UPM

WE CREATE A FUTURE BEYOND FOSSILS

ANNUAL REPORT 2020

RESPONSIBLE SOLUTIONS

Mitigating climate change requires swift action. One key step is to reduce the use of fossil raw materials. We at UPM are doing meaningful work as we create a future beyond fossils.

Forests are part of the solution. Wood is a renewable raw material that can be used for various purposes from packaging to biochemicals. Wood also binds carbon as it grows. We ensure that we always grow more forest than we harvest.

We are committed to the UN's 1.5 °C degree climate target and to science-based measures to mitigate climate change. With our renewable, low-carbon solutions, we also enable our customers and consumers to make more sustainable choices. Where there's action, there's hope.

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We are well positioned to grasp the opportunities that bioeconomy offers for value creation and business growth.

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Our focus is to ensure the performance of all our operations.

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TRANSFORMATIVE GROWTH PROJECTS PROCEEDED

Our pulp project in Uruguay and biochemicals project in Germany are on budget and well on track with the planned start-up timeline.

74

SAFETY FIRST

Fast response and enabling safety culture have helped us continue operations during the coronavirus pandemic.

16

COMMITTED TO CLIMATE ACTIONS

Our aspiration is high when we look at the opportunities to respond to the global challenge.

BEYOND FOSSILS

STRATEGY

BUSINESSES

RESPONSIBILITY

GOVERNANCE

ACCOUNTS FOR 2020

A FUTURE BEYOND FOSSILS

The pandemic turned 2020 into a year of global uncertainty. We focused on securing safety, performance and progress in growth projects with good success.

In 2020, the global pandemic caused an abrupt and severe economic shock that put all societies and businesses to the test. Despite high uncertainty, our focus was clear: secure the safety of our people, the performance of our operations and the successful implementation of our two strategic growth projects in Uruguay and in Germany, both of which proceeded on schedule and on budget.

In the exceptional circumstances our performance was satisfactory. Our sales decreased by 16% and comparable EBIT by 32%. However, we succeeded in keeping our EBIT margin above 11% and our operating cash flow was strong enough to more than cover our accelerating growth investments.

The star performers of the year, UPM Raflatac and UPM Specialty Papers, benefited from favourable market demand driven by changes in consumer behaviour, as well as growth in e-commerce and retail. Both businesses also showed good margin performance from the beginning of the year, due to consistent commercial and efficiency measures taken to improve profitability.

At the same time, the COVID-19 containment measures taken by governments significantly decreased demand for graphic papers. Furthermore, market prices for pulp stayed at cycle low levels for most part of the year.

We took several measures to decrease fixed costs. The closures of the Chapelle and Kaipola paper mills and the Jyväskylä plywood mill and streamlining in several businesses and functions were timely and necessary for the competitiveness of the business.

Sustainability is at the core of everything we do. During the year, we committed to the UN Business Ambition for 1.5°C and to the science-based measures to mitigate climate change. We were recognised as an industry leader in several renowned sustainability listings. We also established a Green Finance Framework and issued our first Green Bond. Our syndicated revolving credit facility is also linked to biodiversity and climate targets.

I would like to sincerely thank both UPMers and our partners for making an extra effort to ensure both safety and successful business during the exceptional year.

Committed to providing more sustainable choices

We are well positioned to respond to global megatrends and growing demand for renewable products. We enable our customers and consumers to make more sustainable choices. Our purpose is to create a future beyond fossils.

Our strategy remains unchanged: We seek sustainable growth in businesses with strong long-term market fundamentals and high barriers to entry. Performance, innovation and responsibility continue to be the cornerstones we build on. We will also ensure that our employees have the competence and drive to make our strategy come true.

Our spearheads for growth are clear: high-value fibre, specialty packaging materials and molecular bioproducts. We innovate climate-positive products and turn them into growing businesses. We source from sustainably managed forests and reduce our emissions. We also limit risks from climate mitigation policies and the physical impacts of the changing climate to our businesses and assets. All this is important for the long-term value of the company.

We believe that customers, investors and other stakeholders value responsible operations that keep risks under control and add to our business opportunities.

Our objective is earnings growth. We will maintain our high standards when it comes to return requirements for growth investments. The year 2021 will be an intensive year of construction for the pulp mill in Uruguay and for the biochemicals refinery in Germany. We have also started the basic engineering phase of a next-generation biorefinery for high-quality renewable fuels. The planned biorefinery would scale up UPM's successful biofuels business to a new level.

Financial position continues to be strong

Creating shareholder value is at the core of our strategy, and we believe that this also benefits other stakeholders and society in the long term. UPM's Board of Directors is proposing an unchanged dividend of EUR 1.30 per share for 2020. The proposal reflects UPM's strong financial position and confidence in future cash generation.

The global economy is expected to start recovering in 2021 from the deep downturn experienced in 2020. Demand for most UPM products is influenced by overall economic activity and therefore depends on the shape and rate of economic recovery. We will do our utmost to ensure business continuity and performance as well as secure safety and successful implementation of our growth projects.

The long-term outlook for our businesses is strong. UPM is well positioned to grasp the opportunities that bioeconomy offers for value creation and business growth.

Jussi Pesonen
President and CEO

THIS IS UPM

As a frontrunner in forest industry, we provide renewable solutions for various end uses. We invest in sustainable growth and innovate for a future beyond fossils. Responsibility is at the core of everything we do.

SALES 2020
EUR 8.6 BILLION

SALES BY MARKET

- **63%** Europe
- **12%** North America
- **20%** Asia
- **5%** Rest of the world

LEADER IN RESPONSIBILITY

Our consistent responsibility efforts have received recognition from several third parties.

UN Global Compact LEAD: A Global Compact LEAD company for demonstrating world-class commitment to corporate responsibility. We are one of 41 companies globally—the only forest-industry company and the first Finnish company—participating.

Dow Jones Sustainability Index: The industry leader in the forest and paper sector in the Dow Jones Sustainability World and Europe Indices (DJSI) for 2020–2021.

MSCI ESG ratings: An AAA rating in the assessment. MSCI ESG Research provides MSCI ESG ratings on global public companies, according to each company's exposure to industry-specific ESG risks and its ability to manage those risks relative to its peers.

CDP Programs: One of the only ten Triple A List companies globally for our significant actions to mitigate climate risk, prevent deforestation and enhance water stewardship.

Corporate Knights: 22nd in the Corporate Knights list of the world's 100 most sustainable corporations, and the highest company listed in the Paper and Forest Products category.

Science Based Targets initiative: Validated for our 2030 responsibility target to decrease our CO_2 emissions (Scope 1 and 2) by 65%, proving that our target is aligned with the Paris Agreement goal to limit global warming to 1.5 degrees.

EcoVadis: The highest possible Platinum level for our responsible performance.

Bloomberg Gender-Equality Index (GEI): UPM is among the 380 public companies globally and one of the few Finnish companies in this index. The GEI lists the companies most committed to transparency in gender reporting and advancing women's equality.

Wood-based raw materials

Low-carbon energy

BUSINESS AREAS:

- UPM BIOREFINING
- UPM ENERGY
- UPM RAFLATAC
- UPM SPECIALTY PAPERS
- UPM COMMUNICATION PAPERS
- UPM PLYWOOD
- NEW BUSINESSES

51 production plants

18,000 employees in 46 countries

RENEWABLE AND RECYCLABLE PRODUCTS FOR:

- PACKAGING
- LABELLING
- TRANSPORTATION
- ELECTRIFICATION
- CONSTRUCTION
- COMMUNICATION
- TISSUE AND HYGIENE PRODUCTS
- MANUFACTURING
- BIOPLASTICS
- BIOMEDICALS

13,400 customers

200 million end-users globally

KEY FIGURES 2020

STRONG FINANCIAL POSITION

UPM BIOREFINING
UPM ENERGY
UPM RAFLATAC
UPM SPECIALTY PAPERS
UPM COMMUNICATION PAPERS
UPM PLYWOOD

PERFORMANCE

Comparable EBIT, EUR
948m
–32%

Comparable ROE
7.5%
–3.7 pp

CASH FLOW

Operating cash flow, EUR
1,005m
–46%

ATTRACTIVE DIVIDEND

Dividend (proposal), EUR
693m
+0%

INDUSTRY-LEADING BALANCE SHEET

Net debt, EUR
56m

FOCUSED INVESTMENTS

Capital expenditure, EUR
903m
attractive returns with disciplined and effective investments

4/6
business areas achieved their financial targets

Cash funds and unused credit facilities, EUR
3.2bn

› upm.com/investors

AIMING FOR CONTINUOUS IMPROVEMENT

Active employees completed Code of Conduct training 99% *)
The UPM Code of Conduct lays the foundation for responsible business operations and continuous improvement.

+3pp

Employee engagement index 71% favourable
Engaged, high-performing people implement the Biofore strategy and drive short- and long-term success.

+0pp

Total recordable injury frequency 6.2
Ensuring a safe working environment for employees and everyone working for UPM.

–9%

Share of certified wood 83%
Forest certification is an excellent tool for ensuring sustainable forestry. Chain-of-Custody requirements ensure 100% supply from controlled sources.

+1pp

Share of spend covered by our Supplier Code 84%
Transparent supplier requirements form the basis of responsible sourcing throughout the entire supply chain.

+0pp

Fossil CO_2 emissions (Scope 1 and 2) 5.4 million t
Creating climate solutions and working towards carbon neutrality.

–6%

*) New training for the updated Code of Conduct started in September 2019.

EVENTS 2020

JANUARY

27 UPM announces its commitment to the UN Business Ambition for 1.5°C.

30 UPM decides to invest EUR 550 million in a 220,000-tonne biochemical refinery producing 100% wood-based biochemicals in Leuna, Germany.

FEBRUARY

12 UPM signs a long-term Wind Power Purchase agreement with German wind park development company wpd to reduce the CO_2 emissions of its paper mills.

MARCH

3 Ramping up of UPM Nordland paper machine 2 conversion to specialty papers.

17 UPM signs a EUR 750 million revolving credit facility with a margin tied to long-term biodiversity and climate targets.

31 AGM is held by special arrangements, according to the original schedule. Decisions were made in accordance with the proposals.

MAY

15 UPM and the new Government of Uruguay sign a memorandum of understanding. UPM will accelerate the earlier planned USD 60 million financing of the road infrastructure development and invest USD 68 million in electrical grid reinforcement.

18 UPM sells its 50% share in Kainuun Voima Oy to Kajaanin Energiatuotanto Oy.

JUNE

2 UPM announces plans to close the UPM Jyväskylä plywood mill in Finland. The mill was closed at the end of July.

JULY

16 UPM permanently closes the UPM Chapelle newsprint mill in Grand-Couronne, France.

28 UPM begins construction of its third state-of-the-art nursery in Central Uruguay.

AUGUST

20 UPM brings its first clinical product, the FibDex® wound dressing, to the Finnish market.

26 UPM announces plans for the permanent closure of UPM Kaipola paper mill, the sale of UPM Shotton paper mill and the streamlining of business function teams. Plans for streamlining other activities are also announced.

SEPTEMBER

21 UPM is again recognised as a UN Global Compact LEAD participant for its strong commitment to responsible business.

OCTOBER

6 UPM announces plans to increase efficiency in UPM Raflatac's operations and distribution and in global functions by streamlining the functions' operations in five countries.

7 The construction of UPM's innovative biochemicals facility starts in Leuna, Germany.

NOVEMBER

13 UPM issues a EUR 750m Green Bond under its EMTN programme. The net proceeds from the bond will be used for financing and/or refinancing Eligible Projects and Assets under UPM's Green Finance Framework.

16 UPM is listed as the forest and paper industry leader in the global Dow Jones Sustainability Index (DJSI) for 2020–2021.

DECEMBER

8 CDP recognises UPM with an outstanding AAA score for tackling climate change and taking actions to ensure sustainable forest management and water security for the second time in a row.

BEYOND FOSSILS

CONSUMPTION IS INCREASING

By 2030, the global middle class is expected to include 3.5 billion people, two billion more than today. Nearly 90% of the additional middle class population will be Asians. China already has the second largest middle class in the world after the US. By 2030, over 70% of China's population could be middle class, consuming nearly USD 10 trillion annually in goods and services.

Source: Statista, EU

GLOBAL MEGATRENDS DRIVE DEMAND

Global consumer demand is strongly influenced by the needs of the growing middle class. At the same time, it is essential to address the challenges posed by climate change and resource scarcity.

As a result of population growth and other demographic changes, global consumer demand is increasing significantly. In 2020, an estimated two billion Asians were categorised as part of the middle class, and that number is set to increase to 3.5 billion by 2030.

With higher living standards and ageing populations, people are consuming more and for longer. According to the UN, 70% of the world's population will live in cities by 2050, enjoying greater access to higher income and many services from healthcare to e-commerce. Currently, 70% of global energy use and up to 85% of economic activity takes place in cities and urban areas.

In recent decades, we have seen the twin pressures of growing populations and growing economies both escalating demand for energy, food and material goods, as well as the resources to produce them. The need for solutions that improve efficiency and provide alternatives to scarce resources has never been greater.

Underlying these trends is the persistent increase in global emissions. In many parts of the world, water quality and soil contamination have worsened significantly. Marine litter associated with plastic pollution remains one of the most difficult waste and resource management challenges. Sustainable packaging and better recycling practices are part of the solution.

Climate change mitigation

Global temperatures reached approximately 1°C above pre-industrial levels in 2017. Climate change has now become an independent driver of changes in natural systems, exacerbating other drivers. Scientists project the damage to become irreversible if the temperature rise exceeds a threshold of 2.5°C. Climate change affects countries in different regions in different ways, impacting for example rising sea-levels, severe weather events, droughts, climbing temperatures, insect infestations and water scarcity, as well as damage to ecosystems and the services they provide.

The solution

The most efficient way to mitigate climate change is to eliminate the use of raw materials from fossil sources. This provides UPM with a strong competitive advantage as we focus on renewable, wood-based raw materials and low-carbon energy. We have studied the various impacts of climate change on our business operations and committed to UN Business Ambition for 1.5°C and to science-based measures to limit global warming. Climate-positive forestry also safeguards the availability of our own wood.

The opportunities and the challenge

With our versatile product portfolio, we are well positioned to meet the growth in consumer demand as well as to enable sustainable choices for our customers and consumers. Regulation may drive further markets for sustainable products, such as cleaner traffic fuels. Growing e-commerce increases demand for labelling, packaging, pulp and transport. UPM can play a role in producing and using low-carbon energy, offering and innovating sustainable products as well as designing products and processes to minimise waste, maximise efficiency, and achieve circularity in production and consumption.

While global megatrends offer significant long-term opportunities for UPM, they are also associated with risks, such as unpredictable regulation or protectionism. Inequality, resource scarcity or the severe impacts of climate change may distort markets or lead to political instability. Changes in the forest ecosystem could have negative impacts on the company's raw material base. Digitalisation has different impacts for different businesses. UPM continuously analyses megatrends and the development of its operating environment to identify both opportunities and challenges.

GLOBAL MEGATRENDS

- GROWING MIDDLE CLASS
- RESOURCE SCARCITY
- CLIMATE CHANGE

DRIVERS FOR DEMAND

- HIGHER LIVING STANDARDS
- CHANGING CONSUMER BEHAVIOUR
- DIGITALISATION & E-COMMERCE
- URBANISATION & MOBILITY
- TIGHTENING REGULATION

OUR SUSTAINABLE SOLUTIONS

- RENEWABLE RAW MATERIALS
- CLEANER TRAFFIC FUELS
- LOW CARBON ENERGY
- CIRCULARITY
- CLIMATE-POSITIVE FORESTRY

TOWARDS A FUTURE BEYOND FOSSILS

Our aspiration is high when we look at the opportunities to respond to the global climate challenge.

Climate change is a major challenge and requires action. The transition to a low-carbon economy is needed to combat the physical impacts of climate change.

We were among the first global forest industry companies to sign the UN's Business Ambition for 1.5°C. Our commitment is aligned with the Paris climate agreement, which aims to keep the average global temperature rise at a level that does not threaten nature or society.

We were able to make this commitment thanks to our scenario analysis on forests and emissions, carried out in 2019.

We are committed to long-term targets and science-based measures to mitigate global warming. Transparency of performance and data is important part of our responsibility work.

While mitigating climate change and working towards carbon neutrality, we create long term value for UPM.

> Our 2030 responsibility targets on page 22
> Our strategy on page 26
> Value from responsibility on page 34

OUR CLIMATE COMMITMENT

WE ACT THROUGH FORESTS

Sustainable forestry is critical for our business. The way in which we use land plays a crucial role in climate change mitigation. Trees and plants capture carbon dioxide from the atmosphere when they grow. At the same time, carbon dioxide is stored in the soil. Thriving forests are more resilient to changes in the climate and an efficient way to mitigate climate change. That's why we are committed to climate-positive forestry and enhancing biodiversity. We are also exploring new ways to use agricultural lands in a way that creates benefits for the climate.

> Sustainable forestry on page 86

2030 TARGETS · 13 CLIMATE ACTION · 15 LIFE ON LAND

WE ACT THROUGH EFFICIENCY AND EMISSIONS

Decreasing the use of fossil fuels is the most important way to mitigate climate change. Our target is to reduce our CO_2 emissions from fuels and purchased electricity by 65% from the 2015 levels and to reduce the emission levels of our supply chain from the 2018 levels by 30% by 2030. We have received approval for our emission reduction target from the Science Based Targets initiative. Our energy portfolio consists mostly of energy sources that do not cause fossil CO_2 emissions. We use energy efficiently and increase the share of renewable and low-emission energy.

> Reducing energy use and emissions to air on page 88

2030 TARGETS · 7 AFFORDABLE AND CLEAN ENERGY · 13 CLIMATE ACTION

WE ACT THROUGH PRODUCTS

Innovating novel products for the future beyond fossils is the core of our Biofore strategy. We develop renewable and recyclable products, materials and solutions and offer alternatives to fossil-based materials. Many of our products are already proven to be climate positive. In the future, we aim to scientifically verify the climate impacts of all our products.

> Responsible product lifecycle on page 82

2030 TARGETS · 7 AFFORDABLE AND CLEAN ENERGY · 12 RESPONSIBLE CONSUMPTION AND PRODUCTION · 13 CLIMATE ACTION

BUSINESS AMBITION FOR 1.5°C · OUR ONLY FUTURE

FROM FORESTS TO SUSTAINABLE PRODUCTS

Our business is based on forests: We grow and harvest forests to create renewable and recyclable materials and products. Innovations that offer alternatives to fossil-based materials are at the core of our Biofore strategy.

Sustainable forestry and land use respond to resource scarcity and climate change, while at the same time creating the prerequisites for financial growth. Sustainable forestry safeguards biodiversity, the good state of water bodies and the benefits of forests for humans. We ensure that our forests grow more than we harvest, and we will improve our forests' growth and their ability to absorb carbon even further.

Sustainable forest management requires investments and continuous development. This secures the economic value of forests and wood supply. The benefits are widely distributed across rural areas, balancing out regional disparities.

Circular economy solutions and resource efficiency complement sustainable forest management. Many of the challenges we face could be solved entirely or in part if materials were circulated more efficiently.

We take concrete actions every day to keep forests growing and materials circulating for the future beyond fossils.

We plant
50 million
trees every year

> Responsible product lifecycle on page 82
> Sustainable forestry on page 86
> Reducing energy use and emissions to air on page 88
> Resource efficiency and circular economy on page 94

OUR ALTERNATIVES TO FOSSIL-BASED MATERIALS

FIBRE PRODUCTS

We provide responsibly produced fibre-based products that are used in packaging, hygiene and tissue products, often replacing non-renewable raw materials. We use renewable wood fibre as the main raw material for our graphic papers, specialty packaging materials, labelling materials and biocomposite products.

MOLECULAR BIOPRODUCTS

Wood-based biofuels and biochemicals offer new growth opportunities and expand our product portfolio. Our advanced biofuels are suitable for all engines and naphtha replaces fossil raw materials in chemical production. Biochemicals will be used in textiles, PET bottles, packaging, cosmetics, pharmaceuticals, detergents, rubbers and resins.

WOOD PRODUCTS

Most of our wood products are used in construction. Plywood and sawn timber are also used in furniture and parquet, packaging and vehicle floors, as well as insulation in carriers used for liquefied natural gas. Wood products offer a solution that is healthy, safe and mitigates climate change. Our wood-based products retain the carbon bound in wood throughout their lifetime.

LOW-EMISSION ENERGY

Our energy portfolio consists mostly of energy sources that do not cause fossil CO_2 emissions. We generate hydropower, nuclear power and biomass-based energy in the mills' combined heat and power plants. Energy efficiency means that energy consumption and emissions are continuously reduced.

From left: Mika Mikkola, VP, Investor Relations; Jussi Pesonen, President and CEO; Kari Ståhlberg, EVP, Strategy and Tapio Korpeinen, CFO.

CREATING SHAREHOLDER VALUE

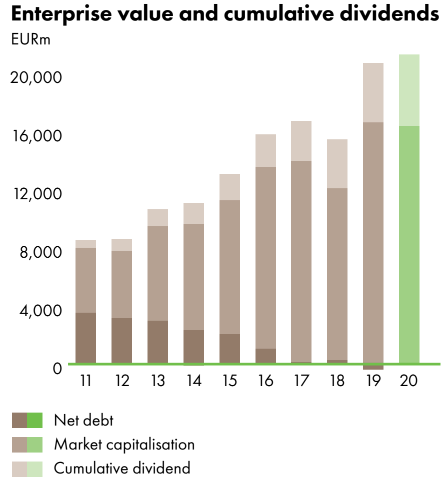
In the coming years we will focus on ensuring performance, successfully completing our transformative growth projects and developing our next growth steps.

-1.4%
Share price 2020

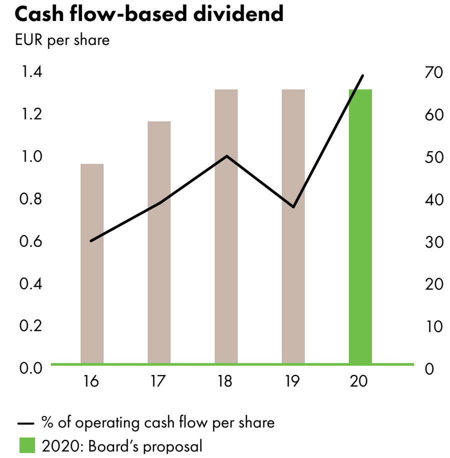
Dividend proposal EUR
1.30
per share

Policy: A dividend of 30–40% of the annual operating cash flow per share

Enterprise value and cumulative dividends



Cash flow-based dividend



DRIVING LONG-TERM VALUE CREATION

Aiming for top performance
We aim for continuous improvement in our financial performance. We make good use of commercial strategies, tight cost control, materials and energy efficiency, effective capital allocation and efficient use of assets. We capture opportunities provided by our operating model, while capitalising on corporate synergies.

Value-enhancing growth projects
Consumer megatrends drive the demand growth for most of our products. This is further supported by the increasing need for sustainable alternatives for fossil-based materials and energy. We invest in businesses with strong long-term fundamentals for profitability and growth, where we have a clear competitive advantage. This underpins attractive returns for invested capital both in the short and longer term.

Innovating for a future beyond fossils
We enable our customers and consumers make more sustainable choices. We protect our intellectual property. Our innovations create new attractive business opportunities with high added value and a unique competitive advantage in molecular bioproducts or specialty packaging materials, for example.

Value from responsibility
Sustainability is an important driver for growth and competitiveness for us. We aim to capture the opportunities presented by the increasingly responsible consumer choices and tightening regulation in mitigating climate change and answering the plastics challenge, for example. Responsible operations and value chain help to mitigate risks.

Improving business portfolio
Increasing our share of sustainability-driven growth businesses with higher margins improves our long-term profitability and boosts the value of our shares. UPM's growth businesses have three times higher EBIT margins on average than the mature graphic paper business.

Industry-leading balance sheet
Our industry-leading balance sheet mitigates risks and enables us to implement our growth projects also during uncertain times, such as in 2020.

Attractive dividends
We aim to pay attractive dividends. A growth in earnings enables us to pay increasing dividends in the long term. Our dividend policy is based on cash flow, targeting a dividend of 30–40% of the company's annual operating cash flow per share.

5-YEAR SHARE PERFORMANCE AND VALUATION MULTIPLES

	2020	2019	2018	2017	2016
Share price at 31 Dec, EUR	30.47	30.91	22.15	25.91	23.34
Comparable EPS, EUR	1.37	2.07	2.24	1.88	1.65
Dividend per share, EUR	1.30*)	1.30	1.30	1.15	0.95
Operating cash flow per share, EUR	1.89	3.46	2.49	2.74	3.16
Effective dividend yield, %	4.3	4.2	5.9	4.4	4.1
P/E ratio	29.0	15.5	7.9	14.2	14.1
P/BV ratio 1)	1.74	1.64	1.21	1.60	1.51
EV/EBITDA ratio 2)	11.3	8.7	6.3	8.6	8.7
Market capitalisation, EUR million	16,250	16,485	11,813	13,818	12,452

*) 2020: Board's proposal
1) P/BV ratio = Share price at 31 Dec./Equity per share
2) EV/EBITDA ratio = (Market capitalisation + Net debt)/EBITDA

OUR RESPONSIBILITY TARGETS FOR 2030

UPM's Biofore strategy guides us in achieving our responsibility targets for 2030 and contributes positively to achieving the UN Sustainable Development Goals (SDGs).

Our responsibility focus areas are divided into economic, social and environmental responsibility. For each focus area, we have determined the respective targets and key performance indicators. The focus areas, as well as the targets, are reviewed annually. The review is based on our annual materiality analysis, which identifies issues that either have a significant impact on our business performance or issues that influence the assessment and decisions made by our stakeholders.

Focus on climate targets

With our targets set in early 2020, we are putting a strong focus on our contribution to climate change mitigation. We have tightened our target for fossil CO_2 emissions from our own combustion processes and from purchased electricity. We also added a new target for indirect fossil CO_2 emissions, focusing on sourced materials and logistics, and have set targets for ensuring climate-positive land use and a climate-positive product portfolio in the future.

Goal 6:
Clean water and sanitation
(Target: 6.3)

Goal 7:
Affordable and clean energy
(Targets: 7.2 and 7.3)

Goal 8:
Decent work and economic growth
(Targets: 8.2, 8.5 and 8.8)

Goal 12:
Responsible consumption and production
(Targets: 12.2, 12.4 and 12.5)

Goal 13:
Climate action
(Target: 13.1)

Goal 15:
Life on land
(Targets: 15.2 and 15.5)

Our contribution to achieving the SDGs

Our responsibility targets contribute positively to achiving the SDGs. We have selected six goals and thereunder 12 targets that are the most relevant for us based on where we can have the greatest effect, either by minimising our negative impacts or by increasing our positive impacts on people, societies and the environment. There are others that are also relevant to us, but to a lesser extent.

To strengthen our future efforts, we launched a new target in 2019 to develop new products and services with contribution to SDGs. In 2020, we renewed our sustainable product design concept. One step was the updating of our ecodesign questionnaire to cover the SDGs. We carried out a pilot case in the development of sustainable lignin products. In 2021, the work will continue with sustainable packaging and other business areas. A special focus on sustainable product development will be put on circularity.

› Towards a future beyond fossils on page 16
› Ensuring performance on page 28
› Value from responsibility on page 34
› People and safety on page 70–75
› Compliance on page 76
› Responsible sourcing on page 80
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› Sustainable forestry on page 86
› www.upm.com/responsibility

UPM RESPONSIBILITY FOCUS AREA	2030 TARGET	2030 FOLLOW-UP / 2020 RESULTS
ECONOMIC		
Profit Creating value to shareholders	• Comparable EBIT growth through focused top-line growth and margin expansion • Comparable ROE: 10% • Net debt/EBITDA: 2 times or less	• Comparable EBIT decreased by 32% to EUR 948 million (1,404 million) • Comparable ROE was 7.5% (11.2%) • Net debt/EBITDA was 0.04 times (−0.24)
Governance Ensuring accountability and compliance	• 100% coverage of participation to UPM Code of Conduct training (continuous)	• 99% (96%) of active employees completed the trainings for the updated Code of Conduct. Training started in September 2019.
Responsible sourcing Adding value through responsible business practices	• 80% of UPM spend covered by UPM Supplier and Third-Party Code (continuous) • 100% of UPM raw material spend covered by UPM Supplier and Third-Party Code by 2030 [1)] • Continuous supplier auditing based on systematic risk assessment practices • 30% reduction of CO_2 emissions from materials and logistics (Scope 3) [2)]	• 84% (84%) of supplier spend covered by UPM Supplier and Third-Party Code • 96% (94%) of raw material spend covered by UPM Supplier and Third-Party Code • 117 supplier audits based on identified risks. 350 contractor reviews with focus on working conditions. • Coverage of the reporting was improved and the share of primary data from suppliers increased
SOCIAL		
Diversity and inclusion Developing organisational culture and local conditions to ensure diverse and inclusive working environment for business success	• People feel that UPM values and promotes diversity. People are treated fairly in their work environment and can advance regardless of personal background or characteristics. 95% favourable in the Employee Engagement Survey Diversity and Inclusion index by 2030. • Diversity and inclusion initiative (continuous)	• Responses to the Employee Engagement Survey's Diversity and Inclusion index 71% (70%) favourable • UPM continued a dialogue with key management teams on developing inclusive leadership
Continuous learning and development Ensuring high performance for business success and continuous professional development for future employability	• Goal setting discussions are held and development plans are created for employees, completion rate 100% by 2030 • Employees perceive good opportunities for learning and development at UPM, 80% favourable in Employee Engagement Survey by 2030	• 82% (88%) of employees had completed individual goal setting or annual discussion. 63% (65%) of employees had a development plan documented • Responses to Employee Engagement Survey's question regarding learning and development were 69% (68%) favourable
Responsible leadership Emphasising value-based and inspiring leadership and integrity. Continuous development of working environment	• Employee engagement and enablement indices with favourable score clearly above external high-performing norm by 2030	• Employee engagement index 71% (71%) favourable. This is 2 pp below the external high-performing norm. Employee enablement index 75% (74%) favourable. This is 2 pp above the external high-performing norm
Working conditions Ensuring safe and healthy working environment and wellbeing of employees	• No fatalities or serious accidents in UPM operations • Continuous improvement in safety: Lost time accident frequency (LTAF) <1 and Total recordable injury frequency (TRIF) <2 levels permanently reached (including contractors) • All operations have certified OHS system by 2030 • Health Promotion Programme is in use at all UPM sites and businesses by 2030 • Absenteeism rate <2% in all organisations by 2030	• No (one) fatal accidents, 2 (3) serious accidents. • LTAF was 2.8 (2.9) for UPM workforce and 3.5 (3.3) incl. contractors, TRIF was 5.3 (7.1) for UPM workforce and 6.2 (6.8) incl. contractors • All production sites have an OHS management system in place. 47% of the sites have external certification of their OHS system. • A majority of the sites with Health Promotion initiatives • The absenteeism rate was 3.9% (4.0%)
Community involvement Ensuring local commitment	• Continuous development of strategic sustainability initiatives with leading NGOs • Continuous sharing of best practices of stakeholder initiatives • UPM's Biofore Share and Care programme brings significant added value	• Cooperation started with the Uruguayan El Paso Civil Association • Sharing of best practices ensured through well-established networks • Local initiatives and voluntary work in response to the pandemic
ENVIRONMENTAL		
Product stewardship Taking care of the entire lifecycle	• Climate-positive product portfolio (continuous) • Development of new products and services with contribution to the UN Sustainable Development Goals (continuous) • All applicable products eligible for ecolabelling by 2030	• Scientific study on substitution and storage effect initiated • Assessment developed as part of sustainable product design concept, launch in 2021 • 82% (83%) of UPM sales was eligible for ecolabelling
Waste Promoting material efficiency and circular economy – reduce, reuse and recycle	• No process waste sent to landfills or to incineration without energy recovery by 2030	• 89% (89%) of UPM's total process waste was recovered or recycled. The total amount of waste to landfills increased by 3% compared to 2019.
Climate Creating climate solutions and working towards carbon neutrality	• Fossil CO_2 emissions from our own combustion and purchased electricity (Scope 1 and 2) reduced by 65% by 2030 [3)] • Maximise the business benefits of greenhouse gas claims (continuous) • Improve energy efficiency annually by 1% (continuous) • 70% share of renewable fuels (continuous) • Acidifying flue gases (NO_x/SO_2) reduced 20% by 2030 [3)]	• Fossil CO_2 emissions reduced by 20% compared to 2015 and 6% compared to 2019 • UPM sold greenhouse gas claims worth nearly 1.1 million CO_2 tonnes • Energy efficiency target was not achieved • Level of 72% (70%) reached in the use of renewable fuels • 19% reduction achieved since 2015 for the UPM average product
Water Using water responsibly	• Effluent load (COD) reduced by 40% by 2030 [4)] • Wastewater volume reduced by 30% by 2030 [4)] • 100% of nutrients used at effluent treatment from recycled sources by 2030 [4)]	• 33% reduction in effluent load achieved since 2008 for the UPM average product • 10% reduction in wastewater volume achieved since 2008 for the UPM average product • 28% of nutrients from recycled resources
Forests and biodiversity Ensuring sustainable land use and keeping forests full of life	• Climate-positive land use (continuous) • All fibre certified by 2030 [5)] • Positive impact on biodiversity (continuous): implementing biodiversity programme and developing monitoring system [6)]	• Five year annual average carbon sink of UPM's own amd leased forests was approx. 6.1 m tonnes of CO_2 equivalents • 83% (82%) of all wood used by UPM is sourced from certified forests • Improvement measured in all quantitative biodiversity indicators

[1)] Covers all raw material spend including wood and wood-based biomass sourcing and excluding energy, [2)] From 2018 level, [3)] From 2015 level,
[4)] From 2008 level, relevant for pulp and paper production, [5)] Forest management certification, [6)] Covers UPM own forests in Finland

OUR STRATEGY

OUR FUTURE IS URBAN

Two-thirds of the world's population will live in urban areas by 2050. Urbanisation is strongest in China and India, and Asia is already home to 54% of the world's urban population. The needs of a growing urban population can be met with sustainable solutions. Housing, transport, energy systems and other infrastructure, such as education and health systems, depend on the successful management of urban growth.

Source: UN

BIOFORE STRATEGY

Biofore strategy drives our transformation as a bioeconomy frontrunner. We seek sustainable growth. High performance, innovations and world-leading responsibility are the cornerstones of our strategy. We enable our customers and consumers to make more sustainable choices. We create value by providing solutions for a future beyond fossils.

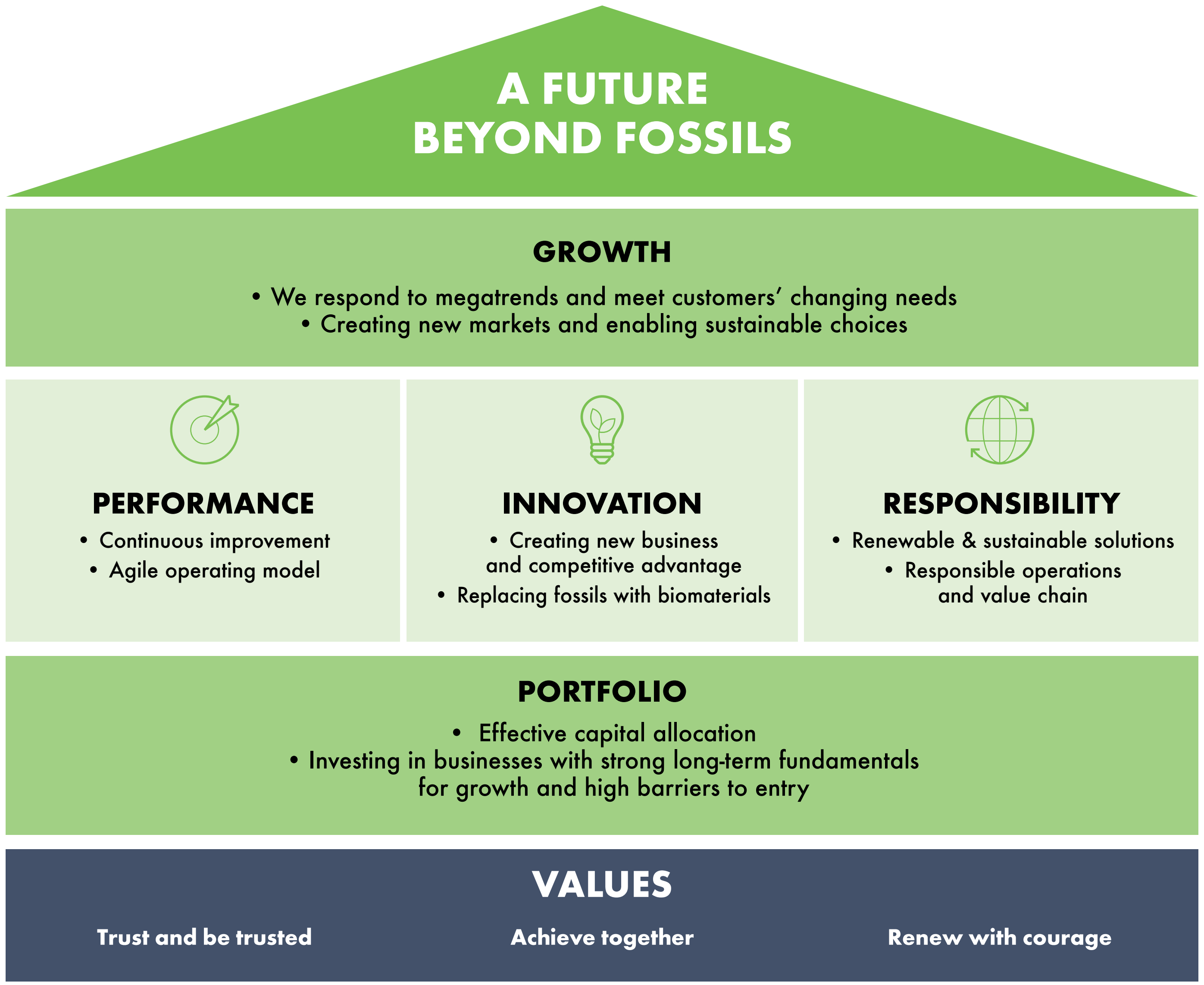
Montevideo port, Uruguay

The Biofore strategy has driven our transformation for more than 10 years and the change continues with accelerating pace. We have the right operating model and nurture a culture of high performance and integrity. In 2020, we succeeded in keeping our employees safe, serving our customers without interruptions and maintaining a satisfactory financial performance.

We are the leading company in responsibility. Our renewable and recyclable products respond to many global challenges, such as climate change and resource scarcity. However, our ambition is even higher. With consistent innovation work, we provide our customer and consumers completely new solutions, creating new profitable growth businesses.

Through effective capital allocation we have achieved a nearly debt-free balance sheet and improved our business portfolio. We are in an intensive phase of building a world-scale pulp mill in Uruguay and a next generation biochemicals refinery in Germany. Combined, the investments amount to EUR 3.3 billion. They represent significant future earnings growth for us. We have also started the basic engineering phase of a new biofuels refinery that would scale up our highly successful biofuels business.

We are in a great position to create value to our shareholders and the society, as a company and through our products and solutions. We create a future beyond fossils.



ENSURING PERFORMANCE

The COVID-19 pandemic and the related lockdowns impacted demand for our products in different ways, with graphic paper markets particularly affected. We implemented significant measures to ensure cost-competitiveness.

We aim for continuous improvement in financial performance through the right operating model, performance culture, continuous improvement programmes and effective capital allocation. At the group level, our target is to grow comparable EBIT over the long term.

In 2020, our successful health and safety measures during the COVID-19 pandemic enabled uninterrupted business operations and progress in our transformative growth projects in Uruguay and Germany. However, graphic paper markets suffered significantly from the related containment measures. While pulp demand continued to be healthy, pulp prices remained low. Self-adhesive labelling and specialty paper markets benefited from the increase in daily consumer product demand and e-commerce. Our comparable EBIT decreased by 32% to EUR 948 million (1,404 million).

To ensure performance, we reduced capacity and streamlined several businesses and functions. The measures, implemented or announced during the second half of 2020, are expected to reduce our annual fixed costs by EUR 130 million.

Comparable ROE

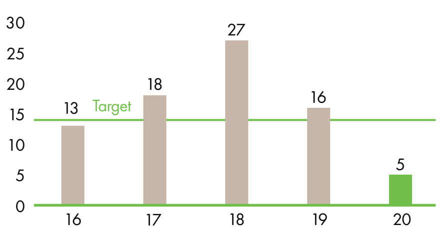
7.5%

Comparable EBIT

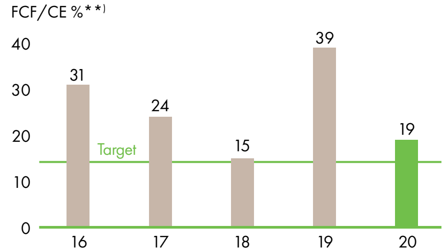
–32%

BUSINESS AREA RETURNS AND LONG-TERM TARGETS

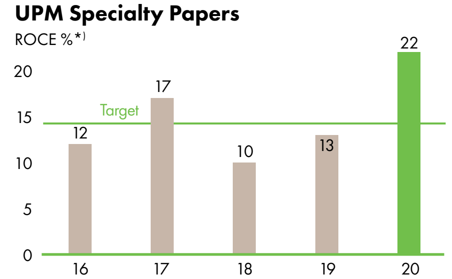
UPM Biorefining
ROCE %*)



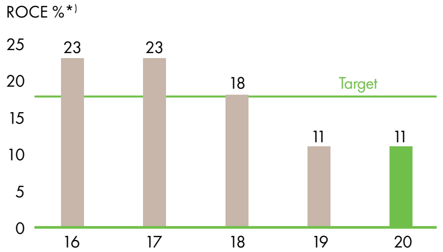
UPM Communication Papers
FCF/CE %**)



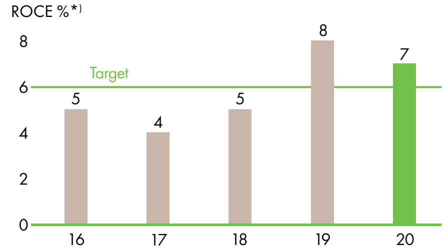
UPM Specialty Papers
ROCE %*)



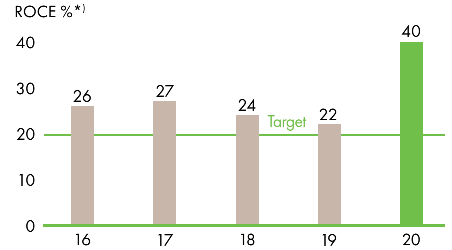
UPM Plywood
ROCE %*)



UPM Energy *)**
ROCE %*)



UPM Raflatac
ROCE %*)



*) ROCE % = Return of capital employed excluding items affecting comparability.
**) Free cash flow after investing activities and restructuring costs.
***) Shareholdings in UPM Energy valued at fair value.

The right operating model

Our businesses in various parts of the bio and forest industry value chain operate as separate market-facing businesses, both in terms of customers and suppliers. Our model offers several benefits:

- Transparency and accountability: target setting, incentives, commercial strategies and benchmarking
- Cost-competitiveness: agility, efficiency and optimal sourcing
- Growth and mix: wider business opportunities

At the business area level, we are targeting top performance in the respective markets. We have also set long-term return targets (ROCE %, on the left) for the six business areas. The return targets apply over business and investment cycles. In 2020, four out of six business areas met or exceeded the targeted returns.

Capturing corporate synergies

We build on corporate synergies, adding value to our businesses and stakeholders with:

- Competitive and sustainable wood sourcing, forestry and plantation operations
- Value-adding, efficient and responsible global functions
- Group-wide continuous improvement programmes in commercial strategies, variable costs, working capital, site and maintenance costs, safety and environmental performance
- Technology development and intellectual property rights
- Global business platform
- Disciplined and effective capital allocation
- Compliance, UPM Code of Conduct and strong UPM brand

Effective capital allocation

Capital allocation is key to attractive long-term returns, as well as developing the business portfolio in areas with the best long-term value creation potential. At UPM, capital allocation decisions take place at the corporate level.

We invest in sustainable businesses with strong long-term fundamentals for demand growth and a clear competitive advantage or high barriers to entry. With careful preparation, we aim to secure attractive returns that meet our targets both in the short and long term.

Over the past five years, our investments have offered highly attractive returns. In addition, our growing businesses have on average offered three times higher comparable EBIT margins than the mature communication paper business over the same period.

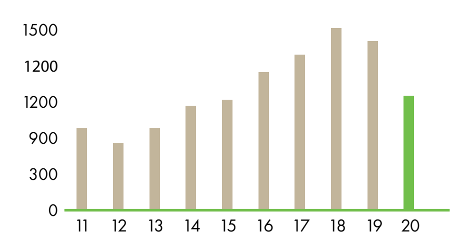
Strong balance sheet and ROE

An Investment Grade rating is an important element in our financing strategy. UPM's financial policy on leverage is based on a net debt/EBITDA ratio of 2 or less. At the end of 2020, the net debt/EBITDA ratio was 0.04.

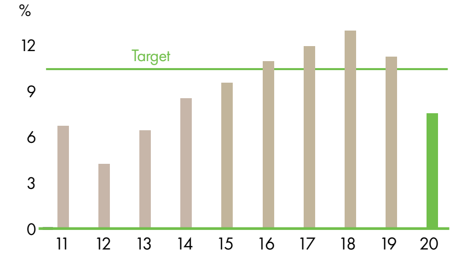
UPM aims for a 10% return on equity. ROE also takes into account the financing, taxation and capital structure of the group. In 2020, the comparable ROE was 7.5%.

> Creating shareholder value on page 20
> 2030 responsibility targets on page 22
> Spearheads for growth on page 30
> Financial statements on page 146

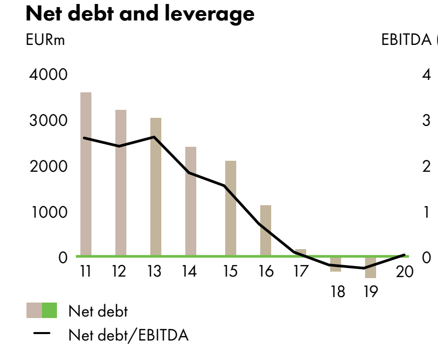
Comparable EBIT
EURm



Comparable ROE
%



Net debt and leverage
EURm EBITDA (x)



SIGNIFICANCE

- Top performance drives value creation and mitigates risks related to the business environment
- Top performance enables investments in growth, innovation and responsibility
- Effective capital allocation drives the company transformation and further enhances long-term value creation

TARGETS

- Continuous improvement
- Top performance in each business
- Growth in comparable EBIT
- Attractive returns
- Strong balance sheet

OUR WAY

- Operating model with separate business areas
- High-performing people
- Commercial excellence
- Cost efficiency
- Efficient use of assets and capital
- Capitalise on corporate benefits and synergies

SPEARHEADS FOR GROWTH

We have selected three focus areas for significant growth in the coming years. Our transformative growth projects progressed on budget and on schedule in 2020, with strict health and safety measures.

High-value fibre — strategic growth project in Uruguay
Global consumer megatrends and the need to find more sustainable alternatives for fossil-based materials support demand growth for market pulp. The requirements for competitive greenfield pulp operations are difficult to meet and provide a lasting competitive advantage.

We are currently constructing a world-class pulp mill in Paso de los Toros in Uruguay and a highly efficient pulp terminal at the Montevideo port. The project and related plantation operations and logistics solutions have been carefully designed and prepared over the past decade to ensure that the pulp operation is competitive and sustainable, and in order to mitigate risks — both during the project and during the operation of the mill.

The mill will have an annual capacity of 2.1 million tonnes of eucalyptus market pulp. The USD 2.7 billion investment will raise our pulp production capacity by more than 50%. Given the expected highly competitive cash costs and the large scale of the mill, the investment is expected to significantly contribute to our future earnings. The mill is scheduled to start up in the second half of 2022.

› Uruguay growth project on page 44

Molecular bioproducts — transformative new businesses beyond fossils
Significant new business opportunities lie in decarbonising traffic with renewable fuels and providing sustainable alternatives for fossil-based chemicals in consumer products. Access to sustainable feedstocks, proprietary technology concepts and high-quality, high-impact products are expected to provide a lasting competitive advantage.

UPM Biofuels has successfully entered the market with its renewable diesel and naphtha UPM BioVerno. The biorefinery has proven its proprietary technology, product quality and sustainability, and has achieved commercial success. We are now preparing opportunities to scale up the business. In January 2021, we proceeded into the basic engineering phase of a potential larger next generation biorefinery.

UPM Biochemicals is preparing for a commercial scale market entry. In January 2020, we decided to invest in a next generation biochemicals refinery in Leuna, Germany. The biorefinery will have an annual capacity of 220,000 tonnes of wood-based biochemicals, e.g. monoethylene glycol, monopropylene glycol and renewable functional fillers. The EUR 550 million investment will open a new attractive market for us and is expected to meet our ROCE target of 14% once fully ramped up and optimised. The biorefinery is scheduled to start production by the end of 2022.

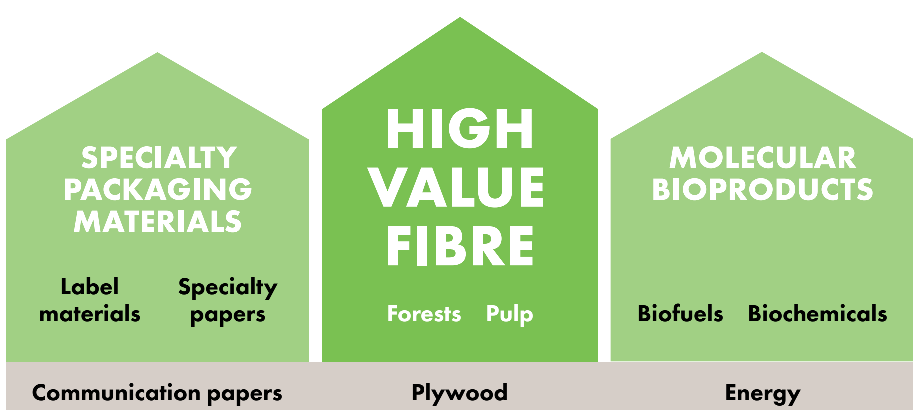
› UPM Biofuels on page 46
› UPM Biochemicals on page 58

Speciality packaging materials — focused growth projects and product innovation
Global consumer megatrends are driving demand for appealing and functional, but at the same time sustainable and safe, labelling and packaging solutions.

We continue to grow in the speciality paper and self-adhesive label materials segments. Our focus is on expanding their current production units and customer reach, and on continuously developing their product portfolio. Our strong position and innovations in these technically demanding and fast-growing niche segments of the packaging value chain provide attractive growth opportunities.

In 2020, demand for our self-adhesive label materials and speciality papers was further strengthened by growth in e-commerce and changes in consumer behaviour during the pandemic. UPM Speciality Papers' capacity expansion at the UPM Changshu mill in China at the end of 2019 was well timed. The conversion of paper machine 2 at UPM Nordland, Germany, was ramping up in 2020 and its products launched among customers. The new capacity provides further growth opportunities for 2021.

› UPM Raflatac on page 50
› UPM Specialty Papers on page 52



The key factors the spearheads have in common are significant growth potential and UPM's competitive advantage based on deep knowhow and high barrier to entry.

UPM is investing also in UPM Plywood and UPM Energy, while maintaining consistently strong cash flow and earnings in UPM Communication Papers.

SIGNIFICANCE
- Significant growth potential, driven by global megatrends
- New large growth markets for sustainable solutions to replace fossils

TARGETS
- Earnings growth
- Attractive returns

OUR WAY
- Clear focus areas for growth
- Well-prepared transformative projects
- Clear return targets
- Talent attraction

VALUE-CREATION OPPORTUNITIES IN THE COMING YEARS

	SPECIALTY PACKAGING MATERIALS	HIGH-VALUE FIBRE	MOLECULAR BIOPRODUCTS
UPM businesses	UPM Raflatac UPM Specialty Papers	UPM Pulp	UPM Biofuels UPM Biochemicals
Strong long-term fundamentals	Demand growth driven by global consumer megatrends	Demand growth driven by global consumer megatrends	Climate commitments and replacing fossil materials open large growing markets
Solutions	Sustainable products for global consumer demand (e.g. labelling and packaging)	Fibre-based products provide sustainable solutions for global consumer demand (e.g. tissue, hygiene, packaging, specialty)	Unique solutions to decarbonise traffic and provide consumers with bio-based products
Market growth	+4%	+3%	Strong growth potential
Competitive advantage	Technically demanding segments, where UPM has a leading market position, expertise and innovation	Competitive greenfield pulp operations have high requirements (wood supply, location, infrastructure, capital)	Unique value chain position with sustainable feedstocks, the right technology and IPR
Current projects or prospects under study	Focused growth investment in Poland Product portfolio development	A new world-scale pulp mill in Uruguay, capacity of 2.1 million tonnes, investment of USD 2.7 billion	Basic engineering of a biorefinery; potential investment in Finland or in the Netherlands Entering to wood-based biochemicals business by building a biorefinery in Germany

INNOVATING FOR THE FUTURE

Research and development, bioeconomy innovations and new technologies support our transformation and expand our business portfolio.

We are developing innovative, high-quality products from wood-based biomass. Wood fibres, biomolecules, residues and side streams are becoming increasingly important raw materials of the future.

Innovation and R&D programmes are essential in the development of new products and technologies. Research and development funding is primarily being used on studying new technologies and developing businesses and processes. A global network of research centres provides support for UPM's activities in R&D, both in new and existing businesses.

In 2020, UPM spent EUR 189 (121) million on research and development, making up 18.8% (6.6%) of UPM's operating cash flow. In addition to direct R&D expenditure of EUR 41 (53) million, the figure includes negative operating cash flow and capital expenditure in developing businesses, transformative growth projects and digitalisation projects.

Accelerating the development and scale-up of new molecular businesses
Molecular bioproducts form one of UPM's three strategic focus areas for growth. Our biorefinery investment in Leuna, Germany, will enable a switch from fossil raw materials to wood-based sustainable alternatives in textiles, plastics, PET bottles, packaging and pharma or cosmetics products.

We have also successfully entered the biofuels business and built a profitable and sustainable business platform. Development is currently ongoing, with the aim of expanding the biofuels business with new types of technology concepts and biomass-based raw materials. In January 2021, we started the basic engineering phase of a potential next generation biorefinery.

Our new state-of-the-art R&D Biofore Base in Lappeenranta, Finland, combines research, piloting and analytics, and unites our technologies, globally accumulated experience and expertise in the new and existing businesses. Strategic research further accelerates the commercialisation of bio-based solutions into viable industrial processes in a cost-efficient way. In 2020, special focus was on new value chains in our growth businesses: biochemicals, biofuels and specialty packaging.

Innovating climate-positive products
Our products offer solutions to mitigating climate change as they replace fossil raw materials with bio-based renewable alternatives. The products store carbon for the entire duration of their lifecycle, especially when recycled multiple times.

We are committed to a climate-positive product portfolio. Many of our products are already proven to be climate positive. In the future, we aim to scientifically verify the climate impacts of all our products.

One example of our research related to climate change mitigation is renewable hydrogen. Potential commercial applications using various technologies are evaluated with the aim to lower CO_2 emissions. We also became a member of the European Clean Hydrogen Alliance.

274
granted patents and patent validations in 2020

306
patent filings and validations in 2020

Sustainable product development
Our R&D activities are guided by our 2030 responsibility targets and integrate contribution to the UN Sustainable Development Goals (SDGs) into product development.

In 2020, we renewed our sustainable product design concept. We carried out a pilot case in the development of sustainable lignin products. In 2021, the work will continue with sustainable packaging and other business areas. Special focus on sustainable product development will be put on circularity.

We are also examining new ways to utilise sustainable fibre-based materials that are being developed for textiles, nonwovens, hygiene products and flexible packaging, for example. New solutions are developed in collaboration with our businesses, technology partners and customers by using revised ecodesign approach as part of sustainable product development concept. We see the residues and side streams as valuable raw materials and thus real business opportunities.

Solid patent portfolio
The significance of the patents, trademarks and intellectual property rights protecting our innovations is more pronounced in our new businesses, supporting the journey from innovation to business. We have nearly 3,000 patents and patent applications, and nearly 1,400 trademarks globally.

A solid patent portfolio boosts our competitive edge. Licensing of innovations and technologies provides an excellent basis for value creation with customers and technology partners.

More value from digital opportunities
We aim to significantly increase the speed and quality of decision-making, culture of data utilisation and innovation by leveraging high-quality, compliant and modern common data services. Much of what we focus on relates to building the data foundation, including common platforms, digital customer experience, digital supply chain and intelligent operations.

After having created a rich portfolio of digital projects and initiatives, we created a solid operating model in 2020. As part of the model, data governance management oversees the strategic focus areas, data principles and related initiatives. Also in 2020, we created the Data Management Office (DMO) and started to work on UPM's Digi and Data strategy to achieve more impact and business value from the digital and data-driven opportunities.

Extensive partner network
Our close-knit global partner network is comprised of customers, universities, research organisations, suppliers and start-up companies. Collaboration speeds up the development and launch of new solutions, particularly for new businesses.

The partnership with the European Joint Undertaking on Bio-Based Industries (BBI) focuses on strengthening the competitiveness of bio-based products in Europe. As a shareholder in the Finnish company CLIC Innovation Ltd, we aim for breakthrough solutions in the bioeconomy, circular economy and cleantech. We are also a member of FinnCERES Ecosystem to collaborate on research into lignocellulose-based materials.

In 2020, UPM joined the Renewable Carbon Initiative (RCI), which promotes the goal of making chemicals more sustainable and more climate-smart. UPM Specialty Papers and UPM Raflatac collaborated with 4evergreen Alliance, a initiative by CEPI to further accelerate the fibre-based packaging in the circular economy. UPM Raflatac and UPM Specialty Papers joined a new global industry-wide consortium CELAB to boost liner recycling in the labelling industry. UPM Biofuels joined the BIKE project promoting sustainable biomass value chains for biofuels in Europe.

› Towards a future beyond fossils on page 16
› From forests to sustainable products on page 18
› Responsible product lifecycle on page 82

SIGNIFICANCE
- The increasing demand for renewable and recyclable materials as we search for alternatives to fossil-based raw materials
- The growing consumption in emerging markets, requiring responsibly produced solutions
- Bioeconomy offers sustainable solutions to the challenges of global megatrends

TARGETS
- Developing products and innovations that replace fossil-based solutions and create added value and growth
- Creating new business

OUR WAY
- Strong expertise in forest biomass processing
- Responsibility and circular economy
- Resource efficiency, product stewardship and ecodesign across the entire value chain
- Technological development and intellectual property rights
- Innovation culture, current and future competences
- Extensive partner network

VALUE FROM RESPONSIBILITY

Creating value for society—both as a company and through our renewable and responsible solutions—is an integral part of our strategy. The bioeconomy offers new opportunities for value creation and business growth.

Responsibility is integrated into our Biofore strategy and forms a solid foundation for long-term value creation. We actively seek sustainable solutions in co-operation with our customers, suppliers and other stakeholders.

To ensure responsible business practices we focus on:

- Compliance
- Responsible operations and value chain
- Value-based leadership
- Renewable raw materials, recyclable and safe products

Responsibility at the core

Our values and the UPM Code of Conduct guide our decision making, management and operations. Responsible business practices are complemented by credible and transparent reporting.

Efficient operations not only reduce costs, but also minimise negative environmental impact. By managing our forests sustainably, we ensure the availability of wood, safeguard biodiversity and mitigate climate change.

Our commitment to respecting human rights is a focal point of our responsible business practices. We are committed to remediate adverse impacts to human rights and environment caused or contributed by our activities. Remediation is specified case-by-case based on verified impacts.

Value-based and inspiring leadership ensures high performance and continuous professional development, a safe and healthy working environment and the well-being of employees and contractors. A diverse and inclusive working environment empowers people. Local commitment is crucial to this.

Renewable raw materials and recyclable products are the essence of a circular economy. With our approach to product stewardship, we aim to ensure that our solutions respond to global challenges and that our product communication is reliable and transparent.

Thanks to our commitment to responsible business, we were recognised as a Global Compact LEAD participant once again. We were one of the only 41 global companies to receive this recognition, the only forest industry representative, and the first company from Finland.

Ambitious work towards a future beyond fossils

In January 2020, we committed to the UN's Business Ambition for 1.5°C in a promise to pursue science-based measures to limit global temperature rise to 1.5°C. The initiative is a response to the rising concerns about the severe consequences of failing to stop global warming. UPM was amongst the first global forest industry companies to make this commitment.

We make a positive impact and contribute to mitigating climate change by tangible actions. We are committed to climate-positive forestry, which is critical for the company's business. Sustainably managed forests are more resilient to changes in the climate. We will ensure that we always grow more forest than we harvest and we will work to improve our forests' growth and ability to absorb more carbon. In 2020, the five-year annual average carbon sink of UPM's own and leased forests was approximately 6.1 million tonnes of CO_2 equivalents (1.1 million tonnes in Finland, 4.9 in Uruguay and 0.1 in the US).

Decreasing the use of fossil fuels is the most important way to mitigate climate change. We made a systematic global review of the opportunities for reducing emissions using existing technologies in 2019. We also analysed the financial impact of each carbon action. Based on the assessment, we made a commitment to reduce our CO_2 emissions from fossil fuels and purchased electricity by 65% from the 2015 level by 2030. In 2020, we achieved a 6% reduction compared to the previous year. We also plan to reduce the emission levels of the supply chain by 30% and started a comprehensive project on Scope 3 emissions (page 91).

Innovative and sustainable products that offer alternatives to fossil materials are in the core of our Biofore strategy. We are committed to a climate-positive product portfolio. At the end of 2020, we started a study on climate-related substitution and the carbon storage effects of our products with two research institutes, the German IFEU and the Finnish Environment institute (SYKE).

As a tangible measure we organised a series of internal climate webinars during the autumn. The aim was to increase our personnel's understanding of climate-related topics and challenge them to join in the discussion with stakeholders.

SIGNIFICANCE

- Responsibility is an integral part of our strategy and our operations and a source of competitive advantage
- Climate change is a major challenge and requires action

TARGETS

- We provide solutions to global challenges, whilst creating value for our stakeholders
- We strive to mitigate climate change through innovating novel products, committing to a 65% CO_2 emission reduction and by practising sustainable forestry

OUR WAY

- We respect international agreements such as the UN Declaration of Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work and the OECD Guidelines for Multinational Enterprises
- Our Biofore strategy guides us in achieving our 2030 responsibility targets and in contributing to the UN Sustainable Development Goals and the UN Business Ambition for 1.5°C
- Our Code of Conduct and Supplier and Third-Party Code provide a foundation for responsible business conduct and continuous improvement
- Corporate responsibility is managed by the Board of Directors and the Group Executive Team, as well as by businesses and functions

Responsibility integrated into financing

Connecting our sustainability performance to our financing demonstrates the importance of responsible business practices to our long-term value creation. In 2020, UPM became one of the first companies to link the pricing mechanism of a syndicated revolving credit facility (RCF) of EUR 750 million to both biodiversity and climate targets. The margin of the RCF is tied to two key performance indicators:

- Achievement of a net positive impact on biodiversity in the company's own forests in Finland
- 65% reduction of fossil CO_2 emissions from fuels and purchased electricity by 2030 from 2015 level, in line with UPM's commitment to UN Business Ambition for 1.5°C

In November 2020, we issued our first green bond of EUR 750 million under the EMTN (Euro Medium Term Note) programme. In connection with the programme, we also prepared a Green Finance Framework. UPM's framework was rated with the highest-grade, Dark Green, by CICERO (Center for International Climate Research). We will allocate assets to projects that enhance sustainable forestry, waste and water management, increase energy efficiency and use of renewable energy as well as promote the innovation of climate-positive products and solutions.

> Towards a future beyond fossils on page 16
> Our responsibility targets for 2030 and how we did in 2020 on pages 22–23
> Creating value with people on page 70
> Compliance on page 76
> Responsibility throughout the value chain on pages 80–83
> Responsible product lifecycle on page 82
> Examples of responsibility in different sections of this report www.upm.com/responsibility

RISKS AND OPPORTUNITIES

The operating environment exposes UPM to a number of risks and opportunities. Many of them arise from general economic activity and global megatrends.

- Risks in the report of Board of Directors on page 129
- Sensitivity to carbon pricing is presented on page 136
- Main earnings sensitivities are presented on page 160
- UPM's cost structure is presented on page 161
- Main currency exposures are presented on page 190

CYCLICAL AND COMPETITIVE BUSINESS ENVIRONMENT

UPM's current product offering competes in markets where there are competing alternatives for customers and where the shifts in supply and demand continuously influence prices. Changes in production capacity, new product development and competitor and consumer behaviour may impact the price levels for our products and cause demand fluctuations. Rapid acceleration in digitalisation and e-commerce may expedite the decline in demand for graphic papers and simultaneously increase demand for sustainable packaging products.

Management: Industry-leading balance sheet. Continuous improvement in competitiveness, resource efficiency and customer offering. Responsible operations. Business portfolio development.

Opportunity: Growing need for renewable and recyclable solutions creates business opportunities and drives demand growth.

CLIMATE CHANGE

The transition to a low-carbon economy can cause policy changes and shifts in market preferences, standards and technologies, which in turn may result in changes to cost structures and change the competitiveness of products, raw materials, industries and countries. The physical impacts of climate change include more frequent and severe weather conditions, which can increase droughts and forest fires and cause uncertainties in business operations. Damage caused by insects and tree diseases can become increasingly common.

Management: Long-term targets and science-based measures to mitigate global warming through sustainable forestry, emissions reductions and innovating novel products.

Opportunity: Transition opportunities include those driven by resource efficiency and the development of new technologies, products and services that could bring new markets, customers, sources of funding and competitive advantage for us. Longer forest growing season in northern hemisphere.

GEOPOLITICAL AND ECONOMIC UNCERTAINTY

The rising protectionism in Europe, global trade tensions between major economies, e.g. the US and China, as well as political uncertainties in several countries continue to cause uncertainty in trade policies and economic growth, and challenge competitiveness for companies with international value chains. The testing relationships between businesses, governments and society, and the changing pandemic containment measures may continue to stress the economic and political environment and cause local challenges to our operations or influence demand for our products.

Management: Monitoring through international trade associations. Compliance. Continuous improvement in competitiveness. Disciplined planning and selection of investments. Business portfolio development.

Opportunity: Diverse business portfolio, geographical presence and responsible business practices may present opportunities for supply chain optimisation or strategic opportunities (incl. M&A) in an economic downturn.

CHANGES IN POLICIES, LEGISLATION AND STAKEHOLDER EXPECTATIONS

The rising social inequality and strain on our natural ecosystem have intensified the expectations for companies to deliver economic, social and environmental benefits and complement the actions being taken by governments. Changes in regulation, taxation or subsidies could have an effect on our performance, competitiveness and the costs and availability of raw materials. Environmental regulations may continue to become more stringent. As policies, legislation or stakeholder expectations, or the application of them, change, additional costs in complying with more stringent requirements may be imposed on us.

Management: Responsible operations in the value chain enhance the ability to operate and influence long-term business success, including environmental management systems, sustainable forestry and compliance.

Opportunity: Creating value for society, as a company and through our renewable and responsible solutions, is an integral part of our strategy. The bioeconomy offers new opportunities for value creation and business growth.

EXECUTION OF STRATEGIC INVESTMENT PROJECTS

We invest in selective strategic projects to enable profitable growth. Investment projects are often large and may take several years to complete. They may also involve strategic, technical and operational risks. Our large pulp mill project in Uruguay consists of several subprojects. The biochemical refinery project in Germany involves new technology and opens new markets for us. The OL3 power plant project may impact energy costs or the fair value of our energy shareholdings. The COVID-19 pandemic and the required additional health and safety measures have added a new challenge to large investment projects.

Management: Stringent and continuous operational planning, steering and supervision, quality control, input procurement, scheduling as well as resource and cost monitoring. Environmental, health, safety and social impact assessments and protocols. Stakeholder engagement.

Opportunity: Carefully selected and implemented growth projects improve our earnings and returns, and change the positioning of the company.

INPUT PRICE FLUCTUATIONS ON THE MAIN RAW MATERIALS AND SERVICES

The main production inputs required in the manufacturing of our products are wood, fibre, chemicals, energy and water. The prices for many of these inputs have been volatile in recent years and are expected to remain volatile for the foreseeable future. Governmental protection, trade protection measures, climate change, local and global environmental policies, possibly impacted by COVID-19 related governmental actions or restrictions, could continue to cause further uncertainty around the prices and availability of these inputs.

Management: Continuously improving resource efficiency and supply chain optimisation. New technologies. Long-term supply contracts and relying on alternative suppliers. Selected ownership of forest land and long-term forest management contracts.

Opportunity: Circular economy and continuous improvement in resource efficiency and resilience to withstand price fluctuations offer competitive advantage.

INFORMATION TECHNOLOGY AVAILABILITY AND INCREASING CYBERCRIME ACTIVITY

Our business operations depend on the availability of supporting information systems and network services. Unplanned interruptions in critical information system services can cause disruptions to the continuity of operations. The information systems may be exposed to a cyber-intrusion that could cause leakage of sensitive information, violation of data privacy regulations, theft of intellectual property, production outages or damage to reputation.

Management: We systematically maintain and further develop our measures for cybersecurity protection.

Opportunity: Sophisticated IT systems enable efficient operations and optimised performance, as well as new customer services and data security.

OPERATIONAL HAZARDS, HEALTH AND SAFETY ISSUES AND BUSINESS INTERRUPTION

Our operations are exposed to risks arising from the environment, fires, natural events, site security and occupational health and safety. A major incident at a UPM site or at a critical part of the logistics chain could cause a shutdown or curtail production. Any failure to maintain high levels of safety management could also result in physical injury, sickness or liability to employees, contractors or third parties.

Management: We systematically maintain and further develop our management, safety, security and loss prevention programmes as well as insurance protection.

Opportunity: Industry-leading environmental performance provides competitive advantage. Health and safety performance strengthens engagement, efficiency and productivity.

FINANCIAL RISKS

Financial risks include foreign exchange and interest rate fluctuations, challenges in refinancing, counterparty or credit risks or changes in taxes. Changes to the monetary policies of major central banks may significantly impact interest rates and consequently various currencies that directly or indirectly affect UPM. Our foreign exchange rate risk primarily relates to the US dollar, British pound sterling and Japanese yen.

Management: Continuous hedging of net currency exposure. Hedging the balance sheet. Continuous improvement in competitiveness. Disciplined planning and selection of investments. Business portfolio development.

Opportunity: Diverse business portfolio and geographical presence, focus on competitiveness and strong balance sheet may present strategic opportunities in a changing currency environment.

EMERGING RISKS

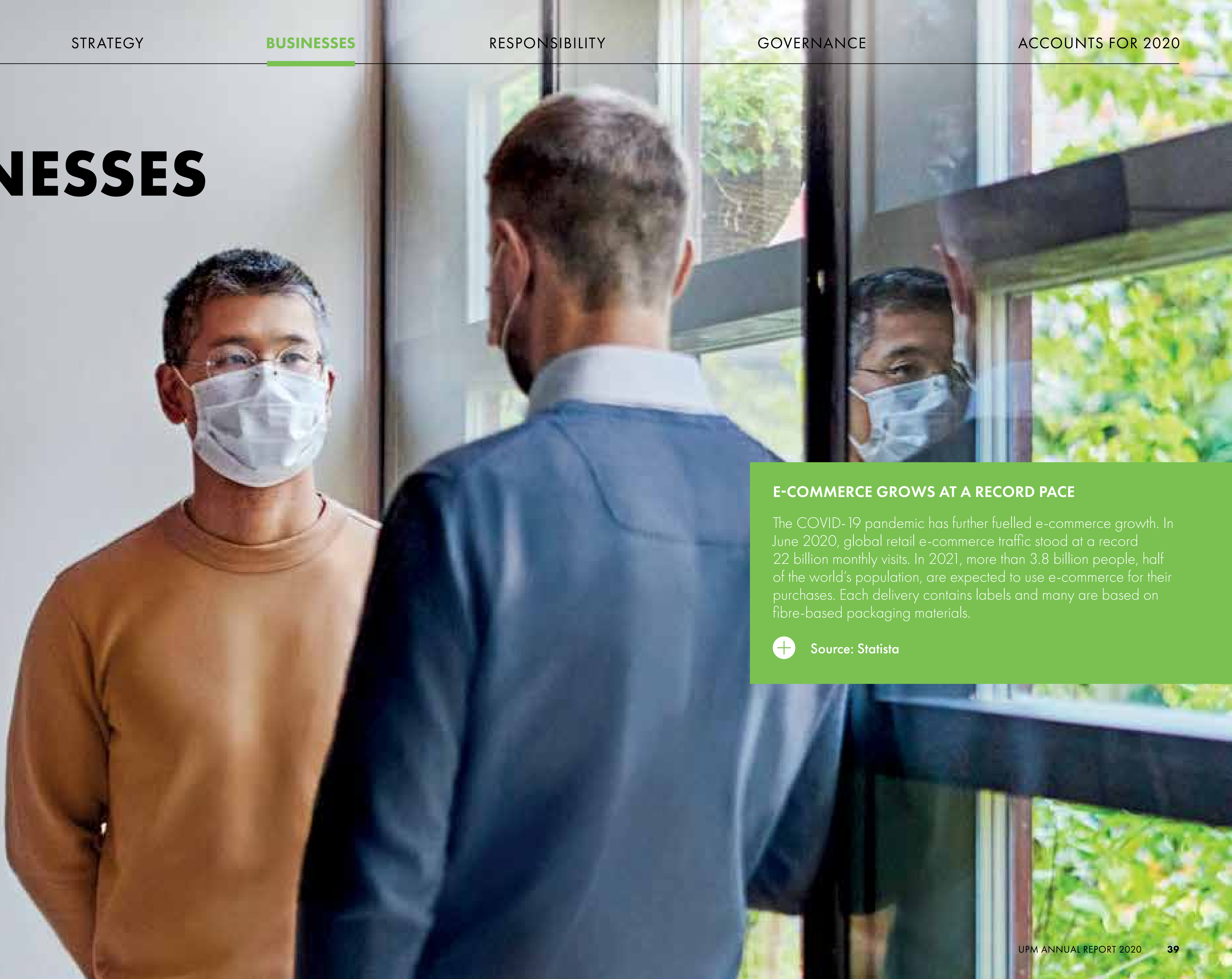
Decisive carbon removal policies may require a rapid growth in carbon removal technology solutions, but could accelerate the tendency to optimise short-term actions and lead to restrictions on wood-use.

Management and opportunity: Sustainable forest management and expansion of forested areas.

A widening digital gap and unbalanced economic development can worsen societal fractures and recovery from the pandemic.

Management and opportunity: Economic activities and creating incremental value in remote areas especially related to forests.

OUR BUSINESSES



E-COMMERCE GROWS AT A RECORD PACE

The COVID-19 pandemic has further fuelled e-commerce growth. In June 2020, global retail e-commerce traffic stood at a record 22 billion monthly visits. In 2021, more than 3.8 billion people, half of the world's population, are expected to use e-commerce for their purchases. Each delivery contains labels and many are based on fibre-based packaging materials.

Source: Statista

Glycols manufactured by UPM Biochemicals.

THE BIOFORE COMPANY

We believe in a future beyond fossils. We respond to the growth in consumer demand with recyclable products that are made of responsibly-sourced, renewable raw materials.

OUR BUSINESSES

UPM BIOREFINING

UPM Biorefining consists of pulp, timber and biofuels businesses. UPM Pulp offers a versatile range of pulp grades suitable for various end uses such as tissue, specialty and packaging papers, graphic papers and board. UPM Timber offers certified sawn timber for joinery, packaging, furniture, planing and construction end-use segments. UPM Biofuels produces wood-based renewable diesel for all diesel engines and renewable naphtha that can be used as a biocomponent for gasoline or for replacing fossil raw materials in the petrochemical industry.

UPM ENERGY

UPM Energy generates cost-competitive, zero-carbon electricity. Operations also include physical electricity and financial portfolio management as well as services to industrial electricity consumers and producers.

UPM RAFLATAC

UPM Raflatac offers self-adhesive label materials for branding and promotion, information and functional labelling in the food, beverage, personal care, pharmaceutical and logistics segments, for example.

UPM SPECIALTY PAPERS

UPM Specialty Papers offers labelling and packaging materials as well as office and graphic papers for labelling, commercial siliconising, packaging, office use and printing.

UPM COMMUNICATION PAPERS

UPM Communication Papers offers an extensive product range of graphic papers for advertising and publishing as well as home and office uses.

UPM PLYWOOD

UPM Plywood offers high quality WISA® plywood and veneer products for construction, vehicle flooring, LNG shipbuilding, parquet manufacturing and other industrial applications.

OTHER OPERATIONS

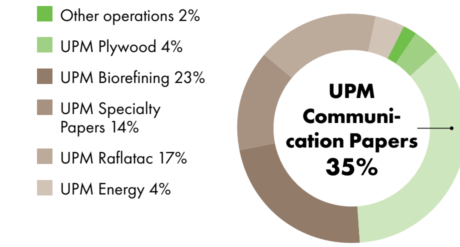
UPM Forest secures competitive wood and biomass for UPM businesses and manages UPM-owned and privately-owned forests in North Europe. In addition, UPM offers forestry services to forest owners and forest investors.

UPM Biochemicals offers wood-based biochemicals for replacing fossil-based raw materials in various applications such as textiles, PET bottles, packaging, cosmetics, pharmaceuticals, detergents, rubbers and resins.

UPM Biomedicals develops and supplies wood-based biomedical products for a variety of uses. The main ingredient of our high-quality products is nanocellulose, extracted from birch.

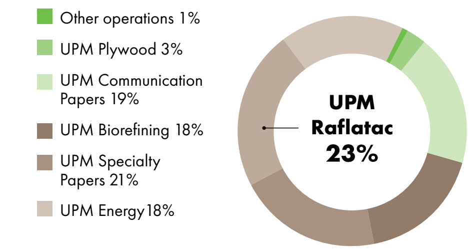
UPM Biocomposites offers composite decking materials based on both recycled consumer and industrial waste. The product range also includes composite materials made from renewable fibres and polymers to replace fossil-based plastics.

Sales 2020
EUR 8,580 million

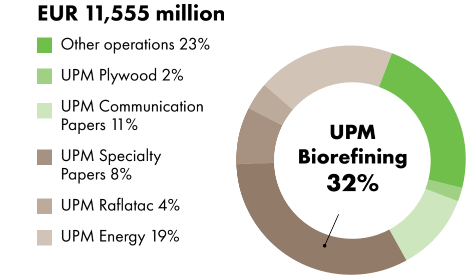


Unconsolidated

Comparable EBIT 2020
EUR 948 million



Capital employed 31 Dec 2020
EUR 11,555 million



UPM BIOREFINING - PULP & TIMBER

FIBRES FOR THE FUTURE

UPM combines the integrated production of pulp, timber and biofuels with a synergistic supply chain of wood-based raw materials.

Pulp is a versatile material meeting the global demand for responsible and renewable products. Our pulp is used for tissue papers, hygiene products, packaging board, labels and other specialty papers as well as printing and writing papers. What's more, products made from pulp can be used to replace non-renewable materials like plastics.

Long-term demand for pulp remains strong, driven by global megatrends. Growth in demand is strongest in China and the rest of the Asia-Pacific region.

In 2020, global market pulp demand was significantly impacted by the COVID-19 pandemic, both positively and negatively. For tissue and hygiene products, the overall markets remained strong. However, the graphic paper end-use market clearly suffered from the pandemic and related lockdowns. Global shipments remained well above the 2019 level and were 4% higher in 2020.

In the UPM Timber business, we supply industrial customers in the furniture, joinery, planning, construction and packaging sectors. Today, the construction industry is estimated to account for nearly 40% of energy-related CO_2 emissions. Replacing non-renewable raw materials in construction with responsibly produced timber is an effective solution for emission reduction.

In 2020, UPM Timber continued to increase its efficiency and improve its performance, seizing opportunities created by the home improvement trend. UPM Timber also reached a significant milestone by achieving fossil-free production of sawn timber (read more on page 90).

World-class business processes

Our target is to have world-class business processes in place across our operations and customer interface. Our commercial strategy focuses on solid value proposition, serving multiple end-use segments, preparing commercial capability for six million-tonne sales after 2022 and ensuring long-term profitability.

In 2020, our pulp mills had a strong year of production. To strengthen our competitiveness even further, we continued efforts to increase the efficiency of our pulp operations in Finland. We streamlined the operating model, optimised the cost structure and advanced digitalisation.

The UPM Fray Bentos mill in Uruguay continued to break production records and also the environmental performance continued to be strong.

As an integral part of the value chain, efforts to enhance wood supply continued in 2020. The value of utilising recent digital applications is also starting to materialise. In Finland, UPM sources wood from private landowners, company-owned forests and import markets. In Uruguay, wood is sourced from eucalyptus plantations that are owned by UPM and third-party landowners.

Products made from pulp can be used to replace non-renewable materials like plastics.

OUR DIRECTION

- For pulp: To provide the most versatile pulp range, advanced technical service and a reliable long-term supply. To maintain cost-competitiveness through continuous operational improvement. To grow as a trusted and responsible pulp supplier.
- For timber: To enhance profitability through efficient wood supply, integrated full-production and focused commercial strategy. To have a streamlined business model that secures our position in chosen key markets and end-use segments.

OUR STRENGTHS

- Versatile selection of sustainably produced pulp grades for a wide range of end uses
- Modern, efficient pulp mills and expert teams committed to grow with customers
- Responsibility integrated into all operations from wood sourcing to logistics
- Competitive sawmills with a dedicated global sales and logistics network

KEY FIGURES	2020	2019
Sales, EURm	2,183	2,712
Comparable EBIT, EURm	166	544
Capital employed (average), EURm	3,620	3,469
Comparable ROCE, %	4.6	15.7
Personnel on 31 Dec.	2,695	2,739

Comparable EBIT decreased due to lower pulp sales prices. Wood and other variable costs were lower. Fixed costs were higher due to the more expensive scheduled maintenance shutdowns in 2020. Global demand growth for chemical pulp was mainly driven by China. Good demand for advanced renewable diesel and naphtha continued. Demand for sawn timber was strong towards end of the year.

CASE

THE PULP MILL PROJECT PROGRESSED DURING THE PANDEMIC

When the COVID-19 pandemic began, about 1,000 people worked at UPM's 16 construction sites in Uruguay. At the end of the year, there were already 3,000 employees at the mill site, in the housing and the port of Montevideo. At the busiest stage of the construction, there will be more than 6,000 people at the sites.

On our construction sites, work continued uninterrupted in compartmentalised teams. in 2020. Employees always work, live, commute and eat in the same group.

If there's a positive Coronavirus case, only a limited number of people are exposed. They

can be easily isolated, tested and monitored without exposing the whole site. In addition to random testing, all new employees are tested before they start working in any of the construction sites. UPM's operations in China had first-hand knowledge of managing the situation, providing a model for well-functioning practices and their implementation. Strict measures and ongoing testing will continue to ensure health and safety of construction workers and progress of the project.

