision made by the Board of Directors in January 2022, the Chair of the Board of Directors in 2022 will be Jussi Linnaranta and the Deputy Chair will be Timo Saukkonen. More detailed information on the members of the Board of Directors is presented on Metsä Group's website under "Metsäliitto Cooperative governance and Metsä Group management".

Independence of the members of the Board of Directors and diversity of the Board

According to an overall evaluation by the Board of Directors, all members of the Board are independent of Metsäliitto Cooperative. The cooperative does not have such significant owner-members as referred to in the Corporate Governance Code of whom the members of the Board of Directors would be dependent. In December 2016, the Board of Directors approved the principles concerning the diversity of the Board of Directors. According to the principles, the successful management of the tasks of the Board of Directors and its committees requires a diverse composition, competence and experience, as well as the consideration of the personal qualities of individual members. Metsäliitto Cooperative has identified, in addition to knowledge of the forestry and forest industry sector, experience in demanding business management tasks and an international operating environment as essential in terms of the Board of Director's diversity. Other factors identified as promoting diversity include the board members' mutually complementary educational backgrounds, management experience in various segments of business operations, and a diverse age and gender distribution. It is Metsäliitto Cooperative's goal that both genders be represented on the Board of Directors. The Supervisory Board's Nomination Committee observes these principles when preparing proposals on the composition of the Board of Directors presented to the Supervisory Board. The Board of Directors was composed of eight members, most of whom have an academic degree. The members of the Board of Directors have significant experience in demanding governance and management duties from a number of sectors, and of international business operations. Several board members are distinguished members of society. The Supervisory Board's Nomination Committee observes the diversity principles and goals when preparing proposals on the composition of the Board of Directors.

Board Committees

In order to ensure that the Board of Directors' tasks are effectively carried out, Metsäliitto Cooperative's Board of Directors has an Audit Committee and an HR Committee. The committees do not have the authority to make decisions independently; the Board of Directors makes the decisions on matters based on the preparation of the Committees. The Board of Directors elects the members of the committees from among its members.

Audit Committee

The Audit Committee assists the Board of Directors in performing its supervision task. In this task, the committee assesses and supervises matters related to financial reporting, auditing, internal audit and risk management in accordance with procedures approved for it. The Audit Committee comprises a minimum of three members, most of whom are independent of the company, elected annually by the Board of Directors from among its members. In addition, the chair of the Supervisory Board

Metsä Group's Executive Management Team on 31 December 2021

Member of the Executive Management Team (since)	Position at Metsä Group	Year of birth	Education	Participation (own, under common ownership and by controlled corporations) in Metsäliitto Cooperative on 31 December 2021 (EUR)	Shares (own and by controlled corporations) in Metsä Board Corporation on 31 December 2021 (pcs)
Ilkka Hämälä (2008)	President and CEO	1961	M.Sc. (Eng.)	-	213,381 (B share)
Vesa-Pekka Takala (2010)	CFO, Metsä Group Deputy Managing Director, Metsäliitto Cooperative	1966	M.Sc. (Econ.)	53,913	186,748 (B share)
Sari Pajari-Sederholm (2021)	Executive Vice President, Strategy	1968	M.Sc. (Eng.)	-	57,461
Juha Mäntylä (2008)	COO, Metsäliitto Cooperative	1961	M.Sc. (agriculture and forestry)	555,991	247,284 (B share)
Ismo Nousiainen (2018)	CEO, Metsä Fibre	1966	M.Sc. (Eng.)	-	70,850 (B share)
Mika Joukio (2012)	CEO, Metsä Board Corporation	1964	M.Sc. (Eng.)	114,019	300,000 (B share)
Esa Kaikkonen (2008)	CEO, Metsä Tissue Corporation	1969	LL.M.	-	57,641 (B share)

has the right to attend the Audit Committee's meetings. The President and CEO also attends the meetings of the Audit Committee, except for the times when the Audit Committee wishes to convene without the presence of the executive management. The Audit Committee regularly reports to the Board of Directors on its operations and observations. In 2021, the Chair of the Audit Committee was Ilkka Salonen. The other members of the committee in 2021 were Jussi Linnaranta and Mikko Mäkimattila. Salonen, Linnaranta and Mäkimattila will continue as members of the Audit Committee in 2022, and Jussi Vanhanen will join the committee as a new member.

