



UPM Biofore – Beyond fossils

Investor presentation
January 2022

UPM **BIOFORE** - BEYOND FOSSILS

UPM in brief

SALES 2021
EUR 9.8 BILLION

**Wood based
raw-materials**



**Low carbon
energy**

BUSINESS AREAS:

UPM FIBRES
UPM ENERGY
UPM RAFLATAC
UPM SPECIALTY PAPERS
UPM COMMUNICATION PAPERS
UPM PLYWOOD
NEW BUSINESSES

**51
production
plants**



**17,000
employees in
46 countries**

RENEWABLE AND RECYCLABLE PRODUCTS FOR:



**13,400
customers**



**200
million end-users
globally**

Our businesses



UPM FIBRES

UPM Pulp

pulp for tissue, specialty and packaging papers.



UPM Timber

certified sawn timber for joinery, packaging, furniture and construction.



UPM Forest

competitive wood for businesses and management of privately-owned forests.



UPM ENERGY

cost-competitive, zero-carbon electricity.



UPM RAFLATAC

self-adhesive label materials for branding and information labelling.



UPM SPECIALTY PAPERS

labelling and packaging materials and fine papers for packaging and printing.



UPM COMMUNICATION PAPERS

graphic papers for advertising and publishing and home and office uses.



UPM PLYWOOD

WISA® plywood for construction, vehicle flooring and LNG shipbuilding.



UPM BIOREFINING

UPM Biofuels

renewable diesel for all diesel engines and renewable naphtha for petrochemical industry.



UPM Biochemicals

wood-based biochemicals for replacing fossil-based raw materials



UPM Biomedicals

wood-based biomedical products for a variety of uses.



UPM Biocomposites

composite decking materials based on recycled waste.

Biofore strategy drives our transformation as the frontrunner of bioeconomy

A FUTURE BEYOND FOSSILS

GROWTH

- We respond to megatrends and meet customers' changing needs
- Creating new markets and enabling sustainable choices



PERFORMANCE

- Continuous improvement
- Agile operating model



INNOVATION

- Creating new business and competitive advantage
- Replacing fossils with biomaterials



RESPONSIBILITY

- Renewable & sustainable solutions
- Responsible operations and value chain

PORTFOLIO

- Investing in businesses with strong long-term fundamentals for growth and high barriers to entry
- Effective capital allocation

Long-term value creation driven by our spearheads for growth



SPECIALITY PACKAGING MATERIALS

Label
materials

Specialty
papers

Communication papers

FIBRES

Forests

Pulp

Plywood

BIOREFINING

Biofuels

Biochemicals

Biomedicals

Biocomposites

Energy

We deliver positive impact to mitigate climate change and to create long-term value



WE ACT THROUGH FORESTS

We are committed to climate-positive forestry and enhancing biodiversity.



WE ACT THROUGH EFFICIENCY AND EMISSIONS

Our target is to reduce our CO₂ emissions by 65%.



WE ACT THROUGH PRODUCTS

We innovate novel products to provide ever more sustainable alternatives for fossil-based materials.



BUSINESS AMBITION FOR 1.5°C   **OUR ONLY FUTURE**

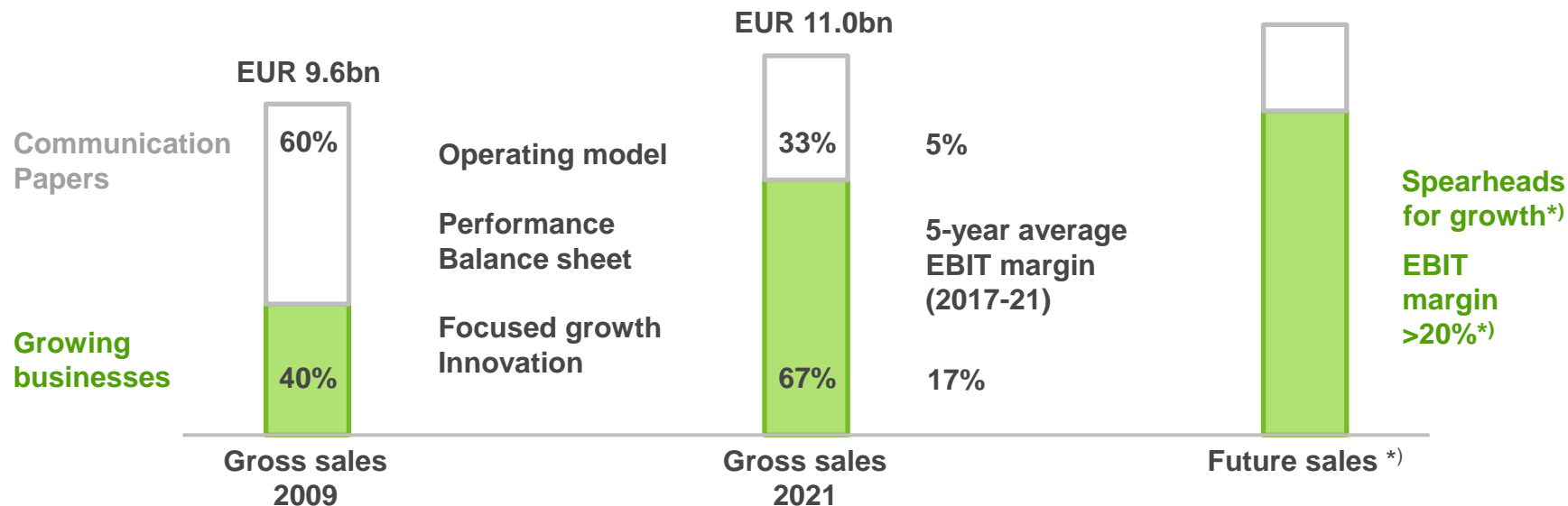
**THE Paris...
CLIMATE 10 years
PLEDGE Early**

Industry leader in responsibility

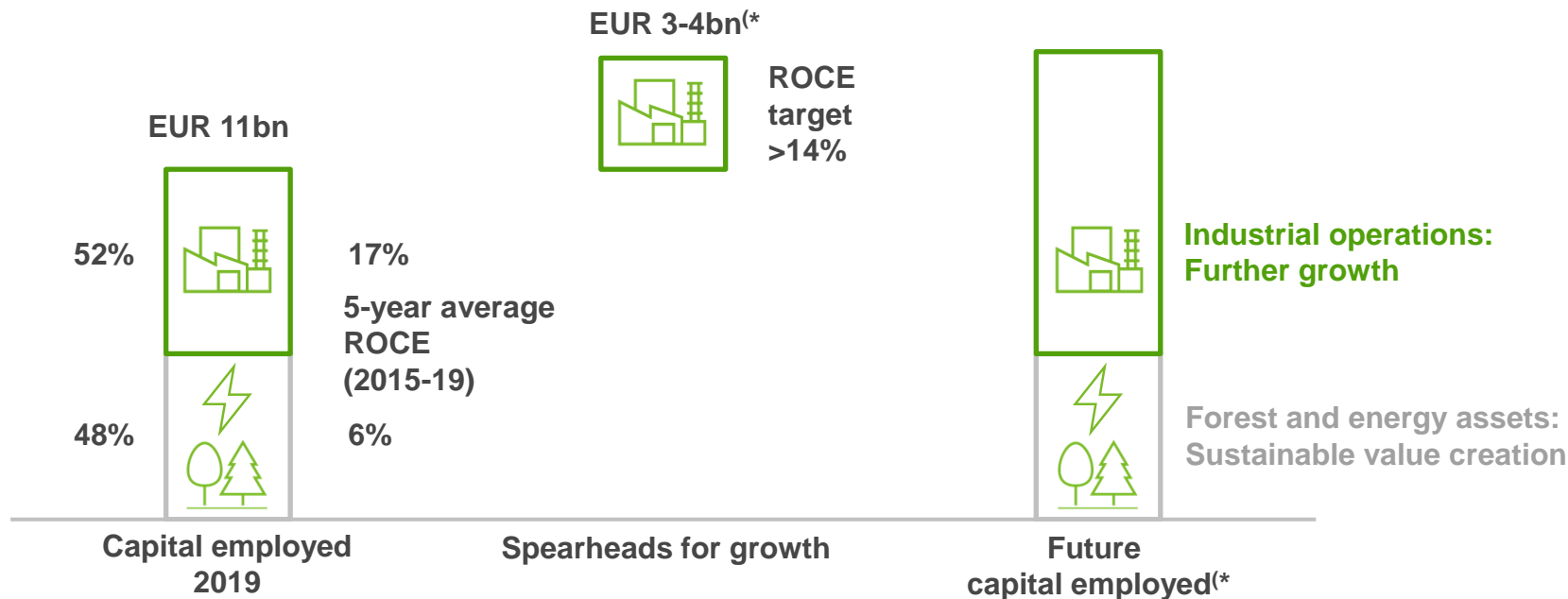


Transformation proceeds at full speed

– business mix drives earnings and shareholder value

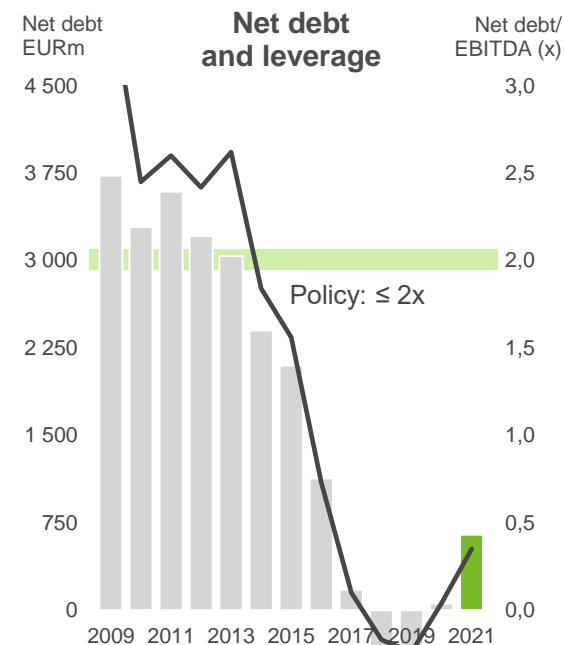
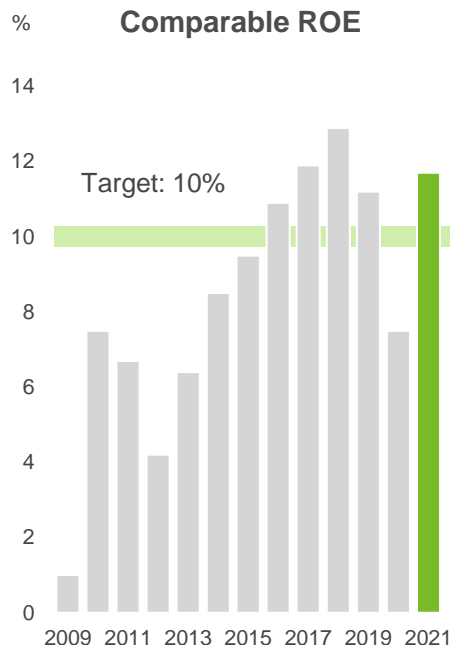
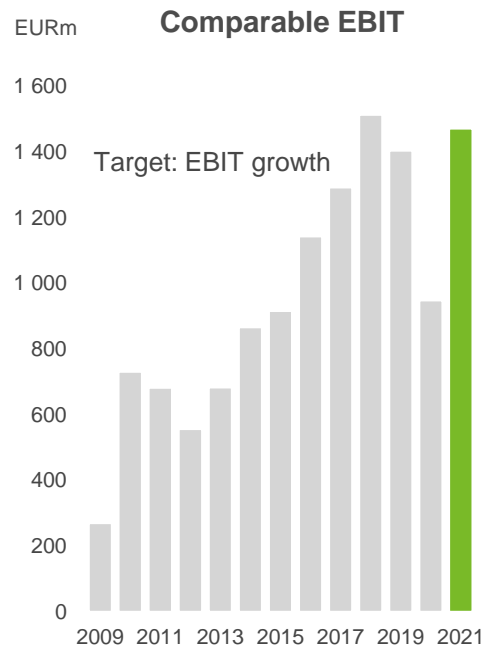