During the pandemic, dialogue with local communities has remained lively. In 2020, UPM hosted over 150 meetings and briefings with various stakeholders and more than 20 open sessions online and on several social media channels. Training for construction workers and entrepreneurs has also started successfully online.

URUGUAY GROWTH PROJECT PROCEEDED

2020 was an intense year of construction for this pulp mill project. Important steps were achieved across the 16 related construction sites.

CASE

NEW BIODIVERSITY INDICATORS IN URUGUAY

We have determined three biodiversity indicators for the company-owned land as part of our global biodiversity programme, which was established in 1998. These indicators are 1) Developing the nature conservation area network; 2) Maintaining and enhancing endemic and threatened species populations in formal conservation areas; and 3) Controlling and decreasing invasion of exotic woody species populations in conservation areas.

Our plantations in Uruguay are situated on grasslands that were formerly used for cattle grazing.

We do not convert natural forests into plantations. All valuable biodiversity hotspots such as wetlands, natural forests and unique areas for protecting specific birds and other species are protected.

Biological surveys have been conducted in areas owned by UPM since the early 1990s to identify and classify species and native ecosystems to be protected. Currently, the network of formal conservation areas covers around 13,000 hectares. To achieve our long-term biodiversity targets, we plan to increase protected area under defined conservation categories and continue with our long-term monitoring programme. This conservation work is being carried out in cooperation with local environmental organisations such as Vida Silvestre and Aves Uruguay.

We are currently building a new world-class pulp mill near Paso de los Toros in central Uruguay. The USD 2.7 billion investment in a 2.1 million-tonne greenfield eucalyptus pulp mill is a significant step for UPM's future earnings and shareholder value. We are also investing approximately USD 280 million in building pulp terminal operations in the port of Montevideo, and USD 70 million in local infrastructure. The mill is scheduled to begin production in the second half of 2022.

2020 was an intense year of construction for this pulp mill project. The project proceeded successfully despite of the exceptional conditions caused by the COVID-19 pandemic (read more on page 42).

Project highlights in 2020

- A total of 3,000 people working on 16 related construction sites
- Training programmes and awareness raising projects launched in cooperation with Uruguayan organisations, institutions and authorities to strengthen local communities and support residents benefiting from increased opportunities
- Mill site preparations, including earth and road works, entrances and gates, office buildings and 12.5 kilometres of fences around the site
- Civil construction including the 127-metre chimney and foundations for the production buildings, such as the fibre line, cooling towers, drying plant, recovery boiler, turbines and evaporation plant
- Temporary and permanent housing areas for the mill construction workers in the nearby communities
- In the port of Montevideo, dredging and filling of the area was completed and construction of a pulp storage facility, tank park and steel structures for pulp loading started
- Construction of a state-of-the art eucalyptus tree nursery started in Sarandí del Yí
- Works related to road infrastructure improvement in central and west Uruguay
- Agreements made on mill technology with Andritz and chemical supply with Kemira, alongside rail logistic services and other supplier agreements

Perfect conditions for plantations

Eucalyptus availability for the mill is secured through UPM's own and leased plantations, as well as through wood sourcing agreements with private partners. We continued to increase plantation areas in Uruguay in 2020, covering 434,000 hectares of UPM's own and leased plantations. They will supply the current UPM Fray Bentos mill and the new mill.

Conditions for growing eucalyptus are optimal in Uruguay. Eucalyptus' fast growth rate and rotation time of 10 years make it the preferred plantation tree. Eucalyptus is also one of the most efficient plants in the world in terms of water and nutrients needed to produce a unit of biomass.

Plantations are established on former grazing lands. The Forestry Act sets strict rules for plantation design and structure. This includes location, tree types and identifying suitable forestry soils for plantation development as well as safe zones around roads, native forests and waterways.

Uruguay's native forests are all protected, and they typically grow on riversides and other lowlands. The country is located within a temperate climate zone so there are no rain forests in Uruguay.

With a combination of competitive wood supply, scale, best available techniques and efficient logistics, the mill is expected to reach a highly competitive cash cost level, approximately USD 280 per delivered tonne of pulp. Furthermore, the safety and sustainability performance of the value chain is expected to be on an industry-leading level.

› www.upmpulp.com, www.upmtimber.com
› www.upmpasodelostoros.com

CASE

PURSUING COLLABORATION AND DIALOGUE WITH LOCAL ORGANISATIONS

We are cooperating extensively with local and national authorities, expert organisations and NGOs to look for ways to mitigate the impacts of the pulp mill construction in Uruguay.

In order to prevent any single location being overwhelmed by the arrival of 6,000 construction workers, UPM has built permanent and temporary housing across four locations. The local areas will later benefit from the 60 permanent houses as well as the infrastructure – such as electricity and sanitation – that has been put in place to build the temporary housing.

We are also working with local authorities to improve road safety due to increased traffic. A new bus transportation service has been created for the transfer of workers to and from the construction site. Road safety talks, training and events are being organised with NGOs.

Concerns over sexual exploitation, which are typically associated with large construction projects worldwide, have been raised locally. In response to this, we are funding an NGO campaign that is aimed at providing information about the harm these types of illicit activities cause and providing education on how to identify and prevent child and adolescent exploitation.

The mill is designed to fully meet strict Uruguayan environmental regulations and international standards for modern mills. UPM will invest in the improvement of local wastewater collection and treatment as well as in the improvement of the new landfill site. UPM also participates in the Rio Negro initiative, providing funding and technical support to keep the local river clean. Environmental performance of the new pulp mill will be reviewed with transparent online monitoring.

UPM BIOREFINING - BIOFUELS

DRIVING CLEANER TRAFFIC

We are committed to helping our customers mitigate climate change with advanced biofuels.

Our low-emission diesel and naphtha made from 100% wood-based residue are sustainable alternatives to fossil fuels and respond to the EU's ambitious targets for greenhouse gas (GHG) reduction. In EU, an overall 55% reduction is needed by 2030 to move towards a low carbon economy.

UPM's Lappeenranta Biorefinery in Finland promotes a circular economy by converting crude tall oil, a residue of pulp making, into renewable UPM BioVerno diesel for road transport. UPM BioVerno reduces GHG emissions by over 80% compared to fossil diesel and it also reduces tailpipe emissions significantly. Unlike first-generation biofuels, it has no blending limit.

Petrochemicals are projected to account for one third of global oil demand growth by 2030 despite the efforts put into recycling and reduction of single-use plastics. Our renewable UPM BioVerno naphtha can be used as a low emission biocomponent for gasoline and for replacing fossil raw materials in plastics and other chemical industry solutions. UPM BioVerno naphtha-based plastic has same technical characteristics and recyclability as conventional plastic.

The biorefinery also produces wood-based chemicals. Turpentine can be used in bio-based aroma chemicals for the fragrance industry. Wood-based pitch can be used to produce inks, bitumen for roads and roofs, or used in energy generation.

In 2020, the biofuel market continued to evolve in a healthy direction, with continuous demand growth. UPM Lappeenranta Biorefinery was racing to keep up with demand by running at a record level with increased nameplate capacity of 130,000 t/a. It also continued to perform above UPM's average return targets.

Collaborating for responsible solutions

Our collaboration with sustainability frontrunners has led to 100% wood-based breakthrough innovations in recent years. In 2020, UPM Biofuels, SABIC and DSM co-operated in creating bio-based Dyneema® fibre (read more below). Also, UPM Formi EcoAce biocomposite, which is made of wood fibres and UPM BioVerno naphtha, was launched for the new range of Finnish Mysoda sparkling water makers (read more on page 61). Our collaboration with UPM Raflatac continued in renewable labelling materials UPM Raflatac Forest Film™ and UPM Raflatac Fossil-Free Adhesive as well as in the recent launch of UPM Raflatac Forest Film PE™.

Unique sustainability certifications

UPM's biofuel production is certified as meeting the RSB (Roundtable on Sustainable Biomaterials) and ISCC (International Sustainability and Carbon Certification) international sustainability standards. Our RSB low indirect land use change (ILUC) risk certification proves that our products have minimal risk of causing indirect emissions. All our products satisfy the sustainability and traceability criteria of the EU Renewable Energy Directive.

Future plans for decarbonisation

Advanced biofuels play an important role in our Biofore strategy by offering sustainable alternatives to fossil economy solutions. Global demand continues to be driven by climate change mitigation targets and stricter environmental standards.

In 2020, we were exploring the opportunities to expand biofuel business with new types of technology concepts and raw materials. Potential next generation multi-feedstock biorefinery would produce 500,000 t/a of renewable fuels including sustainable jet fuel. The products would significantly reduce carbon footprint in the road transport and aviation, as well as replace fossil raw materials with renewable alternatives in chemicals and bioplastics.

The potential new biorefinery would utilise sustainable feedstocks based on wood and other climate-positive feedstocks. Research on raw materials has been focused on forest industry residues. Alternatives made from waste and residue-based raw materials that do not compete with food production have also been tested. We have also been developing a new climate-positive feedstock concept by cultivating brassica carinata as a sequential crop in Uruguay. The carinata crop produces non-edible oil that is suitable for use as feedstock for biofuels.

We took next steps of the potential biorefinery in January 2021 and started a detailed basic engineering phase and site option assessment primarily in two locations: Kotka, Finland and Rotterdam, the Netherlands.

› Towards a future beyond fossils on page 16
› www.upmbiofuels.com

OUR DIRECTION
- Unique, sustainable, advanced biofuels and biomaterials in various markets and segments
- Expanding biofuel business

OUR STRENGTHS
- Established producer of low-emission renewable diesel and naphtha
- Sustainable bio-based alternative to fossil feedstock in the petrochemical industry
- Certified in line with international sustainability standards ISCC and RSB

Our low-emission diesel and naphtha are sustainable alternatives to fossil fuels.

CASE

THE WORLD'S STRONGEST FIBRE GOES RENEWABLE

Extending the use of UPM BioVerno naphtha as a raw material in new applications such as clothing and sports equipment is an example of the collaboration needed to take us towards a future beyond fossils.

Ultra-High Molecular Weight Polyethylene (UHMWPE), known under the Dyneema brand as the world's strongest fibre, is a material used in ropes, sports equipment, protective clothing, and offshore marine or air cargo netting. There is growing interest to use bio-based polymers in a broad range of segments, including hygiene and cosmetic products, the automotive and electrical industries, and other durable goods.

Committed to increasing the share of bio-based raw materials in the production of Dyneema, Royal DSM, a global science-based company in Nutrition, Health and Sustainable Living, teamed up with UPM Biofuels and global chemicals company, SABIC, to improve the environmental impact of its materials.

UPM BioVerno naphtha is processed by SABIC to make certified renewable ethylene for DSM's Dyneema products. The collaboration supports DSM's ambitious sustainability target for Dyneema of sourcing at least 60% of its feedstock from bio-based raw materials by 2030.

From a business point of view, the most important argument driving companies to switch to bio-based alternatives is how they help to reduce the carbon footprint of the end product.

UPM ENERGY

CO_2 FREE ELECTRICITY

The CO_2-emission-free electricity produced by UPM Energy helps UPM comply with the UN Business Ambition for 1.5°C.

Hydropower and nuclear power, which generate no CO_2 emissions, constitute 98% of UPM Energy's electricity production in Finland, making it one of the benchmark producers in Europe. Hydropower is valuable in securing balance for an increasingly volatile market, whereas nuclear power can provide a reliable baseload capacity for the system.

The electricity generated is sold to Nord Pool, the Nordic power market. UPM Energy directly trades physical electricity and its derivatives. We also provide industrial electricity consumption and flexibility services to industrial consumers and other energy companies.

We have a unique position on the market, thanks to our considerable experience in industrial electricity consumption and producer of low-emission electricity.

Focus on hydropower generation

UPM Energy's hydropower generation levels in 2020 were good. During the year, the hydrological balance in Finland was good, due to warm and rainy weather. The annual generation of nuclear power was at a normal level.

Due to the COVID-19 pandemic, we had to take significant measures in order to prevent transmission of the disease and secure the continuity of our operations. The main aim of these measures was to secure that the hydropower plants were under 24-hour surveillance and control.

In July, UPM Energy sold its share in Kainuun Voima to Kajaanin Energiatuotanto, owned by the city of Kajaani in Finland. Due to the sale, UPM Energy's zero-carbon production capacity rose from 90% to 93% of the total capacity.

Growth in CO_2-emission-free electricity generation

UPM Energy is investing in power generation that is free of CO_2 emissions. The largest ongoing project is the construction of Teollisuuden Voima's (TVO) Olkiluoto 3 EPR nuclear power plant unit. According to the updated schedule, regular electricity production at the plant will commence in February 2022. UPM's share of the capacity of the plant unit is approximately 500 MW through Pohjolan Voima.

UPM Energy is carrying out a renovation and modernisation of the Kuusankoski hydropower plant (on the left). The project will be completed in 2022.

Market-based solutions drive change in the energy market and new electricity transmission lines help form a closer connection between Nordic electricity markets and the markets of continental Europe. A strong CO_2 emission trading scheme should be the main tool for the decarbonisation of the energy sector. Thanks to its zero-carbon electricity production, UPM Energy holds a strong position on the energy market, which is facing a big change.

Measures to restore fish stocks

Emission-free hydropower does, however, impact the environment by altering river flow rates and their ecosystems. This impact is mainly mitigated through fishery fees in accordance with permit conditions, with these funds being used by authorities to aid in the reintroduction of fish and the promotion of research into migratory fish stock restoration.

In addition to the statutory fishery fees that compensate for the effects of production, we take voluntary measures to protect and restore migratory fish stock. Our migratory fish programme aims to dismantle migration barriers and test new ways to restore fish stocks all around Finland. The programme is based on collaboration with stakeholders.

In the programme, we dismantled an old mill and a mill dam at the Sapsokoski rapids in Sotkamo in Finland, which opened up a migration route to twelve riffles upstream of the site. UPM Energy funded also the construction of a reproduction area for Saimaa landlocked salmon in the Pielisjoki river. The area was inaugurated in 2020.

› Reducing energy use and emissions to air on page 88

› www.upmenergy.com

OUR DIRECTION

- Profitable growth in zero-carbon electricity generation
- Solutions for industrial energy excellence
- Embracing the decarbonisation of society

OUR STRENGTHS

- Competitive, zero-carbon electricity generation asset portfolio
- Strong track record in physical and financial electricity markets
- World-class expertise in the optimisation of industrial energy consumption

KEY FIGURES	2020	2019
Sales, EURm	379	417
Comparable EBIT, EURm	171	185
Capital employed (average), EURm	2,313	2,454
Comparable ROCE, %	7.4	7.5
Personnel on 31 Dec.	70	68

Comparable EBIT decreased due to lower electricity sales prices. Hydropower generation was higher. In Finland, Sweden and Norway, 2020 was the warmest year on record.

CASE

HYDROPOWER GENERATES FLEXIBLE POWER

UPM has 8 hydropower plants and owns significant shares of other energy companies' plants. We are gradually renovating and modernising the Kuusankoski hydropower plant. The project will be completed by the end of 2022.

Technology has improved so that modern turbines and generator units generate significantly more power from the same amount of water. The average energy production volume is estimated to increase by more than 8% from the current annual volume of 180 GWh to around 195 GWh. This is roughly equivalent to the amount of electricity used by 800 electrically heated single-family houses in a year.

In addition to improved efficiency, modern hydropower technologies are also better for the environment. Hydropower plants respond to the increasing need for renewable energy. Hydropower is the only renewable energy source used to balance the variations in demand for electricity that is easy to adjust and store.

Hydropower offers a more sustainable option as a source of balancing power as companies abandon coal-fired condensing power plants. Hydropower plant production can be started, adjusted and stopped quickly and used to balance production and consumption. Hydropower is also a cost-effective way to produce electricity. The plants have a long service life with low operating costs.

UPM RAFLATAC

LABELLING A SMARTER FUTURE BEYOND FOSSILS

We strengthened our position as a key player in the labelling industry and are well positioned to seize new opportunities in the growing global label markets.

UPM Raflatac creates unique value with its product range. Our technical expertise covers all relevant end-use industries, whilst our deep know-how of the packaging value chain and our global commercial reach further strengthen our competitive advantage.

As one of the UPM growth businesses, UPM Raflatac has proven its execution capabilities and ability to operate resiliently in the recently volatile market environment. Our long-term efforts to improve competitiveness and commercial offering, combined with increased market demand, resulted in excellent performance in 2020.

The main drivers in the packaging value chain continued to be packaging unit growth in fast moving consumer goods like food, personal care and beverages, as well as e-commerce, niche segments like pharmaceuticals and the need for sustainable solutions. The COVID-19 pandemic increased demand for food and logistics packaging. The long-term demand outlook remains solid.

Our strategic cornerstones—a wider product portfolio, improved customer reach and winning operations—are more relevant today than ever, and we made strong progress in all these areas.

Reach and resilience

Despite the volatile demand, we were able to serve essential industries globally, even during lockdowns.

We continued developing our commercial excellence by introducing new ways to reach customers like virtual selling as well as internal and digital sales. The MyRAFLATAC customer portal launched in 2019 continues expanding to new markets.

More sustainable packaging

UPM Raflatac aims to be the first label material company going beyond fossils. In 2020, we were taking major steps to reach this target whilst supporting customers' and brand owners' goals to reduce, recycle and renew packaging materials.

UPM Raflatac PP PCR was the first polypropylene label film manufactured from post-consumer recycled (PCR) plastic on the market (on a mass balance basis). The product was developed in collaboration with SABIC, a global leader in diversified chemicals. UPM Raflatac Forest Film™ label material made from renewable sources was recognised with multiple awards around the world.

We are scaling up our linerless production capacity and investing in a new production line in Nowa Wies, Poland. The investment strengthens our position in the fast-growing linerless labelstock market driven by sustainability and the need for increased efficiency.

RafCycle partnerships continued to increase and our recycling service now has 180 partners globally and has expanded in Asia-Pacific and North America. At the end of 2020, we announced that we are one of the key collaborators in a new global industry-wide consortium, CELAB, to boost the development of a circular business model in the self-adhesive label industry.

We also partnered with UPM Specialty Papers' UPM LinerLoop™ recycling concept to strengthen the labelling value chain offering of recycled content and closed-loop products.

Improving efficiency

We have a relentless drive to improve effectiveness and productivity in everything we do. The three-year programme Step Change in Productivity has progressed as planned. This programme aims to increase our effective capacity without increases in the capital expenditure or operating costs, thus improving our competitiveness.

To secure our future performance and ability to invest and develop for the future, we further improved effectiveness and cost-efficiency. These measures included changes in the global and regional operating models and restructuring actions or downsizing at some of our operating sites globally.

By actively collaborating with our partners and other UPM businesses, we will continue shaping the packaging material value chain.

> www.upmraflatac.com

We respond to the accelerating needs for sustainable labelling solutions.

OUR DIRECTION
- Profitable organic growth, potentially complemented by acquisitions
- Expanding customer reach through commercial excellence
- Widening product portfolio, especially in high value-added and sustainable products and solutions
- Innovating in productivity

OUR STRENGTHS
- End-use-focused product offering
- Sustainability and product safety leadership
- Global delivery network and efficient supply chain
- Global scale in R&D and technical expertise
- Modern, strategically located production assets

KEY FIGURES	2020	2019
Sales, EURm	**1,560**	1,555
Comparable EBIT, EURm	**214**	126
Capital employed (average), EURm	**542**	579
Comparable ROCE, %	**39.5**	21.8
Personnel on 31 Dec.	**3,087**	3,181

Comparable EBIT increased, due to improved mix and margin management. Delivery volumes were higher and fixed costs were lower. Global demand growth for self-adhesive label materials was good in consumer goods and e-commerce-driven labelling.

CASE

FULLY TRACEABLE SUPPLY CHAIN

Bringing customers and brand owners closer to their sustainability goals, certain UPM Raflatac products and multiple production sites have achieved certification for a fully traceable supply chain.

Our factories in Tampere, Finland; Nowa Wies, Poland; Mills River in the US and Changshu, China; along with nine distribution terminals worldwide, have been presented with the International Sustainability and Carbon Certification Scheme ISCC PLUS sustainability certification.

As a globally recognised high-quality certification scheme for biobased and circular plastic, ISCC PLUS provides us with external proof that value chains for both our renewable and recycled raw materials are fully traceable and companies meet environmental and social standards. This strengthens our leadership in the field.

When introducing new renewable and recycled raw materials to the market, it is important that we understand the feedstock and have an assurance mechanism in place for responsible sourcing. The ISCC PLUS certification is based on a mass balance approach, meaning that we use biobased and recycled alternatives to replace an equivalent amount of virgin fossil resources in the production process. UPM Raflatac's products, including the wood-based Forest Film material and the first ever polypropylene label material with recycled content, have already previously been certified according to the ISCC PLUS Scheme.

UPM SPECIALTY PAPERS

SPECIAL BY NATURE

We are co-creating a future beyond fossils with renewable and recyclable label, packaging and fine papers.

Our fibre-based release liner base papers offer renewable alternatives to fossil-based liners. With regards to flexible packaging papers, we continue to grow in selected end-uses with our recyclable papers made from renewable materials. For copy and fine papers, we have continued to build our presence in the Asia-Pacific region by leveraging our strong track record in sustainability, an example being our unique fully recyclable fibre-based copy paper wrap, which can replace plastic coated wrappers.

In 2020, demand for label, release and packaging papers was strong. The COVID-19 pandemic caused an increase in consumable goods and e-commerce. In the Asia-Pacific region, fine paper demand decreased in the first half of the year but improved in the second half. The "new normal" encouraged us to develop new digital ways of engaging with customers.

We managed to successfully run our operations, without interruption, amid the pandemic, while ensuring the health and safety of our employees. As the pandemic spread to other parts of the world, our UPM Changshu mill in China served as an example, offering insights into best practices for other UPM mills and locations.

Investments for future growth

The conversion of paper machine 2 at the UPM Nordland mill in Germany, from fine paper to speciality grades, was finalised in 2019. In 2020, we continued to ramp-up the production and commercialisation of the new capacity. At the UPM Changshu mill in China, we have successfully commercialised our recent supercalendar investment, increasing our capacity of specialty grades for Asian markets.

In 2020, we extended our offering of flexible packaging papers and continued co-creation for more demanding end-uses.

To guarantee our competitiveness and to enable future growth, we have continued to focus on efficiency and cost-competitiveness, most notably on the strict control of fixed costs and streamlining of our cost structure.

Leader in sustainability

We support our customers in their goals for more sustainable packaging and food safety. Today, all our mills have ISO 22000 Food Safety Management system. The paper machine 3 at the UPM Changshu mill is also certified according to FSSC 22000 Food Safety Management System. To further promote sustainable and safe packaging, we have joined CEPI's 4evergreen alliance to boost the contribution of fibre-based packaging in a circular and sustainable economy.

We introduced UPM LinerLoop™ in 2018, which is a unique concept for recycling release liners. Collected release liners are desiliconed and used to produce new high-performance release liner base papers. We continue to grow this offering by utilising our recently updated production platform.

In 2020, we also joined CELAB-Europe, to further promote the development of a circular business model in the self-adhesive label industry. The target is to ensure that 75% of the used liner and matrix materials in Europe are recycled by 2025.

In China, our competitive edge continued to strengthen thanks to sustainability and our further improved environmental performance. We were recognised for the second time as a "Water Efficiency Front-runner", which is the highest recognition issued by the Chinese government on water resource management. We were also named as a national "Green Factory" by the Ministry of Industry and Information Technology in China. With this recognition, we serve as a benchmark in efficient land-use, production cleanliness, waste utilisation and low carbon energy.

Furthermore, our operations in China were recognised for our HR practices. It motivates us to continuously maintain and improve the wellbeing of our employees.

› Responsible product lifecycle on page 82
› www.upmspecialtypapers.com

OUR DIRECTION

- A global leader in labelling materials
- The preferred partner for fine paper in the Asia-Pacific region
- Growth in selected flexible packaging applications

OUR STRENGTHS

- Sustainable alternatives to fossil-based materials
- A strong expertise in technically demanding papers
- Recognised by customers as a reliable partner
- The ability to serve customers globally

KEY FIGURES	2020	2019
Sales, EURm	**1,324**	1,412
Comparable EBIT, EURm	**199**	120
Capital employed (average), EURm	**897**	904
Comparable ROCE, %	**22.2**	13.3
Personnel on 31 Dec.	**1,932**	1,992

Comparable EBIT increased mainly due to lower input costs. Delivery volumes increased. Sales prices were lower. The demand growth for label, release and packaging papers was strong and driven by consumable goods and e-commerce. Demand for fine paper in the Asia-Pacific region decreased in the first half of the year but improved in the second half.

CASE

CO-CREATING PACKAGING SOLUTIONS

The packaging industry is experiencing an unprecedented change: there is a strong push from consumers and regulators for more sustainable solutions. Brand owners also aim to increase the share of recyclable and fibre-based packaging. To achieve these targets, utilisation of the entire packaging value network is a huge opportunity for everyone involved.

Co-creation by the packaging industry is a prerequisite for helping brand owners increase their use of renewable packaging materials.

The best way to develop new alternatives to fossil-based materials is by combining our unique strengths to pilot new alternatives.

We are working on many projects with members of the value chain from converters and packaging line manufacturers to chemical suppliers. We have tested our new barrier paper UPM Asendo™ and received very encouraging feedback on its barrier properties from converters.

Experimenting with potential new end-uses for existing paper solutions is also an important form of co-creation. UPM Solide™ Lucent provides a unique combination of strength and good printability. We are working with the network to test how its barrier properties can be used in demanding end-uses, such as food products that have a shelf-life of several months.

UPM COMMUNICATION PAPERS

RESILIENT AND COMMITTED

Our strategic focus is on safeguarding long term competitiveness. We evolve our business through targeted innovation, uncompromising performance and a strong commitment to reliability, quality and sustainability.

As the world's leading producer of graphic papers, we are committed to the paper business and serving our customers. We offer an extensive product range for advertising and publishing, as well as for home and office use.

While the graphic paper market has been declining at a steady pace over the past years, in 2020, the COVID-19 pandemic and related lockdown measures caused an unexpected and severe temporary disruption to demand.

Thanks to our deep-rooted safety culture, we effectively protected the health and safety of our employees. We managed to run our operations uninterrupted at every mill, throughout the supply chain, and have continuously served our customers across all markets. At the same time, we took measures to ensure an overall positive commercial performance during the challenging year.

Today, the global market for graphic papers exceeds 70 million tonnes, with approximately 20 million tonnes in Europe alone. Even when in decline, these markets continue to offer profitable business and good cash flow for mills with a competitive cost position. We have seized this opportunity, by building on our proven long-term track record of cost discipline, reliable profits and strong cash flow. Our cumulative free cash flow from 2016-2020 was EUR 2.0 billion.

Achieving sustainable performance

Continued long-term decline in graphic paper demand, combined with the weakened economic outlook, requires prompt actions to ensure long term performance. We continue to deliver according to our strategy and we are committed to maintaining competitive operations under any circumstance. This means adapting capacity to profitable customer demand and continuously increasing our operational efficiency.

As a consequence, the UPM Chapelle newsprint mill in France was permanently closed in July. The UPM Kaipola mill producing newsprint and coated mechanical paper in Finland was permanently closed in January 2021. We also announced a plan for the sale of the UPM Shotton paper mill in Wales for conversion purposes and the streamlining of our global business function teams. At the same time we took action and adapted our business functions to the changing requirements of the market.

Mitigating climate change

Future success requires decisive actions to mitigate climate change. In addition to serving our customers with circular and sustainable products, we have taken tangible actions to reduce our environmental footprint. We are committed to reducing our CO_2 emissions by 65%, by 2030 (page 16).

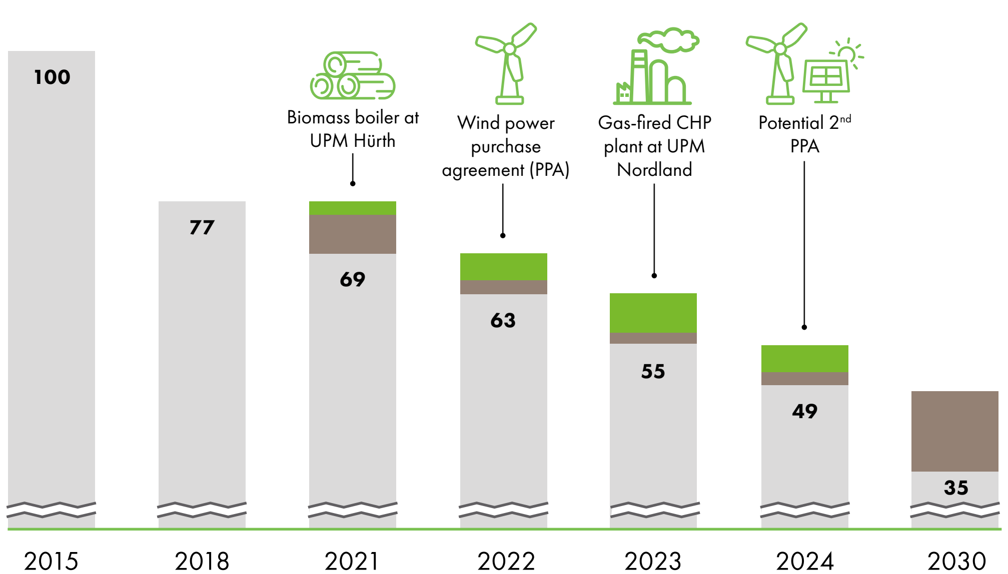
Strengthening commercial focus

In 2020, we also responded to the changing needs of paper markets by strengthening our offering of graphic paper. At the UPM Kymi paper mill in Finland, we have invested in a fourth sheeting line to strengthen our position in graphic paper sheets. We have also expanded our product portfolio to cover newsprint paper at the UPM Jämsänkoski mill in Finland, to be able to serve customers reliably in Finland and the Nordics.

Applying digital technologies is relevant for future success. At our customer interface we have built new digital channels to strengthen commercial focus. To ensure high quality regarding planning and delivery, we have increased the effectiveness of our planning, supply and delivery processes.

> Responsible product lifecycle on page 82
> www.upmpaper.com

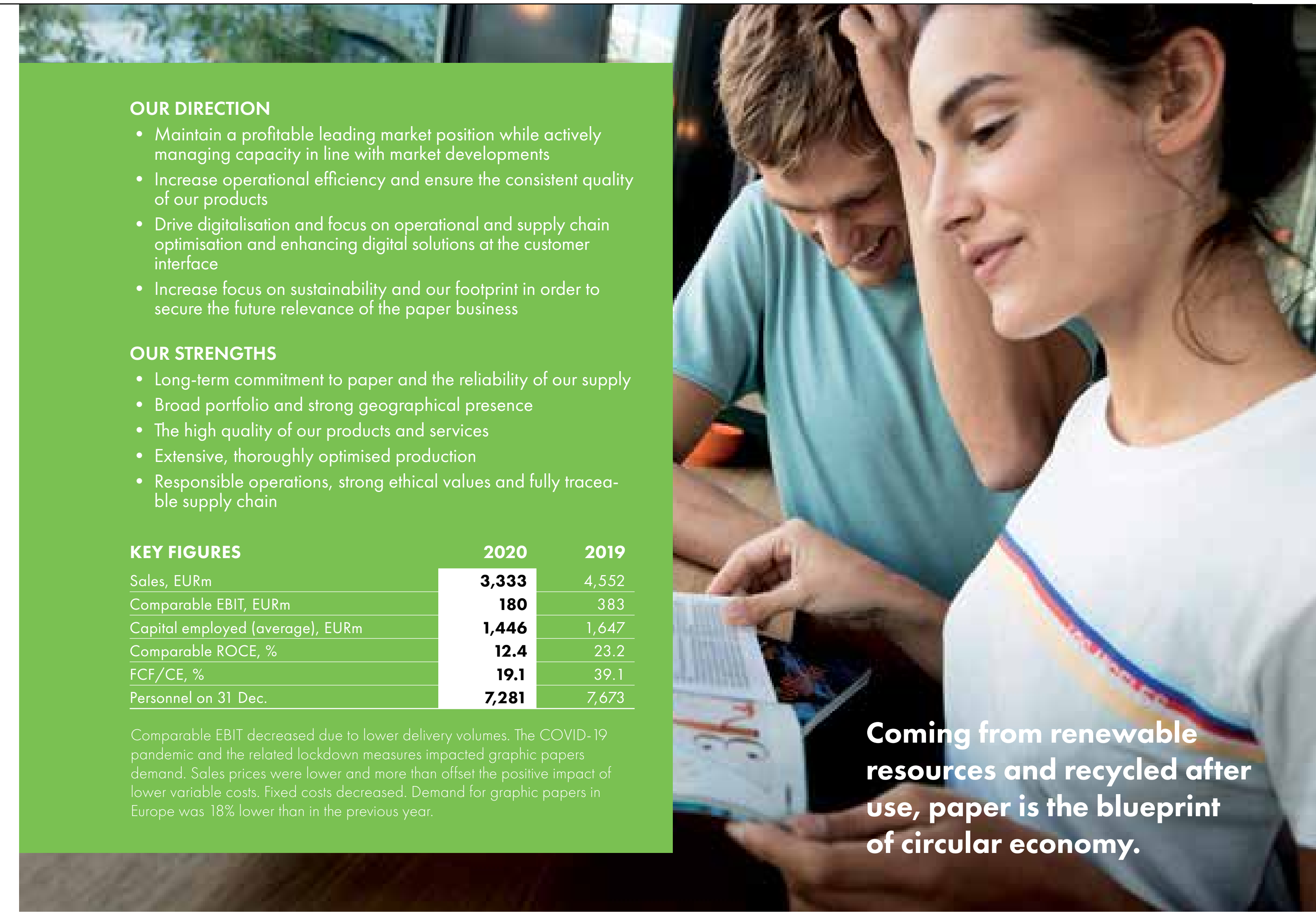
PLANNED CO_2 REDUCTION MEASURES, fossil CO_2 emissions, index 100% in 2015



UPM Communication Papers has committed to a clear CO_2 reduction path and will reduce its fossil CO_2 emissions (Scope 1 an 2) by 65% by 2030

Reductions from climate projects

Reductions from annual efficiency gains, technology and grid mix improvements



OUR DIRECTION

- Maintain a profitable leading market position while actively managing capacity in line with market developments
- Increase operational efficiency and ensure the consistent quality of our products
- Drive digitalisation and focus on operational and supply chain optimisation and enhancing digital solutions at the customer interface
- Increase focus on sustainability and our footprint in order to secure the future relevance of the paper business

OUR STRENGTHS

- Long-term commitment to paper and the reliability of our supply
- Broad portfolio and strong geographical presence
- The high quality of our products and services
- Extensive, thoroughly optimised production
- Responsible operations, strong ethical values and fully traceable supply chain

KEY FIGURES	2020	2019
Sales, EURm	3,333	4,552
Comparable EBIT, EURm	180	383
Capital employed (average), EURm	1,446	1,647
Comparable ROCE, %	12.4	23.2
FCF/CE, %	19.1	39.1
Personnel on 31 Dec.	7,281	7,673

Comparable EBIT decreased due to lower delivery volumes. The COVID-19 pandemic and the related lockdown measures impacted graphic papers demand. Sales prices were lower and more than offset the positive impact of lower variable costs. Fixed costs decreased. Demand for graphic papers in Europe was 18% lower than in the previous year.

UPM PLYWOOD

TUNED FOR CUSTOMER SUCCESS

By taking advantage of the best characteristics of birch and spruce raw material we can offer hard-wearing and sustainable solutions to the construction and transport industries.

Plywood is an unparalleled material when it comes to climate positivity. With a lower carbon footprint, it can replace many substances that are made from non-renewable raw materials, such as aluminium, concrete and steel. WISA® plywood can be used in a sustainable and innovative way, both in building and construction, thanks to its structural strength, durability and environmental certifications. For vehicle flooring, plywood's competitive advantage is its excellent weight-to-strength ratio, which has a positive impact on fuel consumption. LNG carrier markets represent an interesting end-use sector for plywood used in insulation elements.

In 2020, the market for spruce plywood was good. For birch plywood, demand was modest in industrial applications due to the COVID-19 pandemic, and the market was highly competitive. However, the long term demand outlook for birch plywood remained healthy.

We continued to operate under the highly exceptional circumstances in 2020. In the first quarter of the year, our operations and supply reliability were impacted by the strike in Finland. From the second quarter onwards, the COVID-19 pandemic caused significant uncertainty, and a rapid response and resilience to pandemic-related changes in the business environment was required. We took proactive measures to secure the safety of our employees and we were able to serve our customers and run our operations without interruption.

Strengthening competitiveness and performance

We finished the expansion of the UPM Chudovo plywood mill in Russia in 2019. The optimisation of the investment continued successfully in 2020 and the mill's annual production capacity is increasing towards 155,000 cubic metres. The investment has improved our competitiveness and the mill's environmental performance substantially. UPM Chudovo, which celebrated its 30th anniversary in 2020, has been the pioneer of the modern plywood industry in Russia and continues to set the benchmark for the local plywood industry.

In 2020, we took further action to secure long-term competitiveness and performance. The UPM Jyväskylä plywood mill, producing spruce and birch plywood in Finland, was permanently closed. Despite investments, as well as savings and improvement activities, the profitability of the mill was not sustainable.

Responsibility at the core of our customer promise

Responsibility is a solid part of what we do. Our "Responsibility Made Easy" promise has six focus areas: responsibility as a business partner, responsibly produced wood material, responsibility for society and environmental performance, responsibility towards our customers through products and services and innovations for building a more sustainable and fossil-free future.

Customer needs are driving the development of our operations and offerings. Our products are long-lasting, carbon-storing and made from responsibly sourced wood. In 2020, we increased the availability of FSC®-certified birch plywood in German markets, for example.

New innovative plywood solutions continue to strengthen our offering. We launched a new water repellent WISA-SpruceWR plywood that enables efficient and effortless construction, even in changing weather and humidity conditions. (Read more on the left).

An example of our efforts to promote circular economy is our collaboration with the Finnish agriculture sector. We have developed a new organic soil conditioner that can be used to improve the growth conditions of arable land. This soil conditioner is made from bark waste, which is a side stream of our plywood production.

› Responsible product lifecycle on page 82
› www.wisaplywood.com

Our products are long-lasting, carbon-storing and made from responsibly sourced wood.

OUR DIRECTION
- Profitable growth through superior customer experience and operational excellence
- A strengthened market position through increasing value and service offerings

OUR STRENGTHS
- End-use, market and customer insight
- Leading reliability of supply, with consistent high quality
- Leading supplier in demanding end-use segments
- Strongest brand on the market: WISA®

KEY FIGURES	2020	2019
Sales, EURm	405	450
Comparable EBIT, EURm	33	36
Capital employed (average), EURm	292	329
Comparable ROCE, %	11.2	11.0
Personnel on 31 Dec.	2,301	2,467

Comparable EBIT decreased slightly mainly due to lower delivery volumes and sales prices. Fixed costs were significantly lower. Market demand for plywood in Europe slowed down in 2020. Demand for spruce plywood was good and birch plywood-related industrial applications were modest.

CASE

INNOVATIONS IN RESPONSIBLE WOOD CONSTRUCTION

Specially treated plywood products developed by UPM Plywood increase the diversity of wood as a construction material. The starting point for the innovative speciality products is always to bring benefits to the end user – for example by making construction work more efficient.

The latest addition to the product family is water repellent plywood, which makes builder's work easier and quicker. The plywood is treated with a protective wood-based surface treatment, which slows down the penetration of moisture into the structure and lets the panel breathe and dry freely. No extra time is spent on covering materials at the worksite in changing weather and humidity conditions.

The product is made of sustainably grown and sourced wood, and the wood-based surface treatment material does not contain any harmful chemicals. The water-repellent surface also helps to prevent moisture-related structural or health problems, because less moisture ends up in the structure.

The WISA-Spruce wood construction product family includes also fire-retardant plywood and a biocide treated product resistant to wood decaying fungi. Another speciality product is a plywood that is used in roof structures, for example, to withstand snow loads.

Each speciality product supports a certain area in the wood construction process: the design stage and material selection, operations at the worksite and the securing of a long-lasting building and safe living conditions. All responsibly manufactured, durable and safe WISA plywood products are supported by Environmental Product Declaration documents.

UPM BIOCHEMICALS

THE NEW ERA OF BIOCHEMICALS

The investment in industrial-scale biorefinery and wood-based biochemicals is a major milestone in our strategic transformation and the nucleus for an entirely new and high-value growth business.

In January 2020, UPM made the decision to invest EUR 550 million in a biochemical refinery in Leuna, Germany. The investment will open completely new markets for us, with large growth potential for the future.

The new-to-the-world biorefinery will produce a range of 100% wood-based biochemicals, which will enable a switch from fossil raw materials to sustainable alternatives in various consumer-driven end-uses such as textiles, plastics, PET bottles, packaging and variety of rubber applications.

The total annual capacity of the biorefinery will be 220,000 tonnes. The main products will be bio-monoethylene glycol (BioMEG) and lignin-based renewable functional fillers. The biorefinery will also produce bio-monopropylene glycol (BioMPG) and industrial sugars.

In 2020, detailed engineering, procurement and permitting processes of the project were proceeding at full speed. The construction activities for the biorefinery began in October with the official ground-breaking ceremony. The biorefinery is scheduled to start production by the end of 2022.

Strong market for replacing fossil-based chemicals
UPM's biochemicals respond to customers' increasing needs for renewable alternatives. Strong demand-led growth is expected globally as biochemicals are intended mainly to replace chemicals made from fossil raw materials.

The products can be used to replace oil, gas or coal-based materials. Customers don't need to make changes in their existing value chains as UPM's biochemicals perform consistently in existing production processes and recycling infrastructure. Moreover, they will significantly reduce the CO_2 footprint of the end-use products.

The renewable biochemicals have a huge number of potential industrial and consumer applications. Our go-to market strategy focuses on building the right partnerships with the sustainability conscious companies.

Glycols can be converted into various everyday consumer goods.

Lignin replaces fossil raw materials in plastics.

Renewable functional fillers are used in rubber applications.

Good cost and sustainability position
A combination of sustainable wood supply, a unique technology concept and the proximity to customers will ensure the competitiveness of our operations. InfraLeuna GmbH, a company at the heart of European chemical industry, offers very competitive conditions for constructing the biorefinery with its existing permitting processes, logistics arrangements and infrastructure for various services and utilities. The safety and sustainability of the value chain are based on our high standards. Raw materials and key services for the biorefinery will be sourced from a region that enables local value creation and enhances sustainability. Once the biorefinery is fully running and has been optimised, it is expected to achieve the ROCE target of 14%.

In 2020, we joined the Renewable Carbon Initiative (RCI), which promotes the goal of making chemicals more sustainable, more climate-smart and part of the circular economy in the future. Our investment was awarded as "The Bio Act of the Year 2020" by the World BioEconomy Forum. This recognition substantiates the fact that bioproducts boosting the circular economy are truly seen as fundamental in the fight against climate change.

› Spearheads for growth on page 30
› www.upmbiochemicals.com

OUR DIRECTION
- Enter the wood-based biochemicals market
- Opening new markets commercially

OUR STRENGTHS
- Competitive high-quality solutions for replacing fossil-based ingredients in various industries and solutions
- Unique technology concept based on our product development concept
- Climate-neutral feedstock

CASE

LOCALLY SOURCED, CERTIFIED FEEDSTOCK

All the wood used in the new biorefinery is 100% certified and regionally sourced. Utilising thinnings and industrial beechwood that is currently incinerated, along with side streams from sawmills, the facility contributes significantly to advancing the circular economy.

The Leuna plant will use hardwood trees native to Germany, where the share of mixed forests has increased, as they are more resilient to the effects of climate change and help to maintain biodiversity. The new business will now be able to find use cases for hardwood, where industrial applications have so far been limited.

The biorefinery will start out by using beechwood, and once the production is running stable, the aim is to look into utilising also other hardwood species. Increasing the industrial use of hardwood supports the future goals of climate adaptive forest management. The catchment area for raw material for the biorefinery will be as close to the Leuna site as possible.

All feedstock entering the factory will be certified according to either the FSC® or PEFC standards. Our dedicated wood sourcing organisation will work with a broad range of forest owners, from major state-owned organisations in Saxony-Anhalt and Bavaria to private forest organisations and small owners.

Regional sourcing of raw materials and other services for the biorefinery will enable local value creation and ensure compliance with high social and environmental standards. In addition, a railway connection to the mill will further help to lower the total CO_2 emissions of operations.

UPM BIOMEDICALS

EXPANDING PRODUCT PORTFOLIO

UPM is strengthening its role and patent portfolio in the biomedicals sector with a special focus on personalised medicine.

UPM Biomedicals develops and supplies innovative and sustainable wood-based biomedical products for a variety of uses. The main ingredient of our products is high-quality nanocellulose, extracted from birch.

In the long term, we are aiming for personalised medicine, where treatments are developed from patient's own cells. Our gels can be used in manufacturing and in treatments. The key enabling factor is the fact that our gels are animal-free and therefore also do not introduce animal DNA to the patients. Meanwhile, we sell our products to two application areas: clinical and life science.

In the clinical field, FibDex® wound dressing took the significant step of being introduced to market, when a medical device distributor Steripolar Oy started to sell the product to Finnish healthcare professionals and hospitals.

Based on clinical investigation results, FibDex was granted the CE mark in 2019, allowing the marketing and sale of the wound dressing in the EU. Work towards registration with the US Food and Drug Administration (FDA) is ongoing.

In life science, our main products are GrowDex®, a range of hydrogels for 3D cell culturing and GrowDase®, an enzyme to release the cells from the gel. The main application is in pharma (on the left). The nanocellulose ensures excellent compatibility even with the most demanding cells, such as stem cells and patient-derived cells. In addition to the existing GrowDex product family on the market, we launched GrowInk™, new biocompatible ready-to-use hydrogels for 3D bioprinting of cells in 2020.

We work with global partners to develop new biomedical products and applications. In 2020, we joined a new cancer immunotherapy focused research and innovation project, Cancer IO. The project will have a significant impact on clinical cancer research, healthcare systems, business and, most importantly, on the lives of cancer patients. The collaboration integrates immuno-oncology (IO) activities with universities, university hospitals, cancer patient organisations and major pharmaceutical companies.

› Innovating for the future on page 32
› www.upmbiomedicals.com

CASE

SUPPORTING THE GROWTH OF PHARMA

Drug development is challenging, with only 10% of candidate drugs actually making it to the shelf. Time to market is often around 10 to 20 years with very high risk of failure throughout all development stages. High throughput screening is a way to prove drug candidates automatically on cell models and decide, which drugs are moving to the more expensive clinical stages. UPM's GrowDex and GrowDase have been successfully used in HTS to develop new cancer treatments. The gel makes the results interpretation unequivocal thanks to the reproducibility of the gel composition.

UPM BIOCOMPOSITES

NEW BIOCOMPOSITES PRODUCTS LAUNCHED

UPM Biocomposites is the frontrunner in circular bioeconomy. Over 50% of the raw materials originates from recycled and renewable sources.

UPM Biocomposites offers innovative and sustainable composite materials for various uses in outdoor construction and consumer products. The materials are based on UPM's own research and development.

UPM ProFi biocomposite utilises the cellulose fibres and plastic polymers generated as manufacturing surplus from self-adhesive label material production and from label customers' label waste. The label waste is collected from UPM Raflatac's 150 customers and partners from several European countries. Our target is to further increase the use of recycled materials in products. For example, UPM ProFi Piazza decking contains 75% recycled materials, which also includes post-consumer recycled plastics.

In 2020, our focus was on developing internal efficiency and digitalisation, as well as data-based forecasting models. The launch of UPM ProFi Piazza was a commercial success. We also joined the EU Circular Plastics Alliance to boost the use of recycled plastics in consumer goods and, in our case, in UPM ProFi products.

UPM Formi composite material, made from wood-based fibres and polymers, is suitable for different types of industrial and consumer products such as furniture and home appliances. The material has a 30–60% lower carbon footprint than fossil-based materials. It complies with the requirements set by the EU for reinforced plastics in relation to the circular economy.

The new UPM Formi EcoAce product range is based almost entirely on renewable resources. It contains certified wood or cellulose fibres as well as bioplastics made of wood-based feedstock from UPM Biofuels' production. Production is ISCC PLUS certified, which guarantees that the product meets environmental and social standards along the supply chain.

Development of the UPM Formi 3D biocomposite continued in 2020. The focus was on developing technology around large-scale industrial 3D printing.

› www.upmprofi.com, www.upmformi.com

CASE

A NEW MATERIAL FOR REPLACING FOSSIL-BASED PLASTICS

Consumers can now make responsible choices in their everyday life with the launch of the MySoda sparkling water maker. MySoda is a good example of customer cooperation in the development of the new product. Designed by Arni Aromaa from Pentagon Design and manufactured by a Finnish company MySoda, the end result is a sustainable consumer product with an appealing unique design and lower carbon footprint. New MySoda sparkling water makers are being sold in several European countries.

One of our most recent innovations for replacing fossil-based raw materials is used in MySoda. UPM Formi EcoAce, a biocomposite is made using certified renewable fibres and polymers derived from UPM BioVerno naphtha.

ACTIONS FOR FUTURE GROWTH

During 2020, our focus was clear: ensure the safety of our employees and contractors and ensure the performance of the company while implementing our strategic growth projects. This work will continue in 2021.

BUSINESS AREA	STRATEGIC TARGETS	ACTIONS 2020	ACTIONS PLANNED FOR 2021 *)
Group and all businesses	Continuous improvement of financial, social and environmental performance Maintain strong balance sheet and capability for future opportunities Develop an "Aiming higher" culture for business success Compliance with laws and regulation Mitigate risks and capture opportunities	Continuous improvement programmes Commitment to UN 1.5 degree pledge Actions to secure business continuity amid COVID-19 Actions to improve cost competitiveness in businesses and functions EUR 750 million Green Bond issued and Green Finance Framework prepared Strengthen engaging safety culture and global health concept Renewal of UPM Report Misconduct channel Implementation of the revised UPM Supplier and Third-Party Code Continue diversity and inclusion work	Continuous improvement programmes Disciplined and effective capital allocation Study on climate-related substitution and storage effects of products Continue diversity and inclusion work Strengthen engaging safety culture and global health concept Continue diversity and inclusion work
UPM Biorefining	To grow as a trusted and responsible pulp supplier Provide sustainable, advanced biofuels and biomaterials Enhance profitability through efficient wood supply, integrated full-production and focused commercial strategy	Construction of the pulp mill in Paso de los Toros and in Montevideo port advanced Construction of a third nursery in Central Uruguay begins Achieved fossil-free sawn timber production Continued evaluation of growth opportunities and new sustainable feedstocks in biofuels	Construction of the pulp mill site in Paso de los Toros and in Montevideo port continues Evaluation of growth opportunities and new sustainable feedstocks in biofuels continues, basic engineering phase of a potential biorefinery
UPM Energy	Profitable growth in zero-carbon electricity generation Solutions for industrial energy excellence Embrace the decarbonisation of society	Continued developing the service offering to industrial-scale electricity consumers Continued refurbishing the Kuusankoski hydropower plant Continued commissioning tests of OL3 Sold UPM's share in Kainuun Voima Restoration efforts of migratory fish stocks	Refurbishment of the Kuusankoski hydropower plant continues Commissioning of OL3
UPM Raflatac	Profitable organic growth, potentially complemented by acquisitions Expand customer reach through commercial excellence Widen product portfolio for value-added and sustainable products Innovating in productivity	Captured growth opportunities and developed product portfolio and commercial excellence Continued to develop new concepts in sustainability and circular economy Three-year productivity programme progressed as planned	Capture growth opportunities and develop product portfolio and service offering Continue to develop new concepts Continue three-year productivity programme
UPM Specialty Papers	Global leader in labelling materials The preferred fine paper supplier in Asia-Pacific Growth in selected flexible packaging applications	Growth in selected applications Ramp-up and commercialisation of new capacity in China and Germany Continued strengthening our brands and customer excellence Continued to innovate alternatives for fossil-based materials and more demanding end-uses Continuous improvement of environmental performance	Growth in selected applications Further increase output of new capacity Continue to innovate alternatives for fossil-based materials
UPM Communication Papers	Maintain a profitable leading market position whilst actively managing capacity in line with market developments Increase operational efficiency and ensure the consistent quality of our portfolio Drive digitalisation by focusing on operational and supply chain optimisation and enhancing digital solutions at the customer interface Increase focus on sustainability and our carbon footprint	Closed a total of 960,000 tonnes of graphic paper capacity in France and Finland Plan to sell the UPM Shotton mill in the UK Increased effectiveness of supply chain Strengthened customer interface by building new digital channels Continued to reduce environmental impact Long-term wind power purchase agreement in Germany	Continue cost efficiency improvement Capture opportunities in additional end-uses and segments Further explore digitalisation opportunities, focusing on customer interface Continue to reduce the environmental impact
UPM Plywood	Profitable growth through superior customer experience and operational excellence A strengthened market position through increasing value and service offerings	Continued ramp-up of growth investment at the UPM Chudovo mill in Russia Closed UPM Jyväskylä plywood mill In Finland Differentiation from competition with "Responsibility made easy" promise Increased the availability of FSC® certified birch plywood Further enhanced effective raw material usage and agile supply chain capabilities	Operational excellence Further enhance effective raw material usage and agile supply chain capabilities
UPM Forest	Sustainably secure competitive wood supply Ensure sustainable land use and forestry by increasing biodiversity and carbon sinks	Development of strategic forest assets Study availability and quality of competitive wood for UPM's growth projects Development of indicators and monitoring methods of biodiversity Development of forest carbon calculations Actions to improve cost competitiveness	Ensure availability and quality of competitive wood for UPM's mills and growth projects Enhance activity in private wood trade Further development of digital platform Increase broad-leaved trees in Finnish forests
UPM Biochemicals	Enter the wood-based biochemicals market Opening new markets commercially	Investment in a biochemical refinery producing 100% wood-based biochemicals in Leuna, Germany	Construction of biorefinery at Leuna, Germany Commercial preparations for entering into market
UPM Biomedicals	Further commercialisation of GrowDex® products, launch of new products, marketing digitalisation	Launched new biomedical product family: GrowInk™ for 3D bioprinting Signed first distribution agreement for FibDex® wound dressing and delivered first orders	Strategy development towards regenerative medicine and scale-up of business Launch of OEM product range
UPM Biocomposites	Focused business growth	Streamlining of UPM ProFi businesss Launched new Piazza product family Commercialising of bio-based UPM Formi EcoAce	Strengthen UPM ProFi market position Upgrade product portfolio Multiply commercial success of UPM Formi

*) Not a complete list

OUR RESPONSIBLE WAY OF OPERATING

CREATING VALUE WITH PEOPLE

RESPONSIBILITY THROUGHOUT THE VALUE CHAIN

ACTIONS FOR ENVIRONMENT

SUMMARY OF OUR SOCIETAL AND ENVIRONMENTAL IMPACTS

SHOPPING FROM THE MARKET

Due to the shift in our eating habits and evolving lifestyles, the demand for packaged foods is growing rapidly, especially in Asia. The market is expected to grow at an annual rate of 6.5% to nearly USD 5 trillion in 2027. For consumers, easy-to-use, efficiency, flexibility and sustainability are becoming a priority. The plastic challenge and carbon footprint would be decreased if packaging materials were efficiently recycled and more renewable materials were used.

Source: Fortune Business Insights

ACTIVE STAKEHOLDER ENGAGEMENT

Understanding the views and expectations of our stakeholders plays a crucial role in the success of our company and the acceptability of our operations. Active and open dialogue with our stakeholders provides valuable input for our development efforts.

The impact of UPM's operations extends from the local level to wider society. We aim to provide a fact-based, balanced view of the economic, environmental and social aspects of our business activities.

Continuous dialogue with stakeholders

Our goal is to provide our stakeholders with a clear picture of what our future course is, how we implement our Biofore strategy and how we create long-term value for our stakeholders. We disclose relevant and accurate information in accordance with market regulations. In 2020, we arranged a Capital Markets Day, participated in industry conferences and met widely with international investors. As many of our stakeholders view UPM primarily as an economic operator, financial success, stability, good governance, future outlook and growth were key themes discussed.

Stakeholder mapping, active dialogue and the systematic gathering of feedback play an essential role in our stakeholder-relations work. We analyse the feedback carefully to understand the expectations of our stakeholders. Then, we take these expectations into consideration during our development work and decision-making. We received 350 enquiries or concerns from general public in 2020.

Every year, we conduct a materiality analysis that highlights the most important responsibility issues for us and our stakeholders. The analysis is based on several surveys, customer enquiries and feedback from an open web-based tool.

Green recovery high on the policy agenda

Through public affairs work, we aim to foster the necessary prerequisites for our operations, particularly in Finland, Uruguay, Germany and China. Active influencing at the EU-level is also important. We co-operate with a number of trade associations, the most important being the Finnish Forest Industries Federation (FFIF) and the Confederation of European Paper Industries (CEPI). As we enter new businesses, we also need to find new ways and forums for cooperation. For example, UPM is a founding member of Leaders of Sustainable Biofuels (LSB) in the EU and also a new member in the European Chemical Industry Council (CEFIC).

For decision-makers and politicians, 2020 was challenging because of the COVID-19 pandemic and the resulting lockdowns. Despite the need to prioritise measures related to the global pandemic, there was significant progress in several policy fields with impacts for UPM. We were active in discussions on the Finnish operating environment and the focus areas of the government. We emphasised competitiveness, predictability, innovations and climate change solutions (read more on page 68).

Climate change mitigation and our commitment to the UN's 1.5-degree agenda garnered a lot of interest among our stakeholders (page 16). Discussions were carried out with environmental organisations, certification bodies, authorities and decision-makers. The climate impact of forests is linked to policies on land use, land-use change and forestry (LULUCF). We have highlighted the importance of sustainable forest management and manufacturing products from renewable raw materials that replace fossils as effective ways to mitigate climate change.

The EU Commission launched a comprehensive Green Deal initiative, which includes a proposal for more ambitious climate and environment policies. The Green Deal includes a variety of new legislative proposals that will be rolled out over the next few years.

We actively promote the cost-competitive and consistent implementation of climate change policies. The EU Emission Trading Scheme's third trading period ended in 2020, and we have been engaged in the EU preparations for the new trading period starting in 2021. While the mechanism is still limited to covering only activities within the EU, so-called "carbon leakage" measures must be put in place to ensure both efficiency in mitigating emissions and the competitiveness of industrial players in global competition.

Decarbonising traffic through renewable energy and biofuels policies continued. For us, it is very important to get recognition for advanced and residue-based biofuels with high GHG reduction.


Laura Remes, General Manager of UPM Tervasaari handing over face masks to be used at services for the elderly.

World-class commitment to corporate responsibility

In November, UPM was listed as the forest and paper industry leader in the Dow Jones European and World Sustainability Indices for 2020–2021. In September, the UN recognised UPM as the only forest industry representative and also the only Finnish company among the 41 LEAD participants. UPM continued active participation in the UN Global Compact initiatives. UPM also chaired the Global Compact Finland Network, bringing together all Finnish companies and organisations committed to the Global Compact.

We continued our cooperation with different stakeholders on responsibility issues on a voluntary basis, addressing themes such as ecolabels, fish migration and nature conservation. We became an international stakeholder member of PEFC (the Programme for the Endorsement of Forest Certification), reflecting our aim to promote sustainable forest management globally. As a member of both PEFC and FSC® (Forest Stewardship Council), we engaged in active dialogue on updates to forest management standards in both schemes. We also continued our cooperation with WWF Finland and Birdlife Finland. Responsibility issues were also raised in customer enquiries, with product safety, forest certification and the origin of wood as key themes. Globally, we continued active cooperation with local

CASE

LOCAL SUPPORT IN GLOBAL CRISIS

The rocketing demand for face masks due to the COVID-19 pandemic resulted in a shortage over spring and summer this year. We decided to help the communities where we operate and acquired half a million masks to be given out to local operators. Each site could choose the recipient of the support.

Altogether 35 sites in nine countries gave out face masks to 65 recipients. Masks were given to hospitals, health centres, schools and homes for the elderly. Masks were also delivered to day-care centres, services for the disabled and other social care operators.

We also gave 40,000 face masks Finnish universities to be used in classes. We wanted to support students and to enable them to continue with face-to-face learning in these exceptional circumstances.

Purchasing the masks was an apt decision for the Biofore Share and Care programme, as its overall aim is to support local communities and their vitality.

A good example of voluntary work was the expertise support, which our Sourcing function offered pro bono to National Emergency Supply Agency in Finland to help them acquire face masks from China. We identified the mask suppliers, audited them, organised a tender and negotiated terms of delivery. The Agency themselves then signed the purchase agreements with the suppliers.

SIGNIFICANCE

- Stakeholder engagement provides predictability and a competitive advantage
- Continuous dialogue improves understanding of key risks, challenges and opportunities in the operating environment

TARGETS

- We aim to understand stakeholders' needs for information and expectations for UPM, and to consider them in strategic development and decision-making processes

OUR WAY

- We engage in active dialogue with our stakeholders to discuss our operations and targets
- The UPM Code of Conduct sets the standards for responsible behaviour and collaboration
- Stakeholder engagement is measured by several indicators
- Stakeholder relations are co-ordinated globally at Group level, while businesses are responsible for continuous dialogue with customers and business partners, as well as the local communities

CASE

SOCIETAL ROLE REQUIRES GOOD DIALOGUE

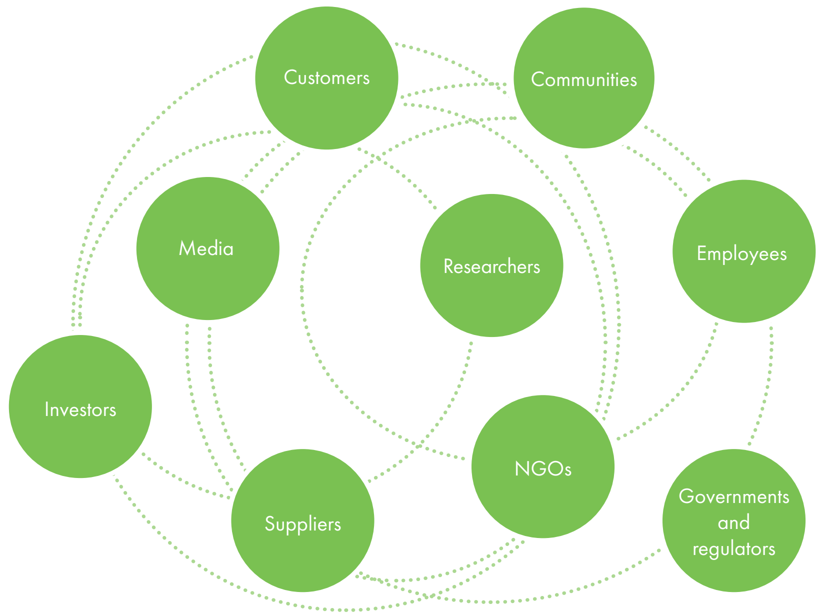
We play a significant societal role in many countries, and our operations impact economy, employment and environment. Therefore, it is important to continuously engage in dialogue with our stakeholders and discuss about our plans and hear thoughts and concerns.

In 2020, we announced several measures to ensure our competitiveness. The rationale for the decisions and the concern for the development of the business environment were brought up in many discussion forums and through the media in Finland. Our aim is to draw attention to the external factors affecting companies' investments and the opportunities to develop a long-term industrial policy.

We have engaged in continuous dialogue with our stakeholders about topics such as competitiveness, taxation, regulations and labour market issues. Other important forums for discussion include local forest industry trade associations. Whether it be Finland, Uruguay, Germany or the UK, we want to be part of societal discussion as part of our corporate responsibility.

OUR MOST IMPORTANT STAKEHOLDERS

Our Biofore strategy forms the foundation of our stakeholder dialogue. The key focus areas and activities vary locally and according to stakeholder needs.



permit authorities. In 2020, we collaborated with different parties to integrate our responsibility targets into the company's long-term financing and published a new Green Finance Framework, rated with the highest-grade, CICERO Dark Green.

Emphasis on local communities and impacts

Our mills in Europe, China and Uruguay can be among the biggest employers and taxpayers in the locations where they operate. In Uruguay, we have been building a second pulp mill since 2019. Stakeholder engagement around the project has been active (page 45). All in all, we aim for engagement and open dialogue with local communities. For example, our Kymi and Kaukas mills have their own forums for local dialogue. We co-operate with local schools and education networks, organising virtual events, for example. In addition, it is crucial for us to have active dialogue with local forest owners, neighbours of harvesting sites and other individuals involved in forest management.

Our EMAS (EU Eco-Management and Audit Scheme) statements cover societal impacts in addition to environmental performance, providing more detailed information on the local impacts of our pulp and paper mills. The EMAS statements also include information on co-operation with local stakeholders, such as sponsorship of local organisations or co-operation with educational institutions. These mill-specific statements complement UPM's corporate responsibility reporting. They are compiled annually and published on the UPM website.

Biofore Share and Care programme continues

UPM's Biofore Share and Care programme demonstrates our dedication to responsibility through sponsorships, donations and employee voluntary work. We share our resources with causes that respect sustainable development and work in line with our purpose and values. In 2020, we directed support to our focus areas: reading and learning, responsible water initiatives, bio-innovations and community engagement. UPM does not financially support political parties or individual candidates.

The rules for sponsorships, donations and employee volunteering were also updated in 2020.

Employee volunteering emphasises local commitment and impact. UPM's employees can spend up to eight hours per year on local volunteering work during their working hours. In 2020, volunteering took also virtual forms. For example, UPMers participated in several reading and learning projects in different countries. In addition, UPM spent approximately EUR 1.3 million (1.2 million) on local sponsorships and other contributions aiming to support the vitality of UPM's production locations. The figure includes support for the Uruguayan UPM Foundation which continued with a contribution of USD 465,000 (USD 400,000). The foundation supports and encourages training, entrepreneurship, employment, healthy living and entertainment in local communities in the Uruguayan countryside. EUR 499,500 (474,000) was donated to charities or other non-profit causes such as the Children and Youth Foundation, Finnish Forest Association, China Green Foundation, Baltic Sea Action Group and the education initiative Polku of the University of Jyväskylä.

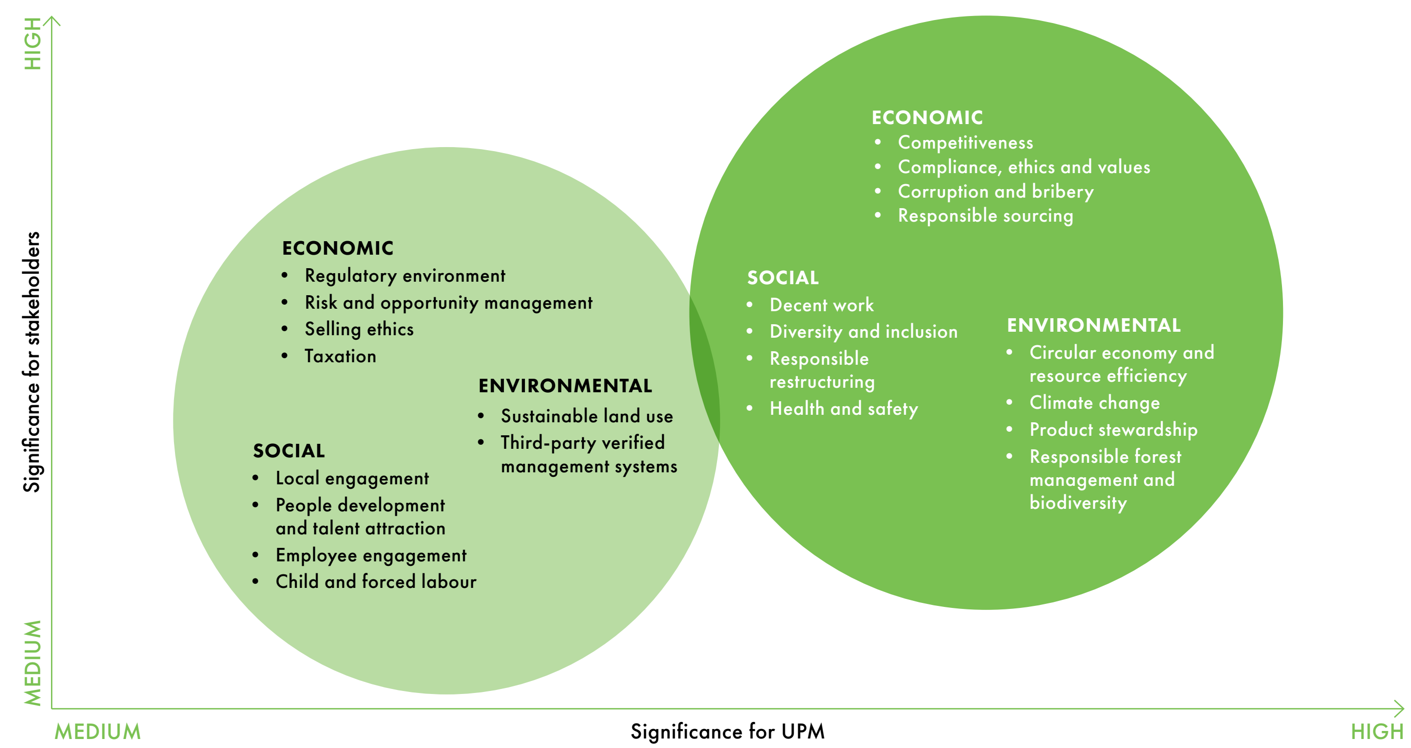
UPM'S MATERIALITY ANALYSIS 2020

The materiality analysis of UPM's responsibility issues covers topics that directly or indirectly influence the ability to create, maintain or acquire economic, environmental or social value for UPM, its stakeholders and society.

Analysis is carried out annually, based on a follow-up of the interests and concerns of various stakeholder groups, including communities, employees, NGOs, customers, suppliers, government and regulators, investors, researchers and media.

All customer questions and stakeholder concerns received during the year are taken into consideration. We also conduct specific stakeholder surveys regularly. A web-based tool enables stakeholders to answer anonymously. The surveys can also be targeted to specific stakeholder groups and topics. The most recent survey was carried out in 2019.

Results of the survey are gathered and analysed by an independent third party and used to support UPM's wider evaluation. Most material economic, environmental and social responsibility topics identified in the analysis are presented below. UPM's responsibility focus areas and targets (pages 22–23) reflect these material aspects. We do not distinguish between topics within the section and consider them all equally material.



ENABLING PEOPLE GROWTH

Our people and their capabilities, integrity and drive set UPM apart and drive our success. Our culture of Aiming Higher encourages all UPMers to develop, as individuals and as a company. Our values—Trust and be trusted, Achieve together and Renew with courage—guide us along the way.

SIGNIFICANCE

- The capabilities, integrity and drive of our people make us unique

TARGETS

- Aim higher in performance
- Lead with passion
- Embrace the limitless opportunities
- Raise the bar in our safety performance

OUR WAY

- Lead according to UPM values and with integrity
- Develop an inclusive and diverse work environment
- Engage employees to journey beyond fossils and active dialogue
- Enable performance with agile goal-setting and feedback
- Invest in the growth of our people and develop new capabilities
- Provide a safe and healthy working environment and foster the wellbeing of employees and contractors

Building a culture of Aiming Higher is essential to our success in today's rapidly changing world. While it sets our tone, our values remain the foundation of who we are. We are accountable and performance driven. In the future, we want to focus more on innovation, cooperation across boundaries and becoming more outward-looking and agile.

Our aim is to increase employee motivation to drive performance. We also want to better differentiate and reward high performance. Our Enabling Performance approach encompasses frequent and forward-looking manager-employee discussions, agile goal setting and regular feedback from relevant stakeholders. The results have been good and according to the annual UPM Employee Engagement Survey (EES), all these aspects have improved from the previous year.

Engaging employees

We are committed to active employee participation and consultation, organised in accordance with international and national rules and regulations. We offer various forums to facilitate continuous dialogue between employees and business management, and there are new communication tools and channels that ease and enhance dialogue within and across teams.

Our co-operative body, the UPM European Forum, focuses on issues related to our business environment and changes within the company. The forum organises regular meetings for employee representatives from business units in Europe. There are also co-operative bodies in UPM countries, which operate in accordance with country-specific rules, regulations and UPM practices. The aim is to promote employee participation and dialogue: dialogue between the business areas and country management, and between employee representatives and employees on a national level.

We continuously measure our progress, and the results illustrate successful development in engaging our people. The annual UPM Employee Engagement Survey (EES) invites all employees across the company to evaluate distinct aspects of their working environment every year. The high participation rate of 83% (84%) indicates that UPMers are keen to improve their workplace. The survey shows that employee engagement has improved from 55% in 2010 to 71% in 2020.

Full time **97%**	Part time **3%**
Women **22%**	Men **78%**
Permanent **91%**	Fixed term **9%**
Shop-floor **59%**	Salaried **41%**

Encouraging learning

In a changing and increasingly complex business environment, enhancing employees' capabilities and wellbeing is important for both business success and sustained employability. Our long-term goal is to ensure high performance and continuous professional development. We are determined to be a responsible and attractive employer now and in the future.

We invest in the growth of our people and expect development from individuals. All employees are encouraged to create an individual development plan and keep it up to date. In 2020, 63% of employees had development plans.

UPM applies the 70-20-10 learning and development framework: 70% of the learning takes place on the job, 20% comes from sharing with and learning from colleagues, and 10% comes from off-the-job training.

Digitalisation is enriching our ways and sources of learning. As the global pandemic has changed our ways of working, we have introduced new e-learning content and programmes. These materials provide support to leaders in managing their teams remotely and encourage individuals to strengthen their self-leadership skills and resilience. Launched in 2017, our learning platform enables employees to share digital learning content flexibly. Additional e-learning content is offered to develop commercial and financial skills, compliance, safety and leadership, for example.

Developing employee experience and enabling renewal

Our apprenticeship programmes are ways to ensure the required level of expertise for future employees. The programmes are typically targeted at shop-floor positions in production or maintenance. We carry out the programmes with regional vocational schools. In Finland and Germany, approximately 100 people join the programmes annually. Most of the graduate apprentices have continued to work at UPM.

Being the employer of choice has become crucial when recruiting new employees and especially younger professionals. We have organised several successful graduate programmes in recent years. We have extended our employer brand to new areas with growth initiatives.

Developing UPM employee experience is an integral aspect in developing UPM as a workplace. We use a design-thinking approach and enable employees to contribute to projects. We created a smooth and engaging onboarding experience for people joining UPM and fixed targets for UPM career experience in 2020.

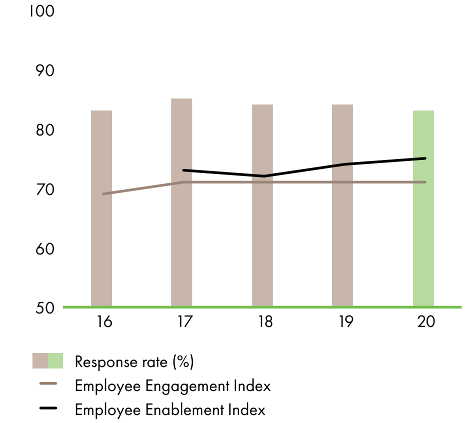
Following our systematic employer branding work, our position among students and professionals was recognised by external parties in Finland and China.

Leading by example

Achieving our ambitious targets requires the committed input of skilled people and teams, empowered by inspiring leaders.

We continuously invest in developing leadership capabilities and management teams. Our development programmes support the three cornerstones of leadership at UPM: leading oneself, leading people and

Employee engagement and enablement index

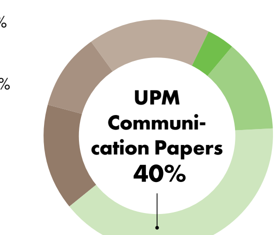


2030 TARGETS Engagement and enablement favourable responses above external high-performing norm

71% achieved for engagement index. 2 pp below external high-performing norm.

75% achieved for enablement index. 2 pp above external high-performing norm.

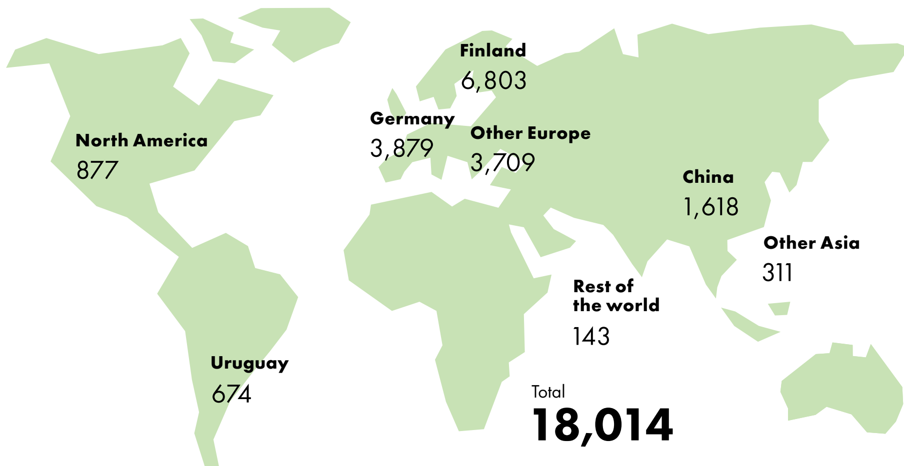
UPM's personnel by business area 2020



2030 TARGETS 95% favourable responses in the Diversity and inclusion index

71% favourable in Employee Engagement Survey 2020

OUR EMPLOYEES BY REGION



leading business. Dealing with complexity, improving coaching capabilities and promoting inspiring leadership have been the key areas of development in recent years. This year, additions to these areas include strengthening resilience and self-leadership.

In 2020, leadership development focused on front-line and middle managers, as they lead most of our employees. We continued to foster a growth mindset and improve the skills needed to enable performance, such as conversation and feedback skills. By the end of 2020, approximately one third of UPM managers had completed the programme on achieving quality conversation skills and improved feedback.

To support teams and individuals in this changing world, we also renewed our approach to change. The aim is to facilitate human-centred change in everyday life and in different projects. The train the trainer model was established to train change experts.

Developing a diverse and inclusive work environment

We value diversity and strive for an inclusive culture. We respect the privacy of our employees and promote equal opportunities and objectivity in employment and career development. In addition to building a culture of Aiming Higher, we are committed to developing local conditions that ensure an inclusive and diverse working environment.

To further develop inclusive leadership and culture, we started a dialogue with management teams in 2019, and this work continued in 2020. Nearly 1,200 people participated in the dialogue by the end of 2020.

We regularly review our diversity status. Our management teams regularly conduct self-assessments that include diversity and inclusion. We welcome the talent of people with different competencies, backgrounds and experiences, as well as genders, ages and nationalities. This contributes to a richness of views, thereby improving decision-making and business success. Inclusive behaviours are integrated into UPM leadership development programmes and emphasised in UPM Code of Conduct training.

Rewarding and recognising high performance

UPM rewards and recognises high performance. Our approach to total rewarding and recognition consists of both tangible and intangible components. Tangible remuneration and recognition consists of base salary, benefits and incentives, which are determined by UPM's global rules, local legislation, general agreements, local market practices, the level of the position and individual performance. Gender, age, ethnic origin and nationality play no role in determining salaries and wages.

Intangible remuneration and recognition consists of, for instance, a safe and healthy working environment, interesting and meaningful work and good leadership and career opportunities. UPM has designed its reward policy to increase employee commitment to and motivation for high performance.

Each employee belongs to a unified annual Short-Term Incentive (STI) scheme. The STI scheme covers group and business-level targets, personal and team performance targets and individual performance evaluation, to differentiate and reward high performance.

The annual incentives paid in 2020 for the 2019 STI plan were EUR 51 million and the estimated amount of annual incentives for the 2020 STI plan is EUR 56 million. We recognise significant individual or team success with a separate Achievement Award system. It is designed to support UPM's high-performance culture and recognise individuals and teams for outstanding contribution, significant achievements and exceptional performance.

In addition to the Short-Term Incentive scheme, UPM provides two long-term incentive plans: Performance Share Plan (PSP) for senior executives and Deferred Bonus Plan (DBP) for other key employees. Launched annually, the plans cover approximately 400 employees.

Restructuring to ensure cost competitiveness

The uncertainty in UPM's market environment continued in 2020. The weakened economic outlook led to restructuring.

UPM closed two paper mills and a plywood mill during the year. UPM also streamlined activities in several businesses and global functions.

The closures, reorganising and streamlining of businesses and functions decreased the number of personnel by 1,312 in total.

To alleviate the effects caused by employee reductions related to the closing of the Finnish mills, we re-launched our "From Job to Job" programme. Implemented in cooperation with the local authorities and partners, the programme includes active measures that promote employment and retraining. We implemented several voluntary measures in addition to our statutory obligations, including training, a business start-up allowance or support for temporary housing.

UPM PERSONNEL IN FIGURES	2020	2019	2018
Turnover, %	10.4	9.2	8.9
Turnover, % (voluntary)	3.5	4.0	4.1
Average age of personnel	44.6	44.3	44.0
People development			
Average training hours/employee	7	12	12
OHS figures, UPM workforce			
Lost-time accident frequency	2.8	2.9	2.7
Total recordable injury frequency	5.3	7.1	6.9
Absenteeism, % 1)	3.9	4.0	3.9
Number of occupational diseases 1)	1	6	6
OHS figures, contractors			
Lost-time accident frequency	4.7	4.2	3.3
Total recordable injury frequency	7.7	6.2	5.8

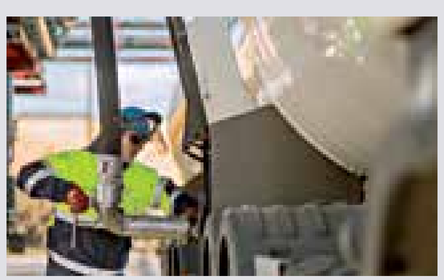
1) Reflects own employees

CASE

A SURVEY FOUND OUT THE WORKING CONDITIONS OF TRUCK DRIVERS

We asked truck drivers about their working conditions at the UPM Schongau paper mill in Germany. The voluntary survey was available in nine languages and was presented to all truck drivers arriving at the site over the course of a single day.

The aim of the survey was to paint a concrete picture of the drivers' routine work process. About two-thirds of drivers responded to the survey. Of those, 65% said they are either satisfied or very satisfied with their working conditions, and three



quarters of respondents said they maintain a working week of under 49 hours.

Working hours aren't really a concern for drivers, as the regulations regarding working hours are followed and monitored scrupulously. The most pressing concerns turned out to be road safety, long waiting times in loading and delivery and the crowdedness of lay-bys or motorway parking areas.

It is important that the workers in our logistics chain are content and do their work in good and safe conditions. With the survey, we can hear about it from the workers themselves. Similar surveys will be conducted when the COVID-19 situation improves.

CASE

PROMOTING LIVING WAGE THROUGH COLLABORATION

Salaries and wages are considered as one of the most important aspects of decent work, and the concept of a living wage underpins several SDGs. Today, living wage as a concept is not yet universally defined and the approach for its calculation varies.