HR Committee

The purpose of the HR Committee is to assist the Board of Directors in ensuring that Metsä Group has appropriate and competitive pay systems, and successor and development planning in accordance with the procedure approved by the Board of Directors. In its task, the committee presents matters such as the terms of the employment relationship of the Managing Director and the President and CEO, pay systems for the senior management, and key principles in the senior management's contracts to the Board of Directors for decision. In addition, the HR Committee presents the annual targets for the senior management to the Board of Directors for approval and monitors their realisation. Furthermore, the committee processes matters related to the compensation systems of the senior management and presents them for the Board of Directors to decide on. The Board of Directors annually elects three members to the HR Committee from among its members. The majority of the members of the HR Committee must be independent of Metsä Group. In addition, the President and CEO attends the meetings of the HR Committee, except for times when the committee wishes to convene without the presence of the executive management. The HR Committee regularly reports to the Board of Directors on its operations. In 2021, the Chair of the HR Committee was Arto Hiltunen and the members were Jussi Linnaranta and Timo Saukkonen. Linnaranta and Saukkonen will continue as members of the HR Committee in 2022. Taavi Heikkilä was elected as the new Chair of the Committee and Nina Pärssinen as a new member.

Information on the meetings of the Board of Directors and its Committees in 2021

The Board of Directors convened 18 times in 2021. Of the members of the Board, Linnaranta, Heikkilä, Mäkimattila, Parpala, Salonen and Saukkonen attended all the meetings. Hiltunen attended 17 meetings. Pärssinen started as a Board member on 24 March 2021 and attended 12 meetings. The Board members' attendance rate was 99%. The Audit Committee convened four times. The attendance rate of the members of the Audit Committee was 100%. The HR Committee convened five times, and the members' attendance rate was 100%.

President and CEO

Metsäliitto Cooperative has a CEO, who also acts as the President and CEO of Metsä Group, unless otherwise decided by the Board of Directors. Currently, the President and CEO of Metsä Group also acts as the CEO of Metsäliitto Cooperative. The President and CEO is appointed by the Board of Directors. The President and CEO is charged with the management of the operations of Metsä Group in accordance with the law and regulations, as well as the decisions and instructions of the governing bodies. The President and CEO is in charge of arranging the running administration of the cooperative and supervising its financial administration. President and CEO Ilkka Hämälä (M.Sc. (Eng.), born in 1961) has acted as the CEO of Metsäliitto Cooperative as of 1 January 2018 and as the President and CEO of Metsä Group since 1 April 2018. More detailed information on the President and CEO is presented on Metsä Group's website under "Metsäliitto Cooperative governance and Metsä Group management".

Corporate Management Team

Metsä Group has an Executive Management Team, with the Group's President and CEO as its chair. The Executive Management Team assists the President and CEO in the planning and operational management of business operations and prepares proposals for the Board of Directors, such as business strategies, budgets and significant investments. In addition to the President and CEO, the Executive Management Team includes the Group's CFO, the Executive Vice President of Metsäliitto Cooperative and the CEOs of Metsä Fibre Oy, Metsä Board Corporation and Metsä Tissue Corporation. The Executive Management Team convenes as summoned by the Chair, primarily once a month, and additionally whenever necessary. Metsä Group's Executive Management Team is composed of President and CEO Ilkka Hämälä, Vesa-Pekka Takala (Metsä Group's CFO, Deputy Managing Director of Metsäliitto Cooperative), Juha Mäntylä (COO of Metsäliitto Cooperative), Ismo Nousiainen (CEO of Metsä Fibre), Mika Joukio (CEO of Metsä Board) and Esa Kaikkonen (CEO of Metsä Tissue Corporation). More detailed information on the members of the Executive Management Team is presented on Metsä Group's website under "Metsäliitto Cooperative governance and Metsä Group management".