Transformation improves UPM's asset mix, driving returns

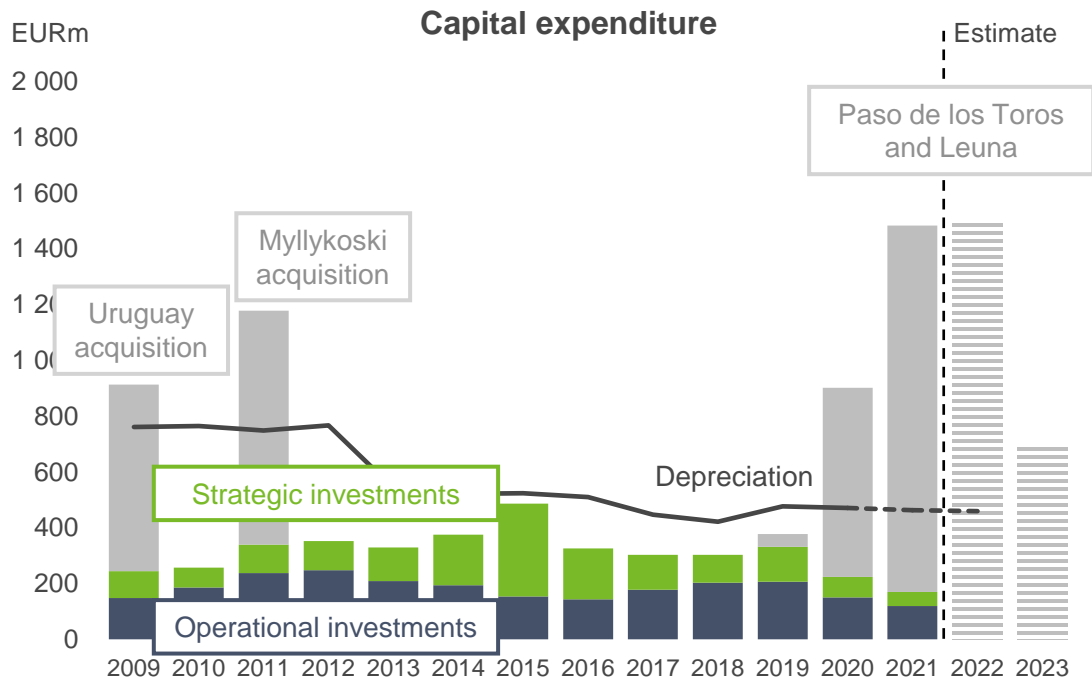


^(*) This is an illustration, not a forecast

Transformation is visible in earnings and balance sheet



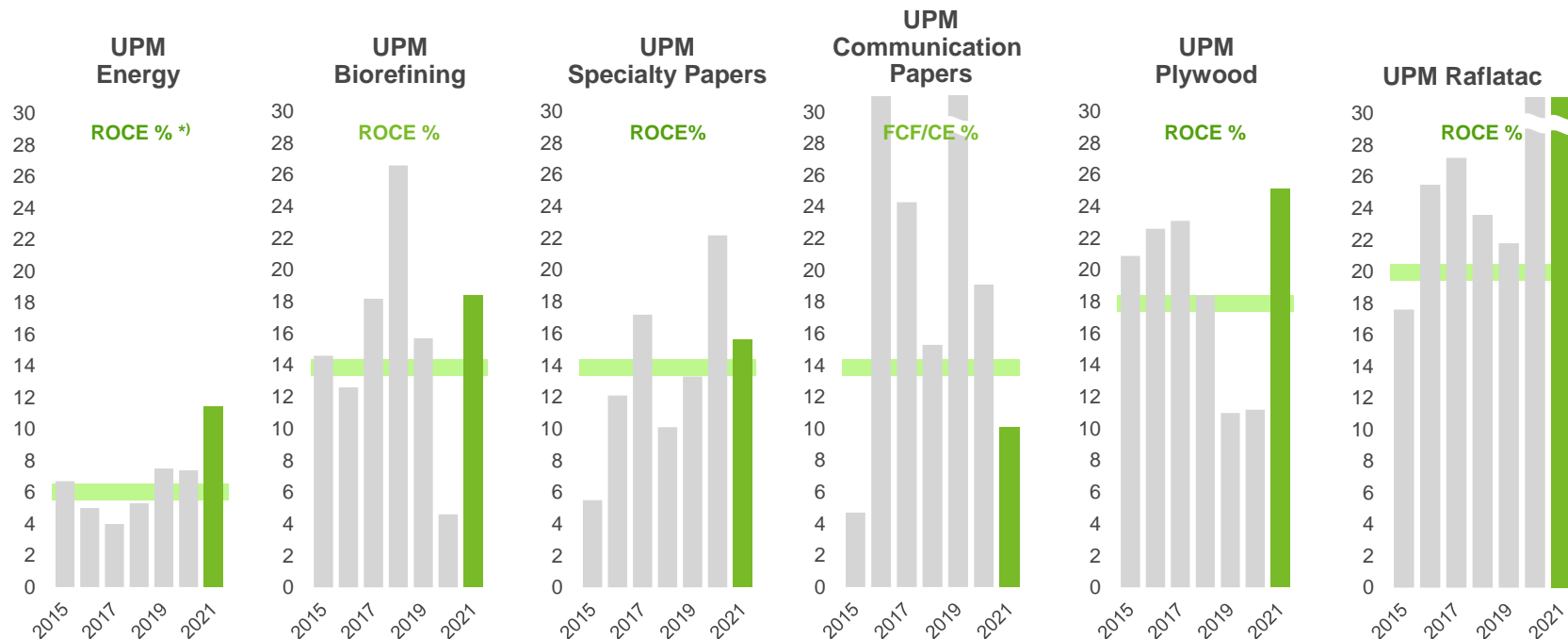
Transformative growth projects in the most intensive phase in 2021-22



Capex estimate for 2022

- Total EUR 1,500m
- Includes EUR 1,300m on the transformative growth projects, pulp in Uruguay and biochemicals in Germany
- Operational investment needs consistently low

Five out of six business areas exceeded their long-term return targets

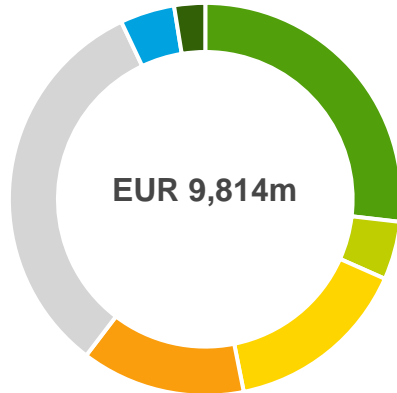


*) shareholdings in UPM Energy valued at fair value

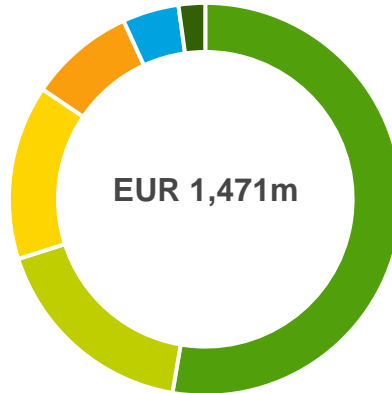
Long-term return target

UPM by business area in 2021

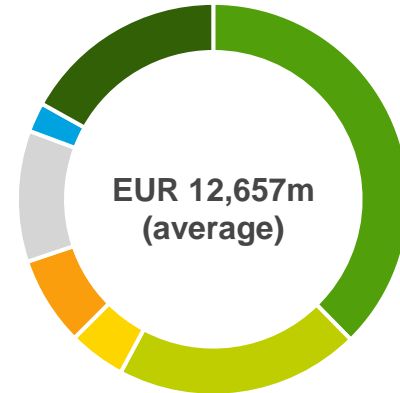
Sales



Comparable EBIT

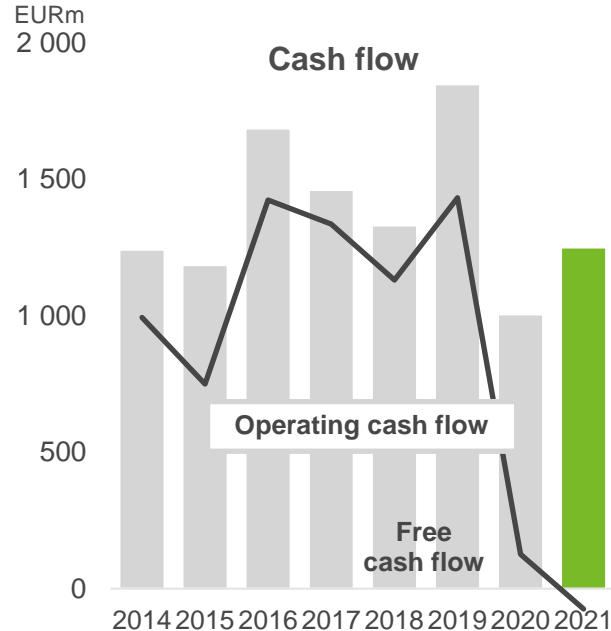


Capital employed



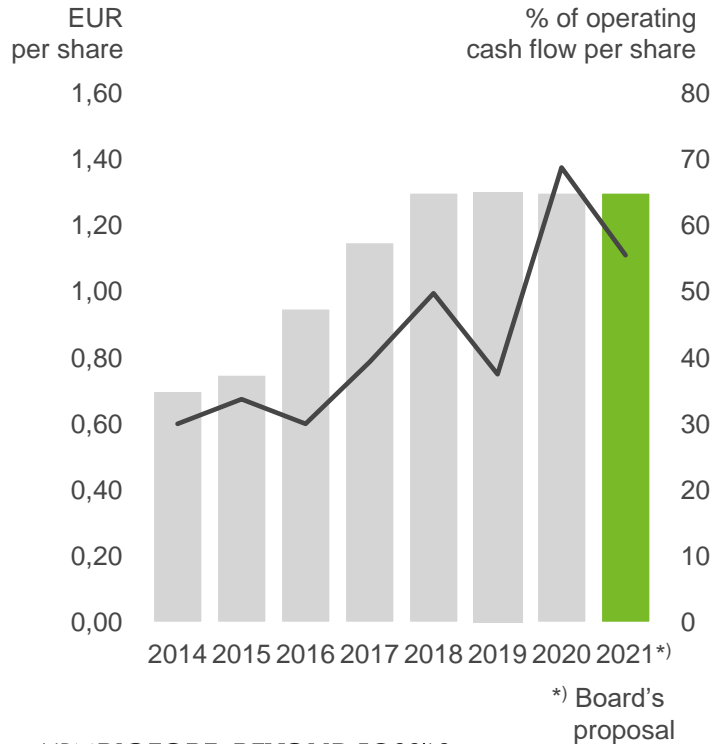
■ Biorefining
 ■ Energy
 ■ Raflatac
 ■ Specialty Papers
 ■ Communication Papers
 ■ Plywood
 ■ Other