However, the concept is based on the general notion that work should provide an employee with a decent standard of living, according to local standards. Elements that are commonly accounted for a living wage are food, water, housing, education, health care, transportation, clothing and other essential needs, such as provision for unexpected events.

We are part of the UN Global Compact working group for promoting living wage within companies. By participating, we can build on capabilities and enhance collaboration between companies and other stakeholders in promoting the concept and facilitating consistency in implementation. Ensuring decent working conditions, fair employment and fair compensation for all employees is also an integral part of our work dedicated to developing our social responsibility. Our commitment to fair compensation is also stated in our Code of Conduct and further specified in our respective policies and rules on compensation and benefits.

In 2019, we initiated an internal global process to review the salaries and wages of all employees against local living wage benchmarks in all 46 countries in which we operate. The analysis shows that all our employees' salaries and wages are considered to be above the local threshold. This work and analysis will continue to ensure that we have identified the best available benchmarks and to develop the assessment further.

STRENGTHENING SAFETY CULTURE

Our proactive safety culture is based on our values, the UPM Code of Conduct and UPM Safety Rules.

In 2020, our safety performance was good despite the global pandemic. Our safety results improved significantly from the previous year thanks to our efforts towards continuous improvement and long-term safety work.

In 2020, UPM's lost-time accident frequency (LTAF: the number of lost-time work accidents per one million hours of work) was 2.8 (2.9). The total recordable injury frequency (TRIF) was 5.3 (7.1). The TRIF includes LTA cases, as well as cases of modified duties and accidents requiring medical treatment. The frequency of accidents involving UPM's contractors was 4.7 (LTAF) and 7.7 (TRIF) in 2020.

Our commitment to safety is strong and we aim to have zero accidents. We recognise exemplary safety performance with company-wide safety awards. UPM Kaukas pulp mill in Finland received the UPM Safety Award for continuous improvement in 2020.

Our safety work is based on long-term planning, effective safety communications and leadership. Safety is integrated in all our new and ongoing projects, and proactive safety is well-integrated in project plans and site practices. For us, good quality means thorough investigation and effective risk management, and this has played an important role in making our operations safe. We have utilised cross-learning to improve safety in our units: Sharing safety observations and best practice on safety have allowed us to learn from each other and improve safety in our units.

We worked with the ISO 45001 Occupational Health and Safety certification and implemented it using UPM-wide change management process. The improved safety audits were conducted remotely as a result of the pandemic.

In 2020, we continued to offer various e-learning content to our employees. Training topics include safety induction, lifesaving standards, auditing and traffic safety, and more. Visitors and contractors need to take safety training when visiting any UPM unit for the first time. A new e-learning course in 2020 covered also the new coronavirus and how to prevent the spread of the virus.

In 2020, a total of

47,000

safety-related near-miss and safety observation reports

31,000

safety walks and discussions

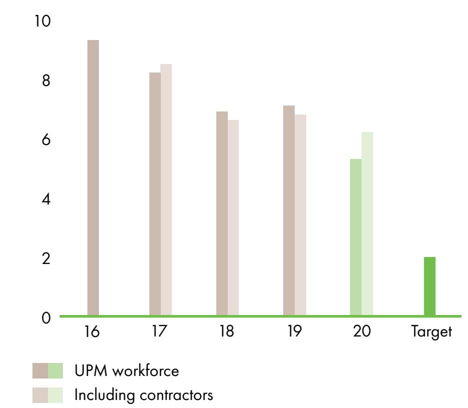
Persistent prevention during the pandemic

During these exceptional times we have had a strong focus on combatting coronavirus. Our actions to ensure business continuity are based on long-term, continuous risk assessments. We have addressed both local and global co-ordination, and our company-wide coronavirus response team has developed global guidelines to be implemented in our businesses and sites.

Rapid actions and preventive measures have helped us to guarantee a safe working environment for our employees.

We have supported our employees' wellbeing with a variety of health and safety measures globally, including support and tools for remote working. We have distributed face masks for our employees to use whenever, and we offer in-house COVID-19 testing and voluntary screening.

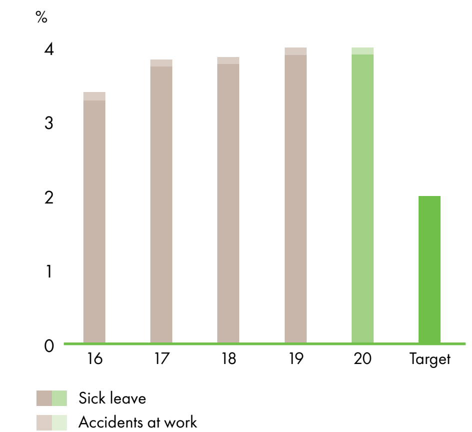
Total recordable injury frequency (TRIF)



2030 TARGETS TRIF below 2 for UPM workforce and contractors (continuous)

6.2 achieved for "Total injuries per one million hours worked"

Absenteeism rate



2030 TARGETS Absenteeism rate below 2 for UPM employees

3.9 achieved for "% absence hours from theoretical working time"

CASE

FROM THE IDENTIFICATION OF RISKS TO PRACTICAL MEASURES

Fast response and enabling safety culture have helped us continue operations during the coronavirus pandemic. Our experience in risk management, continuous safety work and experience in sharing best practices effectively turned into practical measures.

Our key principle has been to ensure our employees stay healthy. In addition, we have made every effort to ensure safe working environment and the continuity of our business.

Our global safety network was implementing measures at all our sites in line with instructions from local authorities. The corona response teams focused on giving safety instructions to our personnel. In addition to UPM-wide guidelines, responsibility was also given to UPM sites locally.

UPM conducted local risk assessments and drafted business continuity plans. Each unit applied the guidelines to best meet their needs. Practical safety measures have included the use of protective equipment, increased cleaning and various special arrangements to avoid the close contact of people. In production, we have divided people into teams, so that the same employees work the same shifts and are transported to sites together.

COMPLIANCE UNDERPINS PERFORMANCE

Regardless of the location, circumstances or people involved, we are committed to complying with applicable laws and regulations, as well as our Code of Conduct. Our Code of Conduct and our values help us make the right choices and guide our work in a changing business environment. This lays the foundations for long-term success.

We strive to ensure compliance with our values and commitments by implementing a company-wide compliance programme through our compliance system.

The compliance system is embedded in our governance model and is designed to bolster company performance and a culture of integrity at all levels. We follow how this culture is developing with the help of the Integrity Index, which is an average calculated on the basis of favourable responses to integrity-related questions in our annual Employee Engagement Survey (EES). These questions are:

1. I understand the UPM Code of Conduct and ethical standards.
2. If I had to report unethical behaviour or misconduct, I am confident that it would be handled effectively by UPM.
3. UPM operates in an ethical manner and in accordance with the UPM Code of Conduct.

Our integrity index figure in 2020 was 87% (86%).

Our compliance system places emphasis primarily on preventive actions, which are drawn from the annual risk management cycle and risk assessments conducted for all businesses and operations. Our compliance system and actions within this system are demonstrated in the illustration below.

Risk assessment

With the support of our compliance team, each business area, function and unit is responsible for identifying, measuring and managing compliance risks related to its own operations. The results of annual risk assessments and discussions are used to guide compliance activities and mitigation actions. Risk assessments and mitigation actions are updated throughout the year so as to respond to changes in the risk environment. The progress of mitigation actions is reported to the Audit Committee of the Board of Directors and businesses on a quarterly basis.

Policies and procedures

Updating our Code of Conduct and certain other focal corporate policies, such as Supplier and Third-Party Code, Anti-Corruption Rules and Confidentiality Rules in 2019, meant that 2020 was a year of renewed training and communication.

Training and communication

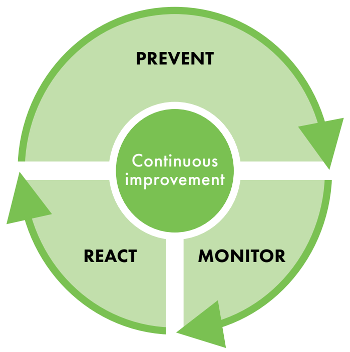
To complement the Code of Conduct e-learning launched in 2019, in 2020 we launched renewed Anti-Corruption, Confidentiality and Competition law e-learning and made some updates to our Insider policy e-learning. We also introduced a completely new Supplier and Third-Party Code e-learning for our employees.

UPM COMPLIANCE SYSTEM

Company performance

Corporate reputation, financial performance, operational excellence

Risk assessment
Policies and procedures
Preventive controls



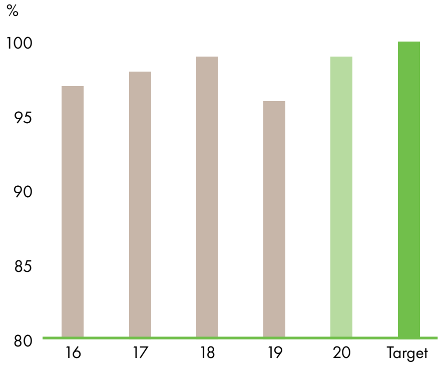
Communication
Training
Proactive advice

Investigation and resolution
Remediation

Auditing, monitoring and surveys
Notification/ reporting channels

Culture of integrity

Code of Conduct training



2030 TARGETS

100% coverage of participation in UPM Code of Conduct training (continuous)

99%

of active employees completed the UPM Code of Conduct training since September 2019

SIGNIFICANCE

- Compliance is an integral part of responsibility, which is one of our strategic focus areas
- Compliance helps us to create sustainable business in the long term
- Compliance is an important asset in our decision making, management and operations

TARGETS

- Compliant operations and behaviour
- Engaging work environment where employees feel safe to voice their concerns
- Responsible value creation

OUR WAY

- We are all responsible for building a culture of integrity, with everything we do and every choice we make
- We do not compromise our standards of integrity under any circumstances
- Accountability for compliance extends down from the Board of Directors and senior management to all employees

Our e-learning modules are available on the same HR platform and easily accessible for our employees. This platform allows us to manage our training effectively through automated reminders and escalation processes, and we can also easily produce training reports. During the year, the completion of mandatory compliance e-learnings was set as a prerequisite for short-term incentive payments. This new criterion will be applied for the first time in incentive payments for 2020 in spring 2021. Available compliance e-learning with the completion rates at year end are listed in the table on the next page.

The e-learning modules are complemented via face-to-face compliance training with specific target groups, who are determined based on risk assessments. The compliance training sessions are supported by active communication. Given that our employees' awareness of what is expected from them is a prerequisite for compliance, we continue to allocate further resources to this.

Monitoring

Our group company risk matrix, which is based on country risk and complexity and the extent of our operations in each country, forms the basis for monitoring activities aimed at ensuring compliance at all levels of the organisation. Our compliance team has a three-year monitoring plan for its compliance reviews that is based on this matrix. The reviews to be performed each year are agreed with the businesses during the annual risk assessment process and co-ordinated with the Internal Audit department. The compliance review findings and recommendations are reported to the Audit Committee of the Board of Directors and businesses. These recommendations are then carried out in collaboration with said businesses.

In 2020, the compliance team conducted compliance reviews in 20 local units in South America, Asia and Europe. Due to COVID-19 most reviews were conducted remotely.

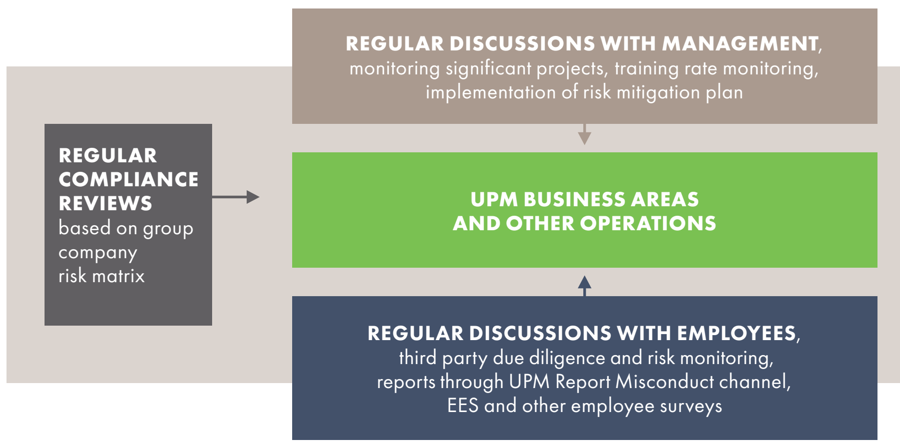
Another example of our compliance team's monitoring activity is the counterparty screening procedures demonstrated in the illustration on the right. The purpose of the activity is to manage compliance risks relating to our numerous business partners in different countries and continents. We want to know who we are trading with and to source even more responsibly. We also want to be able to manage uncertainties relating to trade sanctions more effectively.

Voicing concerns

It is an important part of our culture of integrity that employees feel comfortable voicing any concerns they have and that they can trust UPM to take the appropriate action. If we are worried about anything, we must speak up and take action.

In 2020, we updated our Report Misconduct channel (read more on the right). We do not tolerate retaliation against any person who, in good faith, reports suspected misconduct or participates in an investigation to resolve suspected misconduct.

COMPLIANCE MONITORING



COUNTERPARTY SCREENING PROCEDURES

- Business partner screening against public sources
  - Business integrity (trade sanctions, anti-corruption, anti-money laundering, competition law, fraud)
  - Human rights
  - Environment
- Supply chain risk assessments

PREVENT	MONITOR	REACT
• Supplier qualification • Supplier and Third-Party Code • Specific requirements • Enhanced due diligence on selected business partners • Onboarding and contracting process	• Supplier audits and corrective action plans • Supplier assessments	• Incident analysis and investigation • Blocking procedure • Contract termination

The table on the right summarises the number of cases recorded in our misconduct case management system in 2020 and provides examples of cases handled. Five cases led to disciplinary action, including warnings and terminations of employment.

REPORTED CASES UNDER REPORT MISCONDUCT CHANNEL		
UPM Code of Conduct section	**2020**	**2019**
Our commitment on integrity	1	1
Our people and operations		
Respect people and human rights	4	20
Taking care of the environmental impact and product safety	1	2
Business integrity		
Zero-tolerance for corruption and bribery	3	3
Avoid conflicts of interest	7	1
Compliance with competition laws	2	1
Protect assets and information	3	2
Our stakeholders		
Know with whom you trade	2	1
Total	**23**	**31**

COMPLIANCE TRAINING FOR SPECIFIC TARGET GROUPS IN 2020	COMPLETION RATES AS OF 31 DECEMBER 2020	SIZE OF TARGET GROUP
Code of Conduct e-learning	99	18,000
Personal data protection e-learning	100	7,130
Anti-Corruption e-learning	97	7,130
Competition law e-learning	97	3,200
Confidentiality e-learning	96	7,130
Insider Policy e-learning	95	110

OUR MAIN PRINCIPLES UNDER THE UPM CODE OF CONDUCT

- **We are** committed to integrity
- **We respect** people and human rights
- **We take care** of our environmental impact and product safety
- **We have** zero-tolerance for corruption and bribery
- **We avoid** conflicts of interest
- **We comply** with competition law
- **We protect** our assets and information
- **We know** with whom we trade
- **We engage** with our stakeholders and society
- **We voice** our concerns

CASE

NEW CHANNEL FOR VOICING CONCERNS

At UPM, everyone is responsible for maintaining our integrity and ethical standards. We want to promote a culture of raising concerns openly among colleagues and supervisors or reaching out to HR or other assurance functions. The reporting channel offers another way of voicing concerns. Also, if an employee suspects a breach has occurred, it is important not to assume that someone else has already reported it and promptly report any misconduct.

Our Report Misconduct channel was renewed in 2020. A new service is available globally on our website for both employees and all stakeholders. Operated by an independent external service

provider, the service is accessible in over 40 languages, 24/7.

All reports coming in through the channel are made available to the Head of Internal Audit and the Chief Compliance Officer at UPM. They will then, in most cases, assign responsibility for the next steps to the most appropriate person. The new service establishes efficient procedures for managing the reported cases inside UPM in a way that meets the requirements of the EU Whistleblower Protection Directive.

In previous years, the number of misconduct reports received has been at the level of around 30 cases annually. The number should likely be higher in a company of our size and is expected to rise with the introduction of the new channel. We welcome all input also from customers and partners on any suspicions of misconduct, as stakeholders play a crucial role in maintaining the UPM standards of integrity.

RESPONSIBLE SOURCING

Suppliers are an essential part of our value chain. Our continuous work with suppliers ensures the efficiency, transparency and responsibility of our supply chain.

We buy products, materials and services from over 21,000 B2B suppliers globally. Our sourcing network includes suppliers from start-up companies to international corporations. We also buy wood from some 16,000 private forest owners.

The main sourcing categories are fibre, chemicals, other raw materials, indirect purchases, logistics and energy. When selecting suppliers, our most important criteria include reliable long-term deliveries, product and service quality, financial stability of suppliers, social and environmental responsibility, and product safety.

Continuous development under exceptional circumstances

The aim of the cooperation between us and our suppliers is to ensure efficiency, compliance and systematic performance. A common goal is to guarantee that suppliers can provide responsibly produced, cost-competitive and innovative materials and services globally – in all market situations.

Due to COVID-19, we strongly focused on guaranteeing business continuity and the progress of our transformative growth projects in Uruguay and Germany in 2020. Thanks to the extensive safety precautions, both the raw materials and customer deliveries were secured and the growth projects were well on track with the planned start-up timeline.

Our solution to standardise and simplify sourcing processes was adopted in 2020. The new digital platform will improve process efficiency in demand planning, tendering, contracting and purchase transactions. To enhance transparency and suppliers' integration into our business processes, we plan to develop the platform further in the coming years.

Standards of integrity

We are committed to responsible sourcing practices in our Code of Conduct. All the minimum requirements for suppliers are defined in the UPM Supplier and Third-Party Code. In 2020, we launched the updated Supplier and Third-Party Code along with extensive internal e-learning.

We require suppliers to promote the same requirements in their own supply chains. In 2020, 84% (84%) of UPM's total spend was with suppliers who are committed to the UPM Supplier and Third-Party Code.

All contractors working at our production sites must comply with UPM's safety requirements. Various additional requirements, updated in 2020, are applied to wood, chemicals, pulp, packaging materials and logistics.

All our wood, pulp and recovered paper suppliers are continuously evaluated in regard to environmental issues, social responsibility and their involvement in the local community. These raw materials are either FSC® (N003385) and PEFC (PEFC/02-44-41) certified or comply with the FSC Controlled Wood standard or Due Diligence requirements for PEFC.

A prominent user of wood and recovered paper

We are both a major forest owner and a purchaser of wood. We source all wood assortments to ensure optimal utilisation of this valuable raw material. In 2020, we purchased 24.9 (27.5) million cubic metres of wood worldwide.

We are also one of the world's leading users of recovered paper for the production of graphic paper. In 2020, we used approximately 1.8 (2.3) million tonnes of recovered paper. Recycled fibre accounted 26% (28%) of all fibre raw materials used in UPM's paper production. The decrease is mainly due to the closure of one newsprint mill.

SIGNIFICANCE

- An effective supply chain guarantees our competitiveness and the availability of commodities required for production in all market situations

TARGETS

- We are a trustworthy and future-oriented partner
- We ensure the efficiency, transparency and responsibility of the supply chain
- We create business opportunities in the value chain in collaboration with our partners
- We engage in long-term co-operation with selected suppliers to optimise costs, quality, responsibility and innovation

OUR WAY

- Focus on long-term, co-operative relationships and promoting methods for responsible sourcing
- We set clear requirements and expectations for our suppliers
- Monitoring our suppliers' performance continuously and developing processes together with our key suppliers
- Responsible practices in the supply chain
- Focus on 2030 responsibility targets

The origin of wood is monitored

All the wood we use is legally logged and comes from sustainably managed forests. We don't use wood harvested from tropical rainforests or accept wood from plantations that have been established by converting natural forests. We don't accept wood from regions that do not respect the rights of indigenous peoples.

In addition to third-party certification, we also verify that the wood supplied to our mills is compliant with the EU Timber Regulation, the US Lacey Act and other regional requirements.

Continuous improvement with raw material suppliers

We buy approximately 1.6 million tonnes of pulp from external suppliers. We set further requirements to pulp suppliers for environmental performance, social responsibility, forestry, wood sourcing and reporting.

Collecting and analysing environmental- and social-responsibility-related data for our pulp and chemical suppliers is an integral part of our supplier risk and performance management. We create development plans together with the suppliers based on these analyses. We also monitor the performance of our other raw material suppliers through various surveys.

Know your supplier

We identify our supply chains with a high risk of potential negative environmental and social impacts. With the counterparty risk management tool, we can better evaluate counterparty-related risks through automated screening and support businesses in ethical and prudent decision-making. Effective third-party management plays an essential role in securing business continuity and compliance. In 2020, our focus was on assessing new suppliers critical to our growth projects.

The responsibility-related risks are determined by the country of origin, sourced material or service and complexity of supply chain. Based on the risk identification, we evaluate selected suppliers' activities in more detail through EcoVadis and other assessments, supplier audits and joint development plans.

If any non-conformities are discovered, the supplier is required to take corrective measures. We monitor the implementation of these measures and provide support for improving the suppliers' operations if needed. However, some contracts may have to be discontinued due to insufficient measures or the seriousness of UPM's findings.

In relation to CO_2 emissions caused by supply chains, our focus is on reducing emissions from logistics and selected raw materials such as chemical pulp, pigments, chemicals and paper (read more on page 91).

In addition, we started a project to assess the working conditions of the service providers in the wood procurement value chain. The project will be carried out in 2021.

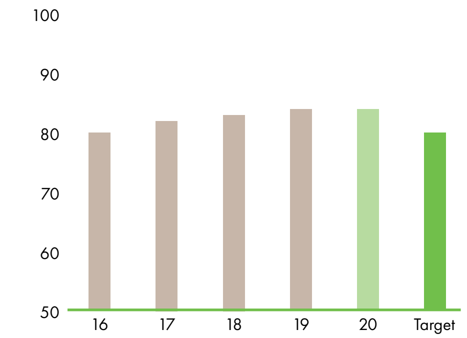
Global cooperation in sustainability

In 2020, we continued our cooperation with Together for Sustainability (TfS), a chemical industry initiative that promotes and improves practices within the supply chains of its members. The cooperation improves transparency and the efficiency of our assessments and audits.

With TfS membership, we have access to a wider pool of EcoVadis assessments and TfS audit reports. In 2020, we conducted some 290 environmental and social risk assessments with EcoVadis. With the exception of wood sourcing and forestry, the number of on-site audits was halved due to COVID-19 restrictions, additionally some virtual audits were piloted. Last year, our own trained auditors and external auditors carried out 117 audits, based on identified risks, including human rights, social and environmental topics. In 2021, we plan to increase the number of suppliers who have been audited and assessed by EcoVadis.

Responsible sourcing is also an important theme in the UN Global Compact. We are an active member of the Action Platform, promoting decent work in global supply chains.

Spend covered by UPM Supplier Code
%

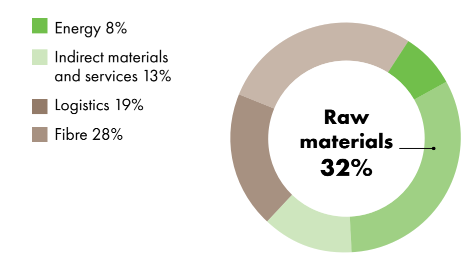


2030 TARGETS 80% of total supplier spend covered by UPM Supplier and Third-Party Code (continuous)

84% achieved

UPM'S FIVE LARGEST SUPPLIERS 2020
1. Suzano, a pulp company, Brazil
2. Pohjolan Voima, an energy company, Finland
3. Andritz, a technology company, Austria
4. Kemira, a chemicals company, Finland
5. Omya, an industrial minerals company, Switzerland

UPM's external purchasing spend 2020



› Compliance on page 76
› Work safety on page 74
› Collaboration needed to reduce emissions in the supply chain on page 91
› Drivers' working conditions on page 72
› www.upm.com/about-us/for-suppliers/

RESPONSIBILITY ACROSS PRODUCT LIFECYCLE

As the population grows and consumption increases, fossil materials and other non-renewable natural resources are to be increasingly replaced by renewable or recycled raw materials.

Product stewardship covers the entire value chain, from raw material sourcing to end products and their recycling or disposal. Bio-based and recyclable products, as well as innovations based on these, are an essential part of the bioeconomy. Open and transparent product communication, supported by ecolabels, certificates and product declarations, increases consumer awareness.

Mitigating climate change and creating value for society

Our products help to mitigate climate change by replacing fossil-based products with bio-based renewable alternatives. The products store carbon for the entire duration of their lifecycle, especially when recycled multiple times.

We actively develop solutions based on the circular economy model. Our target is also to provide solutions that improve our customers' business processes and performance — creating mutual benefit and societal value. Our innovative and sustainable wood-based biomedical products, as well as our pharmaceutical and healthcare labelling solutions, are examples of where we create direct societal value. Many of our products are made from our side streams and residues or from materials recovered after product use, thus supporting circular economy (read more on page 94).

Continuous dialogue and collaboration with customers

UPM's businesses offer a variety of products and services. Each business has its own customer-relationship management process and way of interacting with customers. A comprehensive understanding of each market, knowledge of the end uses of products and an appreciation of the needs of our customers all underpin our approach to customers.

We have a continuous dialogue with our customers and also engage in various development projects with them. Many of these projects are linked to product development and supply-chain efficiency.

Our businesses conduct regular customer-satisfaction surveys. Based on these results, overall satisfaction with UPM as a supplier is 86% (86%). They also help us to define our areas of improvement. Product safety, forest certification, origin of wood and environmental topics such as ecolabels and carbon footprints are some of the most important factors for our customers. Furthermore, actions to mitigate climate change have become increasingly important topics.

SIGNIFICANCE
- Global megatrends are driving demand for sustainable and safe solutions
- Renewable wood and recyclable products reduce the world's dependency on fossil-based and other non-renewable raw materials

TARGETS
- Creating innovative renewable and responsible solutions for a future beyond fossils
- Taking care of the entire lifecycle
- Enabling consumers to make more sustainable choices

OUR WAY
- Focus on recyclable products made from renewable or recycled raw materials
- Strong commitment to long-term customer relationships
- Co-operation across the value chain
- Commitment to ecodesign and UN Sustainable Development Goals in product development
- Improved chemical management to enhance product safety
- Open and transparent product communications
- Focus on 2030 responsibility targets

Ecodesign integrated into our product development

We are committed to contributing to the recyclability of our products. We also aim to minimise the environmental impact of the whole product lifecycle, including the use of materials and manufacturing processes across the entire value chain. In 2020, we renewed our sustainable product design concept. One step was the updating of our ecodesign questionnaire to cover the UN Sustainable Development Goals (SDGs). We carried out a pilot case in the development of sustainable lignin products. In 2021, the work will continue with sustainable packaging and other business areas. Special focus in sustainable product development will be put on circularity.

Life cycle assessments (LCAs) are an important part of the ecodesign toolbox. We use LCAs to provide reliable, documented information on the environmental impacts of our materials and production processes. The results are also used for UPM Raflatac's Label Life service, UPM Plywood's Environmental Product Declarations and to calculate the carbon footprint of pulp and paper products, biofuels and naphtha.

Product safety requirements renewed

The ISO 9001 quality and ISO 22000 food safety management systems provide a framework for continuously improving our performance. All our production sites are ISO 9001 certified. All our pulp mills, UPM Raflatac sites and UPM Specialty Papers production lines in Europe and UPM Changshu PM3 have a certified ISO 22000 food safety management system. In 2020, UPM Changshu paper machine 3 received FSSC 22000 certification and passed the audit for the Chinese food safety standard QS. This allows us to offer a number of products that are designed and produced to meet food packaging requirements.

In 2020, we developed the way in which we communicate our product safety requirements to our pulp, paper, chemical and raw material suppliers as well as to our customers. As a result of collaborating with a number of paper and chemical companies to increase transparency in the supply chain and to accelerate the exchange of information, a new "Pulp & Paper Harmonized Questionnaire" was introduced. The questionnaire enables us to pre-assess the chemicals used in the products and materials and, thus, to ensure the compliance of our products with legal requirements and additional commitments, such as ecolabel criteria. To improve our customer communication, we have created Product Safety Profiles and updated Non-Use Warranty documents.

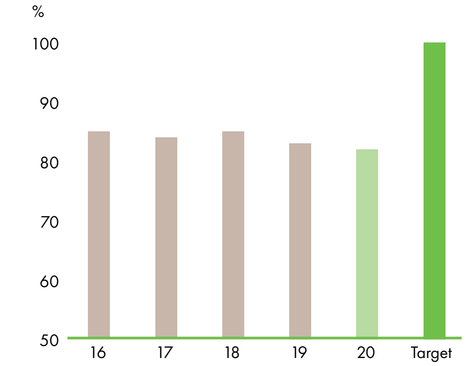
Ecolabels and product declarations increase transparency

We offer product declarations and environmental data for most of our products. They tell our customers about the environmental performance of our products and help them make sustainable choices. The product profiles provide information on the raw materials used, emissions and other environmentally relevant data. Product safety profiles show how products comply with relevant product and chemical regulations. Wood-origin statements provide information on the species and country of origin of the wood.

Most of our products are certified with widely recognised ecolabels. The EU Ecolabel can be used for all UPM graphic papers in Europe. We also give our pulp and paper customers the opportunity to use well-known local ecolabels, such as the German Blue Angel or the Nordic Ecolabel. Our biofuel production has certification from RSB (Roundtable on Sustainable Biomaterials) and ISCC (International Sustainability and Carbon Certification). Also, UPM Formi production in Finland and four of UPM Raflatac's production sites have ISCC PLUS certification (read more on page 50). UPM Raflatac's label grade RAFNXT+ was the world's first label material verified by the Carbon Trust to help mitigate climate change.

All UPM businesses have FSC® and PEFC chain of custody certification. It verifies the origin of the wood and guarantees that all wood used in our products is legally harvested from sustainably managed forests and does not originate from controversial sources.

Products eligible for ecolabelling



2030 TARGETS 100% of applicable products eligible for ecolabelling by 2030

82% achieved

- Innovating for the future on page 32
- Responsible sourcing on page 80
- Sustainable forestry on page 86
- Circular economy and resource efficiency on page 94

GENERATING TAX REVENUE

The year 2020 has highlighted the important role of companies play in the wellbeing of surrounding societies.

It is evident that the health of employees outweighs any other principle. However, in addition to health, it is crucial that our businesses continue their operations to also help societies overcome crises like the global COVID-19 pandemic, both economically and socially. Despite the exceptional circumstances this year, our businesses were able to continue their operations successfully, resulting in a satisfactory financial performance, with the related tax revenue, in various countries.

UPM's effective tax rate in 2020 was 22.9% (17.9%) and its cash tax rate was 19.8% (13.5%). The corresponding corporate income tax reported in 2020 was EUR 169 million (EUR 234 million), and corporate income tax paid in 2020 was EUR 146 million (EUR 176 million). In addition to taxes on income, our various production inputs and outputs are also subject to taxation, which is either paid by us (e.g. energy tax or property tax, such as taxes on real estate) or collected by us (e.g. VAT, payroll tax and social security contributions).

Corporate income taxes vary by countries

The table on the right displays the corporate income tax and property tax paid in our main countries of operation. Based on our corporate and operational structure, UPM mainly reports and pays its corporate income tax in countries where production and innovating activity takes place.

In Finland, we have significant production operations across our six business areas, as well as research and development operations. As a result, UPM is one of the major taxpayers in Finland. Despite the challenging year, UPM's corporate income tax in Finland in 2020 is estimated to be EUR 86 million (EUR 134 million), with subsidiaries reporting and paying approximately EUR 78 million (EUR 93 million). The remaining figure of approximately EUR 8 million (EUR 41 million) will be reported and paid by UPM-Kymmene Corporation.

In Uruguay, the government has granted several free-trade zone permits for domestic and foreign investments. The Uruguay government has granted our pulp mill a permit to operate in a free-trade zone, where taxes mainly consist of property tax and annual tax-like charges paid to the Uruguay government for the development of the zone. The new pulp mill under construction in Uruguay will also be located in a similar free-trade zone.

In China, as fine paper production, UPM qualifies as a high-tech enterprise with a reduced corporate income tax rate of 15%. UPM also pays withholding tax on dividends in China. In countries where our companies are using tax losses from previous years to offset the tax liability of the year in question, such as Germany, limited corporate income tax is paid.

CORPORATE INCOME TAXES PAID AND PROPERTY TAXES BY COUNTRY

EURm	2020	2019
Finland	91	150
Germany	14	17
Uruguay	13	15
China	28	7
United States	8	0
United Kingdom	4	6
Austria	6	1
Russia	4	3
Poland	1	1
Estonia	2	2
France	3	5
Other	4	4
Group total	**178**	211

DIRECT ECONOMIC VALUE GENERATED AND DISTRIBUTED BY UPM IN 2020 (EUR MILLION)

Direct economic value created		Economic value distributed	
		Operating costs	-6,183
Sales	8,580	Employee wages and benefits	-1,188
Income from sale of assets	45	Payments to providers of loans	-51
Income from financial investments	6	Dividend distribution	-693
Other income	91	Corporate income taxes paid and property taxes	-178
Total	**8,722**		**-8,293**
Economic value retained 429			

UPM's economic impact is significant in the surrounding communities. The company's operations contribute to local, regional and national economies by generating economic benefits for different stakeholder groups. The related direct monetary flows indicate the extent of added value globally.

In accordance with UPM's Tax Policy, the locations of our companies are driven by commercial rationale and business reasoning. We do not transfer any value created and do not have any investments in production or service operations in jurisdictions defined by the Council of the European Union as non-cooperative jurisdictions for tax purposes or in any similar secrecy jurisdictions. A list of UPM subsidiaries and joint operations and their country of incorporation can be found on page 198-200.

Furthermore, our sites contribute to local employment, income tax and purchasing power and are engaging in projects with communities. Information can be found in pulp and paper mills' EMAS-verified reports on environmental and societal responsibility.

Energy taxation at various levels of the value chain

Energy taxation is relevant to us in various countries and for various levels of the supply chain. Energy taxation is subject to detailed regulation at both individual country and EU levels.

Electricity produced by us is subject to electricity taxation, regardless of which sources are used. Also our renewable UPM BioVerno diesel and naphtha, which are produced from a residue of pulp production, are subject to energy taxation. However, the energy tax rates for transport fuels from renewable and sustainable sources, like UPM BioVerno, are lower than those from fossil fuels.

Most of the energy used in the production processes is subject to energy tax, although there are various tax rates and exemptions depending on the type of use. We also pay a significant amount of energy tax on fuels for logistics costs, especially for road transportation.

Within the EU, energy taxation laws allow member states to compensate for the taxes paid on, or apply lower tax rates to, energy-intensive industrial production, for example. Many of the main countries in which we have production facilities, such as Finland and Germany, offer such tax relief because the level of energy taxation has increased significantly in recent years.

In Finland, electricity is taxed at a lower rate when used in industrial production

See examples of UPM Kymi mill's social impacts and responsibility at upmimpacts.com

(e.g. in 2020 at 6.9 EUR/MWh). Energy-intensive industries have received a retroactive refund of paid energy tax. This is based on a separate application, if the amount exceeds a threshold, which is dependent on the company's added value. For UPM, this retroactive refund paid in 2020 (for energy taxes paid in 2019) amounted to approximately 74% of paid energy taxes.

An energy taxation reform, introduced by the Finnish government came into force on 1 January 2021. The overall impact is expected to be minor for us due to the fact that the majority of our energy consumption is already from renewable sources, although the impact varies with each business area.

It is possible to apply for a retroactive energy tax refund in Austria, while in the UK relief is granted upfront in the form of lower tax rates for energy-intensive industrial users fulfilling specific requirements. In Germany, UPM benefits from certain subsidy schemes such as EEG (Erneuerbare Energien Gesetz) compensation for energy-intensive industries.

Our tax governance and tax compliance

The Board of Directors' Audit Committee is responsible for the supervision of tax risk management, as part of our risk management processes. UPM's internal control and risk management operations review tax risks regularly and update the control framework together with the tax function. A more thorough review of the tax practices of customers and suppliers is a part of our counterparty risk management processes.

UPM Tax Policy is supported by internal instructions, benchmark analyses of best practice and related internal controls. Tax matters are managed by our tax function, which is complemented by third-party tax services to comply with local tax reporting and filing, as well as other requirements.

We aim to co-operate transparently and proactively with tax authorities, and value dialogue with other important stakeholders concerning taxation. In Finland, UPM co-operates with the Finnish Large Taxpayers' Office.

SIGNIFICANCE

- We are strongly committed to continuously improving our economic and social performance
- Our businesses play a leading role in contributing to societal development through the tax revenue they generate

OUR WAY

- Based on the standards of the UPM Code of Conduct, the UPM Tax Policy describes the main principles and guidelines of our taxation
- Taxes are paid in accordance with local tax laws and regulations that apply to the country in question
- We pay corporate income taxes in the countries where added value is created and profit is generated

SUSTAINABLE FORESTRY

Our business is based on the sustainable use of forests: We grow and harvest forests to create renewable and sustainable materials and products.

Finland and Uruguay are the most important countries for our wood sourcing. At the end of 2020, we owned a total of about 870,000 hectares of forest land in Finland, Uruguay and the USA. Most of this land is in Finland, totalling roughly 515,000 hectares, followed by Uruguay (280,000 hectares) and the United States (76,000 hectares). We also lease about 152,000 hectares in Uruguay and manage around 1.2 million hectares of private forest globally. We follow the same strict sustainability standards everywhere we operate.

Approximately 180,000 hectares (20%) of the land we own is protected. Protected areas include valuable habitats, natural forests and other valuable areas.

We own three modern nurseries, one in Finland and two in Uruguay. The nurseries provide high-quality seedlings and are an important platform for research. In Finland, we started to produce small amounts of alder and oak. Increasing the share of deciduous trees in our Finnish forests has positive impacts on biodiversity, climate and forest health (read more on the right).

In 2020, we started to construct our third nursery in Central Uruguay. The new nursery, scheduled to start-up in 2022, will ensure the annual planting capacity required to supply the new UPM Paso de los Toros pulp mill is met.

Forests and climate

We are committed to climate-positive forestry and improving biodiversity. Forests and forest biodiversity are both beneficial for the climate. We want to ensure that our forests continue to act as carbon sinks, stay resilient and diverse in changing conditions, and continue to thrive and grow for generations to come.

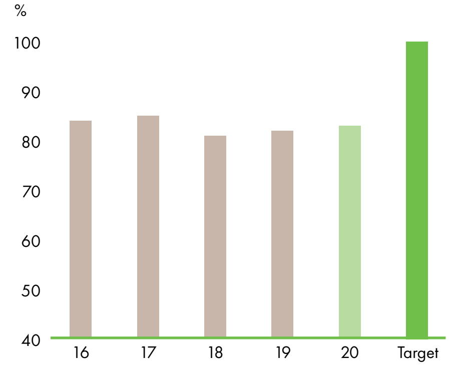
Maintaining our forests as carbon sinks means that they grow more than we harvest. We manage our forests to maintain their health and ability to grow and absorb more carbon. In 2020, the five year annual average carbon sink of UPM's own and leased forests was approximately 6.1 million tonnes of CO_2 equivalents (1.1 million tonnes in Finland, 4.9 in Uruguay and 0.1 in the US). Together with the scientific community we further develop the measurements and monitoring of forest carbon. Harmonising the methodologies for different countries for both soil and tree carbon is the key area of development.

Improving biodiversity

We continuously work to have a positive impact on biodiversity in the company forests in Finland. We implement biodiversity actions as part of everyday forestry operations, through forest protection and collaborative stakeholder projects. In 2020, we published our biodiversity indicators for monitoring our progress towards the target. The indicators are developed together with researchers and currently are:

- Tree species
- Forest age
- Forest structure
- Protected areas
- Valuable habitats
- Habitat restoration
- Species and habitat projects
- Indicator development

Certified fibre share



2030 TARGETS 100% certified fibre by 2030

83% achieved

UPM FORESTS AND PLANTATIONS	2008	2020
Forest and plantation land, own and leased (1,000 ha)	1,012	**1,025**
Forest growth (million m³)	4.3	**7.2**
Wood harvested from UPM forests and plantations (million m³)	2.2	**4.4**
Value of forests and plantations, including land (EURm)	1,270	**2,854**

In 2020, improvement was measured in all quantitive biodiversity indicators. To gain more and more robust data on biodiversity, further indicators and monitoring processes are developed. For example, the regular monitoring of deadwood is being developed to be able to include it to our list of indicators.

In 2020, we developed a biodiversity framework for our plantations and other company-owned land in Uruguay. (Read more on page 44.)

Third-party-verified supply chain

We always know the origin of our wood. Our wood does not originate from illegal logging or from areas where human rights or forests with high conservation values are threatened. Our wood sourcing does not cause land-use change. We don't use genetically modified trees. Our compliance with these requirements is confirmed by independent third-party verification.

All UPM-owned forests are certified or in the process of certification if acquired recently. We also promote forest certification to private forest owners and our other customers. We have established the FSC® group certification scheme. In 2020, our FSC group covered approximately 460,000 hectares in Finland and over 13,000 hectares in Uruguay.

We actively participate in developing forest certification on a national and global level. We have active dialogue with the FSC® and PEFC organisations and we participate in national and international working groups for certification development.

CDP recognised UPM as one of only ten Triple A List companies globally for its significant actions to mitigate climate risk and prevent deforestation.

Collaboration with stakeholders

For decades, we have worked together with researchers, academic institutions, environmental organisations and other stakeholders to develop our sustainable forestry practices. In 2020, we continued our long-time partnerships with the Osprey Foundation in Finland and with Aves Uruguay and Vida Silvestre in Uruguay. In Russia, we ran a joint project with WWF Russia and published joint guidelines on sustainable forest management for wood suppliers.

In Finland, we continued transplanting threatened wood-inhabiting fungi in cooperation with the Natural Resources Institute Finland and the University of Helsinki. Together with the Centre for Economic Development, Transport and the Environment and other stakeholders, we implemented species and habitat projects, such as restoring the habitat of the endangered northern crested newt, implementing artificial burnings and removing invasive alien species from burning environments. We also started a project to restore spring habitats. In collaboration with the Osprey Foundation and North Carelian Ornithological Society, we continued building a network of artificial nests for birds of prey.

We continued to participate in forest- and environment-related stakeholder forums. In Finland, we took part in a biodiversity roundtable process led by the Ministries of Environment and Agriculture and Forestry. We also continued to actively collaborate with FSC International to promote sustainable forest management globally. We joined PEFC International as an international stakeholder member to further strengthen our work to develop sustainable forestry.

› Responsible sourcing on page 80
› Responsible product lifecycle on page 82

SIGNIFICANCE

- Renewable wood is our most important raw material
- Forest biodiversity is the basis for all benefits gained from forests
- Sustainable forestry is an important means to adapt to climate change
- Forests and wood-based products play a unique role in climate change mitigation
- Forests are part of the water cycle
- Forests support the wellbeing of local communities

TARGETS

- Climate-positive forestry and maintaining forest carbon sinks
- Improving and maintaining biodiversity
- Securing all forest ecosystem services

OUR WAY

- Third-party-verified and credible certification systems for all of our own forests
- Third-party-verified and certified chain of custody systems to ensure 100% wood traceability
- No wood from tropical rainforests or from forest plantations that have been established by converting natural forests
- No operations in areas where the rights of indigenous peoples are endangered
- No plantation operations in water-stressed areas
- Strong stakeholder engagement
- Focus on 2030 responsibility targets

CASE

DECIDUOUS TREES IMPROVE CLIMATE RESISTANCE

UPM will double the number of deciduous trees in its forests in Finland. Deciduous trees improve forest growth and yield and increase the diversity of forest species. Biodiversity makes forests more resilient to the effects of climate change such as adverse weather conditions and remain healthier.

With the goal, one fifth of trees on sites that accommodate birch will be deciduous. UPM's own nursery in Joroinen has also grown small amounts of oak and black alder saplings to increase biodiversity. The intensified competition within the more diverse group of species brings balance to the ecosystem and reduces the risk that one species will overpower the others and cause damage.

Most species provide opportunities to expand the range of wood-based products. Thriving mixed forests also increase carbon sequestration, which is important in combating climate change. UPM is the first forest company to set the target to verifiably improve the state of forest nature in its own forests in Finland.

REDUCING ENERGY USE AND EMISSIONS TO AIR

We are constantly seeking new solutions to minimise our environmental impact by selecting optimised energy sources and generation methods, and by improving energy efficiency.

We favour the use of renewable and other carbon-neutral energy sources. Biomass-based fuels account for 72% (70%) of our fuel usage.

As the use of weather-dependent energy sources increases around the world, the need for balancing power within energy systems will also grow. Hydropower is the most effective and sustainable method of producing balancing power and we have significant hydropower assets in Finland.

The majority of our energy consumption originates from the paper and pulp mills' production where electricity and heat are needed in mechanical pulping, pumping and drying. We generate steam and electricity through combined heat and power (CHP) plants at all of our pulp mills, and at almost all of our paper mills. At some mills, all or part of this energy is produced by external or co-owned power plants.

Continuous improvement in energy efficiency

We are constantly looking for ways to improve our energy efficiency across our operations with audits, innovations and investments. However, in 2020 we did not reach our annual target of increasing energy efficiency by 1%.

As a result of the energy-saving investments we carried out in 2020, we reduced our energy costs by EUR 0.3 (1.2) million, avoided emitting 2,400 (12,800) tonnes of CO_2 and achieved a 13,000 (41,000) MWh reduction in energy consumption. The annual savings were EUR 0.8 (1.4) million, 8,600 (15,600) tonnes of CO_2 and 44,000 (49,000) MWh of energy.

Reducing emissions to air in production

We tightened our 2030 targets for reducing our emissions of fossil CO_2 and acidifying flue gases (NOx and SO_2) in January 2020. We are taking steps towards these targets through consistent improvement programmes and investments.

At UPM Nordland paper mill in Germany, we are building a natural gas-based combined heat and power (CHP) plant. At UPM Hürth paper mill in Germany, we have partnered with E.ON to replace the fossil-fuel-based steam supply with a biomass-fired boiler which will provide steam for the mill. Both projects are expected to be finalised in 2022. After completion, they will contribute to reaching our fossil CO_2 emission target for 2030 (page 54).

At the UPM Changshu paper mill in China, we are modifying the natural gas boiler to further reduce our NOx emissions. After its finalisation in 2021, we will reach the very low emission limit of 50mg/Nm3.

In China, a nationwide carbon emission trading system was established for the power sector. The system covers more than

SIGNIFICANCE

- Energy generation is the main source of air emissions
- Fossil fuels are the largest contributor to climate change
- UPM is a significant producer and user of energy

TARGETS

- Significantly cut fossil CO_2 emissions from production and increase energy efficiency
- Minimise acidifying flue gases (NOx and SO_2) emissions by efficient purification

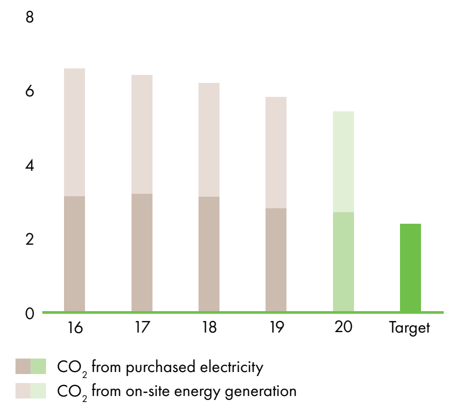
OUR WAY

- Committed to continuous improvements in energy efficiency and to an increased share of renewable and low-emission energy
- Use of Best Available Techniques (BAT)
- Focus on 2030 responsibility targets

2,200 companies and it has set a national CO_2 trading quota and allocation plan for the power sector for the years 2019-2020. The system defines the free allowances and the emission reduction targets for each company. Being one of the companies in this system, UPM Changshu has taken the required actions to report submission and verify the data during the year.

In Joensuu, Finland, UPM Plywood's new biomass-based boiler plant uses by-products of plywood production as its energy source and, thanks to the new plant, the mill is more energy efficient and generates fewer emissions. UPM Energy is currently running an extensive renovation and modernisation project at its hydropower plant in Kuusankoski, Finland. The three-year project started in 2019 (read more on page 48). TVO's Olkiluoto 3 EPR-type nuclear power plant unit in Finland is scheduled to commence regular electricity production in February 2022.

Fossil CO_2 emissions



2030 TARGETS 65% reduction of UPM's total CO_2 emissions (Scope 1 and 2) from 2015 levels by 2030

20% reduction achieved for UPM's total CO_2 emissions (Scope 1 and 2)

2030 TARGETS 20% reduction of acidifying flue gases from 2015 level by 2030

19% achieved for the UPM average product

CASE

SAWMILLS RUNNING ON RENEWABLE ENERGY

UPM Timber is the first business within the company to use only renewable energy in its production. Our timber production has been fossil-free since the start of 2020. This continued improvement regarding responsible operations is helping us to reach our target for emission reduction.

All the logs are sawn up, and the by-products of this process (i.e. chips and sawdust) are utilised in pulp production. In addition, we use the bark to produce renewable energy. All four of our sawmills use both heat energy and electricity.

The Korkeakoski sawmill has produced its own energy from bark and dry wood chips for years using its biomass-based heating plant. Meanwhile, the sawmill has completely abandoned the use of oil for fuel. In Pori, the Seikku sawmill receives renewable energy made of sawmill's side streams from the power plant of Pori Energia.

Pulp mills are enormous production plants of renewable energy and they generate such an abundance of energy that some of it can be directed to the sawmills. The sawmills at the Pietarsaari and Lappeenranta mill integrates have been fully running on renewable energy produced by pulp mills since early 2020.

UPM Timber has co-operated closely with UPM Pulp to guarantee the origin of all the electric energy consumed by the mills. Fingrid Oyj, a company that certifies electricity produced domestically using renewable energy sources, has issued UPM Timber a certificate of origin, which proves that UPM Timber's electrical energy is emission-free.

Collaboration with supply chain to reduce CO_2 emissions

Beside fossil CO_2 emissions from our own energy generation (Scope 1) and purchased electricity (Scope 2), we also evaluate the emissions from other indirect sources (Scope 3) such as purchased materials, transportation or processing of sold products. According to our evaluation, 47% of our overall CO_2 emissions are directly related to our energy use and 53% to Scope 3.

In early 2020, we set a target to reduce the fossil CO_2 emission levels of our supply chain by 30% by 2030. Our focus is on reducing emissions from logistics and most relevant raw materials such as pulp, pigments, chemicals and paper. We also aim to increase industry collaboration to create standardised ways of reporting emissions from purchased products, raw materials and transportation. In 2020, we started a comprehensive project on Scope 3 emissions.

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CAPACITY TO GENERATE POWER THROUGH OWN POWER PLANTS AND SHAREHOLDINGS

	Nominal MW
Hydropower	720
Nuclear power	588
Thermal power	97
UPM Energy in total	**1,405**
Mill site combined heat and power (CHP)	1,339
Mill site hydropower	7
Mill site power generation in total	**1,346**
Total UPM	**2,751**

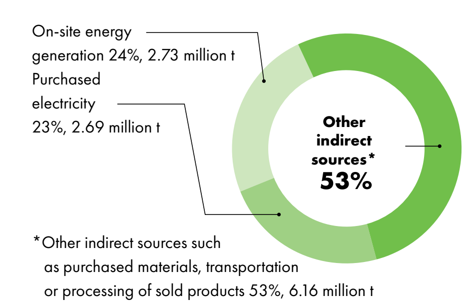
ELECTRICITY GENERATION THROUGH OWN POWER PLANTS AND SHAREHOLDINGS

TWh	2020	2019
Mill CHP	5.2	5.7
Hydropower	3.5	2.8
Nuclear power	4.9	4.9
Thermal power	0.1	0.2
Total	**13.7**	**13.6**

FUELS USED FOR HEAT GENERATION

TWh	2020	2019
Black liquor	19.4	19.4
Bark and other biomass	6.7	7.6
Heat recovered from TMP production	1.1	1.3
Renewable fuels total	**27.2**	**28.3**
Peat	0.6	1.1
Purchased heat	0.3	1.3
Natural gas	6.4	7.1
Oil	0.6	0.6
Coal	2.7	2.8
Total	**37.8**	**41.2**

Sources of UPM's fossil CO_2 emissions



*Other indirect sources such as purchased materials, transportation or processing of sold products 53%, 6.16 million t

CASE

WORKING TOGETHER TOWARDS MORE RESPONSIBLE SUPPLY CHAINS

UPM has set a target of reducing its supply chain emissions by 30% by 2030. We need exhaustive information on how suppliers are performing to meet this target. There is currently, however, no comparable way to report emissions from sourced products and raw materials, and the emissions that come from their transportation.

Supply chain emissions are largely calculated using secondary data from different databases and the general coefficients drawn up from this data. We can only reduce our emissions if we know the level at which they really are and can choose the best partners based on this information.

Due to the complexity of global supply chains, collaboration between various parties is necessary. The chemical industry's Together for Sustainability (TfS) initiative is a great example of efforts to develop the sustainability practices of supply chains and share comprehensive information about suppliers.

In maritime transport, for example, there are big operators that can provide data about their actual emissions online. However, even the suppliers that are not yet able to report their emissions in a precise way have been very committed to the development work.

We have already had discussions with suppliers that belong to certain supply chain categories about their readiness to report their emissions. The key areas, in addition to chemicals, are logistics, pulp and pigments at a minimum. For example, common practices would greatly facilitate the emissions calculations for supply chain materials such as chemicals, as well as fillers and binders used in paper production.

RESPONSIBLE WATER USE

Water has a crucial role in our business, from sustainable forestry to production. It is also an important source of renewable energy.

As a signatory of the UN Global Compact's CEO Water Mandate, we follow recognised principles in water stewardship. We aim to use water in a way that is environmentally sustainable, socially equitable and economically beneficial.

CDP recognised UPM as one of the only ten Triple A List companies globally for its significant actions to enhance water stewardship.

Continuous improvement in water management

The water we need for our pulp and paper production processes is circulated and reused as much as possible. Only a small proportion eventually leaves the process as effluent and needs to be replaced with fresh water. Approximately 95% of the water we use in our paper mill processes is internally recirculated, and thus only 5% is replaced by fresh water. Using less water also means using less electricity, fewer chemicals and less thermal energy.

All effluents from our pulp and paper mills are cleaned in both mechanical and biological effluent treatment processes. We operate a global water specialist network to share best practices and get the best possible treatment results.

We continued testing several potential sources of recycled nutrients and mapping opportunities for cooperation across all UPM sites. For example, UPM Kymi started to use biogas plant reject water with the target of replacing 50% of the urea used as the nutrient. In Germany, UPM Hürth started to replace 100% urea with chemical industry side stream ammonium sulphate. Testing will continue at several mills in 2021.

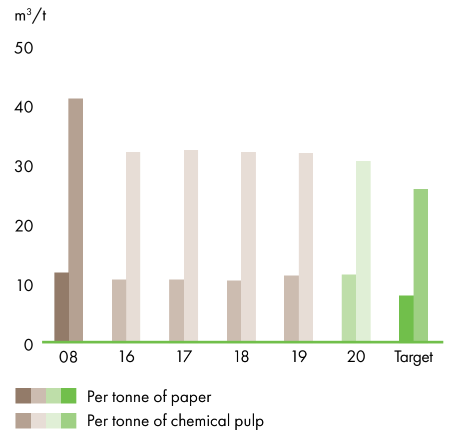
All pulp and paper mills have prepared a roadmap in order to reach their targets for reducing water use and effluent load by 2030. The exceptional year 2020 caused challenges at several mills, but there is also positive development in sight. For example, at UPM Pietarsaari an improved pulp line and better washing efficiency resulted in a 9% reduction in specific wastewater volumes per tonne of pulp.

Optimisation of UPM Changshu's operations continued and process wastewater volumes decreased further by 14% per tonne of paper. The mill received the Water Efficiency Front Runner award in October for the second time. Additionally, several mills started to use advanced process controls or predictive analytic models to further optimise the operation of the treatment plant. Exploring new ways of working, new technologies and new partnerships with potential chemical and machinery suppliers continued in 2020 and some of these technologies were piloted in 2019–2020. The work will continue in 2021.

Collaboration with stakeholders

Our responsible water use highlights the importance of water resources and good water management all over the world. For example, UPM Raflatac is collaborating with WWF Poland in the Rivers for Life project. In Finland, UPM is actively co-operating with the Baltic Sea Action Group to find new sources of recycled nutrients. This collaboration promotes our 2030 responsibility target to use only recycled nutrients in our wastewater treatment plants.

Process waste water volumes

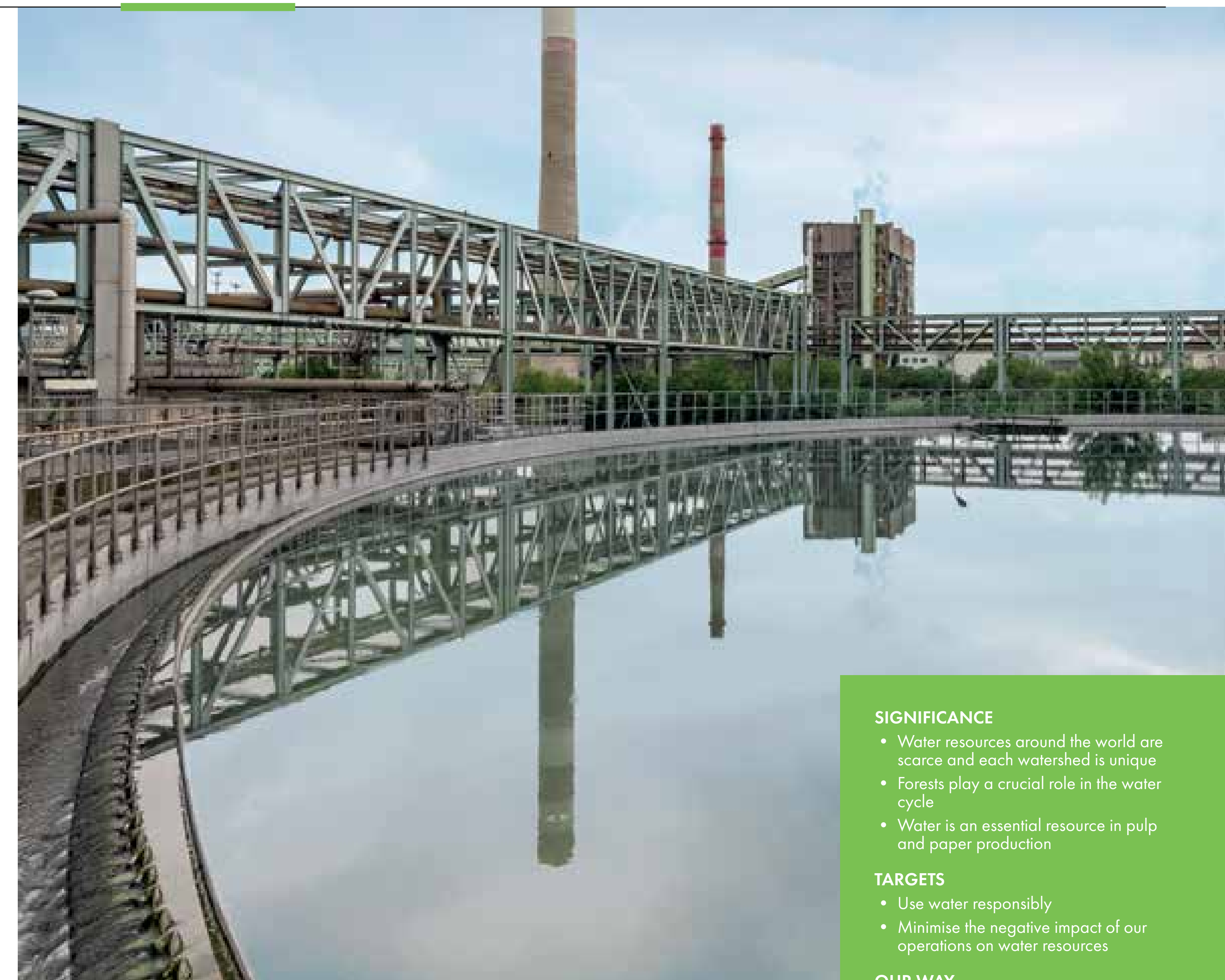


2030 TARGETS
30% reduction of wastewater volume by 2030 from 2008 level

10% reduction achieved for the UPM average product

2030 TARGETS
40% reduction in effluent load (COD) from 2008 level by 2030

33% reduction achieved for the UPM average product



SIGNIFICANCE
- Water resources around the world are scarce and each watershed is unique
- Forests play a crucial role in the water cycle
- Water is an essential resource in pulp and paper production

TARGETS
- Use water responsibly
- Minimise the negative impact of our operations on water resources

OUR WAY
- Water-intensive operations in areas with sufficient water resources
- Efficient water use with appropriate recycling techniques
- Treatment of used water according to the Best Available Techniques
- Returning water to its original watershed when possible
- Cooperation with local stakeholders to minimise negative impacts and ensure the availability of water for everyone
- Focus on 2030 responsibility targets

Minimising the impact of hydropower facilities

UPM has been a hydropower producer for over a century, and UPM Energy is the second-largest electricity producer in Finland. While hydropower is a cost-effective, renewable and CO_2-free way to generate electricity, it can also have an adverse impact on watercourses and their surroundings. In order to minimise these impacts, we work closely with authorities and other stakeholders.

In 2020, our migratory fish programme continued in Finland. The Saimaa landlocked-salmon breeding and nursery area in Pielisjoki was inaugurated and the old mill and mill damn at the Sapsokoski rapids were dismantled. We are participating in a research programme and evaluating new restoration locations.

CIRCULAR ECONOMY AND RESOURCE EFFICIENCY

We are using materials in an efficient manner and many of our products are made from side streams, residues or waste. In response to climate change, we actively develop new solutions in order to accelerate the transition to a circular economy and aim to continuously reduce our environmental impact.

We see the circular economy as the cornerstone of a sustainable future. Lifelong product stewardship covers the entire value chain from the procurement of raw materials to end products and their afterlife. Open and transparent product communication complements our activities. Environmental targets for 2030 ensure resource efficiency in production and contribute to the UN SDGs. Our goal is to minimise waste and maximise recycling and create added value through smart solutions. We are actively looking for partners to co-create circular innovations linked to side stream utilisation, product development and supply chain efficiency.

Our targets on circular economy

By 2030, we will not deposit any process waste at landfill sites, and no process waste will be incinerated without recovering the energy. On average in 2020, 89% (89%) of our process waste was recycled or recovered, of which 19% is energy recovery. 64% of our production sites have already achieved 100% waste utilisation. However, the total amount of waste to landfills increased by 3% compared to 2019 because of lacking utilisation possibilities at certain locations.

We share best practices, research results and ideas throughout the company, and have several internal working groups focusing on the usage of waste and by-products. Green liquor dregs originating from pulp production are one of our most challenging residues to utilise, and we are putting a lot of emphasis on developing ways to use the material.

Most organic production residues, such as bark, wood residues and fibre-containing solids from deinking and effluent treatment, are used to generate energy for mill sites. The fibrous residues that are not incinerated are utilised in brick manufacturing, earthwork or as soil improvement materials. Overall, ash originating from biomass-based energy generation makes up the largest share of our solid waste.

In 2020, 92% of the ash was utilised in various applications, such as in soil stabilisation and the cement industry, or internally to replace caustic soda or as raw material for paper filler production.

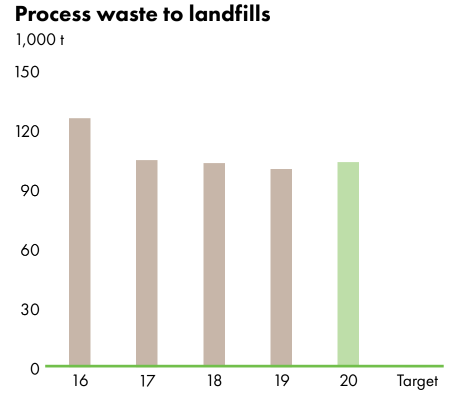
Our other circular economy target is the use of 100% nutrients from recycled sources in our effluent treatment plants by 2030. In 2020, 28% was achieved. (Read more on page 92.)

Making use of side streams and recovered materials

Many of our products are made from side streams. We actively develop new solutions to accelerate the transition to a circular economy, in response to climate change and resource scarcity. For example, UPM BioVerno renewable diesel and naphtha are produced from crude tall oil, a residue from chemical pulp production. Lignin, a by-product of pulp production, is used in WISA BioBond gluing technology, replacing fossil-based phenol used in plywood manufacturing.

We are also active in enhancing circularity over the product lifecycle. UPM Raflatac collects label waste from nearly 180 partners globally and recycles it in its Rafcycle® service. The service takes the self-adhesive label waste and gives them new life as paper liner, magazine paper or composite material. UPM Specialty Papers has developed UPM LinerLoop™, a unique concept where collected release liners are desiliconised and used to produce new high-performance release liner base papers. We also have a long history of using recovered paper to produce new graphic paper. In 2020, we used approximately 1.8 (2.3) million tonnes of recovered paper. Recycled fibre accounted 26 (28) % of all fibre materials used in UPM's paper production.

Process waste to landfills



2030 TARGETS No process waste to landfills or to incineration without energy recovery by 2030

89% recycling or recovery achieved for our total process waste

Active operator in circular economy networks

For example, we are a member of INGEDE (International Association of the Deinking Industry), and a shareholder of CLIC Innovation Ltd., a Finnish open innovation cluster with an aim for breakthrough solutions in bioeconomy, circular economy and cleantech.

UPM Raflatac is an active member of the Ellen MacArthur Foundation, the global thought leader of the transition towards a circular economy. In 2020, UPM also tested its circularity with the Circulytics tool developed by the Ellen McArthur Foundation and received B+ as an overall score.

In 2020, UPM Specialty Papers and UPM Raflatac joined CELAB-Europe, to further promote the development of a circular business model in the self-adhesive label industry. We also continued to participate in the Finnish UUMA3 programme to enhance the use of recovered materials in earth construction and took part in several other research projects related to the use of our side streams.

SIGNIFICANCE

- Global megatrends such as population growth lead to resource scarcity and competition for natural resources
- Resource efficiency and circular economy ease the pressure on resources and the environment and bring competitive advantages

TARGETS

- Promote the efficient use of all material streams and the implementation of circular economy - reduce, reuse and recycle

OUR WAY

- Circular economy thinking
- Recycle and reuse production waste and utilise by-products
- Cross-industry collaboration
- Focus on 2030 responsibility targets

› Towards a future beyond fossils on page 16
› From forests to sustainable products on page 18
› Sustainable forestry on page 86
› Responsible product lifecycle on page 82
› Reducing energy use and emissions to air on page 88
› Responsible water use on page 92
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CASE

CONFRONTING THE REEL PACKAGING PLASTIC CHALLENGE

UPM has been initiating projects alongside its value chain partners, such as packaging company Walki Group, to develop innovative solutions to reduce plastics in packaging. The latest collaborative project set the goal of reducing the amount of fossil-based polyethylene (PE) in paper in reel wrapping laminate without compromising the moisture protection for the reels.

We started the project in few paper mills by testing material that replaced standard fossil-based PE with polymers based on crude tall oil—a residue of pulp production from UPM. Testing took three months to get results and feedback from the whole supply chain. Based on the tests, there are not any major technical differences in the quality of the materials.

The amount of polyethylene in the reels decreased by a quarter from 20 g/m² to 15 g/m².

The tests determined whether that amount was sufficient to protect the paper from moisture. The tests revealed that the amount of polyethylene could not be further reduced without risk. The measures are calculated to reduce the amount of polyethylene by about 400 tonnes per year, which corresponds to about 15–20 truckloads.

The project aims to optimise material usage and reduce CO_2 emissions. At the same time, we must ensure that the paper reels are not damaged during transport, because that is a far bigger waste of material and damage to the environment.

Our long-term target is to find alternatives with which we can fully eliminate conventional plastic from our packaging.

OUR SOCIETAL AND ENVIRONMENTAL IMPACTS

Our activities and products have impacts on society. Understanding these impacts is a prerequisite to develop our operations. The evaluation covers our value creation from economic, social and environmental perspective.

Indirect inputs and outputs provide a more comprehensive picture of the value chain. Together with the direct inputs and outputs they form the basis for impact evaluation.

INDIRECT UPSTREAM

Number of b-to-b suppliers	21,000
Private forest owners supplying wood to UPM	16,000
Seedlings planted	50 million
Supplier spend covered by UPM Supplier Code	84%
Certified wood	83%
Percentage of wood origin known	100%
Fossil CO_2 emissions (Scope 2 upstream)	2.7m t
Fossil CO_2 emissions (Scope 3 upstream)	3.8m t
Water intensive production sites located in water abundant areas	100%
New hires	1,700
Restricted chemical substances in UPM screening	6,000
UPM forests available for recreational use	591,000 ha
Ecosystem services	EUR 350m

DIRECT UPSTREAM

RAW MATERIALS	
Wood	24.9m m³
Market pulp	1.6m t
Recovered paper	1.8m t
Minerals	1.8m t
Purchased paper for converting	0.4m t
Co-mingled domestic waste	0.2m t
Plastic, adhesives, resins, films	0.2m t
Costs, raw materials	EUR 4.5 billion

WATER UPTAKE	
Surface water	376m m³
Ground water	19m m³
Communal water	4m m³

ENERGY	
Renewable fuels	26,100 GWh
Fossil fuels	10,300 GWh
Purchased electricity and heat	12,900 GWh

UPM

51 production sites in 12 countries

1,025,000 ha own and leased forests and plantations

18,000 employees

Approx. 113,000 shareholders

Capital employed EUR 11,555m

Net debt EUR 56m

Market cap EUR 16,250m

DIRECT DOWNSTREAM

PRODUCTS	
Paper	7.0m t
Chemical pulp	3.6m t
Converting materials	0.6m t
Plywood and veneer	0.7m m³
Sawn timber	1.6m m³
Electricity and heat	11,000 GWh
Sales	EUR 8,580m
Comparable EBIT	EUR 948m
Comparable ROE	7.5%
Dividend distribution	EUR 693m
Employee wages and benefits	EUR 1,188m
Corporate income taxes paid and property taxes	EUR 178m
Payments to providers of loans	EUR 51m
Granted patents and patents validations	274

EMISSIONS TO AIR	
Nitrogen oxides	7,500 t
Sulphur dioxide	1,000 t
Particulates	710 t
VOC	1,000 t
Fossil CO_2 emissions (Scope 1)	2.7m t

EMISSIONS TO WATER	
Process wastewater	190m m³
Cooling water	180m m³
Biological oxygen demand (7days) t	6,400 t
Chemical oxygen demand	57,000 t
Adsorbable organic halogens	260 t

PEOPLE	
Employee engagement index	71% favourable
Training hours per employee	7
Total recordable injury frequency incl. contractors	6.2
Lost-time accident frequency incl.contractors	3.5

PROCESS WASTE AND BY-PRODUCTS	
Material recycling	670,000 dry t
Energy recovery	190,000 dry t
Composting	30,000 dry t
Landfilling	100,000 dry t
Temporary storage	7,000 dry t
Incineration without energy recovery	2,000 dry t
Hazardous waste for special treatment	6,000 t

INDIRECT DOWNSTREAM

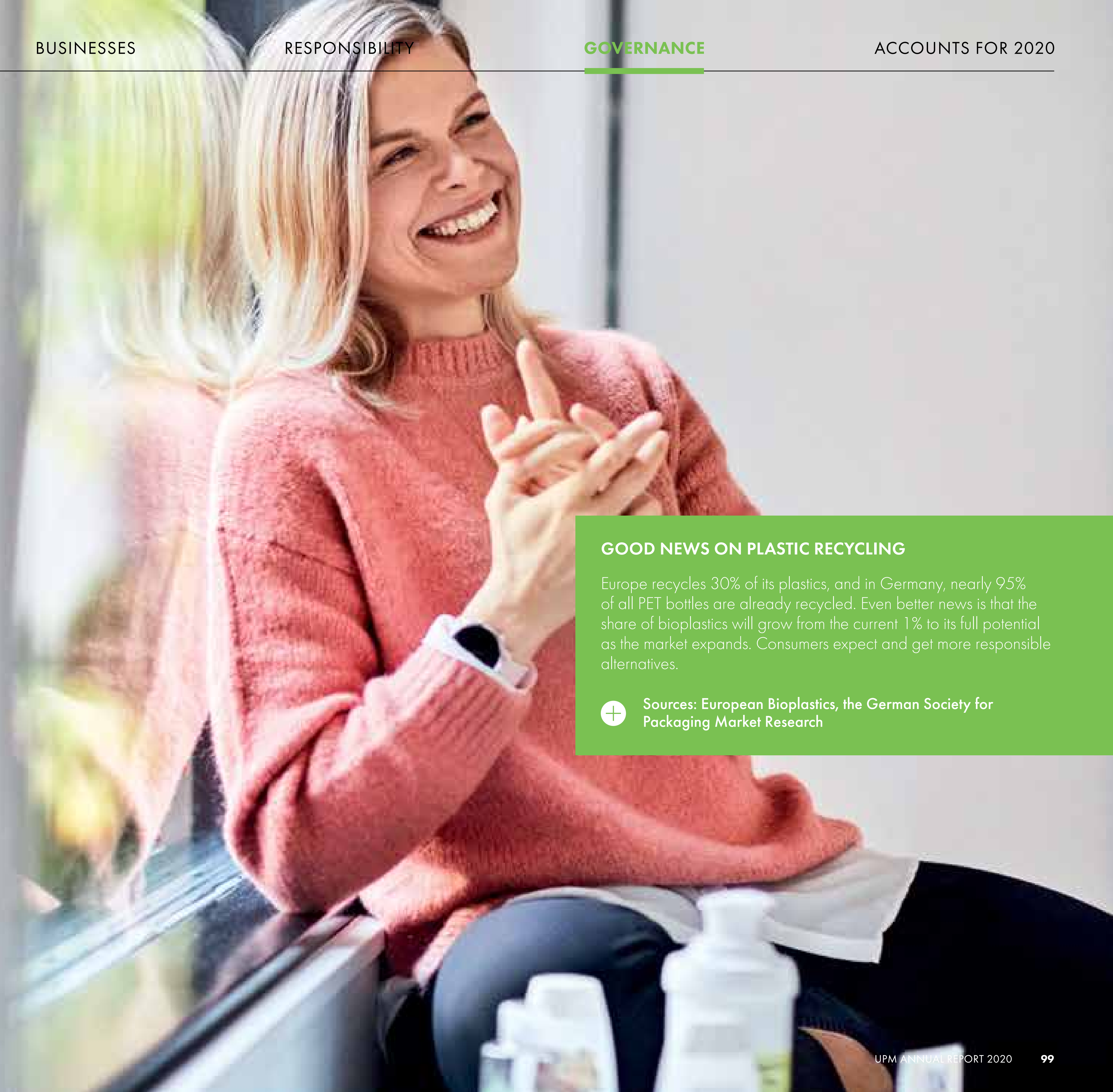
Number of customers	13,400 in 130 countries
People using UPM products	over 200 million
Biofore Share and Care donations and sponsorships	EUR 1,8m distributed to about 251 groups
Virgin materials replaced	2.7m t
Value of products eligible for ecolabelling	EUR 7.2 billion
Fossil CO_2 emissions (Scope 3 downstream)	2.4m t
Carbon stored in UPM products	16m t

OUTCOME & IMPACTS

- Purchase power of workforce and shareholders EUR 1,881 million
- Multiplicative effects of value added EUR 2.4 billion
- Increasing knowledge and quality of life through our products
- Responsible business practices in value chain
- Vitality and prosperity for area of influence
- Health impact on employees and contractors
- Employee skills enhanced
- Biodiversity enhanced [1]
- Climate change mitigation through UPM's carbon actions [2]
- Impact valuation of carbon sink of UPM own and leased forests EUR 187m [3]
- Impact valuation of GHG emissions EUR –357m
- Impact valuation of recreational use of UPM forests EUR 80m [4]
- Impact valuation of ash used as raw material EUR 15m [4]
- Impact valuation of landfilled waste EUR –15m [4]

[1] Read more on pages 86-87, [2] Read more on pages 16-17, [3] Based on study by Natural Resources Institute Finland, [4] examples based on pilot study by Gaia

GOVERNANCE



GOOD NEWS ON PLASTIC RECYCLING

Europe recycles 30% of its plastics, and in Germany, nearly 95% of all PET bottles are already recycled. Even better news is that the share of bioplastics will grow from the current 1% to its full potential as the market expands. Consumers expect and get more responsible alternatives.

Sources: European Bioplastics, the German Society for Packaging Market Research

EXECUTING DECISIONS

We also 'aim higher' when it comes to governance. Our decision making, management and operations are guided by our values and by the UPM Code of Conduct. Our governance structure supports good management, responsible business operations and compliance at all levels, with clear responsibilities and reporting lines.

UPM-Kymmene Corporation (UPM or the Company) complies with all recommendations of the Finnish Corporate Governance Code (CG Code) for listed companies, which is issued by the Finnish Securities Market Association. In accordance with the CG Code, we have published our Corporate Governance Statement (CG Statement) for the financial year 2020. It is available on the corporate website at www.upm.com/governance. We refer to the CG Statement for information on:

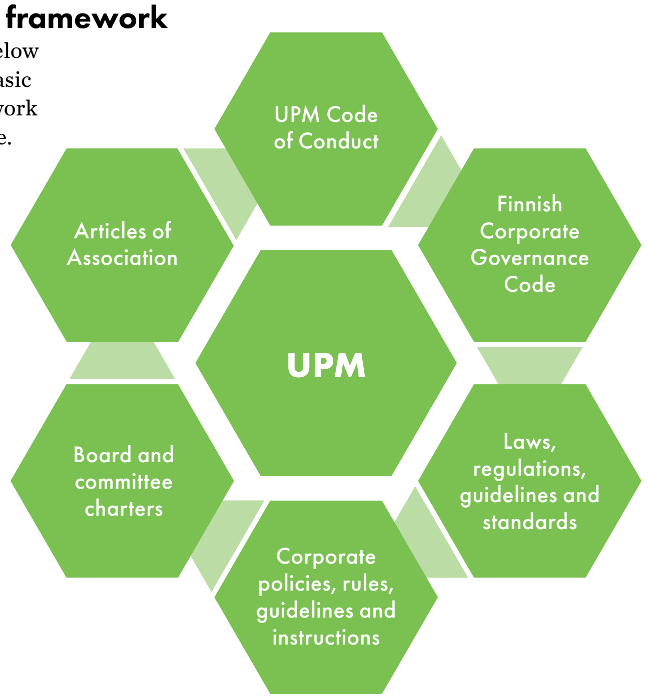
- Our governance structure and management system
- The duties and responsibilities of the Board of Directors and its Committees
- The duties and responsibilities of our management bodies
- Our management and control procedures related to internal control, risk management, internal audit, insider administration and related party transactions

General meeting of shareholders

Our Annual General Meeting (AGM) 2020 was held by special arrangement in Helsinki, Finland on 31 March 2020. Notice of UPM's AGM was published in January. Following the outburst of the COVID-19 pandemic, the Company took extensive measures to be able to hold the AGM as planned so that the essential resolutions, such as payment of dividends, could be decided upon. Due to the COVID-19 pandemic, the shareholders were requested not to attend the meeting in person but to appoint a proxy in order to minimise physical presence at the meeting. In addition, other precautionary measures, such as dividing the participants into several meeting rooms with video access to the main meeting room, were taken. A total of 2,524 (2019: 3,561) shareholders attended the meeting, mainly by proxy. Shareholders were present or represented at the meeting, representing 52.0% of the Company's registered shares and votes. We are delighted to thank our shareholders, who made it possible to arrange the AGM on the planned date while a restriction issued by the Finnish government limited the number of persons able to be at the meeting's venue. The shareholders adhered to the Company's appeal to follow the AGM via live webcast instead of attending the meeting in person. UPM further supported shareholders with

Governance framework

The illustration below summarises the basic regulatory framework for our governance.



The main focus points of the UPM Biofore strategy continue to be performance, growth, innovation, responsibility and portfolio development.

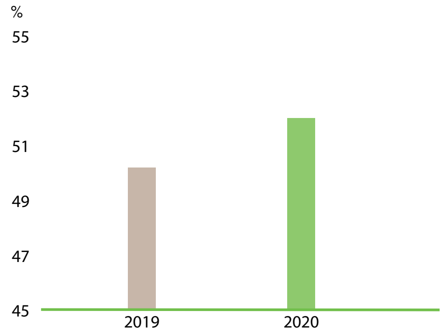
exercising their shareholder rights by providing a proxy service for shareholders pre-registered for the AGM.

The AGM adopted the Company's Financial Statements and decided to distribute the same dividend of EUR 1.30 per share, as in the previous year, and released the members of the Board of Directors and the President and CEO from liability for the financial year 2019. The dividends, totalling EUR 693 million, were paid on 16 April 2020 to shareholders who were registered in our list of registered shareholders on 2 April 2020. For the year 2020, the Board of Directors has proposed a dividend of EUR 1.30 per share.

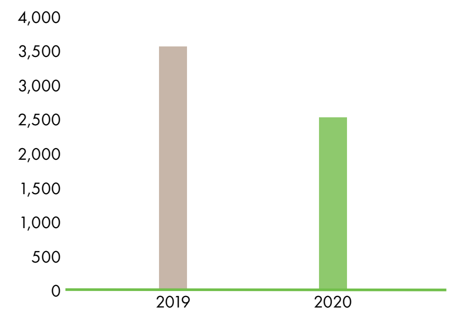
UPM's Remuneration Policy for governing bodies was presented to and adopted by the AGM for the first time. Information on other decisions made at the AGM can be found later on in this section and on the corporate website at www.upm.com/agm2020. During the AGM, all Board proposals were approved and all decisions were made without voting.

The AGM 2021 will be held on 30 March. Due to the continued COVID-19 pandemic, the meeting will be arranged under the Act on a temporary derogation from the Companies' Act (677/2020). Shareholders can participate and exercise their shareholder rights in the Annual General Meeting only by voting in advance and by submitting counterproposals and asking questions in writing prior to the meeting via an electronic voting or proxy service provided by the Company. The AGM, as well as speeches by the Chair of the Board and the President and CEO, can be followed via webcast. Detailed instructions for shareholders are available on the corporate website at www.upm.com/agm2021.

Percentage of represented shares and voting rights in the AGM



Number of shareholders represented in the AGM



Board of Directors

- Sets the Company's strategic objectives
- Reviews and approves financial and other plans relevant to the achievement of these objectives and
- Reviews the management team's performance in terms of meeting these objectives

The Board's other primary responsibilities relate to the integrity of the Company's financial reporting, the effectiveness of internal control and risk management systems and the appointment, remuneration and succession planning of the Company's senior management.