Internal control, internal audit and risk management

Profitable business requires that operations are monitored continuously and with adequate efficiency. Metsä Group's internal control covers Metsä Group's business units and head office functions. Internal control produces transparency to the efficiency and appropriateness of internal operations, as well as the reliability of financial reporting and compliance with the relevant laws and regulations. The functionality of internal control is evaluated by Metsä Group's internal audit. Internal control is implemented throughout the organisation. Internal control methods include internal guidelines and reporting systems that support control. The principles, objectives and responsibilities of Metsä Group's internal control and the principles of internal audits are described below. Metsä Group's executive management, risk management director and internal audit are responsible for composing the principles above and the Board of Directors for ultimately ratifying them.

Internal control

In Metsä Group, internal control covers the control of financial and business operations from a risk-oriented perspective. Internal control is implemented by the Board of Directors, the Audit Committee and the executive management, as well as the entire personnel. "Internal control" refers to those management activities that seek to ensure:

- Metsä Group's corporate social responsibility performance;
- Achievement of the objectives set for Metsä Group and the economical, appropriate and efficient use of resources;
- Appropriate management of operational risks;
- Reliable and correct financial and other management information;
- Adherence to external regulations and internal policies;
- Good practices in relations with external stakeholders (e.g. suppliers, customers, social actors);
- Sufficient security of people, operations, information and property; and
- Arrangement of adequate and suitable manual and IT systems to support operations.

Internal control is divided into (i) proactive control, such as defining Metsä Group's values and general operational and business principles, as well as its goals and strategy; (ii) daily control, such as general control and follow-up with business processes, operational management systems and work guidelines; and (iii) subsequent control, such as different management evaluations and inspections, comparisons and verifications, the aim of which is to ensure that the goals are met and that the agreed operational and control principles are followed. Metsä Group's corporate culture, governance and the approach to control together create the basis for the entire process of internal control.

Internal monitoring of the financial reporting process, credit control and authorisation rights

The financial organisations of the business areas and the Group are responsible for financial reporting. The units and business areas report the financial figures each month. Business area controllers check the monthly performance of units from each business area and report them further to the Group's financial administration. Business area profitability development and business risks and opportunities are discussed monthly at the meetings of Metsä Group's Executive Management Team attended by the senior management of Metsä Group and of each business area, as well as at financial management team meetings attended by the Group CFO and director of finance and the CFO of each business area, among others. The results are reported to the Board of Directors of Metsäliitto Cooperative each month. The results of the business areas are additionally reported to the Boards of Directors of their parent companies each month. Metsä Group's Controllers' Manual describes the reporting and control regulations and the reporting procedure in detail. Credit control in Metsä Group is carried out by each business area in accordance with the group's credit control policy and the business area-specific credit control policy based on it. Credit control is carried out by the group's central credit control organisation in cooperation with the management of the business areas. Authorisation rights concerning expenses, significant contracts and investments have been continuously specified for different organisation levels, according to the decision-making order confirmed by the board and the authority separately granted by the President and CEO and other management personnel. Investment approval and follow-up are carried out by the business areas and the group's financial administration according to the decision-making order and investment policy approved by the Board of Directors. The most significant investments are prepared in cooperation with the group's technology unit and, when required by the decision-making policy, submitted to the group's Executive Management Team for review and to the Board of Directors of the group's parent company or the business area's parent company for approval. The technology unit ensures that the final reporting and follow-up monitoring of these projects are implemented in accordance with the investment policy.

Internal audit

Internal audit is an independent and objective assessment, assurance and consulting activity designed to add value to Metsä Group and improve its operations. Internal audit assists the Board in its supervisory role and supports Metsä Group and its management in achieving the company's objectives by providing a systematic approach to assessing and improving the effectiveness of risk management, control, governance and management processes.

Audit work is carried out in compliance with the internal audit guideline ratified by the Audit Committee. The internal audit function reports to the Audit Committee on operations and to the President and CEO on administration. Internal audit draws up a six-monthly action plan which is approved by the Audit Committee. The audit work is risk-based and focuses on the Group's activities and units that are considered to be key to achieving the objectives set for the operations. Internal audit, in cooperation with the audit function, ensures that the plans are coordinated to allow adequate coverage of audit work and to avoid duplication of work. Similarly, cooperation is carried out with other assurance functions within the Group, such as risk management, internal controls and compliance.

An audit report on the results of the audit is shared with the Group's President and CEO, the CFO, the management of the audited entity and the persons in charge. The audit reports are provided to the auditor. Internal audit provides the Audit Committee with a six-monthly summary report on the audits carried out, the main findings and recommendations, and the management action plans and their implementation. The Chair of the Audit Committee and the Audit Director also meet regularly without the presence of management.