Robust cash flow



- Q4 2021 operating cash flow was EUR 406m (347m in Q4 2020)
- Working capital decreased by EUR 91m (decreased by 72m in Q4 2020)
- 2021 operating cash flow was EUR 1,250m (1,005m in 2020)
- Working capital increased by EUR 115m (increased by 93m)

Dividend proposal: EUR 1.30 per share



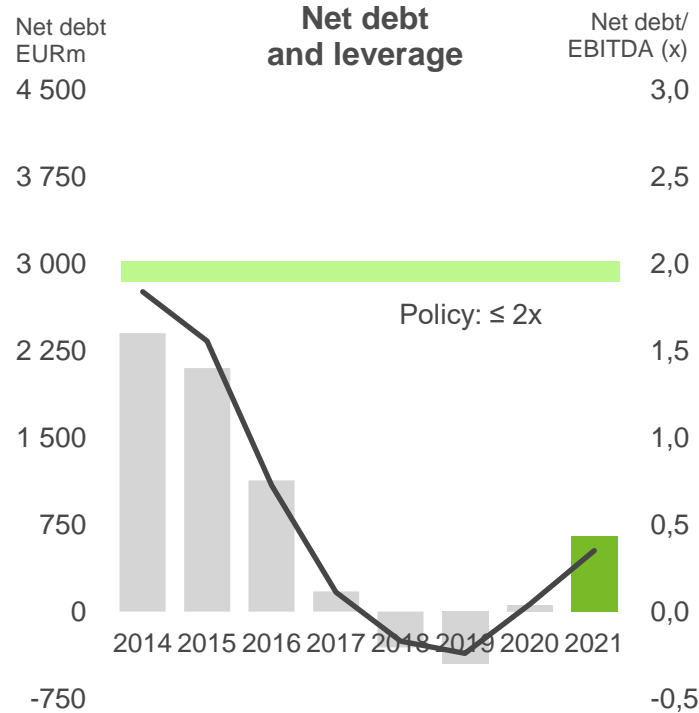
Long term dividend policy

- UPM aims to pay an attractive dividend, 30–40% of operating cash flow per share

Dividend proposal for 2021

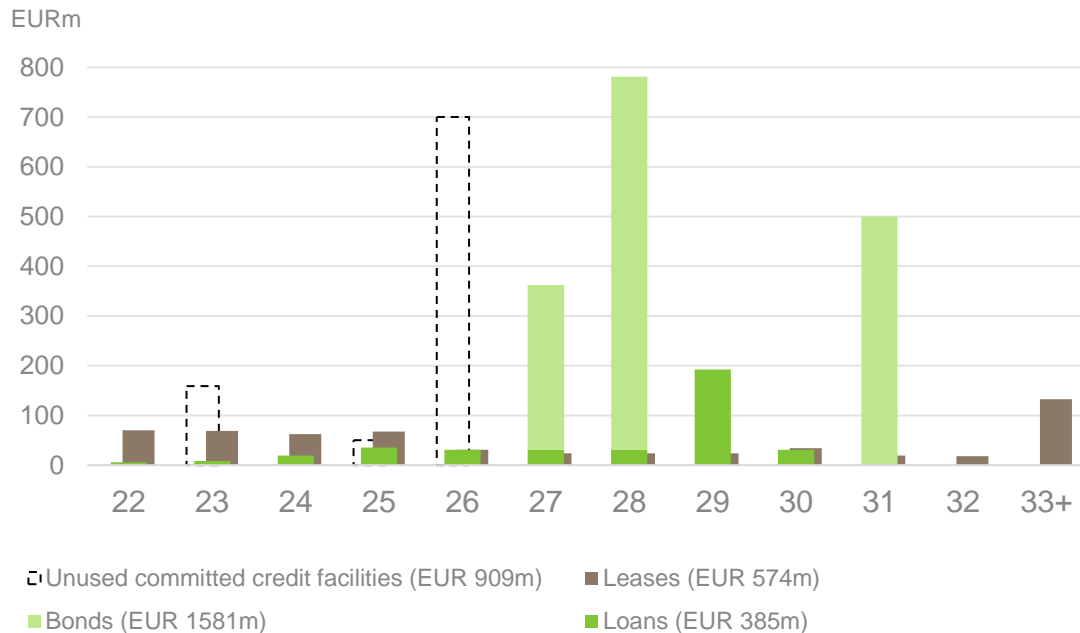
- EUR 1.30 (1.30) per share, totalling EUR 693m
- 55% of 2021 operating cash flow

Strong financial position



- Net debt EUR 647m at the end of 2021
- Cash funds and committed credit facilities EUR 2.5bn at the end of 2021
- UPM issued a EUR 500m Green Bond in Q1 2021
- No financial covenants

Maturity profile and liquidity



Liquidity on 31 December 2021 was EUR 2.5bn (cash, funds and unused committed credit facilities)

UPM's committed credit facilities:

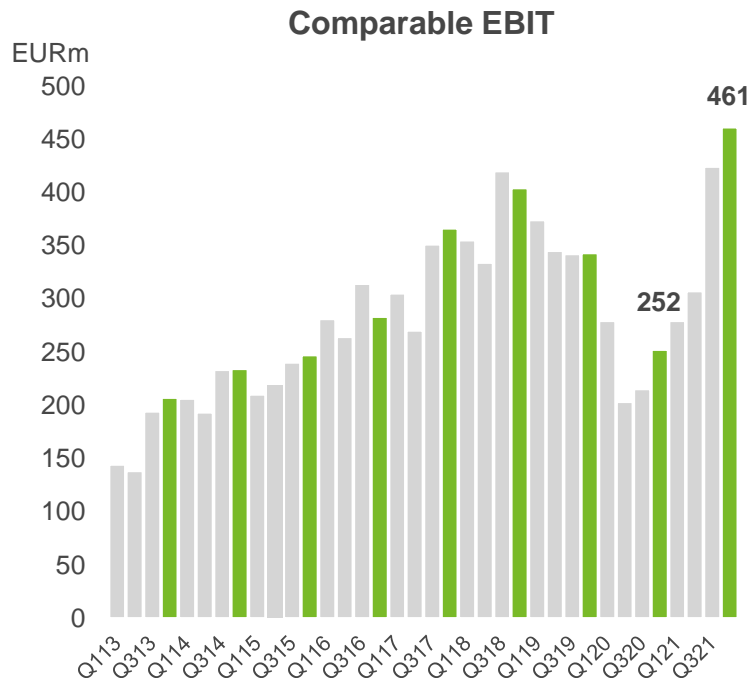
- EUR 159m rolling committed overdraft facility maturing 2023
- EUR 750m committed syndicated revolving credit facility of which EUR 50m maturing 2025 and EUR 700m maturing 2026

No financial covenants

Q4 2021: earnings back to strong pre-pandemic levels

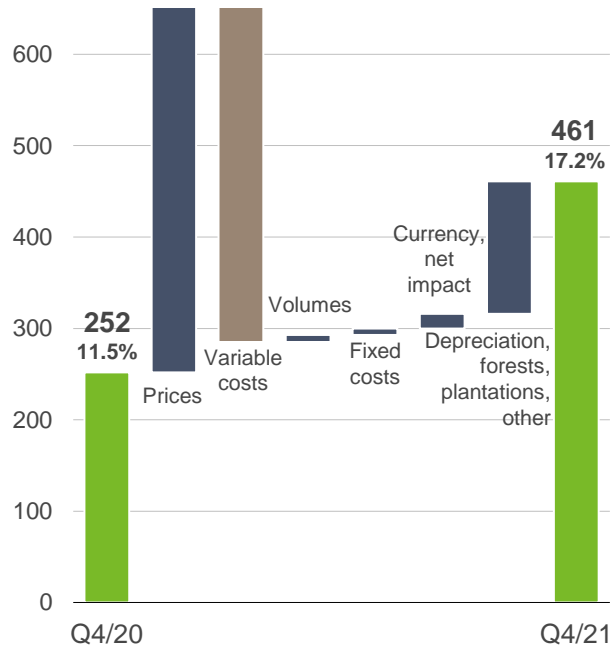


- Sales increased by 22% to EUR 2,673m (2,188m in Q4 2020)
- Comparable EBIT increased by 83% to EUR 461m, 17.2% of sales (252m, 11.5%)
- Operating cash flow was EUR 406 million (347 million)
- The unprecedented energy market situation enabled UPM Energy to reach record earnings but added to the paper businesses' costs
- The fair value of UPM's sustainably managed forests increased by EUR 103m due to higher wood volume, growth, and price estimates