RELEVANT PROFESSIONAL EXPERIENCE

- √ Financial expertise
- √ Relevant industry knowledge
- √ International experience
- √ Risk management experience
- √ Governance and leadership experience
- √ Experience in the planning and implementation of company strategies

BOARD COMPOSITION IN 2020

DIRECTOR [1]	DIRECTOR SINCE	NO. OF TERMS	AGE (AT THE END OF 2020)	INDEPENDENCE OF THE COMPANY	NON-EXECUTIVE / EXECUTIVE DIRECTOR
Björn Wahlroos (Chair)	2008	13	68	Independent	NED
Berndt Brunow (Deputy Chair)	2002	19	70	Independent	NED
Henrik Ehrnrooth	2015	6	51	Independent	NED
Emma FitzGerald	2020	1	53	Independent	NED
Piia-Noora Kauppi	2013	8	45	Independent	NED
Marjan Oudeman	2018	3	62	Independent	NED
Martin à Porta	2020	1	50	Independent	NED
Ari Puheloinen [2]	2014	7	69	Independent	NED
Veli-Matti Reinikkala [2]	2007	14	63	Independent	NED
Kim Wahl	2012	9	60	Independent	NED

[1] At the AGM 2020 Jussi Pesonen'a and Suzanne Thoma's terms ended due to their announcement that they were not available for re-election.
[2] Not available for re-election at the AGM 2021.

Board composition

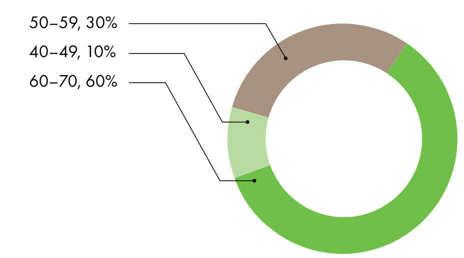
The composition of the Board changed in 2020 when Suzanne Thoma, UPM's director since 2015, and Jussi Pesonen, UPM's director since 2007, announced that they would not be available for re-election. Nomination and Governance Committee conducted its annual review of the structure, size, composition, diversity and succession needs of the Board as a whole, including whether the Board reflects an appropriate balance of sound judgement and a diverse range of business expertise, skills, experience, independence, availability of service to the Company and other desired qualities. As a result of a careful selection process, the Nomination and Governance Committee decided to propose Emma FitzGerald and Martin à Porta be elected to the Board at the AGM 2020.

As proposed by the Nomination and Governance Committee, ten directors were elected to UPM's Board of Directors at the AGM for a one-year term. The shareholders were asked to vote on a single slate for the Board of Directors as this is, unlike in many other countries, a market practice in Finland. The Nomination and Governance Committee also believes that this practice helps to ensure that the Board works effectively as a whole and comprises sufficiently diverse members with varied experience and versatile areas of expertise that mutually complement each other. The composition of the Board is presented in the table above. The term of the current Board of Directors will end upon closing of the AGM 2021.

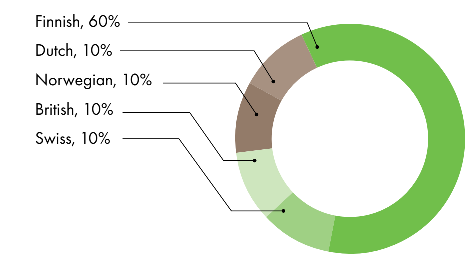
The new director Emma FitzGerald (born 1967) is a UK citizen and holds a doctorate in surface chemistry and solid-state physics (D.Phil.) from Oxford University and a master's degree in business administration (MBA) from the Manchester Business School. FitzGerald is the CEO of Puma Energy Ltd., a global energy company delivering energy services and associated infrastructure to business and retail

Board diversity – gender

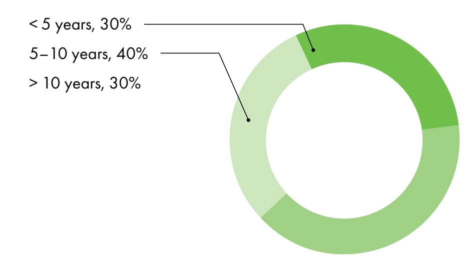
Board diversity – age



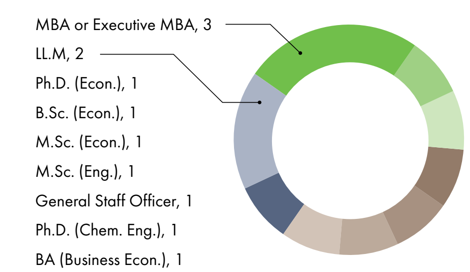
Board diversity – nationality



Board diversity – tenure



Board diversity – education



ATTENDANCE AT BOARD AND COMMITTEE MEETINGS 2020

DIRECTOR	ATTENDANCE / NO. OF BOARD MEETINGS	ATTENDANCE %	ATTENDANCE/NO. OF COMMITTEE MEETINGS	ATTENDANCE %	ATTENDANCE %
Björn Wahlroos (Board and NGC Chair)	12/12	100	6/6	100	100
Berndt Brunow (Deputy Chair, NGC member)	12/12	100	6/6	100	100
Henrik Ehrnrooth (RC member)	12/12	100	3/3	100	100
Emma FitzGerald (AC member)	8/9	89	4/4	100	92
Piia-Noora Kauppi (AC Chair)	12/12	100	5/5	100	100
Marjan Oudeman (AC member)	11/12	92	5/5	100	94
Jussi Pesonen (Board member until 31 March 2020)	3/3	100	-	-	100
Martin à Porta (RC member)	9/9	100	2/2	100	100
Ari Puheloinen (NGC member)	12/12	100	6/6	100	100
Veli-Matti Reinikkala (RC Chair)	12/12	100	3/3	100	100
Suzanne Thoma (Board and RC member until 31 March 2020)	2/3	67	0/1	0	50
Kim Wahl (AC member)	12/12	100	5/5	100	100

NGC – Nomination and Governance Committee, RC – Remuneration Committee, AC – Audit Committee

customers in Africa, Central and Southern America and Asia. Prior to that, she was involved in the UK utility industry responsible for gas, water and waste networks for the UK National Grid and Severn Trent PLC. Before that, she had an over 20-year career with Shell around the world managing, among others, downstream retail, lubricant and LPG (liquefied petroleum gas) businesses.

Ms FitzGerald has served on Boards in both executive and non-executive director positions for Severn Trent plc, Cookson Group plc, Alent plc and DCC plc. She has also served in the audit, remuneration and nomination committees for these corporations, except Severn Trent plc, where she was an executive director. She sits currently on the Advisory Board of Oxford Sciences Innovation.

The other new director, Martin à Porta (born 1970), is a Swiss citizen and holds a master's degree in engineering (M.Sc.) from the Swiss Federal Institute of Technology. He is now acting as a Senior Advisor in the private equity market. From November 2015 until February 2019, à Porta served as the President and CEO of Pöyry Plc, an international consulting and engineering company providing services in power generation, transmission and distribution, forest industry, biorefining and chemicals, mining and metals and infrastructure, as well as water and the environment. Pöyry was acquired by ÅF AB in 2018. Following the completion of the transaction, à Porta was responsible for ÅF Pöyry's Management Consulting Division until October 2019. Before Pöyry, à Porta had a long career in different leadership positions in Switzerland, China, Hong Kong and Qatar with Siemens, which he joined in 2001, with his most recent position as the CEO responsible for Siemens Building Technologies Division Europe from 2012–2015.

Board diversity

The Board diversity aspects are defined in the Diversity Policy of the Board and include relevant professional experience and education, gender, age, nationality and length of tenure. This policy is available at www.upm.com/governance. Information on the professional backgrounds of the Board of Directors and their other significant commitments is available on pages 110–111 of this report. Information on the other aspects of Board diversity is available in the pie charts on the previous page. More information on UPM Board diversity, related objectives and results obtained is available in our CG Statement 2020.

Director independence

The Board of Directors evaluates the independence of its members both annually and on a continuous basis, with the assistance of the Board's Nomination and Governance Committee. Director independence is assessed based on the independence criteria of the Finnish CG Code. The majority of members of the Board of Directors must be independent of the Company, and at least two of these independent members must be independent of any significant shareholders.

Independence evaluation of director candidates is one of the key factors in the preparation of the Nomination and Governance Committee's annual proposal for the composition of the Board. The Committee assesses the independence of members of the Board of Directors on a continuous basis and reviews a report on any changes in professional engagements and other commitments in every meeting to ensure that members are compliant with the independence criteria. The Committee also assesses how such changes may affect the Board members' availability for Board-related work, and reports to the Board on the outcome of such assessments. In particular, the Committee assesses Board members' positions in other publicly listed companies to ensure that the members adhere to the best practices related to overboarding. The Board of Director changes that took place in 2020 had an effect on the director independence assessment, as Mr Pesonen, the President and CEO of UPM, had not been independent of the Company. Thereafter, according to the Nomination and Governance Committee's assessment, all directors are independent of both the Company and the significant shareholders as from the AGM 2020. The commitment of Board members and their availability for Board-related work is evidenced by the members' high attendance at Board and Committee meetings (see the table on page 103).

According to the evaluation carried out by the Board with the help of the Nomination and Governance Committee, all directors are independent of the Company's significant shareholders, as the Company has no controlling shareholder and none of the Company's shareholders have announced a holding of 10% or more of the Company's shares or votes attached thereto. In addition, all directors are independent of the Company, including Berndt Brunow, Veli-Matti Reinikkala and Björn Wahlroos, who have been non-executive directors of the Company for more than ten consecutive years. Based on the Board's overall evaluation of the independence of these Board members, their long-standing service does not compromise their independence and no other factors or circumstances have been identified that could affect their independence.

COMMITTEE MEMBERS 2020

AUDIT COMMITTEE
Piia-Noora Kauppi (Chair)
Emma FitzGerald
Marjan Oudeman
KimWahl

REMUMERATION COMMITTEE
Veli-Matti Reinikkala (Chair)
Henrik Ehrnrooth
Martin à Porta

NOMINATION AND GOVERNANCE COMMITTEE
Björn Wahlroos (Chair)
Berndt Brunow
Ari Puheloinen

Board-related work in 2020

The Board held 12 meetings in 2020 and its work was not disrupted, even under the exceptional circumstances caused by the COVID-19 pandemic. The Board convened according to its original meeting schedule, however most of the meetings were held remotely. There is no minimum meeting attendance requirement for Board members. Instead, Board members are expected to attend all meetings unless there is a valid reason for not attending. The average attendance of the Board members at the Board meetings was 95.6% (2019: 96.4%) and at the Committee meetings 90.9% (2019: 97.8%). The personal attendance rates of each Board member are presented in the table on page 103. In connection with its meetings, the Board also held non-executive sessions and non-executive sessions with the auditor.

Strategic focus points in 2020

In line with its main duties and responsibilities, the Board reviewed and approved strategic plans during its strategy session in May. The main focus points of the UPM Biofore strategy continue to be performance, growth, innovation, responsibility and portfolio development (read more on pages 24–37). An essential part of the Board's annual strategy-related work is to oversee the assessment and management of risks related to the Company's strategy and operations. These risks and opportunities and their impact on operations and strategy are described on pages 62–63.

In 2020, the Board continued to focus on the major strategic investment in Uruguay, the platform development project. The Board has been closely reviewing the status and the feasibility of this project since 2016 and has conducted several status reviews, including risk assessments, in its meetings since then. The investment will raise UPM's pulp production capacity by more than 50% and significantly contribute to future earnings. Read more on this strategic investment on pages 44–45 and on the corporate website at upm.uy/en/growth.

In January the Board made another strategic investment decision regarding a biorefinery in Leuna, Germany. UPM will invest EUR 550 million in an industrial scale biorefinery to convert solid wood into next generation biochemicals. The biorefinery will produce a range of 100% wood-based biochemicals that enable a switch from fossil raw materials to sustainable alternatives in various consumer-driven end-uses. Both major investment projects proceeded according to the plan throughout the COVID-19 pandemic, with high health and safety standards ensuring safe working conditions. The Board has regularly been reviewing the status of the projects. Read more on this strategic investment on pages 58–59 and on the corporate website at www.upmbiochemicals.com/biorefinery.

Board performance evaluation

The Board conducts an annual evaluation of its performance and working methods, including an evaluation of the performance and working methods of its committees. In addition, the committees each evaluate their performance and working methods on an annual basis. Identified areas for improvement are considered when planning the Board-related work, and the Nomination and Governance Committee takes the results into consideration when preparing its proposal for the composition of the Board to the Annual General Meeting.

In 2020, the evaluation was conducted as a self-assessment and its results were reviewed and discussed at the Board meeting in December. The Board members evaluated the performance of the Board and of the committees in relation to their duties and responsibilities, Board and committee composition and structure, Board culture, effectiveness of Board and Committee meetings, the individual performance of Board members and the performance of the Chair of the Board. The overall results of the 2020 self-assessment survey were highly favourable and indicated that the Board, Chair of the Board and the Board Committees are functioning effectively and Board members are committed to the Board work.

Board committees
The Board has three committees that assist it in preparing matters to be decided by the Board:

- The Audit Committee
- The Remuneration Committee and
- The Nomination and Governance Committee

The Committees also assist the Board in its oversight and monitoring responsibilities. The Board remains responsible for the performance of any duties assigned to the Committees.

The Nomination and Governance Committee assisted the Board in reviewing the composition, qualification criteria and duties of the Board committees, and made a proposal to the Board for the appointment of committee members and Chairs. The members appointed to the Board committees in the Board's constitutive meeting on 31 March 2020 are shown in the table on the previous page. Neither the President and CEO nor other Company executives may be members of any Board committees.

The written committee charters approved by the Board of Directors set forth the purpose, composition, operations and duties of each committee, as well as the prerequisites of committee membership. Each committee is responsible for performing the duties assigned to it in its charter.

The committees hold their meetings prior to Board meetings in order to prepare matters to be decided by the Board. In the Board meeting following the committee meeting, the Chairs of the committees report to the Board on the matters discussed and the actions taken by the committees. Furthermore, minutes and committee meeting materials are available to all directors.

Committee-related work in 2020
The importance and extent of the work of the Committees has increased in recent years and will further increase following the continuous changes in the regulatory framework and the Company's business environment. This is also reflected in the committee charters and in the topics and matters the committees were involved with in addition to their regular duties throughout the year.

Audit Committee
The Audit Committee is responsible for overseeing the Company's financial reporting processes and internal control, internal audit and risk management and for monitoring the Company's audit and compliance procedures. In 2020, the Committee held five meetings. In addition to the Committee's assigned matters and reports, it also reviewed reports on non-financial matters, cyber security, UPM's COVID-19 related response plans and climate-related financial disclosures (TCFD). Furthermore, the Committee also reviewed the preparation of UPM's Euro Medium Term Note (EMTN) programme.

The lead audit partner attended all Committee meetings and reported to the Committee on the interim procedures and findings, as well as quarterly audit and non-audit fees and services. The Committees' standard procedures also include quarterly sessions with the internal auditor, with the lead audit partner, with management and among Committee members.

The Audit Committee has prepared the Board's proposal for the election and remuneration of the auditor to be submitted at the AGM 2021. In this context, the Committee evaluated the qualifications and independence of the auditor, as well as the audit-related and non-audit-related services provided by the auditor. The evaluation included an assessment of the effectiveness of the audit process, the quality of the audit, the performance of the lead auditor and the audit team and the cooperation with the auditor's international audit network. As a result of this evaluation, the Committee recommended to the Board the re-election of PricewaterhouseCoopers Oy as the Company's auditor, and the Board concurred with this proposal and has made a corresponding proposal to the AGM 2021. Following the stipulations of the Auditor Regulation, the last year that PricewaterhouseCoopers Oy can act as the Company's auditor is 2023.

According to PricewaterhouseCoopers Oy, Authorised Public Accountant Mikko Nieminen would continue as the lead audit partner.

Remuneration Committee
The Remuneration Committee is responsible for preparing the Company's remuneration principles and practices and for planning the remuneration and succession of the President and CEO, as well as other senior executives. In 2020, the Committee held three meetings. In addition to the Committee's regular duties, it focused on the Remuneration Policy presented to the Annual General Meeting 2020, as well as the preparation of the Remuneration Report to be presented to shareholders at the AGM 2021 for the first time.

Nomination and Governance Committee
The Nomination and Governance Committee is responsible for the composition, diversity and remuneration of the Board of Directors and Corporate Governance. In addition to the Committee's assigned matters and reports, in 2020 it also focused on the new requirements for remuneration reporting as set out in the new CG Code, as well as considering the arrangements for the AGM in the exceptional circumstances caused by the COVID-19 pandemic.

The Nomination and Governance Committee conducted its annual review of the structure, size, composition, diversity and succession needs of the Board as a whole, including whether the Board reflects an appropriate balance of sound judgement and a diverse range of business expertise, skills, experience, independence, availability of service to the Company and other desired qualities. As a result of careful search and selection efforts, the Nomination and Governance Committee has proposed that Jari Gustafsson be elected as a new member of the Board at the AGM 2021. Of the incumbent directors Ari Puheloinen and Veli-Matti Reinikkala will not be available for re-election. The Nomination and Governance Committee's proposal on the composition of the Board in 2021 and the Board's assessment of the independence of potential Board members is available on the corporate website at www.upm.com/agm2021.

Executive management
Jussi Pesonen has been the President and Chief Executive Officer of UPM-Kymmene Corporation since January 2004. According to his service agreement, Jussi Pesonen would have been entitled to retire in November 2020 at the age of 60. At the request of the Company's Board of Directors, he will continue as the President and CEO as disclosed by the Company in a stock exchange release on 24 October 2019. Jussi Pesonen has also been a member of the Company's Board of Directors 2007-2020.

The President and CEO duty is to manage and oversee the Company's day-to-day operations in accordance with the instructions and orders given by the Board of Directors. In the operative management of the Company, the President and CEO is assisted by the Group Executive Team consisting of the executives heading the business areas and global functions, the Business Area Boards and the Strategy Team. The President and CEO chairs the Group Executive Team. The compositions of these management bodies are presented in the table above.

COMPOSITION OF MANAGEMENT BODIES

GROUP EXECUTIVE TEAM	BUSINESS AREA BOARDS	STRATEGY TEAM
President and CEO (Ch.)	President and CEO (Ch.)	President and CEO (Ch.)
CFO	CFO	CFO
General Counsel	General Counsel	General Counsel
Business area EVPs	Business area EVP	EVP Strategy
EVPs of global functions	EVPs of global functions	EVP Technology

› Read more on our management system in the CG Statement 2020 and at www.upm.com/governance.

› Members of the Group Executive Team, including information on the executives' biographical details, professional and educational backgrounds, other significant commitments and shareholdings in the Company, are presented on pages 112–113 of this report.

RESPONSIBILITY AREAS OF THE MEMBERS OF THE GROUP EXECUTIVE TEAM

PRESIDENT AND CEO JUSSI PESONEN

CFO [1]	Tapio Korpeinen	**UPM Biorefining**	Bernd Eikens
General Counsel	Juha Mäkelä	**UPM Energy**	Tapio Korpeinen
Strategy	Kari Ståhlberg	**UPM Raflatac**	Antti Jääskeläinen
Technology [2]	Jyrki Ovaska	**UPM Specialty Papers**	Jaakko Nikkilä
Human Resources	Riitta Savonlahti	**UPM Communication Papers**	Winfried Schaur
Stakeholder Relations [3]	Pirkko Harrela	**UPM Plywood**	Mika Sillanpää

[1] Incl. Finance & Control, Treasury, IR, IT, Sourcing and Real Estate (incl. Finnish forest assets)
[2] Incl. Investment Management, R&D, new business development (biochemicals, biocomposites)
[3] Incl. Communications & Brand, Responsibility, Public Affairs

Management responsibilities
Members of the Group Executive Team have primary responsibility for the business areas and global functions that they lead. These areas of responsibility are shown in the illustration above.

Remuneration
In accordance with the CG Code, we have published our Remuneration Report for the financial year 2020. The Remuneration Report and information on the remuneration of the Group Executive Team members are available on the corporate website at www.upm.com/governance.

The Remuneration Report for governing bodies presents the remuneration of the directors and the President and CEO and has been prepared by the Board of Directors' Remuneration Committee and Nomination and Governance Committee. The Remuneration Report 2020 will be presented at the AGM 2021. The Remuneration Policy sets out the framework for the remuneration of the Company's governing bodies and it is available on the corporate website at www.upm.com/governance. Remuneration of the members of the Group Executive Team and information on the Company's short- and long-term incentive schemes and plans, as well as on the terms and conditions of the aforementioned executives' service agreements, are available on the corporate website at www.upm.com/governance.

Remuneration of the Board of Directors
In accordance with the Nomination and Governance Committee's proposal, at the AGM 2020 it was decided that the remuneration of the members of the Board of Directors remain unchanged. No changes have been made to the remuneration of Board members since 2017. In terms of Board members' remuneration in 2021, the Nomination and Governance Committee has proposed that the annual base fee of the Chair, Deputy Chair and each member of the Board be raised by EUR 5,000 and that the annual committee fees remain unchanged.

The approved annual fees and total remuneration of each Board member, as well as the number of shares purchased, are presented in the tables below.

Board members did not receive any other financial benefits for their Board or Committee membership in addition to the annual base and committee fees. Travel and lodging expenses incurred from meetings held elsewhere than in a director's place of residence were paid against invoice. Shares purchased for the Board members in 2020 may not be transferred for two years from the purchase date (24 April 2020) or until the membership of the respective Board member ends, whichever occurs first.

BOARD REMUNERATION AND PAYMENT MECHANISM

ANNUAL BASE FEE (EUR)	2020	2019	PAYMENT MECHANISM
Chair	190,000	190,000	• Approx. 40% in company shares, rest in cash to cover taxes. The Company paid costs and transfer tax related to the purchase of the Company shares. • Shares may not be transferred within two years from the purchase date or until the Director's membership in the Board has ended, whichever occurs first.
Deputy Chair	135,000	135,000	
Member	110,000	110,000	

COMMITTEE FEES AND PAYMENT MECHANISM

ANNUAL COMMITTEE FEES 2019-2020 (EUR)	CHAIR	MEMBERS	PAYMENT MECHANISM
Audit Committee	35,000	15,000	cash
Remuneration Committee	20,000	10,000	
Nomination and Governance Committee	20,000	10,000	

BOARD REMUNERATION IN 2020

DIRECTOR [1)]	ANNUAL BASE FEE (EUR) OF WHICH	40% FOR SHARES (EUR)	60% IN CASH (EUR)	ANNUAL COMMITTEE FEE (EUR)	TOTAL REMUNERATION (EUR)	NUMBER OF SHARES PURCHASED AS PART OF ANNUAL BASE FEE [2)]
Björn Wahlroos	**190,000**	76,000	114,000	20,000	210,000	3,123
Berndt Brunow	**135,000**	54,000	81,000	10,000	145,000	2,219
Henrik Ehrnrooth	**110,000**	44,000	66,000	10,000	120,000	1,808
Emma FitzGerald	**110,000**	44,000	66,000	15,000	125,000	1,808
Piia-Noora Kauppi	**110,000**	44,000	66,000	35,000	145,000	1,808
Marjan Oudeman	**110,000**	44,000	66,000	15,000	125,000	1,808
Martin á Porta	**110,000**	44,000	66,000	10,000	120,000	1,808
Ari Puheloinen	**110,000**	44,000	66,000	10,000	120,000	1,808
Veli-Matti Reinikkala	**110,000**	44,000	66,000	20,000	130,000	1,808
Kim Wahl	**110,000**	44,000	66,000	15,000	125,000	1,808
Total	**1,205,000**	482,000	723,000	160,000	1,365,000	19,806

[1)] In AGM 2020 Jussi Pesonen and Suzanne Thoma's terms ended due to their announcement that they were not available for re-election. No Board fees were payable to them during financial year 2020.
[2)] Purchase date 24 April 2020.

It is a long-standing custom at UPM to remunerate Board members in both shares and cash. Board members are encouraged to own Company shares on a long-term basis and most of them have substantial holdings, indicating a close alignment of the interests of Board members with those of shareholders.

Remuneration of executive management
Remuneration at UPM is designed to encourage our value-based behaviour, encourage the achievement of ambitious strategic targets and compensate performance accordingly.

The aim of the remuneration process for the Company's management team is to promote the Company's long term financial success, competitiveness and favourable development of shareholder value. Remuneration comprises fixed and variable components. These components are shown in the table on the right.

The variable components are linked to pre-determined and measurable performance criteria, and thresholds have been set for the payable amount. The payable amounts of incentives are linked to the management team member's position, as well as their achievement of performance measures and targets set on an annual basis.

The Company has the right to reclaim any paid or due variable remuneration under certain circumstances, such as violation of law or other legal obligation or violation of the UPM Code of Conduct or other Company policies. Overall circumstances will be considered before exercising this right.

The Company also has the right to cancel, recover or restate any paid or due variable remuneration in the event that financial or other calculations are found to be incorrect.

Salaries, benefits and incentives earned by the President and CEO and members of the Group Executive Team are shown in the tables on the right.

In 2020, costs under the Finnish statutory pension scheme for the President and CEO amounted to EUR 349,000 (2019: EUR 465,000). Payments under the voluntary pension plan amounted to EUR 1,421,000 (2019: EUR 1,459,000). The President and CEO's voluntary pension benefit was arranged through a defined benefit plan until the end of November 2020. The last contribution into the defined benefit plan was made in 2020. As of December 2020, the voluntary pension benefit is arranged through a defined contribution plan. First contribution to the defined contribution plan will take place in 2021.

In 2020, costs under the Finnish and German statutory pension schemes for GET members (excluding the President and CEO) amounted to EUR 785,000 (2019: EUR 924,000). Payments under the voluntary pension plan amounted to EUR 964 000 (2019: EUR 947,000). Please see also Remuneration Report 2020 (subject to adoption in the AGM 2021) and Note 3.2 of the consolidated Financial Statements.

Auditor and audit fees
At the AGM 2020, PricewaterhouseCoopers Oy, a firm of Authorised Public Accountants, was re-elected as the Company's statutory auditor for a one-year term, with Authorised Public Accountant Mikko Nieminen as the lead audit partner. Mr Nieminen has held this position since 4 April 2019. Mr Nieminen is the CEO of PwC Finland.

The most recent tendering process for auditing services was carried out in 2013. Following the stipulations of the Auditor Regulation, the last year that PricewaterhouseCoopers Oy can act as the Company's auditor is 2023.

The AGM further resolved that the audit fee would be paid against invoices, approved by the Board of Directors' Audit Committee. The amounts paid to the auditor, as approved by the Audit Committee, are shown in the table below.

COMPONENTS OF MANAGEMENT REMUNERATION

COMPONENT	PAYABLE IN	BASIS OF PAYMENT	TIME OF PAYMENT
Base salary	Cash	Service agreement/ Executive contract	Monthly
Fringe benefits	For example, company car and phone	Service agreement/ Executive contract	Monthly
Short-term incentives	Cash	Short-Term Incentive Plan	Annually
Long-term incentives	Shares	Performance Share Plan (PSP)	Annually following a three-year earning period

REMUNERATION OF THE PRESIDENT AND CEO

SALARIES AND BENEFITS (EUR 1,000)	2020	2019
Salary, **paid** during the financial year	1,093	1,096
Short-term incentives, **earned** during the financial year	708[*)]	888[**)]
Share rewards, **earned**	1,902[***)]	2,734[****)]
Benefits, **paid** during the financial year	31	29

*) Paid in February 2021
**) Paid in February 2020
***) PSP 2018-2020 (shares delivered in February 2021)
****) PSP 2017-2019 (shares delivered in February 2020)

REMUNERATION OF THE GROUP EXECUTIVE TEAM (EXCLUDING THE PRESIDENT AND CEO)

SALARIES AND BENEFITS (EUR 1,000)	2020	2019
Salaries, **paid** during the financial year	4,132	4,242
Short-term incentives, **earned** during the financial year	2,054[*)]	1,530[**)]
Share rewards, **earned**	5,979[***)]	8,231[****)]
Benefits, **paid** during the financial year	134	123

*) Paid in February 2021
**) Paid in February 2020
***) PSP 2018-2020 (shares delivered in February 2021)
****) PSP 2017-2019 (shares delivered in February 2020)

AUDITOR'S FEES

EUR MILLION	2020	2019	2018
Audit fee	**3.8**	3.1	2.4
Audit-related services	**0.1**	0.2	0.0
Tax services	**0.4**	0.5	0.3
Other services	**0.2**	0.2	0.5
Total	**4.5**	**4.0**	**3.2**

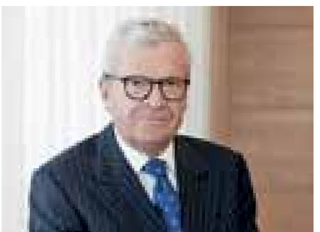
Board of Directors


Björn Wahlroos

Chair of the Board
- Chair and member since 2008
- Chair of the Nomination and Governance Committee
- Independent of the Company and significant shareholders
- Born 1952, Finnish citizen
- Ph.D. (Econ.)
- UPM shares 268,317

President and CEO of Sampo plc 2001–2009. Chair of the Board of Mandatum Bank plc 1998–2000, CEO and Vice Chair of the Board of Mandatum & Co. Ltd. 1992–1997. Executive Vice President and member of the Executive Committee of the Union Bank of Finland 1989–1992.

Chair of the Board of Sampo plc. Board member of the Finnish Business and Policy Forum EVA and the Research Institute of the Finnish Economy ETLA. Board member of Mannerheim Foundation.


Berndt Brunow

Deputy Chair of the Board
- Member since 2002, Deputy Chair since 2005
- Member of the Nomination and Governance Committee
- Independent of the Company and significant shareholders
- Born 1950, Finnish citizen
- B.Sc. (Econ.)
- UPM shares 314,752

President and CEO of Oy. Karl Fazer Ab. 2002–2007. President and CEO of Sanitec Corporation 2000–2002. Prior to this, over 20 years of experience in executive positions at Finnpap and within the UPM Group. Chair of the Board of Oy Karl Fazer Ab.


Henrik Ehrnrooth

Member since 2015
- Member of the Remuneration Committee
- Independent of the Company and significant shareholders
- Born 1969, Finnish citizen
- M.Sc. (Econ.)
- UPM shares 11,314

President and CEO of KONE Corporation since 2014 and KONE Corporation's Chief Financial Officer and Executive Board member 2009–2014. Previously worked for Goldman Sachs International 1998–2009, most recently as a Managing Director in the Investment Banking Division. Prior to this, various positions at UBS Limited 1994–1998. Member of the Foundation Board of the International Institute for Management Development (IMD, Switzerland) and member of the European Round Table for Industry (ERT).


Emma FitzGerald

Member since 2020
- Member of the Audit Committee
- Independent of the Company and significant shareholders
- Born 1967, British citizen
- MBA, D.Phil., MA (Surface Chemistry/Solid-state Physics)
- UPM shares 6,808

CEO and Executive Director of Puma Energy Ltd. since 2019. Executive Director responsible for water and waste service businesses and member of the Board of Severn Trent plc. 2015–2018, CEO of Gas Distribution Networks for the UK National Grid 2013–2015, Vice President, Global Retail Network, Shell International Ltd. 2010–2013, Vice President, Downstream Strategy and Consultancy, Shell International Ltd. 2007–2010, Managing Director, Shell China/Hong Kong 2004–2007 and Shell Gas Ltd. 2001–2004, Shell International Ltd., Global R&D, sales and marketing roles 1992–2001. Member of Oxford Sciences Innovation Advisory Board.


Piia-Noora Kauppi

Member since 2013
- Chair of the Audit Committee
- Independent of the Company and significant shareholders
- Born 1975, Finnish citizen
- LL.M.
- UPM shares 21,199

Managing Director of Finance Finland (FFI) since 2009. Member of the European Parliament and member of various parliamentary committees 1999–2008, Head of the Finnish Delegation in the EPP-ED Group 2004–2008. Legal advisor for the Parliamentary Group of the National Coalition Party Kokoomus 1997–1999. Chair of the Board of the SOS-Children's Villages Foundation. Board member of the Finnish Financial Ombudsman Bureau. Member of the Supervisory Board of Helsinki Deaconess Institute and Helsinki School of Economics Support Foundation. Member of the EBF Executive Committee.


Marjan Oudeman

Member since 2018
- Member of the Audit Committee
- Independent of the Company and significant shareholders
- Born 1958, Dutch citizen
- LL.M., MBA
- UPM shares 5,363

President of the Executive Board of Utrecht University 2013–2017. Executive Committee member of AkzoNobel NV., responsible for HR and organisational development 2011–2013. Executive Director of Strip Products Division and Executive Committee member in Tata Steel Europe (previously Corus Group Plc.) 2007–2010. Managing Director positions in Corus Group PLC. 2000–2007, most recently Executive Director responsible for Corus Strip Products business and CEO of Corus Nederland BV. Various positions in Hoogovens Group NV. 1982–1999, most recently Managing Director of Hoogovens Packaging Steel business. Board member of SHV Holdings NV., Solvay SA., Aalberts NV. and Novolipetsk Steel PJSC.


Martin à Porta

Member since 2020
- Member of the Remuneration Committee
- Independent of the Company and significant shareholders
- Born 1970, Swiss citizen
- M.Sc. (Eng.)
- UPM shares 6,008

President and CEO of Pöyry Plc. 2015–2019, most recently EVP of ÅF Pöyry AB.'s Management Consulting Division until 2019, Various positions in Switzerland, China, Hong Kong and Qatar with Siemens companies 2001-2015, most recently as CEO of Siemens Building Technologies Division Europe, Head of Engineering Section and project manager, Electrowatt Engineering Ltd., 1996–2000. Board member of Stantec Inc.


Ari Puheloinen

Member since 2014
- Member of the Nomination and Governance Committee
- Independent of the Company and significant shareholders
- Born 1951, Finnish citizen
- General Staff Officer, General (ret.)
- UPM shares 13,339

Commander of the Finnish Defence Forces 2009–2014. Chief of Finnish Defence Command 2007–2009 and Commander of the Eastern Command 2004–2007. Deputy Chief of Operations of the Finnish Defence Staff 2000–2003 and Brigade Commander 1999–2000. Principal Secretary of the Defence Council 1997–1999. Assistant Defence Attaché in Moscow 1986–1990. Board member of Patria Plc.


Veli-Matti Reinikkala

Member since 2007
- Chair of the Remuneration Committee
- Independent of the Company and significant shareholders
- Born 1957, Finnish citizen
- eMBA
- UPM shares 46,135

President of ABB Region Europe during 2015 and member of the Group Executive Committee of ABB Ltd. 2006–2015. President of ABB Process Automation Division 2006–2014 and Business Area Manager for ABB Process Automation 2005. Automation Technologies Division Manager in ABB China 2003–2004. ABB Drives & Power Electronics, Business Area Manager 2002 and Manager for ABB Drives 1996–2001. CFO of ABB Industry Oy. 1994–996. Prior to 1994, various positions in paper and packaging companies in Finland. Chair of the Board of Glaston Corporation and Deputy Chair of the Board of Fortum Corporation.


Kim Wahl

Member since 2012
- Member of the Audit Committee
- Independent of the Company and significant shareholders
- Born 1960, Norwegian citizen
- MBA (Harvard)
- BA (Business Econ.)
- UPM shares 23,113

Chair of the Board of Strømstangen AS. since 2009. Deputy Chair and Cofounder of the European private equity firm IK Investment Partners 1989–2009. Associate, Corporate Finance, Goldman, Sachs & Co. 1987–1989. Board member of DNB Bank ASA. and Civita AS. Chair of the Board of Voxtra AS. and Voxtra Foundation.

Group Executive Team

Jussi Pesonen

- President and CEO
- M.Sc. (Eng.)
- Born 1960, Finnish citizen
- Member of the Group Executive Team since 2001, employed by the UPM Group since 1987
- UPM shares 504,710

President and CEO of UPM-Kymmene Corporation since 2004. COO of UPM Paper Divisions and Deputy to the President and CEO 2001–2004. Several management positions in UPM Paper Divisions 1987–2001. Chair of the Board of the Finland Chamber of Commerce and ICC Finland. Deputy Chair of the Board of the Finnish Forest Industries Federation (FFIF). Board member of the Confederation of European Paper Industries (CEPI) and the East Office of Finnish Industries Oy.

Tapio Korpeinen

- Chief Financial Officer, Executive Vice President, UPM Energy
- M.Sc. (Tech.), MBA
- Born 1963, Finnish citizen
- Member of the Group Executive Team since 2008, employed by the UPM Group since 2005
- UPM shares 184,755

CFO since 2010. President, Energy and Pulp Business Group 2008–2010. Vice President, Corporate Development and Senior Vice President, Strategy, UPM 2005–2008. Several management positions at Jaakko Pöyry Consulting in Finland and North America 1991–1998 and 1999–2005. A.T. Kearney in Finland 1998–1999 and McKinsey & Company in Sweden 1988–1990. Chair of the Board of Pohjolan Voima Oy. Vice Chair of the Board of Kemijoki Oy. Board member of Teollisuuden Voima Oyj. Supervisory Board member of Varma Mutual Pension Insurance Company.

Bernd Eikens

- Executive Vice President, UPM Biorefining
- Ph.D. (Eng.)
- Born 1965, German citizen
- Member of the Group Executive Team since 2013, employed by the UPM Group since 1998
- UPM shares 101,661

Executive Vice President, UPM Specialty Papers 2016–2019. Executive Vice President, UPM Paper ENA 2013–2016. Senior Vice President, Supply Chain, Paper Business Group 2008–2013. President, UPM-Kymmene Inc. North America 2005–2008. Several management positions at UPM Nordland Papier 1998–2005. Senior Process Engineer, International Paper Co. 1996–1998. Supervisory Board member of Johann Bunte Bauunternehmung GmbH & Co. KG. Advisory Board member of Meyer Turku Oy.

Pirkko Harrela

- Executive Vice President, Stakeholder Relations
- M.A.
- Born 1960, Finnish citizen
- Member of the Group Executive Team since 2004, employed by the UPM Group since 1985
- UPM shares 101,358

Executive Vice President, Corporate Communications 2004–2013. Vice President, Corporate Communications of UPM 2003. Several positions in Communications in Finnpap and UPM Paper Division 1985–2002. Board member of the Finnish Forest Industries Federation (FFIF). Member of S-Group's CSR and Sustainability Advisory Group. Member of the Board of Trustees in WWF Finland. Member of the Advisory Board of Deutsch-Finnische Handelskammer. Board member of Satalinna Foundation. Chair of the Board of UPM-Kymmene Cultural Foundation. Member of the Board of Governors of the Association for Finnish Work.

Antti Jääskeläinen

- Executive Vice President, UPM Raflatac
- M.Sc. (Eng.), M.Sc. (Econ.), MBA
- Born 1972, Finnish citizen
- Member of the Group Executive Team since 2016, employed by the UPM Group since 2014
- UPM shares 37,341

Senior Vice President, EMEIA, UPM Raflatac 2014–2016. Senior Vice President, Head of Global Operations, Amer Sports 2012–2014. Chief Development Officer, member of the Group Executive Board, Amer Sports 2009–2014. Several management positions at Stora Enso in Finland, Sweden and the UK 2004–2009. Engagement Manager & Associate, McKinsey & Company 2002–2004. Business Operations Manager, Nokia Networks in Finland and Italy 1998–2001. Financial Analyst, Enso Group 1997–1998. Board member of Vaisala Corporation.

Juha Mäkelä

- General Counsel
- LL.M.
- Born 1962, Finnish citizen
- Member of the Group Executive Team since 2008, employed by the UPM Group since 2005
- UPM shares 82,988

Group General Counsel since 2005. Positions as legal counsel and senior legal counsel in KONE Corporation 1997–2004. Several positions in law firms 1991–1996. Supervisory Board member of Kemijoki Oy.

Jaakko Nikkilä

- Executive Vice President, UPM Specialty Papers
- M.Sc. (Eng.), eMBA
- Born 1967, Finnish citizen
- Member of the Group Executive Team since July 2019, employed by the UPM Group since 1995
- UPM shares 3,655

Senior Vice President, UPM Specialty Papers ENA 2018–2019. Vice President, APAC Sales, UPM Fine and Specialty Papers, China 2012–2017. Vice President, Converters, Paper Business Group, Finland 2011–2012. Area Sales Director, APAC Converters, Paper Business Group, Hong Kong 2005–2011. Production manager, Fine and Specialty Papers 2001–2005. Technical customer service manager, Fine and Specialty Papers 1995–2000. Analyst, Jaakko Pöyry Consulting 1993–1995.

Jyrki Ovaska

- Executive Vice President, Technology
- M.Sc. (Eng.)
- Born 1958, Finnish citizen
- Member of the Group Executive Team since 2002, employed by the UPM Group since 1984
- UPM shares 108,148

President, Paper Business Group 2008–2013. President, Magazine Paper Division 2004–2008. President, Fine and Speciality Papers Division 2002–2003. Several management positions at United Paper Mills Ltd. and within the UPM Group in the Printing Papers Division 1984–2001. Deputy member of the Board of CLIC Innovation Oy. Member of the Business Finland Advisory Board for Bioeconomy and Cleantech. Member of the Finnish Research and Innovation Council 2016–2019.

Riitta Savonlahti

- Executive Vice President, Human Resources
- M.Sc. (Econ.)
- Born 1964, Finnish citizen
- Member of the Group Executive Team since 2004, employed by the UPM Group since 2004
- UPM shares 34,231

Senior Vice President, Human Resources at Elcoteq Network Corporation 2001–2004. Senior Vice President, Human Resources at Raisio Group 2000–2001. Human Resources Manager at Nokia Mobile Phones, Salo Operations 1995–2000. Human Resources positions at ABB 1990–1994.

Supervisory Board member of Ilmarinen Mutual Pension Insurance Company. Member of Labour Markets Committee of the Finnish Forest Industries Federation (FFIF). Member of Work, Education and Skills Committee of the Finland Chamber of Commerce.

Winfried Schaur

- Executive Vice President, UPM Communication Papers
- Dipl. Ing. (FH)
- Born 1965, German citizen
- Member of the Group Executive Team since 2016, employed by the UPM Group since 2001
- UPM shares 66,036

Senior Vice President, Newspaper Publishing, UPM Paper ENA 2013–2016. Several leadership positions in the UPM paper business 2001–2013. Project Manager, Investments, Haindl Papier GmbH 1993–2001. Project Engineer, Hoerbiger Automotive 1991–1992. Chair of the Board of the German Pulp and Paper Association (VDP). Vice Chair of the Board of the Bavarian Industry Association (VBW). Board member of the Confederation of European Paper Industries (CEPI) and the Federation of German Industries (BDI).

Mika Sillanpää

- Executive Vice President, UPM Plywood
- M.Sc. (Eng.)
- Born 1958, Finnish citizen
- Member of the Group Executive Team since 2013, employed by the UPM Group since 1985
- UPM shares 63,467

Vice President, Sourcing, UPM Raflatac Group 2008–2013. Senior Vice President, Strategic Development, UPM Raflatac Group 2003–2008. Vice President, UPM Raflatac Europe 2001–2003. Several management positions at UPM Raflatac in Finland and in France 1985–2000. Board member of the Federation of the Finnish Woodworking Industries.

Kari Ståhlberg

- Executive Vice President, Strategy
- M.Sc. (Eng.)
- Born 1971, Finnish citizen
- Member of the Group Executive Team since 2013, employed by the UPM Group since 2007
- UPM shares 51,065

Senior Vice President, Corporate Strategy 2010–2013. Director, M&A, UPM-Kymmene Corporation 2007–2010. Investment Manager at Finnish Industry Investment Ltd. 2006–2007. M&A Advisor at JP Capital International Limited in the UK 2000–2006. Management Consultant at Jaakko Pöyry Consulting Oy. 1998–2000. Vice Chair of the Board of Steveco Oy.

UPM'S CORPORATE RESPONSIBILITY REPORTING IN ACCORDANCE WITH GRI STANDARDS AND AA 1000

UPM follows the Global Reporting Initiative's (GRI) Sustainability Reporting Standards in its corporate responsibility reporting. The reporting has been prepared in accordance with the GRI Standards: Core option.

Our GRI index document shows where the disclosures of material topics and general disclosures are addressed in the Annual Report, on UPM's webpage or in the GRI index document itself. It also includes information on omissions, additional explanations and disclosures on the management approach. The document is available on the UPM webpage upm.com/responsibility.

UPM is also committed to the principles of inclusivity, materiality and responsiveness as defined in the AA 1000 AccountAbility Principles Standard (2008).

The English version of the corporate responsibility information for 2020 has been assured by an independent third party, PricewaterhouseCoopers Oy (see the Independent Assurance Report below) and identified in the GRI content index. Congruence between the English and Finnish version has been checked.

AA1000
Licensed Assurance Provider
000-29

Independent Practitioner's Assurance Report

To the Management of UPM-Kymmene Corporation

We have been engaged by the Management of UPM-Kymmene Corporation (hereinafter also "the Company") to perform a limited assurance engagement on selected corporate responsibility information for the reporting period 1 January to 31 December 2020, disclosed in UPM-Kymmene Corporation's Annual Report 2020 and on its website in section "Responsibility" (hereinafter "the CR Reporting"). The assured information is indicated in the Company's GRI Content Index 2020 on the Company's website.

Furthermore, the assurance engagement has covered UPM-Kymmene Corporation's adherence to the AA1000 AccountAbility Principles with moderate (limited) level of assurance.

Management's responsibility
The Management of UPM-Kymmene Corporation is responsible for preparing the CR Reporting in accordance with the Reporting criteria as set out in the Company's reporting instructions and the GRI Standards Sustainability Reporting Guidelines of the Global Reporting Initiative. The Management of UPM-Kymmene Corporation is also responsible for such internal control as the management determines is necessary to enable the preparation of CR Reporting that is free from material misstatement, whether due to fraud or error.

The Management of UPM-Kymmene Corporation is also responsible for the Company's adherence to the AA1000 AccountAbility Principles of inclusivity, materiality and responsiveness as set out in AccountAbility's AA1000 AccountAbility Principles Standard 2008.

Practitioner's responsibility
Our responsibility is to express a limited assurance conclusion on the CR Reporting and on the Company's adherence to the AA1000 AccountAbility Principles based on the procedures we have performed and the evidence we have obtained. We conducted our limited assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised) "Assurance Engagements Other than Audits or Reviews of Historical Financial Information". That Standard requires that we plan and perform the engagement to obtain limited assurance about whether the CR Reporting is free from material misstatement.

In addition, we have conducted our work in accordance with the AA1000 Assurance Standard 2008. For conducting a Type 2 assurance engagement as agreed with the Company, the AA1000AS (2008) requires planning and performing of the assurance engagement to obtain moderate (limited) assurance on whether any matters come to our attention that cause us to believe that UPM-Kymmene Corporation does not adhere, in all material respects, to the AA1000 AccountAbility Principles and that the CR Reporting is not reliable, in all material respects, based on the Reporting criteria.

In a limited assurance engagement, the evidence-gathering procedures are more limited than for a reasonable assurance engagement, and therefore less assurance is obtained than in a reasonable assurance engagement. An assurance engagement involves performing procedures to obtain evidence about the amounts and other disclosures in the CR Reporting, and about the Company's adherence to the AA1000 AccountAbility Principles. The procedures selected depend on the practitioner's judgement, including an assessment of the risks of material misstatement of the CR Reporting and an assessment of the risks of the Company's material nonadherence to the AA1000 AccountAbility Principles.

Our work consisted of, amongst others, the following procedures:

- Interviewing senior management of the Company.
- Interviewing employees from various organisational levels of the Company with regards to materiality, stakeholder expectations, meeting of those expectations, as well as stakeholder engagement.
- Assessing stakeholder inclusivity and responsiveness based on the Company's documentation and internal communication.
- Assessing the Company's defined material corporate responsibility topics as well as assessing the CR Reporting based on these topics.
- Visiting the Company's Head Office as well as two sites in Finland and Germany. Visits were conducted virtually.
- Interviewing employees responsible for collecting and reporting the information presented in the CR Reporting at the group level as well as at the site level.
- Assessing how group employees apply the reporting instructions and procedures of the Company.
- Testing the accuracy and completeness of the information from original documents and systems on a sample basis.
- Testing the consolidation of information and performing recalculations on a sample basis.

Limited assurance conclusion
Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that UPM-Kymmene Corporation's CR Reporting for the reporting period ended 31 December 2020 is not properly prepared, in all material respects, in accordance with the Reporting criteria, or that the CR Reporting is not reliable, in all material respects, based on the Reporting criteria.

Furthermore, nothing has come to our attention that causes us to believe that UPM-Kymmene Corporation does not adhere, in all material respects, to the AA1000 AccountAbility Principles.

When reading our assurance report, the inherent limitations to the accuracy and completeness of sustainability information should be taken into consideration.

Our assurance report has been prepared in accordance with the terms of our engagement. We do not accept, or assume responsibility to anyone else, except to UPM-Kymmene Corporation for our work, for this report, or for the conclusions that we have reached.

Observations and recommendations
Based on the procedures we have performed and the evidence we have obtained, we provide the following observations and recommendations in relation to UPM-Kymmene Corporation's adherence to the AA1000 AccountAbility Principles. These observations and recommendations do not affect the conclusions presented earlier.

Regarding Inclusivity: UPM-Kymmene Corporation has processes in place for stakeholder inclusivity both at the group and at the business level. Due to changes in market conditions, additional stakeholder expectations have been considered. We recommend that the Company continues continuous monitoring of changes across stakeholder expectations through established procedures to ensure inclusivity of stakeholders.

Regarding Materiality: UPM-Kymmene Corporation has a systematic process in place to evaluate and determine the materiality of corporate responsibility topics. Materiality analysis is updated periodically. We recommend that the Company continues to further develop proactive dialogue with its stakeholders to determine and evaluate material topics.

Regarding Responsiveness: UPM-Kymmene Corporation has processes in place for responding to stakeholder needs. Due to changes in market conditions, responsiveness towards stakeholder expectations required adjustments. We recommend that the Company maintains its systematic approach to respond to stakeholder's expectations.

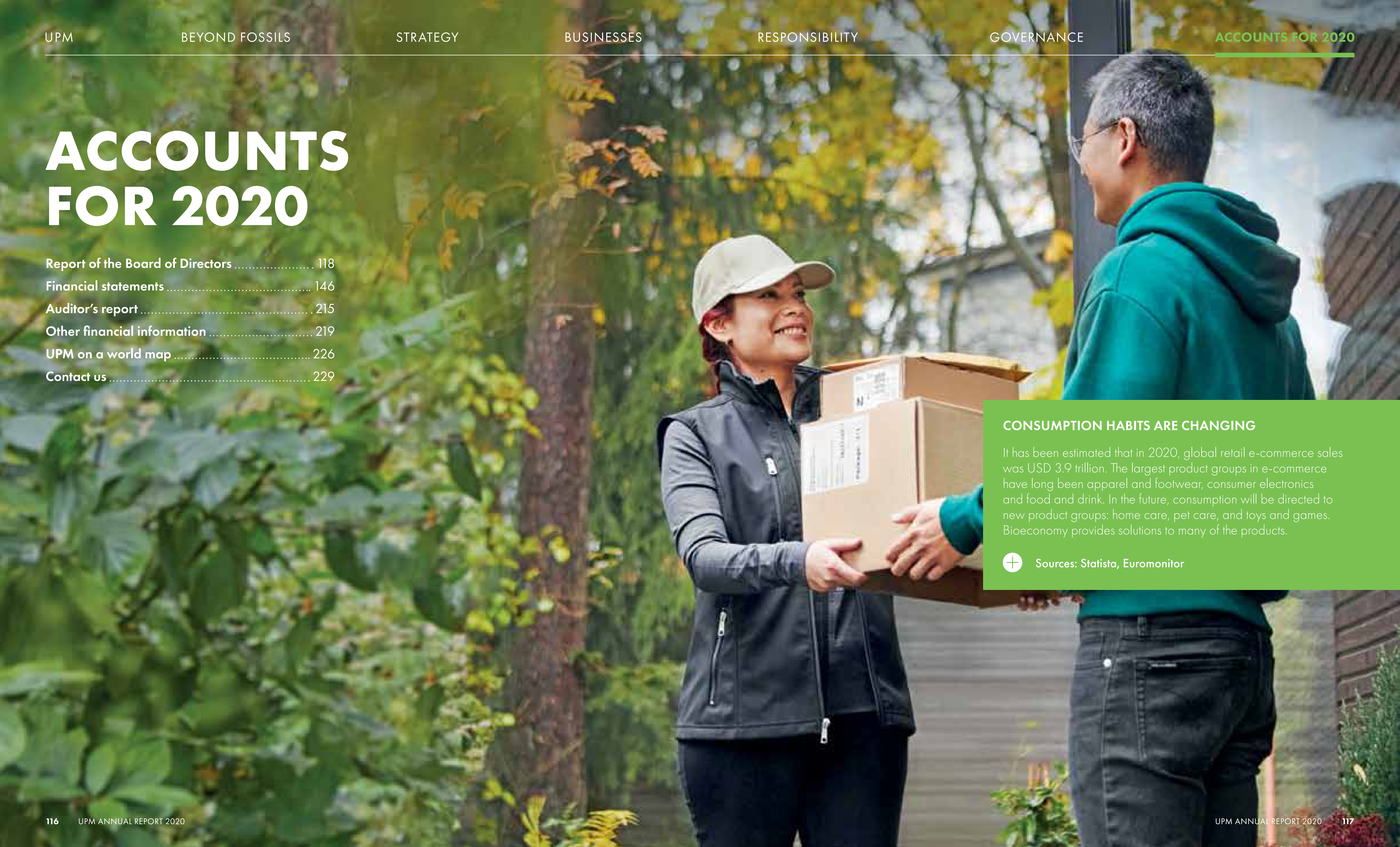
Practitioner's independence, qualifications and quality control
We have complied with the independence and other ethical requirements of the *Code of Ethics for Professional Accountants* issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

Our multi-disciplinary team of corporate responsibility and assurance specialists possesses the requisite skills and experience within financial and non-financial assurance, corporate responsibility strategy and management, social and environmental issues, as well as the relevant industry knowledge, to undertake this assurance engagement.

PricewaterhouseCoopers Oy applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Helsinki 18 February 2021
PricewaterhouseCoopers Oy

Mikko Nieminen	Jussi Nokkala
Partner	Director
Authorised Public Accountant	Sustainability & Climate Change



ACCOUNTS FOR 2020

CONSUMPTION HABITS ARE CHANGING

It has been estimated that in 2020, global retail e-commerce sales was USD 3.9 trillion. The largest product groups in e-commerce have long been apparel and footwear, consumer electronics and food and drink. In the future, consumption will be directed to new product groups: home care, pet care, and toys and games. Bioeconomy provides solutions to many of the products.

Sources: Statista, Euromonitor

Report of the Board of Directors

UPM introduction and business model

UPM leads the forest-based bioindustry into a sustainable and innovation-driven future across six business areas: UPM Biorefining, UPM Energy, UPM Raflatac, UPM Specialty Papers, UPM Communication Papers and UPM Plywood. These business areas are competitive, with strong market positions.

UPM provides sustainable and safe solutions to the growing global consumer demand. Products are made from renewable materials and are recyclable.

UPM group creates value to its stakeholders by operating separate businesses with a focus on:

- Competitive and sustainable wood sourcing, forestry and plantation operations
- Value adding, efficient and responsible global functions
- Continuous improvement (Smart) programmes
- Technology and intellectual property rights
- A global platform to build on
- Disciplined and effective capital allocation
- Compliance with applicable laws and regulations, UPM Code of Conduct and corporate policies

Clear roles and responsibilities

Group	Businesses	Outcomes
Portfolio strategy	Business area strategies	Top performance
Capital allocation	Commercial excellence	Competitive advantage
Business targets	Operational excellence	Value creation
Code of Conduct	Cost efficiency measures	Stakeholder and societal value
Responsibility targets	Focused growth project	License to operate
	Innovation	

Each business area is responsible for executing its own strategy and achieving targets. Group direction and support from global functions enable the businesses to capture benefits from UPM's brand, scale and integration, while navigating the complex operating environment. Capital allocation decisions take place at the group level.

Corporate responsibility is an integral part of all of our operations and a source of competitive advantage. UPM is committed to continuous improvement in financial, social and environmental performance. UPM promotes responsible practices throughout the value chain and is active in finding sustainable solutions, in co-operation with its customers, suppliers and partners.

Market environment in 2020

The COVID-19 pandemic and the related containment measures led to significant uncertainty, a sharp decline in global output and a severe global recession. Global real GDP growth is projected at -4.0% in 2020. The effects of the pandemic varied across industry sectors and caused significant fluctuations in consumer spending. Recovery in China in the second half of the year was robust but at the same time many countries were forced to slow reopening processes, while some even had to reinstate lockdowns.

The pandemic highlighted the urgent need for health and economic policy action. The global trade tensions between major economic regions such as the US and China continued with lower focus in 2020 and Brexit plans remained uncertain throughout the year. The UK-EU Free Trade Agreement was announced just before the UK's year-long transition out of the EU ended at the end of 2020.

In Europe, economic growth is projected at around -6.7% in 2020. The containment measures to prevent the spread of the virus severely impacted the economy and brought about a reduction in consumption. Meanwhile, massive economic policy measures protected businesses somewhat and softened the rise in unemployment.

Economic growth in the US is projected at around -3.6% in 2020. The US failed to keep the spread of COVID-19 under control and the rate of unemployment was weaker than anticipated. However, the financial markets remained resilient and US stocks repeatedly hit record highs as historically large US stimulus packages raised optimism surrounding economic recovery.

In China, economic growth slowed to 2.1%. China managed to suppress the COVID-19 pandemic well. Key industries benefited from strong export. Still, the rebound was unbalanced as private consumption remained weaker and fiscal deficit continued to climb.

Even as the world focused on the pandemic in 2020, seizing the sustainability opportunity continued. As governments took urgent actions and laid the foundations for financial, economic and social recovery, they increasingly integrated climate action into their development plans and pledged support for climate-related investments.

Inflation in advanced economies remained low and below pre-pandemic levels in 2020. However, despite the global economic recession, commodity prices increased in response to supply disruptions and the anticipation of a recovery in 2021. Oil markets were hit by the pandemic and the Russia-Saudi Arabia oil price war. UPM's input costs were lower in comparison with the previous year, especially in fibre.

The US dollar weakened against the euro and other key currencies during 2020. Overall, the impact from changing currencies to UPM's businesses was moderate throughout 2020.

Market demand for UPM's products was both negatively and positively influenced by the COVID-19 pandemic, the related containment measures and the economic recession. Demand for graphic papers was the most severely affected. In Europe, demand for graphic papers was 18% lower than in the previous year. Prices decreased for all paper grades throughout the year.

Global demand growth for chemical pulp continued good in 2020 and market pulp shipments improved from the weak comparison year 2019. Growth was mainly driven by China. Pulp prices decreased significantly from the previous year and were low relative to marginal producers' cash cost levels. However, pulp prices started to improve towards end of the year.

Demand for advanced renewable diesel and naphtha continued to evolve positively, driven by climate change mitigation targets, stricter environmental standards and sustainability.

Finland's electricity consumption was volatile in 2020. Hydropower generation levels were good and above normal at the end of the year. The annual generation of nuclear power was somewhat lower than in the previous year. Electricity sales prices in Finland were lower.

The growth of global demand for self-adhesive label materials was strong in the first half of the year, especially in consumer goods and e-commerce-driven labelling due to COVID-19-related lockdowns and changes in consumer behaviour. In the second half of the year the demand normalised somewhat due to destocking in the customer value chain. However, demand resumed growth partly driven by the second wave of the pandemic towards end of the year.

The growth in demand for label, release and packaging papers was strong and driven by consumable goods and e-commerce. Demand for office paper in the Asia-Pacific region decreased in the first half of the year but improved in the second half. Market prices in China were lower than in the previous year but improved towards the end of the year.

Market demand for plywood in Europe slowed down in 2020. Demand for spruce plywood was good and birch plywood-related industrial applications were modest. Uncertainties in the global economy and intense competition impacted market prices.

Impact of COVID-19 pandemic

The COVID-19 pandemic and the related containment measures around the world continue to represent significant uncertainty in 2021.

Global economy

The COVID-19 pandemic and the related containment measures resulted in a sharp decline in the global economy in 2020. In the first phase of the recession, the pandemic containment measures and lockdowns around the world severely limited or temporarily stopped significant parts of the economy. It is uncertain how potent the following recovery will be and how long it will take for the world economy to reach the pre-pandemic level of activity. Despite the start of vaccinations, additional waves of the epidemic in different parts of the world remain possible.

Safety and business continuity

UPM has implemented extensive precautions to protect the health and safety of its employees and to ensure business continuity and progress of its strategic projects during the pandemic. Despite these efforts, the operation of one or more units or the supply chain and logistics could be temporarily disrupted during the pandemic and the related lockdown measures. In these circumstances some units would need to limit operations or be temporarily shut down.

So far UPM has been able to protect its employees and business continuity well.

Demand for UPM products

Many of UPM products serve essential everyday needs and may therefore see relatively resilient demand during the crisis. These products include pulp, specialty papers and self-adhesive label materials. Even in these businesses, demand is influenced by general economic activity, however.

Demand for graphic papers, plywood and timber is more prone to be impacted by the lockdowns and the recession. The lockdowns limit a wide range of consumer-driven services and retail, as well as work at the office. This has had a negative impact on printed advertising and graphic paper demand during the pandemic.

The lockdowns and the level of economic activity may also affect demand for electricity.

In Q2 2020, graphic paper demand in Europe decreased by 32% from the previous year, as particularly advertising-driven paper consumption and office paper demand were impacted by the lockdowns across Europe. In Q3 2020, there was some recovery in demand, but graphic paper demand remained 18% lower than in the previous year. In Q4 2020, a second wave of COVID-19 was under way in Europe, with gradual introduction of new lockdowns in various countries. Graphic paper demand was 14% lower than in the previous year.

Pulp demand held up relatively well, supported by good demand for tissue and hygiene products as well as for some packaging and specialty paper products. Pulp consumption in graphic paper production decreased.

Demand grew for self-adhesive label materials and specialty papers during the lockdowns, as consumers shifted some of their spending from away-from-home categories to packaged daily consumer goods. E-commerce continued to grow, supporting some labelling and specialty paper applications. In Q2, demand for self-adhesive labels in Europe grew by 10% from the previous year. In Q3 2020, demand for self-adhesive labels in Europe was 3% lower than in the previous year, driven by destocking in the customer value chain. In Q4 2020, demand for self-adhesive labels resumed 7% growth year-on-year, partly impacted by the re-established lockdowns.

Adjusting to different scenarios

The potential impacts to UPM are likely to differ by business and by the phase of the pandemic, lockdown measures, changes in consumer behaviour, the recession and recovery. UPM is using shift arrangements, temporary layoffs, or reduced working hours as required to adjust its operations in different scenarios. During Q3 2020, the company also announced plans to permanently reduce graphic paper production capacity and other plans to improve cost efficiency in different businesses and functions.

Projects and maintenance shutdowns

The pandemic and the required health and safety measures add challenge to large investment projects and maintenance shutdowns. UPM's transformative pulp project in Uruguay and biochemicals project in Germany are proceeding with strict health and safety controls. Despite these efforts, some changes to the detailed timeline of the projects are possible during the pandemic and the related containment measures. Currently the projects proceed in line with the planned start-up timeline.

In April TVO announced that fuel loading into the OL3 reactor would not happen as planned in June 2020, TVO announced an updated schedule in August 2020.

UPM rescheduled two pulp mill maintenance shutdowns from Q2 2020 to Q4 2020 due to the pandemic. The two shutdowns were successfully completed in Q4 with strict health and safety controls.

Financing

UPM's financial position is strong. UPM's net debt was EUR 56 million at the end of Q4 2020. Cash funds and unused committed credit facilities totalled EUR 3.2 billion at the end of Q4 2020. This includes the sustainability-linked five-year EUR 750 million revolving credit facility signed during Q1 2020, the EUR 550 million of bilateral committed credit facilities signed during Q2 2020 and EUR 158 million equivalent rolling overdraft facility. During Q4 2020, UPM successfully issued a EUR 750 million Green Bond under its EMTN (Euro Medium Term Note) programme. The facilities and UPM's outstanding debt have no financial covenants.

Key figures

	2020	2019	2018
Sales, EURm	8,580	10,238	10,483
Comparable EBITDA, EURm	1,442	1,851	1,868
% of sales	16.8	18.1	17.8
Operating profit, EURm	761	1,344	1,895
Comparable EBIT, EURm	948	1,404	1,513
% of sales	11.1	13.7	14.4
Profit before tax, EURm	737	1,307	1,839
Comparable profit before tax, EURm	924	1,367	1,457
Profit for the period, EURm	568	1,073	1,496
Comparable profit for the period, EURm	737	1,119	1,194
Earnings per share (EPS), EUR	1.05	1.99	2.80
Comparable EPS, EUR	1.37	2.07	2.24
Return on equity (ROE), %	5.8	10.7	16.2
Comparable ROE, %	7.5	11.2	12.9
Return on capital employed (ROE), %	6.7	12.3	18.4
Comparable ROCE, %	8.3	12.8	14.6
Operating cash flow, EURm	1,005	1,847	1,330
Operating cash flow per share, EUR	1.89	3.46	2.49
Equity per share at the end of period, EUR	17.53	18.87	18.36
Capital employed at the end of period, EURm	11,555	11,474	10,575
Net debt, EURm	56	-453	-311
Net debt to EBITDA	0.04	-0.24	-0.17
Personnel at the end of period	18,014	18,742	18,978

» Refer Other financial information Alternative performance measures for definitions of key figures.

Results

2020 compared with 2019

Sales in 2020 were EUR 8,580 million, 16% lower than the EUR 10,238 million for 2019. Sales decreased for UPM Communication Papers, UPM Biorefining, UPM Specialty Papers, UPM Plywood and UPM Energy, and increased slightly for UPM Raflatac.

Comparable EBIT decreased by 32% to EUR 948 million, which was 11.1% of sales (1,404 million, 13.7%).

Sales prices decreased for all UPM's business areas, mostly in UPM Biorefining and UPM Communication Papers. At the group level, the negative impact of lower sales prices was clearly larger than the positive impact of decreased variable costs.

Fixed costs decreased by EUR 140 million, partly due to temporary measures to adjust to the COVID-19 pandemic. Production and delivery volumes were lower, especially for UPM Communication Papers, as the COVID-19 pandemic and the related containment measures reduced demand for graphic papers. The industry-wide strike in Finland impacted both delivery volumes and fixed costs in the first quarter of 2020.

Depreciation, excluding items affecting comparability, totalled EUR 471 million (477 million) including depreciation of leased assets totalling EUR 73 million (72 million). The change in the fair value of forest assets net of wood harvested was EUR -25 million (26 million).

Operating profit totalled EUR 761 million (1,344 million). Items affecting comparability in operating profit totalled EUR -187 million in the period (-60 million), including EUR 90 million in restructuring charges related to the closure of the UPM Kaipola paper mill, EUR 85 million in restructuring charges related to closure of the UPM Chapelle paper mill, EUR 23 million in restructuring charges related to the closure of the Jyväskylä plywood mill, EUR 6 million in charges related to the restructuring of the functions of UPM Communication Papers, EUR 9 million in charges related to restructuring of the functions of UPM Raflatac, earnings of EUR 12 million on the sale of the group's share in Kainuun Voima Oy and earnings of EUR 11 million on the sale of other non-current assets.

Net interest and other finance income and costs were EUR -26 million (-38 million). Exchange rate and fair value gains and losses were EUR 2 million (0 million). Income taxes totalled EUR 169 million (234 million).

Profit for 2020 was EUR 568 million (1,073 million), and comparable profit was EUR 737 million (1,119 million).

Financing and cash flow

In 2020 cash flow from operating activities before capital expenditure and financing totalled EUR 1,005 million (1,847 million). Working capital increased by EUR 93 million (decreased by 276 million).

Net debt was EUR 56 million at the end of Q4 2020 (-453 million). The gearing ratio as of 31 December 2020 was 1% (-4%). The net debt to EBITDA ratio, based on the last 12 month's EBITDA, was 0.04 at the end of the period (-0.24).

On 31 December 2020 UPM's cash funds and unused committed credit facilities totalled EUR 3.2 billion. This includes the sustainability-linked five-year EUR 750 million revolving credit facility signed in Q1 2020, the EUR 550 million of bilateral committed credit facilities signed in Q2 2020 and the EUR 158 million equivalent rolling overdraft facility.

On 13 November 2020 UPM issued a EUR 750 million Green Bond under its EMTN (Euro Medium Term Note) programme.

A dividend of EUR 1,30 per share (totalling EUR 693 million) was paid on 16 April 2020 for the 2019 financial year.

Capital expenditure

In 2020, capital expenditure totalled EUR 903 million, which was 10.5% of sales (378 million, 3.7% of sales). Capital expenditure does not include additions to leased assets.

In 2021, UPM's total capital expenditure, excluding investments in shares, is expected to be about EUR 2,000 million, which includes estimated capital expenditure of approximately EUR 1,800 million in transformative projects. Transformative projects consist of the new pulp mill, port operations, local investments outside the mill fence in Uruguay and the biochemicals biorefinery in Germany.

In April 2018, UPM announced that it would rebuild paper machine 2 at its Nordland mill in Dörpen, Germany, and convert it from fine paper to glassine paper production. The machine was equipped with new finishing equipment and started producing glassine paper in Q1 2020. The capacity after the rebuild is 110,000 tonnes per year. The total investment in Nordland was EUR 124 million.

In January 2019, UPM announced that it would invest in the refurbishment of the Kuusankoski hydropower plant in Finland. The average annual production of the Kuusankoski plant is expected to increase from the current 180 GWh to 195 GWh. The investment will be completed by the end of 2022.

In July 2019, UPM announced that it would invest USD 2.7 billion in a 2.1 million tonne greenfield eucalyptus pulp mill near Paso de los Toros in central Uruguay. Additionally, UPM will invest approximately USD 280 million in port operations in Montevideo and USD 70 million in local investments outside the mill fence, including a new residential area in Paso de los Toros. The mill is scheduled to start up in the second half of 2022.

In October 2019, UPM announced that it would invest EUR 95 million in a Combined Heat and Power (CHP) plant at the UPM Nordland paper mill in Germany. The plant is planned to go on grid in Q3 2022. The annual cost savings of more than EUR 10 million will begin in 2023. The investment is estimated to decrease UPM's CO_2-footprint by 300,000 tonnes.

In January 2020, UPM announced that it would invest EUR 550 million in a 220,000 tonnes next-generation biochemicals biorefinery in Leuna, Germany. The facility is scheduled to start up by the end of 2022.

Personnel

In 2020, UPM had an average of 18,557 employees (19,185). At the beginning of the year the number of employees was 18,742 and at the end of 2020 it was 18,014.

*Further information about personnel is available in **» Our People** section in UPM Annual report 2020.*

Uruguay pulp mill investment

On 23 July 2019, UPM announced that it would invest USD 2.7 billion in a 2.1 million tonne greenfield eucalyptus pulp mill near Paso de los Toros in central Uruguay. Additionally, UPM will invest approximately USD 280 million in port operations in Montevideo and USD 70 million in local investments outside the mill fence, including a new residential area in Paso de los Toros. The mill is scheduled to start up in the second half of 2022.

The investment will grow UPM's current pulp capacity by more than 50%, resulting in a step change in the scale of UPM's pulp business as well as in UPM's future earnings.

With a combination of competitive wood supply, scale, best available techniques and efficient logistics, the mill is expected to reach a highly competitive cash cost level of approximately USD 280 per delivered tonne of pulp. This figure includes the variable and fixed costs of plantation operations, wood sourcing, mill operations and logistics delivered to the main markets. Furthermore, the safety and sustainability performance of the value chain from plantations to customer delivery is expected to be on an industry-leading level.

Competitive wood supply

Eucalyptus availability for the mill is secured through UPM's own and leased plantations, as well as through wood sourcing agreements with private partners. The plantations that UPM owns and leases in Uruguay cover 434,000 hectares. They will supply the current UPM Fray Bentos mill and the new mill near Paso de los Toros.

State of the art mill design

The pulp mill has been designed as an efficient single-line operation. The machines, materials, level of automation and standards enable a high operating rate and maintainability, as well as high energy output. This ensures excellent safety, high environmental performance and low operating costs during the long lifecycle of the mill.

The mill is designed to fully meet the strict Uruguayan environmental regulations, as well as international standards and recommendations for modern mills, including the use of the latest and best available technology (BAT). The mill's environmental performance will be verified through comprehensive and transparent monitoring.

The mill's initial annual production capacity is 2.1 million tonnes, and the environmental permits enable further capacity potential. When in operation, the mill generates more than 110 MW surplus of renewable electricity.

Efficient logistics set-up

An efficient logistics chain will be secured by the agreed road improvements, extensive railway modernization and port terminal construction.

The Public-Private-Partnership agreement between the government and the construction company for the construction of the central railway was signed in May 2019. Works on the central railway are proceeding with earth moving and levelling, but the overall rail project is currently behind the original schedule by several months. UPM has a contingency plan in place to ensure logistics with truck transportation in case of a delay.

UPM is proceeding with the construction of a deep-sea pulp terminal at Montevideo port with an investment of approximately USD 280 million. Direct rail access from the mill to a modern deep-sea port terminal creates an efficient supply chain to world markets. The Montevideo deep-sea port also enables synergies in ocean logistics with UPM's existing Uruguay operations.

UPM has entered into a port terminal concession agreement in 2019 and signed an agreement on rail logistics services in October 2020. Both agreements are considered in accordance with IFRS 16 Leases. The total amount of such lease payments is expected to be USD 200 million.

Significant impact on the Uruguayan economy

Based on independent socioeconomic impact studies, the mill is estimated to increase Uruguay's gross national product by about 2% and the annual value of Uruguay's exports by approximately 12% after completion.

In the most intensive construction phase, more than 6,000 people will be working on the site. When completed, approximately 10,000 permanent jobs are estimated to be created in the Uruguayan economy of which approximately 4,000 would involve direct employment by UPM and its subcontractors. About 600 companies are estimated to be working in the value chain.

The mill will be located in one of Uruguay's many free trade zones and will pay a fixed annual tax of USD 7 million. The mill's value chain is expected to contribute USD 170 million in annual taxes and social security payments and to contribute USD 200 million annually in wages and salaries.

Project schedule and capital outflow

The mill is expected to start up in the second half of 2022. The project is proceeding according to the planned schedule. Approximately 3,000 people are currently working on the project at the various construction sites. Due to the COVID-19 health emergency, special protocols are in place and UPM is swabbing all workers at the pulp mill site in Paso de los Toros returning to work after the holiday period in January 2021.

At the pulp mill site in Paso de los Toros, civil works are progressing in all main process areas, including wood handling, recovery island, fibre line, drying and bale unloading according to the plans. Moreover, the mechanical erection phase started in January 2021 as planned.

The temporary and permanent housing construction are also proceeding as planned, with about 90% of the works completed, and housing areas are already in use by the construction workers.

At the pulp terminal in Montevideo, main pier and tank area construction are proceeding and the pulp warehouse and unloading area erection is ongoing.

The main part of the total capital expenditure of USD 3 billion will take place in 2020-2022. UPM will hold 91% ownership of the project and a local long-term partner which has also been involved in UPM Fray Bentos, owns 9%. UPM's investment will mainly be financed from operating cash flow complemented by regular group financing activities.

Biochemicals refinery investment

On 30 January UPM announced that it would invest EUR 550 million in a 220,000 tonnes next-generation biochemicals refinery in Leuna, Germany. The biorefinery is scheduled to start up by the end of 2022.

The biorefinery will produce a range of 100% wood-based biochemicals, which will enable a switch from fossil raw materials to sustainable alternatives in various consumer-driven end-uses. The investment opens totally new markets for UPM, with large growth potential for the future.

An industrial scale biorefinery will convert solid wood into next generation biochemicals: bio-monoethylene glycol (BioMEG) and lignin-based renewable functional fillers. In addition, the biorefinery will produce bio-monopropylene glycol (BioMPG) and industrial sugars. Once the facility is fully ramped up and optimized, it is expected to achieve the ROCE target of 14%.

A combination of sustainable wood supply, a unique technology concept, integration into existing infrastructure at Leuna as well as the proximity to customers will ensure the competitiveness of operations. The safety and sustainability of the value chain will be based on UPM's high standards.

InfraLeuna GmbH, in the state of Saxony-Anhalt, offers very competitive conditions for constructing a biorefinery with its existing permitting processes, logistics arrangements and infrastructure for various services and utilities. In October 2020, UPM has entered into service agreements with InfraLeuna GmbH related to wood handling, wastewater treatment and other utilities, which will be recognised as lease assets and liabilities under IFRS 16 Leases upon commencement date. The total amount of such lease assets and liabilities is estimated to be EUR 100 million.

Construction of the biorefinery at Leuna has commenced. Permitting has proceeded in accordance with German legislation and the first permits have been received as planned. Detailed engineering and procurement activities are proceeding at full speed.

Biofuels business development

In January 2021, UPM announced that it moves forward with biofuels growth plans and starts the basic engineering phase of a next generation biorefinery. The potential biorefinery would have an annual capacity of 500,000 tonnes of high-quality renewable fuels including sustainable jet fuel. The products would significantly reduce carbon footprint in the road transport and aviation, as well as replace fossil raw materials with renewable alternatives in chemicals and bioplastics. In the feedstocks, UPM's wood biomass-based residues and side streams play a substantial role. In addition, it would use sustainable liquid waste and residue raw materials.

UPM is proceeding with a detailed commercial and basic engineering study to define the business case, select the innovative technology option and estimate the investment need. During the study UPM will also review the operating environment primarily in two locations: Kotka, Finland and Rotterdam, the Netherlands.

The estimated duration of this basic engineering phase is minimum 12 months. If all preparations are concluded successfully, UPM would initiate the company's standard procedure of analyzing and preparing an investment decision.

OL3 power plant project

Teollisuuden Voima Oyj (TVO) is in the process of constructing a third nuclear power plant unit, OL3 EPR, at the Olkiluoto site (OL3). UPM participates in OL3 through its shareholding in Pohjolan Voima Oyj (PVO), which is the majority shareholder in TVO. UPM's indirect share of OL3 is approximately 31%. The OL3 plant supplier, a consortium consisting of AREVA GmbH, AREVA NP SAS and Siemens AG (Supplier), is constructing OL3 as a turnkey project.

The start of regular electricity production, originally scheduled for April 2009, has been revised several times by the Supplier. TVO announced in August 2020 having received an updated re-baseline schedule on the commissioning of OL3 from Supplier. According to the schedule fuel will be loaded into the reactor in March 2021, OL3 will be connected to the grid in October 2021, and regular electricity production will start in February 2022.

The new management of Areva, the supplier party, is preparing a financial solution to complete OL3 project by the end of the guarantee period. TVO is also negotiating with the supplier on the terms of completing the OL3 project.

When completed, OL3 will supply electricity to its shareholders on a cost-price principle (Mankala-principle) which is widely applied in the Finnish energy industry. Under the Mankala-principle electricity and/or heat is supplied to the shareholders in proportion to ownership, and each shareholder is, pursuant to the specific stipulations of the respective articles of association, severally responsible for its respective share of the production costs of the energy company concerned. OL3 will increase UPM Energy's electricity generation capacity significantly. The new power plant unit is expected to be highly efficient and meet the highest safety standards. Its power generation will be CO_2 -free and Olkiluoto will have a secure solution for the final disposal of used fuel.

Events during the year 2020

On 27 January, several Finnish labour unions began extensive labour actions in the Finnish forestry industry.

On 27 January, UPM announced its commitment to the United Nations Global Compact's Business Ambition for 1.5°C, joining leading companies in a promise to pursue science-based measures to limit the global temperature rise to 1.5°C. UPM will strive to mitigate climate change and drive value creation by innovating novel products, committing to a 65% CO_2 emission reduction from 2015 levels by 2030 and by practicing sustainable forestry.

On 28 January, UPM announced that it has started the employee consultation processes for the potential closure of the UPM Chapelle newsprint mill in Grand-Couronne, France.

On 30 January, UPM announced that it would invest EUR 550 million in a 220,000 tonnes next generation biochemicals refinery in Leuna, Germany. The facility is scheduled to start up by the end of 2022.

On 30 March, UPM withdrew its outlook for 2020, due to the uncertainty caused by the COVID-19 pandemic for the rest of the year.

On 8 April, an Olkiluoto 3 ERP unit nuclear fuel loading permission application was submitted. TVO also announced, that due to the COVID-19 pandemic, fuel loading into the reactor will not happen as planned in June 2020, and that it is possible that regular electricity production will be delayed respectively.

On 15 May, UPM announced that UPM and the new Government of Uruguay had signed a memorandum of understanding on pending items related to UPM's growth project in Uruguay. UPM will accelerate the earlier planned USD 60 million financing of the road infrastructure development and invest USD 68 million in electrical grid reinforcement.

On 18 May, UPM announced that it would sell its 50% share in Kainuun Voima Oy to Kajaanin Energiatuotanto Oy, owned by the city of Kajaani. In addition, the city of Kajaani will acquire five properties owned by UPM. The total amount of share and real estate transactions was EUR 19 million. The transaction was completed on 1 July.

On 2 June, UPM announced the plan that it has started a consultation process for the potential closure of the UPM Jyväskylä plywood mill in Finland. The plywood mill is producing spruce and birch plywood and it employs 167 people. UPM has recognized restructuring charges of EUR 22 million as items affecting comparability in its Q2 2020 results. The planned actions would result in annual savings of approximately EUR 11 million.

On 16 July, UPM announced the decision to permanently close the UPM Chapelle newsprint mill in France, reducing annual capacity of newsprint by 240,000 tonnes. The number of people affected was 228. UPM recognizes restructuring charges in total of EUR 78 million, whereof EUR 61 million as cash costs. EUR 45 million was booked as items affecting comparability in Q1 2020 and EUR 33 million in Q2 2020. The action will result in annual savings of approximately EUR 30 million.

On 21 July, UPM announced the decision to permanently close the UPM Jyväskylä plywood mill. The reduction in personnel is 147.

On 26 August, UPM announced the plans for the permanent closure of the UPM Kaipola paper mill in Finland, the sale of the UPM Shotton paper mill in Wales and the streamlining of UPM Communication Papers business function teams.

The planned closure of the three paper machines at UPM Kaipola would impact approximately 450 positions and lead to a permanent reduction of 720,000 tonnes of graphic paper capacity, thereof 450,000 tonnes of newsprint and 270,000 tonnes of coated mechanical paper. UPM Communication Papers plans to reorganise and streamline its business function teams would affect approximately 170 positions in more than 10 countries. UPM's plan to sell its UPM Shotton paper mill for conversion purposes would impact production capacity of 250,000 tonnes of newsprint.

In addition, UPM announced UPM Biorefining and UPM Specialty Papers plans to reorganize and streamline activities in the Finnish pulp mills, UPM Forest and the UPM Tervasaari mill in Finland. UPM will begin the employee consultation process at its Kymi, Kaukas and Pietarsaari pulp mills. These plans would lead to a reduction of 110 positions. In the Finnish forest organization, the planned measures would affect maximum 60 positions. At UPM Specialty Papers, the planned measures would impact approximately 50 positions at the UPM Tervasaari mill.

UPM will recognise restructuring charges of approximately EUR 115 million (EUR 55 million cash impact and EUR 60 million as write-offs) as items affecting comparability in its Q3 2020 results, mainly related to the planned actions at UPM Communication Papers. The planned actions would result in total annual cost savings of approximately EUR 75 million.