An annual summary report of the internal audit activities is prepared for the Board of Directors.

Risk management

Risk management is an essential part of Metsä Group's standard business planning and leadership. Risk management is part of daily decision-making, operations follow-up and internal control, and it promotes the objectives set by the company and ensures that they are met. Linking business management effectively with risk management is based on the operational principles confirmed by Metsäliitto Cooperative's Board of Directors. 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 for Metsä Group's insurance coverage. The most crucial objective of risk management is to identify and evaluate those risks, threats and opportunities that may have an impact on the implementation of the strategy and on the achievement of short-term and long-term objectives. The most significant investment proposals also include a separate risk review. The business areas regularly evaluate and monitor the risk environment and related changes as part of their annual and strategic planning. The risks identified and their means of control are reported to the company's management, Audit Committee and Board of Directors at least twice a year. Business risks also involve opportunities, and they can be capitalised on 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.

Risk management responsibilities

Risk management responsibilities in Metsä Group are divided as follows:

- The Board of Directors is responsible for Metsä Group's risk management and confirms the company's risk management policy
- The Audit Committee evaluates the adequacy of Metsä Group's risk management and the essential risk areas and provides the Board with related proposals.
- The President and CEO and the members of the Executive 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 Group's risk management director is in charge of the development and coordination of the risk management process, the performance of the risk assessment and essential insurance decisions.
- Business areas and services functions identify and evaluate the essential risks related to their own areas of responsibility in their planning processes, prepare for them, take the necessary preventive action and report on the risks as agreed.

Risk management process

The essential elements of Metsä Group's risk management include implementing a comprehensive corporate risk management process that supports the entire business, protecting property and ensuring business continuity, Metsä Group's 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 that are financially or otherwise significant.

The tasks of risk management are to:

- Ensure that all identified risks with an impact on personnel, customers, products, property, information assets, corporate image, corporate responsibility or operational capacity are controlled according to applicable laws and on the basis of best available information and financial aspects;
- Ensure that Metsä Group'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 Metsä Group's overall risk exposure and minimise the overall risks.

The most significant risks and uncertainties that Metsä Group is aware of are described in the report of the Board of Directors.

Insider guidelines

Metsä Group complies with the EU's market abuse regulation (Regulation (EU) No 596/2014 of the European Parliament and of the Council; hereinafter referred to as "MAR"), securities market legislation, and the insider guidelines of the parent company Metsäliitto Cooperative and the subsidiary Metsä Board Corporation, prepared in accordance with rules and instructions drawn up by the Helsinki stock exchange. Metsä Group requires every employee to follow the insider regulations. Pursuant to Article 14 of MAR and Chapter 51 of the Criminal Code of Finland, a person in possession of insider information may not: (i) engage or attempt to engage in insider dealing by acquiring or disposing of the company's financial instruments under their own or a third party's name; (ii) recommend that another person engage in insider dealing or induce another person to engage in insider dealing; or (iii) disclose inside information to another person unless this occurs as part of the normal performance of work, tasks or the profession. Insider guidelines aim to enable the people considered the company's insiders to hold shares in the company openly while maintaining public trust in trading and price formation with the company's securities. Metsä Group only recommends long-term investments and the use of purchase programmes. Insiders are provided with instructions and training at frequent intervals. Following MAR's entry into force on 3 July 2016, Metsä Group companies no longer have public insiders, nor do they maintain permanent company-specific insider registers, but rather only project- or event-specific insider lists. The lists include information on persons participating in insider projects who are not allowed to trade the financial instruments of the company in question during the project. Metsäliitto Cooperative has defined its managers as referred to in MAR to include the members of the Supervisory Board, the members of the Board of Directors, and the President and CEO. The managers in question and their related parties are obligated to inform the company and the Financial Supervisory Authority of their transactions in Metsäliitto Cooperative's financial instruments, and Metsäliitto Cooperative will publish such transactions as stock exchange releases. The aforementioned persons are subject to a closed period of 30 calendar days prior to the publication of Metsä Group's interim reports and financial statements, during which time the managers may not trade in Metsäliitto Cooperative's financial instruments. In addition to the managers subject to the disclosure obligation the company specifies such other persons who, in the course of their duties, participate in the preparation of interim reports and financial statements and may not trade in Metsäliitto Cooperative's financial instruments during the closed period. Metsäliitto Cooperative did not have any traded financial instruments in circulation on a regulated market on 31 December 2021.