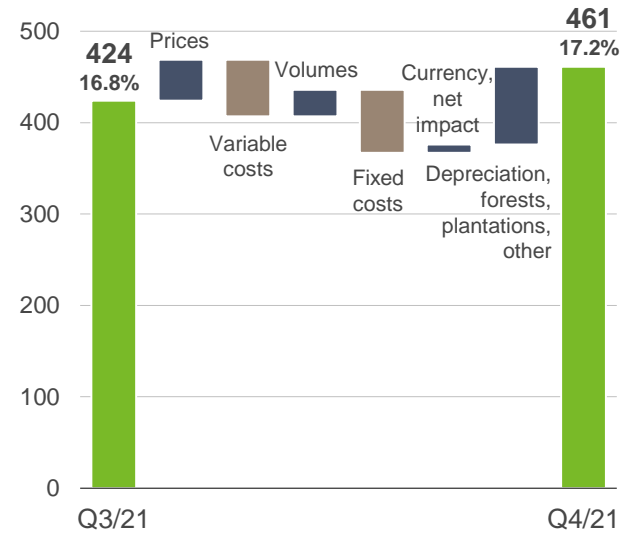


Comparable EBIT in Q4 2021

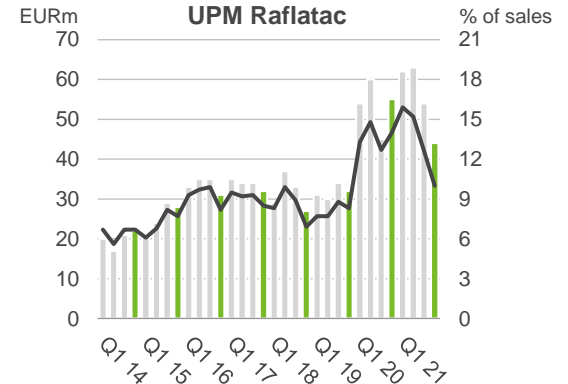
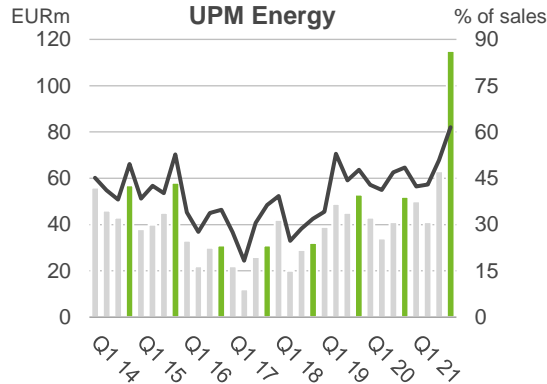
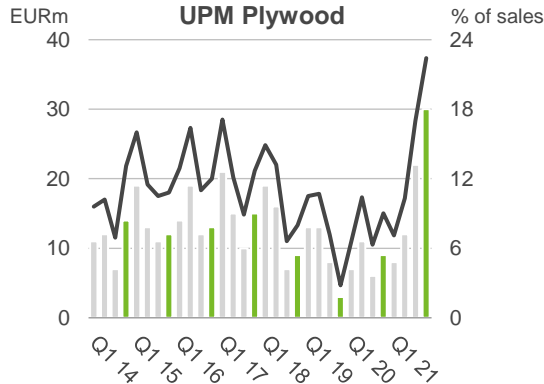
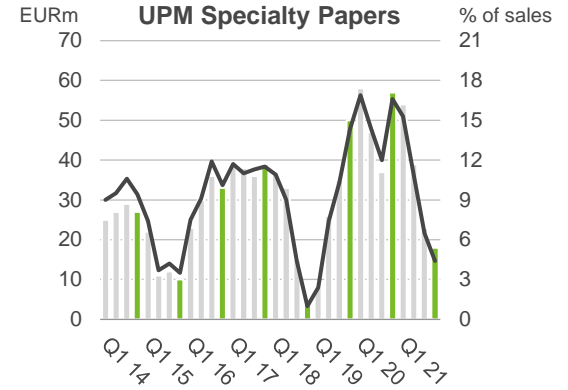
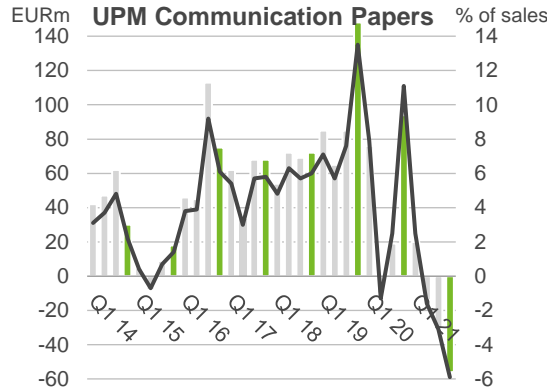
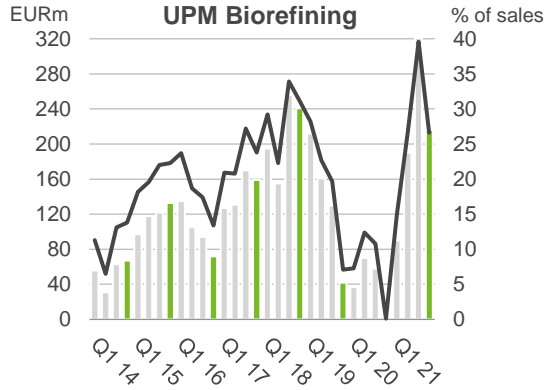
EURm



EURm



Comparable EBIT by business area



Outlook for 2022



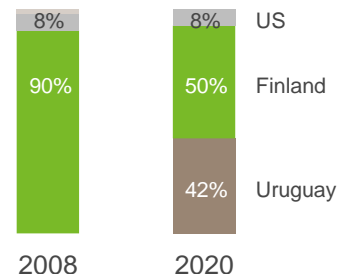
- UPM's earnings recovered to the strong pre-pandemic level in 2021 and overall, 2022 is expected to be another good year for the company.
- There are significant uncertainties in the outlook for 2022, related to the ongoing pandemic, continuation of the global economic recovery, the unusual energy market situation, tight raw material supply chains and the labour negotiations in Finland.
- Good demand is expected to continue for most UPM products in 2022. In the early part of the year, production and earnings are affected by the strike at the Finnish units of UPM Pulp, UPM Biofuels, UPM Raflatac, UPM Specialty Papers and UPM Communication Papers.
- Sales prices for many UPM products are expected to increase in the beginning of 2022, most notably the graphic and specialty paper prices. Sales prices for pulp and energy are expected to continue on good levels in the early part of the year.
- Many variable cost items are expected to increase in 2022 or stay at elevated level. UPM will continue to manage margins with product pricing, optimising its product and market mix, efficient use of assets as well as by taking measures to improve variable and fixed cost efficiency.
- UPM's comparable EBIT in H1 2022 is expected to be on similar level compared to H1 2021.

Developing our forest assets

UPM forests and plantations

	2008	2020
Forest and plantation land (own and leased) (1,000 ha)	1,012	1,025
Forest growth (million m ³)	4.3	7.2
Wood sourced from UPM forests and plantations (million m ³)	2.2	4.4
Value of forests and plantations, including land (EURm)	1,270	2,854

Area distribution



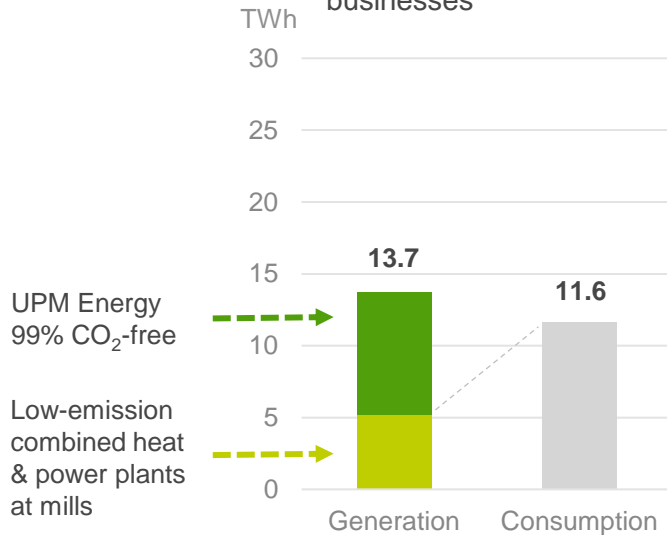
Investing in strategic forest assets in Uruguay
 Releasing capital from forests far from our mills
 Productivity with active management and nurseries
 Strong commitment to sustainability

UPM is a large producer and consumer of energy



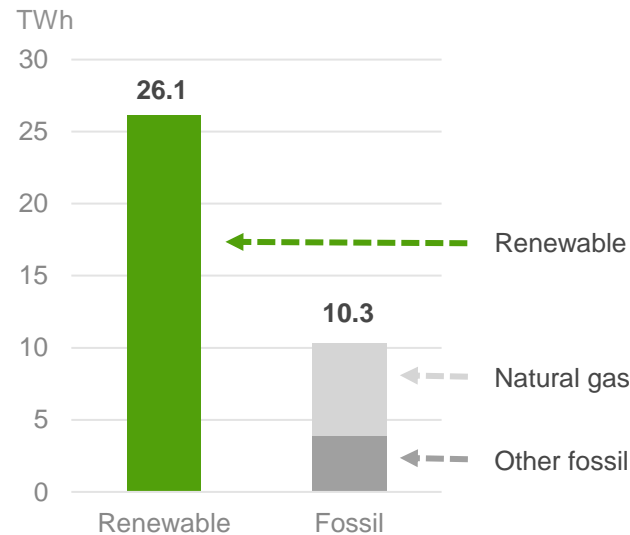
Electricity

Separate market-driven operations at UPM Energy and the energy-consuming businesses



Fuels

72% of all fuels are renewable, from the industrial processes



Hedging

Approx. 60% of electricity and fuel purchases hedged for the rest of 2021 and 2022

CO₂

due to implemented emission reductions, UPM has more emission allowances than it needs

UPM Biochemicals

UPM invests in next generation biochemicals



- EUR 550 million investment in an industrial scale biorefinery at Leuna, Germany
- 100% wood-based biochemicals provide alternatives to fossil materials in various consumer-driven end-uses
- Total annual capacity of 220,000 tonnes
- Scheduled to start up by the end of 2023
- Safety and sustainability of the value chain based on UPM's high standards

UPM creates a totally new sustainable business with large growth potential



- Major milestone in UPM's transformation
- UPM biochemicals respond to the customers' increasing needs for renewable alternatives
- Current supply is limited and high-quality biochemicals are priced at a premium
- Sustainable wood supply, unique technology, existing infrastructure and proximity to customers enables a good cost position
- Attractive returns: ROCE target of 14% once the facility is fully ramped up and optimized



Renewable product range



- **Bio-monoethylene glycol (bMEG)**
for textiles, PET bottles, packaging, deicing fluids
- **Renewable functional fillers**
for rubber applications as a sustainable, light-weight and high-purity alternative to carbon black and silica
- **Bio-monopropylene glycol (bMPG)**
for composites, pharma, cosmetics, detergents
- **Industrial sugars**
for various applications in chemicals industry



Large growth markets – unique sustainability value



- The global glycols market is more than 30 million tonnes, with expected annual growth of approx. 4%
- The global market of carbon black and silica is more than 15 million tonnes, with expected annual growth of approx. 3%
- Current market supply based on non-renewable raw materials
- Customers increasingly committed to sustainable solutions
- UPM's renewable raw material and new technologies provide significant reduction in carbon footprint
- UPM biochemicals fit directly into customers' processes and the existing recycling infrastructure

UPM invests in a world class pulp mill in Uruguay



**One of the most competitive mills in the world
with cash cost level of USD 280 per delivered tonne of pulp**

**USD 3.47
billion
investment in
Uruguay**



Pulp mill in Paso de los Toros, deep seaport terminal in Montevideo and local community



Pulp is used in tissue, specialty and packaging papers, for example



Total annual capacity of 2.1 million tonnes of eucalyptus pulp



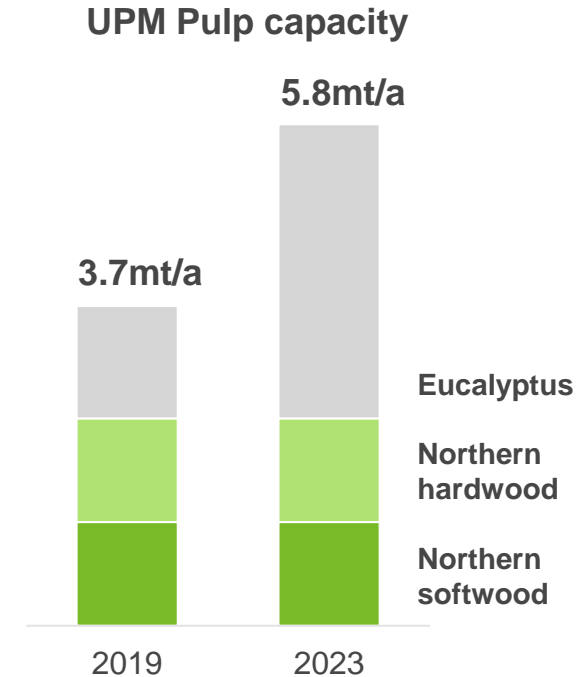
**Scheduled
to start up
by the end of
Q1 2023**



Transformative step in UPM's pulp business and in UPM's future earnings



- Significant step for UPM's future earnings
 - One of the most competitive mills in the world
 - Expected cash cost level of USD 280 per delivered tonne of pulp^(*)
 - Attractive returns in various market scenarios
 - Carefully prepared to ensure long-term competitiveness and to minimise risks both in the project phase and during continuous operations
- Step change in UPM's pulp business



State of the art mill design



Initial production capacity of 2.1 million tonnes of eucalyptus pulp, with further potential

World-class single line pulp mill and Best Available Techniques (BAT)

Excellent safety

Proven high environmental performance

High availability and maintainability

High energy output, surplus renewable electricity 110 MW

Low costs



Competitive wood supply



Eucalyptus availability secured through UPM's own and leased plantations and wood sourcing agreements with private partners

UPM's own and leased plantations in Uruguay cover 466,000 hectares, supplying both UPM Fray Bentos and the new mill near Paso de los Toros

30 years experience of sustainably managed and productive plantations



Efficient logistics set-up



UPM will invest USD 280 million to construct a deep sea pulp terminal in Montevideo port