On 28 August, TVO announced that it had received an updated schedule from the plant supplier Areva-Siemens consortium for the commissioning of the OL3 EPR plant unit. According to the schedule, the fuel will be loaded into the reactor in March 2021, the plant unit will be connected to the national electricity grid in October of the same year and regular electricity generation will start in February 2022.

On 21 September UPM announced that it has been recognised as a UN Global Compact LEAD participant for its strong commitment to responsible business. UPM has held LEAD participant status since 2016.

On 6 October, UPM announced plans to simplify organisation and increase efficiency at UPM Raflatac and in global functions. The plans would reduce approximately 100 positions at UPM Raflatac and 70 positions from global functions. The plans would result in annual savings of approximately EUR 12 million.

On 15 October, UPM announced that employee consultations were concluded and the UPM Kaipola mill in Finland will be closed permanently. The number of persons affected will be 448. The mill was closed in early January 2021.

On 5 November UPM established a EUR 3 billion Euro Medium Term Note (EMTN) programme and launched a Green Finance Framework. UPM's framework was rated with the highest grade, CICERO Dark Green.

On 13 November UPM issued its first Green Bond under the EMTN programme with a nominal value of EUR 750 million. The bond matures in November 2028 and pays a fixed coupon of 0.125%. There are no financial covenants connected to the bond.

On 16 November UPM announced that it has been listed as the forest and paper industry leader in the Dow Jones European and World Sustainability Indices (DJSI) for 2020–2021.

On 18 November UPM announced that it has applied for listing of a EUR 750 million Green Bond under its EMTN programme to Irish Stock Exchange plc, trading as Euronext Dublin.

On 2 December UPM announced that it has completed the employee consultation process in global functions and decrease the number of positions by 67. UPM has also concluded the consultations regarding the reorganisation and restructuring at the Finnish pulp mills and UPM Forest and reduce 135 positions.

On 8 December UPM announced that is has been recognised with CDP's Triple A score for tackling climate change and taking actions to ensure sustainable forest management and water security.

Events after the balance sheet date

On 19 January, UPM announced that it would invest EUR 13 million in UPM Raflatac's new production line in Nowa Wieś, Poland. The investment will increase UPM Raflatac's Direct Thermal (DT) Linerless annual production capacity by 100 million m2. The new production line is expected to be operational at the end of 2021.

On 28 January, UPM announced that it moves forward with biofuels growth plans and starts the basic engineering phase of a next generation biorefinery.

Outlook for 2021

The global economy is expected to start recovering in 2021 from the deep downturn experienced in 2020. World regions will progress at different pace, and China is leading this development. Demand for most UPM products is influenced by overall economic activity and hence, depends on the shape and rate of the economic recovery.

The COVID-19 pandemic continues to cause significant uncertainty in 2021. In 2020, lockdowns had a significant negative impact on graphic paper demand but supported the strong demand for self-adhesive labelling materials and specialty papers. Opening of the economies are likely to allow for some normalisation of these demand impacts. However, further waves of the pandemic and related lockdowns remain possible.

In the beginning of 2021, pulp prices are expected to increase compared with Q4 2020. Paper prices are expected to decrease moderately, compared with Q4 2020.

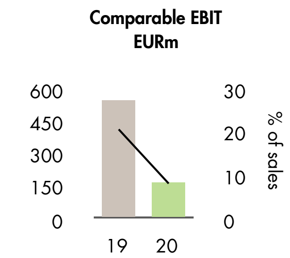
UPM will continue to implement measures to decrease fixed and variable costs.

UPM's comparable EBIT in H1 2021 is expected to be lower than in H1 2020, due to lower paper prices and higher maintenance activity. Comparable EBIT is expected to recover in H2 2021.

Business area reviews

UPM Biorefining

UPM Biorefining consists of pulp, timber and Biofuels businesses. UPM Pulp offers a versatile range of pulp grades suitable for a wide range of end uses. UPM Timber offers certified sawn timber and UPM Biofuels produces wood-based renewable diesel for all diesel engines and renewable naphtha that can be used as a biocomponent for gasoline or for replacing fossil raw materials in the petrochemical industry.



	2020	2019
Sales, EURm	2,183	2,712
Comparable EBITDA, EURm	348	724
% of sales	15.9	26.7
Change in fair value of forest assets and wood harvested, EURm	-8	-11
Share of results of associates and joint ventures, EURm	2	2
Depreciation, amortisation and impairment charges, EURm	-176	-171
Operating profit, EURm	166	544
% of sales	7.6	20.1
Items affecting comparability in operating profit, EURm	–	–
Comparable EBIT, EURm	166	544
% of sales	7.6	20.1
Capital employed (average), EURm	3,620	3,469
Comparable ROCE, %	4.6	15.7
Pulp deliveries, 1,000 t	3,664	3,715

2020 compared with 2019

Comparable EBIT for UPM Biorefining decreased due to lower pulp sales prices. Wood and other variable costs were lower. Fixed costs were higher due to the more expensive scheduled maintenance shutdowns in 2020. The strike in Finland in the first quarter of 2020 impacted delivery volumes.

The average price in euro for UPM's pulp deliveries decreased by 24%.

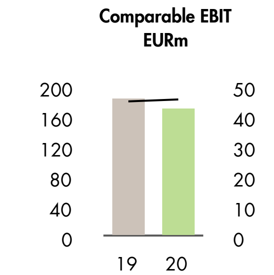
Market environment

- Global chemical pulp demand was good in 2020. Demand growth was mainly driven by China. Global shipments of market pulp improved from the weak year 2019.
- In 2020, the average European market price in euro was 16% lower for NBSK and 22% lower for BHKP, compared to 2019. In China the average market price in US dollars was 7% lower for NBSK and 19% lower for BHKP, compared to 2019.
- Good demand for advanced renewable diesel and naphtha.
- Demand for sawn timber was strong in Q4 2020. Market prices remained stable.

Sources: FOEX, UPM

UPM Energy

UPM Energy generates cost-competitive, zero-carbon electricity. Operations also include physical electricity and financial portfolio management as well as services to industrial electricity consumers and producers.



	2020	2019
Sales, EURm	379	417
Comparable EBITDA, EURm	178	195
% of sales	47.0	46.7
Depreciation, amortisation and impairment charges, EURm	-10	-9
Operating profit, EURm	184	184
% of sales	48.7	44.2
Items affecting comparability in operating profit, EURm [1]	14	-1
Comparable EBIT, EURm	171	185
% of sales	45.0	44.4
Capital employed (average), EURm	2,313	2,454
Comparable ROCE, %	7.4	7.5
Electricity deliveries, GWh	9,168	8,619

[1] 2020 items affecting comparability include EUR 3 million charges related to restructuring of ownership in Alholmens Kraft power plant, EUR 12 million gain on sale of group's share in Kainuun Voima Oy and EUR 5 million income relating to reversal of unused restructuring provisions. 2019 items affecting comparability relate to restructuring of ownership in Meri-Pori power plant.

2020 compared with 2019

Comparable EBIT for UPM Energy decreased due to lower electricity sales prices. Hydropower generation was higher. Fixed costs for nuclear were higher due to the low comparison period.

UPM's average electricity sales price decreased by 13% to EUR 36.5/MWh (41.9/MWh).

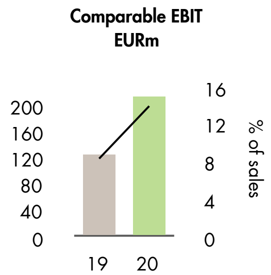
Market environment

- In Finland, Sweden and Norway, 2020 was the warmest year on record. The Nordic hydrological balance was above normal at the end of December. In Finland, the hydrological situation was good.
- The CO_2 emission allowance price of EUR 32.7/tonne at the end of 2020 was higher than at the end of 2019 (EUR 24.6/tonne).
- The average Finnish area spot price on the Nordic electricity exchange in 2020 was EUR 28.0/MWh, 36% lower than in 2019 (44.0/MWh).

Sources: The Norwegian Water Resources and Energy Directorate, Svensk Energi, Finnish Environment Institute, Nord Pool, NASDAQ OMX, Bloomberg, UPM

UPM Raflatac

UPM Raflatac offers innovative and sustainable self-adhesive label materials for branding and promotion, information and functional labelling in the food, beverage, personal care, pharmaceutical and logistics segments, for example.



	2020	2019
Sales	1,560	1,555
Comparable EBITDA, EURm	252	166
% of sales	16.2	10.7
Depreciation, amortisation and impairment charges, EURm	-39	-40
Operating profit, EURm	205	124
% of sales	13.2	8.0
Items affecting comparability in operating profit, EURm [1]	-9	-2
Comparable EBIT, EURm	214	126
% of sales	13.7	8.1
Capital employed (average), EURm	542	579
Comparable ROCE, %	39.5	21.8

[1] 2020 items affecting comparability include restructuring charges. 2019 items affecting comparability include EUR 2 million gain on sale of non-current assets and EUR 4 million of restructuring charges.

2020 compared with 2019

Comparable EBIT for UPM Raflatac increased, due to improved mix and margin management. Delivery volumes were higher. Fixed costs were lower.

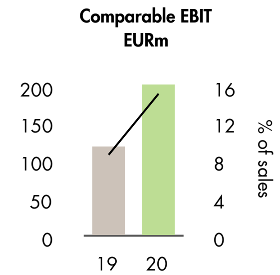
Market environment

- In H1 2020, demand was particularly strong in the daily consumer goods and e-commerce-driven labelling due to the COVID-19-related lockdowns and changes in consumer behaviour. In Q3 2020, demand declined in Europe compared to the previous quarter due to destocking in the customer value chain. In Q4 2020, demand resumed growth partly driven by the second wave of the pandemic.
- In North America, demand was steady at a good level in 2020.

Sources: UPM, FINAT, TLMI

UPM Specialty Papers

UPM Specialty Papers offers labelling and packaging materials as well as office and graphic papers for labelling, commercial siliconising, packaging, office use and printing.



	2020	2019
Sales	1,324	1,412
Comparable EBITDA, EURm	273	194
% of sales	20.6	13.7
Depreciation, amortisation and impairment charges, EURm	-73	-74
Operating profit, EURm	206	120
% of sales	15.5	8.5
Items affecting comparability in operating profit, EURm [1]	6	–
Comparable EBIT, EURm	199	120
% of sales	15.0	8.5
Capital employed (average), EURm	897	904
Comparable ROCE, %	22.2	13.3
Paper deliveries, 1000 t	1,596	1,552

[1] 2020 items affecting comparability include gains on sale of non-current assets.

2020 compared with 2019

Comparable EBIT for UPM Specialty Papers increased mainly due to lower input costs. Delivery volumes increased. Sales prices were lower.

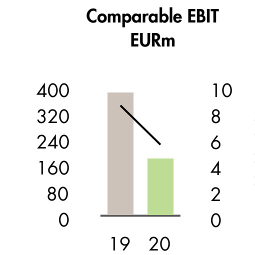
Market environment

- In H1 2020, fine paper demand in the Asia-Pacific region weakened due to COVID-19-related lockdowns. In H2 2020, fine paper demand improved.
- In H1 2020, China fine paper market prices decreased to low levels. In H2 2020, prices started to increase towards end of the year.
- Demand growth for label, release and packaging paper was strong in 2020. Demand was driven by consumable goods and e-commerce as demand for durable goods was negatively impacted by COVID-19 and uncertainties in economy. Sales prices remained stable in 2020.

Sources: UPM, RISI, Pöyry, AWA

UPM Communication Papers

UPM Communication Papers offers an extensive product range of sustainably produced graphic papers for advertising and publishing as well as home and office uses.



	2020	2019
Sales	3,333	4,552
Comparable EBITDA, EURm	300	513
% of sales	9.0	11.3
Share of results of associates and joint ventures, EURm	0	1
Depreciation, amortisation and impairment charges, EURm	-179	-145
Operating profit, EURm	9	324
% of sales	0.3	7.1
Items affecting comparability in operating profit, EURm [1]	-170	-58
Comparable EBIT, EURm	180	383
% of sales	5.4	8.4
Capital employed (average), EURm	1,446	1,647
Comparable ROCE, %	12.4	23.2
Paper deliveries, 1000 t	5,466	6,774

[1] 2020 items affecting comparability include EUR 74 million restructuring charges and EUR 11 million impairment charges related to closure of Chapelle mill in France, EUR 43 million restructuring charges and EUR 47 million impairment charges relating to closure of Kaipola mill in Finland. EUR 6 million charges relate to restructuring of business functions and EUR 11 million income to prior capacity closures. 2019 items affecting comparability include EUR 15 million restructuring charges and EUR 12 million impairment charges related to closure of PM2 at UPM Rauma mill, and EUR 24 million restructuring charges and EUR 1 million impairment charges related to closure of PM10 at UPM Plattling mill. EUR 6 million charges relate to prior capacity closures and establishment of new Business Service Hub in Poland.

2020 compared with 2019

Comparable EBIT for UPM Communication Papers decreased due to lower delivery volumes. The COVID-19 pandemic and the related lockdown measures impacted graphic papers demand. The strike in Finland impacted production in Q1 2020. Sales prices were lower and more than offset the positive impact of lower variable costs. Fixed costs decreased. The average price in euro for UPM's paper deliveries decreased by 11%.

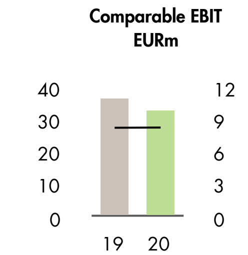
Market environment

- In 2020, demand for graphic papers in Europe was 18% lower than in the previous year. Newsprint demand decreased by 18%, magazine papers by 18% and fine papers by 18%.
- In 2020, publication paper prices in Europe were 12% and fine paper prices 6% lower compared to 2019.
- In 2020, demand for magazine papers in North America decreased by 25% compared to 2019. The average price in US dollars for magazine papers decreased by 6% compared to 2019.

Sources: PPI/RISI, Euro-Graph, PPPC

UPM Plywood

UPM Plywood offers high quality WISA® plywood and veneer products for construction, vehicle flooring, LNG shipbuilding, parquet manufacturing and other industrial applications.



	2020	2019
Sales	405	450
Comparable EBITDA, EURm	59	61
% of sales	14.6	13.5
Depreciation, amortisation and impairment charges, EURm	-35	-25
Operating profit, EURm	10	36
% of sales	2.5	8.0
Items affecting comparability in operating profit, EURm [1]	-23	–
Comparable EBIT, EURm	33	36
% of sales	8.0	8.0
Capital employed (average), EURm	292	329
Comparable ROCE, %	11.2	11.0
Plywood deliveries, 1,000 m3	683	739

[1] 2020 items affecting comparability include EUR 15 million restructuring charges and EUR 8 million impairment charges related to closure of Jyväskylä plywood mill in Finland.

2020 compared with 2019

Comparable EBIT for UPM Plywood decreased slightly mainly due to lower delivery volumes and sales prices. Delivery volumes were impacted by the strike in Finland in Q1 2020. Fixed costs were significantly lower.

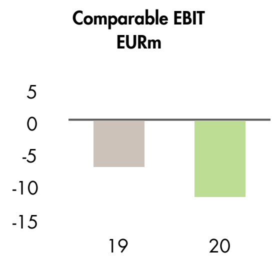
Market environment

- In H1 2020, demand for spruce plywood was solid. In H2 2020, demand was strong.
- In H1 2020, demand for birch plywood-related industrial applications was negatively impacted by COVID-19, and competition tightened. In H2 2020, demand remained modest but started to improve in Q4 2020.

Source: UPM

Other operations

Other Operations includes UPM Forest, UPM Biochemicals, UPM Biocomposites and UPM Biomedicals business units as well as group services. UPM Forest secures competitive wood and biomass for UPM businesses and manages UPM-owned and privately-owned forests in North Europe. In addition, UPM Forest offers forestry services to forest owners and forest investors.



	2020	2019
Sales, EURm	225	264
Comparable EBITDA, EURm	34	-18
Change in fair value of forest assets and wood harvested, EURm	-17	38
Share of results of associated companies and joint ventures, EURm	1	–
Depreciation, amortisation and impairment charges, EURm	-30	-27
Operating profit, EURm	-15	-10
Items affecting comparability in operating profit, EURm [1]	-3	-4
Comparable EBIT, EURm	-12	-7
Capital employed (average), EURm	1,901	1,824
Comparable ROCE, %	-0.6	-0.4

[1] 2020 items affecting comparability relate to restructuring charges. 2019 items affecting comparability of EUR 2 million relate to restructuring charges and EUR 2 million to capital loss on sale of Voikkaa mill site in Finland.

2020 compared with 2019

Comparable EBIT for other operations decreased. The change in the fair value of forest assets net of wood harvested was EUR -17 million (38 million). The increase in the fair value of forest assets was EUR 63 million (15 million). The cost of wood harvested from UPM forests was EUR 81 million (9 million).

Board of Directors and the Group Executive Team

At the Annual General Meeting held on 31 March 2020, the number of members of the Board of Directors was confirmed as 10, and Berndt Brunow, Henrik Ehrnrooth, Piia-Noora Kauppi, Marjan Oudeman, Ari Puheloinen, Veli-Matti Reinikkala, Kim Wahl and Björn Wahlroos were re-elected to the Board. Emma FitzGerald and Martin à Porta were elected as new directors to the Board. Suzanne Thoma and Jussi Pesonen stepped down from the Board. The directors' term of office will end upon the closure of the next AGM.

Björn Wahlroos was re-elected as Chair, and Berndt Brunow as Deputy Chair of the Board of Directors of UPM-Kymmene Corporation at the Board of Directors' constitutive meeting that took place following the Annual General Meeting.

In addition, the Board of Directors elected the chairs and other members to the Board committees from among its members. Piia-Noora Kauppi was re-elected to chair the Audit Committee, and Emma FitzGerald, Marjan Oudeman and Kim Wahl were elected as other committee members. Veli-Matti Reinikkala was re-elected to chair the Remuneration Committee, and Henrik Ehrnrooth and Martin à Porta were elected as other committee members. Björn Wahlroos was re-elected to chair the Nomination and Governance Committee, and Berndt Brunow and Ari Puheloinen were re-elected as other committee members.

Shares held by the Board of Directors and the Group Executive Team

At the end of the year, the members of the Board of Directors owned a total of 716,348 (1,162,920) UPM-Kymmene Corporation shares. These represent 0.13% (0.22%) of the shares and 0.13% (0.22%) of the voting rights. At the end of the year, President and CEO Jussi Pesonen owned 504,710 shares. At the end of the year, the other members of the Group Executive Team owned a total of 832,705 shares.

» Refer Note 3.2 Key management personnel, of the consolidated financial statements 2020 for further information on remuneration and shares held by the members of the Board and the President and CEO and remuneration of the members of Group Executive Team.

Litigation

» Refer Note 9.2 *Litigation*, of the consolidated financial statements 2020 for information on legal proceedings.

Risks

Risk management

UPM regards risk management as a systematic and proactive means to analyse and manage opportunities and threats related to its business operations. This also includes risks that can be avoided through careful planning and evaluation of future projects and business environments.

Risk management is an integral part of UPM's management system as risk taking is a normal part of business operations. While executing strategies, UPM and its business areas, functions and manufacturing units are exposed to a number of risk and opportunities. Each business area, function and unit is responsible for identifying, measuring and managing of risks related to its own operations, and for reporting on risk exposures, risk management activities and results to its own management team and to the Risk Management function.

The Risk Management Committee, chaired by the CFO, is responsible for recommending risk tolerances and profile to the President and CEO and the Strategy Team. The Strategy Team is responsible for aligning risk management priorities, business and risk management strategies and policies.

The Board of Directors, assisted by the Audit Committee, monitors and assesses the effectiveness of the company's risk management systems and oversees the assessment and management of risks related to the company's strategy and operations. The Audit Committee oversees that risk management activities are aligned with the Risk Management Policy, and that risk assessments are used to guide internal audit activities.

UPM seeks to transfer insurable risks through insurance arrangements for any risks that exceed the defined tolerance.

UPM strives to ensure compliance with the UPM Code of Conduct and other corporate policies. To enhance compliance and mitigate risks, UPM performs risk assessments, training and monitoring at regular intervals.

UPM has developed and implemented a comprehensive internal control system that covers business and financial reporting processes. Internal control is aimed at ensuring that the company's operations are efficient and reliable, and in compliance with statutory requirements, and that the company's financial reporting is accurate and reliable, and reflects operational results. Internal control pertaining to financial reporting is described in the Corporate Governance Statement available in the corporate website.

The main risk factors that can materially affect the company's business, financial results and non-financial performance are set out below. They have been classified as strategic risks, operational risks, and financial risks. Risks may also arise from legal proceedings incidental to UPM's operations.

Strategic risks

Uncertainties in the economic and political operating environment

The main short-term uncertainties in UPM's earnings relate to sales prices and delivery volumes of its products, as well as to changes in the main input cost items and currency exchange rates, most of which are affected by uncertainty in the global, regional or local economic and political conditions. Political developments are causing uncertainties to the global economy. Such uncertainties also affect UPM's customers influencing the demand for UPM's products.

Examples of such developments are the trade tensions between the United States, the EU and China, the nature of the relationship between the EU and the UK after its exit from the EU as well as increased geopolitical tensions. UPM is also exposed to the impacts of certain governmental protection and trade protection measures that safeguard domestic industries and other changes affecting international trade. Restrictions on import and export and other national interests may affect the availability of necessary raw materials, and changes in the international trade agreements. COVID-19 related containment measures and the economic downturn or global power struggles continue to cause high uncertainty to global trade, geopolitics or trajectories of economies.

UPM is especially exposed to the economic and political conditions in countries in which UPM has significant production operations and ongoing investment projects, such as Finland, Uruguay and Germany. UPM also has significant production operations in a number of developing markets, such as China and Russia, where the lack of transparency and predictability of the political, economic and legal systems may lead to an increasing uncertainty and risk level when investing in or operating in them.

Cyclical and highly competitive markets

In all markets UPM operates in, the price level is determined by a combination of demand and supply and an imbalance between them could cause the prices of UPM's products to fluctuate significantly. Imbalances in demand and supply may be caused by factors such as decreases or increases in the end-use demand, changes in customer preferences or a new production capacity entering the market or an old production capacity being closed, all of which may affect both the volume and price level of UPM's products.

Competitor behaviour may also influence the market price development. UPM may, from time to time, experience price pressures from competitors in its main business areas and geographic market areas as well as particularly large fluctuations in operating margins due to this competitive environment.

The majority of UPM's revenue comes from sales of graphic and specialty papers, pulp and label materials, and UPM principally competes with several large multinational paper and forest product companies as well as with numerous regional or more specialised competitors.

Changes in consumer behaviour

Demand for UPM's products may be affected by the introduction of substitute or alternative products. The demand for graphic papers in the mature markets is forecast to continue to decline. This will likely increase the pressure on UPM's graphic paper deliveries and sales prices as well as the scarcity of recycled fibre. The COVID-19 pandemic may further amplify the speed of changes adopted by consumers in consuming and communicating information. Changes in demand could also cause overcapacity in some of UPM's products, affecting the sales prices and deliveries of such products.

Depending on the product area, the shifts in consumer demand may either have a positive or an adverse effect on the consumption of UPM's products. For example, UPM expects that there will continue to be a growing need for renewable and recyclable solutions, which creates various opportunities for UPM and drive demand growth for most of UPM's products. At the same time digitalisation and e-commerce have changed consumer behaviour and resulted in decline in demand for graphic papers for various end uses.

Changes in legislation

UPM is exposed to a wide range of laws and regulations globally. The performance of UPM's businesses, for example the paper, energy, and biofuels businesses, are to a high degree dependent on the regulatory framework for these areas. Changes in regulation, direct and indirect taxation or subsidies, aid, grants or allowances could have a direct effect on UPM's performance and its relative competitiveness, and structurally restrict or exacerbate UPM's ability to compete for raw material.

UPM also operates in industries that are subject to extensive environmental laws and regulations governing, among others, emissions, water quality, energy efficiency, as well as waste handling, recycling and disposal. Environmental laws and regulations have become more stringent and may continue to develop to be even more stringent due to various global, regional and national level regulatory initiatives. As these environmental laws and regulations are amended or as their application or enforcement is changed, additional costs in complying with new and more stringent regulations may be imposed on UPM.

UPM's operations require UPM to obtain multiple environmental permits and other licences from relevant authorities and comply with their terms and conditions. These permits and licences may be subject to modification, renewal or, subject to certain conditions, revocation by the issuing authorities. UPM monitors regulatory changes in order to better adapt to the effects of such changes.

Shareholdings in Pohjolan Voima Oyj

UPM is a shareholder of Pohjolan Voima Oyj (PVO), which is the majority shareholder of Teollisuuden Voima Oyj (TVO). TVO is in the process of constructing a third nuclear power plant unit, OL3 EPR, at the Olkiluoto site (OL3). When completed, OL3 will supply electricity to its shareholders on a cost-price principle (so called 'Mankala-principle') that is widely applied in the Finnish energy industry. Under the Mankala principle, electricity and/or heat is supplied to the shareholders in proportion to their ownership and each shareholder is, pursuant to the specific stipulations of the respective Articles of Association, severally responsible for its respective share of the production costs of the energy company concerned. OL3 is expected to increase UPM's electricity generation capacity significantly. UPM's indirect share of OL3 is approximately 31%.

According to TVO OL3 was procured as a fixed price turnkey project from a consortium formed by Areva GmbH, Areva NP SAS and Siemens AG (Supplier). Under the plant contract, the consortium companies have joint and several liability for the contractual obligations.

Originally commercial electricity production at OL3 was scheduled to start in April 2009. However, completion of the project has been delayed. Supplier has updated the schedule for the commissioning of OL3 several times.

In March 2018 TVO announced that it had signed a comprehensive settlement agreement with Supplier and the Areva Group parent company, Areva SA, a company wholly owned by the French state. The settlement agreement concerns the completion of the OL3 project and related disputes and entered into force in late March 2018. According to TVO, pursuant to the settlement agreement, TVO and Supplier jointly withdrew the pending arbitration proceedings under the International Chamber of Commerce (ICC) rules with respect to costs and losses incurred in relation to delays in the construction of the OL3 project.

In July 2018, TVO announced that in June 2018 the ICC tribunal had confirmed the arbitration settlement by a consent award, and the arbitration proceedings had been terminated. The parties also withdrew the pending appeals in the General Court of the European Union.

According to TVO, the settlement agreement stipulates as follows:

- To provide and maintain adequate and competent technical and human resources for the completion of the OL3 project, Areva will source the necessary additional resources from Framatome S.A.S., whose majority owner is EDF.
- The supplier consortium companies undertake that the funds dedicated to the completion of the OL3 project will be adequate and will cover all applicable guarantee periods, including setting up a trust mechanism funded by Areva companies to secure the financing of the costs of completion of the OL3 project.
- The turnkey principle of the OL3 plant contract and the joint and several liability of the supplier consortium companies remain in full force.
- The agreement also noted Supplier's schedule at the time the agreement was signed, according to which regular electricity production in the unit would have commenced in May 2019.
- The ICC arbitration concerning the costs and losses caused by the delay of the OL3 project is settled by financial compensation of EUR 450 million to be paid to TVO in two instalments by Supplier.
- The parties withdraw all on-going legal actions related to OL3, including the ICC Arbitration and appeals in the General Court of the European Union.
- In the event that the Supplier consortium companies fail to complete the OL3 project by the end of 2019, the Supplier consortium companies will pay a penalty to TVO for such delay, the amount of which will depend on the actual time of completion of the OL3 project and may not exceed EUR 400 million.

In April 2020, TVO announced that it had submitted a permission application to the Finnish Radiation and Nuclear Safety Authority (STUK) for nuclear fuel loading of the OL3 nuclear power plant unit.

In August 2020, TVO announced having received an updated re-baseline schedule on the commissioning of OL3 from Supplier. According to the schedule fuel will be loaded into the reactor in March 2021, OL3 will be connected to the grid in October 2021, and regular electricity production will start in February 2022. Realisation of the OL3 EPR nuclear power plant project and preparing the plant unit for production will be continued. Commissioning tests and maintenance work are needed before fuel loading.

The coronavirus pandemic may have significantly added uncertainty to the progress of the project. According to TVO significant arrangements have been made at the OL3 site preventing the coronavirus infections. Despite of coronavirus restrictions, work has been able to continue under special arrangements.

As announced by TVO, the new management of Areva, the supplier party, is preparing a financial solution to complete the OL3 project until the end of the guarantee period. TVO is also negotiating with Supplier on the terms of completing the OL3 project.

Further, as announced by TVO, TVO has recognised receivables amounted to the accumulated compensation by the end of Q3 2020 agreed in the comprehensive settlement agreement from supplier. The compensation decreases the historical costs of property, plant and equipment in TVO's balance sheet.

On 16 December 2020 TVO announced that the shareholders of TVO have signed an additional shareholder loan commitment, comprising a total of EUR 400 million new subordinated shareholder loan agreements. According to TVO with the new shareholder loan commitment, TVO prepares to maintain a sufficient liquidity buffer and equity ratio in order to complete the OL3.

As announced by TVO, on 17 December 2020, S&P Global Ratings (S&P) affirmed its long-term corporate credit rating 'BB' on TVO and removed it from CreditWatch Negative, where it had been placed on 4 September 2020, with the outlook being negative. According to S&P, the EUR 400 million shareholder loan recently granted to TVO reduces near-term risk and signals that TVO's owners still support the OL3 project, despite the delays it has suffered.

Further delays to the OL3 project could have an adverse impact on PVO's business and financial position, the fair value of UPM's energy shareholdings in PVO and/or the cost of energy sourced from OL3 when completed. It is possible that the cost of energy sourced from OL3 at the time when it starts regular electricity production may be higher than the market price of electricity at that time.

Climate change

UPM is exposed to a variety of risks related to climate change. Strategic risks related to climate change include risks concerning competition, markets, customers, products and regulation. For example, unpredictable regulation and subsidies may distort raw material and final product markets and changing costs of greenhouse gas emissions may influence UPM's financial performance. UPM believes that forest, wood-based products and low-carbon energy hold significant value creation potential with respect to renewable and recyclable products.

Other risks related to climate change particularly concern UPM's supply chain as well as the availability and price of major inputs, such as wood and electricity. Climate change may cause exceptional weather events, such as severe storms, floods and draughts, which could, for example, result in unpredictable hydropower availability and wood harvesting conditions. Exceptionally mild winter conditions with a reduced period of frozen soil in the Nordics could affect the harvesting and transport of wood, consequently undermining the stability of raw material supply and potentially increasing the cost of wood. These could also increase the risk of production limitations.

Loss of major customers and industry consolidation

UPM has several major customers, and the largest customer in terms of sales represented approximately 2% of UPM's sales in 2020, and the ten largest customers represented approximately 14% of such sales. Although UPM is not dependent on any specific customer or group of customers, the loss of its major customers, if not replaced on similar terms, could have a material effect on UPM's business. Also, as the size of UPM's customers could increase in connection with industry consolidation, such customers could exert increased bargaining power on all of their suppliers, including UPM. UPM is also exposed to risks related to any deterioration of a major customer group's financial condition.

Product development, innovation and intellectual property rights

Research and product development are an important part of UPM's strategy, particularly with regard to new businesses, such as wood-based biofuels, biochemicals and biomedicals. The return on investment of new or enhanced existing products and solutions may not meet targets or improve UPM's competitiveness.

UPM has a broad patent portfolio that provides value creation potential in the future; however, it also exposes UPM to risks related to the protection and management of intellectual property, including patents and trademarks.

Corporate acquisitions and divestments

UPM's strategy is to grow businesses with strong long-term fundamentals and sustainable competitive advantage. This may result in acquisitions of new businesses or divestments of existing businesses or parts thereof. Carrying out corporate mergers, acquisitions and divestments involves risks relating to the successful implementation of a divestment and the ability to integrate and manage acquired businesses, systems, culture and personnel successfully. In addition, the cost of an acquisition may prove high and/or the anticipated economies of scale or synergies may not materialise. Hidden liabilities of an acquired company (e.g., competition law liabilities) may also constitute a significant risk in relation to potential acquisitions.

UPM may divest operations or assets to focus on strategic areas. Any future divestments may be affected by many factors that are beyond UPM's control, such as the availability of financing to potential buyers, interest rates and acquirers' capacity, and divestments may also expose UPM to indemnity claims. Furthermore, divestments may involve additional costs due to historical and unaccounted liabilities. The profitability of corporate acquisitions and divestments may differ from UPM's expectations.

Operational risks

Fluctuations in the prices of major inputs as well as changes in their availability

The main inputs required in the manufacturing of UPM's products are wood, fibre, chemicals, energy and water. The prices for many of these major production inputs have been volatile in the recent years and are expected to remain volatile for the foreseeable future, which may have an effect on the general profitability of the industries in which UPM operates. Climate change may contribute to the increase of the price volatility of UPM's major production inputs. Also, any changes in the current forestry practices and level of harvesting due to negative public opinion towards harvesting could have an effect on the raw material supply and may increase the cost of wood.

Governmental protection and trade protection measures could also have an effect on the price and availability of raw materials as countries may, for example, enact export ban policies to protect forests or to bolster their domestic timber industry, which could have a material effect on the cost and availability of wood as a raw material for UPM. It is also uncertain how the EU energy policies may affect the availability and costs of fibre and energy. Significant increases in the prices of UPM's major inputs could increase UPM's operating expenses.

Supplier and subcontractor network and raw materials procurement

UPM's business operations depend on a large number of suppliers and contractors. The majority of UPM's need of wood is covered by suppliers, and other production inputs, such as chemicals, fillers and recovered paper, are fully obtained from suppliers. Disruptions in the supply of key inputs or transportation services could have a significant effect on manufacturing operations. This could, for example, result in interruption or downscaling of production, change in the product mix or increased costs resulting from price increases for critical inputs as well as shifts in the availability and price of wood. Supplier consolidation could also limit the number of suppliers from which UPM would be able to source its production inputs and could materially affect the prices paid by UPM for these inputs.

The UPM Supplier and Third Party Code defines the minimum level of performance that UPM requires from its suppliers and third-party intermediaries. UPM carries out supplier risk assessments on, for example, operational, financial, quality and responsibility perspectives. Based on the risk assessment, selected suppliers' activities are evaluated in more detail through annual surveys, supplier audits and joint development plans. If any non-conformities are discovered, the supplier is required to take corrective measures, which UPM follows up on. Some contracts may also be discontinued due to the seriousness of the finding or insufficient corrective measures.

Management and execution of large investment projects

Investment projects in UPM's businesses are often large and take one or more years to complete. Participation in large projects involves risks, such as cost overruns or delays, as well as non-achievement of the economic targets set for the investment. Currently, UPM's largest ongoing investment project is the construction of a new world-class pulp mill in Uruguay, which includes other related investments as well (port, Free Trade Zone infra and housing). Particular to this project is its size, complexity with a number of interconnected sub-projects as well as the level of cooperation with permit and other authorities. Additionally, the second largest ongoing project is the construction of a biochemicals refinery in Germany. This project involves the development of new business concepts and technologies.

UPM is responsible for many projects in several of its countries of operation at any given time. All projects involve technical and operational risks, and projects require continuous operational planning, steering and supervision, quality control, input procurement, scheduling as well as resource and cost monitoring. Managing several projects requires that UPM has sufficient resources and efficient processes. The COVID-19 pandemic and the required additional health and safety measures have also added a new challenge to large investment projects. UPM's transformative pulp project in Uruguay and biochemicals project in Germany are proceeding with strict health and safety controls, but despite these efforts, some changes to the detailed timeline of the projects may occur due to containment measures.

Unavailability of information systems as well as cybersecurity breaches
UPM's production and business operations depend on the availability of supporting information systems and network services. Unplanned interruptions in critical information system services, loss of critical, financial or personal data due to reasons beyond UPM's control, such as power cuts, software or telecommunication errors or other major disasters, such as fires or natural disasters, as well as user errors by UPM's own personnel or suppliers, can potentially cause major damage to UPM's businesses and disruptions to the continuity of operations.

UPM's information systems may be exposed to various cybersecurity risks. Malicious cyber intrusion could cause leakage of sensitive information, violation of data privacy regulations, theft of intellectual property, production outages and damage to UPM's reputation.

Litigation and compliance
UPM operates globally in a large number of jurisdictions and complex regulatory frameworks. UPM may from time to time be involved in litigation and other similar proceedings or it could become subject to various claims and actions based on various grounds.

On a global scale, enforcement activities and jurisdictional reach regarding competition issues and anti-corruption have increased. Also, the recent development of Renewable Energy Sources Act (EEG) related lawsuits in Germany for alleged non-payment of EEG based surcharges may have an adverse impact on UPM, albeit UPM is not currently a party to any such lawsuits. The UPM Code of Conduct sets the standards of responsible behaviour and it covers topics relating to legal compliance and disclosure, anti-corruption, competition law, HR practices, human rights, responsible sourcing and environmental matters.

UPM's environmental performance and social responsibility play a significant role in UPM's ability to operate and influence the long-term success of its businesses. UPM has significant manufacturing operations or sourcing in several developing countries, some of which are perceived as highly corrupt or corrupt according to Transparency International. In these countries, there is an increased risk of corruption, for example in relation to interaction with government officials and in the use of intermediaries when applying for permits and licences requiring governmental approval. Breaches of applicable laws and regulations or corporate policies by UPM employees may lead to legal processes, sanctions and fines as well as reputational damages effecting UPM's operations.

Labour disruptions
UPM is subject to risk of labour disputes, which could disrupt its business operations or the business operations of its stakeholders. Uncertainty may increase in the Finnish labour market amid the announcement of the Finnish Forest Industries Federation in fall 2020 to transfer collective bargaining to companies. Any labour disputes in UPM's business operations or related sectors could have an effect on UPM's business operations. For example, labour disputes in the transport sector or among other stakeholders important to UPM, may disrupt UPM's operations. Additionally, public dissatisfaction with UPM's labour-related decisions may, in extreme cases, lead to unanticipated boycotts or disruptions at its facilities or construction sites.

A natural disaster, fire, accident or other calamity at UPM's production facilities
UPM operates a significant number of production facilities globally that are exposed to risks related to environment, fires, natural events, site security and occupational health and safety risks. If UPM's production facilities were to experience a major accident or were forced to shut down or curtail production due to such unforeseen events, such as a leak or spill due to malfunction or human error, this could cause major interruptions in UPM's operations and result in significant costs in order to clean up and repair any potential damages to the production plant and the surrounding areas. Any failure to maintain high levels of safety management could also result in physical injury, sickness (such as a COVID-19 infection) or liability to UPM's employees, contractors or third parties. These risks are managed through established management procedures, health and safety precautions and loss prevention programmes. UPM's insurance programme provides coverage for insurable hazard risks, subject to insurance terms and conditions.

Forests and plantations
UPM's plantations and forests may be affected by the impacts of climate change, which include more frequent and severe extreme weather conditions such as heavy rainfall, storms, floods and drought. Climate change is expected to have the biggest physical effect on UPM's forest lands in Finland, where temperatures are expected to rise more significantly and rapidly compared with other countries where UPM owns forest. Although forest growth will likely accelerate, particularly in Finland, due to the longer growing season, extreme weather conditions will intensify, presenting new risks. The increase of droughts and fires are estimated to pose the most significant risks for UPM's business. Also, damages caused by insects and tree diseases are becoming increasingly common, which could have an effect on the value of UPM's forest assets. Should these risks materialise, they could harm UPM's forest and plantations resulting in production interruption and additional costs.

Strategic partners
UPM collaborates with many partners. For example, product development in the biofuels, bioenergy or biochemicals increases the importance of partnerships in the search for new products and businesses or higher efficiency. Partnerships may, however, create risks to the profitability, for example, through changes occurring within the partner entity or changes in how the partnership operates. UPM is also subject to the risk that its strategic partners do not comply with UPM's Code of Conduct with anti-corruption, competition law, HR practices, human rights, responsible sourcing and environmental matters.

Partnership arrangements may also be too rigid to enable timely changes required, for example, in connection with changes in the market conditions or the economy. UPM's partners may have different targets with respect to the business of the partnerships. As UPM may not have sole control over strategic direction and operational output of these entities, its partners may have the right to make certain decisions on key business matters with which UPM does not agree. In some cases, strategic partners may choose not to continue partnerships that they have with UPM.

Intellectual property rights of third parties
Molecular bioproducts form one of UPM's three strategic focus areas for growth. Initiatives within this strategic focus area are technology-intensive and require increasing investments in such technologies either through internal development or through third party licences or technological partnerships. In addition to UPM's own IPR portfolio, UPM licences certain technologies developed by third parties. Evaluating the rights related to the third party technologies UPM uses or intends to use is increasingly challenging. Licensing third party technology exposes UPM to such risks as the increase of overall licensing costs, loss of negotiation power, the validity of such licensing arrangements and potential infringement claims, which could restrict UPM's ability to use certain technologies, prevent the delivery of UPM's products and/or result in costly and time-consuming litigation. Risk related to IPR claims and disputes relating to technological partnerships have been assessed to increase.

Building capabilities to growth areas
The success of UPM's business largely depends on the ability to build the necessary new capabilities required for future growth. UPM is continuously developing its leadership culture, evaluating its recruitment, compensation policies and career development opportunities and taking measures to attract and retain diversely skilled personnel for current and future growth areas.

Financial risks
Financial risks are described in consolidated financial statements 2020.

TYPE OF RISK	CONSOLIDATED FINANCIAL STATEMENT NOTE
Credit risk	4.6 Working capital
Liquidity and refinancing risk	5.1 Capital management
Interest rate risk	6.1 Financial risk management
Foreign exchange risk	6.1 Financial risk management
Electricity price risk	6.1 Financial risk management
Counterparty risk	6.2 Derivatives and hedge accounting

Non-financial information

Global megatrends represent many long-term opportunities and challenges for UPM towards 2030 and beyond. They are also driving demand for sustainable solutions and responsible business practices.

To steer its responsibility activities, UPM has established a set of responsibility focus areas with targets and key performance indicators. They are reviewed every year based on a materiality analysis (page 71). The focus areas cover economic, social and environmental responsibility. Economic responsibility at UPM covers economic performance, good governance and compliance, as well as responsible sourcing. Social responsibility focuses on respecting human rights, occupational health and safety and UPM's role as a responsible employer. Environmental responsibility includes sustainable products, the climate and use of forests, as well as water use and waste reduction. Mitigation of and adaptation to climate change is becoming more important all the time, and it is relevant for UPM throughout the whole value chain: land use, sourcing, production and products. Climate-related targets have been established for all of these areas.

UPM's Biofore strategy guides the company in achieving its responsibility targets for 2030 and in contributing to the Sustainable Development Goals (SDG) of the 2030 Agenda for Sustainable Development published by the UN.

In March 2020, UPM became one of the first companies to link the pricing mechanism of a syndicated revolving credit facility (RCF) of EUR 750 million to both biodiversity and climate targets. In November 2020, UPM issued its first green bond of EUR 750 million under the EMTN (Euro Medium Term Note) programme. In connection with the programme, a UPM Green Finance Framework was prepared which was rated with the highest-grade by CICERO (Center for International Climate Research).

Based on international frameworks and commitments
UPM respects international human rights agreements and agreements concerning labour rights, including the UN Declaration of Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work, and the OECD Guidelines for Multinational Enterprises.

Since 2003, UPM is a signatory of the UN Global Compact initiative, whose ten universal principles are derived from international agreements in the areas of human rights, labour standards, the environment and anti-corruption. And since 2016, UPM has the LEAD participant status for its commitment to the UN Global Compact. In 2020, UPM was one of only 41 global companies to receive this recognition, and the only representative of the forest industry and Finland.

Regarding climate change UPM committed to the Science Based Targets (SBT) initiative in 2017 and received validation of its tightened CO_2 targets in 2020. To further strengthen its climate approach, UPM committed to the UN's Business Ambition for the 1.5°C pledge.

UPM follows the Finnish Corporate Governance Code issued by the Securities Market Association and complies with all of its recommendations.

UPM Code of Conduct and other corporate policies
UPM's decision making, management and operations are guided by UPM values and the UPM Code of Conduct. Legal compliance and responsible practices are the foundation of all of UPM's businesses and create long-term value for both UPM and its stakeholders. The UPM Code of Conduct emphasises UPM's commitment to business integrity and responsible business operations, manifesting the company's guiding principles.

The UPM Code of Conduct is complemented by more detailed policies approved by the Board of Directors and rules or statements approved by the Group Executive Team, business areas or global functions. These policies, rules and statements cover such topics as treasury, taxes, disclosures, insider matters, anti-corruption, competition law, confidentiality, contract management, human resources, the environment, forestry, information security and data protection, and safety. In 2020, the UPM Responsibility Statement, defining responsibility-related principles and commitments relevant to all UPM operations, was issued

UPM requires its suppliers, third party intermediaries and joint venture partners to apply the same principles as in the UPM Code of Conduct and to fulfil criteria concerning social and environmental responsibility. These requirements are defined in the UPM Supplier and Third Party Code, latest updates effective as of beginning of 2020.

The UPM Code of Conduct was last updated during 2019, followed by extensive communication and training efforts to enhance our employees' awareness and understanding of its contents.

Roles of the group management and functions in leading non-financial matters

The Board of Directors, with the assistance of the Audit Committee, is responsible for monitoring compliance with applicable legal and regulatory requirements and with the UPM Code of Conduct and other corporate policies. In addition, the Audit Committee oversees procedures for treatment of complaints and concerns received by the company, anonymous or otherwise. As part of the committee's compliance review, the committee is provided with a quarterly report by the company's Chief Compliance Officer, and a report of submissions under the company's Report Misconduct channel by the Head of Internal Audit.

In line with its main duties and responsibilities, the Board reviewed and approved updated strategic plans during its strategy session in May 2020. The main focus areas of the UPM Biofore strategy continue to be performance, growth, innovation, responsibility and portfolio development. This strategy is enhanced by the brand promise: Beyond Fossils (read more on pages 26-27). An essential part of the Board's annual strategy work is to review and assess strategic and operational risks and opportunities (see UPM Governance Statement 2020). These risks and opportunities and their impact on operations and strategy are described on pages 36-37.

The Group Executive Team, headed by the President and CEO, is in charge of the management of corporate responsibility, determining courses of action and guiding development work. In practice, corporate responsibility efforts take place in businesses and functions, and in the Group's Responsibility team, which co-ordinates the projects carried out by businesses and functions.

UPM Legal Function and its Compliance team manage legal compliance programmes and arrange related training at regular intervals for specific target groups, which have been defined based on risk assessments. UPM Sourcing organisations follow clearly defined selection and follow-up processes when evaluating suppliers. Reliable long-term deliveries, product and service quality, financial sustainability of suppliers, social and environmental responsibility and product safety are the key factors when selecting and evaluating suppliers.

While executing strategies, UPM and its business areas, functions and production units are exposed to a number of financial and non-financial risks and opportunities. Each business area, function and unit is responsible for identifying, measuring and managing risks related to its own operations, and for reporting on risk exposures, risk management activities and results to its own management team and to the Risk Management Function.

Management of non-financial matters

UPM's responsibility thinking starts with anticipating, mitigating and managing risks, and extends to creating a competitive advantage and long-term value.

UPM continually strives to reduce its risk exposure and improve its performance by using tools such as certified management systems. Since 2018, all our production sites have a certified ISO 14001 environmental management system. Almost all our production sites and wood-sourcing operations implemented integrated management systems for environmental protection, quality management and occupational health and safety in accordance with ISO 14001, ISO 9001 and ISO 45001 standards. All European pulp and paper mills, as well as the UPM Fray Bentos pulp mill in Uruguay and the UPM Changshu paper mill in China, also adhere to the EU's Eco-Management and Audit Scheme (EMAS). Many of the sites also have energy management systems certified under ISO 50001 or the Finnish ETJ+ system, and food safety management systems certified under ISO 22000, if relevant.

Should stakeholders have any concerns or suspect misconduct, they are encouraged to contact UPM or to use the UPM Report Misconduct channel which was renewed in 2020. The new service is available on the corporate website for both the company's employees and external stakeholders. Operated by an independent external service provider, the service is accessible in over 40 languages, 24/7. In 2020, 23 (31) cases were reported either through the UPM Report Misconduct channel or directly to internal audit. One case related to discrimination. Five cases led to disciplinary action including warnings and terminations of employment.

Reporting framework used

UPM uses the GRI Standards reporting guidelines published by the Global Reporting Initiative to measure and report on corporate responsibility at group level. UPM's corporate responsibility reporting has been compiled in accordance with the GRI Standards: Core option.

Committed to anti-corruption

The UPM Code of Conduct underlines the company's zero tolerance attitude towards corruption and bribery in any form. UPM Anti-Corruption Rules explain prohibited conduct and expected ethical behaviour in further detail.

UPM performs anti-corruption risk assessment on a regular basis. The annual risk-assessment process includes a top-down risk discussion with the management of each business area. All UPM group entities are also assessed on the basis of country risk and complexity of operations. UPM operates globally and has significant manufacturing operations in several emerging market countries. Such operations require a number of permits and other licenses from the relevant authorities. Some of the countries where UPM operates are perceived as highly corrupt or corrupt according to Transparency International. In these countries, there is an increased risk of corruption, for example in relation to interaction with government officials and in the use of intermediaries when applying for permits and licences requiring governmental approval.

Due diligence of suppliers and third parties with whom UPM does business is an essential part of UPM's anti-corruption compliance programme. UPM requires that due diligence is performed before entering into or renewing any contract with a third party that meets specified criteria. UPM requires anti-bribery contract terms to be included in agreements with such third parties outlining the third party's commitment to compliance with applicable anti-bribery laws and UPM's right to audit the third party to verify compliance with these terms. The company also has corresponding due diligence procedures for joint ventures, including mergers and acquisitions.

In 2020, UPM updated its anti-corruption e-learning platform. The anti-corruption training covers all white-collar employees. In 2020, the company also launched an e-learning platform to support the implementation of the updated Supplier and Third Party Code. The company organized tailored anti-corruption training workshops for selected target groups across the company and performed risk-based compliance reviews in selected jurisdictions and operations.

Respect for human rights

UPM is committed to respecting human rights. UPM has assessed all its operations and activity and has identified the potential human rights issues and impacts. When considering both the severity and likelihood of these potential issues and impacts, UPM considers the salient human rights issues in the company's sphere of influence to be environmental pollution, occupational health and safety (OHS), working conditions, protection of children, and forced labour.

In 2020, UPM reviewed quarterly its human rights risks as part of UPM compliance process and took into use a continuous process for assessing salient human rights issues on a business area level. Grievance mechanisms were strengthened by renewing UPM's Report Misconduct channel.

Responsible sourcing

UPM requires its suppliers, third-party intermediaries and joint venture partners to apply the same principles as in the UPM Code of Conduct including commitment to anti-corruption, environmental and social responsibility, safe products, human rights and occupational health and safety practices.

Transparent supplier requirements are the basis for responsible sourcing. These supplier requirements are defined in the UPM Supplier and Third Party Code (available on the corporate website). A number of additional requirements are in place for the sourcing of wood, chemicals, pulp and packaging materials, as well as for safety and logistics. All contractors working on site go through UPM's safety requirements and a web-based safety induction training.

UPM identifies its supply chains with a high risk of potential negative environmental and social impacts. These responsibility-related risks are determined by the country of origin, sourced material or service, and complexity of supply chain. Based on the risk identification, selected suppliers' activities are evaluated in more detail through EcoVadis and other assessments, supplier audits and joint development plans.

In 2020, UPM focused on training its sourcing employees on renewed supplier requirements and promoting decent work in supply chain. UPM also assessed working conditions in its logistics chain by interviewing truck drivers in Central-Europe.

UPM continued its cooperation with Together for Sustainability (TfS), a chemical industry initiative that promotes and improves sustainability practices within the supply chains and its participation to UN Global Compact Action Platform on Decent Work in Global Supply Chains. In 2020, UPM conducted some 290 EcoVadis assessments and 117 supplier audits.

Social and employee-related matters

UPM's responsibility focus areas in social and employee-related matters are: learning and development, responsible leadership, diversity and inclusion as well as working conditions.

UPM is committed to active employee participation and consultation, organised in accordance with international and national rules and regulations. UPM aims to empower and engage employees at all levels through responsible leadership. UPM encourages its employees to pursue professional growth, expects development and supports them in learning skills and developing them further.

UPM respects the privacy of employees and promotes equal opportunities and objectivity in employment and career development. All UPM employees are treated as individuals regardless of gender, age, ethnic origin, nationality, etc.

UPM promotes employees' health and wellbeing. Safety is an essential part of UPM's activities and business management system. Equal safety requirements are applied to all employees, visitors and contractors working at UPM's premises.

In its People Strategy, UPM focused on leadership and creating safe, inclusive & diverse working environment, as well as aiming higher in performance and ensuring growth of our people. In 2020, UPM continued the enabling performance approach by strengthening feedback culture, agile goal setting and frequent manager-employee discussions. Development programs to support skills of asking and giving feedback, high quality conversations and coaching have been continued. To further develop inclusive leadership and culture, UPM continued the dialogue on diversity and inclusion with management teams.

The proactive safety of employees and contractors has remained an important focus area in 2020. Safety and wellbeing of our employees during global pandemic has been the key priority.

Product stewardship

Majority of UPM's products are made from renewable raw materials and are recyclable. Product stewardship covers the entire lifecycle of all UPM products from the development phase to the end-use and beyond.

Ecodesign and product safety measures ensure that impacts on products and the environment are considered and minimised. In 2020, UPM renewed its sustainable product design concept. One step was the updating of the ecodesign questionnaire to cover the UN Sustainable Development Goals.

UPM provides product declarations to provide customers with easy access to information concerning the responsibility of products' environmental and product safety aspects or the wood origin. In 2020, the collaboration with paper and chemical companies resulted in a new harmonized and transparent way to gather and assess chemical information.

Most of UPM products are certified with widely recognised ecolabels, such as the EU ecolabel and national ecolabels for graphic paper or ISCC and RSB certification for biofuels, biocomposites and labels.

All of UPM pulp mills, the European sites of UPM Raflatac and UPM Specialty Papers' production lines have implemented ISO 22000 food management systems and the respective products are designed and produced to meet food packaging requirements.

Environment

UPM's responsibility focus areas in environmental matters are forests and biodiversity, water use, waste and climate. UPM uses raw materials, water, energy and other resources in a responsible manner and continuously improves its energy, resource and cost efficiency.

UPM is committed to sustainable forestry, and the company uses third-party-verified FSC™ and PEFC chain of custody certification to ensure that the wood it procures is legally sourced from sustainably managed forests. All UPM owned forests are certified, or in the process of certification if acquired recently.

In 2020, UPM continued to implement its work aimed at positive impact on biodiversity in company forests in Finland. This biodiversity programme is implemented through biodiversity guidelines for operational forestry work, forest protection and cooperation with stakeholders. Biodiversity indicators and monitoring methods have been developed further in 2020.

All of UPM's largest production plants are located in areas where there is sufficient water available. The water used by UPM plants comes from rivers, lakes or groundwater resources. UPM uses water responsibly in terms of the company's water consumption and effluent quality. If the price of raw water were to increase by EUR 0.01 per cubic metre, it would mean additional water costs of approximately EUR 4 million annually. In 2020, wastewater volume increased by 2% per tonne of paper and decreased by 4% per tonne of pulp.

Circular economy thinking is at the core of our operations. We have developed innovative ways to reduce and recover waste and to use side streams. For example, tall oil is used for UPM BioVerno renewable diesel and naphtha and ash is utilized in soil stabilisaton, cement industry or as raw material for paper filler production. Regulatory changes can have an impact on the options for waste or residue use, thus causing higher costs for alternative solutions. In 2020, 89 (89)% of UPM's process waste was recovered or recycled.

In 2020, UPM's environmental investments totalled EUR 6 million (17 million). The largest investments were the modernization of UPM Chudovo plywood mill's wastewater treatment plant and a system to collect rainwater from the wood yards and direct it to the wastewater treatment plant at UPM Kaukas. UPM's environmental costs, which were mainly attributable to effluent treatment and waste management, totalled EUR 110 million (123 million), including depreciation.

The company-wide Clean Run programme, launched in 2012, aims to improve UPM's environmental performance by bringing environmental issues to the forefront of everyday work. All sites systematically follow up any deviations, proactively report observations and near misses, carry out walks and discussions, and compile detailed risk assessments. Despite the global pandemic, approximately 1,700 (1,900) environmental walks were organised and 2,700 (2,900) preventive environmental observations and near misses were reported in 2020.

There has been a significant decrease in the number of environmental non-conformances since UPM's internal Clean Run programme was launched in 2012. No major environmental incidents occurred at UPM production plants in 2020. However, a total of 17 (19) temporary deviations from permit limits or limits set by UPM occurred over the course of the year. The deviations were minor contraventions of air emission and water-related limits (7 and 10, respectively). All deviations were immediately reported to the authorities and, where relevant, to local stakeholders. Appropriate measures were taken to normalise the situation and prevent similar occurrences.

Climate

The management of climate change related issues is integrated to management of other non-financial issues and is reported to the Board depending on the context and matter. For example: 1) risks are reported to the Board by CFO, 2) related compliance and regulatory issues are briefed quarterly to Audit Committee (Board) by Compliance Officer, 3) annual progress on 2030 responsibility targets is reported by EVP Stakeholder Relations or 4) if there are specific climate-related topics, then responsible topic owner briefs the Board. Additionally, major climate-related issues such as scenario analyses, commitments and UPM's overall approach of acting through forests, emission reductions in production and supply chain and through climate-positive products are reported directly to UPM management bodies led by CEO.

UPM's position and resilience in different climate scenarios (IPCC RCP 2.6, RCP 4.5, RCP 8.5, IEA B2DS, IEA NPS and IEA CPS) have been evaluated for the businesses and functions from both physical and transitional angles, involving expertise from scientific community. Generally, in low- and medium-emission scenarios the transition impacts play a bigger role and UPM is well positioned as its business portfolio allows for flexibility regarding recognised risks and opportunities. In the high-emission scenario physical impacts dominate with severe consequences not only to UPM but the ecosystems and societies over the globe.

UPM's main target related to climate change is reducing fossil CO_2 emissions (scope 1 and 2) by 65% from 2015 level by 2030. This target was validated by Science-Based Target initiative to be aligned with the 1.5°C pathway according to Paris agreement. In 2020, fossil CO_2 emissions (scope 1 and 2) summed up to 5.4 million tonnes, which is a decrease of 6% compared to 2019.

Further targets related to climate change are reducing fossil CO_2 emissions from supply chain (Scope 3) by 30% from 2018 level by 2030, climate-positive land use and developing climate-positive product portfolio. Concerning land use, forestry and product portfolio, UPM has engaged with scientific partners in order to gain credible data and approaches.

UPM favours the use of renewable and other carbon-neutral energy sources. Biomass-based fuels make up 72% (70%) of fuels used by UPM worldwide. If UPM needed to buy certificates to cover its whole direct fossil CO_2 emissions, and if the price of CO_2 certificates were to rise by EUR 5 per tonne, it would mean additional costs of approximately EUR 14 million annually.

UPM climate related disclosures according to TCFD (Task Force on Climate-related Financial Disclosures) is integrated to this report as follows:

REQUIREMENTS	PAGES
GOVERNANCE	
a) The role of the Board in overseeing climate-related issues	Page134, paragraph "Roles of the group management and functions in leading non-financial matters"
b) The role of management in assessing and managing climate-related issues	Page 134, paragraph "Roles of the group management and functions in leading non-financial matters"
STRATEGY	
a) The climate related risks and opportunities over the short, medium and long term	Pages 129–133, chapter "Risks" Pages 36–37, chapter "Risks and opportunities" Pages 14–15, chapter "Global megatrends drive demand"
b) The impact of climate-related risks and opportunities on business, strategy and financial planning	Pages 36–37, chapter "Risks and opportunities" Pages 14–15, chapter "Global megatrends drive demand" Page131, 132 paragraphs "Climate change", "Forest and plantations"
c) The resilience of strategy, taking into consideration climate-related scenarios	Page 136, paragraph "Climate" Pages 16–17, chapter "Towards a future beyond fossils"
RISK MANAGEMENT	
a) Processes for identifying climate-related risks	Page 129, paragraph "Risk management" Page 134, paragraph "Roles of the group management and functions in leading non-financial matters"
b) Processes for managing climate-related risks	Page 129, paragraph "Risk management" Page 134, paragraph "Roles of the group management and functions in leading non-financial matters"
c) How processes for identifying, assessing, and managing climate-related risks are integrated into overall risk management	Page 129, paragraph "Risk management" Pages 105–106, chapter "Governance"
METRICS AND TARGETS	
a) Metrics used to assess climate-related risks and opportunities	Pages 10–11, "Key figures 2020"
b) Scope 1, Scope 2 and Scope 3 emissions, and related risks	Page 136, paragraph "Climate" Page 93, graph "Sources of UPM's greenhouse gas emissions"
c) Targets used to manage climate-related risks and opportunities and performance against targets	Page138–139, table "Material non–financial topics and key performance indicators" Pages 22–23, table "UPM Responsibility targets"

Material non-financial topics and key performance indicators

TOPIC	MANAGEMENT	KEY PERFORMANCE INDICATOR	2020 RESULTS
Governance/ Anti-Corruption	Corruption related risks are identified and assessed in connection with the company's risk management process. These risks are managed and mitigated by training, communication, due diligence procedures, audits and practical guidelines specifically targeted at anti-corruption and anti-bribery. UPM Code of Conduct training is mandatory to all employees and anti-bribery training to all salaried employees.	100% coverage of participating in UPM Code of Conduct training (continuous)	99% (96%) of active employees completed training for the revised UPM Code of Conduct. Training started in September 2019.
Human rights	UPM is committed to respecting human rights based on its Code of Conduct. UPM has a process for assessing human rights at UPM site level, including community relations and local sourcing, as well as for risk assessments and audits for suppliers.	Continuous supplier auditing based on systematic risk assessment practices	117 supplier audits were conducted based on identified risks, including human rights, social and environmental topics. In addition, about 350 contractor reviews with focus on working conditions were carried out.
Responsible sourcing	UPM requires its suppliers, third party intermediaries and joint venture partners to apply the same principles as in the UPM Code of Conduct. These supplier requirements are defined in the UPM Supplier and Third Party Code.	80% of total supplier spend covered by UPM Supplier and Third Party Code (continuous)	84% (84%) of supplier spend covered by UPM Supplier and Third Party Code.

TOPIC	MANAGEMENT	KEY PERFORMANCE INDICATOR	2020 RESULTS
Responsible leadership	UPM continuously develops leadership capabilities, management teams and working environments. UPM measures work environments, team work and leadership with an annual engagement survey and has a leadership development programme portfolio that supports self leadership, leading people and leading businesses. Programmes cover topics such as inspiring leadership, coaching, conversation and feedback skills, innovations and leading complexity.	Employee engagement and enablement indices overall favourable score above external high performing norm by 2030	Employee engagement index 71% (71%) favourable. This is 2%-points below the external high performing norm. Employee enablement index 75% (74%) favourable. This is 2%-points above the external high-performing norm.
Learning and development	UPM has a systematic process for goal setting and creating development plans for all employees globally to ensure high performance and continuous professional development.	Goal setting discussions are held and development plans created for employees, completion rate 100% by 2030	82% (88%) of employees had completed individual goal settings or annual discussions. 63% (65%) had a development plan documented.
Safe working conditions	UPM has a comprehensive safety management system which promotes a proactive and engaging safety culture. UPM uses means such as safety audits and reporting on safety related near-misses and safety observations.	No fatalities or serious accidents in UPM operations Total recordable injury frequency (TRIF) <2 levels permanently reached including contractors	No (one) fatal accident, two (three) serious accidents TRIF was 5.3 (7.1) for UPM workforce and 6.2 (6.8) including contractors.
Diversity	UPM wants to develop organisational culture and local conditions to ensure an inclusive and diverse working environment. UPM has committed to, and promotes, diversity and inclusion in its policies. UPM reviews the diversity status of all its businesses and functions regularly. The composition of UPM key management teams and inclusiveness is discussed and development actions planned and implemented.	95% favourable in the Employee Engagement Survey's Diversity and Inclusion index by 2030	Responses to the Employee Engagement Survey's Diversity and Inclusion index 71% (70%) favourable
Product stewardship	Ecolabels help customers make responsible choices and provide stakeholders with important information. Third party verified environmental certificates and labels tell customers about the environmental performance of our products.	All applicable products eligible for ecolabelling by 2030	82% (83%) of UPM sales were eligible for ecolabelling.
Climate	UPM favours the use of renewable and other carbon-neutral energy sources and strives to continuously improve its energy efficiency across all its operations. Strengthened targets for scope 1 and 2 to be in line with the commitment to Science Based Targets and 1.5° pledge.	Fossil CO_2 emissions from its own combustion and purchased electricity (Scope 1 and 2) reduced by 65% by 2030 (compared to 2015)	Fossil CO_2 emissions reduced by 20% compared to 2015 and 6% compared to 2019.
Water	UPM's goal is to minimise the impact of its operations on water resources, safeguard the natural water cycle in forests, and maintain the functioning of aquatic ecosystems.	Wastewater volume reduced by 30% by 2030 (compared to 2008)	10% reduction in wastewater volume achieved since 2008 for the UPM average product.
Waste	Circular economy means both financial and environmental efficiency. UPM aims to reuse materials and products, reduce the amount of solid waste and increase recycling and recovery in its operations.	No process waste sent to landfills or to incineration without energy recovery by 2030	89% (89%) of all UPM's process waste was recovered and recycled. The total amount of waste to landfills increased by 3% compared to 2019.
Forest	UPM is committed to sustainable forestry and uses third party verified chains-of-custody to ensure that wood is legally sourced from sustainably managed forests.	All fibre certified by 2030	83% (82%) of all wood used by UPM is sourced from certified forests.

Material risks and their management is described on pages 129–133 of the Report of Board of Directors and in the Annual Report on pages 36–37. Information on the company's risk management system is available on the corporate website in the governance section and in the Corporate Governance Statement 2020, which is also available as a separate report on the corporate website ***upm.com/governance***. More information about performance related non-financial topics is available in the general section of the Annual Report and on the UPM website ***upm.com***.

Research and development

Innovating for the future

Innovation and R&D programmes are essential in the development of new products and technologies. Research and development funding is primarily being used on studying new technologies and developing businesses and processes. A global network of research centres provides support for UPM's activities in R&D, both in new and existing businesses.

In 2020, UPM spent EUR 189 (121) million on research and development, making up 18.8% (6.6%) of UPM's operating cash flow. In addition to direct R&D expenditure of EUR 41 (53) million, the figure includes negative operating cash flow and capital expenditure in developing businesses, transformative business prospects and digitalisation projects.

Accelerating the development and scale-up of new molecular businesses

Molecular bioproducts form one of UPM's three strategic focus areas for growth. The biorefinery investment in Leuna, Germany, will enable a switch from fossil raw materials to wood-based sustainable alternatives in various consumer-driven end-uses such as textiles, plastics, PET bottles, packaging and pharma or cosmetics products.

We have also successfully entered the biofuels business and built a profitable and sustainable business platform. Development is currently ongoing, with the aim of expanding the biofuels business with new types of technology concepts and biomass-based raw materials.

Our new state-of-the-art R&D Biofore Base in Lappeenranta, Finland, combines research, piloting and analytics, and unites our technologies, globally accumulated experience and expertise in the new and existing businesses. Strategic research further accelerates the commercialisation of bio-based solutions into viable industrial processes in a cost-efficient way. In 2020, special focus was placed on new value chains in our growth businesses: biochemicals, biofuels and specialty packaging.

Innovating climate-positive products

Our products offer solutions to mitigating climate change as they systematically replace fossil raw materials with bio-based renewable alternatives. Carbon bound from the atmosphere remains in our products over their lifetime, even if they're recycled several times.

We are committed to a climate-positive product portfolio. Many of our products are already proven to be climate positive. In 2020, we initiated a study on climate-related substitution and the carbon storage effects of our products with two research institutes, the German IFEU (Institut für Energie- und Umweltforschung) and the Finnish Environment Institute (SYKE). In the future, we aim to scientifically verify the climate impacts of all our products.

One example of our research related to climate change mitigation is renewable hydrogen. Potential commercial applications using various technologies are evaluated with the aim to lower CO_2 emissions. We also became a member of the European Clean Hydrogen Alliance.

Focus on sustainability and circular economy solutions

Our R&D activities are guided by our aim to meet our 2030 responsibility targets and integrate contribution to the UN Sustainable Development Goals (SDGs) into product development. In 2020, we renewed our sustainable product design concept. One step was the updating of our ecodesign questionnaire to cover SDGs. We carried out a pilot case in the development of sustainable lignin products. In 2021, the work will continue with sustainable packaging and other business areas. Special focus on sustainable product development will be put on circularity.

We are also examining new ways to utilise sustainable fibre-based materials that are being developed for growing end-uses, such as textiles, nonwovens, hygiene products and flexible packaging. New solutions are developed in collaboration with our businesses, technology partners and customers by using revised ecodesign approach as part of sustainable product development concept. We see the residues and side streams as valuable raw materials and thus real business opportunities.

Solid patent portfolio creates value

The significance of the patents, trademarks and intellectual property rights protecting our innovations is even more pronounced in our new businesses, supporting the journey from innovation to business. We have 2,713 patents and patent applications, and 1,360 trademarks globally.

A solid patent portfolio boosts our competitive edge. Licensing of innovations and technologies provides an excellent basis for value creation with customers and technology partners.

More value from digital opportunities

We aim to significantly increase the speed and quality of decision-making, culture of data utilisation and innovation by leveraging high-quality, compliant and modern common data services. Much of what we focus on relates to building the data foundation, including common platforms, digital customer experience, digital supply chain and intelligent operations.

After having created a rich portfolio of digital projects and initiatives, we created a solid operating model that facilitates data-driven decision making in 2020. As part of the model, data governance management forms an important decision-making body for overseeing the strategic focus areas, data principles and related initiatives. Also in 2020, we created the Data Management Office (DMO) and started to work on UPM's Digi and Data strategy to achieve more impact and business value from the digital and data-driven opportunities.

Extensive partner network

Our close-knit global partner network is comprised of customers, universities, research organisations, suppliers and start-up companies. Collaboration speeds up the development and launch of new solutions, particularly for new businesses.

The partnership with the European Joint Undertaking on Bio-Based Industries (BBI) focuses on bio-based products and strengthening their competitiveness in Europe. As a shareholder in the Finnish company CLIC Innovation Ltd, we aim for breakthrough solutions in the bioeconomy, circular economy and cleantech, as well as in smart energy systems. We are also a member of FinnCERES Ecosystem to collaborate on research into lignocellulose-based materials.

In 2020, UPM Specialty Papers collaborated with 4evergreen Alliance, a initiative by CEPI (the Confederation of European Paper Industries) to further accelerate the fibre-based packaging in the circular economy. UPM Raflatac joined a new global industry-wide consortium CELAB (Creating the Circular Economy for Labelling) to boost liner recycling in the labelling industry. UPM Biofuels joined the BIKE project promoting sustainable biomass value chains for biofuels in Europe.

The new era of biochemicals

In January, UPM made the decision to invest EUR 550 million in a biochemical refinery in Leuna, Germany. The investment will open completely new markets for us, with large growth potential for the future.

The new-to-the-world biorefinery will produce a range of 100% wood-based biochemicals, which will enable a switch from fossil raw materials to sustainable alternatives in various consumer-driven end-uses such as textiles, plastics, PET bottles, packaging and variety of rubber applications.

The total annual capacity of the biorefinery will be 220,000 tonnes. The main products will be bio-monoethylene glycol (BioMEG) and lignin-based renewable functional fillers. The biorefinery will also produce bio-monopropylene glycol (BioMPG) and industrial sugars.

In 2020, detailed engineering, procurement and permitting processes of the project were proceeding at full speed. The construction activities for the biorefinery began in October with the official groundbreaking ceremony. The biorefinery is scheduled to start production by the end of 2022.

UPM's biochemicals respond to customers' increasing needs for renewable alternatives. Strong demand-led growth is expected globally as biochemicals are intended mainly to replace chemicals made from fossil raw materials.

The products can be used to replace oil, gas or coal-based materials. Customers don't need to make changes in their existing value chains as UPM's biochemicals perform consistently in existing production processes and recycling infrastructure. Moreover, they will significantly reduce the CO_2 footprint of the end-use products.

The renewable biochemicals have a huge number of potential industrial and consumer applications. Our go-to market strategy focuses on building the right partnerships in the value chain with the sustainability conscious companies.

A combination of sustainable wood supply, a unique technology concept and the proximity to customers will ensure the competitiveness of our operations. InfraLeuna GmbH, a company at the heart of European chemical industry, offers very competitive conditions for constructing the biorefinery with its existing permitting processes, logistics arrangements and infrastructure for various services and utilities. The safety and sustainability of the value chain are based on our high standards. Raw materials and key services for the biorefinery will be sourced from a region that enables local value creation and enhances sustainability. Once the biorefinery is fully running and has been optimised, it is expected to achieve the ROCE target of 14%.

In 2020, we joined the Renewable Carbon Initiative (RCI), which promotes the goal of making chemicals more sustainable, more climate-friendly and part of the circular economy in the future. Our investment was awarded as "The Bio Act of the Year 2020" by the World BioEconomy Forum. This recognition substantiates the fact that bioproducts boosting the circular economy are truly seen as fundamental in the fight against climate change.

First clinical product to hospitals

UPM Biomedicals develops and supplies innovative and sustainable wood-based biomedical products for a variety of uses. The main ingredient of our products is high-quality nanocellulose, extracted from birch.

In the long term, we are aiming for personalised medicine, where treatments are developed from patient's own cells. These cells can be used in manufacturing and in treatments. The key enabling factor is the fact that our gels are animal-free and therefore also do not introduce animal DNA to the patients. Meanwhile, we sell our products to two application areas: clinical and life science.

In the clinical field, FibDex® wound dressing took the significant step of being introduced to market, when a medical device distributor Steripolar Oy started to sell the product to Finnish healthcare professionals and hospitals.

Based on clinical investigation results, FibDex was granted the CE mark in 2019, allowing the marketing and sale of the wound dressing in the EU. Work towards registration with the US Food and Drug Administration (FDA) is ongoing.

In life science, our main products are GrowDex®, a range of hydrogels for 3D cell culturing and GrowDase®, an enzyme to release the cells from the gel. The main application is in pharma. The nanocellulose ensures excellent compatibility even with the most demanding cells, such as stem cells and patient-derived cells. In addition to the existing GrowDex product family on the market, we launched GrowInk™, new biocompatible ready-to-use hydrogels for 3D bioprinting of cells in 2020.

We work with global partners to develop new biomedical products and applications. In 2020, we joined in a new cancer immunotherapy focused research and innovation project, Cancer IO. The project will have a significant impact on clinical cancer research, healthcare systems, business and, most importantly, on the lives of cancer patients. The collaboration integrates immuno-oncology (IO) activities with universities, university hospitals, cancer patient organisations and major pharmaceutical companies.

Circular economy is the basis of growth for biocomposites

UPM Biocomposites offers innovative and sustainable composite materials for various uses in outdoor construction and consumer products. Over 50% of the raw material originates from renewable sources. The materials are based on UPM's own research and development.

UPM ProFi biocomposite utilises the cellulose fibres and plastic polymers generated as manufacturing surplus from self-adhesive label material production and from label customers' label waste. The label waste is collected from UPM Raflatac's 150 customers and partners from several European countries. Our target is to further increase the use of recycled materials in products. For example, UPM ProFi Piazza decking contains 75% recycled materials, which also includes post-consumer recycled plastics.

In 2020, our focus was on developing internal efficiency and digitalisation, as well as data-based forecasting models. The launch of UPM ProFi Piazza was a commercial success. We also joined the EU Circular Plastics Alliance to boost the use of recycled plastics in consumer goods and, in our case, in UPM ProFi products.

UPM Formi composite material, made from wood-based fibres and polymers, is suitable for different types of industrial and consumer products such as furniture and home appliances. The material has a 30–60% lower carbon footprint than fossil-based materials. It complies with the requirements set by the EU for reinforced plastics in relation to the circular economy.

The new UPM Formi EcoAce product range is based almost entirely on renewable resources. It contains certified wood or cellulose fibres as well as bioplastics made of wood-based feedstock from UPM Biofuels' production. Production is ISCC Plus certified, which guarantees that the product meets environmental and social standards along the supply chain. In collaboration with customers, we launched two new UPM Formi EcoAce products, Akvila's reusable cutlery and the MySoda sparkling water maker in 2020.

Development of the UPM Formi 3D biocomposite continued in 2020. The focus was on developing technology around large-scale industrial 3D printing.

R&D's role in different businesses

BUSINESS AREA	DESCRIPTION
UPM Biorefining UPM Pulp	In 2020, special effort was invested in supporting UPM's growth strategy and finding the right solutions for our state-of-the-art pulp mill scheduled to start in Uruguay in 2022. Joint development work was carried out by our technical customer service, development and research experts in Finland, Germany, Uruguay and China in order to understand how to best meet our customers' needs. Good results were achieved within several end-use areas and regions resulting in improved production efficiency both on our side and on the customers' side. To improve product quality and reduce production cost, development work was carried out to improve the level of digitalisation. New digital upper level control solutions were put into use in wood handling, cooking, bleaching and chemical recovery operations at our pulp mills in Finland and Uruguay. Quality to Trust development work on harmonising quality control and streamlining our processes was successfully implemented, improving and solidifying the ability to deliver the right pulp for the right end use.
UPM Biofuels	Collaboration for the development of new applications for renewable plastics based on UPM BioVerno naphtha is continued. The targeted development of UPM Lappeenranta Biorefinery has further improved operational efficiency and increased nominal capacity to 130,000 tonnes per annum. Piloting, research and process development continue to take place at the UPM Biorefinery Development Centre (BrDC). An improved hydrotreatment catalyst was evaluated and selected for our UPM Lappeenranta Biorefinery to improve diesel product cold flow properties and production efficiency, hence enabling better fulfilment of customer needs. UPM is also studying and testing the use of several new feedstocks that fulfil sustainability criteria, such as wood residues and feedstocks from carbon farming for our possible growth plans either in Kotka, Finland or Western Europe.
UPM Energy	The focus was on improving the cost-competitiveness and environmental performance of hydropower production assets and on developing competencies and business operations related to the optimisation of industrial energy consumption and demand-side flexibility. UPM Energy participated in several research programmes and undertook development work with the aim of improving UPM's power generation and consumption operations in a changing electricity market.
UPM Raflatac	Research centres located at four sites (Finland, Poland, China, USA) support the product range expansion of paper, film and special products for global self-adhesive labelling business operations. Cost efficiency and product customisation requirements for various end-use segments were taken into account during the customer and market-orientated development phase. Global R&D focus continues to be in technology platform development for coatings and polymer development. Product safety and sustainable label material alternatives, i.e. Forest Film and RAFNXT+, had their role increased along with new requirements for solutions supporting plastic recycling. Continuous quality improvement continued to remain an essential part of product and process development.
UPM Specialty Papers	R&D and product development initiatives aim to enable high performance and efficiency in the value chain and to develop fibre-based alternatives for non-renewable materials. These initiatives also support growth targets by driving the innovation of products for new applications. In 2020, new papers grades were added to our kraft paper portfolio. We also introduced a packaging paper with no added optical brighteners. Moving forward, we continue to focus on co-creating sustainable packaging papers for increasingly demanding end-uses, together with the packaging value network; we currently have several co-creation initiatives ongoing. UPM Specialty Papers continues to develop release liner base papers to further improve efficiency and minimise the environmental impact of the value chain, through e.g. downgauging and developing our offering of grades with recycled content. UPM Specialty Papers also works to enhance the sustainability and efficiency of operations. In 2020, several improvements to water efficiency were made at Changshu Mill. The mill achieved a 1.3 million m3 reduction in total water consumption by optimizing operations on all three paper machines, i.e. -12%. Several water collection projects were completed; this means that rain water and waste water is collected and pumped to the waste water treatment plant for further treatment. Two natural gas boilers at the mill were upgraded and an exceedingly low NOx emission limit has been reached.
UPM Communication Papers	R&D centres in Lappeenranta, Finland and Augsburg, Germany, focused on investigating new fibre concepts for various paper grades. RCF quality controlling also proceeded. Development of the product portfolio focused on key customer groups' needs, as well as extending the approach to address new and profitable end uses. UPM Communication Papers has been initiating projects alongside its value chain partners designed to explore and develop solutions that can replace and decrease the amount of plastic used in packaging. One innovative project involved removing the plastic film traditionally used in office paper ream wrappers and successfully replacing it with renewable and responsibly sourced wood fibres from UPM. In the area of energy, the focus was on technological innovations that help minimise the energy needs at production sites. Paper mills were also developing intelligent operations to enable more and more demand-side management towards the electricity markets and networks to support system stability and decrease emissions in peak times. For operations efficiency, our R&D efforts concentrated on improving the efficiency of several mills for pinpointed efficiency supporting actions and also safety-improving areas. Digital solutions were developed, built and tested to optimise RCF delivery flows and machine performance measurement and to increase the machine reading of order information. Contributions from the R&D teams were valuable in helping meet the 2030 targets in the areas of energy, water consumption, effluent treatment and resource efficiency.
UPM Plywood	UPM Plywood product management and development provides competitive products within selected end-use areas in collaboration with our customers, superior technical expertise and support for customers, as well as support for the commercialisation of newly developed products and applications. Our latest example of new functional products is WISA-SpruceWR, a water repellent plywood panel, which enables efficient and effortless construction even in changing weather and humidity conditions.

Information on shares

Shares

UPM has one class of shares. Each share entitles the holder to one vote at the General Meeting of UPM.

On 31 December 2020, the total number of UPM shares was 533,735,699. Through the issuance authorisation described below, the number of shares may increase to a maximum of 558,735,699. On 31 December 2020, UPM held 411,653 treasury shares, representing approximately 0.08% of the total number of UPM shares and voting rights. There are no specific terms related to the shares.

In 2020, UPM shares worth a total of EUR 9,921million (9,695 million) were traded on the NASDAQ Helsinki stock exchange. This is estimated to represent more than 50% of all trading volume in UPM shares. The highest listing was EUR 31.50 in January and the lowest was EUR 20.31 in March.

Authorisations held by the Board of Directors

The Annual General Meeting held on 31 March 2020 authorized the Board of Directors to decide on the repurchase of a maximum of 50,000,000 of the Company's own shares. The authorization will be valid for 18 months from the date of the AGM resolution.

The Annual General Meeting held on 31 March 2020 authorized the Board of Directors to decide on the issuance of new shares, the transfer of treasury shares and the issuance of special rights entitling to shares in proportion to the shareholders' existing holdings in the Company, or in a directed share issue, deviating from the shareholder's pre-emptive subscription right. The Board of Directors may also decide on a share issue without payment to the Company itself. The aggregate maximum number of new shares that may be issued and treasury shares that may be transferred is 25,000,000, including the number of shares that can be received on the basis of special rights. The authorization will be valid for 18 months from the date of the AGM resolution.

Aside from the above, the Board of Directors has no current authorisation to issue shares, convertible bonds or share options.