Metsä Board Corporation has defined its managers as referred to in MAR to include the members of the Board of Directors and the President and CEO. The managers in question and their related parties are obligated to inform the company and the Financial Supervisory Authority of their transactions concerning Metsä Board's shares and financial instruments, and Metsä Board will publish such transactions as stock exchange releases. The aforementioned persons are subject to a closed period of 30 calendar days prior to the publication of Metsä Group's interim reports and financial statements, during which time the managers may not trade Metsä Board's financial instruments. In addition to the managers subject to the disclosure obligation, the company specifies such other persons who, in the course of their duties, participate in the preparation of interim reports and financial statements and may not trade Metsä Board's shares or financial instruments during the closed period.

Related party transactions

Metsäliitto Cooperative and its Group companies assess and monitor related party transactions. Related parties are determined in accordance with International Accounting Standards (IAS 24), and they include, among others, all group companies and the members of the Board of Directors and the Executive Management Team, as well as their immediate family members. Any conflicts of interest are taken into account in decision-making and, in accordance with the Corporate Governance Code, each Group company maintains a list of the members of its related parties. Transactions between Group companies are carried out on an arm's length basis and, where necessary, external valuations are also used to prepare decisions on related party transactions.

Audit

According to the rules of Metsäliitto Cooperative, Metsäliitto Cooperative has one auditor, which must be an auditing firm authorised by the Finland Chamber of Commerce. The Representative Council elects the auditor to review the accounts for the year underway, and their task ends at the closure of the next annual meeting of the Representative Council. The task of the auditor is to audit the financial statements and accounting of the group and the parent company, and the administration of the parent company. The auditor provides a statutory auditor's report to the members of Metsäliitto Cooperative in connection with the annual financial statements, and regularly reports on their observations to the Board of Directors and the management of Metsä Group. In accordance with the resolution of the Representative Council meeting in the spring of 2021, Metsäliitto Cooperative's auditor for 2021 is KPMG Oy Ab, firm of authorised public accountants, with Kirsi Jantunen, APA, as the Auditor-in-Charge. In 2021, companies belonging to Metsä Group paid a total of EUR 1,300,000 (EUR 1,183,000 in 2020) in audit fees to KPMG in Finland and internationally and a total of EUR 79,000 (206,000) to other audit firms. In addition, KPMG was paid EUR 271,000 (104,000) in Finland and internationally for services not related to the actual audit, while other audit firms were paid EUR 1,287,000 (1,845,000).

Metsäliitto Cooperative's Representative Council

Members of Metsäliitto Cooperative elect a Representative Council from among the members every four years by mail, telecommunications or by some other technical device. The Representative Council is the highest decision-making body.