Direct rail access from the mill to a modern port terminal creates an efficient supply chain to world markets

Synergies with the UPM Fray Bentos mill

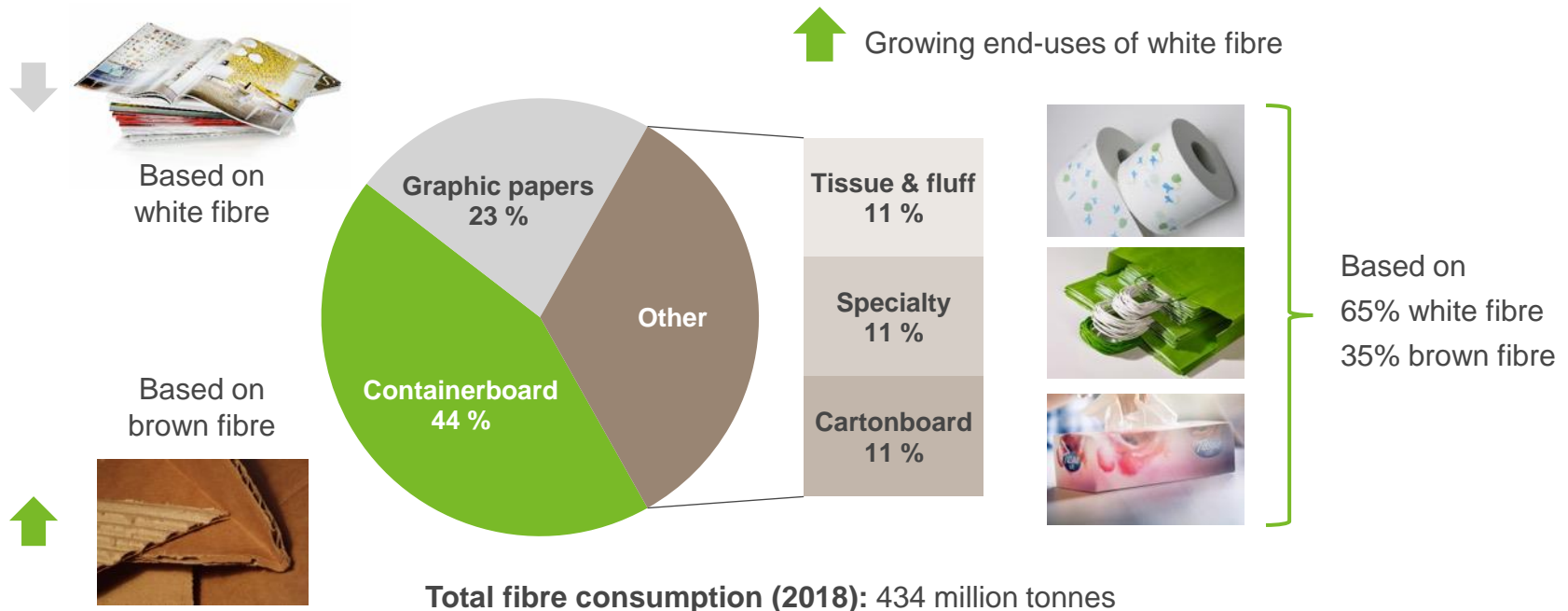
Agreed railway modernisation

Public-private-partnership agreement between the government and the construction company

Agreed road improvements



Market pulp consumed in growing end-uses – supply of alternative white fibres declines

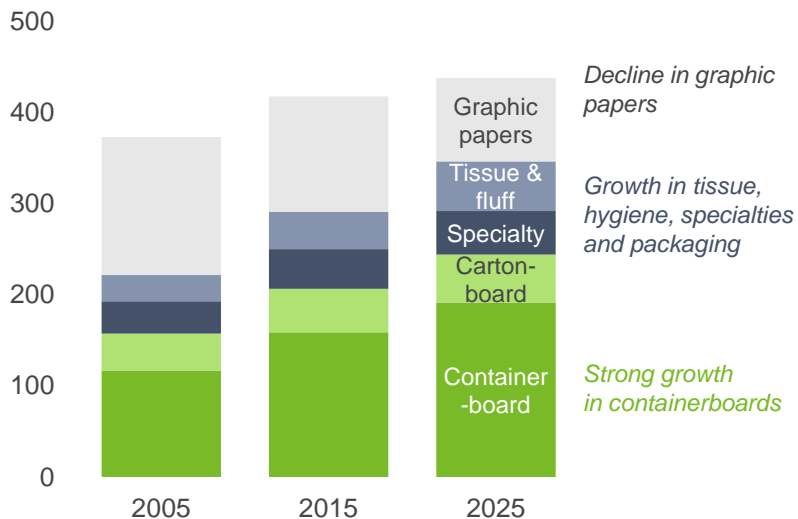


UPM Fibres

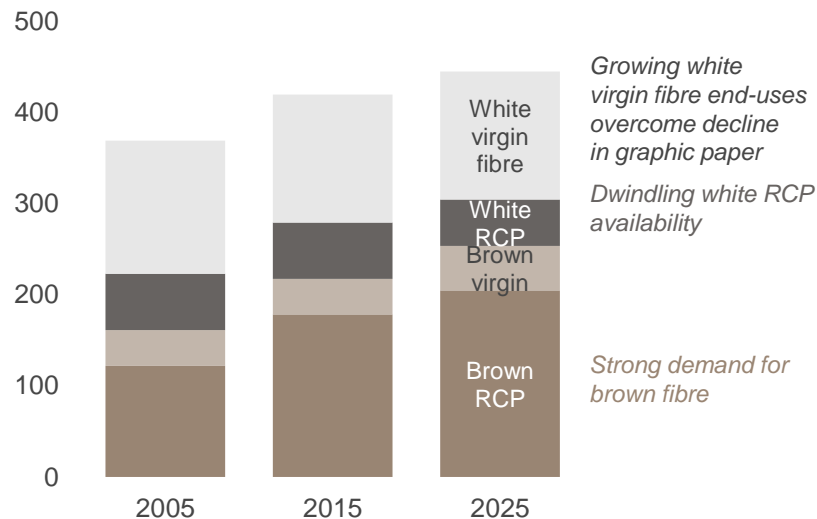
Pulp demand outlook



Global consumption of end-uses
in million tonnes



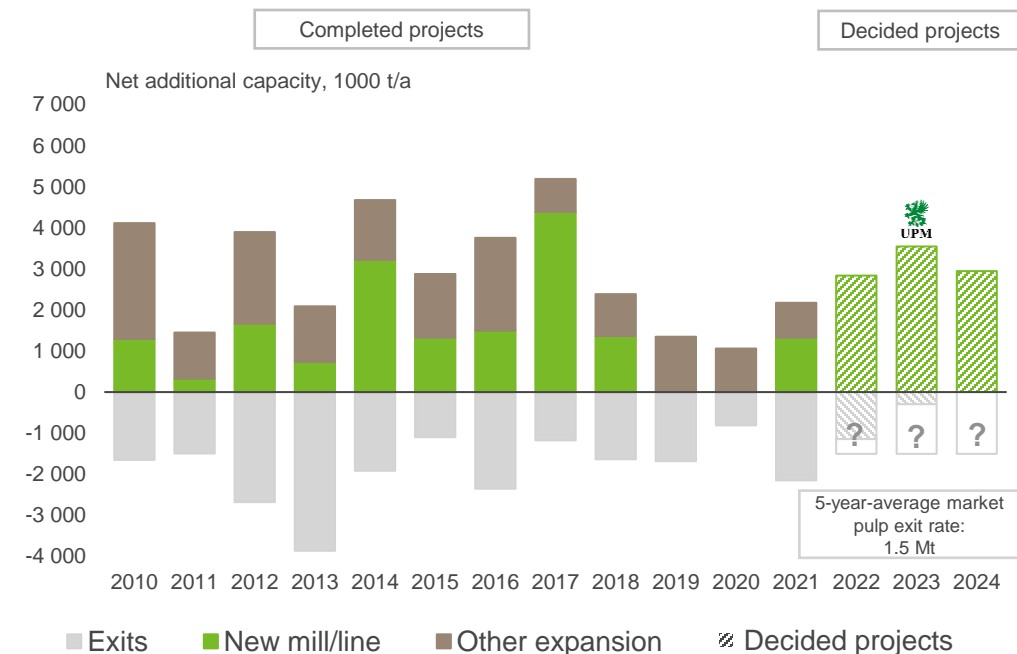
Global consumption of fibres
in million tonnes



Moderate numbers of decided projects in the short-term



Entry of market bleached pulp capacity



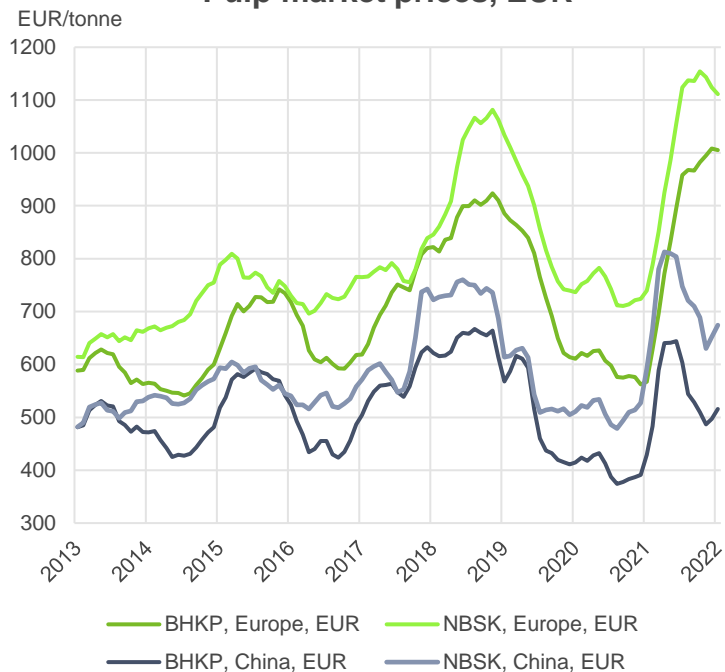
Note: including BHKP, BSKP, excluding fluff and dissolving

UPM Fibres

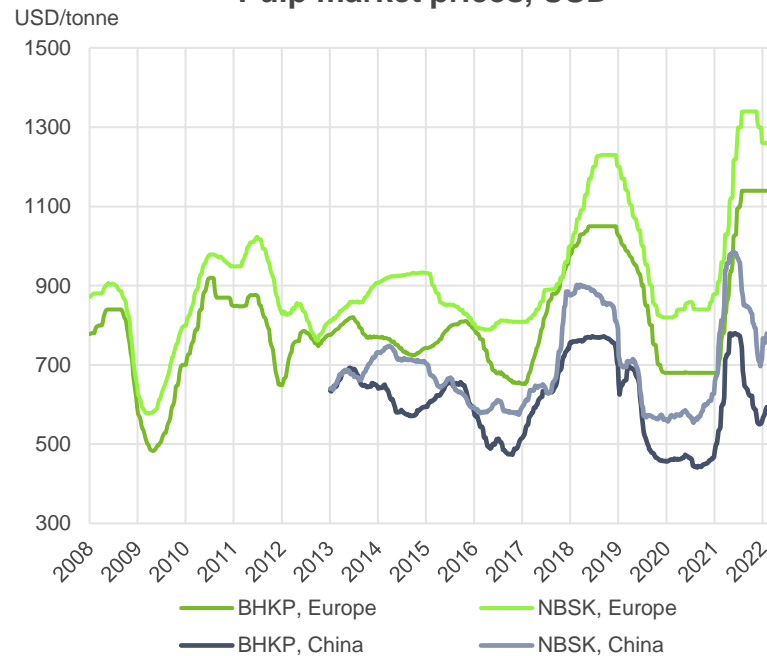
Chemical pulp market prices



Pulp market prices, EUR



Pulp market prices, USD

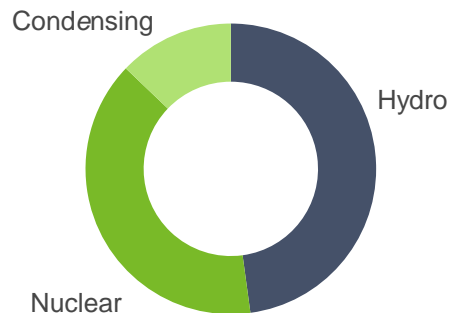


Source: FOEX Indexes Ltd

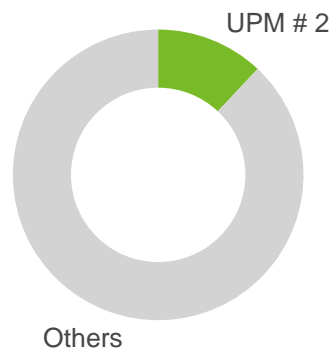
UPM's power generation – competitive in all market conditions