Changes in number of shares

	2020	2019	2018	2017	2016
Number of shares 1 January	533,735,699	533,735,699	533,735,699	533,735,699	533,735,699
Number of shares at 31 December	533,735,699	533,735,699	533,735,699	533,735,699	533,735,699

Major shareholders at 31 December 2020

	NUMBER OF SHARES	HOLDING %
Ilmarinen Mutual Pension Insurance Company	11,181,000	2.09
Varma Mutual Pension Insurance Company	8,169,340	1.53
ELO Mutual Pension Insurance Company	5,311,719	1.00
The State Pension Fund	3,637,531	0.68
OP-Suomi Investment Fund	3,003,170	0.56
The Society of Swedish Literature in Finland	2,877,070	0.54
Holding Manutas Oy	2,200,000	0.41
Swiss National Bank	2,130,070	0.40
Mandatum Life Insurance Company	1,732,814	0.32
Kymin Osakeyhtiön 100-vuotissäätiö	1,696,360	0.32
Nominees & registered foreign owners	358,272,963	67.13
Others	133,523,662	25.02
Total	533,735,699	100.00

Shareholders by category at 31 December, %

	2020	2019	2018	2017	2016
Companies	2.7	2.3	2.1	2.1	2.2
Financial institutions and insurance companies	3.8	3.0	2.9	2.4	3.1
Public bodies	6.0	5.7	6.8	5.1	5.8
Non-profit organisations	4.7	4.6	4.4	4.8	4.8
Households	15.6	15.2	15.0	15.1	15.3
Non-Finnish nationals	67.1	69.1	68.7	70.5	68.8
Total	100.0	100.0	100.0	100.0	100.0

Share distribution at 31 December 2020

SIZE OF SHAREHOLDINGS	NUMBER OF SHARE-HOLDERS	% OF SHARE-HOLDERS	NUMBER OF SHARES, MILLION	% OF SHARES
1 – 100	42,578	37.67	2.0	0.4
101 – 1,000	53,156	47.03	20.9	3.9
1,001 – 10,000	15,926	14.09	42.9	8.0
10,001 – 100,000	1,234	1.09	30.2	5.7
100,001 –	138	0.12	86.1	16.1
Total	113,032	100.00	182.1	34.1
Nominee-registered			351.7	65.9
Not registered as book entry units			–	0.0
Total			533.7	100.0

Under the provisions of the Securities Markets Act, changes in holdings must be disclosed when the holding reaches, exceeds or falls below 5, 10, 15, 20, 25, 30, 50 or 66.7 (2/3) per cent of the voting rights or the number of shares of the company. The stock exchange releases on notifications of changes in holdings pursuant to Chapter 9, Section 5 of the Securities Market Act are available in UPM website ***upm.com/investors***.

Adjusted share related indicators

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Earnings per share (EPS), EUR	1.05	1.99	2.80	1.82	1.65	1.72	0.96	0.63	–2.14	0.88
Comparable EPS, EUR	1.37	2.07	2.24	1.88	1.65	1.38	1.20	0.91	0.74	0.93
Equity per share, EUR	17.53	18.87	18.36	16.24	15.43	14.89	14.02	14.08	14.18	14.22
Dividend per share, EUR [1]	1.30	1.30	1.30	1.15	0.95	0.75	0.70	0.60	0.60	0.60
Dividend to earnings ratio, %	123.7	65.4	46.4	63.0	57.6	43.6	72.9	95.2	neg.	68.2
Dividend to operating cash flow, %	69	38	52	42	30	34	30	43	30	30
Effective dividend yield, %	4.3	4.2	5.9	4.4	4.1	4.4	5.1	4.9	6.8	7.1
P/E ratio	29.0	15.5	7.9	14.2	14.1	10.0	14.2	19.5	neg.	9.7
Operating cash flow per share, EUR	1.89	3.46	2.49	2.74	3.16	2.22	2.33	1.39	1.98	1.99
Dividend distribution, EURm [1]	693	693	693	613	507	400	373	317	317	315
Share price at 31 Dec., EUR	30.47	30.91	22.15	25.91	23.34	17.23	13.62	12.28	8.81	8.51
Lowest quotation, EUR	20.31	21,10	21.69	20.82	13.71	13.19	10.07	7.30	7.82	7.34
Highest quotation, EUR	31.50	31,49	34.70	26.69	23.41	19.26	13.99	13.02	10.98	15.73
Average quotation for the period, EUR	26.09	25.73	28.86	23.89	17.51	16.37	12.26	9.42	9.21	11.17
Market capitalisation, EURm	16,250	16,485	11,813	13,818	12,452	9,192	7,266	6,497	4,633	4,466
Shares traded, EURm [2]	9,921	9,695	9,980	8,460	6,749	7,469	6,233	5,308	5,534	8,835
Shares traded (1,000)	380,237	376,801	345,822	354,053	385,355	456,168	508,318	563,382	600,968	790,967
Shares traded, % of all shares	71.3	70.7	64.8	66.4	72.2	85.5	95.6	106.7	114.4	151.5
Number of shares, average (1,000)	533,324	533,324	533,324	533,415	533,505	533,505	531,574	527,818	525,434	521,965
Number of shares at the end of period (1,000)	533,736	533,736	533,736	533,736	533,736	533,736	533,736	529,302	526,124	524,973
of which treasury shares (1,000)	412	412	412	412	231	231	231	231	231	211

[1] 2020 proposal

[2] Trading on the Nasdaq Helsinki Main Market. Treasury shares bought by the company are included in shares traded.

The definitions of adjusted share related indicators are described below

SHARE RELATED INDICATORS	DEFINITION
Earnings per share (EPS), EUR	Profit for the period attributable to owners of the parent company divided by adjusted average number of shares during the period excluding treasury shares.
Comparable EPS, EUR	Earnings per share calculated in accordance with IFRS excluding items affecting comparability and their tax impact.
Equity per share, EUR	Equity attributable to the owners of the parent company in relation to the adjusted number of shares at the end of period.
Dividend per share, EUR	Dividend distribution divided by adjusted number of shares at the end of period.
Dividend to earnings ratio, %	Dividend per share as a percentage of earnings per share.
Dividend to operating cash flow, %	Dividend per share as a percentage of operating cash flow per share.
Effective dividend yield, %	Adjusted dividend per share as a percentage of adjusted share price at 31.12.
P/E ratio	Adjusted share price in relation to the earnings per share.
Operating cash flow per share, EUR	Operating cash flow divided by adjusted average number of shares during the period excluding treasury shares.
Market capitalisation, EURm	Total number of shares (excluding those held as treasury shares) multiplied by the share price at the end of period.
Adjusted share price at the end of period	Share price at the end of period in relation to share issue coefficient.
Adjusted average share price	Total value of shares traded in relation to adjusted number of shares traded during the period.

Board of Directors´ proposal for the distribution of profit

The Board of Directors proposes to the Annual General Meeting of UPM-Kymmene Corporation to be held on 30 March 2021 that a dividend of EUR 1.30 per share be paid based on the balance sheet to be adopted for the financial year ending 31 December 2020 and that the remaining portion of the distributable funds be retained in the Company's unrestricted shareholders' equity.

The dividend will be paid to a shareholder who is registered in the Company's shareholders' register held by Euroclear Finland Ltd on the dividend record date of 1 April 2021. The Board of Directors proposes that the dividend be paid on 12 April 2021.

On the date of the dividend proposal, 28 January 2021, the Company's registered number of shares is 533,735,699. The aforementioned number of shares includes 411,653 treasury shares which are not entitled to dividend. As a result, the proposed dividend would total EUR 693.3 million.

On 31 December 2020, the distributable funds of the parent company were EUR 3,523,705,577.69 including EUR 248,543,044.65 profit for the period. No material changes have taken place in respect of the Company's financial position after the balance sheet date. In the opinion of the Board Of Directors, the proposed distribution of profits does not risk the solvency of the Company.

Signatures of the annual accounts and the report of the Board of Directors for the year 2020

Helsinki, 28 January 2021

Björn Wahlroos Chair	Berndt Brunow	Henrik Ehrnrooth
Piia-Noora Kauppi	Marjan Oudeman	Martin à Porta
Ari Puheloinen	Veli-Matti Reinikkala	Emma FitzGerald
Kim Wahl		

Financial Statements 2020

Consolidated financial statements, IFRS

Consolidated income statement

EURm	NOTE	2020	2019
Sales	2.1, 2.2	8,580	10,238
Other operating income	2.3	116	97
Costs and expenses	2.3	-7,371	-8,531
Change in fair value of forest assets and wood harvested	4.2	-25	26
Share of results of associated companies and joint ventures		3	3
Depreciation, amortisation and impairment charges	2.3, 4.1, 4.4	-541	-490
Operating profit		761	1,344
Exchange rate and fair value gains and losses	5.4	2	0
Interest and other finance costs, net	5.4	-26	-38
Profit before tax		737	1,307
Income taxes	7.1	-169	-234
Profit for the period		568	1,073
Attributable to:			
Owners of the parent company		560	1,061
Non-controlling interests	8.1	8	12
		568	1,073
Earnings per share for profit attributable to owners of the parent company			
Basic earnings per share, EUR	2.4	1.05	1.99
Diluted earnings per share, EUR	2.4	1.05	1.99

Consolidated statement of comprehensive income

EURm	NOTE	2020	2019
Profit for the period		568	1,073
Other comprehensive income for the period, net of tax			
Items that will not be reclassified to income statement:			
Actuarial gains and losses on defined benefit plans		-36	-58
Changes in fair value of energy shareholdings		-251	-13
Items that may be reclassified subsequently to income statement:			
Translation differences		-262	67
Net investment hedge		5	-6
Cash flow hedges		-24	-50
Other comprehensive income for the period, net of tax	7.2	-569	-58
Total comprehensive income for the period		0	1,014
Attributable to:			
Owners of the parent company		-7	987
Non-controlling interests		6	27
		0	1,014

The notes are integral part of these consolidated financial statements.

Consolidated balance sheet

EURm	NOTE	2020	2019
ASSETS			
Goodwill	4.4	229	238
Other intangible assets	4.4	363	326
Property, plant and equipment	4.1	4,316	4,083
Leased assets	5.2	561	590
Forest assets	4.2	2,077	2,097
Energy shareholdings	4.3	1,936	2,145
Other non-current financial assets	5.3	166	170
Deferred tax assets	7.2	421	395
Net retirement benefit assets	3.4	26	38
Investments in associates and joint ventures		33	33
Other non-current assets		21	23
Non-current assets		10,149	10,140
Inventories	4.6	1,285	1,367
Trade and other receivables	4.6, 5.3	1,534	1,576
Other current financial assets	5.3	136	59
Income tax receivables		34	26
Cash and cash equivalents	5.1, 5.3	1,720	1,536
Current assets		4,709	4,565
Assets classified as held for sale	8.4	–	18
Assets		14,858	14,722

EURm	NOTE	2020	2019
EQUITY AND LIABILITIES			
Share capital	5.5	890	890
Treasury shares		-2	-2
Translation reserve		25	278
Other reserves	5.5	1,430	1,711
Reserve for invested non-restricted equity	5.5	1,273	1,273
Retained earnings		5,735	5,912
Equity attributable to owners of the parent company		9,351	10,062
Non-controlling interests	8.1	162	113
Equity		9,513	10,175
Deferred tax liabilities	7.2	564	549
Net retirement benefit liabilities	3.4	771	759
Provisions	4.5	222	144
Non-current debt	5.2, 5.3	1,952	1,195
Other non-current financial liabilities	5.3	97	83
Non-current liabilities		3,606	2,730
Current debt	5.2, 5.3	90	104
Trade and other payables	4.6, 5.3	1,571	1,654
Other current financial liabilities	5.3	48	33
Income tax payables		30	27
Current liabilities		1,740	1,818
Liabilities		5,345	4,548
Equity and liabilities		14,858	14,722

The notes are integral part of these consolidated financial statements.

Consolidated statement of changes in equity

EURm	SHARE CAPITAL	TREASURY SHARES	TRANSLATION RESERVE	OTHER RESERVES	RESERVE FOR INVESTED NON-RESTRICTED EQUITY	RETAINED EARNINGS	EQUITY ATTRIBUTABLE TO OWNERS OF THE PARENT COMPANY	NON-CONTROLLING INTERESTS	TOTAL EQUITY
Value at 1 January 2020	890	-2	278	1,711	1,273	5,912	10,062	113	10,175
Profit for the period	–	–	–	–	–	560	560	8	568
Translation differences	–	–	-258	–	–	–	-258	-4	-262
Cash flow hedges - reclassified to income statement, net of tax	–	–	–	-34	–	–	-34	–	-34
Cash flow hedges - reclassified to PPE	–	–	–	-5	–	–	-5	–	-5
Cash flow hedges - change in fair value, net of tax	–	–	–	11	–	–	11	3	14
Net investment hedge, net of tax	–	–	5	–	–	–	5	–	5
Energy shareholdings - changes in fair value, net of tax	–	–	–	-252	–	1	-251	–	-251
Actuarial gains and losses on defined benefit plans, net of tax	–	–	–	–	–	-36	-36	–	-36
Total comprehensive income for the period	–	–	-253	-279	–	525	-7	6	–
Share-based payments, net of tax	–	–	–	-2	–	-9	-11	–	-11
Dividend distribution	–	–	–	–	–	-693	-693	-21	-714
Other items	–	–	–	–	–	–	–	–	-1
Contributions by non-controlling interests	–	–	–	–	–	–	–	64	64
Total transactions with owners for the period	–	–	–	-2	–	-702	-704	43	-662
Total equity at 31 December 2020	890	-2	25	1,430	1,273	5,735	9,351	162	9,513
Value at 1 January 2019	890	-2	232	1,778	1,273	5,617	9,786	5	9,791
Profit for the period	–	–	–	–	–	1,061	1,061	12	1,073
Translation differences	–	–	53	–	–	–	53	15	67
Cash flow hedges - reclassified to income statement, net of tax	–	–	–	5	–	–	5	–	5
Cash flow hedges - change in fair value, net of tax	–	–	–	-54	–	–	-54	–	-54
Net investment hedge, net of tax	–	–	-6	–	–	–	-6	–	-6
Energy shareholdings - changes in fair value, net of tax	–	–	–	-13	–	1	-13	–	-13
Actuarial gains and losses on defined benefit plans, net of tax	–	–	–	–	–	-58	-58	–	-58
Total comprehensive income for the period	–	–	47	-63	–	1,004	987	27	1,014
Share-based payments, net of tax	–	–	–	-3	–	-8	-12	–	-12
Dividend distribution	–	–	–	–	–	-693	-693	–	-693
Changes in non-controlling interests	–	–	–	–	–	-7	-7	81	75
Total transactions with owners for the period	–	–	–	-3	–	-709	-712	81	-631
Total equity at 31 December 2019	890	-2	278	1,711	1,273	5,912	10,062	113	10,175

*» **Refer Note 5.5** Share capital and reserves, for further information.*

Consolidated cash flow statement

EURm	2020	2019
Cash flows from operating activities		
Profit for the period	568	1,073
Adjustments [1)]	721	719
Interest received	3	2
Interest paid	-37	-29
Dividends received	3	2
Other financial items, net	-14	-20
Income taxes paid [3)]	-145	-176
Change in working capital [2)]	-93	276
Operating cash flow	1,005	1,847
Cash flows from investing activities		
Capital expenditure	-818	-359
Additions to forest assets	-57	-44
Investments in energy shareholdings	-47	0
Proceeds from sale of property, plant and equipment and intangible assets, net of tax [3)]	23	13
Proceeds from sale of forest assets, net of tax [3)]	3	2
Proceeds from disposal of energy shareholdings	2	1
Proceeds from disposal of joint operations	17	0
Net cash flows from net investment hedges	-4	-29
Change in other non-current assets	3	1
Investing cash flow	-879	-415
Cash flows from financing activities		
Proceeds from non-current debt	861	13
Payments of non-current debt	-31	-6
Lease repayments	-86	-82
Change in current liabilities	-2	-7
Net cash flows from derivatives	-17	11
Dividends paid to owners of the parent company	-693	-693
Dividends paid to non-controlling interests	-23	0
Contributions paid by non-controlling interests	67	21
Other financing cash flow	-4	-39
Financing cash flow	71	-783
Change in cash and cash equivalents	197	649
Cash and cash equivalents at the beginning of the period	1,536	888
Exchange rate effect on cash and cash equivalents	-13	-1
Change in cash and cash equivalents	197	649
Cash and cash equivalents at the end of the period	1,720	1,536

[1)] Adjustments

EURm	2020	2019
Change in fair value of forest assets and wood harvested	25	-26
Share of results of associated companies and joint ventures	-3	-3
Depreciation, amortisation and impairment charges	541	490
Capital gains and losses on sale of non-current assets	-25	-1
Financial income and expenses	24	37
Income taxes	169	234
Utilised provisions	-55	-29
Non-cash changes in provisions	130	43
Other adjustments	-86	-25
Total	721	719

[2)] Change in working capital

EURm	2020	2019
Inventories	45	282
Receivables included in working capital	-6	270
Liabilities included in working capital	-133	-276
Total	-93	276

[3)] Total income taxes paid in 2020 amounted to EUR 146 million (176 million). Income taxes paid related to investing activities are presented in investing cash flow.

Notes to the consolidated financial statements

The notes to the consolidated financial statements are grouped into sections based on their nature. The notes contain the relevant financial information as well as a description of accounting policy and key estimates and judgements applied for the topics of the individual notes. All amounts are shown in millions of euros unless otherwise stated.

Items marked with this symbol describe the accounting principle applied by UPM to the specific financial statement area.

Items marked with this symbol indicate that the accounting area involves estimates and judgement which are described separately.

Risks related disclosures, whether they are financial, actuarial, credit or counterparty in nature, can be found in sections marked with this symbol.

1. Basis for reporting

1.1 Corporate information

UPM-Kymmene Corporation ("the parent company" or "the company") together with its consolidated subsidiaries ("UPM" or "the group") is a global forest-based bioindustry group. UPM large product range covers pulp, graphic and specialty papers, selfadhesive labels, wood-based renewable diesel, electricity as well as plywood and timber products.

UPM-Kymmene Corporation is a Finnish limited liability company, domiciled in Helsinki in the Republic of Finland. The address of the company's registered office is Alvar Aallon katu 1, 00100 Helsinki, where a copy of the consolidated financial statements can be obtained.

The parent company's shares are publicly traded on the Nasdaq Helsinki Main Market.

These group consolidated financial statements were authorised for issue by the Board of Directors on 28 January 2021. According to the Finnish Companies Act, the General Meeting of Shareholders is entitled to decide on the adoption of the company's financial statements.

1.2 Basis of preparation

UPM's consolidated financial statements are prepared in accordance with International Financial Reporting Standards as adopted by the European Union (IFRS as adopted by the EU) and IFRIC Interpretations.

The consolidated financial statements have been prepared under the historical cost convention, except for forest assets, energy shareholdings and certain other financial assets and financial liabilities, defined benefit plan assets and obligations and share-based payment arrangements which are measured at fair value.

The consolidated financial statements are presented in millions of euros, which is the functional and presentation currency of the parent company. Items included in the financial statements of each group subsidiary are measured using the currency of the primary economic environment in which the subsidiary operates ("the functional currency").

The amounts within parentheses refer to the preceding year, 2019.

Figures presented in these financial statements are rounded and therefore the sum of individual figures might deviate from the presented total figure.

Accounting policies

The accounting policies applied to the consolidated financial statements as a whole are described in this section, while the remaining accounting policies are described in the notes to which they relate as UPM aims to provide enhanced understanding of each financial statement area. Further, to provide a better understanding, the accounting choices made within the framework of the prevailing IFRS are described together with the policy.

Key estimates and judgements

In the process of applying the group's accounting policies, management has made a number of judgements and applied estimates of future events that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting periods. Although these estimates are based on management's best knowledge, actual results and timing may ultimately differ from previously made estimates.

Key estimates and judgement which are material to the reported results and financial position are presented in the following notes.

KEY ESTIMATES AND JUDGEMENTS	NOTE
Valuation of forest assets	4.2 Forest assets
Fair value determination of energy shareholdings	4.3 Energy shareholdings
Impairment of property, plant and equipment	4.1 Property, plant and equipment
Impairment of goodwill and other intangible assets	4.4 Goodwill and other intangible assets
Pension and other post-employment benefits	3.4 Retirement benefit obligations
Income taxes	7. Income tax
Environmental provisions	4.5 Provisions
Legal contingencies	9.2 Litigation

Financial risks

UPM is exposed to a variety of financial risks as a result of its business activities including currency risk, interest rate risk, commodity price risk, credit risk, capital risk and liquidity risk. Risk management related to financial activities is carried out by UPM's central treasury department, Treasury and Risk Management, under policies approved by the Board of Directors. Financial risks are described in the relevant notes as described below.

FINANCIAL RISK	NOTE
Credit risk	4.6 Working capital
Liquidity and refinancing risk	5.1 Capital management
Interest rate risk	6.1 Financial risk management
Foreign exchange risk	6.1 Financial risk management
Electricity price risk	6.1 Financial risk management
Financial counterparty risk	6.2 Derivatives and hedge accounting

Impact of COVID-19 on the financial statements

The impact of COVID-19 on UPM financial statements has so far been relatively limited. The group uses estimates and makes significant judgements when valuating certain assets and liabilities, including energy shareholdings, forest assets, retirement benefit obligations and provisions. The group has assessed the impact of COVID-19 to balance sheet items by considering indicators of impairment of goodwill and other intangible assets, recoverable amount of property, plant and equipment, recoverability of deferred tax assets, valuation of inventories, and collectability of trade receivables. The expectations of future cash flows, discount rates and other significant valuation inputs were revised to reflect changed economic environment. Based on these assessments, no significant adjustments to the carrying amounts of said assets were made due to COVID-19. However, the increased uncertainty in the economic environment can lead to significant adjustments to the carrying amount of assets.

The group expects that it will continue to operate and meet its liabilities as they fall due. UPM has a strong financial position. Net debt in the balance sheet amounted to EUR 56 million on 31 December 2020, after paying the dividend of EUR 693 million in Q2 2020. Cash funds and unused committed credit facilities amounted to EUR 3.2 billion. This includes the sustainability-linked five-year EUR 750 million revolving credit facility signed during Q1 2020, the EUR 550 million of bilateral committed credit facilities signed during Q2 2020 and EUR 158 million equivalent rolling overdraft facility. During Q4 2020, UPM successfully issued a EUR 750 million Green Bond under its EMTN (Euro Medium Term Note) programme. The facilities and UPM's outstanding debt have no financial covenants.

1.3 Consolidation principles

Subsidiaries

UPM's consolidated financial statements include the financial statements of the parent company, UPM-Kymmene Corporation, and subsidiaries controlled by UPM. All group entities apply consistently UPM's accounting policies. All intercompany transactions, receivables, liabilities and unrealised profits, as well as intragroup profit distributions, are eliminated. Unrealised losses are also eliminated unless the transaction provides evidence of an impairment of the transferred asset.

Joint operations

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. Joint control is a contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control.

UPM's share in joint operations is recognised in the consolidated balance sheet through recognition of the group's own assets and liabilities and revenues and expenses in the arrangement together with UPM's proportionate share in the joint assets, liabilities and joint income and expenses. The proportionate share of realised and unrealised gains and losses arising from intragroup transactions between UPM and its joint operations is eliminated.

Associates and joint ventures

Associates are entities over which the group has significant influence but no control. Significant influence is the power to participate in the financial and operating policy decisions without the power to control or jointly control those policies. Joint ventures are joint arrangements where the group has joint control with other parties and the parties have rights to the arrangement's net assets.

Interests in associates and joint ventures are accounted for using the equity method of accounting and are initially recognised at cost.

Associates and joint ventures follow the group accounting policies for consolidation purpose.

Non-controlling interests

The profit or loss attributable to owners of the parent company and non-controlling interests is presented on the face of the income statement. Non-controlling interests are presented in the consolidated balance sheet within equity, separately from equity attributable to owners of the parent company.

Transactions with non-controlling interests are treated as transactions with equity owners of the group. For purchases from non-controlling interests, the difference between consideration paid and the acquired share of the carrying value of the subsidiary's net assets is recorded in equity. Gains or losses of disposals to non-controlling interests are also recorded in equity, net of transaction costs.

1.4 Foreign currency translation

Foreign currency transactions are translated into the functional currency using the exchange rate prevailing at the date of transaction. Receivables and liabilities denominated in foreign currencies outstanding on the balance sheet date are translated into the functional currency using the balance sheet date exchange rate. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the income statement, except when recognised in other comprehensive income as qualifying cash flow hedges and qualifying net investment hedges.

UPM records foreign exchange differences relating to ordinary business operations within the appropriate line items above operating profit and those relating to financial items are presented separately as a net amount in finance costs.

Income and expenses of subsidiaries that have a functional currency different from euro are translated into euros at quarterly average exchange rates. Assets and liabilities of subsidiaries are translated at the closing rate at the balance sheet date. All resulting translation differences are recognised as a separate component in other comprehensive income. On consolidation, exchange differences arising from the translation of net investment in foreign operations and other currency instruments designated as hedges of such investments, are recognised in other comprehensive income. When a foreign entity is partially disposed of, sold or liquidated, translation differences accrued in equity are recognised in the income statement as part of the gain or loss on sale/liquidation.

1.5 Changes in accounting policies

The group has reviewed IFRS standard amendments effective on periods starting 1 January 2020. The amendments effective as of 1 January 2020 did not have any impact on the group's financial statements.

2. Business performance

Sales
EUR **8,580 m**
(EUR 10,238m)

Comparable EBIT
EUR **948 m**
(EUR 1,404m)

Comparable ROE
7.5 %
(11.2 %)

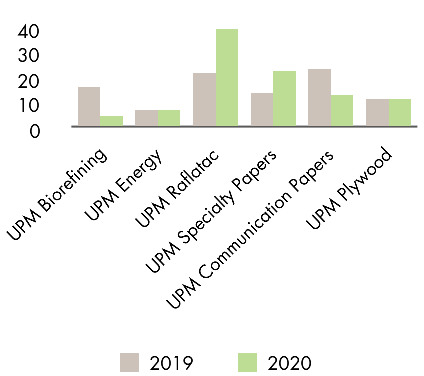
2.1 Business areas

UPM business portfolio consist of six competitive businesses with strong market positions. UPM reports financial information for the following business areas (segments): UPM Biorefining, UPM Energy, UPM Raflatac, UPM Specialty Papers, UPM Communication Papers, UPM Plywood and Other operations. UPM has production plants in 12 countries. The group’s most important markets are Europe, North America and Asia.

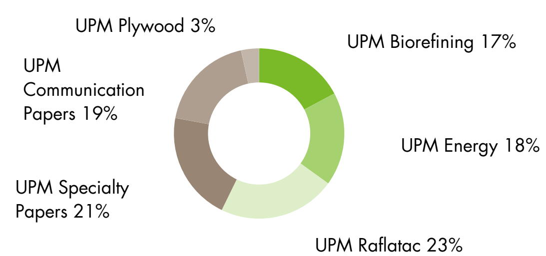
Accounting policies

UPM business areas are reported consistently with the internal reporting provided to UPM’s President and CEO who is responsible for allocating resources and assessing performance of the business areas. Internal reporting is prepared under the same basis as the consolidated accounts. Costs, revenues, assets and liabilities are allocated to business areas on a consistent basis. The sales transactions between business areas are based on market prices, and they are eliminated on consolidation.

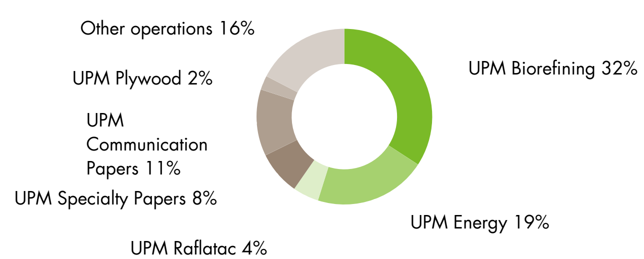
Comparable ROCE, %



Comparable EBIT 2020
EUR 948 million



Capital employed 31 Dec 2020
EUR 11,555 million



The goods and services included in sales revenue of each business area are presented in below table:

BUSINESS AREA	DESCRIPTION AND PRODUCTS
UPM Biorefining	UPM Biorefining consists of UPM Pulp, UPM Timber and UPM Biofuels business units. UPM Pulp offers a versatile range of responsibly-produced pulp grades suitable for a wide range of end uses such as tissue, specialty and packaging papers, graphic papers and board. UPM Timber offers certified sawn timber for joinery, packaging, furniture, planing and construction end-use segments. UPM Biofuels produces wood-based renewable diesel for all diesel engines and renewable naphtha that can be used as a biocomponent for gasoline or for replacing fossil raw materials in the petrochemical industry.
UPM Energy	UPM Energy generates cost-competitive, zero-carbon electricity. Operations also include physical electricity and financial portfolio management as well as services to industrial electricity consumers and producers.
UPM Raflatac	UPM Raflatac offers innovative and sustainable self-adhesive label materials for branding and promotion, information and functional labelling in the food, beverage, personal care, pharmaceutical and logistics segments, for example.
UPM Specialty Papers	UPM Specialty Papers offers labelling and packaging materials as well as office and graphic papers for labelling, commercial siliconising, packaging, office use and printing.
UPM Communication Papers	UPM Communication Papers offers an extensive product range of sustainably produced graphic papers for advertising and publishing as well as home and office uses.
UPM Plywood	UPM Plywood offers high quality WISA® plywood and veneer products for construction, vehicle flooring, LNG shipbuilding, parquet manufacturing and other industrial applications.
Other operations	Other operations include UPM Forest, UPM Biochemicals-, UPM Biomedicals-, UPM Biocomposites- business units and group services. UPM Forest secures competitive wood and biomass for UPM businesses and manages UPM-owned and privately-owned forests in North Europe. In addition, UPM offers forestry services to forest owners and forest investors. UPM Biochemicals offers innovative wood-based biochemicals for replacing fossil-based raw materials in various applications such as textiles, PET bottles, packaging, cosmetics, pharmaceuticals, detergents, rubbers and resins. UPM Biomedicals is the forerunner in producing nanofibrillar cellulose for clinical and life science applications in the field of drug screening, personalised medicine, advanced cell therapies, 3D bioprinting, tissue engineering and wound care. UPM Biocomposites is a pioneer in circular economy offering composite decking materials based on both recycled consumer and industrial waste. The product range also includes composite materials made from renewable fibres and polymers to replace fossil-based plastics.

Key performance indicators and financial targets

UPM aims to grow its comparable EBIT over the long term. The group has a portfolio of five businesses that operate on growing markets and one business that faces declining demand. All of UPM businesses are competitive and have strong market positions. Financial target setting, follow up and allocation of resources in the group’s performance management process is mainly based on the business area comparable EBIT and comparable ROCE.

UPM presents comparable performance measures to reflect the underlying business performance and to enhance comparability from period to period. However, the comparable performance measures used by management should not be considered in isolation as a substitute for measures of performance in accordance with IFRS. Business area information including description of items affecting comparability is presented below.

Business area information for the year ended 31 December 2020

EURm, OR AS INDICATED	UPM BIO-REFINING	UPM ENERGY	UPM RAFLATAC	UPM SPECIALTY PAPERS	UPM COM PAPERS	UPM PLYWOOD	OTHER OPE-RATIONS	ELIMINATI-ONS AND RECONCILI-ATIONS [2]	GROUP
External sales	1,720	252	1,560	1,148	3,296	385	221	-1	8,580
Internal sales	463	127	–	176	37	21	4	-827	–
Total sales	2,183	379	1,560	1,324	3,333	405	225	-828	8,580
Comparable EBIT	166	171	214	199	180	33	-12	-2	948
Items affecting comparability in operating profit	–	14	-9	6	-170	-23	-3	-3	-187
Operating profit	166	184	205	206	9	10	-15	-4	761
Finance costs, net									-24
Income taxes									-169
Profit for the period									568
Operating assets [1]	4,004	2,251	656	1,069	1,757	314	2,083	-235	11,898
Deferred tax assets									421
Other non-operating assets									82
Other financial assets									2,457
Total assets									14,858
Operating liabilities [1]	325	23	142	197	436	34	198	-220	1,135
Deferred tax liabilities									564
Other liabilities									1,023
Other financial liabilities									2,623
Total liabilities									5,345
Other items									
Change in fair value of forest assets and wood harvested	-8	–	–	–	–	–	-17	–	-25
Share of results of associates and joint ventures	2	–	–	–	–	–	1	–	3
Depreciation and amortisation	-176	-7	-39	-74	-121	-27	-29	–	-472
Impairment charges	–	-3	–	–	-58	-8	-1	–	-70
Capital employed, 31 December	3,679	2,228	514	871	1,321	280	1,885	777	11,555
Average capital employed	3,620	2,313	542	897	1,446	292	1,901	504	11,514
Capital expenditure	659	6	13	27	70	17	110	2	903
Capital expenditure, excluding acquisitions and shares	659	5	13	27	70	17	110	1	902
Comparable ROCE, %	4.6	7.4	39.5	22.2	12.4	11.2	-0.6	–	8.3
Personnel, 31 December	2,695	70	3,087	1,932	7,281	2,301	649	–	18,014

[1] Business area's operating assets include goodwill, other intangible assets, property, plant and equipment, forest assets, energy shareholdings, investments in associates and joint ventures, inventories and trade receivables. Operating liabilities include trade payables and advances received.

[2] Eliminations and reconciliations include the elimination of internal sales and internal inventory margin and the changes in fair value of unrealised cash flow and commodity hedges that are not allocated to segments.

*» **Refer Other financial information** on Alternative performance measures, for definitions of key figures and reconciliation to measures presented in the consolidated income statement and balance sheet prepared in accordance with IFRS.*

Business area information for the year ended 31 December 2019

EURm, OR AS INDICATED	UPM BIO-REFINING	UPM ENERGY	UPM RAFLATAC	UPM SPECIALTY PAPERS	UPM COM PAPERS	UPM PLYWOOD	OTHER OPE-RATIONS	ELIMINATI-ONS AND RECONCILI-ATIONS [2]	GROUP
External sales	2,096	180	1,555	1,203	4,516	427	258	4	10,238
Internal sales	617	237	–	209	36	24	6	-1,129	–
Total sales	2,712	417	1,555	1,412	4,552	450	264	-1,125	10,238
Comparable EBIT	544	185	126	120	383	36	-7	17	1,404
Items affecting comparability in operating profit	–	-1	-2	–	-58	–	-4	5	-60
Operating profit	544	184	124	120	324	36	-10	21	1,344
Finance costs, net									-37
Income taxes									-234
Profit for the period									1,073
Operating assets [1]	3,638	2,481	703	1,124	2,026	351	2,159	-362	12,121
Deferred tax assets									395
Other non-operating assets									87
Other financial assets									2,119
Total assets									14,722
Operating liabilities [1]	246	28	169	200	525	31	277	-338	1,139
Deferred tax liabilities									549
Other liabilities									930
Other financial liabilities									1,930
Total liabilities									4,548
Other items									
Change in fair value of forest assets and wood harvested	-11	–	–	–	–	–	38	–	26
Share of results of associates and joint ventures	2	–	–	–	1	–	–	–	3
Depreciation and amortisation	-171	-9	-40	-73	-132	-25	-27	–	-476
Impairment charges	–	–	–	–	-13	–	–	–	-13
Capital employed, 31 December	3,392	2,453	534	924	1,501	320	1,881	468	11,474
Average capital employed	3,469	2,454	579	904	1,647	329	1,824	-182	11,024
Capital expenditure	133	6	13	115	47	29	35	–	378
Capital expenditure, excluding acquisitions and shares	133	6	13	115	47	29	35	–	378
Comparable ROCE, %	15.7	7.5	21.8	13.3	23.2	11.0	-0.4	–	12.8
Personnel, 31 December	2,739	68	3,181	1,992	7,673	2,467	622	–	18,742

[1] Business area's operating assets include goodwill, other intangible assets, property, plant and equipment, forest assets, energy shareholdings, investments in associates and joint ventures, inventories and trade receivables. Operating liabilities include trade payables and advances received.

[2] Eliminations and reconciliations include the elimination of internal sales and the changes in fair value of unrealised cash flow and commodity hedges that are not allocated to segments.

*» **Refer Other financial information** on Alternative performance measures, for definitions of key figures and reconciliation to measures presented in the consolidated income statement and balance sheet prepared in accordance with IFRS.*

Items affecting comparability

EURm	2020	2019
In operating profit		
Impairment charges	-70	-13
Restructuring charges	-137	-52
Change in fair value of unrealised cash flow and commodity hedges	-3	5
Capital gains and losses on sale of non-current assets	23	—
Total	-187	-60
Total in profit before tax	-187	-60
In income taxes		
Taxes related to items affecting comparability	21	14
Changes in tax rates	-3	—
Total	18	14
Total in profit for the period	-169	-46

Certain non-operational or non-cash valuation transactions with significant income statement impact are considered as items affecting comparability and reported separately to reflect the underlying business performance and to enhance comparability from period to period.

In 2020, items affecting comparability in UPM Communication Papers include EUR 117 million restructuring charges and EUR 58 million impairment charges related to closure of UPM Chapelle paper mill and UPM Kaipola paper mill. In UPM Plywood business area, items affecting comparability include EUR 15 million restructuring charges and EUR 8 million impairment charges related to the closure of Jyväskylä plywood mill. Additionally, restructuring charges reported as items affecting comparability include prior capacity closures in UPM Communication Papers as well as restructuring costs related to the business functions of UPM Communications Papers and UPM Raflatac. Capital gains affecting the comparability comprise of a gain of EUR 12 million relating to sale of group's share in Kainuun Voima Oy as well as earnings of EUR 11 million on the sale of other non-current assets.

In 2019, items affecting comparability in operating profit include EUR 15 million restructuring charges and EUR 12 million impairment charges related to closure of paper machine 2 at UPM Rauma mill, Finland, and EUR 24 million restructuring charges and EUR 1 million impairment charges related to closure of paper machine 10 at UPM Plattling mill, Germany. Additionally, restructuring charges reported as items affecting comparability include prior capacity closures in UPM Communication Papers as well as restructuring costs related to establishment of a new Business Services Hub in Wroclaw, Poland.

Total assets and capital expenditure by country

	Assets		Capital expenditure	
EURm	**2020**	**2019**	**2020**	**2019**
Finland	9,050	9,217	131	135
Germany	1,218	1,144	136	94
Uruguay	2,575	2,099	604	70
China	683	782	5	35
United States	328	385	6	6
United Kingdom	151	155	2	5
Austria	103	101	5	4
Russia	123	158	5	24
Poland	125	138	4	3
Estonia	53	54	3	1
France	43	67	1	1
Other EU countries	48	49	—	—
Other European countries	29	27	1	—
Rest of world	330	348	1	1
Total	14,858	14,722	903	378

Sales by destination country

EURm	2020	2019
Finland	865	894
Germany	1,304	1,580
United States	963	1,213
United Kingdom	520	665
China	953	1,042
France	326	387
Uruguay	25	25
Poland	277	289
Austria	122	156
Russia	159	172
Other EU countries	1,495	1,927
Other European countries	298	304
Rest of world	1,272	1,584
Total	8,580	10,238

2.2 Sales

UPM generates revenue mainly from the sale of goods, i.e. several types of products.

The majority of UPM's revenue comes from sales of graphic and specialty papers to publishers, retailers, printing houses, merchants and distributors, converters and label stock manufacturers; sales of self-adhesive label materials to label printers and brand owners and sales of pulp products to tissue, board, specialty and graphic paper producers. The revenue comprises also sales of energy, biofuels, sawn timber and plywood products and a very limited amount of services not related to sale of goods.

UPM sells a proportion of its products to several major customers. The largest customer in terms of sales represented approximately 2% (3%) of UPM's sales and the ten largest customers represented approximately 14% (15%) of such sales.

The group disaggregates its external sales by business area, because this depicts how the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors. Sales by UPM business areas are reported consistently with the internal reporting provided to UPM's President and CEO who is responsible for allocating resources and assessing performance of the business areas. The goods and services included in sales revenue of each business area are presented in below tables.

» Refer Note 2.1 Business areas for information on UPM products.

Sales by business area

EURm	2020	2019	CHANGE
UPM Biorefining	2,183	2,712	-20 %
UPM Energy	379	417	-9 %
UPM Raflatac	1,560	1,555	0 %
UPM Specialty Papers	1,324	1,412	-6 %
UPM Communication Papers	3,333	4,552	-27 %
UPM Plywood	405	450	-10 %
Other operations	225	264	-15 %
Eliminations	-828	-1,125	—
Total	8,580	10,238	-16 %

External sales by major products

BUSINESS AREA	BUSINESS	2020	2019
EUR million			
UPM Biorefining	UPM Pulp, UPM Biofuels, UPM Timber	1,720	2,096
UPM Energy	UPM Energy	252	180
UPM Raflatac	UPM Raflatac	1,560	1,555
UPM Specialty Papers	UPM Specialty Papers	1,148	1,203
UPM Communication Papers	UPM Communication Papers	3,296	4,516
UPM Plywood	UPM Plywood	385	427
Other operations	UPM Forest, UPM Biochemicals, UPM Biomedicals, UPM Biocomposites	221	258
Eliminations and reconciliations		-1	4
Total		8,580	10,238

BUSINESS	PRODUCT RANGE
UPM Pulp	Softwood, birch and eucalyptus pulp
UPM Biofuels	Wood-based renewable diesel for transport and renewable naphtha for transport and petrochemicals
UPM Timber	Standard and special sawn timber
UPM Energy	Electricity and related services
UPM Raflatac	Self-adhesive paper and film label stock
UPM Specialty Papers	Labelling materials, release base papers, flexible packaging materials, office papers, graphic papers
UPM Communication Papers	Graphic papers for various end uses
UPM Plywood	Plywood and veneer products
UPM Forest	Wood and wood-based biomass (logs, pulpwood, chips, forest residues etc.), full forestry service offering
UPM Biochemicals	Lignin products for industrial use
UPM Biomedicals	Wood-based products for biomedical applications
UPM Biocomposites	UPM ProFi decking products and UPM Formi granules

Effect of a 10% change in prices on operating profit for the year

EURm	2020	2019
Papers in UPM Communication Papers	318	441
Fine and specialty papers in UPM Specialty Papers	114	119
Label materials in UPM Raflatac	156	155
Plywood	37	41
Sawn timber	31	36
Chemical pulp (net effect)	56	63

The biggest factor affecting UPM's financial results is the sales price of paper. A change in the volume delivered has less than half of the effect of the same percentage change in sale prices.

Accounting policies

Sales of goods
UPM's performance obligation in the contracts with customers consists of providing the goods specified in the contracts. Revenue from UPM's product sales is recognised when performance obligation is satisfied, which takes place at point in time when control of the good has been transferred to the customer. In UPM's customer contracts the transfer of control and thus timing of revenue recognition is largely dependent on delivery terms. Group terms of delivery are based on Incoterms 2020, the official rules for interpretation of trade terms issued by the International Chamber of Commerce. Major part of the sales contracts is on delivery terms basis, whereby delivery is not a promised service to the customer, as the control of a good does not transfer to the customer before shipment. Revenue and the corresponding receivable are recorded at the point in time when the product is delivered to the destination point for terms designated Delivered Duty Paid ("DDP") or Delivered at Place ("DAP"). For sales transactions designated free of carriage (FCA), revenue is recorded at the time of shipment. For sales transactions designated as Carriage paid to (CPT) or Carriage and Insurance Paid to (CIP), the portion of revenue relating to goods is recorded at the time of loading and the portion of revenue relating to delivery services over time when the service has been performed.
UPM sells energy to NordPool electricity market. Revenue is recognised when electricity is transmissed over time.

Sales of services
UPM provides forest expertise and contracting services to woodland and forestry owners and freight services (free space on group's vessels sold as freight services). Revenues from services are recorded over time when the service has been performed. Sales of services is very limited and thus the group does not report it separately.

Revenue recognition
The group recognises revenue as an amount equal to the price specified in the customer contract net of any sales taxes, cash flow hedging results of sales in foreign currency, hedges of energy sales and variable consideration, when applicable. Variable consideration is defined as any variability that may occur between the sales price and the amount UPM expects to receive. The variable consideration includes mainly cash discounts and volume rebates that encourage the customer to take specific volumes in a given timescale. In addition, the group gives the customers the right for purchase price refund in case the products do not meet the quality as specified in the agreement. The amount of variable consideration is recognised as a refund liability when some of the amount received is expected to be refunded to the customer. Customer rebates payable to customers in relation to sales made until the end of the reporting period and expected quality claims are estimated using the expected value method, and revenue is only recognised to the extent that it is highly probable that a significant reversal will not occur. A refund liability is included in trade and other payables.
Receivables are recognised when the goods are delivered, and the consideration is unconditional except for the passage of time. For most of UPM's customer contracts the period between the transfer of goods or services to customers and the receipt of payment is less than 12 months. For these contracts the group has elected to use the practical expedient not to adjust revenue for the effect of financing components.
Advance payments received from customers are recognised as contract liability. UPM does not have any contract assets arising from contracts with customers.

» Refer Note 4.6 Working capital for information on contract liabilities and refund liabilities.

2.3 Operating expenses and other operating income

Operating expenses
Operating expenses excluding forest assets fair value change, wood harvested and share of results of associates and joint ventures are presented below.

EURm	2020	2019
Costs and expenses		
Raw materials, consumables and goods	4,551	5,515
Employee costs [1]	1,188	1,214
Other operating costs and expenses [2]	852	918
Delivery costs and other external charges	781	884
Total	7,371	8,531

[1] » Refer Note 3 Employee rewards, for further information.

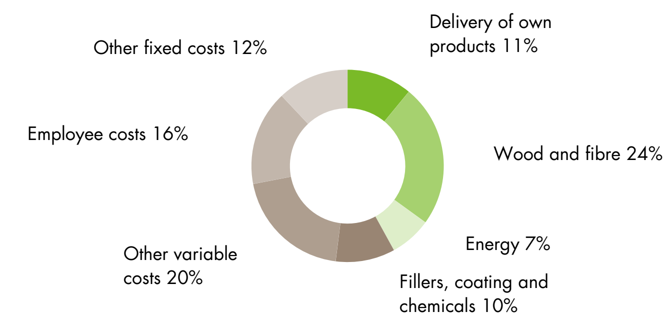
[2] Distribution of other operating costs and expense

EURm	2020	2019
Rents and lease expenses	15	16
Emission expenses [1]	10	8
Losses on sale of non-current assets	0	3
Credit losses	9	12
Maintenance and other operating expenses [2]	818	879
Total	852	918

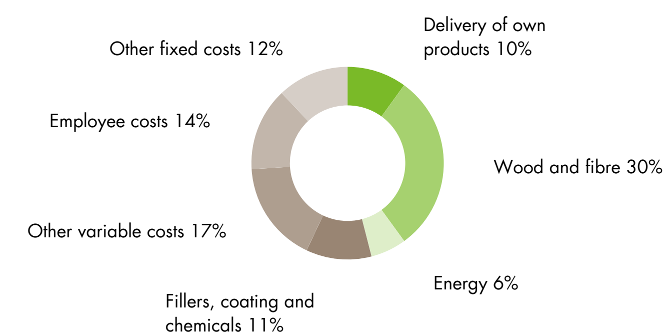
[1] Emission expenses include gains on sales of emission rights EUR 13 (14) million.

[2] Other operating expenses include, among others, energy as well as expenses related to services and group's administration.

Cost structure 2020
EUR 7,371 million



Cost structure 2019
EUR 8,531 million



Auditor's fees

EURm	2020	2019
Audit fee	3.8	3.1
Audit related services	0.1	0.2
Tax services	0.4	0.5
Other services	0.2	0.2
Total	4.5	4.0

In 2020, auditor's fees include EUR 0.1 (0.1) million related to audit services, EUR 0.0 (0.2) million related tax services and EUR 0.2 (0.2) million related to other services paid to PwC Oy.

Research and development costs
The research and development costs included in operating expenses were EUR 41 million (53 million) in 2020. The focus was on new technologies and developing businesses.

Government grants
In 2020, government grants recognised as deduction of operating expenses totalled to EUR 7 million (4 million) of which EUR 4 million (2 million) relates to Finland. In addition, the group received emission rights from governments amounting to EUR 57 million (62 million) of which EUR 21 million (33 million) relates to Finland, EUR 25 million (19 million) to Germany, EUR 3 million (3 million) to Austria and EUR 5 million (0 million) to UK.

Other operating income

EURm	2020	2019
Gains on sale of non-current assets	25	4
Rental income	13	13
Emission rights received	57	62
Derivatives, non-qualifying hedges	24	1
Exchange rate gains and losses	-30	3
Other	26	13
Total	116	97

In 2020, gains on sale of non-current assets include an EUR 12 million gain from the disposal of UPM's 50 % share in the joint operation Kainuun Voima Oy.

Emission rights
The group has recognised EUR 57 million (62 million) of income in Other operating income and EUR 10 million of expense (8 million) under Other operating costs and expenses relating to CO_2 emissions. The liability to cover the obligation to return emission rights amounted to EUR 21 million (18 million) and is recognised in provisions. The emission rights recognised in intangible assets are specified below:

EURm	2020	2019
Carrying value, at 1 January	80	45
Emission rights received and purchased	57	67
Deliveries and disposals	-42	-33
Impairment	–	–
Carrying value, at 31 December	95	80
Accumulated costs	96	81
Accumulated impairments	-1	-1
Carrying value, at 31 December	95	80

Accounting policies

Research and development costs
Research and development costs are expensed as incurred, except for certain development costs, which are capitalised as they generate future economic benefits, and UPM can the measure the cost reliably. Capitalised development costs are amortised on a systematic basis over their expected useful lives, usually not exceeding five years.

Government grants
Government grants are recognised at fair value where there is a reasonable assurance that the grant will be received and the group will comply with the attached conditions. Government grants relating to the purchase of property, plant and equipment are deducted from the acquisition cost of the asset and accordingly directly reduce the annual depreciation of the underlying asset. Other government grants are recognised in the income statement in the period necessary to match them with the costs they are intended to compensate.

Other operating income
Other operating income mainly includes gains on the disposal of non-current assets and rental income. Further, other operating income includes foreign exchange gains and losses in respect of UPM's normal business activities. Gains and losses on derivatives not qualifying hedge accounting are also recognised in other operating income.

Emission rights
The group participates in the European Emissions Trading Scheme aimed at reducing greenhouse gas emissions. Emission rights received from governments free of charge to emit a fixed tonnage of carbon dioxide in a fixed period of time give rise to an intangible asset for the emission rights, a government grant and a liability for the obligation to deliver emission rights equal to the emissions that have been made during the compliance period.

Emission rights are initially recognised as intangible assets based on market value at the date of initial recognition. Emission rights are not amortised. If the market price of emissions rights at the balance sheet date is less than the recognised costs, any surplus emission rights that are not required to cover actual and estimated emissions during the financial year, are impaired to the market price.

Government grants are recognised as deferred income in the balance sheet at the same time as emission rights and are recognised in other operating income in the income statement, systematically, over the compliance period to which the corresponding emission rights relate.

The liability to deliver emission rights is recognised based on actual emissions. The emissions realised are expensed under other operating costs and expenses in the income statement and presented as a provision in the balance sheet. The liability is settled using emission rights on hand, measured at the carrying amount of those emission rights. Emission rights and associated provisions are derecognised when disposed. Any profit or loss represents the costs of purchasing additional rights to cover excess emissions, the sale of unused rights in the case realised emission are under emission rights received free of charge or the impairment of unused emission rights.

2.4 Earnings per share and dividend

According to UPM dividend policy, the company aims to pay an attractive dividend amounting to 30-40% of the group annual operating cash flow per share.

The dividend paid in 2020 were EUR 693 million (EUR 1.30 per share) which is 38% of the operating cash flow per share and in 2019 EUR 693 million (EUR 1.30 per share). The Board of Directors proposes to the Annual General Meeting that a dividend of EUR 693 million, EUR 1.30 per share, will be paid in respect of 2020. The proposed dividend represents 69% of UPM's operating cash flow per share for the year 2020.

Earnings per share

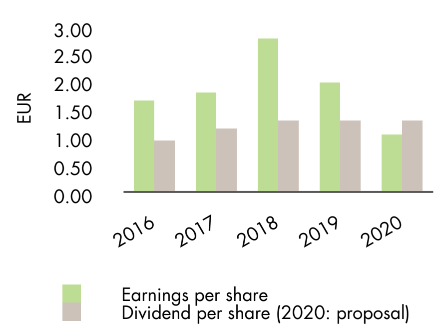
EURm	2020	2019
Profit attributable to owners of the parent company, EURm	560	1,061
Weighted average no. of shares (1,000)	533,324	533,324
Basic earnings per share, EUR	1.05	1.99
Diluted earnings per share, EUR	1.05	1.99

§ ***Accounting policies***

Earnings per share
Earnings per share (EPS) is the amount of profit for the period attributable to each ordinary share. The basic earnings per share are computed using the weighted average number of shares outstanding during the period. Diluted earnings per share are computed using the weighted average number of shares outstanding during the period plus the dilutive effect of share options. The group did not have share-option schemes at the end of 2020 and 2019.

Dividend
Dividend distribution to the owners of the parent company is recognised as a liability in the group's consolidated financial statements in the period in which the dividends are approved by the parent company's shareholders.

Earnings and dividend per share



3. Employee rewards

3.1 Employee costs

EURm	2020	2019
Salaries and fees	979	964
Share-based payments	12	14
Pension and other post-employment benefits, defined benefit plans	13	25
Pension costs, defined contribution plans	89	105
Other indirect employee costs [1]	94	107
Total	1,188	1,214

[1] Other indirect employee expenses primarily include other statutory social expenses, excluding pension expenses.

3.2 Key management personnel

The Annual General Meeting 2020 resolved that the remuneration of the members of the Board of Directors remain unchanged. No changes have taken place in the directors' remuneration since 2017.

In 2020 and 2019, the Chair of the Board of Directors received an annual base fee of EUR 190,000, the Deputy Chair of the Board EUR 135,000 and other members of the Board EUR 110,000. The annual base fee was paid in company shares and cash so that approximately 40% of the fee was paid in the company shares to be purchased on the Board members' behalf, and the rest in cash. The company paid any costs and transfer tax related to the purchase of the company shares.

The Chair of Audit Committee received annual committee fee of EUR 35,000 and Chair of Remuneration Committee as well as Chair of Nomination and Governance Committee EUR 20,000. The members of Audit Committee received annual committee fee of EUR 15,000 and members of other committees EUR 10,000. The annual committee fees were paid in cash.

In 2020, 3,123 (2,911) company shares were purchased to the Chair, 2,219 (2,068) to the Deputy Chair and 1,808 (1,685) to other members of the Board.

Shareholdings (no. of shares) and fees of the Board of Directors

	Shareholdings 31 December		Annual base fee (EUR 1,000)		Annual committee fee (EUR 1,000)	
	2020	2019	2020	2019	2020	2019
Board members						
Björn Wahlroos, Chair	268,317	265,194	190	190	20	20
Berndt Brunow, Deputy Chair	314,752	312,533	135	135	10	10
Henrik Ehrnrooth	11,314	9,506	110	110	10	10
Emma FitzGerald [2]	6,808	–	110	–	15	–
Piia-Noora Kauppi	21,199	19,391	110	110	35	35
Marjan Oudeman	5,363	3,155	110	110	15	15
Jussi Pesonen, President and CEO [1]	–	466,472	–	–	–	–
Martin à Porta [2]	6,008	–	110	–	10	–
Ari Puheloinen	13,339	11,531	110	110	10	10
Veli-Matti Reinikkala	46,135	44,327	110	110	20	20
Suzanne Thoma [1]	–	9,506	–	110	–	10
Kim Wahl	23,113	21,305	110	110	15	15
Total	716,348	1,162,920	1,205	1,095	160	145

[1] Suzanne Thoma and Jussi Pesonen stepped down from the Board in 2020

[2] Emma FitzGerald and Martin à Porta were elected as new directors to the Board in 2020

Salaries and benefits paid to the President and CEO and the Group Executive Team

	President and CEO Jussi Pesonen		Other members of Group Executive Team[1]	
EUR 1,000	2020	2019	2020	2019
Salaries	1,093	1,096	4,132	4,242
Short-term incentives	888	1,426	1,530	1,779
Share rewards	2,734	3,025	8,231	9,421
Benefits	31	29	134	123
Total	4,747	5,576	14,026	15,565

[1] 11 members in 2020 and 2019.

In 2020, costs under the Finnish statutory pension scheme for the President and CEO amounted to EUR 349,000 (465,000) and payments under the voluntary pension plan amounted to EUR 1,421,000 (1,459,000).

In 2020, costs under the Finnish and German statutory pension schemes for Group Executive Team (GET) members (excluding the President and CEO) amounted to EUR 785,000 (924,000) and payments under the voluntary pension plan amounted to EUR 964,000 (947,000).

The remuneration of the President and CEO and other members of the Group Executive Team consists of the base salary and benefits, short-term incentives and long-term share-based incentives.

In 2020 and 2019, the short-term incentives are based on the company's Short-Term Incentive Plan and they are paid annually in cash. The amount of the incentive is linked to the executive's position and achievement of annually set targets. The maximum incentives amount to a total of 100% of the annual base salary to the Business Area Executives and to a total of 70% of annual base salary to the other members of the Group Executive Team. For the President and CEO, the maximum annual incentive amounts to 150% of the annual base salary.

The expenses recognised in income statement in respect of share-based payments for the Group Executive Team were EUR 3.4 million (3.4 million).

According to the service agreement, the President and CEO would have been entitled to retire in November 2020 at the age of 60 but at the request of the company's Board of Directors, the President and CEO has decided to continue in his position.

The President and CEO has a voluntary pension benefit in addition to the Finnish statutory pension scheme. The President and CEO's voluntary pension benefit was arranged through a defined benefit plan until the end of November 2020. The last contribution to the defined benefit plan was made in 2020. Under the defined benefit plan, the target pension was 60% of the average indexed earnings from the last ten full calendar years of employment calculated according to the Finnish statutory pension scheme. The income of the President and CEO's defined benefit pension plan in 2020 was EUR 1.6 million (1.0 million expense in 2019). The plan assets amounted to EUR 17.3 million (14.9 million) and the obligation amounted to EUR 14.9 million (15.0 million).

As of December 2020 the voluntary pension benefit is arranged through a defined contribution plan. First contribution to the defined contribution plan will take place in 2021.

The retirement age of other members of the Group Executive Team is 63. Other Group Executive Team members are under defined contribution plans.

Should the company or the President and CEO give notice of termination of the service agreement, no severance pay will be paid in addition to the salary for the 12-month notice period. For GET members, the period for severance pay is 12 months, in addition to the six months' salary for the notice period, unless notice is given for reasons that are solely attributable to the executive. Should a GET member give notice of termination to the company, no severance pay will be paid in addition to the salary for the notice period.

If there is a change of control in the company, the President and CEO may terminate his service agreement within three months and each GET member within one month from closing the takeover and shall receive compensation equivalent to 24 months' base salary.

3.3 Share-based payments

UPM offers rewards and recognition with an emphasis on high performance. All UPM's employees belong to a unified annual Short Term Incentive (STI) scheme. In addition, UPM has two long-term incentive schemes: the Performance Share Plan (PSP) for senior executives and the Deferred Bonus Plan (DBP) for other key employees.

Performance Share Plan

The Performance Share Plan (PSP) is targeted at the President and CEO and other Group Executive Team (GET) members as well as other selected members of the management. Under the ongoing plans UPM shares are awarded based on total shareholder return during a three-year earning period. The earned shares are delivered after the earning period has ended. Total shareholder return takes into account share price appreciation and paid dividends.

PERFORMANCE SHARE PLANS	PSP 2017–2019	PSP 2018–2020	PSP 2019–2021	PSP 2020–2022
No. of participants at 31 December 2020	21	25	28	29
Actual achievement	100 %	71.45 %	–	–
Max no. of shares to be delivered [1]				
to the President and CEO	92,500	60,089	94,072	85,589
to other members of GET	275,500	188,914	313,600	291,500
to other selected members of management	169,000	112,892	211,350	203,700
Total max no. of shares to be delivered	537,000	361,895	619,022	580,789
Share delivery (year)	2020	2021	2022	2023
Earning criteria (weighting)	Total shareholder return (100%)	Total shareholder return (100%)	Total shareholder return (100%)	Total shareholder return (100%)

[1] For PSP 2017–2019 and PSP 2018–2020, the gross number of shares actually earned.

Deferred Bonus Plan

The Deferred Bonus Plan (DBP) is targeted at other selected key employees and it consists of annually commencing plans. Each plan consists of a one-year earning period and a two-year restriction period. UPM shares are awarded based on achievement of group or group and business area EBITDA targets. Prior to share delivery, the share rewards earned are adjusted with dividends and other capital distributions, if any, paid to all shareholders during the restriction period.

DEFERRED BONUS PLANS	DBP 2017	DBP 2018	DBP 2019	DBP 2020
No. of participants (at grant)	360	370	390	393
No. of participants (at 31 December 2020)	304	316	355	384
Max no. of shares to be delivered (at grant)	525,000	450,000	460,000	429,558
Estimated no. of shares to be delivered at 31 December 2020 [1]	291,340	300,478	183,315	139,600
Share delivery (year)	2020	2021	2022	2023
Earning criteria	Group/Business Area EBITDA	Group/Business Area EBITDA	Group/Business Area EBITDA	Group/Business Area EBITDA

[1] For DBP 2017 and DBP 2018, the gross number of shares actually earned

The indicated actuals and estimates of the share rewards under the Performance Share Plan and the Deferred Bonus Plan represent the gross amount of the rewards of which the applicable taxes will be deducted before the shares are delivered to the participants.

§ ***Accounting policies***

The group's long-term share incentive plans are recognised as equity-settled or cash-settled share-based payment transactions depending on the settlement. The group classifies the transactions with net settlement features for tax obligations as equity-settled in its entirety. Shares are valued using the market rate on the grant date. The settlement is a combination of shares and cash. The group may obtain the necessary shares by using its treasury shares or may purchase shares from the market. PSP and DBP share deliveries are executed by using already existing shares and the plans, therefore, have no dilutive effect.

3.4 Retirement benefit obligations

The group operates various pension schemes in accordance with local conditions and practices in the countries of operations. Retirement benefits are employee benefits that are payable usually after the termination of employment, such as pensions and post-employment medical care.

The pension plans are generally funded through payments to insurance companies or to trustee-administered funds or foundations and classified as defined contribution plans or defined benefit plans.

Defined benefit assets and liabilities recognised in the balance sheet are presented below:

	2020					2019				
EURm	FINLAND	UK	GERMANY	OTHER COUNTRIES	TOTAL	FINLAND	UK	GERMANY	OTHER COUNTRIES	TOTAL
Present value of funded obligations	581	539	43	16	1,180	542	509	39	19	1,108
Fair value of plan assets	-606	-515	-3	-16	-1,140	-579	-491	-3	-20	-1,092
Deficit (+)/surplus (–)	-25	24	40	—	39	-37	17	37	-1	16
Present value of unfunded obligations	—	—	606	74	679	—	—	596	79	675
Net defined benefit liability (+)/asset (–)	-25	24	646	74	719	-37	17	633	78	691
Net retirement benefit asset in the balance sheet	-26	—	—	—	-26	-38	—	—	—	-38
Net retirement benefit liability in the balance sheet [1]	1	24	646	74	745	2	17	633	78	729

[1] Net retirement benefit liability in the balance sheet includes other long-term employee benefits of EUR 25 million (30 million) in 2020.

About 95% of the group's defined benefit arrangements exist in Finland, in the UK and in Germany. The group has defined benefit obligations also in Austria, Holland, France, Canada and in the US. Approximately a quarter of UPM's employees are active members of defined benefit arrangement plans.

Finland

In Finland employers are obliged to insure their employees for statutory benefits, as determined in Employee's Pension Act (TyEL). TyEL provides the employee with insurance protection for old age, disability and death. The benefits can be insured with an insurance company or the employer can establish a fund or a foundation to manage the statutory benefits.

Approximately 81% (82%) of group´s Finnish employees are insured with an insurance company and these arrangements qualify as defined contribution plans. Approximately 19% (18%) of employees are insured with TyEL foundation (UPM Sellutehtaiden eläkesäätiö). The TyEL foundation is administered by the representatives of both the employer and the employees. The foundation has named an authorised representative to take care of its regular operations. The plan is supervised by Financial Supervisory Authority. The foundation is classified as a defined benefit plan for the benefits that must be funded nationally and is the most significant defined benefit pension plan in Finland for UPM.

UK

In the UK, the group operates a legacy defined benefit scheme providing benefits that are linked to the salary level near retirement age or an earlier date of leaving service. The scheme is closed both for new members and future accrual for old members. Part of the scheme is a defined contribution plan and is open to all current employees. The UK pension scheme operates under a single trust which is independent from the group.

Germany

In Germany employees within defined benefit arrangements are entitled to annual pensions on retirement based on their service and final salary. All significant defined benefit plans are closed for new employees.

Present value of obligation and fair value of plan assets

	Pension and other post-employment benefits 2020			Pension and other post-employment benefits 2019		
EURm	PRESENT VALUE OF OBLIGATION	FAIR VALUE OF PLAN ASSETS	NET DEFINED BENEFIT LIABILITY/ (ASSET)	PRESENT VALUE OF OBLIGATION	FAIR VALUE OF PLAN ASSETS	NET DEFINED BENEFIT LIABILITY/ (ASSET)
Carrying value, at 1 January	1,784	-1,092	691	1,569	-956	612
Current service cost	14	—	14	13	—	13
Past service cost	-2	—	-2	—	—	—
Gains and losses arising from settlements	-6	—	-6	—	—	—
Interest expense (+) income (–)	20	-14	7	34	-22	12
Total included in employee costs (Note 3.1)	27	-14	13	47	-22	25
Actuarial gains and losses arising from changes in demographic assumptions	-3	—	-3	—	—	—
Actuarial gains and losses arising from changes in financial assumptions	163	—	163	228	—	228
Actuarial gains and losses arising from experience adjustments	-21	—	-21	-16	—	-16
Return on plan assets, excluding amounts included in interest expense (+) income (–)	—	-90	-90	—	-130	-130
Total remeasurement gains (–) and losses (+) included in other comprehensive income	140	-90	50	211	-130	81
Benefits paid	-63	63	—	-67	67	—
Contributions by the employer	—	-33	-33	—	-30	-30
Translation differences	-28	26	-2	24	-21	3
Carrying value, at 31 December	1,859	-1,140	719	1,784	-1,092	691

Actuarial risks

Defined benefit plans typically expose the group to the following actuarial risks:

Investment risk (asset volatility)

The group is exposed to changes of assets' values especially in the investments of the foundations and schemes in Finland and in the UK. The asset values of these arrangements constitute 98% of total asset values in defined benefit plans within group.

Interest risk

Discount rates used in calculations are based on high-quality corporate bond yield curves in currency in which the benefits are paid. A decrease in the discount rate would increase the plan liabilities. The maturities of yields are reflecting the durations of the underlying obligations. The weighted average duration of group's defined benefit obligation is 17 years (18 years) at the end of 2020.

Inflation risk

In the Finnish plan, the inflation risk is not significant as changes in the inflation assumption are mainly covered by the TyEL pooling system. In the UK, the pensions in payment are tied to Retail Price Index whilst being tied to Consumer Price Index during deferment. An increase of 0.5% in indexes will increase the liabilities by some EUR 43 million. In Germany the pensions have to be adjusted in accordance with the Consumer Price Index.

Salary risk

The present value of the net retirement benefit assets and liabilities is calculated by reference to the expected future salaries of plan participants. An increase in the salary of the plan participants would increase the plan liabilities. In Finland, the salary risk is minor as well as in the UK, where the changes in salary levels have no impact on the funding position as all defined benefit arrangements in the UK are closed to future accrual. In Germany, an increase of 0.5% in expected future salaries would increase the obligation by EUR 13 million.

Life expectancy

Adjustments in mortality assumption have an impact on group's defined benefit obligation. An increase in life expectancy by one year will increase the obligation in Finland by EUR 25 million, in the UK by EUR 26 million and in Germany by EUR 34 million.

Key estimates and judgements

Several actuarial assumptions are used in calculating the expense and liability related to the defined benefit plans. Statistical information used may differ materially from actual results due to, among others, changing market and economic conditions, or changes in service period of plan participants. Significant differences in actual experience or significant changes in assumptions may affect the future amounts of the defined benefit obligation and future expense.

Actuarial assumptions

The weighted average principal assumptions used in the valuations of the defined benefit obligations are detailed below:

	FINLAND		UK		GERMANY		OTHER COUNTRIES	
	2020	2019	2020	2019	2020	2019	2020	2019
Discount rate %	0.33	0.74	1.35	2.05	0.37	0.93	0.67	1.23
Inflation rate %	1.33	1.31	2.95	3.00	1.70	1.70	1.83	1.70
Rate of salary increase %	1.33	1.31	–	–	2.50	2.50	2.54	2.44
Rate of pension increase %	0.62	0.53	2.90	2.95	1.70	1.70	0.87	0.95
Expected average remaining working years of participants	14.1	13.2	11.6	17.4	8.1	8.9	8.6	10.5

EURm	0.5% INCREASE		0.5% DECREASE	
	2020	2019	2020	2019
Discount rate %	-156	-148	173	167
Rate of salary increase %	15	26	-13	-19
Rate of pension increase %	92	93	-88	-84
Life expectancy +1 year	86	78	–	–

A negative change indicates a decrease in the defined benefit obligation.
A positive change indicates an increase in the defined benefit obligation.

Plan assets by categories at 31 December

EURm	2020		2019	
	Quoted	Unquoted	Quoted	Unquoted
Money market	177	97	33	126
Debt instruments	225	107	353	83
Equity instruments	295	39	266	51
Property	21	94	23	68
Assets held by insurance companies	–	62	–	62
Other assets	–	24	–	27
Total	718	423	675	417

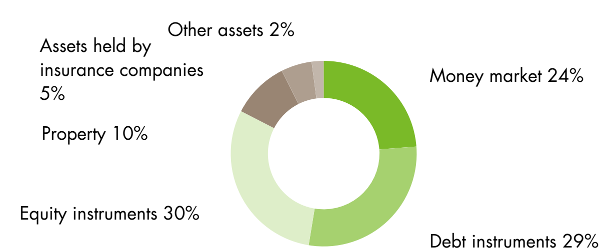
In 2020 plan assets include the company's ordinary shares with a fair value of EUR 2 million (2 million).

In 2021 contributions of EUR 34 million are expected to be paid to group's defined benefit plans. In 2020 contributions of EUR 33 million were paid to group's defined benefit plans.

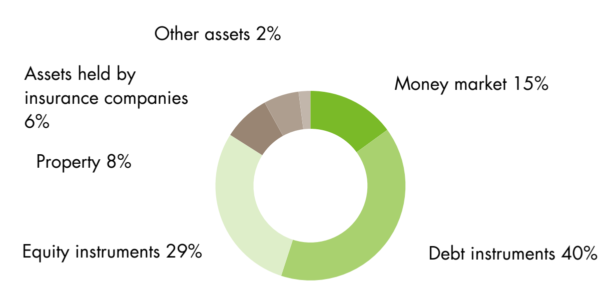
Sensitivity analysis of defined benefit obligations

The sensitivity analysis shows the effect of the change in assumption. The analysis assume that all other assumptions remain unchanged. The projected unit credit method has been applied when calculating the obligation as well as these sensitivities.

Plan assets by categories 2020



Plan assets by categories 2019



Accounting policies

Defined benefit pension plans

Plan benefits depend on salary and length of service. The defined benefit obligations are calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid and that have terms to maturity approximating the term of the related pension liability. The liability recognised in the balance sheet in respect of defined benefit pension plans is the present value of the defined benefit obligation at the balance sheet date less the fair value of plan assets. The cost of providing pensions is charged to the income statement as employee costs so as to spread the cost over the service lives of employees. Changes in actuarial assumptions and actuarial gains and losses arising from experience adjustments are charged or credited in other comprehensive income in the period in which they arise. Past service costs and gains or losses on settlement are recognised immediately in income when they occur.

Defined contribution plans

For defined contribution plans, contributions are paid to pension insurance companies. Once the contributions have been paid, there are no further payment obligations. Contributions to defined contribution plans are charged to the income statement in the period to which the contributions relate.

Other post-employment obligations

Some group companies provide post-employment medical and other benefits to their retirees. The entitlement to healthcare benefits is usually conditional on the employee remaining in service up to retirement age and the completion of a minimum service period. The expected costs of these benefits are accrued over the period of employment, using an accounting methodology similar to that for defined benefit pension plans. Valuations of these obligations are carried out by independent qualified actuaries.

4. Capital employed

UPM's capital employed primarily relates to its production facilities and both forest and energy assets. UPM aims to capture growth opportunities in its existing business portfolio and invest in projects with attractive and sustainable returns.

Capital employed

	2020	2019
Property, plant and equipment	4,316	4,083
Leased assets	561	590
Forest assets	2,077	2,097
Energy shareholdings	1,936	2,145
Goodwill and other intangible assets	592	564
Operating working capital	1,247	1,451
Provisions	-222	-144
Net retirement benefit assets and liabilities	-744	-721
Cash and cash equivalents	1,720	1,536
Other assets and liabilities	215	7
Net deferred tax assets and liabilities	-143	-153
Assets classified as held for sale	–	18
Total	11,555	11,474

4.1 Property, plant and equipment

EURm	LAND AND WATER AREAS	BUILDINGS	MACHINERY AND EQUIPMENT	OTHER TANGIBLE ASSETS	CONSTRUC-TION IN PROGRESS	TOTAL
2020						
Accumulated costs	797	3,423	13,182	839	724	18,965
Accumulated depreciation and impairments	-39	-2,577	-11,318	-714	–	-14,649
Carrying value, at 31 December	757	846	1,864	125	724	4,316
Carrying value, at 1 January	761	948	2,006	134	235	4,083
Additions	48	–	4	1	776	829
Disposals	-1	-5	–	–	–	-7
Depreciation	–	-73	-292	-18	–	-383
Impairment	-8	-27	-34	-1	–	-70
Reclassifications	–	30	235	16	-280	1
Reclassifications to assets held for sale	3	-3	-3	–	–	-2
Translation differences	-45	-26	-52	-6	-7	-136
Carrying value, at 31 December	757	846	1,864	125	724	4,316
2019						
Accumulated costs	796	3,522	13,579	870	235	19,002
Accumulated depreciation and impairments	-35	-2,574	-11,574	-737	–	-14,919
Carrying value, at 31 December	761	948	2,006	134	235	4,083
Carrying value, at 1 January	740	992	2,096	127	159	4,115
Additions	14	7	10	3	316	351
Disposals	–	-5	-1	–	–	-6
Depreciation	–	-72	-303	-17	–	-392
Impairment	–	-1	-12	–	–	-13
Reclassifications	–	22	205	20	-246	–
Reclassifications to assets held for sale	-3	-2	-6	–	–	-11
Translation differences	10	8	15	1	6	40
Carrying value, at 31 December	761	948	2,006	134	235	4,083

Capital expenditure

Capital expenditure, excluding acquisitions and shares, amounted to EUR 902 million (378 million) in 2020.

In January 2020, UPM announced that it would invest EUR 550 million in a 220,000 tonnes next-generation biochemicals biorefinery in Leuna, Germany. The facility is scheduled to start up by the end of 2022.

In January 2019 UPM announced that it would invest in the refurbishment of the Kuusankoski hydropower plant in Finland. The average annual production of the Kuusankoski plant is expected to increase from the current 180 GWh to 195 GWh. The investment will be completed by the end of 2022.

In July 2019 UPM announced that it would invest USD 2.7 billion in a 2.1 million tonne greenfield eucalyptus pulp mill near Paso de los Toros in central Uruguay. Additionally, UPM will invest approximately USD 280 million in port operations in Montevideo and USD 70 million in local investments outside the mill fence, including a new residential area in Paso de los Toros. The mill is scheduled to start up in the second half of 2022.

In October 2019 UPM announced that it would invest EUR 95 million in a Combined-Heat-Power (CHP) plant at the UPM Nordland paper mill in Germany. The plant is planned to go on grid in Q3 2022. The annual cost savings of more than EUR 10 million will start as of 2023. The investment is estimated to decrease UPM's CO_2-footprint by 300,000 tonnes.

In April 2018 UPM announced that it would rebuild Paper Machine 2 at its Nordland mill in Dörpen, Germany, and convert it from fine paper to glassine paper production. The machine was equipped with new finishing equipment and started producing glassine paper in Q1 2020. The capacity after the rebuild is 110,000 tonnes per year. The total investment in Nordland is EUR 124 million.

Capitalised borrowing costs

In 2020, the borrowing costs capitalised as part of non-current assets amounted to EUR 4 million (4 million). Amortisation of capitalised borrowing costs was EUR 3 million (3 million) and the average interest rate used 1.31% (7.19%), which represents the average costs to finance the projects. In 2020, capitalised borrowing costs were mainly related to the construction of the new pulp mill in Uruguay.

Government grants

In 2020, government grants recognised as deduction of non-current assets totalled to EUR 5 million (1 million).

Major capital commitments at 31 December

EURm	2020	2019
New biorefinery / Germany	471	–
CHP power plant / Germany	67	95
New pulp mill / Uruguay	2,139	2,684
Renovation and modernisation / Kuusankoski hydro power plant	16	19
Paper machine conversion / Nordland paper mill	–	15

Impairment losses

In June 2020, UPM announced the plan that it has started a consultation process for the potential closure of the UPM Jyväskylä plywood mill in Finland. With the plan to permanently close the mill, UPM recognised impairment charges of EUR 8 million in the Plywood business area.

In August 2020, UPM announced the plans for the permanent closure of the UPM Kaipola paper mill in Finland. The mill was permanently closed in early January 2021. With the permanent closure of the mill, UPM recognised impairment charges of EUR 53 million in the Communication Papers business area.

In June 2019, UPM announced the decision to permanently close paper machine 10 at UPM Plattling, Germany. With the closure of the paper machine, UPM recognised impairment charges of EUR 1 million in Communication Business area.

In September 2019, UPM announced that it plans to permanently close SC paper machine 2 in Rauma, Finland. EUR 12 million impairment charges were recognised in Communication Papers business area.

Accounting policies

Property, plant and equipment

Property, plant and equipment is stated at historical cost. Costs of assets of acquired in business combinations are determined at fair value at the acquisition date. Depreciation is calculated on a straightline basis and the carrying value is adjusted for impairment charges, if any. The carrying value of property, plant and equipment on the balance sheet represents the cost less accumulated depreciation and any impairment charges.

Borrowing costs incurred for the construction of any qualifying assets are capitalised during the period of time required to complete and prepare the asset for its intended use. Other borrowing costs are expensed.

Major renovations are capitalised and depreciated over the useful lives of the related asset. Ordinary expenses for repairs and maintenance are expensed as incurred.

Gains and losses on disposals are determined by comparing the disposal proceeds with the carrying amount and are included in other operating income and other operating expenses, respectively.

ASSESSED USEFUL LIVES	NUMBER OF YEARS
Land, not subject to depreciation	-
Buildings	20-50
Power plants	20-30
Heavy machinery	15-20
Light machinery	10-15
Equipment	5

Impairment testing

Carrying values of individual items included in property, plant and equipment are reviewed at each closing date to determine whether there is any indication of impairment. The carrying value is written down immediately to the asset's recoverable amount if the carrying value exceeds the estimated recoverable amount. Assets that have an indefinite useful life are not subject to amortisation and are tested annually for impairment. The recoverable amount is determined as the higher of an asset's fair value less costs to sell and its value in use. Value in use is determined by discounting future cash flows expected to be generated by the asset. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units).

Non-financial assets, other than goodwill, that have suffered impairment are reviewed for possible reversal of the impairment at each reporting date. Where an impairment loss is subsequently reversed, the carrying amount of the asset is increased to the revised estimate of its recoverable amount, but the increased carrying amount will not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset in prior years.

Key estimates and judgements

The estimations of useful lives, residual value as well as depreciation and amortisation methods require significant management judgement and are reviewed annually. Management makes estimates on the future cash flows expected to result from the use of the asset and its eventual disposal. While management believes that estimates of future cash flows are reasonable, different assumptions regarding such cash flows could materially affect valuations.

The long useful lives of assets, changes in estimated future sales prices of products, changes in product costs and changes in the discount rates used could lead to significant impairment charges.

Estimates are also made in an acquisition when determining the fair values and remaining useful lives of acquired intangible and tangible assets.

4.2 Forest assets

UPM is both a major forest owner and a purchaser of wood. The value of forest assets, i.e. standing trees, amounted to EUR 2,077 million (2,097 million) at the end of 2020. UPM's own and leased forest land areas are summarised in below table.

1,000 ha	FOREST LAND	PRO-DUCTIVE FOREST LAND	FORESTED LAND
Finland	515	425	418
Uruguay	281	170	162
Uruguay, leased land	153	123	114
United States	76	56	56
Total	1,025	774	750

At the end of 2020, carrying value of own forest land amounted to EUR 594 million (EUR 591 million) and leased forest land EUR 183 million (EUR 176 million).

Forest assets

EURm	2020	2019
Carrying value, at 1 January	2,097	1,945
Additions	53	119
Disposals	–	-1
Wood harvested	-129	-101
Net change in fair value	100	125
Translation differences	-45	10
Carrying value, at 31 December	2,077	2,097

Change in fair value, change due to harvesting and gains or losses on sale of forest assets are recognised in the income statement as a net amount amounting to EUR -25 million (26 million) in 2020.

Accounting policies

The group divides all its forest assets for accounting purposes into growing forests, which are recognised as forest assets at fair value less costs to sell, and land. Own land is stated at cost whereas leased land is valued at cost less accumulated depreciation.

Any changes in the fair value of the growing forests are recognised in the operating profit in the income statement. The fair value is calculated on the basis of discounted future expected cash flows as there is a lack of a liquid market. The fair value of forest assets is a level 3 measure in terms of the fair value measurement hierarchy.

Key estimates and judgements

Fair valuation

The valuation process of forest assets is complex and requires management estimates and judgement on assumptions that have a significant impact on the valuation of the group's forest assets.

Main factors used in the fair valuation of forest assets are estimates for growth and wood harvested, stumpage prices and discount rates. Stumpage price forecasts are based on the current prices adjusted by the management's estimates for the full remaining productive lives of the trees, up to 100 years for forests in Finland and in the US and up to 10 years for plantations in Uruguay. The cash flows are adjusted by selling costs and costs related to future risks. Felling revenues and maintenance costs are estimated on the basis of actual costs and prices, taking into account the group's projection of future price and costs development. In addition, calculations take into account future forest growth and environmental restrictions.

The pre-tax discount rate used to determine the fair value of the Finnish forests in 2020 was 7.0% (7.0%) and for Uruguayan plantations 9.9% (9.9%). A decrease (increase) of one percentage point in discount rate would increase (decrease) the fair value of forest assets by approximately EUR 260 million (260 million).

4.3 Energy shareholdings

UPM is both a significant purchaser and producer of energy. The majority of electrical and thermal energy is consumed at the group's pulp and paper production. The production is mainly carried out by energy companies in which UPM has energy shareholdings. Energy shareholdings are unlisted equity investments. UPM does not have control or joint control of or significant influence in the said energy companies.