Aikio Kaarlo	Forestry Engineer	Kuusamo
Airaksinen Seppo	Forest Owner	Vantaa
Anttila Juha	Farmer	Mänttä-Vilppula
Björknäs Roger	Farmer	Kristiinankaupunki
Finne Christer	Farmer	Mustasaari
Haikkonen Aila	Master of Science, Agricultural Entrepreneur	Pori
Halkilahti Jaakko	Farmer	Salo
Hall Hans	Farming Entrepreneur	Leppävirta
Havanka Pentti	Logger, Smallholder farmer	Ruovesi
Isomuotia Harri	Forester	Hämeenkyrö
Kallio Maarit	Agrologist, Farmer	Sastamala
Kiviranta Esko	Farmer, Senior Lawyer	Sauvo
Korpela Liisa	Forester, Rural Entrepreneur	Kärkölä
Koskinen Jaakko	Farming Entrepreneur	Hamina
Könönen Katri	Bachelor of Natural Resources, Farmer	Tohmajärvi
Körhämö Jani	Forester, Game manager	Pälkäne
Laitinen Markku	Farming and Forestry Entrepreneur	Kangasniemi
Laukkanen Mika	Farming and Forestry Entrepreneur	Tuusniemi
Leikola Mikko	Farmer	Lohja
Lyömiö Matti	Agrologist	Mäntyharju
Miettinen Petri	Farming Entrepreneur	Juva
Mikkonen Eeva	Forestry Engineer, Salesperson	Rääkkylä
Moilanen Heli	Public Health Nurse	Paltamo
Moilanen Jussi	Forest Technician	Suomussalmi
Morri Tiina	Forestry Entrepreneur	Virrat
Niemelä Henry	Farmer	Lapua
Nyman Jan-Ove	Agronomist	Kokkola
Orjala Jari	Farming Entrepreneur, Full-time Teacher	Kannus
Palohuhta Reijo	Forestry Entrepreneur	Evijärvi
Pekonen Kari	Rural Entrepreneur	Parikkala
Perttu Antti-Jussi	Bachelor of Natural Resources, Farming Entrepreneur	Eura
Pietilä Juho	Farming Entrepreneur	Loimaa
Pietilä Timo	Forestry Engineer, Pensioner	Liminka
Purhonen Petri	Farmer	Enonkoski
Ryymin Jaakko	Forest Owner	Iisalmi
Saatsi Esko	Rural Director	Nurmes
Saviniemi Timo	Farming and Forestry Entrepreneur	Hämeenlinna
Savola Mikko	Member of the Parliament	Ähtäri
Soronen Mauno	Vicar	Haapavesi
Stenman-Kässi Liisa	Agrologist	Uurainen
Säynätjoki Ilkka	Farmer	Kuhmoinen
Tapaninen Teuvo	Pensioner	Sodankylä
Tiusanen Matti	Farming and Forestry Entrepreneur	Äänekoski
Torppa Pekka	Farmer	Toivakka
Tyskas Kim	Farming Entrepreneur, Salesman	Lapinjärvi
Törmikoski Jari	Farmer	Raahe
Uotila Kirsi	Forestry Entrepreneur	Helsinki
Vuorela Jorma	Farmer	Kurikka
Yli-Antola Kimmo	Farming and Forestry Entrepreneur	Laitila
Yli-Korhonen Jarmo	Farmer	Kauhajoki
Ylimartimo Aatto	Farmer	Tervola
Ylä-Outinen Päivi	Farmer	Lappeenranta

Metsäliitto Cooperative's Supervisory Board

The Supervisory Board's duty is to supervise the appropriate management of Metsäliitto Cooperative in compliance with the relevant regulations, the Supervisory Board's decisions, and in the interests of Metsäliitto Cooperative. It also supervises the implementation of the Representative Council's decisions and elects Metsäliitto Cooperative's Board of Directors.

Chair

Paajanen Juha	Farming and Forestry Entrepreneur	Savonlinna

Deputy Chair

Siponen Ahti	Master of Social Sciences	Kiuruvesi

Members

Alatalo Matti	Farmer	Soini
Brandt Mats	Agrologist	Kokkola
Hatva Teuvo	Forestry Entrepreneur	Kajaani
Haukilahti Tapani	Farmer	Veteli
Hiekka Matti	Farmer, Entrepreneur	Ikaalinen
Hirvonen Ville	Agrologist	Rääkkylä
Isotalo Antti	Farmer	Kauhava
Jäärni Antti	Farmer	Simo
Ketola Jyrki	Director,	Helsinki
Kontinen Kati	Master of Science (For.)	Mikkeli
Kulmala Airi	Specialist, Farmer	Nousiainen
Kuutti Petri	Farmer	Kouvola
Laatikainen Markus	Executive Manager	Posio
Laineenoja Jari	Agronomist, Financing Manager	Huittinen
Laitinen Pirkko	Agronomist	Utajärvi
Lalli Jarmo	Farming Entrepreneur	Pöytyä
Lappalainen Jukka	Farmer	Pielavesi
Lauttia Petri	Farmer	Hämeenlinna
Lillandt Anders	Farmer	Kristiinankaupunki
Mikkola Antti-Jussi	Farmer	Pälkäne
Minkkinen Timo	Forestry Entrepreneur	Viitasaari
Mulari Keijo	Farming Entrepreneur	Suomussalmi
Savolainen Jyrki	Farmer	Laukaa
Turtiainen Matti	Master of Science (Agr. And For.), Agronomist	Savonlinna
Uusitalo Ilkka	Farmer	Salo
Vanhatalo Jukka	Farmer	Siikainen
Virnala Jukka	Entrepreneur	Kurikka
Wasström Anders	Farming Entrepreneur	Raasepori