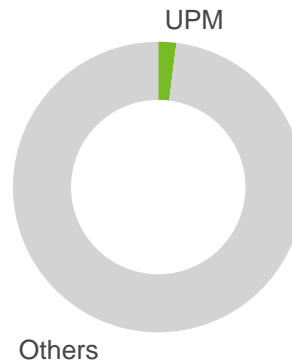
UPM's power
generation assets



UPM in Finland



UPM in Nordics



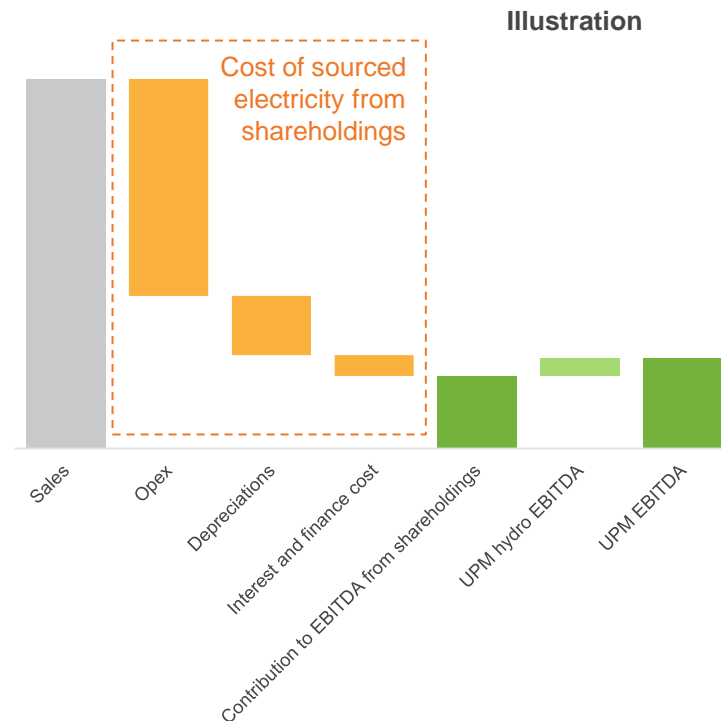
UPM Energy

UPM Energy

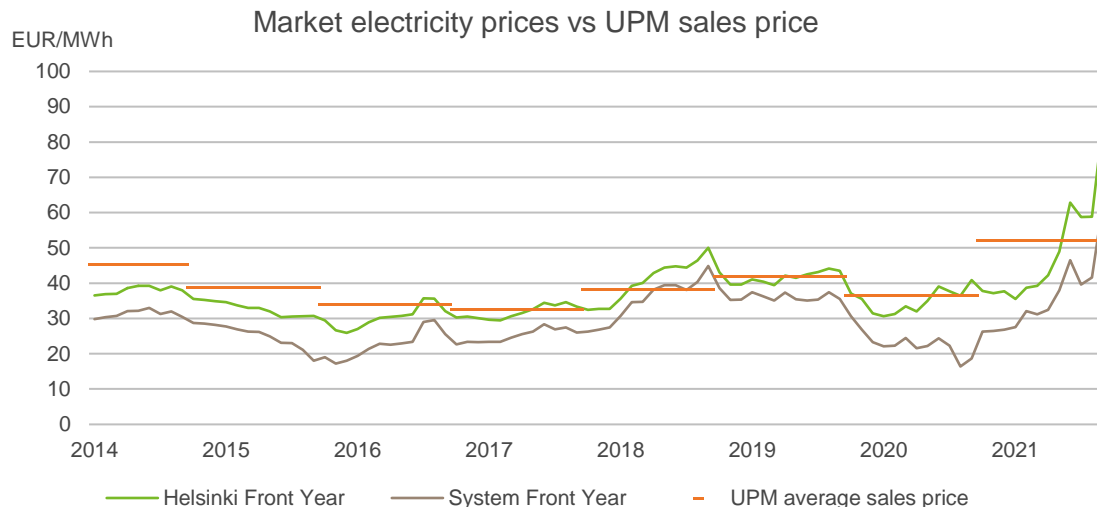


UPM Energy's power generation	MW	EURm
Hydropower holdings	549	760
Nuclear power OL1 and OL2	588	1,008
Nuclear power OL3 under construction	(494)	216
Thermal power	133	1
UPM Energy's shareholdings in total, valued at fair value	1,290	1,984
UPM own hydropower assets	166	
UPM Energy's in total (excl. OL3)	1,456	
UPM Energy capital employed		2,370

UPM Energy sources electricity from part owned energy companies at full cost (cost-price principle, mankala principle)



Cost efficient generation enables robust profitability in changing market environment



UPM Energy profitability	2016	2017	2018	2019	2020	2021
Comparable EBIT, EURm	116	91	123	185	171	270
% of sales	32.7	28.8	31.5	44.4	45.0	51.3

UPM Raflatac

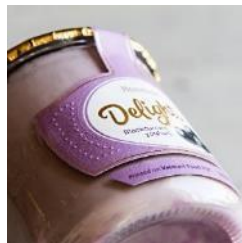
Self-adhesive labels in end-use



Pharmaceuticals



Wine, spirits & craft beverage



Food



Personal care



Home care



Durables



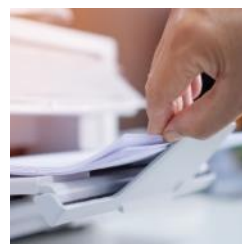
Transport & logistics



Industrial Chemical



Retail



A4 & cut-size



Security & brand protection



Tyre

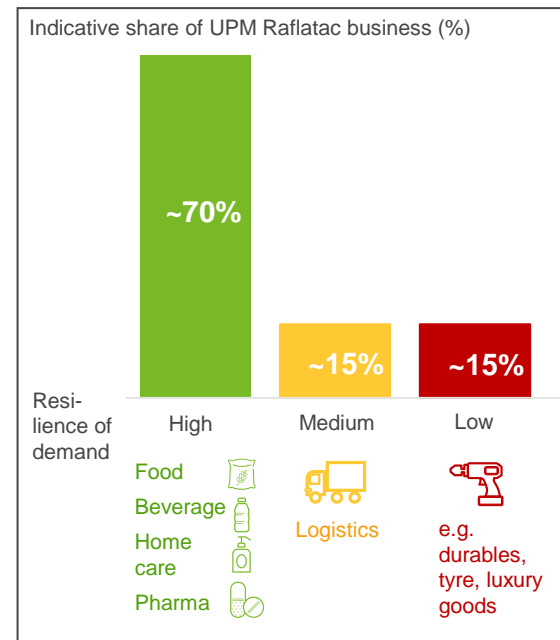
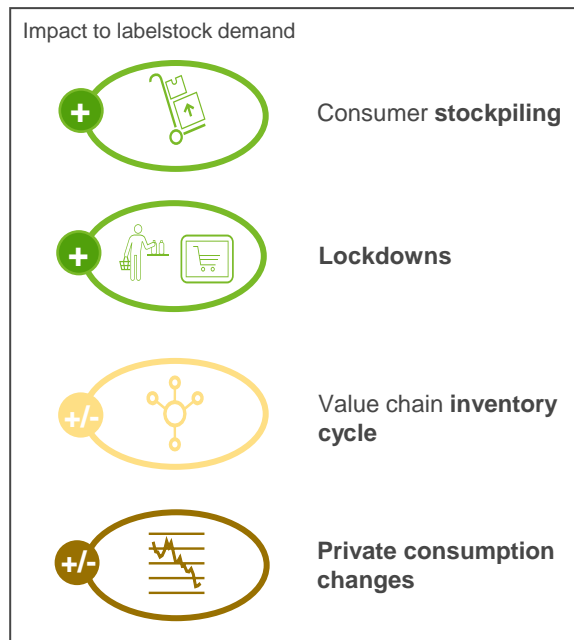
The labelstock markets have solid long term demand growth trends – short term can be more volatile



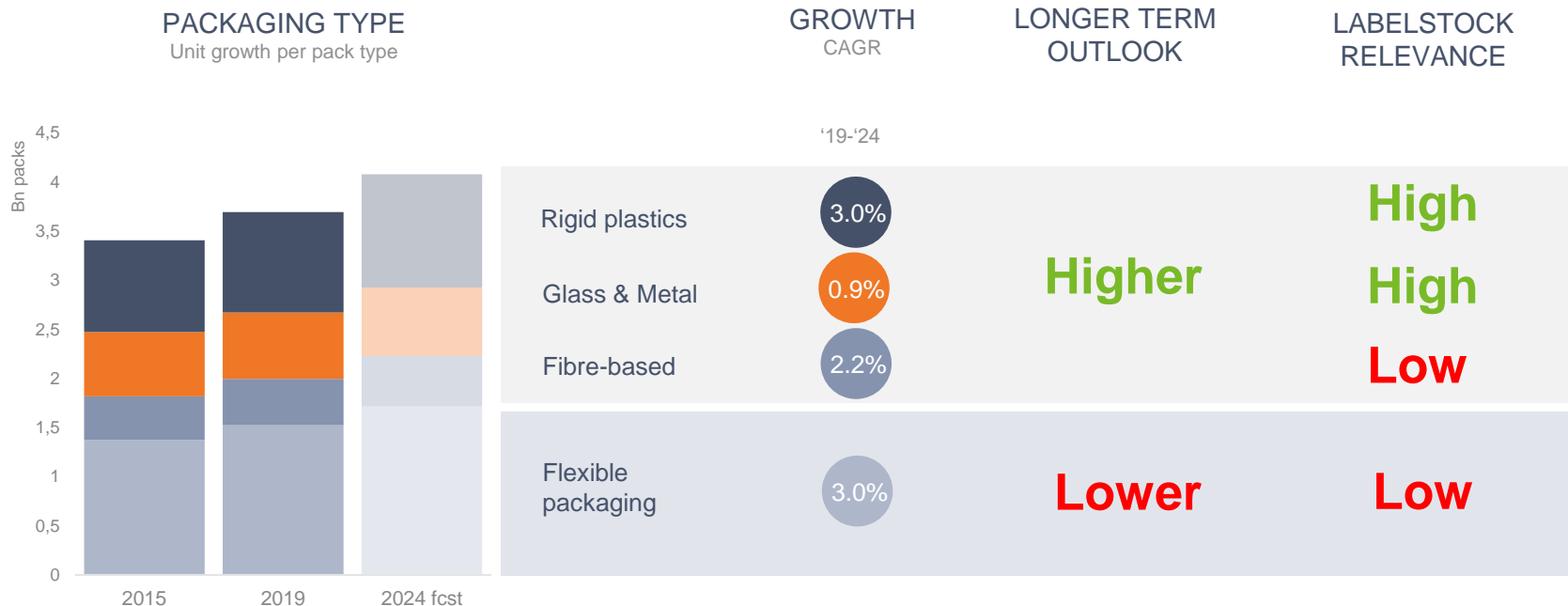
The long term demand growth outlook remains a solid 3-4% p.a.