The value of energy shareholdings amounted to EUR 1,936 million (2,145 million) at the end of 2020. These energy companies supply energy or both energy and heat to their shareholders on a cost-price principle (Mankala-principle) which is widely applied in the Finnish energy industry. Under the Mankala-principle energy and/or heat is supplied to the shareholders in proportion to their ownership and each shareholder is, pursuant to the specific stipulations of the respective articles of association, severally responsible for its respective share of the production costs of the energy company concerned.

In 2020, UPM issued a shareholder loan of EUR 47 million without a maturity date to PVO. Embedded into the loan terms is a right to issue new shares in the PVO B2 series against the remaining, unpaid nominal of the loan starting from 2021. The loan is valued at fair value and is taken into account as a part of the total fair valuation of the PVO B2 series valuation. In addition, UPM issued a similar loan commitment of EUR 123 million to PVO, where also a right to issue new PVO B2 shares is embedded starting from 2023.

	Number of shares	Group holding %	Carrying value, EURm 2020	Carrying value, EURm 2019
Pohjolan Voima Oyj, A series	8,176,191	61.24	362	360
Pohjolan Voima Oyj, B series	4,140,132	58.11	990	1,191
Pohjolan Voima Oyj, B2 series	2,869,819	51.22	191	188
Kemijoki Oy	179,189	7.33	273	290
Länsi-Suomen Voima Oy	10,220	51.10	114	111
Other	–	–	6	7
Carrying value, at 31 December			1,936	2,145

PVO's share capital is divided into different series of shares. The B and B2 series relate to PVO's shareholdings in Teollisuuden Voima Oyj (TVO). UPM has no direct shareholdings in TVO. TVO operates two nuclear power plants (Olkiluoto 1 and Olkiluoto 2) and is constructing one new nuclear power plant in Olkiluoto (Olkiluoto 3), Finland. The operation of a nuclear power plant is governed by international, European Union and local nuclear regulatory regimes. Pursuant to the Finnish Nuclear Liability Act, the operator of a nuclear facility has a strict third-party liability in relation to nuclear accidents. Shareholders of power companies that own and operate nuclear power plants are not subject to the liability under the Nuclear Liability Act. In Finland, the future costs of conditioning, storage and final disposal of spent fuel, management of low and intermediate level radioactive waste as well as nuclear power plant decommissioning are provided for by a state established fund (the Finnish State Nuclear Waste Management Fund). The contributions to the Fund are intended to be sufficient to cover estimated future costs. These contributions have been taken into consideration in the fair value of the related energy shareholdings.

Energy shareholdings

EURm	2020	2019
Carrying value, at 1 January	2,145	2,159
Disposals	-2	-1
Changes in fair value recognised in other comprehensive income	-207	-13
Carrying value, at 31 December	1,936	2,145

Accounting policies

The group has made an irrevocable election to designate its energy shareholdings as equity instruments where changes in fair value are recognised through OCI. The shareholdings are not held for trading as the group has an intention to hold the investments for the long term. Purchases of energy shareholdings are initially and subsequently measured at fair value through other comprehensive income, net of tax if applicable, with only dividend income recognised through profit and loss. Initial fair value is acquisition cost including transaction costs. Upon disposal of the investment, the accumulated fair value changes in equity are not recycled to the income statement but instead, are reclassified from the fair value reserve to retained earnings.

The fair value of energy shareholdings is a level 3 measure in the fair value measurement hierarchy.

Key estimates and judgements

Fair valuation and sensitivity

Valuation of energy shareholdings requires management's assumptions and estimates of a number of factors that may differ from the actual outcome which could lead to significant adjustment to the carrying amount of the asset. Fair value is determined on a discounted cash flow basis and the main factors impacting the future cash flows include future electricity prices, price trends and discount rates.

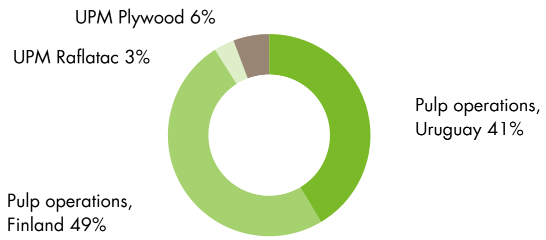
The electricity price estimate is based on a simulation of the Finnish area electricity price. A change of 5% in the electricity price used in the model would change the total value of the assets by EUR 340 million. The discount rate of 5.47% used in the valuation model is determined using the weighted average cost of capital method. A change of 0.5% percentage points in the discount rate would change the estimated fair value of the assets by approximately EUR 300 million.

Other uncertainties and risk factors in the value of the assets relate to start-up schedule of the fixed price turn-key Olkiluoto 3 EPR nuclear power plant project. UPM's indirect share of the capacity of Olkiluoto 3 EPR is approximately 31%, through its PVO B2 shares. Changes in regulatory environment or taxation could also have an impact on the value of the energy generating assets.

4.4 Goodwill and other intangible assets

The group's goodwill mainly relates to pulp operations in Finland and Uruguay belonging to UPM Biorefining business area.

Goodwill by business area 2020



Goodwill by business area

EURm	2020	2019
Pulp operations Uruguay	94	103
Pulp operations Finland	113	113
UPM Raflatac	7	7
UPM Plywood	13	13
Other operations	1	1
Total	229	238

Goodwill

EURm	2020	2019
Carrying value, at 1 January	238	236
Translation differences	-9	2
Carrying value, at 31 December	229	238

Other intangible assets

EURm	INTANGIBLE RIGHTS	SOFTWARE AND OTHER INTANGIBLE ASSETS	TOTAL
2020			
Accumulated costs	471	665	1,136
Accumulated amortisation and impairments	-272	-596	-868
Carrying value, at 31 December	199	69	267
Carrying value, at 1 January	199	47	246
Additions	3	34	37
Amortisation	-4	-12	-16
Reclassifications	–	1	1
Carrying value, at 31 December	199	69	267
Emission rights, carrying value [1]			95
Carrying value including emission rights, at 31 December			363
2019			
Accumulated costs	485	637	1,122
Accumulated amortisation and impairments	-286	-590	-876
Carrying value, at 31 December	199	47	246
Carrying value, at 1 January	201	32	233
Additions	3	23	26
Amortisation	-5	-8	-13
Reclassifications	–	–	–
Carrying value, at 31 December	199	47	246
Emission rights, carrying value [1]			80
Carrying value including emission rights, at 31 December			326

[1] *» Refer Note 2.3* Operating expenses and other operating income, for further information on emission rights.

Impairment testing

Impairment tests for goodwill and water rights with indefinite life were carried out in the fourth quarter 2020.

Water rights of hydropower plants belonging to UPM Energy and reported in intangible rights amounted EUR 189 million at the end of 2020 and 2019. The values of water rights were tested based on expected future cash flows of each separate hydro power plant.

Goodwill impairment tests were carried out for pulp operations in Finland and Uruguay, belonging to UPM Biorefining business area, UPM Raflatac business area and UPM Plywood business area.

The 2020 impairment tests did not result in a recognition of any impairment.

The basis for valuation and key assumptions used in goodwill impairment testing are summarised in below table:

CASH GENERATING UNIT	BASIS OF VALUATION	PERIOD OF FORECAST	PRE-TAX DISCOUNT RATE	KEY ASSUMPTIONS
Pulp operations Finland	Value in use	10 years + terminal value	7.84 % (2019: 7.72 %)	Pulp price, wood costs
Pulp operations Uruguay	Value in use	10 years + terminal value	7.84 % (2019: 8.10 %)	Pulp price, wood costs
UPM Raflatac	Value in use	10 years + terminal value	7.60 % (2019: 6.78 %)	Product prices, cost development
UPM Plywood	Value in use	10 years + terminal value	13.04 % (2019: 10.14 %)	Product prices, cost development

Sensitivity analyses

The sensitivity analyses of goodwill impairment tests indicate that no reasonable change in key assumptions would result in recognition of impairment loss against goodwill. In pulp operations the recoverable amount is most sensitive to pulp sales prices and the cost of wood raw material.

Key estimates and judgements

The group's assessment of the carrying value of goodwill and indefinite life assets requires significant judgement.

While management believes that estimates of future cash flows are reasonable, different assumptions are subject to change as a result of changing economic and operational conditions. Actual cash flows could therefore vary from estimated discounted future cash flows and could result in changes in the recognition of impairment charges in future periods.

Future cash flows

The review of recoverable amount for goodwill and indefinite life assets is based on a calculation of value in use, using management projections of future cash flows. The most important assessments and assumptions needed in calculations are forecasts for future growth rates for the business in question, product prices, cost development and the discount rates applied. The group is using ten-year forecasts in calculations as the nature of the group's business is long-term, due to its capital intensity, and is exposed to cyclical changes. In estimates of product prices and cost development, forecasts prepared by management for the next three years and estimates made for the following seven years are taken into consideration. In addition, consideration is given to the investment decisions made by the group as well as the profitability programmes that the group has implemented and the views of knowledgeable industry experts on the long-term development of demand and prices. In the projection of cash flows UPM uses EBITDA adjusted with cash flows not captured within EBITDA, including working capital movements and capital expenditures.

Discount rate

The discount rate is estimated using the weighted average cost of capital (WACC) on the calculation date adjusted for risks specific to the business in question. The adjusted after-tax discount rate is translated to a pre-tax rate for each cash generating unit (CGU) based on the specific tax rate applicable to where the CGU operates.

Accounting policies

Goodwill

Goodwill arises in connection with business combinations where the consideration transferred exceeds the fair value of the acquired net assets. Goodwill is recognised at cost less accumulated impairment and is an intangible asset with an indefinite useful life. Goodwill is allocated to the cash generating units that are expected to benefit from the synergies from the business combination.

Intangible rights

Intangible rights include water rights of hydropower plants, patents, licences, intellectual property and similar rights. Water rights are deemed to have an indefinite useful life as the company has a contractual right to exploit water resources in the energy production of power plants.

The values of water rights are tested annually for impairment based on expected future cash flows of each separate hydropower plant. Other intangible rights are recognised at cost less accumulated amortisation and impairment. Amortisation is calculated using the straight-line method over their estimated useful lives ranging from 5 to 10 years.

Software and other intangible assets

Research expenditure is recognised as an expense as incurred. Costs incurred in acquiring software that will contribute to future period financial benefit are capitalised to software and systems. Other intangible assets are recognised at cost less accumulated amortisation and impairment. Amortisation is calculated using the straight-line method over their estimated useful lives ranging from 3 to 5 years.

Impairment testing

Goodwill and other intangible assets that are deemed to have an indefinite life are tested at least annually for impairment. For goodwill impairment testing purposes the group identifies its cash-generating units (CGUs), which is the smallest identifiable group of assets that generate cash inflows largely independent of the cash inflows of other assets or other groups of assets. Each CGU is no larger than a business area. The carrying amount for the CGU includes goodwill, non-current assets and working capital. If the balance sheet carrying amount of the CGU unit exceeds its recoverable amount, an impairment loss is recognised.

Impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to other assets of the unit. An impairment loss recognised for goodwill is not reversed in a subsequent period.

Other intangible assets with indefinite useful lives are impaired if the recoverable amount of the asset is less than the carrying amount. The carrying amount of the asset is then reduced to the recoverable amount which is the higher of the asset's net selling price and its value in use.

4.5 Provisions

EURm	RE-STRUCTURING	TERMINATION	ENVIRON-MENTAL	EMISSIONS	OTHER	TOTAL
2020						
Provisions at 1 January	30	36	20	18	41	144
Provisions made during the year	43	96	7	23	3	173
Provisions utilised during the year	-11	-33	-1	-19	-9	-73
Unused provisions reversed	-6	-7	–	-1	-7	-21
Reclassifications	-4	–	4	–	–	–
Provisions at 31 December	52	91	29	21	28	222
Non-current						100
Current						122
Total						222
2019						
Provisions at 1 January	22	24	20	14	46	126
Provisions made during the year	11	33	–	22	6	72
Provisions utilised during the year	-3	-19	-1	-18	-7	-47
Unused provisions reversed	–	-2	–	–	-4	-7
Reclassifications	–	–	–	–	–	–
Provisions at 31 December	30	36	20	18	41	144
Non-current						81
Current						62
Total						144

UPM has undergone several restructuring in recent years including mill closures and profit improvement programs. Restructuring provisions recognised include various restructuring activities including dismantling costs. Termination provisions include severance payments, unemployment compensations or other arrangements for employees leaving the company. In Finland termination provisions include also unemployment arrangements and disability pensions. Unemployment provisions in Finland are recognised 2–3 years before the granting and settlement of the compensation.

At 31 December 2020 and 2019, restructuring and termination provisions relate mainly to capacity closures and optimisation of operations in UPM Communication Papers business area. UPM Chapelle paper mill was closed in 2020. UPM Kaipola paper mill was closed in the beginning of 2021. The total termination and restructuring provisions related to these actions amounted to EUR 106 million in 2020. Additionally, termination provision made during the year relate to restructuring of business functions of UPM Communication Papers and UPM Raflatac amounting to EUR 14 million. In UPM Plywood business Jyväskylä plywood mill was closed and EUR 12 million restructuring and termination provision recognised .

In 2019, UPM closed paper machine 10 at UPM Plattling in Germany and SC paper machine 2 in Rauma. The total termination and restructuring provisions related to these actions amounted to EUR 33 million in 2019.

The group recognises provisions for normal environmental remediation costs expected to be incurred in a future period upon a removal of non-current assets and restoring industrial landfills where a legal or constructive obligation exists.

Other provisions are mainly attributable to onerous contracts and will be incurred over a period longer than one year.

Provisions for emissions include liability to cover the obligation to return emission rights. The group possesses emission rights amounting to EUR 95 million (80 million) as intangible assets.

» Refer Note 2.3 Operating expenses and other operating income, for further information on emission rights.

Accounting policies

A provision is recognised when a present legal or constructive obligation exists as a result of a past event and it is probable that an outflow of resources will be required to settle the obligation and the amount can be reliably estimated. Provisions are split between amounts expected to be settled within 12 months of the balance sheet date (current) and amounts expected to be settled later (non-current).

Restructuring and termination provisions

A restructuring provisions is recognised when a detailed plan for the implementation of the measures is complete and when the plan has been communicated to those who are affected. Employee termination provisions are recognised when the group has communicated the plan to the employees.

Environmental provisions

Environmental expenditures that relate to an existing condition caused by past operations that do not contribute to future earnings are expensed. The recognition of environmental provisions is based on current interpretations of environmental laws and regulations. Such provisions are recognised when the group has an obligation to dismantle and remove a facility or an item of plant and to restore the site on which it is located. The amount recognised is the present value of the estimated future expenditure determined in accordance with local conditions and requirements. A corresponding item of property, plant and equipment of an amount equivalent to the provision is also recognised and subsequently depreciated as part of the asset. Provisions do not include any third-party recoveries.

Emission provisions

Emission obligations are recognised in provisions based on realised emissions. The provision is measured at the carrying amounts of the corresponding emission rights held, which are recognised as intangible assets. In case of deficit in emission rights, the shortage is valued at the market value at the balance sheet date.

Key estimates and judgements

Environmental provisions

The estimates used in determining the provisions are based on the expenses incurred for similar activities in the current reporting period taking into account the effect of inflation, cost-base development and discounting. Because actual outflows can differ from estimates due to changes in laws, regulations, public expectations, technology, prices and conditions, and can take place many years in the future, the carrying amounts of provisions are regularly reviewed and adjusted to take into account of any such changes. The discount rate applied is reviewed annually.

The group aims to operate in compliance with regulations related to the treatment of waste water, air emissions and landfill sites. However, expected events during production processes and waste treatment could cause material losses and additional costs in the group's operations.

Legal contingencies

Management judgement is required in measurement and recognition of provisions related to pending litigation. Provisions are recorded when the group has a present legal or constructive obligation as a result of past event, an unfavourable outcome is probable and the amount of loss can be reasonably estimated. Due to inherent uncertain nature of litigation, the actual losses may differ significantly from the originally estimated provision.

» Refer Note 9.2 Litigation for details of legal contingencies.

4.6 Working capital

The group defines operating working capital as inventories, trade receivables, trade payables and advances received which are presented separately below. The performance obligations related to advances received are typically fulfilled within 12 months of receipt of the advance.

UPM is focusing on working capital efficiency and targeting a sustainable and permanent reduction in operating working capital.

Operating working capital

EURm	2020	2019
Inventories	1,285	1,367
Trade receivables	1,098	1,222
Trade payables	-1,128	-1,130
Advances received	-8	-8
Total	1,247	1,451

Inventories

EURm	2020	2019
Raw materials and consumables	647	682
Work in progress	6	9
Finished products and goods	616	658
Advance payments	16	18
Total	1,285	1,367

Trade and other receivables

EURm	2020	2019
Trade receivables		
Trade receivables	1,129	1,253
Loss allowance provision	-31	-31
Total trade receivables	1,098	1,222
Prepayments and accrued income		
Personnel expenses	9	2
Interest income	–	–
Energy and other excise taxes	48	52
Other items	130	106
Total prepayments and accrued income	186	159
Other receivables		
VAT and other indirect taxes receivable	135	144
Other receivables	115	51
Total other receivables	250	195
Total	1,534	1,576

EURm	2020 TRADE RECEIVABLES	2020 LOSS ALLOWANCE PROVISION	2020 RECEIVABLES, NET OF PROVISION	2019 TRADE RECEIVABLES	2019 LOSS ALLOWANCE PROVISION	2019 RECEIVABLES, NET OF PROVISION
Undue	1,030	-4	1,025	1,128	-3	1,125
Past due up to 30 days	59	-1	58	79	-1	79
Past due 31-90 days	14	-3	11	13	-2	11
Past due over 90 days	26	-22	4	33	-26	8
Total	1,129	-31	1,098	1,253	-31	1,222

Trade and other payables

EURm	2020	2019
Accrued expenses and deferred income		
Personnel expenses	180	188
Interest expenses	6	7
Indirect taxes	11	4
Customer rebates	92	124
Customer claims	5	7
Other items	59	88
Total accrued expenses and deferred income	354	417
Advances received	8	8
Trade payables	1,128	1,130
Other current liabilities	82	98
Total	1,571	1,654

Operational credit risk

Operational credit risk is defined as the risk where UPM is not able to collect the payments for its receivables. The group has a credit policy in place and the exposure to credit risk is monitored on an ongoing basis. Outstanding trade receivables, days of sales outstanding (DSO) and overdue trade receivables are followed on monthly basis. Potential concentrations of credit risk with respect to trade and other receivables are limited due to the large number and the geographic dispersion of customers. Customer credit limits are established and monitored, and ongoing evaluations of their financial condition is performed. The group has trade credit insurances to protect accounts receivables from significant credit losses. In certain market areas, including Asia and Northern Africa, measures to reduce credit risks include letters of credit, prepayments and bank guarantees. Maximum exposure to credit risk, without taking into account any credit enhancements, is the carrying amount of trade and other receivables.

UPM does not have significant concentration of customer credit risk. The ten largest customers accounted for approximately 15% (15%) of the trade receivables as at 31 December 2020 – i.e., approximately EUR 170 million (179 million).

In 2020, trade receivables amounting to EUR 10 million (8 million) were subject to permanent write-off and the loss was recognised under other costs and expenses. In accordance with the group's accounting policy, trade receivables are permanently written off when there is no reasonable expectation of recovery.

Accounting policies

Inventories
Inventories are stated at the lower of cost and net realisable value. Cost is determined by the method most appropriate to the particular nature of inventory, the first-in, first-out (FIFO) or weighted average cost. The cost of finished goods and work in progress comprises raw materials, direct labour, other direct costs and related production overheads (based on normal operating capacity) but excludes borrowing costs. Net realisable value is the estimated selling price in the ordinary course of business, less the costs of completion and selling expenses. If the net realisable value is lower than cost, a valuation allowance is established for inventory obsolescence.

Trade receivables
Trade receivables arising from selling goods and services in the normal course of business are recognised initially at transaction price and subsequently at amortised cost less loss allowance provision. No element of financing is deemed present as the sales are made with a credit term of 14–60 days, which is consistent with market practice.

The group applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables. The group has recognised two types of provisions for trade receivables – a general provision for lifetime expected credit losses and a provision for specified individual trade receivables, both of which are charged to the income statement. The group uses a provision matrix for estimating lifetime expected credit losses where trade receivables are segregated by businesses. The provision matrix is based on historical observed default rates, adjusted by forward looking information. It takes into account trade credit insurances, payment profile of customers and the factor that as debts get older they are more likely not to be paid. Additionally, the group recognises a provision individually for outstanding trade receivables where specific debtor information is available. In these cases there must be objective evidence that the group will not be able to collect all amounts due according to the original terms of the receivables.

Trade receivables are permanently written off when there is no reasonable expectation of recovery. The customer entering into bankruptcy or liquidation proceedings or finalising such proceedings, or entering into debt-restructuring are considered indicators that the trade receivables are no longer expected to be recovered. Subsequent recoveries of amounts previously written off are credited to the income statement. The carrying amount of trade receivables approximates to their fair value due to the short-term nature of the receivables.

Trade and other payables
Trade payables arise from purchase of inventories, fixed assets and goods and services in the ordinary course of business from UPM's suppliers. Trade and other payables are classified as current liabilities if they are due to be settled within the normal operating cycle of the business or within 12 months from the balance sheet date. Trade payables are recognised initially at fair value and subsequently at amortised cost using the effective interest method. The carrying amount of trade payables approximates to their fair value due to the short-term nature of the payables.

The group is recognising refund liability for expected volume and other discounts arising from contracts with customers. Customer rebates include mainly volume discounts and are recognised as equal to an amount which is most likely to be paid to the customer. The carrying amount of expected customer rebates is updated at each reporting date, using the latest forecast data available.

Customer claims relating to quality complaints are accounted for as revenue related refund liability. Expected customer claims are estimated based on historical data and the amount of refund liability is updated at each reporting date.

Advances received are recognised as contract liability until the performance obligation is fulfilled.

5. Capital structure

UPM has a strong cash flow and industry-leading balance sheet that mitigates risks and enables value-enhancing strategic actions.

Net debt	Free cash flow
EUR **56 m**	EUR **126 m**
(EUR -453m)	(EUR 1,432m)

5.1 Capital management

UPM's objective for managing capital comprising of net debt and total equity is to ensure maintenance of flexible capital structure to enable the ability to operate in capital markets and maintain optimal returns to shareholders. The group manages its financing activities, debt portfolio and financial resources via various policies that are designed to ensure optimum financing arrangements minimising simultaneously financial expenses and refinancing risk and optimising liquidity. Borrowing activities are centralised to the parent to the extent possible and cash resources are distributed within the group by the central treasury department.

UPM targets a net debt to EBITDA ratio of approximately 2 times or less.

UPM's capital

EURm	2020	2019
Equity attributable to owners of the parent company	9,351	10,062
Non-controlling interest	162	113
Total equity	9,513	10,175
Non-current debt	1,952	1,195
Current debt	90	104
Total debt	2,042	1,299
Total capitalisation	11,555	11,474
Total debt	2,042	1,299
Less: Interest-bearing financial assets	1,986	1,752
Net debt	56	-453
Gearing ratio, % [1]	1	-4
Net debt to EBITDA [1]	0.04	-0.24

[1] Refer » *Other financial information* on Alternative performance measures.

Liquidity and refinancing risk

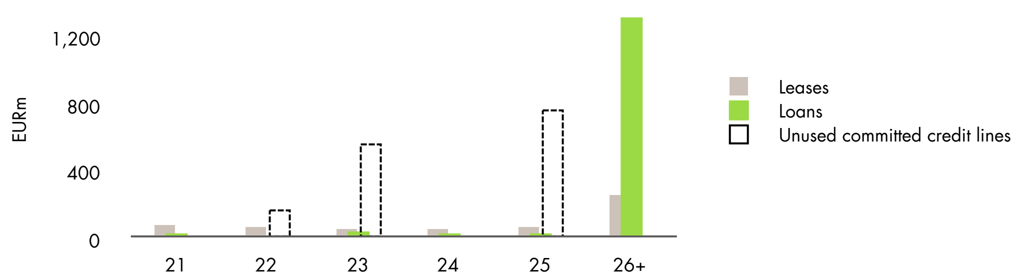
Under all circumstances, UPM seeks to maintain adequate liquidity, which depends on a number of factors, such as the availability of cash flows from operations and access to additional debt and equity financing. UPM aims to ensure sufficient liquidity by means of efficient cash management and restricting financial investments to investment types that can readily be converted into cash and by keeping a sufficient amount of unused committed credit lines or cash as a reserve. UPM aims to minimise refinancing risks by ensuring a balanced loan portfolio maturing schedule and sufficiently long maturities. The average loan maturity at 31 December 2020 was 7.6 years (7.5 years).

Liquidity and refinancing

EURm	2020	2019
Cash at bank	1,390	977
Cash equivalents	330	559
Committed credit lines	1,458	7
of which used	–	-4
Loan commitments	-123	-47
Used uncommitted credit lines	-2	-2
Long-term loan repayment cash flow	-80	-99
Liquidity	2,973	1,391

Cash and cash equivalents comprise cash in hand, deposits held at banks and with original maturities of three months or less. Bank overdrafts are included in used uncommitted credit lines and presented within current debt in the balance sheet. In 2020, no impairment and no expected credit losses were recognised in profit or loss for loan receivables or cash and cash equivalents.

Repayments of debt and maturities of unused committed credit lines at the end of 2020



Maturity table of debt at the end of 2020

EURm	2021	2022	2023	2024	2025	2026+	TOTAL
Bonds	–	–	–	–	–	1,056	1,056
Loans from financial institutions	4	4	17	8	16	77	126
Lease liabilities	75	63	53	50	54	248	544
Other loans	1	–	–	–	–	168	171
Current loans	2	–	–	–	–	–	2
Principal payments	82	67	71	59	70	1,550	1,898
Interest payments	44	40	39	38	37	127	325

The difference between the above nominal values and carrying value of total debt arise from fair value adjustments increasing carrying value by EUR 157 million and other non-cash adjustments decreasing carrying value by EUR 18 million.

Maturity table of debt at the end of 2019

EURm	2020	2021	2022	2023	2024	2025+	TOTAL
Bonds	–	–	–	–	–	334	334
Loans from financial institutions	16	10	6	18	1	1	53
Lease liabilities	83	68	53	49	43	290	586
Other loans	1	1	1	1	1	174	179
Current loans	2	–	–	–	–	–	2
Principal payments	102	79	60	68	45	799	1,154
Interest payments	45	43	42	41	40	168	379

The difference between the above nominal values and carrying value of total debt arise from fair value adjustments increasing carrying value by EUR 152 million and other non-cash adjustments decreasing carrying value by EUR 9 million.

Maturity table of derivatives included in net debt and guarantees at the end of 2020

EURm	2021	2022	2023	2024	2025	2026+	TOTAL
Net settled interest rate swaps							
Net inflow	19	19	19	17	16	29	120
Net outflow	–	–	–	–	–	-3	-4
Gross settled derivatives							
Gross currency swaps							
Total inflow	6	6	6	6	6	188	220
Total outflow	-1	-1	-1	-1	-1	-170	-173
Forward foreign exchange contracts							
Total inflow	715	–	–	–	–	–	715
Total outflow	-711	–	–	–	–	–	-711
Guarantees	2	–	–	–	–	–	2

Maturity table of derivatives included in net debt and guarantees at the end of 2019

EURm	2020	2021	2022	2023	2024	2025+	TOTAL
Net settled interest rate swaps							
Net inflow	14	15	15	15	14	40	112
Net outflow	–	–	–	–	–	–	-1
Gross settled derivatives							
Gross currency swaps							
Total inflow	7	7	7	7	7	204	239
Total outflow	-1	-1	-1	-1	-2	-175	-181
Forward foreign exchange contracts							
Total inflow	325	–	–	–	–	–	325
Total outflow	-326	–	–	–	–	–	-326
Guarantees	2	–	–	–	–	–	2

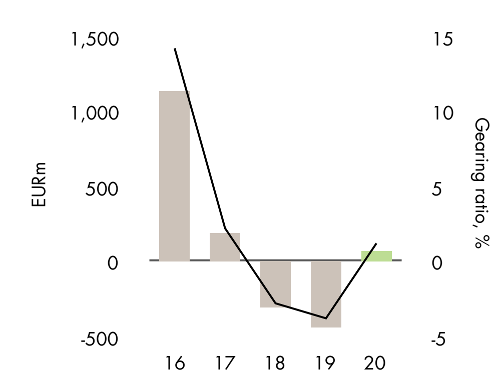
5.2 Net debt

Net debt is defined as the total of current and non-current debt less cash and cash equivalents and interest-bearing current and non-current financial assets. In 2020, the group increased net debt by EUR 509 million. Net debt totalled EUR 56 million (-453 million) at the end of 2020.

In October 2020 UPM established a EUR 3 billion Euro Medium Term Note (EMTN) programme and launched a Green Finance Framework. The independent second opinion concerning the framework was provided by CICERO Shades of Green. UPM's framework was rated with the highest-grade, CICERO Dark Green.

In November 2020 UPM successfully issued its first Green Bond under the EMTN programme with a nominal value of EUR 750 million. The bond matures in November 2028 and pays a fixed coupon of 0.125%. There are no financial covenants connected to the bond. The net proceeds from the bond will be used for financing and/or refinancing Eligible Projects and Assets under UPM's Green Finance Framework. Then bond is listed on the Irish Stock Exchange plc, trading as Euronext Dublin.

Net debt



Net debt

EURm	2020	2019
Bonds	1,153	431
Loans from financial institutions	121	35
Lease liabilities	469	504
Other loans	210	225
Non-current debt	1,952	1,195
Repayments of non-current debt	5	17
Repayments of lease liabilities	75	83
Derivatives	8	3
Other liabilities	2	2
Current debt	90	104
Total debt	2,042	1,299
Loan receivables	4	7
Derivatives	157	154
Other receivables	20	19
Non-current interest-bearing assets	181	180
Loan receivables	8	8
Derivatives	12	8
Other receivables	66	20
Cash and cash equivalents	1,720	1,536
Current interest-bearing assets	1,805	1,571
Total interest-bearing assets	1,986	1,752
Net debt	56	-453

Accounting policies

Debt

Debt comprising of bonds, bank and pension loans, lease liabilities and other loans is recognised initially at fair value, net of transaction costs and subsequently measured at amortised cost using the effective interest method. Any difference between proceeds (net of transaction costs) and the redemption value is recognised in the income statement over the estimated life of the borrowing. UPM classifies debt as non-current unless due for settlement within a year. Most of the debt is hedged in a fair value hedge relationship as described in *» Note 6.1 Financial risk management.*

Change in net debt 2020

	Reported in financing activities in cash flow statement						
EURm	NON-CURRENT LOANS INCL. REPAYMENTS	LEASE LIABILITIES	CURRENT LOANS	NET DERIVATIVES	OTHER FINANCIAL ASSETS	CASH AND CASH EQUIVALENTS	NET DEBT
Carrying value, at 1 January	708	586	2	-159	-54	-1,536	-453
Change in net debt, cash							
Proceeds from non-current debt	861	–	–	–	–	–	861
Payments of non-current debt	-31	–	–	–	–	–	-31
Lease repayments	–	-86	–	–	–	–	-86
Change in current liabilities	–	–	-2	–	–	–	-2
Net cash flows from derivatives	–	–	–	-17	–	–	-17
Transaction costs and discounts in operating cash flow	-10	–	–	–	–	–	-10
Change in other financial assets in operating cash flow	–	–	–	–	-47	–	-47
Change in other financial assets in investing cash flow	–	–	–	–	3	–	3
Change in cash and cash equivalents	–	–	–	–	–	-197	-197
	820	-86	-2	-17	-44	-197	473
Change in net debt, non-cash							
New contracts and subsequent additions	1	64	–	–	–	–	65
Lease liability reassessments	–	5	–	–	–	–	5
Fair value gains and losses	4	–	–	15	–	–	20
Exchange gains and losses	-35	-25	–	–	–	13	-46
Effective interest rate adjustment	1	–	–	–	–	–	1
Reclassification between non-current and current loans	-3	–	3	–	–	–	–
Liabilities related to assets classified as held for sale	-8	–	–	–	–	–	-8
	-39	44	3	15	–	13	36
Carrying value, at 31 December	1,489	544	2	-161	-97	-1,720	56

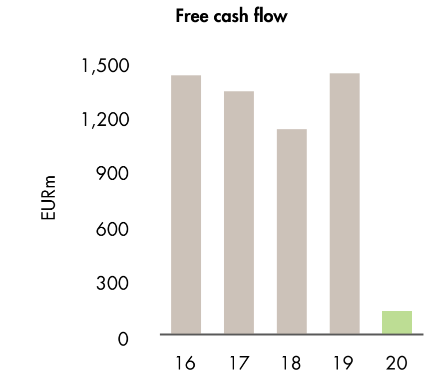
Change in net debt 2019

	Reported in financing activities in cash flow statement						
EURm	NON-CURRENT LOANS INCL. REPAYMENTS	LEASE LIABILITIES	CURRENT LOANS	NET DERIVATIVES	OTHER FINANCIAL ASSETS	CASH AND CASH EQUIVALENTS	NET DEBT
Carrying value, at 1 January	669	588	9	-135	-64	-888	179
Change in net debt, cash							
Proceeds from non-current debt	13	–	–	–	–	–	13
Payments of non-current debt	-6	–	–	–	–	–	-6
Lease repayments	–	-82	–	–	–	–	-82
Change in current liabilities	–	–	-7	–	–	–	-7
Net cash flows from derivatives	–	–	–	11	–	–	11
Change in other financial assets in operating cash flow	–	–	–	–	6	–	6
Change in other financial assets in investing cash flow	–	–	–	–	5	–	5
Change in cash and cash equivalents	–	–	–	–	–	-649	-649
	7	-82	-7	11	10	-649	-710
Change in net debt, non-cash							
New contracts and subsequent additions	–	76	–	–	–	–	76
Fair value gains and losses	20	–	–	-35	–	–	-15
Exchange gains and losses	12	5	–	–	-1	1	17
Effective interest rate adjustment	1	–	–	–	–	–	1
	32	81	–	-35	-1	1	78
Carrying value, at 31 December	708	586	2	-159	-54	-1,536	-453

Free cash flow

Free cash flow is primarily a liquidity measure. It is an important indicator of UPM's overall operational performance as it reflects the cash generated from operations after investing activities.

EURm	2020	2019
Operating cash flow	1,005	1,847
Investing cash flow	-879	-415
Free cash flow	126	1,432
Dividends paid to owners of the parent company	-693	-693
Dividends paid to non-controlling interests	-23	–
Contributions paid by non-controlling interests	67	21
Other financing cash flow	-4	-39
Transaction costs and discounts in operating cash flow	10	–
Change in other financial assets in operating cash flow	47	-6
Change in other financial assets in investing cash flow	-3	-5
Change in net debt, cash	473	-711
Change in net debt, non-cash	36	78
Impact of adoption of IFRS 16	–	491
Change in net debt	509	-142
Opening net debt	-453	-311
Closing net debt	56	-453



Bonds

FIXED RATE PERIOD	INTEREST RATE, %	CURRENCY	NOMINAL VALUE ISSUED, MILLION	CARRYING VALUE 2020 EURm	CARRYING VALUE 2019 EURm
1997–2027	7.450	USD	375	411	431
2020–2028	0.125	EUR	750	741	–
Value, at 31 December				1,153	431
Current portion				–	–
Non-current portion				1,153	431

Leases

Leases of property, plant and equipment where UPM, as a lessee, obtains substantially all of the economic benefits from the use of the identified asset and where UPM has the right to direct the use of the identified asset, are classified as leases. Approximately 33 % (30%) of leased assets recognised on the balance sheet consists of land areas in Uruguay, which the group uses for eucalyptus plantations. Approximately 34% (32%) of the leased assets on the balance sheet consist of five power plants. UPM uses the energy generated by these plants for its own production. In addition, the group has leased one waste water treatment plant as well as several warehouses, terminals, offices, railcars and vessels. UPM also leases some production machinery and equipment like forklifts and vehicles that are insignificant to the total leased assets portfolio.

In 2020, the total cash outflow for leased assets was EUR 86 (82) million. The expenses related to short-term leases recognised in the income statement in 2020 amounted to EUR 7 (9) million. The group had no significant variable lease payments in 2020.

The lease commitments for leases not commenced at year-end 31 December 2020 totals approximately EUR 412 million, which are mostly related to long-term charter agreements, railway service agreement in Uruguay and service agreements related to wood handling, waste water treatment and other utilities in Leuna, Germany. Such lease commitments in 2019 amounted to approximately EUR 100 million.

Changes in leased assets

	LAND AREAS	BUILDINGS	MACHINERY AND EQUIPMENT	OTHER LEASED ASSETS	ADVANCE PAYMENTS [1]	TOTAL
2020						
Carrying value, at 1 January	212	262	104	12	–	590
New contracts and subsequent additions	28	16	10	7	4	65
Reassessments and disposals	3	2	-1	–	–	3
Depreciations	-12	-32	-22	-7	–	-73
Reclassifications	–	–	-2	–	–	-2
Translation differences	-16	-3	-3	–	–	-23
Carrying value, at 31 December	214	245	86	12	4	561
2019						
Carrying value, at 1 January	174	283	108	16	–	581
New contracts and subsequent additions	44	11	17	3	–	75
Reassessments and disposals	1	–	–	–	–	1
Depreciations	-10	-32	-22	-7	–	-72
Translation differences	3	1	1	–	–	5
Carrying value, at 31 December	212	262	104	12	–	590

[1] Advance payments for leases not commenced at the year end reporting 31.12.2020

§ ***Accounting policies***

Leases

The group as a lessee

UPM assesses whether a contract is or contains a lease at inception of the contract. This assessment involves the exercise of judgment about whether it depends on a specified asset, whether UPM obtains substantially all the economic benefits from the use of that asset, and whether UPM has the right to direct the use of the asset.

The group recognises a leased asset and a lease liability at the lease commencement date, except for short-term leases. UPM applies this to all asset classes. Short-term leases are leases that, at the commencement date, have a lease term of 12 months or less. A lease that contains a purchase option is not a short-term lease. UPM recognises lease payments of short-term leases as an expense on a straight-line basis over the lease term.

The lease term is determined as the non- cancellable period of the lease taking into consideration the options to extend and terminate if it is reasonably certain that the group will exercise the extension option or will not exercise the termination option. If the contract is for an indefinite period of time and the group and the lessor both have a right to terminate the contract within a short notice period (12 months or less) without a significant economic penalties and termination cash payments, the contract is considered to be a short-term.

The lease liability is recognised at the commencement date and measured at the present value of the lease payments to be paid during the lease term. The group uses, as a basis, discount rate implicit in the lease and if that rate cannot be readily determined, UPM uses incremental borrowing rate which comprises of currency and lease term-based reference rate and specific credit spread as well as other specific terms and conditions of a lease. Lease payments can include fixed payments, variable payments that depend on an index or rate and extension option payments or purchase options if it is reasonably certain that the group will exercise them. The lease liability is subsequently measured at amortised cost using the effective interest rate method and remeasured (with corresponding adjustment to the related leased asset) when there is a change in future lease payments due to renegotiation, changes of an index or rate or reassessment of options.

Leased asset comprises the initial lease liability, initial direct costs and the obligations to refurbish the asset, less any incentives granted by the lessors. The leased asset is subsequently valued at cost less accumulated depreciation and impairment losses. Remeasurement takes place in case lease liability is remeasured and change in cash flows is based on contract terms that have been included in the original contract. The leased asset is depreciated over the shorter of the asset's useful life and the lease term. The leased asset is subject to testing for impairment if there is an indicator for impairment, as for own assets.

The group has elected to separate non-lease components such as service components and other variable components and account them for as expenses, if they can be separated from the leased asset. However, the group does not separate non-lease components from the lease contracts of company cars.

The group does not apply portfolio approach of leases with similar characteristics.

Leased assets are presented in the balance sheet as a separate financial statement line item. Lease liabilities are presented as part of non-current debt and current debt line items in the balance sheet. Lease liabilities are part of net debt calculation of the group. Short-term lease payments are reported as rents and lease expenses. Variable lease payments are recognised within the operating costs and expenses based on the nature of the payment. The interest expense on the lease liability is recognised as a component of finance costs in income statement. In cash flow statement, payments for the principal portion of the lease liability are recognised as financing cash flow while payments for interest portion of lease liability, short-term leases, and variable amounts not included in the measurement of the lease liability, are classified within operating cash flow.

The group as a lessor

At inception of a lease contract, the group makes an assessment whether the lease is a finance lease or an operating lease. If the lease transfers substantially all of the risks and rewards incidental to ownership of the asset, it is considered to be a finance lease; if not, the lease is considered to be an operating lease. The group has only a minor amount of operating lease contracts, whereby the lease payments are recognised on a straight-line basis over the term of the lease.

5.3 Financial assets and liabilities by category

Financial assets and liabilities recognised in the balance sheet include cash and cash equivalents, loans and other financial receivables, investments in securities, trade receivables, trade payables, loans, bank overdrafts and derivatives.

Classification of financial assets into different measurement categories depends on the contractual cash flow characteristics and the business model for managing the financial asset. The measurement category of each financial asset is determined at inception. Financial assets and liabilities are offset and the net amount reported in the balance sheet when there is a legally enforceable right in all circumstances to offset the recognised amounts and there is an intention to settle on a net basis or realise the asset and settle the liability simultaneously.

Financial assets and liabilities by category at the end of 2020

EURm	FAIR VALUE THROUGH PROFIT AND LOSS	EQUITY INSTRUMENTS AT FAIR VALUE THROUGH OCI	DERIVATIVES UNDER HEDGE ACCOUNTING	FINANCIAL ASSETS AND LIABILITIES AT AMORTISED COST	TOTAL
Energy shareholdings	–	1,936	–	–	1,936
Other non-current financial assets					
Loans and receivables	–	–	–	8	8
Derivatives	–	–	157	–	157
	–	–	157	8	166
Trade and other receivables	–	–	–	1,534	1,534
Other current financial assets					
Loans and receivables	–	–	–	8	8
Derivatives	32	–	96	–	129
	32	–	96	8	136
Cash and cash equivalents	–	–	–	1,720	1,720
Total financial assets	32	1,936	254	3,270	5,492
Non-current debt					
Interest-bearing liabilities	–	–	–	1,952	1,952
	–	–	–	1,952	1,952
Other non-current financial liabilities					
Other liabilities [1]	–	–	–	97	97
Derivatives	–	–	–	–	–
	–	–	–	97	97
Current debt					
Interest-bearing liabilities	–	–	–	82	82
Derivatives	8	–	–	–	8
	8	–	–	82	90
Trade and other payables	–	–	–	1,571	1,571
Other current financial liabilities					
Derivatives	19	–	29	–	48
	19	–	29	–	48
Total financial liabilities	27	–	29	3,703	3,759

[1] Consists mainly of non-current advances received and a put liability that is not estimated to mature within 12 months.

Financial assets and liabilities by category at the end of 2019

EURm	FAIR VALUE THROUGH PROFIT AND LOSS	EQUITY INSTRUMENTS AT FAIR VALUE THROUGH OCI	DERIVATIVES UNDER HEDGE ACCOUNTING	FINANCIAL ASSETS AND LIABILITIES AT AMORTISED COST	TOTAL
Energy shareholdings	–	2,145	–	–	2,145
Other non-current financial assets					
Loans and receivables	–	–	–	15	15
Derivatives	–	–	155	–	155
	–	–	155	15	170
Trade and other receivables	–	–	–	1,576	1,576
Other current financial assets					
Loans and receivables	–	–	–	8	8
Derivatives	17	–	34	–	51
	17	–	34	8	59
Cash and cash equivalents	–	–	–	1,536	1,536
Total financial assets	17	2,145	189	3,135	5,487
Non-current debt					
Loans	–	–	–	1,195	1,195
	–	–	–	1,195	1,195
Other non-current financial liabilities					
Other liabilities [1]	–	–	–	83	83
Derivatives	–	–	–	–	–
	–	–	–	83	83
Current debt					
Loans	–	–	–	101	101
Derivatives	3	–	–	–	3
	3	–	–	101	104
Trade and other payables	–	–	–	1,654	1,654
Other current financial liabilities					
Derivatives	4	–	28	–	33
	4	–	28	–	33
Total financial liabilities	7	–	28	3,033	3,069

[1] Consists mainly of non-current advances received and a put liability that is not estimated to mature within 12 months.

The carrying amounts of financial assets and financial liabilities except for non-current loans approximate their fair value. The fair value of non-current loans amounted to EUR 1,978 million (1,186 million) at the end of 2020. For quoted bonds, the fair values are based on the quoted market value as of 31 December.

At the end of 2020, all bonds were quoted. For other non-current borrowings fair values are estimated using the expected contractual future payments discounted at market interest rates and are categorised within level 2 of the fair value hierarchy.

» Refer Note 5.2 Net debt, for further information on net debt and bonds.

Fair value measurement hierarchy for financial assets and liabilities

EURm	2020				2019			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Financial assets								
Derivatives, non-qualifying hedges	–	32	–	32	–	17	–	17
Derivatives under hedge accounting	2	252	–	254	23	166	–	189
Energy shareholdings	–	–	1,936	1,936	–	–	2,145	2,145
Total	2	284	1,936	2,222	23	183	2,145	2,351
Financial liabilities								
Derivatives, non-qualifying hedges	–	27	–	27	–	7	–	7
Derivatives under hedge accounting	2	27	–	29	7	22	–	28
Total	2	54	–	56	7	29	–	36

There have been no transfers between levels in 2020 and 2019.

Accounting policies

Fair value through profit or loss
This category includes derivatives that don't qualify hedge accounting. They are measured at fair value and any gains or losses from subsequent measurement are recognised in the income statement.

Equity instruments at fair value through other comprehensive income
This category includes mainly UPM's energy shareholdings. These assets are measured at fair value through other comprehensive income.

Financial assets at amortised cost
This category comprises loan receivables with fixed or determinable payments that are not quoted in an active market, as well as trade and other receivables, and cash and cash equivalents. They are included in non-current assets unless they mature within 12 months of the balance sheet date. Cash and cash equivalents are always classified as current assets. Loan receivables that have a fixed maturity are measured at amortised cost using the effective interest method. Loan receivables without fixed maturity date are measured at amortised cost. As soon as a loan receivables or cash and cash equivalents are originated or purchased, a loss allowance for 12-month expected credit losses are recognised in profit or loss. If credit risk increases significantly, full lifetime expected credit losses are recognised in profit or loss. In the comparison period, loan receivables were impaired if the carrying amount exceeded the estimated recoverable amount. The credit loss model applied to trade receivables is described in *» Note 4.6 Working capital.*

Derivatives under hedge accounting
All derivatives are initially and continuously recognised at fair value in the balance sheet. Gains and losses on remeasurement of derivatives used for hedging purposes are recognised in accordance with the accounting principles described in *» Note 6.2 Derivatives and hedge accounting.*

Financial liabilities measured at amortised cost
This category includes debt, trade payables and other financial liabilities. *» Refer Note 5.2 Net debt, for further information.*

The different levels of fair value hierarchy used in fair value estimation are defined as follows:

Fair values under level 1
Quoted prices (unadjusted) traded in active markets for identical assets or liabilities. Derivatives include futures and commodity forwards traded in exchange.

Fair values under level 2
Observable inputs are used as basis for fair value calculations either directly (prices) or indirectly (derived from prices). If all significant inputs required to fair value an instrument are observable, the instrument is included in level 2. Derivatives, level 2 include OTC derivatives like forward foreign exchange contracts, foreign currency options, interest and currency swaps and commodity swaps.

Specific valuation techniques used to value financial instruments at level 2 include the following methods:

Interest forward rate agreements (FRA) are fair valued based on quoted market rates on the balance sheet date. Forward foreign exchange contracts are fair valued based on the contract forward rates at the balance sheet date. Foreign currency options are fair valued based on quoted market rates and market volatility rates on the balance sheet date by using the Black&Scholes option valuation model. Interest and currency swap instruments are fair valued as present value of the estimated future cash flows based on observable yield curves. Commodity swaps are fair valued based on quoted forward prices on the balance sheet date.

An embedded derivative that is by nature a foreign currency forward contract is valuated at market forward exchange rates and is included in level 2. Embedded derivatives are monitored by the group and the fair value changes are reported in other operating income in the income statement.

Fair values under level 3
Financial assets or liabilities of which fair values are not based on observable market data (that is, unobservable inputs) are classified under level 3. This category include UPM's energy shareholdings and forest assets. Fair valuations are performed at least quarterly by respective business areas or functions. Fair valuations are reviewed by the group finance management and overseen by the Audit Committee. *» Refer Note 4.3 Energy shareholdings and » Note 4.2 Forest assets.*

5.4 Financial income and expenses

EURm	2020	2019
Exchange rate gains and losses		
Derivatives	-18	15
Exchange gains and losses on financial liabilities measured at amortised costs	34	-11
Exchange gains and losses on financial assets measured at amortised costs	-16	-5
Other exchange rate gains and losses	4	1
	3	-1
Fair value changes		
Fair value gains and losses on derivatives designated as fair value hedges	3	21
Fair value adjustment of debt attributable to interest rate risk	-4	-20
Fair value adjustment of firm commitments attributable to foreign exchange risk	0	–
	-2	1
Total	2	–
Interest and other finance costs, net		
Interest expense on lease liabilities	-12	-13
Interest expense on other financial liabilities measured at amortised cost	-35	-32
Interest income on derivatives	23	16
Interest income on loans and receivables	3	2
Other financial expenses, net	-5	-11
	-26	-38
Total	-24	-37

Net gains and losses on derivatives included in the operating profit

EURm	2020	2019
Cash flow hedges reclassified from hedging reserve	42	-6
Non-qualifying hedges	24	1
Total	66	-4

Foreign exchange gains and losses in the operating profit excluding non-qualifying hedges

EURm	2020	2019
Sales	-19	-51
Other operating income	-30	3
Total	-48	-48

5.5 Share capital and reserves

The company has one series of shares and each share carries one vote. There are no specific terms related to the shares. At 31 December 2020, the number of the company's shares was 533,735,699. The shares do not have any nominal counter value. The shares are included within the book entry system for securities.

Share capital

	2020	2019
Number of shares (1,000)	533,736	533,736
Share capital, EURm	890	890

Treasury shares

At 31 December 2020, the company held 411,653 (411,653) of its own shares, 0.08% (0.08%) of the total number of shares.

Reserves

EURm	2020	2019
Fair value reserve	1,380	1,632
Hedging reserve	28	55
Share-based payments reserve	22	24
Total other reserves	1,430	1,711
Reserve for invested non-restricted equity	1,273	1,273
Translation reserve	25	278
Total reserves	2,728	3,263

Fair value reserve

This reserve represents the cumulative net change in the fair value of investments in equity securities comprising mainly of the fair value change of the energy shareholdings. Amounts are recycled only within equity upon the disposal of the asset.

Hedging reserve

This reserve comprises the cumulative net change in the fair value of the effective portion of cash flow hedging instruments related to hedged transactions that have not yet occurred and the cost of hedging when recognised in OCI. Amounts are recognised in profit or loss when the associated hedged transactions affect profit or loss or as part of the acquisition cost of property, plant and equipment. There were no reclassifications from the cash flow hedge reserve to profit or loss during the period resulting from inefficiency.

Share-based payments reserve

The share-based payments reserve is used to recognise the fair value at the grant date of the share incentive plans, Performance Share Plan and Deferred Bonus Plan, over their vesting period.

Reserve for invested non-restricted equity

Reserve for invested non-restricted equity includes, under the Companies' Act, the exercise value of shareholders' investments in the company unless otherwise decided by the company.

Translation reserve

This reserve includes the foreign currency differences arising from the translation of foreign operations, and the effective result of transactions that hedge the group's net investments in foreign operations. There were no reclassifications from the translation reserve to profit or loss during the period resulting from inefficiency of net investment hedges.

Accounting policies

Transaction costs directly relating to the issue of new shares or share options are recognised, net of tax, in equity as a reduction in the proceeds. Where any group company purchases the parent company's shares (treasury shares), the consideration paid, including any directly attributable incremental costs (net of tax), is deducted from equity attributable to the owners of the parent company until the shares are cancelled or reissued. Where such shares are subsequently reissued, any consideration received, net of any directly attributable incremental transaction costs and the related income tax effects, is included in equity attributable to the owners of the parent company.

Hedging reserve

EURm	CURRENCY CASH FLOW HEDGES	ELECTRICITY PURCHASE AND SALES HEDGES	COST OF HEDGING	TAX	TOTAL
2020					
Hedging reserve, at 1 January	-4	78	-6	-14	55
Amounts reclassified to profit and loss	10	-61	9	8	-34
Amounts reclassified to acquisition cost of a fixed assets	-4	0	0	0	-5
Change in fair value of hedging instruments recognised in OCI	55	-43	-5	5	11
Hedging reserve, at 31 December	57	-26	-2	-1	28

EURm	CURRENCY CASH FLOW HEDGES	ELECTRICITY PURCHASE AND SALES HEDGES	COST OF HEDGING	TAX	TOTAL
2019					
Hedging reserve, at 1 January	-19	154	-5	-26	104
Amounts reclassified to profit and loss	38	-46	13	-1	5
Change in fair value of hedging instruments recognised in OCI	-24	-30	-14	14	-54
Hedging reserve, at 31 December	-4	78	-6	-14	55

6. Risk management

6.1 Financial risk management

The objective of financial risk management is to protect the group from unfavourable changes in financial markets and thus help to secure profitability. The objectives and limits for financing activities are defined in the Group Treasury Policy approved by the Board of Directors. In financial risk management various financial instruments are used within the limits specified in the Group Treasury Policy. Only such instruments which market value and risk profile can be continuously and reliably monitored are used for this purpose.

Financing services are provided to the group entities and financial risk management carried out by the central treasury department, Treasury and Risk Management.

Foreign exchange risk

As a consequence of the global nature of its business, UPM is exposed to risks associated with changes in exchange rates, primarily with respect to USD, GBP and JPY. Foreign exchange risk arises from contracted and expected commercial future payment flows (transaction exposure), changes in value of recognised assets and liabilities denominated in foreign currency and changes in the value of assets and liabilities in foreign subsidiaries (translation exposure). The objective of foreign exchange risk management is to limit the uncertainty created by changes in foreign exchange rates on the future value of cash flows earnings and in the group's balance sheet. Changing exchange rates can also have indirect effects, such as change in relative competitiveness between currency regions.

Transaction exposure

The group hedges transaction exposure related to highly probable future commercial foreign currency cash flows on a rolling basis over the next 12-month period based on forecasts by the respective business areas. Transaction risk arises from the changes in currency rates of highly probable transactions, which are expected to take place in currencies other than the functional currency of the entity. The group's policy is to hedge an average of 50% of its estimated net risk currency cash flow. Some highly probable cash flows have been hedged for longer than 12 months ahead while deviating from the risk neutral hedging level at the same time. At 31 December 2020, 49% (51%) of the forecast 12-month currency flow was hedged.

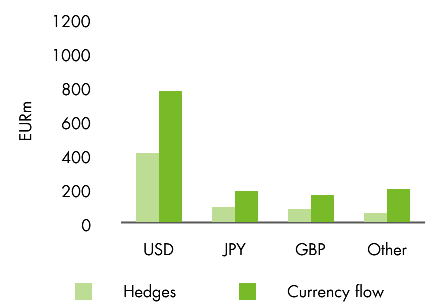
The group enters into external forward contracts, which are designated at group level as hedges of foreign exchange risk of specific future foreign currency flows. Cash flow hedge accounting is applied when possible. If hedge accounting is not possible, fair value changes of the hedging instrument are recognised through profit and loss immediately.

At the end of 2020, UPM's estimated net risk currency flow for the next 12 months was EUR 1,327 million (1,673 million).

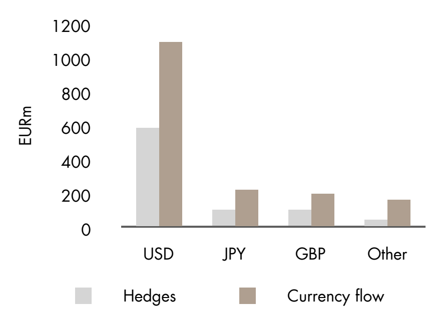
The weighted hedging rate by currency against EUR were USD 1.15, GBP 0.9 and JPY 121,8.

In addition to commercial foreign currency flow, the group has hedged risk currency flow related to investments. Cash flow or fair value hedge accounting is applied. At the end of 2020 the nominal value of these hedges was EUR 470 million (EUR 4 million).

12 months net risk currency flow and hedges 2020



12 months net risk currency flow and hedges 2019



Translation exposure

The group has several currency denominated assets and liabilities on its balance sheet such as foreign currency bonds, loans and deposits, group internal loans and cash in other currencies than functional currencies. UPM aims to fully hedge this balance sheet translation exposure, however, UPM might have unhedged balance sheet exposures within the limits set in group Treasury Policy.

At 31 December 2020 the unhedged balance sheet exposures in net of interest-bearing assets and liabilities amounted to EUR 11 million (14 million). Hedge accounting is not applied and all fair value changes of hedging instruments are recognised through profit and loss immediately.

The group has also accounts receivable and payable balances denominated in foreign currencies and UPM aims to fully hedge the net exposure in main currencies. The nominal values of the hedging instruments in net of accounts payable and receivable hedging were EUR 540 million (433 million). Hedge accounting is not applied and all fair value changes of hedging instruments are recognised through profit and loss immediately.

UPM's net investments in foreign subsidiaries are also subject to foreign currency translation differences. The exchange rate differences arising from translation of foreign subsidiaries are accumulated as a separate component of equity in the translation reserve relate mainly to USD, CNY and GBP. Currency exposure arising from the net investment in foreign subsidiaries is generally not hedged. However, at 31 December 2020, part of the foreign exchange risk associated with the net investments was hedged, major ones in China and Uruguay, and net investment hedge accounting has been applied. The average weighted hedging rate of these hedges against EUR were China CNY 8.17 and Uruguay USD 1.09.

Derivatives used for hedging translation risks are external forward contracts, cross currency swaps and currency options.

Foreign exchange risk sensitivity

The following table illustrates the effect to profit before tax due to recognised balance sheet items in foreign currency and the effect to equity arising mainly from foreign currency forwards used to hedge foreign currency flows.

	Profit before tax		Equity	
EURm	**2020**	**2019**	**2020**	**2019**
EUR strengthens by 10%				
USD	1	–	91	61
UYU	–	–	-15	-7
JPY	-1	-1	9	11
GBP	–	–	8	10
EUR weakens by 10%				
USD	-1	–	-91	-61
UYU	–	–	15	7
JPY	1	1	-9	-11
GBP	–	–	-8	-10

The following assumptions were made when calculating the sensitivity to changes in the foreign exchange risk:

- Major part of non-derivative financial instruments (such as cash and cash equivalents, trade receivables, debt and trade payables) are either directly denominated in the functional currency or are transferred to the functional currency through the use of derivatives i.e. the balance sheet position is close to zero. Exchange rate fluctuations have therefore minor or no effects on profit or loss.
- The position includes foreign currency forward contracts that hedge commercial flows or investments and are part of the effective cash flow hedge having an effect on equity.
- The position includes also foreign currency forward contracts that are not part of the effective cash flow hedge having an effect on profit.
- The position excludes foreign currency denominated future cash flows and effects of translation exposure and related hedges

Interest rate risk

The interest-bearing liabilities and assets expose the group to interest rate risk, namely repricing and fair value interest rate risk caused by interest rate movements. According to the Group Treasury Policy the interest rate exposure is defined as the difference in interest rate sensitivity between assets and liabilities compared to a benchmark portfolio with a 6-month duration. The total interest rate exposure is a net debt portfolio which includes all interest bearing assets and liabilities and derivatives that are used to hedge the aforementioned balance sheet items. The policy sets risk limits and allowed deviation from target net debt duration level. The group uses interest rate derivatives, such as interest rate swaps, interest rate futures and crosscurrency swaps, to change net debt duration.

The table below shows the nominal value of interest rate position exposed to interest rate risk in each significant currency. The position includes all cash balances, interest bearing assets and liabilities and currency derivatives used to hedge these items. The positive/negative position indicates a net liability/asset position by currency and that the group is exposed to repricing and/or fair value interest risk by interest rate movements in that currency. Table excludes leasing transactions.

Nominal values of the group's net debt by currency including derivatives

EURbn	2020	2019
EUR	-0.3	-1.0
USD	0.2	0.3
GBP	-0.1	-0.1
Others	-0.3	-0.1
Total	-0.5	-1.0

Most of the interest rate derivatives hedging interest on long-term debt meet the requirement of fair value hedge accounting.

Interest rate risk sensitivity

The following table illustrates the effect to profit before tax mainly as a result of higher/lower interest expense on floating rate debt and the effect to equity as a result of a decrease/increase in the fair value of derivatives designated as cash flow hedges of floating rate debt.

	Profit before tax		Equity	
EURm	**2020**	**2019**	**2020**	**2019**
Interest rate of net debt 100 basis points higher	-12	-6	–	–
Interest rate of net debt 100 basis points lower	12	6	–	–

The following assumptions were made when calculating the sensitivity to changes in interest rates:

- The variation of interest rate is assumed to be 100 basis points parallel shift in applicable interest rate curves.
- In the case of fair value hedges designated for hedging interest rate risk, the changes in the fair values of the hedged items and the hedging instruments attributable to the interest rate movements balance out almost completely in the income statement in the same period. However, the possible ineffectiveness has an effect on the profit of the year.
- Cash balances are excluded.
- Leasing transaction are excluded.
- Fixed rate debt that is measured at amortised cost and is not designated to fair value hedge relationship is not subject to interest rate risk sensitivity.
- In case of variable to fixed interest rate swaps which are included in cash flow hedge accounting, fair value changes of hedging swaps are booked to equity.
- Floating rate debt that are measured at amortised cost and not designated as hedged items are included in interest rate sensitivity analysis.
- Changes in the market interest rate of interest rate derivatives (interest rate futures, swaps and cross currency swaps) that are not designated as hedging instruments in hedge accounting affect the financial income or expenses (net gains or losses from remeasurement of the financial assets and liabilities to fair value) and are therefore included in the income-related sensitivity analysis.

Electricity price risk

UPM is hedging both sales of power production and power purchases consumed. Electricity prices rely on the balance of supply and demand and as the share of intermittent renewable energy sources grows in the energy system, the volatility in the electricity market increases. The group's sensitivity to electricity market price is dependent on the electricity production and consumption levels and the hedging levels. The inherent price risks arise from the daily sales and purchases of electricity from the power market with spot prices, and the hedging objective is to reduce the earnings volatility that arises from electricity prices.

UPM considers system (SYS) and electricity price area differential (EPAD) products perfect hedges for corresponding electricity price risk components in Finland. The components of electricity price risk in the Nordic power market are hedged by entering into System and EPAD electricity derivative contracts, mostly Nasdaq Commodities forwards, futures and options. System and EPAD prices are considered as separately identifiable and reliably measurable risk components in electricity sales and purchase contracts as well as in the hedging instruments, as a quoted price is available. Fair value changes of designated system and EPAD derivatives are offsetting electricity sales and purchase price changes. The share of SYS component covers approximately 80-90% and the share of EPAD component covers 10-20% of the changes in electricity sales and purchase prices.

The electricity price risk in the Central European power market is hedged by entering into European electricity exchange futures. Products used for hedging hedge the entire price risk for the underlying price area.

The time frame hedged has historically been approximately rolling 5 years. Hedging level has been typically higher for the nearest years and lower for the latter years. Hedging level for a certain year has historically varied between 0-80%. UPM constantly updates its electricity sales and consumption forecasts. The targeted hedging level is calculated based on the most recent available information about the sales and consumption of electricity.

The group applies cash flow hedge accounting for the hedging relationships when it hedges its electricity price risk. In addition to hedging, the group is also trading electricity forwards and futures. As well as hedging, proprietary trading risks are monitored on a daily basis. Value-At-Risk levels are set to limit the maximum risk at any given time. Cumulative maximum loss is limited by stop-loss limits.

Electricity derivatives price sensitivity

Sensitivity analysis for financial electricity derivatives is based on position at the end of financial year. Sensitivities change over time as the overall hedging and trading positions change. Underlying physical positions are not included in the sensitivity analysis. Sensitivity analysis is calculated separately for the hedge accounted and non-hedge accounted volumes. In the analysis it is assumed that forward quotation in Nasdaq Commodities and EEX would change EUR 5/ MWh throughout the period UPM has derivatives. EUR 5/ MWh price sensitivity is estimated from historical market price movements in Nasdaq and EEX markets.

EURm	EFFECT	2020	2019
+/– EUR 5/MWh in electricity forward quotations			
Effect on profit before tax	+/-	0.7	3.8
Effect on equity	+/-	64.9	11.2

6.2 Derivatives and hedge accounting

The group uses financial derivatives to manage currency, interest rate and commodity price risks.

» Refer Note 6.1 *Financial risk management.*

Accounting policies

All derivatives are initially and continuously recognised at fair value in the balance sheet. The fair value gain or loss is recognised through the income statement or other comprehensive income depending on whether the derivative is designated as a hedging instrument, and on the nature of the item being hedged. Certain derivatives are designated at inception either hedges of the fair value of recognised assets or liabilities or a firm commitment (fair value hedge), hedges of highly probable forecasted transactions (cash flow hedge), or hedges of net investments in foreign subsidiaries with other than the EUR as their functional currency (net investment hedge). Derivative fair values on the balance sheet are classified as non-current when the remaining maturity is more than 12 months and as current when the remaining maturity is less than 12 months.

For hedge accounting purposes, UPM documents the relationship between the hedging instruments and hedged items, as well as the risk management objective and strategy for undertaking various hedge transactions at the inception date. This process includes linking all derivatives designated as hedges to specific assets and liabilities or to specific firm commitments or forecast transactions. The group also documents its assessment, both at the hedge inception and on an on-going basis, as to whether the hedge is highly effective in offsetting changes in fair values or cash flows of the hedged items.

Certain derivatives, while considered to be economical hedges for UPM's financial risk management purposes, do not qualify for hedge accounting. Such derivatives are recognised at fair value through the income statement in other operating income or under financial items.

Cash flow hedges

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognised in other comprehensive income. Cost of hedging, meaning forward points of derivative forward contracts accounted as cash flow hedges, is recognised as a part of the hedging reserve. Amounts deferred in equity are transferred to the income statement and classified as income or expense in the same period as that in which the hedged item affects the income statement (for example, when the forecast external sale to the group that is hedged takes place).

When the forecasted transaction that is hedged results in the recognition of a fixed asset, gains and losses previously deferred in equity are transferred from equity and included in the initial measurement of the acquisition cost and depreciated over the useful lives of the assets.

When a hedging instrument expires or is sold, or when a hedge no longer meets hedge accounting criteria, any cumulative gain or loss existing in equity at that time remains in equity and is recognised when the committed or forecasted transaction is ultimately recognised in the income statement. However, if a forecasted transaction is no longer expected to occur, the cumulative gain or loss that was reported in equity is immediately recognised to the income statement.

In currency cash flow hedging, the hedging instrument is made in the same currency as the hedged item and hence the fair value change of the hedging instrument are expected to effectively offset the fair value changes generated by the hedged items. Thereby the hedge ratio between the instrument and the cash flow is 1:1. Ineffectiveness may arise in the highly unlikely case that the forecasted cash flows are no longer expected to occur. Ineffectiveness can also occur in a situation where the hedging instrument with an appropriate maturity is not available in the market for the whole duration of the hedged item. Then the terms of the hedging instrument and the hedged item don't fully match, which causes minor ineffectiveness. There are no other significant sources of ineffectiveness that can reasonably be expected to take place.

Ineffectiveness in electricity price hedges may arise in the highly unlikely case that the forecasted cash flows are no longer expected to occur. Ineffectiveness may also arise in case EPAD prices remained negative for a longer period of time, but considering historical price development UPM considers this scenario to be highly unlikely.

Hedges of net investments in foreign subsidiaries

The fair value changes of forward exchange contracts used in hedging net investments that reflect the change in spot exchange rates are recognised in other comprehensive income within translation reserve. Any gain or loss relating to the interest portion of forward exchange contracts is recognised immediately in the income statement under financial items. Gains and losses accumulated in equity are included in the income statement when the foreign operation is partially disposed of or sold.

The hedging instrument is always made in the same currency as the hedged investment, hence the hedge ratio in net investment hedging is 1:1. For hedging of net investments, ineffectiveness may only arise in the highly unlikely situation where the hedged item is disposed or sold during the duration of the hedging instrument.

Fair value hedges

The group applies fair value hedge accounting for hedging fixed interest risk on debt. Changes in the fair value of derivatives that are designated and qualify as fair value hedges and that are prospectively highly effective are recorded in the income statement under financial items, along with any changes in the fair value of the hedged asset or liabilities that are attributable to the hedged risk. The carrying amounts of hedged items and the fair values of hedging instruments are included in interest-bearing assets or liabilities.

Derivatives that are designated and qualify as fair value hedges mature at the same time as hedged items. If the hedge no longer meets the criteria for hedge accounting, the adjustment to the carrying amount of a hedged item for which the effective interest method is used is amortised to profit or loss over the expected period to maturity.

Ineffectiveness in fair value hedge of fixed interest risk may arise in case of early redemption of such debt, which is hedged under fair value hedge accounting. The group has not recognised other significant sources of ineffectiveness that can reasonably be expected to take place.

The group applies fair value hedge accounting also for hedging firm commitment of a purchase in foreign currency. The currency changes of the hedging instrument are recorded through profit and loss in financial items, until they are recognised as a part of the acquisition cost of a fixed asset.

Financial counterparty risk

The financial instruments the group has agreed with banks and financial institutions contain an element of risk of the counterparties being unable to meet their obligations. According to the Group Treasury Policy derivative instruments and investments of cash funds may be made only with counterparties meeting certain creditworthiness criteria. The group minimises counterparty risk also by using a number of major banks and financial institutions. Creditworthiness of counterparties is constantly monitored by Treasury and Risk Management.

Effect of IBOR reform and significant assumptions

The Group's risk exposure that is directly affected by the IBOR reform is fair value hedge accounting of long-term fixed-rate debt for changes in fair value attributable to USD LIBOR which is the current benchmark interest rate. Group currently has only few contracts which reference USD LIBOR and extend beyond 2021. Group oversees the IBOR transition and follows changes to ISDA and other market guidelines on effects of these changes to UPM's contracts. In fair value hedging relationships, fair value for both the hedged item and hedging instrument is calculated with identical rate. Therefore no ineffectiveness is expected.

Net fair values of derivatives

EURm	Positive fair values 2020	Negative fair values 2020	Net fair values 2020	Positive fair values 2019	Negative fair values 2019	Net fair values 2019
Foreign exchange risk						
Forward foreign exchange contracts						
Cash flow hedges	83	-26	57	11	-21	-10
Net investment hedge	12	-1	11	1	-1	–
Non-qualifying hedges	29	-27	2	6	-7	-1
Cross currency swaps						
Non-qualifying hedges	1	–	1	7	–	7
Derivatives hedging foreign exchange risk	125	-54	71	25	-29	-4
Interest rate risk						
Interest rate swaps						
Fair value hedges	113	–	113	103	–	103
Non-qualifying hedges	2	–	2	1	–	1
Cross currency swaps						
Fair value hedges	44	–	44	51	–	51
Non-qualifying hedges	–	–	–	–	–	–
Derivatives hedging interest risk	159	–	159	156	–	156
Commodity risk						
Electricity sales						
Cash flow hedges	1	-1	–	1	-5	-4
Electricity purchase						
Cash flow hedges	1	-1	–	23	-2	21
Other commodities						
Non-qualifying hedges	1	–	–	2	–	2
Derivatives hedging commodity risk	2	-2	–	26	-7	19
Total	286	-56	230	206	-36	170

No derivatives are subject to offsetting in the group's financial statements. All derivatives are under ISDA or similar master netting agreement.

Notional amounts of derivatives

EURm	2020	2019
Interest rate futures	2,391	1,729
Interest rate swaps	1,056	334
Forward foreign exchange contracts	3,992	2,491
Currency options	20	24
Cross currency swaps	166	172
Commodity contracts	791	913

Cash collaterals pledged for derivative contracts totalled EUR 66 million of which EUR 65 million relate to commodity contracts and EUR 1 million to interest rate forward contracts.

Net fair values of derivatives calculated by counterparty

EURm	POSITIVE FAIR VALUES	NEGATIVE FAIR VALUES	NET FAIR VALUES
2020	241	-11	230
2019	188	-17	171

Timing of nominal amounts of derivatives 2020

EURm 2020	Within 1 year	Between 1–5 years	Later than 5 years	Total
Foreign exchange risk				
Forward foreign exchange contracts				
Cash flow hedges	2,004	441	–	2,445
Net investment hedge	228	–	–	228
Non-qualifying hedges	1,318	1	–	1,319
Currency options				
Non-qualifying hedges	20	–	–	20
Cross currency swaps				
Non-qualifying hedges	–	–	166	166
Interest rate risk				
Interest rate swaps				
Fair value hedges	–	–	1,056	1,056
Non-qualifying hedges	–	–	–	–
Cross currency swaps				
Fair value hedges	–	–	166	166
Interest rate futures				
Non-qualifying hedges	2,391	–	–	2,391
Commodity risk				
Electricity sales				
Cash flow hedges	274	204	–	478
Non-qualifying hedges	–	6	–	6
Electricity purchase				
Cash flow hedges	145	138	–	283
Other commodities				
Non-qualifying hedges	24	–	–	24

Timing of nominal amounts of derivatives 2019

EURm	Within 1 year	Between 1–5 years	Later than 5 years	Total
		2019		
Foreign exchange risk				
Forward foreign exchange contracts				
Cash flow hedges	1,459	–	–	1,459
Net investment hedge	298	–	–	298
Non-qualifying hedges	724	10	–	734
Currency options				
Non-qualifying hedges	24	–	–	24
Cross currency swaps				
Non-qualifying hedges	–	–	172	172
Interest rate risk				
Interest rate swaps				
Fair value hedges	–	–	334	334
Non-qualifying hedges	–	–	–	–
Cross currency swaps				
Fair value hedges	–	–	172	172
Interest rate futures				
Non-qualifying hedges	1,729	–	–	1,729
Commodity risk				
Electricity sales				
Cash flow hedges	217	174	–	390
Non-qualifying hedges	–	35	–	35
Electricity purchase				
Cash flow hedges	210	227	–	437
Other commodities				
Non-qualifying hedges	48	–	–	48

The nominals of cross currency swaps are included in both foreign exchange risk and interest rate risk.

7. Income tax

7.1 Tax on profit for the year

Income tax

In 2020, tax on profit for the year amounted to EUR 169 million (234 million). The effective tax rate was 22.9% (17.9%). In 2020 and 2019, the effective tax rate was affected by the income not subject to tax from subsidiaries operating in tax free zone. In addition, effective tax rate was affected by German tax rate that is higher than in Finland and the loss of France subsidiary for which no deferred tax assets were recognised due to uncertainty of their utilisation.

In 2020, accrued and paid withholding taxes relating to dividend payments of subsidiaries amounted to EUR 9 million (EUR 2 million). In 2020, tax losses with no tax benefit mainly relate to the losses resulting from the closure of UPM Chapelle paper mill in France. In 2019, change in recoverability of deferred tax assets included EUR 15 million tax income related to reassessment of deferred tax assets in Germany.

Income tax

EURm	2020	2019
Current tax expense	141	181
Change in deferred taxes	28	53
Total	169	234

Tax rate reconciliation

EURm	2020	2019
Profit before tax	737	1,307
Computed tax at Finnish statutory rate of 20%	147	261
Difference between Finnish and foreign rates	1	16
Tax-exempt income	-29	-34
Non-deductible expenses	6	9
Withholding taxes	9	2
Tax loss with no tax benefit	29	3
Results of associates	-1	–
Change in tax legislation	4	1
Change in recoverability of deferred tax assets	3	-12
Utilisation of previously unrecognised tax losses	-3	-10
Other items	2	-1
Total income taxes	169	234
Effective tax rate, %	22.9 %	17.9 %

Accounting policies

The group's income tax expense comprises current tax and deferred tax. Current tax is calculated on the taxable result for the period based on the tax rules prevailing in the countries where the group operates and includes tax adjustments for previous periods and withholding taxes deducted at source on intra-group transactions. Tax expense is recognised in the income statement, unless it relates to items that have been recognised in equity or as part of other comprehensive income. In these instances, the related tax expense is also recognised in equity or other comprehensive income, respectively.

Key estimates and judgements

The group is subject to income taxes in numerous jurisdictions and the calculation of the group's tax expense and income tax liabilities involves a degree of estimation and judgement. Tax balances reflect a current understanding and interpretation of existing tax laws. Management periodically evaluates positions taken in tax returns with respect of situations in which applicable tax regulation is subject to interpretation and adjusts income tax liabilities where appropriate.

7.2 Deferred tax

EURm	2020	2019	2018
Deferred tax assets			
Intangible assets and property, plant and equipment	77	77	76
Inventories	38	45	62
Retirement benefit liabilities and provisions	156	148	121
Other temporary differences	163	103	24
Tax losses and tax credits carried forward	157	180	198
Offset against liabilities	-170	-157	-83
Total	421	395	397
Deferred tax liabilities			
Intangible assets and property, plant and equipment	-245	-249	-181
Forest assets	-352	-364	-329
Retirement benefit assets	-5	-7	-7
Other temporary differences	-132	-86	-101
Offset against assets	170	157	83
Total	-564	-549	-535
Net deferred tax assets (liabilities)	-143	-153	-138

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

Movements in deferred tax assets and liabilities

EURm	2020	2019
Carrying value, at 1 January	-153	-138
Charged to income statement	-28	-53
Charged to other comprehensive income	29	38
Exchange rate adjustments	9	—
Net deferred tax assets (liabilities)	-143	-153

Tax charge to other comprehensive income

EURm	Before tax 2020	Tax 2020	After tax 2020	Before tax 2019	Tax 2019	After tax 2019
Actuarial gains and losses on defined benefit plans	-50	14	-36	-81	24	-58
Energy shareholdings	-254	3	-251	-13	—	-13
Translation differences	-262	—	-262	67	—	67
Cash flow hedges	-37	13	-24	-63	12	-50
Net investment hedges	6	-1	5	-8	2	-6
Total	-597	29	-569	-97	38	-58

Key estimates and judgements

Recognised deferred tax assets
The recognition of deferred tax assets requires management judgement as to whether it is probable that such balances will be utilised and/or reversed in the foreseeable future. At 31 December 2020, net operating loss carry-forwards for which the group has recognised a deferred tax asset amounted to EUR 536 million (616 million), of which EUR 475 million (502 million) was attributable to German subsidiaries. In Germany net operating loss carry-forwards do not expire. In other countries net operating loss carry-forwards expire at various dates and in varying amounts. Based on profit forecasts, it is probable that there will be sufficient future taxable profits available against which the tax losses can be utilised.

The assumptions regarding future realisation of tax benefits, and therefore the recognition of deferred tax assets, may change due to future operating performance of the group, as well as other factors, some of which are outside of the control of the group.

Unrecognised deferred tax assets and liabilities
The net operating loss carry-forwards for which no deferred tax is recognised due to uncertainty of their utilisation amounted to EUR 864 million (819 million) in 2020. These net operating loss carry-forwards are mainly attributable to certain German and French subsidiaries and do not expire. In addition, the group has not recognised deferred tax assets on loss carry-forwards relating to closed Miramichi paper mill due to only minor operations in Canada. These loss carry-forwards expire at different times by the end of 2029.

The group has not recognised deferred tax liability in respect of undistributed earnings of non-Finnish subsidiaries to the extent that it is probable that the temporary differences will not reverse in the foreseeable future. In addition, the group has not recognised deferred tax liability for the undistributed earnings of Finnish subsidiaries and associates as such earnings can be distributed without any tax consequences.

Accounting policies

Deferred tax is calculated based on temporary differences between the carrying amounts and the taxable values of assets and liabilities and for tax loss carry-forwards to the extent that it is probable that these can be utilised against future taxable profits.

Deferred income tax is determined using tax rates (and laws) that have been enacted or substantially enacted by the balance sheet date and are expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled.

Deferred income tax is provided on temporary differences arising on investments in subsidiaries, associates and joint ventures, except where the timing of the reversal of the temporary difference is controlled by the group and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets and liabilities are recognised net where there is a legal right to set-off and an intention to settle on a net basis.

8. Group structure

8.1 Business acquisitions and disposals

In 2020, UPM sold its 50% share in the joint operation Kainuun Voima. UPM also made a minor sale of its 6.1% ownership BSW Timber Ltd, which was accounted for as a fair value through OCI investment. In 2019, UPM made a minor sale of its joint venture, EURO WASTE a.s.

In 2020, UPM purchased an additional 1.89% share in the joint operation Alholmens Kraft, increasing UPM's ownership from 27.88% to 29.77 %. In 2019, no business acquisitions were made.

Net cash arising from disposal of Kainuun Voima Oy

EURm	2020
Property, plant and equipment and intangible assets	14
Trade and other receivables	1
Cash and cash equivalents	1
Trade and other payables	-1
Non-current debt	-8
Net assets	7
Gain on disposal	11
Total consideration	18
Settled in cash and cash equivalents	18
Cash in joint operation disposed	-1
Net cash arising from disposal	17

Transactions with non-controlling interests
In 2020, there were no changes in the share of non-controlling interests.

In September 2019, the new shareholders' agreements of Tile Forestal S.A., CUECAR S.A., Tebetur S.A. and Blanvira S.A. were signed reducing UPM's continuing interest in these companies to 91%. The proceeds of EUR 3 million were received from non-controlling interest in cash being the proportionate share of the carrying amount of the net assets of these subsidiaries. In addition, the terms and conditions of UPM S.A. shareholders' agreement were amended resulting in recognition of 9% non-controlling interest amounting to EUR 63 million and derecognition of financial liability amounting to EUR 56 million. The difference amounting to EUR 7 million was recognised in equity as transactions with non-controlling interest. Prior to the amendment of the agreement the group accounted the portion belonging to non-controlling interests at the present value of the redemption amount within financial liability due to put option over non-controlling interests.

The assets, liabilities, income and expenses of subsidiaries with non-controlling interests are consolidated line by line into the UPM consolidated financial statements. The proportion of the profit for the period, as well as the accumulated share of total equity belonging to non-controlling interests are presented separately in the consolidated income statement and consolidated balance sheet.

Accounting policies

UPM consolidates acquired entities at the acquisition date which is when it gains control using the acquisition method. Consideration transferred is determined as the fair value of the assets transferred, the liabilities incurred and equity instruments issued including the fair value of a contingent consideration. Acquisition related transaction costs are expensed as incurred. Identifiable assets acquired and liabilities and contingent liabilities assumed are measured initially at their fair values at the acquisition date. The group measures any non-controlling interest in the acquiree either at fair value or at the non-controlling interest's proportionate share of the acquiree's net assets.