Personnel representatives

Hämäläinen Jari	Production foreman	Savonlinna
Koljonen Timo	Solution Owner	Helsinki
Kuhalampi Rauno	Forest Specialist, Wood trade and Forest Services	Seinäjoki
Kääriäinen Osmo	Chief Shop Steward	Sumiainen

Metsäliitto Cooperative's Board of Directors

JUSSI LINNARANTA

b. 1972

M.Sc (Agriculture and Forestry)
Agronomist
Member of the Board since 2017,
Chairman of the Board since 2020

Participation (own, under common ownership and by controlled corporations) in Metsäliitto Cooperative on 31 December 2021: EUR 131,556

Shares (own and by controlled corporations) in Metsä Board Corporation on 31 December 2021: 25,192 (B-share)

TIMO SAUKKONEN

b. 1963

M.Sc (Agriculture and Forestry)
Forester
Member of the Board since 2007,
Vice Chairman of the Board since 2020

Participation (own, under common ownership and by controlled corporations) in Metsäliitto Cooperative on 31 December 2021: EUR 149,453

Shares (own and by controlled corporations) in Metsä Board Corporation on 31 December 2021: 13,198 (B-share)

JUHA PARPALA

b. 1967

Agrologist
Member of the Board since 2009

Participation (own, under common ownership and by controlled corporations) in Metsäliitto Cooperative on 31 December 2021: EUR 40,902

Shares (own and by controlled corporations) in Metsä Board Corporation on 31 December 2021: 1,087 (B-share)

NINA PÄRSSINEN

b. 1961

LL.M
Member of the Board since 2021

Participation (own, under common ownership and by controlled corporations) in Metsäliitto Cooperative on 31 December 2021: EUR 670

Shares (own and by controlled corporations) in Metsä Board Corporation on 31 December 2021: 0 (B-share)

TAAVI HEIKKILÄ

b. 1962

M.Sc. (Econ)
Vuorineuvos (Finnish honorary title)
Member of the Board since 2021

Participation (own, under common ownership and by controlled corporations) in Metsäliitto Cooperative on 31 December 2021: 0

Shares (own and by controlled corporations) in Metsä Board Corporation on 31 December 2021: 0 (B-share)

MIKKO MÄKIMATTILA

b. 1971

M.Sc (Agriculture and Forestry)
Agronomist
Member of the Board since 2020

Participation (own, under common ownership and by controlled corporations) in Metsäliitto Cooperative on 31 December 2021: EUR 78,254

Shares (own and by controlled corporations) in Metsä Board Corporation on 31 December 2021: 0 (B-share)

ILKKA SALONEN

b. 1965

M.Sc (Econ)
Member of the Board since 2018

Participation (own, under common ownership and by controlled corporations) in Metsäliitto Cooperative on 31 December 2021: EUR 109,405

Shares (own and by controlled corporations) in Metsä Board Corporation on 31 December 2021: 0 (B-share)

JUSSI VANHANEN

b. 1971

MBA, LL.M.
Member of the Board since 2022

Participation (own, under common ownership and by controlled corporations) in Metsäliitto Cooperative on 31 December 2021: EUR 713

Shares (own and by controlled corporations) in Metsä Board Corporation on 31 December 2021: 0 (B-share)

Metsä Group Executive Management Team

ILKKA HÄMÄLÄ

b. 1961

M.Sc (Engineering)
Vuorineuvos (Finnish honorary title)
CEO, Metsäliitto Cooperative
President and CEO, Metsä Group
Member of the Executive Management Team since 2008

Participation in Metsäliitto Cooperative on 31 December 2021: 0

Shares in Metsä Board Corporation on 31 December 2021: 213,381 (B-share)

JUHA MÄNTYLÄ

b. 1961

M.Sc (Agriculture and Forestry)
Forester
Metsäneuvos (Finnish honorary title)
COO, Metsäliitto Cooperative
Member of the Executive Management Team since 2008