However in the short term the demand changes can be more dynamic

The demand of UPM Raflatac's end use portfolio is relatively resilient



Early signs of recycling impacts: Packaging decisions to favour labelstock



Source: Euromonitor September 2020; UPM Raflatrac perspective

Focus on global Labelling materials, Packaging in Europe and Office paper in APAC



LABELLING MATERIAL



PACKAGING



OFFICE PAPER APAC



UPM Specialty Papers is well positioned for growth in the selected markets



LABEL & RELEASE

Leading position in growing global label and release paper markets



PACKAGING PAPERS

Selective approach in consumer packaging area. Well positioned for future growth.



APAC FINE PAPERS

One of the leading players in office papers, focused niche player in graphic papers



Market growth forecast, CAGR 2020-2025

Global
release liner
3-4%

Global
flexible
packaging
2-4%

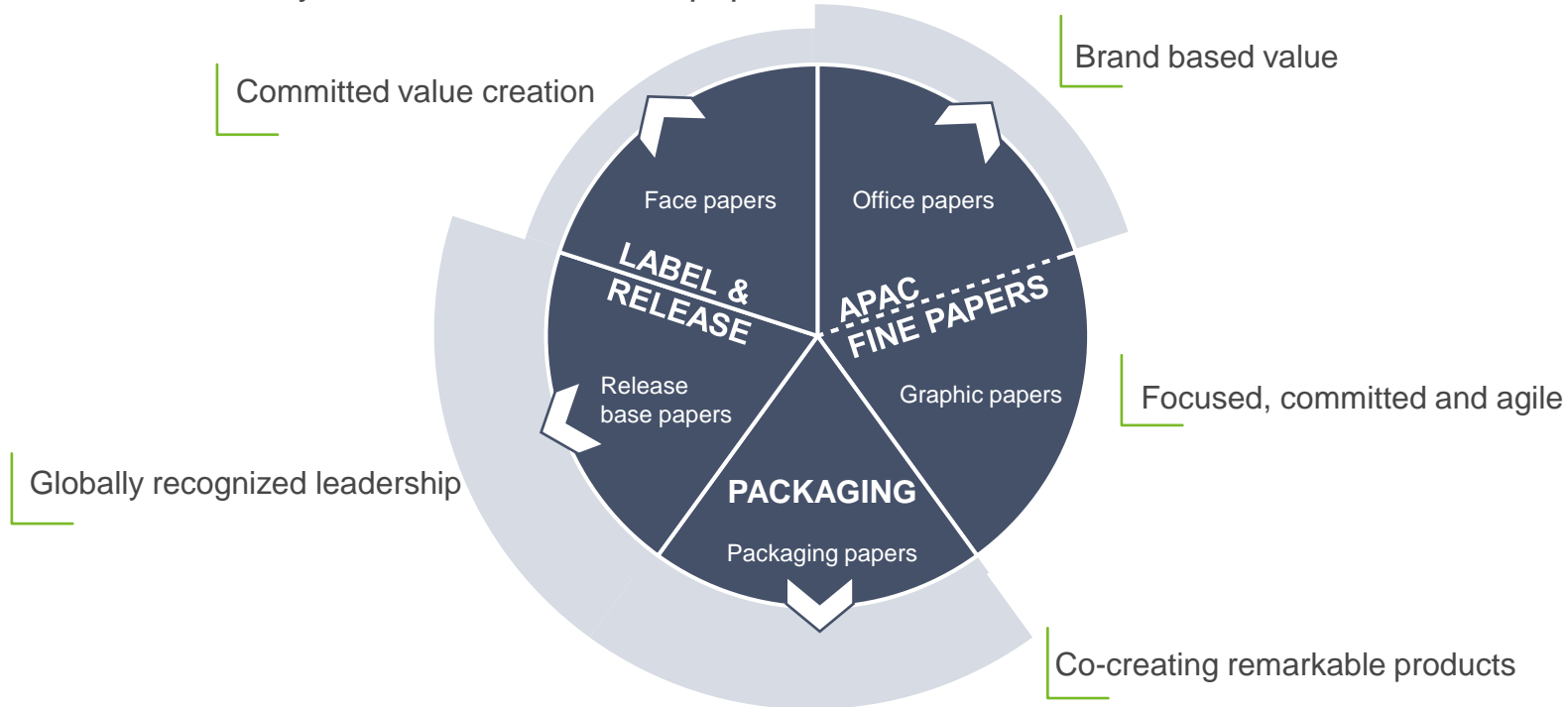
Paper



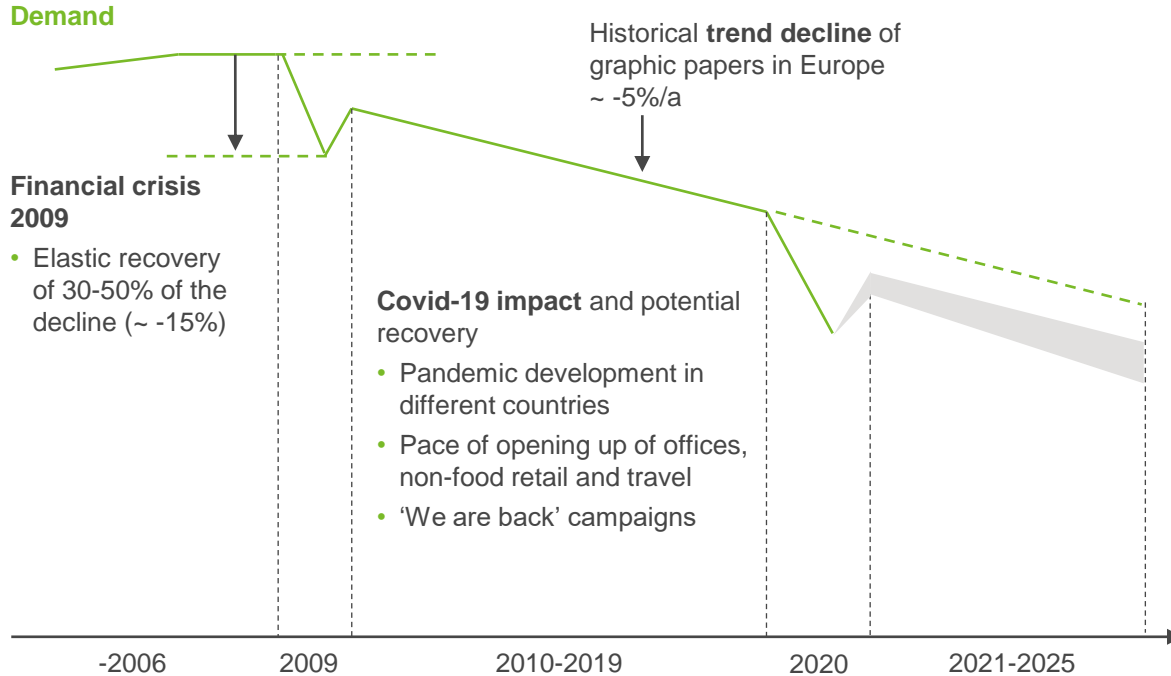
APAC office
papers
1-2%

UPM Specialty Papers **GROWTH STRATEGY**

We co-create a future beyond fossils with renewable, recyclable and remarkable papers



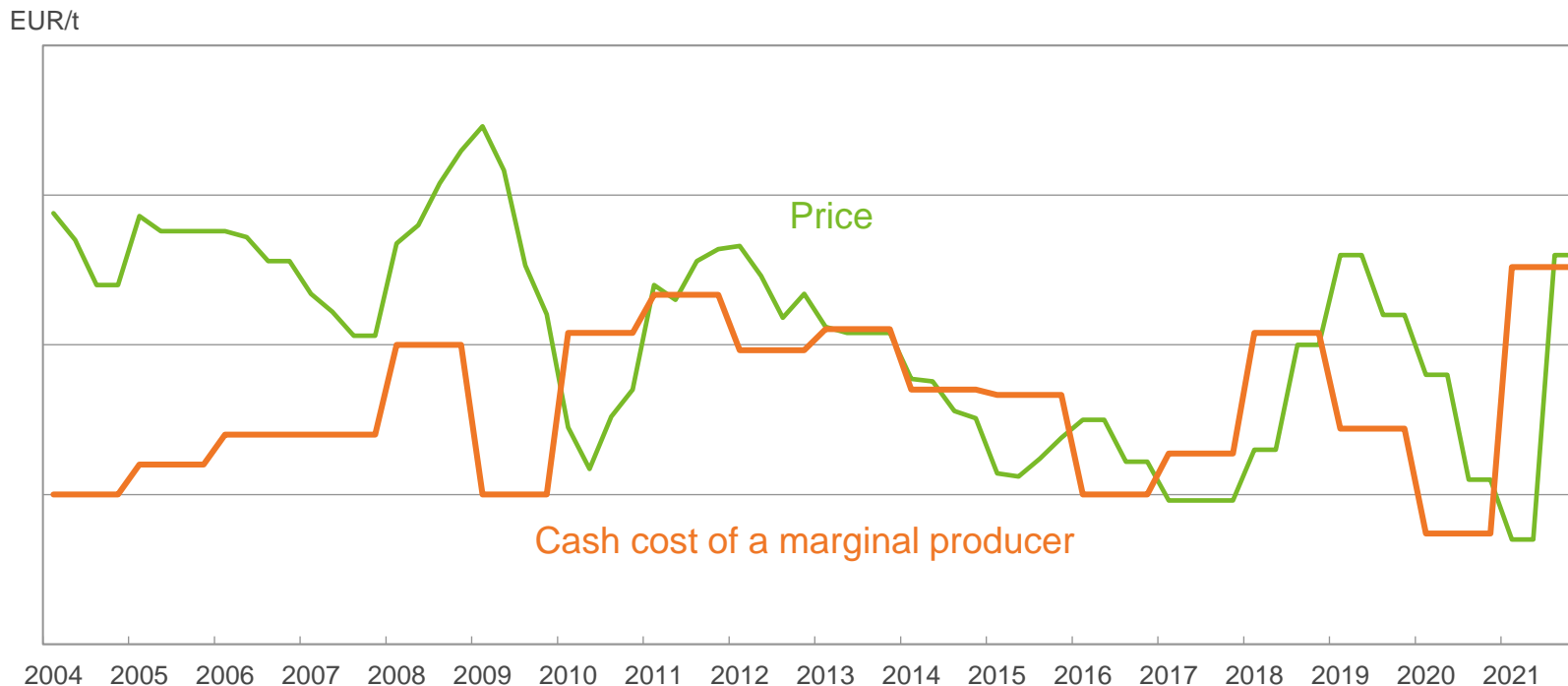
Paper demand impacted by the lockdowns, economic activity and structural changes*)