The excess of the consideration transferred, the amount of any non-controlling interest in the acquiree and the acquisition-date fair value of any previous equity interest in the acquiree over the fair value of the identifiable net assets of the subsidiary acquired is recorded as goodwill.

8.2 Principal subsidiaries and joint operations

SUBSIDIARIES	COUNTRY OF INCORPORATION	HOLDING % 2020	HOLDING % 2019
Blandin Paper Company	US	100.00	100.00
Blanvira S.A.	UY	91.00	91.00
Cuecar S.A.	UY	91.00	91.00
Forestal Oriental S.A.	UY	100.00	100.00
Gebrüder Lang GmbH Papierfabrik	DE	100.00	100.00
LLC UPM Ukraine	UA	100.00	100.00
Nordland Papier GmbH	DE	100.00	100.00
NorService GmbH	DE	100.00	100.00
nortrans Speditionsgesellschaft mbH	DE	100.00	100.00
OOO UPM-Kymmene	RU	100.00	100.00

SUBSIDIARIES	COUNTRY OF INCORPORATION	HOLDING % 2020	HOLDING % 2019
OOO UPM-Kymmene Chudovo	RU	100.00	100.00
PT UPM Raflatac Indonesia	ID	100.00	100.00
Rhein Papier GmbH	DE	100.00	100.00
Steyrermühl Sägewerksgesellschaft m.b.H. Nfg KG	AT	100.00	100.00
Tebetur S.A.	UY	91.00	91.00
Tile Forestal S.A.	UY	91.00	91.00
UPM (China) Co., Ltd	CN	100.00	100.00
UPM (Vietnam) Ltd	VN	100.00	100.00
UPM Asia Pacific Pte. Ltd	SG	100.00	100.00
UPM Biofuels S.A.	UY	100.00	100.00
UPM Communication Papers Oy	FI	100.00	100.00
UPM Energy Oy	FI	100.00	100.00
UPM France S.A.S.	FR	100.00	100.00
UPM Fray Bentos S.A.	UY	100.00	100.00
UPM GmbH	DE	100.00	100.00
UPM Manufatura e Comércio de Produtos Florestais Ltda	BR	100.00	100.00
UPM OÜ [1]	EE	100.00	100.00
UPM Plywood Oy	FI	100.00	100.00
UPM Pulp Sales Oy	FI	100.00	100.00
UPM Raflatac (China) Co., Ltd.	CN	100.00	100.00
UPM Raflatac (S) Pte Ltd	SG	100.00	100.00
UPM Raflatac (UK) Limited	GB	100.00	100.00
UPM Raflatac Chile SpA	CL	100.00	100.00
UPM Raflatac Co., Ltd	TH	100.00	100.00
UPM Raflatac Iberica S.A.	ES	100.00	100.00
UPM Raflatac Inc.	US	100.00	100.00
UPM Raflatac Mexico S.A. de C.V.	MX	100.00	100.00
UPM Raflatac NZ Limited	NZ	100.00	100.00
UPM Raflatac Oy	FI	100.00	100.00
UPM Raflatac Pty Ltd	AU	100.00	100.00
UPM Raflatac s.r.l.	AR	100.00	100.00
UPM Raflatac SAS	FR	100.00	100.00
UPM Raflatac Sdn. Bhd.	MY	100.00	100.00
UPM Raflatac South Africa (Pty) Ltd	ZA	100.00	100.00
UPM Raflatac Sp. z o.o.	PL	100.00	100.00
UPM S.A.	UY	91.00	91.00
UPM Sales GmbH	DE	100.00	100.00
UPM Sales Oy	FI	100.00	100.00
UPM Silvesta Oy	FI	100.00	100.00
UPM Specialty Papers Oy	FI	100.00	100.00
UPM Sähkönsiirto Oy	FI	100.00	100.00
UPM-Kymmene (Korea) Ltd	KO	100.00	100.00
UPM-Kymmene (UK) Ltd	GB	100.00	100.00
UPM-Kymmene Austria GmbH	AT	100.00	100.00
UPM-Kymmene Inc.	US	100.00	100.00
UPM-Kymmene India Private Limited	IN	100.00	100.00
UPM-Kymmene Japan K.K.	JP	100.00	100.00
UPM-Kymmene Kagit Urunleri Sanayi ve Ticaret Ltd. Sti.	TR	100.00	100.00
UPM-Kymmene Otepää OÜ	EE	100.00	100.00
UPM-Kymmene S.A.	ES	100.00	100.00
UPM-Kymmene Seven Seas Oy	FI	100.00	100.00
UPM-Kymmene Sp. z o.o.	PL	100.00	100.00
UPM-Kymmene S.r.l.	IT	100.00	100.00
Werla Insurance Company Ltd	MT	100.00	100.00

[1] UPM AS's corporate form and legal company name has changed to UPM OÜ as of 1 September 2020.

JOINT OPERATIONS	COUNTRY OF INCORPORATION	HOLDING % 2020	HOLDING % 2019
Oy Alholmens Kraft Ab (Pohjolan Voima Oyj, G series)	FI	29.77	27.88
EEVG Entsorgungs- und Energieverwertungsgesellschaft m.b.H.	AT	50.00	50.00
Järvi-Suomen Voima Oy	FI	50.00	50.00
Kainuun Voima Oy [1]	FI	–	50.00
Kaukaan Voima Oy (Pohjolan Voima Oyj, G9 series)	FI	54.00	54.00
Kymin Voima Oy (Pohjolan Voima Oyj, G2 series)	FI	76.00	76.00
Madison Paper Industries	US	50.00	50.00
Rauman Biovoima Oy (Pohjolan Voima Oyj, G4 series)	FI	71.95	71.95

[1] In 2020, UPM sold its 50% share in the joint operation Kainuun Voima Oy. Refer Note » 8.1 Business acquisitions and disposals.

8.3 Related party transactions

The Board of Directors and the Group Executive Team

There have not been any material transactions between UPM and its members of the Board of Directors or the Group Executive Team (key management personnel) or persons closely associated with these members or organisations in which these individuals have control or significant influence. There are no loans granted to any members of the Board of Directors or the Group Executive Team at 31 December 2020 and 2019.

*For information concerning shares held by members of the Board of Directors as well as remuneration to members of the Board of Directors and the Group Executive Team are disclosed in **» Note 3.2.** Key management personnel.*

Associates and joint ventures

In Finland, the group organises its producer's responsibility of recovered paper collection through Encore Ympäristöpalvelut Oy (until 1.1.2019 by name Paperinkeräys Oy). Austria Papier Recycling GmbH purchases recovered paper in Austria and L.C.I s.r.l. in Italy. ASD Altpapier Sortierung Dachau GmbH is a German recovered paper sorting company. The purchases from those four companies represented approximately 95% (93%) of total recovered paper purchase amount from associates and joint ventures.

Transactions with associates and joint ventures are presented in the table below. The group has no individually material associates or joint ventures.

EURm	2020	2019
Dividends received	3	2
Purchases of raw materials and services	60	73
Loan receivables	6	5
Trade and other receivables	1	1
Trade and other payables	7	6

Subsidiaries and joint operations

***» Refer Note 8.2** Principal subsidiaries and joint operations.*

Pension Funds

In Finland, the group has the pension foundation, UPM Sellutehtaiden eläkesäätiö, which is a separate legal entity. Pensions for about 19% (18%) of the group's Finnish employees are arranged through the Foundation.

In 2020, the contributions paid by UPM to the Foundation amounted to EUR 18 million (20 million). The Foundation manages and invests the contributions paid to the plan. The fair value of the Foundation's assets at 31 December 2020 was EUR 563 million (537 million), of which 52% was in the form of equity instruments, 40% in the form of debt instruments and 8% was invested in property and money market.

In the UK, the single UPM Pension Scheme operates under a Trust which is independent from the group. The Trust consists of various defined benefit sections, all of which are closed to future accrual and one common defined contribution section which is open to all UPM employees in the UK. The group made contributions of EUR 6 million (8 million) to the defined benefit sections of the Scheme in 2020. The fair value of the UK defined benefit fund assets at 31 December 2020 was EUR 515 million (491 million), of which 8% was invested in equity instruments, 21% in debt instruments, 66% in property and money market and 5% in other investments.

8.4 Assets held for sale

No assets were classified as held for sale at the end of 2020.

At the end of 2019, assets classified as held for sale EUR 18 million relate to UPM Chapelle paper mill assets located in France.

Accounting policies

Non-current assets (or disposal groups) are classified as assets held for sale and stated at the lower of carrying amount and fair value less costs to sell, if UPM will recover their carrying amount through a sale transaction which is considered highly probable. Non-current assets classified as held for sale, or included within a disposal group that is classified as held for sale, are not depreciated after the classification.

9. Unrecognised items

9.1 Commitments and contingencies

In the normal course of business, UPM enters into various agreements providing financial or performance assurance to third parties. The maximum amounts of future payments for which UPM is liable is disclosed in the table below under "Other commitments". Property under mortgages given as collateral for own commitments include property, plant and equipment, industrial estates and forest land.

EURm	2020	2019
On own behalf		
Mortgages	–	1
On behalf of others		
Guarantees	2	2
Other own commitments		
Leasing commitments for the next 12 months in accordance with IFRS 16 [1]	6	6
Leasing commitments for subsequent periods[1]	–	–
Other commitments	214	104
Total	223	113

Increase in other commitments is mainly due to a shareholder loan commitment to PVO, which amounts to EUR 123 million. *Refer Note 4.3 Energy shareholdings for additional information.*

The lease commitments for leases not commenced at the end of 2020 totals approximately EUR 412 million, which are mostly related to long-term charter agreements, railway service agreement in Uruguay and service agreements related to wood handling, waste water treatment and other utilities in Leuna, Germany. Such lease commitments at the end of 2019 amounted to EUR 100 million.

9.2 Litigation

Contingent liabilities

The group is defendant or plaintiff in a number of legal proceedings incidental to its operations. These lawsuits primarily involve claims arising from commercial law issues.

Group companies

The group's management is not aware of any significant litigation in the end of 2020.

9.3 Events after the balance sheet date

On 19 January, UPM announced that it would invest EUR 13 million in UPM Raflatac's new production line in Nowa Wieś, Poland. The investment will increase UPM Raflatac's Direct Thermal (DT) Linerless annual production capacity by 100 million m2. The new production line is expected to be operational at the end of 2021.

On 28 January, UPM announced that it moves forward with biofuels growth plans and starts the basic engineering phase of a next generation biorefinery.

10. Other notes

10.1 Forthcoming new standards, amendments and accounting policy changes

Certain new accounting standards and interpretations have been published that are not mandatory for 31 December 2020 reporting periods. These standards and amendments are not expected to have a material impact on the group in the current or future reporting periods and on foreseeable future transactions and have not been early adopted. The impact of Interest Rate Benchmark Reform—Phase 2 (Amendments to IFRS 9, IFRS 7 and IFRS 16) is presented below.

Phase 2 amendments IFRS 9, IFRS 7 and IFRS 16 for IBOR reform

The IBOR reform phase 2 amendments to IFRS 9 and IFRS 7 relate to matters that might affect financial reporting when an existing interest rate benchmark is replaced. The amendments explain how to account for changes on the basis for determining contractual cash flows as a result of IBOR reform, provide additional temporary exceptions from applying specific hedge accounting requirements to avoid discontinuation of hedge relationships solely due to IBOR reform. The amendments also include additional IFRS 7 disclosures related to the reform. The IBOR reform phase 2 amendments to IFRS 9, IFRS 7 and IFRS 16 are effective for annual reporting periods beginning on or after 1 January 2021.

The group's risk exposure that is directly affected by the IBOR reform is fair value hedge accounting of long-term fixed-rate debt for changes in fair value attributable to USD LIBOR which is the current benchmark interest rate. Group currently has only few contracts which reference USD LIBOR and extend beyond 2021. Group Treasury oversees the group's IBOR transition and follows changes to ISDA and other market guidelines on effects of these changes to UPM's contracts. In fair value hedging relationships, fair value for both the hedged item and hedging instrument is calculated with identical rate. Therefore no ineffectiveness is expected.

Parent company accounts

(Finnish Accounting Standards, FAS)

Income statement

EURm	NOTE	2020	2019
Sales	1	1,816	2,318
Change in inventories of finished goods and work in progress		-6	-2
Production for own use		5	5
Other operating income	2	44	18
Materials and services			
Raw materials and consumables purchased		-1,342	-1,460
Change in inventories		-6	-45
External charges		-6	-5
		-1,353	-1,510
Personnel expenses			
Salaries and fees		-196	-212
Indirect employee costs			
Pension costs		-31	-31
Other indirect employee costs		-7	-7
	3	-234	-250
Depreciation, amortisation and impairment charges			
Depreciation and amortisation		-115	-111
Impairment charges on non-current assets		-1	0
	4	-116	-111
Other operating expenses	5	-183	-192
Operating profit		-27	277
Financial income and expenses			
Income from non-current assets			
Dividend income from group companies		348	534
Interest income from group companies		5	6
Other interest and financial income			
Other interest income from group companies		43	40
Other interest income from other companies		1	1
Other financial income from other companies		23	0
Impairment charges on investments		1	–
Interest and other financial expenses			
Interest expenses to group companies		-8	-13
Interest expenses to other companies		-21	-16
Other financial expenses to group companies		-20	-3
Other financial expenses to other companies		-69	-32
		302	516
Profit before closing entries and tax		275	793
Closing entries			
Depreciation difference		1	6
Group contributions granted		-19	–
		-18	6
Income taxes	6	-8	-43
Profit for the period		249	756

Balance sheet

EURm	NOTE	2020	2019
ASSETS			
Non-current assets			
Intangible assets			
Intangible rights		5	5
Other intangible assets		59	13
Advance payments		3	27
	7	67	45
Tangible assets			
Land and water areas		719	721
Buildings		212	230
Machinery and equipment		579	601
Other tangible assets		24	25
Advance payments and construction in progress		7	22
	8	1,541	1,599
Investments			
Holdings in group companies		3,788	3,077
Holdings in participating interest companies		5	5
Other shares and holdings		3	3
Receivables from group companies		716	864
Receivables from participating interest companies		4	4
Other non-current receivables		0	7
	9	4,516	3,960
Total non-current assets		6,124	5,603
Current assets			
Inventories			
Raw materials and consumables		160	165
Finished products and goods		19	25
Advance payments		15	16
		193	206
Receivables			
Current receivables			
Trade receivables		31	27
Receivables from group companies		956	944
Receivables from participating interest companies		8	8
Other current receivables		125	23
Prepayments and accrued income		41	29
	10	1,162	1,031
Cash and cash equivalents		1,582	1,382
Total current assets		2,937	2,619
Assets		9,061	8,223

EURm	NOTE	2020	2019
EQUITY AND LIABILITIES			
Equity			
Share capital		890	890
Revaluation reserve		142	142
Reserve for invested non-restricted equity		1,273	1,273
Retained earnings		2,002	1,940
Profit for the period		249	756
Total equity	11	4,555	5,000
Accumulated depreciation difference		439	440
Provisions			
Termination provisions		5	3
Other provisions		183	47
	12	187	49
LIABILITIES			
Non-current liabilities			
Bonds		1,056	334
Loans from financial institutions		100	0
Payables to group companies		168	115
Other non-current liabilities		166	172
	13	1,490	621
Current liabilities			
Advances received		0	1
Trade payables		247	241
Payables to group companies		2,021	1,703
Payables to participating interest companies		1	0
Other current liabilities		36	81
Accrued expenses and deferred income		83	87
	14	2,390	2,112
Total liabilities		3,880	2,733
Equity and liabilities		9,061	8,223

Cash flow statement

EURm	2020	2019
Cash flows from operating activities		
Profit before closing entries and tax	275	793
Financial income and expenses	-302	-516
Adjustments to operating profit [1]	175	59
Change in working capital [2]	-131	266
Interest received	49	47
Interest paid	-29	-31
Dividends received	348	534
Other financial items	-22	-61
Income taxes paid [3]	-11	-45
Operating cash flow	352	1,046
Cash flows from investing activities		
Investments in tangible and intangible assets	-84	-83
Investments in shares and holdings	-719	-197
Proceeds from sale of intangible and tangible assets	15	12
Proceeds from disposal of shares and holdings	6	1,257
Change in other non-current receivables	150	-217
Investing cash flow	-632	773
Cash flows from financing activities		
Proceeds from non-current liabilities	904	0
Payments of non-current liabilities	0	-270
Change in current liabilities	269	-238
Dividends paid	-693	-693
Group contributions, net	0	-6
Financing cash flow	480	-1,207
Cash and cash equivalents at beginning of period	1,382	770
Change in cash and cash equivalents	200	612
Cash and cash equivalents at end of period	1,582	1,382

Notes to cash flow statement

[1] Adjustments to operating profit

EURm	2020	2019
Depreciation, amortisation and impairment charges	116	111
Capital gains and losses on sale of non-current assets	-12	-2
Change in provisions	71	-50
Total	175	59

[2] Change in working capital

EURm	2020	2019
Inventories	13	60
Current receivables	-121	260
Current non-interest-bearing liabilities	-23	-54
Total	-131	266

[3] Income taxes related to sale of assets are presented in investing cash flow.

Notes to the parent company financial statements

Accounting policies

The financial statements of the parent company are prepared in accordance with Finnish Accounting Standards, FAS. The main differences in accounting policies of the group and the parent company relate to the measurement of financial derivatives and forest assets and recognition of defined benefit obligations, share-based payments, lease agreements and deferred income taxes.

The financial statements are presented in millions of euros and rounded and therefore the sum of individual figures might deviate from the presented total figure.

Foreign currency translation
Receivables and liabilities denominated in foreign currencies outstanding on the balance sheet date and other commitments are translated into euro currency using the balance sheet date exchange rate. Exchange rate differences arising from the valuation of trade receivables are recognised in sales and exchange rate differences on trade payables in purchases. Exchange differences arising from the measurement of other receivables and liabilities are recognised in financial items.

Tangible and intangible assets
Tangible and intangible assets are stated at cost less accumulated depreciation and amortisation according to plan and impairments. Emission rights are recognised using net approach. Depreciation and amortization according to plan is recorded on a straight-line basis over the expected useful lives of the assets as follows:

Land and water areas, no depreciation	
Intangible assets	5 – 10 years
Buildings	20 – 50 years
Light machinery and equipment	5 – 10 years
Heavy machinery	15 – 20 years
Power plants	20 – 30 years
Other tangible assets	5 – 20 years

Forest assets are recognised as tangible assets within land and water areas at historical cost and revaluation. No systematic depreciation or changes in value due to felling is recognised.

Investments
Investments are stated at cost less impairments.

Inventories
Inventories are stated at cost or the lower of replacement cost and probable selling price. Costs are measured using FIFO-method. In addition to variable costs, the cost of inventories includes a portion of the fixed costs of acquisition and manufacturing.

Revaluations
The balance sheet value of land includes revaluations. No new revaluations are made and the balance sheet value of land is considered to be below their fair value.

Leases
Lease payments of lease contracts are recognised in other operating expenses over the lease term. Lease payments due in future years under lease contracts are presented as off-balance sheet items.

Provisions
Provisions include foreseeable future expenses and losses to which the company is committed, the realization of which is probable and the amount can be reliably estimated, e.g. pension and environmental liabilities and termination and restructuring costs. Changes in provisions are recognised in income statement within particular cost items.

Sales
Sales include sales revenue from actual operations less indirect taxes, discounts, claims and exchange rate differences on net cash flow hedges and trade receivables.

Research and development costs
Research and development costs are expensed in the year in which they are incurred.

Pensions
In Finland employers are obliged to insure their employees for statutory benefits, as determined in Employee's Pension Act (TyEL). The mandatory pensions are arranged mainly through pension insurance companies. Contributions to pension insurance companies are charged to the income statement in the period to which the contributions relate. Pension obligations of own pension funds are fully funded.

Share-based payments
Share based compensation is recognized as an expense in the income statement over the earnings period and the related liability is booked to the balance sheet.

Closing entries
Parent company closing entries consists of the change in the depreciation difference and group contributions granted to group companies. The accumulated depreciation difference in the parent company has not been divided into equity and deferred tax liability.

Income taxes
Income taxes presented in the income statement consist of accrued taxes for the financial year and tax adjustments for prior years. The parent company has not recognised deferred tax assets and liabilities in the balance sheet, but presents the information in the notes.

Derivatives
Income and expenses of derivative contracts relating to net cash flow hedges are recognised in sales. Income and expenses related to commodity derivatives are recognised in purchases. Income and expenses of fair value hedges are recognised in financial items. Net cash flow hedging derivatives and commodity derivatives are recognised in the income statement when the cash flow occurs. Hedge accounting is not applied. The fair value losses of financial derivatives are recognised through the income statement and presented as a provision in the balance sheet.

All financial derivative contracts of the group are made by the parent company. All contracts are made with external counterparties except some internal derivatives which are used to manage foreign currency and interest rate exposure. Internal derivatives are one cross currency swap with nominal value of EUR 66 million (76 million) maturing in 2027 and foreign currency forwards with nominal value of EUR 462 million (0) maturing between 2021 and 2023.

Financial risks, fair values and maturities of the group external derivatives are disclosed in » Note 6.1 *Financial risk management and in* » Note 6.2 *Derivatives and hedge accounting.*

1. Sales

Sales by business area

EURm	2020	2019
UPM Biorefining	1,448	1,876
Other operations	368	442
Total	1,816	2,318

Sales by destination

EURm	2020	2019
Finland	1,785	2,275
Other EU countries	16	22
Other countries	16	21
Total	1,816	2,318

2. Other operating income

EURm	2020	2019
Gains on sale of non-current assets	15	5
Rental income	10	10
Other	18	3
Total	44	18

3. Personnel expenses

EURm	2020	2019
Salaries and fees of the President and CEO, and members of the Board of Directors [1]	6	7
Other salaries and fees	190	206
Pension costs	31	31
Other indirect employee costs	7	7
Total	234	250

[1] » Refer Note 3.2 Key management personnel

Personnel

EURm	2020	2019
Total average	3,026	3,070

4. Depreciation, amortisation and impairment charges

EURm	2020	2019
Intangible rights	2	2
Other intangible assets	10	6
Buildings	19	19
Machinery and equipment	81	80
Other tangible assets	3	3
Total	116	111

5. Other operating expenses

EURm	2020	2019
Rents and lease expenses	13	13
Losses on sale of non-current assets	2	3
Maintenance expenses	100	84
Other operating expenses [1]	67	92
Total	183	192

[1] The research and development costs in operating expenses were EUR 9 million (24 million) and auditor's fee EUR 2.0 million (1.4 million). In personnel expenses the research and development costs were EUR 17 million (16 million).

6. Income taxes

EURm	2020	2019
Tax expense for the period	8	43
Total	8	43

Deferred tax assets and liabilities [1]

EURm	2020	2019
Deferred tax assets		
Provisions	37	10
Share-based payments	1	2
Total	39	13
Deferred tax liabilities		
Accumulated depreciation difference	88	88
Revaluations of land areas	60	60
Total	148	148

[1] The parent company has not recognised deferred tax assets and liabilities in the balance sheet. Deferred tax assets and liabilities are calculated based on temporary differences between the carrying and taxable values of assets and liabilities.

7. Intangible assets

EURm	INTANGIBLE RIGHTS	OTHER INTANGIBLE ASSETS	ADVANCE PAYMENTS	TOTAL
2020				
Accumulated costs	19	303	3	325
Accumulated amortisation and impairments	-14	-244	–	-259
Carrying value, at 31 December	5	59	3	67
Carrying value, at 1 January	5	13	27	45
Additions	2	29	3	34
Amortisation	-2	-10	–	-13
Reclassifications	–	27	-27	–
Carrying value, at 31 December	5	59	3	67
2019				
Accumulated costs	18	248	27	293
Accumulated amortisation and impairments	-12	-236	–	-248
Carrying value, at 31 December	5	13	27	45
Carrying value, at 1 January	5	17	14	36
Additions	2	2	19	23
Disposals	–	–	-6	-6
Amortisation	-2	-6	–	-8
Carrying value, at 31 December	5	13	27	45

8. Tangible assets

EURm	LAND AND WATER AREAS	BUILDINGS	MACHINERY AND EQUIPMENT	OTHER TANGIBLE ASSETS	ADVANCE PAYMENTS AND CONSTRUCTIO	TOTAL
2020						
Accumulated costs	420	613	2,257	145	7	3,441
Accumulated amortisation and impairments	–	-401	-1,677	-121	–	-2,199
Revaluations	300	–	–	–	–	300
Carrying value, at 31 December	719	212	579	24	7	1,541
Carrying value, at 1 January	721	230	601	25	22	1,599
Additions	1	1	43	2	3	50
Disposals	-2	–	-1	–	-2	-5
Depreciations	–	-19	-80	-3	–	-102
Reclassifications	–	–	16	–	-17	–
Carrying value, at 31 December	719	212	579	24	7	1,541
2019						
Accumulated costs	421	611	2,200	143	22	3,398
Accumulated amortisation and impairments	–	-381	-1,600	-118	–	-2,099
Revaluations	300	–	–	–	–	300
Carrying value, at 31 December	721	230	601	25	22	1,599
Carrying value, at 1 January	720	244	645	25	11	1,646
Additions	2	7	28	3	20	59
Disposals	-1	-3	–	–	–	-4
Depreciations	–	-19	-80	-3	–	-102
Reclassifications	–	1	8	–	-9	–
Carrying value, at 31 December	721	230	601	25	22	1,599

9. Other non-current assets

EURm	HOLDINGS IN GROUP COMPANIES	HOLDINGS IN PARTICIPATING INTEREST COMPANIES	OTHER SHARES AND HOLDINGS	RECEIVABLES FROM GROUP COMPANIES	RECEIVABLES FROM PARTICIPATING INTEREST COMPANIES	OTHER NON-CURRENT RECEIVA-BLES	TOTAL
2020							
Accumulated costs	5,204	5	3	716	4	–	5,931
Accumulated value adjustments	-1,415	–	–	–	–	–	-1,415
Carrying value, at 31 December	3,788	5	3	716	4	–	4,516
Carrying value, at 1 January	3,077	5	3	864	4	7	3,960
Additions	719	–	–	37	–	–	756
Disposals	-7	–	–	-186	–	-7	-200
Carrying value, at 31 December	3,788	5	3	716	4	–	4,516
2019							
Accumulated costs	4,492	5	3	864	4	7	5,375
Accumulated value adjustments	-1,415	–	–	–	–	–	-1,415
Carrying value, at 31 December	3,077	5	3	864	4	7	3,960
Carrying value, at 1 January	4,136	5	3	646	4	7	4,801
Additions	197	–	–	234	–	–	431
Disposals	-1,256	–	–	-16	–	–	-1,272
Carrying value, at 31 December	3,077	5	3	864	4	7	3,960

10. Current receivables

EURm	RECEIVABLES FROM GROUP COMPANIES	RECEIVABLES FROM PARTICIPATING INTEREST COMPANIES	RECEIVABLES FROM OTHERS	TOTAL
2020				
Trade receivables	280	8	31	319
Loan receivables [1]	675	–	–	675
Prepayments and accrued income [2]	1	–	41	42
Other current receivables	–	–	125	125
Carrying value, at 31 December	956	8	198	1,162
2019				
Trade receivables	371	8	26	405
Loan receivables [1]	570	–	–	570
Prepayments and accrued income [2]	1	–	30	31
Other current receivables	2	–	23	25
Carrying value, at 31 December	944	8	79	1,031

[1] There were no loans granted to the company's President and CEO and members of the Board of Directors at 31 December 2020 and 2019.

[2] Prepayments and accrued income

EURm	2020	2019
Energy taxes	7	7
Interest income	6	6
Exchange gains and losses	14	10
Income taxes	11	5
Other items	4	2
Carrying value, at 31 December	42	31

11. Equity

EURm	SHARE CAPITAL	REVALUATION RESERVE	RESERVE FOR INVESTED NON-RESTRICTED EQUITY	RETAINED EARNINGS	PROFIT/LOSS FOR THE PERIOD	TOTAL SHARE-HOLDER'S EQUITY
2020						
Carrying value, at 1 January	890	142	1,273	1,940	756	5,000
Transfer of profit from previous year	–	–	–	756	-756	–
Profit for period	–	–	–	–	249	249
Dividend distribution	–	–	–	-693	–	-693
Carrying value, at 31 December	890	142	1,273	2,002	249	4,555
2019						
Carrying value, at 1 January	890	142	1,273	1,853	780	4,938
Transfer of profit from previous year	–	–	–	780	-780	–
Profit for period	–	–	–	–	756	756
Dividend distribution	–	–	–	-693	–	-693
Changes in revaluations	–	–	–	–	–	–
Carrying value, at 31 December	890	142	1,273	1,940	756	5,000

EURm	2020	2019
Distributable funds		
Reserve for invested non-restricted equity	1,273	1,273
Retained earnings from previous years	2,002	1,940
Profit for the period	249	756
Total distributable funds at 31 December	3,524	3,969

12. Provisions

EURm	RESTRUCTURING	TERMINATION	ENVIRONMENTAL	OTHER [1]	TOTAL
2020					
Provisions at 1 January	3	3	8	35	49
Provisions made during the year	–	4	–	141	145
Provisions utilised during the year	–	-1	–	-5	-7
Carrying value, at 31 December	3	5	8	172	187
2019					
Provisions at 1 January	3	4	8	85	101
Provisions made during the year	–	1	–	–	1
Provisions utilised during the year	–	-3	–	-50	-53
Carrying value, at 31 December	3	3	8	35	49

[1] Other provisions are attributable to onerous contracts and fair value losses of financial derivatives. At the end of 2020 the fair value loss in other provisions of EUR 5 million (7 million) is attributable to one group internal cross currency swap and EUR 47 million (0 million) to group internal foreign currency forwards.

13. Non-current liabilities

EURm	2020	2019
Bonds	1,056	334
Loans from financial institutions	100	–
Payables to group companies	168	115
Other non-current liabilities	166	172
Carrying value, at 31 December	1,490	621

Maturity in 2026 (in 2025) or later

EURm	2020	2019
Bonds	1,056	334
Loans from financial institutions	77	–
Other non-current liabilities	166	172
Total	1,299	506

Bonds

FIXED RATE PERIOD	INTEREST RATE, %	CURRENCY	NOMINAL VALUE ISSUED, MILLION	CARRYING VALUE 2020EURm	CARRYING VALUE 2019EURm
1997–2027	7.450	USD	375	306	334
2020–2028	0.125	EUR	750	750	
Carrying value, at 31 December				1,056	334
Non-current portion				1,056	334

14. Current liabilities

EURm	PAYABLES TO GROUP COMPANIES	PAYABLES TO PARTICIPATING INTEREST COMPANIES	PAYABLES TO OTHERS	TOTAL
2020				
Trade payables	40	1	247	288
Accrued expenses and deferred income [1]	18	–	83	101
Other current liabilities	1,963	–	36	2,000
Carrying value, at 31 December	2,021	1	368	2,390
2019				
Advances received	–	–	1	1
Trade payables	51	–	241	293
Accrued expenses and deferred income [1]	15	–	87	102
Other current liabilities	1,636	–	81	1,717
Carrying value, at 31 December	1,703	–	410	2,112

[1] Accrued expenses and deferred income

EURm	2020	2019
Personnel expenses	65	78
Interest expenses	4	3
Exchange gains and losses	31	21
Other items	1	–
Carrying value, at 31 December	101	102

15. Commitments

EURm	2020	2019
Mortgages		
As security against own debt	–	1
Guarantees		
Guarantees for loans on behalf of group companies	–	13
Other guarantees on behalf of group companies	26	67
Other commitments		
Leasing commitments, due within 12 months	26	34
Leasing commitments, due after 12 months	45	64
Other commitments	49	62
Total	148	240

In addition, the parent company acts as a guarantor on behalf of other companies belonging to the group. Majority of such commitments relate to major investment projects and can end up payable by the parent company in case group companies are unable to manage their obligations. » Refer Note 4.1 *Property, plant and equipment for information about major investment projects.*

Pension commitments of the President and CEO and the members of the Group Executive Team

» Refer Note 3.2 *Key management personnel.*

Related party transactions

» Refer Note 8.3 *Related party transactions.*

16. Shares and holdings owned by parent company

SUBSIDIARIES	COUNTRY OF INCORPORATION	HOLDING %
Jyväs-Helmi Oy	FI	61.00
Myllykoski Oyj	FI	100.00
Repola Investment Oy	FI	100.00
Suurijärven Huolto Oy	FI	67.59
Unicarta Oy	FI	100.00
UPM (Vietnam) Limited	VN	100.00
UPM AG	CH	100.00
UPM Asia Pacific Pte. Ltd.	SG	100.00
UPM B.V.	NL	100.00
UPM Biochemicals GmbH	DE	100.00
UPM Bulgaria EOOD	BG	100.00
UPM Communication Papers Oy	FI	100.00
UPM Energy Oy	FI	100.00
UPM India Private Limited	IN	100.00
UPM Kft.	HU	100.00
UPM Manufatura e Comércio de Produtos Florestais Ltda.	BR	100.00
UPM NV	BE	100.00
UPM OÜ	EE	100.00
UPM Plywood Oy	FI	100.00
UPM Pulp Oy	FI	100.00
UPM Pulp Sales Oy	FI	100.00
UPM Raflatac Canada Holdings Inc.	CA	100.00
UPM Raflatac NZ Limited	NZ	100.00
UPM Raflatac Oy	FI	100.00
UPM Raflatac S.r.l.	AR	27.80
UPM Romania S.R.L	RO	100.00
UPM Silvesta Oy	FI	100.00
UPM Specialty Papers Oy	FI	100.00
UPM Wood Materials (UK) Ltd	UK	100.00
UPM-Kymmene (HK) Ltd.	CN/HK	100.00
UPM-Kymmene (Korea) Ltd	KR	100.00
UPM-Kymmene (UK) Holdings Limited	UK	100.00
UPM-Kymmene A/S	DK	100.00

SUBSIDIARIES	COUNTRY OF INCORPORATION	HOLDING %
UPM-Kymmene AB	SE	100.00
UPM-Kymmene B.V.	NL	100.00
UPM-Kymmene Beteiligungs GmbH	DE	100.00
UPM-Kymmene Comercializacao de Papel Lda	PT	100.00
UPM-Kymmene d.o.o.	SI	100.00
UPM-Kymmene Groupe S.A.	FR	100.00
UPM-Kymmene Grundstücksverwaltung GmbH	DE	100.00
UPM-Kymmene Hellas Ltd	GR	100.00
UPM-Kymmene India Private Limited	IN	100.00
UPM-Kymmene Investment Inc.	US	100.00
UPM-Kymmene Japan K.K.	JP	100.00
UPM-Kymmene Pty Limited	AU	100.00
UPM-Kymmene RUS Holdings Oy	FI	99.62
UPM-Kymmene S.A.	ES	100.00
UPM-Kymmene S.r.l.	IT	100.00
UPM-Kymmene s.r.o.	CZ	100.00
UPM-Kymmene Seven Seas Oy	FI	100.00
UPM-Kymmene Slovakia s.r.o.	SK	100.00
Werla Insurance Company Ltd	MT	100.00

PARTICIPATING INTEREST COMPANIES	COUNTRY OF INCORPORATION	HOLDING %
Kiinteistö Oy Joutsan Rantatie 3	FI	25.43
Metsäteho Oy	FI	23.95
Oy Citotest Ab	FI	36.60
Oy Keskuslaboratorio - Centrallaboratorium Ab	FI	38.65
Perkaus Oy	FI	33.33
Rönnäsin Kiinteistöhuolto Oy	FI	28.41
Selluloosan ruokalaosuuskunta	FI	33.33
Steveco Oy	FI	34.32

Group subsidiaries and joint operations are disclosed in » Note 8.2.

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Auditor's Report (Translation of the Finnish Original)

To the Annual General Meeting of UPM-Kymmene Corporation

Report on the Audit of the Financial Statements

Opinion

In our opinion
- the consolidated financial statements give a true and fair view of the group's financial position and financial performance and cash flows in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU
- the financial statements give a true and fair view of the parent company's financial performance and financial position in accordance with the laws and regulations governing the preparation of the financial statements in Finland and comply with statutory requirements.

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

What we have audited

We have audited the financial statements of UPM-Kymmene Corporation (business identity code 1041090-0) for the year ended 31 December 2020. The financial statements comprise:
- the consolidated balance sheet, income statement, statement of comprehensive income, statement of changes in equity, cash flow statement and notes, including a summary of significant accounting policies
- the parent company's balance sheet, income statement, cash flow statement and notes.

Basis for Opinion

We conducted our audit in accordance with good auditing practice in Finland. Our responsibilities under good auditing practice are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report.
We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We are independent of the parent company and of the group companies in accordance with the ethical requirements that are applicable in Finland and are relevant to our audit, and we have fulfilled our other ethical responsibilities in accordance with these requirements.
To the best of our knowledge and belief, the non-audit services that we have provided to the parent company and to the group companies are in accordance with the applicable law and regulations in Finland and we have not provided non-audit services that are prohibited under Article 5(1) of Regulation (EU) No 537/2014. The non-audit services that we have provided are disclosed in note 2.3 to the Financial Statements.

Our Audit Approach

Overview

- Overall group materiality: € 60 million, which represents approximately 5 % of the average of the profit before tax for the last three years.

- The group audit scope encompassed all significant group companies, as well as a number of smaller group companies in Europe, Asia, North America and South America covering the vast majority of revenue, assets and liabilities.

- Valuation of forest assets
- Valuation of energy shareholdings

As part of designing our audit, we determined materiality and assessed the risks of material misstatement in the financial statements. In particular, we considered where management made subjective judgements; for example, in respect of significant accounting estimates that involved making assumptions and considering future events that are inherently uncertain.

Materiality

The scope of our audit was influenced by our application of materiality. An audit is designed to obtain reasonable assurance whether the financial statements are free from material misstatement. Misstatements may arise due to fraud or error. They are considered material if individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

Based on our professional judgement, we determined certain quantitative thresholds for materiality, including the overall group materiality for the consolidated financial statements as set out in the table below. These, together with qualitative considerations, helped us to determine the scope of our audit and the nature, timing and extent of our audit procedures and to evaluate the effect of misstatements on the financial statements as a whole.

Overall group materiality	€ 60 million (previous year € 60 million)
How we determined it	Approximately 5% of the average of the profit before tax for the last three years.
Rationale for the materiality benchmark applied	We chose profit before taxes as the benchmark because, in our view, it is the benchmark against which the performance of the Group is commonly measured by users, and is a generally accepted benchmark. We chose approximately 5%, which is within the range of acceptable quantitative materiality thresholds in auditing standards.

How we tailored our group audit scope

We tailored the scope of our audit, taking into account the structure of the UPM-Kymmene Group, the accounting processes and controls, and the industry in which the group operates.

We determined the type of work that needed to be performed at group companies by us, as the group engagement team, or by auditors from other PwC network firms operating under our instruction. Audits were performed in group companies which were considered significant either because of their individual financial significance or due to their specific nature, covering the majority of revenue, assets and liabilities of the group. Selected specified procedures as well as analytical procedures were performed to cover the remaining group companies.

Key Audit Matters

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

As in all of our audits, we also addressed the risk of management override of internal controls, including among other matters consideration of whether there was evidence of bias that represented a risk of material misstatement due to fraud.

Key audit matter in the audit of the group	How our audit addressed the key audit matter
Valuation of forest assets Refer to note 4.2. in the consolidated financial statements for the related disclosures. The group owns and leases total of 1 025 thousand hectares of forests and plantations in Finland, the United States and Uruguay valued at € 2 077 million at 31 December 2020. Forest assets are measured at fair value less cost to sell. The fair value is calculated on the basis of discounted future expected cash flows as there is a lack of a liquid market. Young saplings and land are valued at cost. Main factors used in the valuation are estimates for growth and wood harvested, stumpage prices and discount rates. We focused on this area as the amounts are material, the valuation process is complex and judgmental and is based on assumptions that are affected by expected future market or economic conditions.	In testing the valuation of forest assets, in conjunction with our valuation specialists we: – Assessed the methodologies adopted by management for the valuation; – Tested the mathematical accuracy of the model used for valuation; – Assessed the discount rates applied in the valuation; – Assessed the other key valuation assumptions; and, – Validated key inputs and data used in valuation model such as stumpage price, trend price forecast, tree growth assumptions, consumer price index and inflation.
Valuation of energy shareholdings Refer to note 4.3. in the consolidated financial statements for the related disclosures. The energy shareholdings amounted to € 1 936 million at 31 December 2020. The energy shareholdings are unlisted equity investments in energy companies and are valued at fair value through other comprehensive income, net of tax if applicable. The fair value is determined on a discounted cash flow basis. The main factors impacting the future cash flows include future electricity prices, price trends, discount rates and the start-up schedule of the nuclear power plant unit Olkiluoto 3. We focused on this area as the amounts are material, the valuation process is complex and judgmental and is based on assumptions that are affected by expected future market or economic conditions.	In testing the valuation of the energy shareholdings, in conjunction with our valuation specialists we: – Assessed the methodology adopted by management for the valuation; – Tested the mathematical accuracy of the model used for valuation; – Assessed the future electricity prices and price trends; – Assessed the discount rate applied in the valuation; – Validated the Olkiluoto 3 nuclear power plant unit start-up schedule against the most recent available information; – Validated key inputs and data used in valuation model such as production costs and volumes, UPM's ownership percentages, inflation, tax rate and net debt.

We have no key audit matters to report with respect to our audit of the parent company financial statements.

There are no significant risks of material misstatement referred to in Article 10(2c) of Regulation (EU) No 537/2014 with respect to the consolidated financial statements or the parent company financial statements.

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

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

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

Auditor's Responsibilities for the Audit of the Financial Statements

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

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

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the parent company's or the group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of the Board of Directors' and the Managing Director's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the parent company's or the group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our

opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the parent company or the group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events so that the financial statements give a true and fair view.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.
We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.
From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Other Reporting Requirements

Appointment

We have been acting as auditors appointed by the annual general meeting since 30 April 1996. Our appointment represents a total period of uninterrupted engagement of 25 years. The Company arranged the latest audit tendering process in 2013. Authorised Public Accountant (KHT) Mikko Nieminen has acted as the responsible auditor since 4 April 2019, representing a total uninterrupted period of two years.

Other Information

The Board of Directors and the Managing Director are responsible for the other information. The other information comprises the report of the Board of Directors and the information included in the Annual Report, but does not include the financial statements and our auditor's report thereon. We have obtained the report of the Board of Directors prior to the date of this auditor's report and the Annual Report is expected to be made available to us after that date.
Our opinion on the financial statements does not cover the other information.
In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. With respect to the report of the Board of Directors, our responsibility also includes considering whether the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.
In our opinion

- the information in the report of the Board of Directors is consistent with the information in the financial statements
- 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 the other information, we are required to report that fact. We have nothing to report in this regard.

Other Statements

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

Helsinki 15 February 2021
PricewaterhouseCoopers Oy
Authorised Public Accountants

Mikko Nieminen
Authorised Public Accountant (KHT)

Other financial information

Alternative performance measures

UPM presents certain performance measures of historical performance, financial position and cash flows, which in accordance with the "Alternative Performance Measures" guidance issued by the European Securities and Markets Authority (ESMA) are not accounting measures defined or specified in IFRS and are therefore considered as alternative performance measures. These alternative performance measures are described below:

ALTERNATIVE PERFORMANCE MEASURE	DEFINITION
Operating profit	Profit before income tax expense, finance expenses and finance income and net gains on sale of energy shareholdings as presented on the face of the IFRS income statement. Gains on sale of energy shareholdings are not recorded to the income statement from 2018 onwards.
Comparable EBIT	Operating profit adjusted for items affecting comparability.
Comparable EBITDA	Operating profit before depreciation, amortisation and impairments, change in fair value of forest assets and wood harvested, share of results of associates and joint ventures and items affecting comparability.
Comparable profit before tax	Profit before income tax expense excluding items affecting comparability.
Comparable profit for the period	Profit for the period excluding items affecting comparability and their tax impact.
Comparable EPS, EUR	Earnings per share calculated in accordance with IFRS excluding items affecting comparability and their tax impact.
Net debt	Total of current and non-current debt less cash and cash equivalents and interest-bearing current and non-current financial assets.
Items affecting comparability	Certain non-operational or non-cash valuation transactions with significant income statement impact are considered as items affecting comparability, if they arise from asset impairments, restructuring measures, asset sales, fair value changes of forest assets resulting from changes in valuation parameters or estimates or changes in legislation or legal proceedings. In addition, the changes in fair value of unrealised cash flow and commodity hedges are classified as items affecting comparability. Numerical threshold for items to be considered as significant in UPM's business areas UPM Biorefining, UPM Specialty Papers and UPM Communication Papers is determined as one cent (EUR 0.01) after tax per share or more. In other business areas, the impact is considered to be significant if the item exceeds EUR 1 million before tax.
Free cash flow	Cash generated from operations after cash used for investing activities.
Return on equity (ROE), %	Profit for the period as a percentage of average equity.
Comparable ROE, %	Return on equity (ROE) excluding items affecting comparability.
Return on capital employed (ROCE), %	Profit before taxes, interest expenses and other financial expenses as a percentage of average capital employed.
Comparable ROCE, %	Return on capital employed (ROCE) excluding items affecting comparability.
Capital employed	Group total equity and total debt.
Business area's comparable ROCE, %	Business area's operating profit adjusted for items affecting comparability as a percentage of business area's average capital employed.
Business area's capital employed	Business area's operating assets less its operating liabilities. Operating assets include goodwill, other intangible assets, property, plant and equipment, forest assets, energy shareholdings, investments in associates and joint-ventures, inventories and trade receivables. Operating liabilities include trade payables and advances received.
Capital expenditure	Capitalised investments in property, plant and equipment, intangible assets including goodwill arising from business combinations, energy shareholdings and other shares, associates and joint ventures.
Capital expenditure excluding acquisitions and shares	Capital expenditure excluding investments in shares and participations.
Operating cash flow per share, EUR	Operating cash flow divided by adjusted average number of shares during the period excluding treasury shares.
Gearing ratio, %	Net debt as a percentage of total equity
Net debt to EBITDA	Net debt divided by EBITDA
Equity to assets ratio, %	Equity expressed as a percentage of total assets less advances received.

Reconciliation of key figures to IFRS (Quarterly key figures are unaudited)

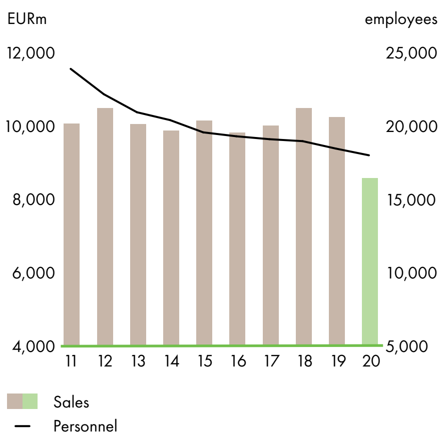
EURm, OR AS INDICATED	Q4/20	Q3/20	Q2/20	Q1/20	Q4/19	Q3/19	Q2/19	Q1/19	Q1–Q4/20	Q1–Q4/19
Items affecting comparability										
Impairment charges	2	-53	-19	0	-1	-11	-1	0	-70	-13
Restructuring charges	3	-57	-34	-48	0	-18	-28	-5	-137	-52
Change in fair value of unrealised cash flow and commodity hedges	-3	-2	-9	12	-6	1	6	4	-3	5
Capital gains and losses on sale of non-current assets	0	14	8	0	0	2	-2	0	23	0
Total items affecting comparability in operating profit	2	-98	-55	-36	-7	-26	-26	-1	-187	-60
Changes in tax rates	0	0	-4	0	0	0	0	0	-3	0
Taxes relating to items affecting comparability	-3	22	4	-2	10	5	-1	0	21	14
Items affecting comparability in taxes	-2	22	1	-2	10	5	-1	0	18	14
Items affecting comparability, total	-1	-75	-54	-39	2	-21	-26	-1	-169	-46
Comparable EBITDA										
Operating profit	253	117	148	243	336	316	319	373	761	1,344
Depreciation, amortisation and impairment charges excluding items affecting comparability	116	117	119	120	120	119	118	120	471	477
Change in fair value of forest assets and wood harvested excluding items affecting comparability	24	1	-1	1	-19	-5	3	-5	25	-26
Share of result of associates and joint ventures	0	-1	-1	-1	-1	-1	-1	-1	-3	-3
Items affecting comparability in operating profit	-2	98	55	36	7	26	26	1	187	60
Comparable EBITDA	392	331	320	398	442	455	466	488	1,442	1,851
% of sales	17.9	16.3	15.4	17.4	18.1	18.2	17.9	18.1	16.8	18.1
Comparable EBIT										
Operating profit	253	117	148	243	336	316	319	373	761	1,344
Items affecting comparability in operating profit	-2	98	55	36	7	26	26	1	187	60
Comparable EBIT	252	215	203	279	343	342	345	374	948	1,404
% of sales	11.5	10.6	9.8	12.2	14.0	13.7	13.2	13.9	11.1	13.7
Comparable profit before tax										
Profit before tax	250	109	138	240	324	319	300	364	737	1,307
Items affecting comparability in operating profit	-2	98	55	36	7	26	26	1	187	60
Comparable profit before tax	248	207	193	276	331	345	325	366	924	1,367
Comparable ROCE, %										
Comparable profit before tax	248	207	193	276	331	345	325	366	924	1,367
Interest expenses and other financial expenses	4	7	10	11	14	10	11	8	33	44
	253	213	203	288	346	355	337	374	957	1,411
Capital employed, average	11,138	10,744	10,888	11,241	11,323	10,996	11,069	10,946	11,514	11,024
Comparable ROCE, %	9.1	7.9	7.5	10.2	12.2	12.9	12.2	13.7	8.3	12.8
Comparable profit for the period										
Profit for the period	190	83	103	192	263	260	245	304	568	1,073
Items affecting comparability, total	1	75	54	39	-2	21	26	1	169	46
Comparable profit for the period	191	158	157	231	261	281	271	305	737	1,119
Comparable EPS, EUR										
Comparable profit for the period	191	158	157	231	261	281	271	305	737	1,119
Profit attributable to non-controlling interest	-3	-1	-2	-2	2	-14	0	0	-8	-12
	188	157	155	229	263	267	271	305	729	1,106
Average number of shares basic (1,000)	533,324	533,324	533,324	533,324	533,324	533,324	533,324	533,324	533,324	533,324
Comparable EPS, EUR	0.35	0.29	0.29	0.43	0.49	0.50	0.51	0.57	1.37	2.07
Comparable ROE, %										
Comparable profit for the period	191	158	157	231	261	281	271	305	737	1,119
Total equity, average	9,496	9,468	9,564	9,923	10,015	9,706	9,804	9,924	9,844	9,986
Comparable ROE, %	8.0	6.7	6.6	9.3	10.4	11.6	11.1	12.3	7.5	11.2

Financial information 2011–2020

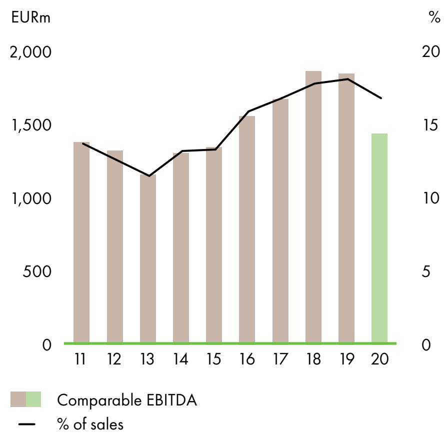
EURm, OR AS INDICATED	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Income statement										
Sales	8,580	10,238	10,483	10,010	9,812	10,138	9,868	10,054	10,492	10,068
Comparable EBITDA	1,442	1,851	1,868	1,677	1,560	1,350	1,306	1,161	1,325	1,383
% of sales	16.8	18.1	17.8	16.8	15.9	13.3	13.2	11.5	12.6	13.7
Operating profit	761	1,344	1,895	1,259	1,135	1,142	674	548	–1,318	459
% of sales	8.9	13.1	18.1	12.6	11.6	11.3	6.8	5.5	–12.6	4.6
Comparable EBIT	948	1,404	1,513	1,292	1,143	916	866	683	556	682
% of sales	11.1	13.7	14.4	12.9	11.6	9.0	8.8	6.8	5.3	6.8
Profit before tax	737	1,307	1,839	1,186	1,080	1,075	667	475	–1,271	417
% of sales	8.6	12.8	17.5	11.9	11.0	10.6	6.8	4.7	–12.1	4.1
Comparable profit before tax	924	1,367	1,457	1,218	1,089	849	793	610	471	573
% of sales	10.8	13.4	13.9	12.2	11.1	8.4	8.0	6.1	4.5	5.7
Profit for the period	568	1,073	1,496	974	880	916	512	335	–1,122	457
% of sales	6.6	10.5	14.3	9.7	9.0	9.0	5.2	3.3	–10.7	4.5
Comparable profit for the period	737	1,119	1,194	1,004	879	734	638	479	390	487
% of sales	8.6	10.9	11.4	10.0	9.0	7.2	6.5	4.8	3.7	4.8
Balance sheet										
Non-current assets	10,149	10,140	9,501	9,144	9,715	10,259	10,269	10,487	11,066	11,412
Inventories	1,285	1,367	1,642	1,311	1,346	1,376	1,356	1,327	1,388	1,429
Other current assets	3,424	3,215	2,853	2,612	2,850	2,558	2,570	2,785	2,489	2,548
Total assets	14,858	14,722	13,996	13,067	13,911	14,193	14,195	14,599	14,943	15,389
Total equity	9,513	10,175	9,797	8,663	8,237	7,944	7,480	7,455	7,461	7,477
Non-current liabilities	3,606	2,730	2,194	2,254	3,364	4,328	4,717	5,019	5,430	5,320
Current liabilities	1,740	1,818	2,005	2,150	2,309	1,921	1,998	2,125	2,052	2,588
Total equity and liabilities	14,858	14,722	13,996	13,067	13,911	14,193	14,195	14,599	14,943	15,389
Capital employed at year end	11,555	11,474	10,575	9,777	10,657	11,010	10,944	11,583	11,603	12,110
Capital expenditure	903	378	303	329	325	520	411	362	357	1,179
% of sales	10.5	3.7	2.9	3.3	3.3	5.1	4.2	3.6	3.4	11.7
Capital expenditure excluding acquisitions and shares	902	378	303	303	325	486	375	329	347	340
% of sales	10.5	3.7	2.9	3.0	3.3	4.8	3.8	3.3	3.3	3.4
Cash flow and net debt										
Operating cash flow	1,005	1,847	1,330	1,460	1,686	1,185	1,241	735	1,040	1,041
Free cash flow	126	1,432	1,131	1,336	1,424	750	994	438	968	910
Net debt	56	-453	-311	174	1,131	2,100	2,401	3,040	3,210	3,592
Key figures										
Return on capital employed (ROCE), %	6.7	12.3	18.4	12.5	10.5	10.3	6.5	4.8	neg.	4.4
Comparable ROCE, %	8.3	12.8	14.6	12.8	10.6	8.3	7.6	6.0	4.2	5.2
Return on equity (ROE), %	5.8	10.7	16.2	11.5	10.9	11.9	6.9	4.5	neg.	6.3
Comparable ROE, %	7.5	11.2	12.9	11.9	10.9	9.5	8.5	6.4	4.2	6.7
Gearing ratio, %	1	-4	-3	2	14	26	32	41	43	48
Net debt to EBITDA	0.04	-0.24	-0.17	0.10	0.73	1.56	1.84	2.62	2.42	2.60
Equity to assets ratio, %	64.1	69.2	70.1	66.6	59.4	56.1	52.7	51.1	50.0	48.6
Personnel										
Personnel at year end	18,014	18,742	18,978	19,111	19,310	19,578	20,414	20,950	22,180	23,909
Deliveries										
Pulp (1,000 t)	3,664	3,715	3,468	3,595	3,419	3,224	3,287	3,163	3,128	2,992
Electricity (GWh)	9,168	8,619	8,608	8,127	8,782	8,966	8,721	8,925	9,486	8,911
Papers, total (1,000 t)	7,062	8,326	8,996	9,430	9,613	9,771	10,028	10,288	10,871	10,615
Plywood (1,000 m3)	683	739	791	811	764	740	731	737	679	656
Sawn timber (1,000 m3)	1,604	1,741	1,719	1,728	1,751	1,731	1,609	1,661	1,696	1,683

Financial information 2011–2020

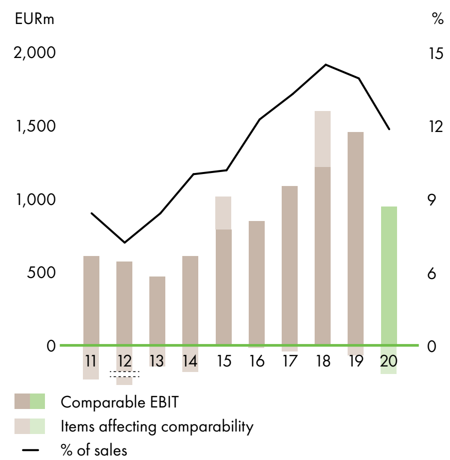
Sales and personnel



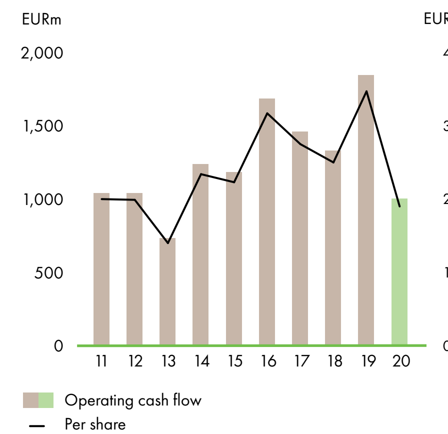
Comparable EBITDA



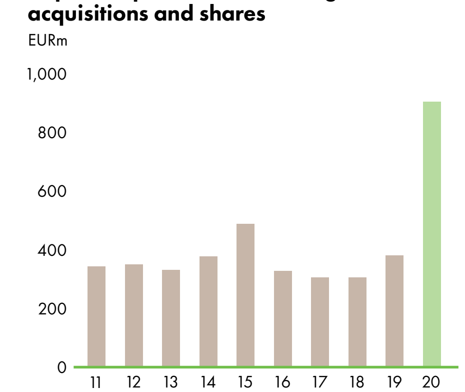
Comparable EBIT



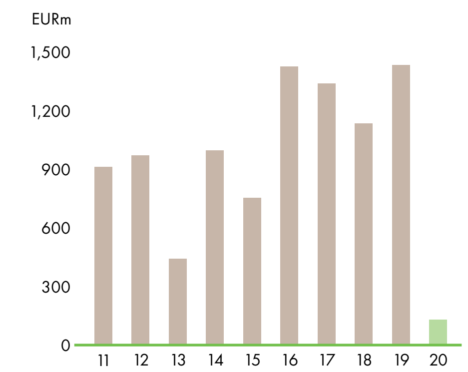
Operating cash flow



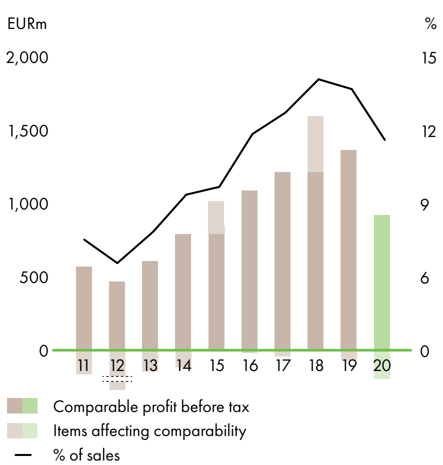
Capital expenditure excluding acquisitions and shares



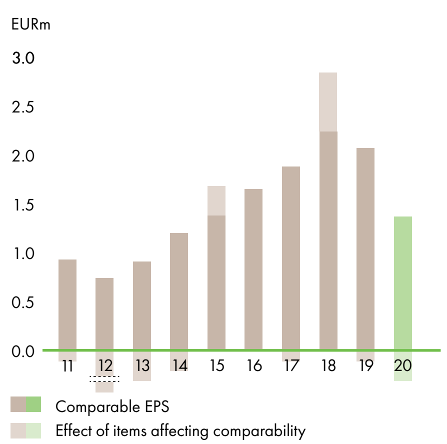
Free cash flow



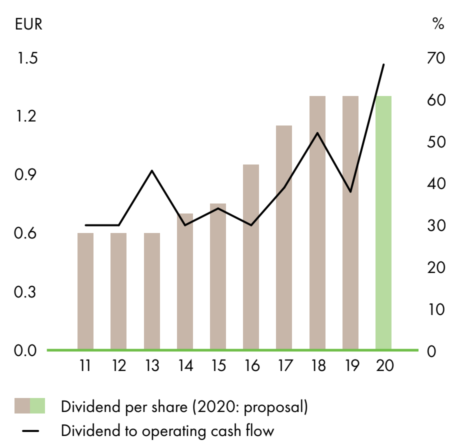
Comparable profit before tax



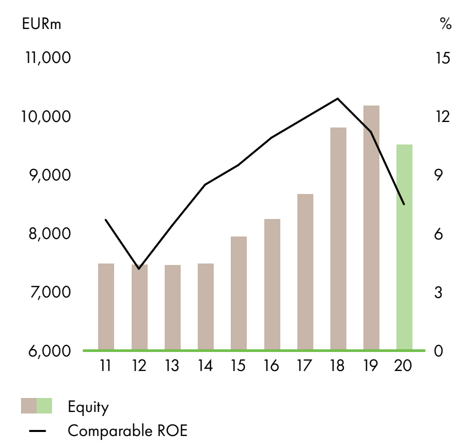
Comparable earnings per share



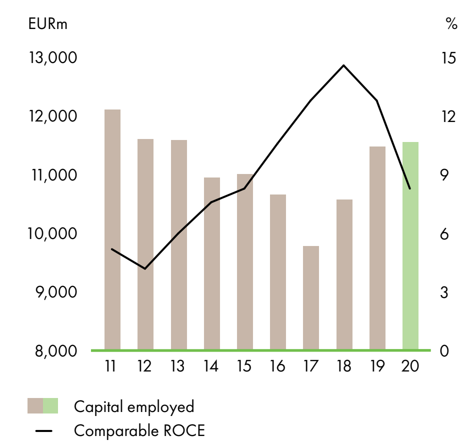
Dividend per share



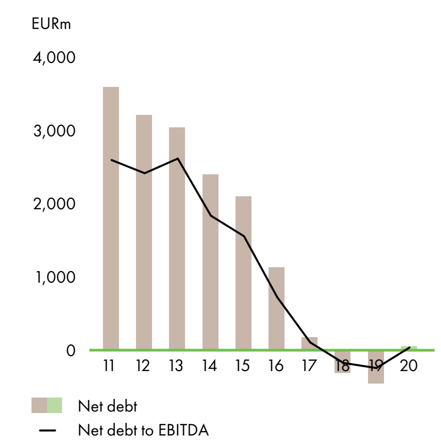
Equity and comparable ROE



Capital employed and comparable ROCE



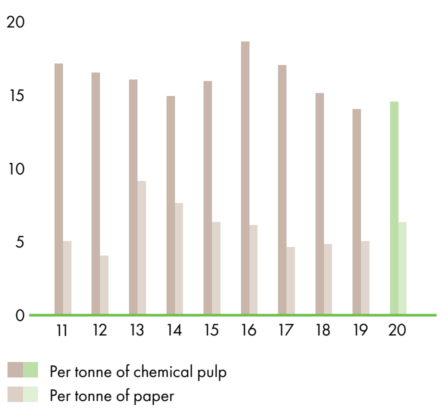
Net debt and net debt to EBITDA



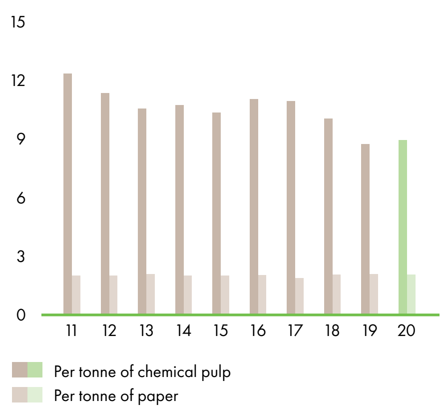
In 2016 UPM has relabelled the previously referenced "excluding special items" non-GAAP financial measures with "comparable" performance measures.
Corresponding 2014 and 2015 group measures have been revised accordingly.

More on responsibility

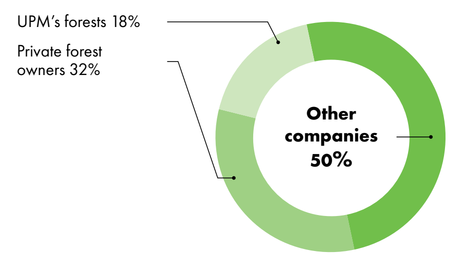
Solid waste to landfills and to incineration w/o energy recovery per tonne of product



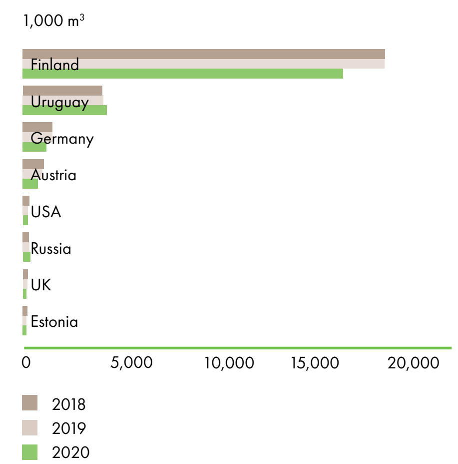
UPM's COD load per tonne of product



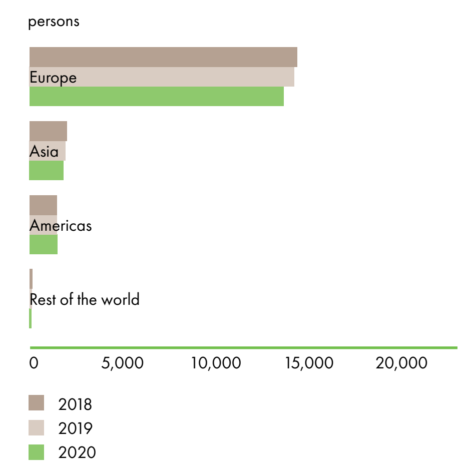
Sources of wood to UPM mills 2020



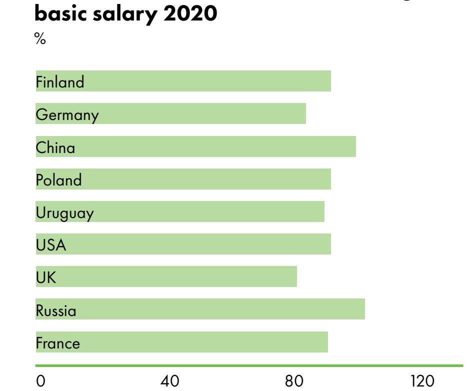
Wood deliveries to UPM mills



UPM employees by region

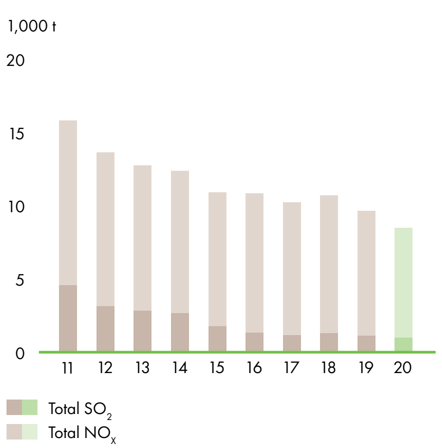


Ratio of female to male salaries weighted basic salary 2020

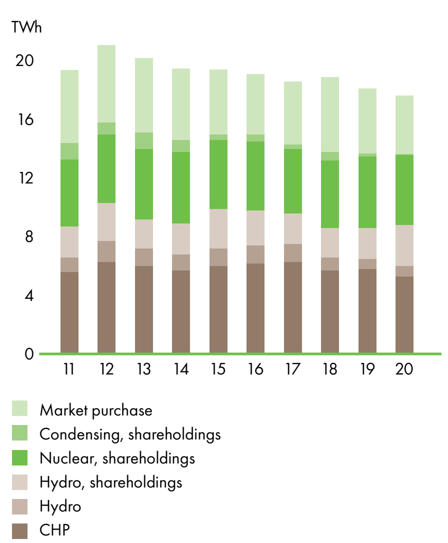


The ratio is calculated by comparing weighted average of basic salaries of women to men on the same job grade, for the nine biggest countries in terms of salaried employees. These countries cover 90% of UPM's total number of salaried employees.

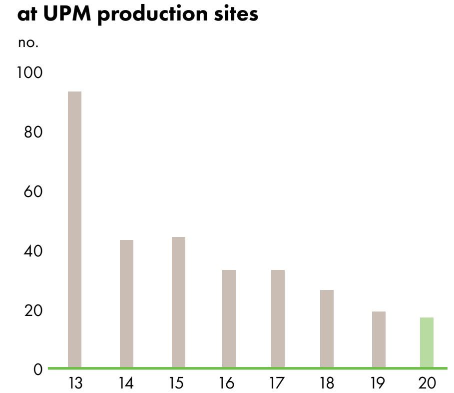
UPM's acidifying flue gases



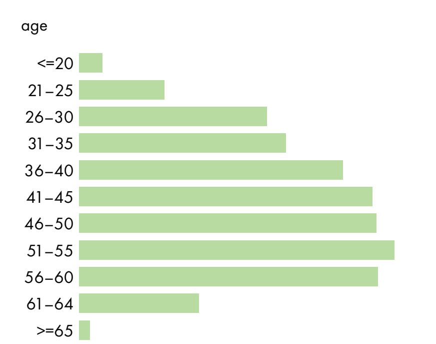
Electricity sourcing



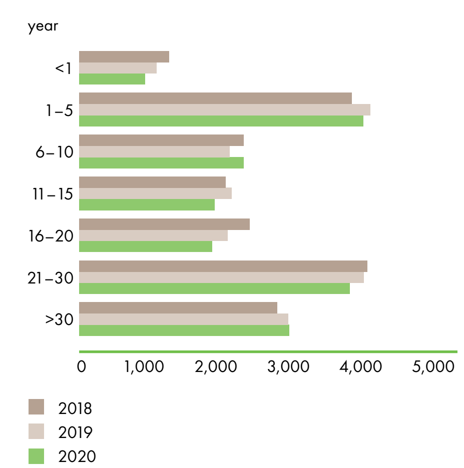
Environmental deviations at UPM production sites



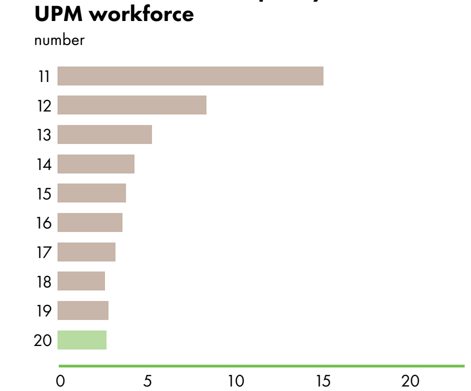
Age structure of UPM employees 2020



Employees' years of service with UPM



Lost-time accident frequency, UPM workforce



Competitive businesses, strong market positions

Our 18,000 people work in 46 countries across six continents. With head office in Finland, our most important markets are in Europe, Asia and North America.

UPM BIOREFINING

- A versatile range of chemical pulp for many growing end uses with annual production capacity of 3.7 million tonnes produced in Finland and in Uruguay
- Annual capacities in tonnes by mills: UPM Fray Bentos 1.3 million; UPM Pietarsaari 800,000; UPM Kaukas 770,000 and UPM Kymi 870,000 tonnes
- 434,000 ha of own and leased plantations in Uruguay
- Certified sawn timber with annual capacity of 1.5 million cubic metres, produced at four sawmills in Finland
- Wood-based renewable diesel and naphtha with the annual capacity of 130,000 tonnes produced in Finland

Pulp mills
Finland: UPM Kaukas (Lappeenranta), UPM Kymi (Kouvola) and UPM Pietarsaari

Uruguay: UPM Fray Bentos, UPM Paso de los Toros (completed in 2022) and cerified eucalyptus plantations

Sawmills
Finland: UPM Alholma (Pietarsaari), UPM Kaukas (Lappeenranta), UPM Korkeakoski (Juupajoki) and UPM Seikku (Pori)

Biorefinery
Finland: UPM Lappeenranta Biorefinery (Lappeenranta)

Market position

#8 Pulp globally

UPM ENERGY

- Cost competitive low-emission electricity generation in Finland consisting of hydro, nuclear and thermal power
- The total electricity generation capacity is 1,405 MW, including UPM's own hydropower plants and shareholdings in other energy companies
- Market agility and optimisation services for industrial consumers
- Largest shareholdings:
  – 47.69% of Pohjolan Voima Oy (PVO), which is a majority shareholder (58.5%) in Teollisuuden Voima Oyj (TVO)
  – 19% of Kemijoki Oy's hydropower shares

Hydropower plants:
Finland: Harjavalta, Kallioinen (Sotkamo), Kaltimo (Joensuu), Katerma (Kuhmo), Keltti (Kouvola), Kuusankoski (Kouvola), Tyrvää (Sastamala), Voikkaa (Kouvola) and Äetsä

Market position

#2 in Finland

UPM RAFLATAC

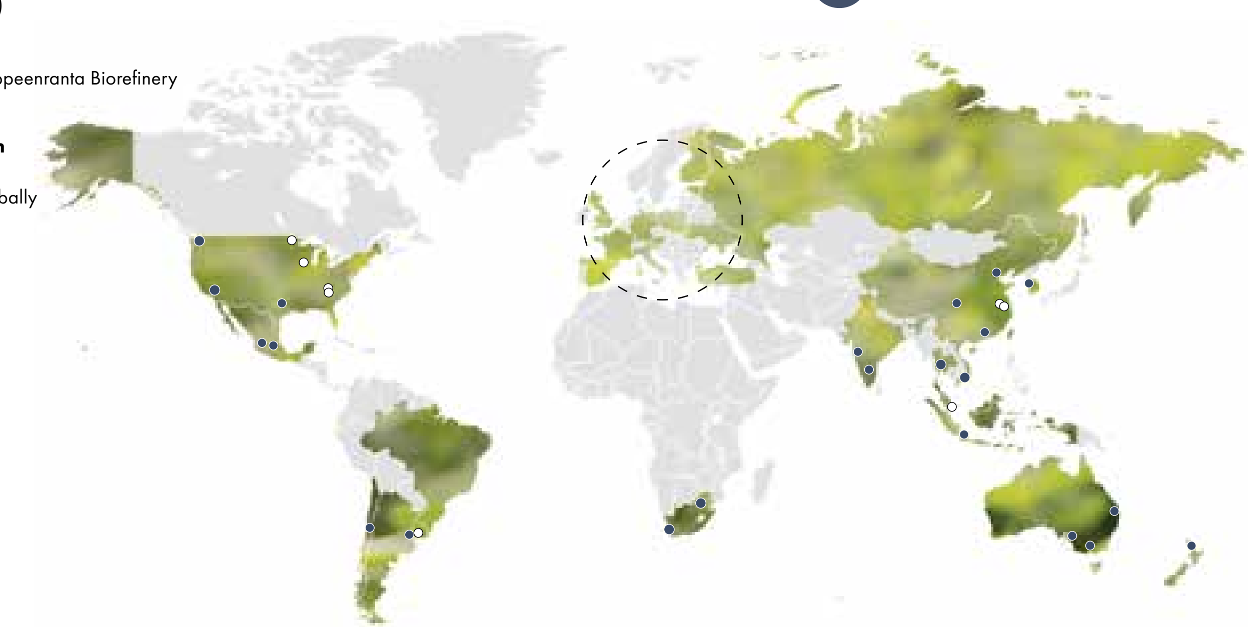
- Self-adhesive label materials for promotion, information and functional product and information labelling
- 10 factories and 28 slitting and distribution terminals in all continents

Labelstock factories
China: Changshu
Finland: Tampere
France: Nancy
Malaysia: Johor
Poland: Kobierzyce (Wroclaw) and Nowa Wieś (Wroclaw)
United Kingdom: Scarborough
USA: Mills River, NC; Fletcher, NC and Dixon, IL

Slitting and distribution terminals
Argentina: Buenos Aires
Australia: Adelaide, Brisbane and Melbourne
Chile: Santiago
China: Chengdu and Tianjin
India: Bangalore and Navi Mumbai
Indonesia: Jakarta
Italy: Osnago
México: Ciudad de México and Guadalajara
New Zealand: Auckland
Russia: Moscow, St Petersburg and Chelyabinsk
South Africa: Cape Town and Johannesburg
South Korea: Seoul
Spain: Barcelona
Thailand: Bangkok
Turkey: Istanbul
Ukraine: Kiev
USA: Dallas, TX, Ontario, CA and Seattle, WA
Vietnam: Binh Thang Ward Di An District

Market position

#2 globally



UPM SPECIALTY PAPERS

- Labelling materials, release liner base papers, flexible packaging papers, office and graphic papers
- Total annual production capacity of 2.0 million tonnes

Paper mills
China: UPM Changshu
Germany: UPM Nordland Papier (Dörpen)
Finland: UPM Jämsänkoski (Jämsä) and UPM Tervasaari (Valkeakoski)

Market position

#1 Labelling materials and release liner base papers globally

#1 High-quality office paper segment in China

UPM COMMUNICATION PAPERS

- Magazine paper, newsprint and fine papers for a wide range of end uses
- Annual paper production capacity of 6.4 million tonnes, manufactured in 14 paper mills
- Capacities: Annual production capacity of 3.3 million tonnes of magazine papers, 1.3 million tonnes of newsprint and 1.8 million tonnes of fine papers
- The combined heat and power (CHP) plants operating on paper mill sites included in the business area

Paper mills
Austria: UPM Steyrermühl
Finland: UPM Jämsänkoski (Jämsä), UPM Kaukas (Lappeenranta), UPM Kymi (Kouvola) and UPM Rauma
Germany: UPM Augsburg, UPM Ettringen, UPM Hürth, UPM Nordland Papier (Dörpen), UPM Plattling and UPM Schongau
United Kingdom: UPM Caledonian Paper (Irvine), UPM Shotton Paper
USA: UPM Blandin (Grand Rapids, MN)

Market position

#1 in Europe

UPM PLYWOOD

- Plywood and veneer products mainly for construction, vehicle flooring and LNG shipbuilding as well as other industrial end uses
- Production capacity: 960,000 cubic metres
- Production in 8 mills in Finland, Estonia and Russia

Plywood mills
Estonia: UPM Otepää
Finland: UPM Joensuu, UPM Pellos (3 mills, Ristiina, Mikkeli) and UPM Savonlinna
Russia: UPM Chudovo

Veneer mill
Finland: UPM Kalso (Vuohijärvi, Kouvola)

Market position

#1 High and mid segments in EMEA

#1 LNG plywood globally

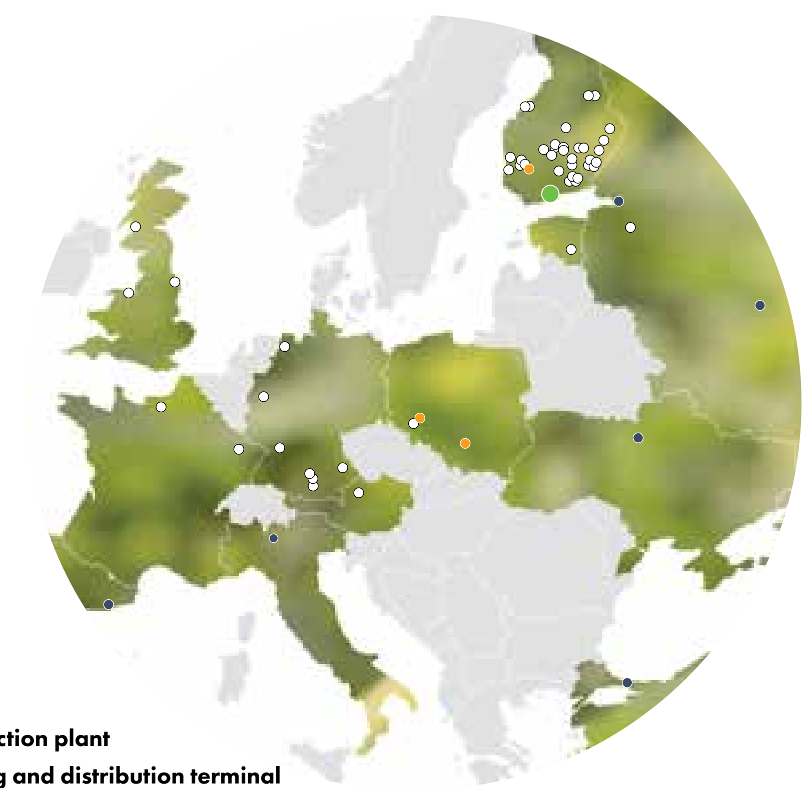
OTHER OPERATIONS

- UPM Forest: Purchasing wood and biomass in 11 countries, 515,000 ha of own forest land in Finland and 76,000 ha in the USA, offering forestry services to private forest owners in Finland
- UPM Biochemicals: Lignin products, development of glycols, Finland and Germany
- UPM Biomedicals: Wood-based products for biomedical applications
- UPM Biocomposites producing UPM ProFi outdoor products and UPM Formi composite material for injection moulding and extrusion

Biochemicals
Finland: Biofore Base research centre, Lappeenranta
Germany: Biochemicals biorefinery, Leuna (completed in 2022)

Biomedicals innovation unit
Finland: Biomedicum research and educational centre, Helsinki

Biocomposites mills
Finland: UPM Lahti
Germany: UPM Bruchsal (Karlsruhe)



○ **Production plant**
● **Slitting and distribution terminal**
● **Group Head Office**
● **Other business hubs**

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Instagram: Instagram: upm_beyondfossils

Annual General Meeting

UPM-Kymmene Corporation will hold its Annual General Meeting on Tuesday 30 March 2021 at 14:00 (EET). Due to the continued COVID-19 pandemic, the meeting will be arranged under the Act on a temporary derogation from the Companies' Act (677/2020). Shareholders can participate and exercise their shareholder rights in the AGM only by voting in advance and by submitting counterproposals and asking questions in writing prior to the meeting via an electronic voting or proxy service provided by the Company. The AGM, as well as speeches by the Chair of the Board and the President and CEO, can be followed via webcast. Detailed instructions for shareholders are available on the corporate website at www.upm.com/agm2021.

DIVIDEND

The Board of Directors proposes to the Annual General Meeting that a dividend of EUR 1.30 per share be paid for the 2020 financial year. The dividend will be paid to the shareholders who are registered in the company's shareholders' register held by Euroclear Finland Ltd on the dividend record date 1 April 2021. The Board of Directors proposes that the dividend be paid on 12 April 2021.

FINANCIAL REPORTS IN 2021

UPM will publish the financial reports in 2021 as follows:

- UPM Interim Report for January–March (Q1) on 27 April 2021
- UPM Half Year Financial Report for January–June (Q1–Q2) on 22 July 2021
- UPM Interim Report for January–September (Q1–Q3) on 26 October 2021

UPM

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