Participation in Metsäliitto Cooperative on 31 December 2021: EUR 555,991

Shares in Metsä Board Corporation on 31 December 2021: 247,284 (B-share)

ISMO NOUSIAINEN

b. 1966

M.Sc (Engineering)
CEO, Metsä Fibre Oy
Member of the Executive Management Team since 2018

Participation in Metsäliitto Cooperative on 31 December 2021: 0

Shares in Metsä Board Corporation on 31 December 2021: 70,850 (B-share)

MIKA JOUKIO

b. 1964

M.Sc (Technology)
MBA
CEO, Metsä Board Corporation
Member of the Executive Management Team since 2012

Participation in Metsäliitto Cooperative on 31 December 2021: EUR 114,019

Shares in Metsä Board Corporation on 31 December 2021: 300,000 (B-share)

ESA KAIKKONEN

b. 1969

LL.M
CEO, Metsä Tissue Corporation
Member of the Executive Management Team since 2008

Participation in Metsäliitto Cooperative on 31 December 2021: 0

Shares in Metsä Board Corporation on 31 December 2021: 63,303 (B-share)

SARI PAJARI-SEDERHOLM

b. 1968

M.Sc (Engineering)
EVP, Strategy, Metsä Group
Member of the Executive Management Team since 2021

Participation in Metsäliitto Cooperative on 31 December 2021: 0

Shares in Metsä Board Corporation on 31 December 2021: 57,641 (B-share)

VESA-PEKKA TAKALA

b. 1966

M.Sc (Economy)
CFO, Metsä Group
Deputy Managing Director, Metsäliitto Cooperative
Member of the Executive Management Team since 2010

Participation in Metsäliitto Cooperative on 31 December 2021: EUR 53,913

Shares in Metsä Board Corporation on 31 December 2021: 186,748 (B-share)

Financial reporting

Metsä Group does not comment on the Group's financial performance or similar matters from the silent period of each reporting period up to the publishing of the report for the period, apart from substantial changes in the market conditions or correcting incorrect information

Financial information

The financial reports are published in Finnish and English. Brochures and other publications can be ordered by sending e-mail to communications@metsagroup.com and from the Group's website at www.metsagroup.com.

Stock exchange releases, interim reports and financial statements are updated on Metsä Group's website in real time. In addition, the website presents the Group's products, customers, sales network, environmental matters and organisation. You can provide feedback on the website. Metsä Group's general e-mail address is communications@metsagroup.com.

Metsä Group aims to offer company-related information that is up to date and easy to utilise on a regular and open basis. The company aims to provide reliable and truthful information on its operations and financial position and short-term outlook. All investors are treated equally.

Metsä Group publishes its financial reports in 2022 as follows:

Silent period	Financial report	Publishing date
1.1.–10.2.2022	The Financial Statement 2021	10 February 2022
1.–27.4.2022	Interim Report for January–March 2022	28 April 2022
1.–27.7. 2022	Half-Year Report for January–June 2022	28 July 2022
1.–26.10.2022	Interim Report for January–September 2022	27 October 2022

Metsä Group's annual reporting includes four parts: Metsä Group's Annual Review, Brochure and Sustainability Report, as well as Metsä Board's Annual Report and Sustainability Report. Each report is available in both Finnish and English.

PUBLISHED BY
Metsä Group
The publications are available at:
www.metsagroup.com

Feedback can be emailed to
communications@metsagroup.com
or provided on social media
@MetsaGroup

Metsä Group Brochure 2021

Metsä Group Annual Review 2021

Metsä Group Sustainability Report 2021

Metsä Board Annual and Sustainability Report 2021

The cover material of these reports was produced at the Kyro paperboard mill. The high-yield pulp in the middle layer of the paperboard was produced at the Joutseno mill, and the chemical pulp in the back layer was produced at the Äänekoski bioproduct mill. The coated folding boxboard made from pure fresh fibre is suitable for packaging and graphical end uses.

Your partner in
sustainable growth

METSÄ GROUP
P.O. Box 10
FI–02020 Metsä, Finland
Visiting address: Revontulenpuisto 2 A
02100 Espoo, Finland
Tel. +358 10 4601
www.metsagroup.com

PEFC™
PEFC/02-31-92