Uncertainties for demand recovery and drivers in demand decline trend

- Uncertain economic recovery
- Perpetuation of “new” consumption and digitalization trends
- Trend towards digital publishing and subscription models, cost of distribution
- Growth of e-commerce, digital customer engagement and promo in retail
- Adaption of digital records and workflows in administration, business and education
- Paper as ‘chill media’ for healthy offline time
- Trust in media, effectiveness of print promo

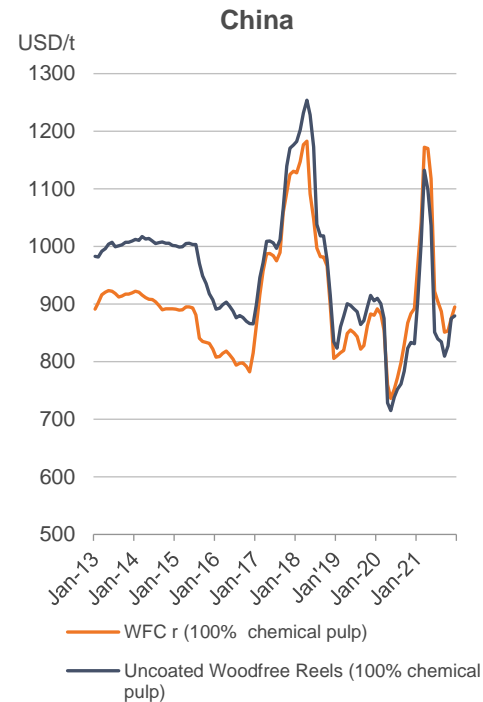
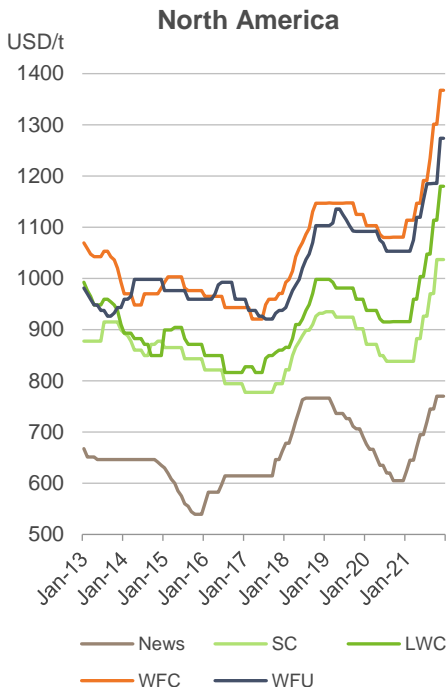
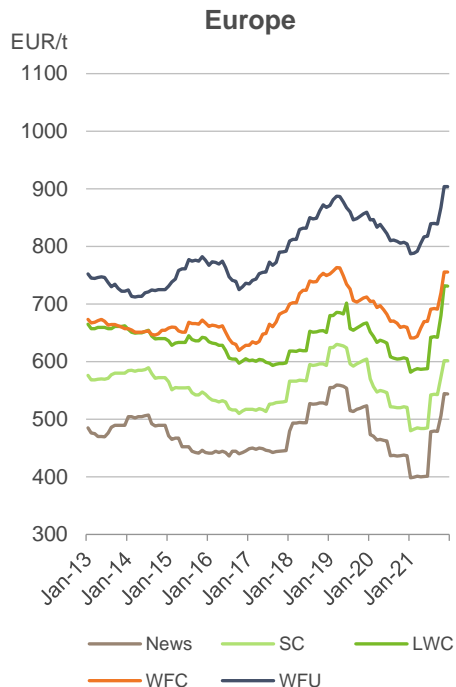
Paper price vs. cash cost of marginal cost producer



Sources: PPI, RISI, Pöyry

UPM Communication Papers

Graphic paper prices



Sources: PPI, RISI

UPM Plywood focuses on three end use segments



Construction



UPM's position and direction

- Leading position in high and medium range standard products in Europe through well established distribution network providing easy access to WISA® plywood
- Uncompromised sustainability, certified products and operations
- New growth sought by strengthening position in selected emerging markets

Vehicle flooring



UPM's position and direction

- Leading position in Europe
- Competitive edge built on smoothly running operations and needs-based product design creating value to both vehicle manufacturers and operators
- Growth sought by expanding to new markets and related end use segments

LNG shipbuilding



UPM's position and direction

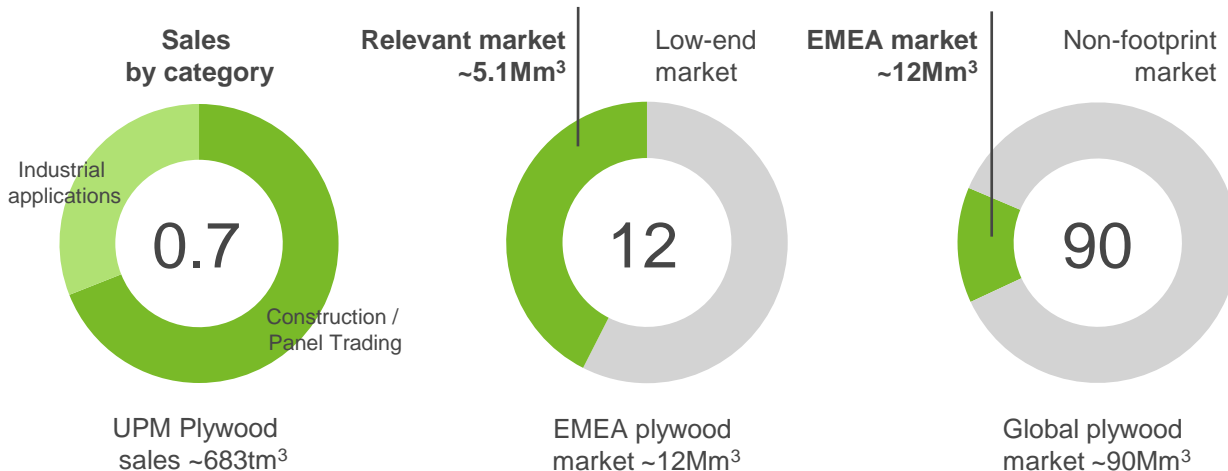
- Leading supplier in LNG plywood
- Competitive edge based on right quality and accurate on-time deliveries
- Long term commitment and benchmark service level
- Focus to secure leading position in LNG carriers and to extend offering into related applications using the same technologies (e.g. land storage tanks)

UPM's key markets are in the high and mid segments primarily in EMEA region



Strategic choices

1. Demanding industrial applications
2. High and medium range standard products
3. Selected customers
4. EMEA region and LNG business globally



UPM's growth plans in biofuels



Basic engineering phase of new biorefinery ongoing



Potential next generation biofuels biorefinery



Products would significantly reduce carbon footprint in the road transport and aviation

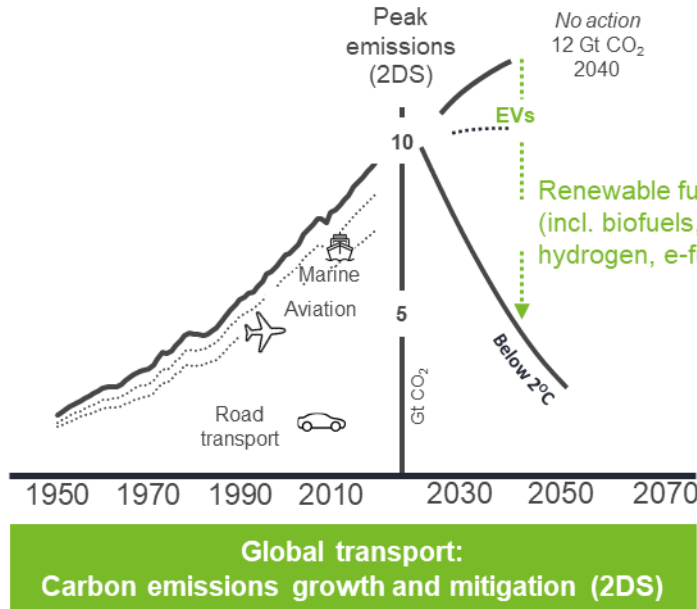


Capacity would be 500,000t of renewable fuels incl. sustainable jet fuel

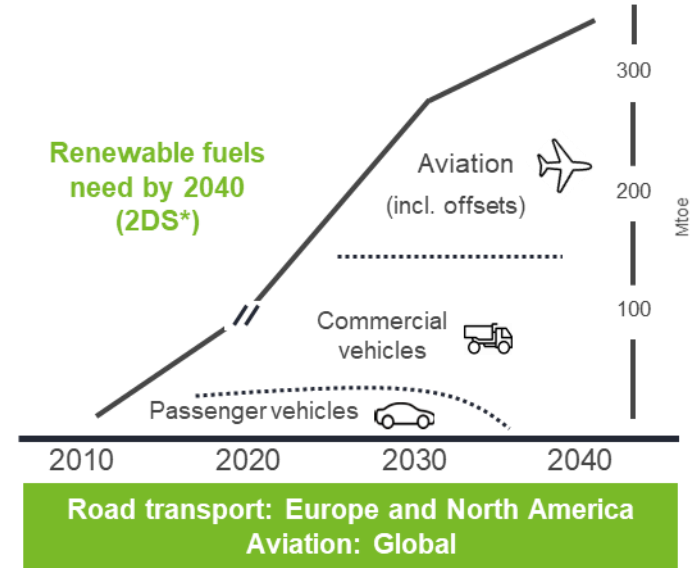


Potential location in Rotterdam, the Netherlands

Carbon mitigation in transport is dependent on renewable fuels despite recent decline in fuel consumption



Source: UPM based on IEA, EIA, Bloomberg



*The two degree scenario (2DS) is calculated vs. 2005 reference per sector (-30% 2030, -40% 2040, -50% 2050)

Source: UPM based on WoodMackenzie, Bloomberg, ICAO, EIA

UPM Biofuels' competitive edge to be built on resilient ecosystem and agility to select markets



NEW SUSTAINABLE BIOMASS

Sustainable and uniquely upstream integrated feedstock pool

- Additionality
- Climate positive land use



Carbon stored to soil in each cycle

CLIMATE-POSITIVE FUELS

Efficient carbon neutral production



Cellulosic fuels

Renewable diesel, gasoline and jet

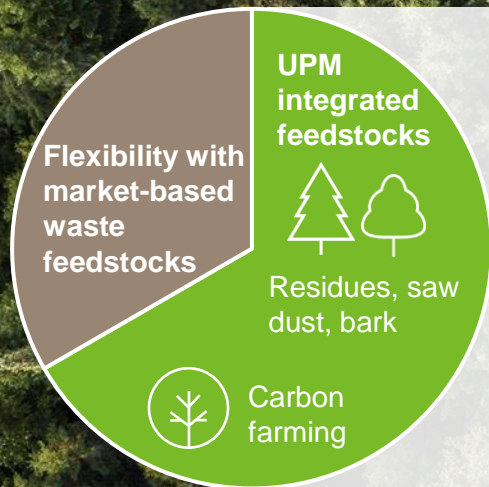
E-fuels future potential

DECARBONIZED TRANSPORT AND PETROCHEMICALS

Flexibility to create maximum value from several end uses and market geographies



UPM's sustainable biofuel feedstock concept founded on wood based and climate positive feeds



INTEGRATED WOOD BASED AND CLIMATE POSITIVE FEEDS

complemented with sustainable market based feedstocks



UPM Lappeenranta biorefinery
130,000t



Planned biorefinery
500,000t



VALUE FROM SEVERAL END-USES

Road transport, petrochemicals and aviation

UPM **BIOFORE**
BEYOND FOSSILS

