Financials includes the report of the Board of Directors and the financial statements, as well as Stora Enso in capital markets and our tax footprint.

Financials

Part of Stora Enso's Annual Report 2020

THE RENEWABLE MATERIALS COMPANY

Contents

The renewable future grows in the forest.

Drones can gather large amounts of data that can be used for planning and inventing purposes in the forests. Drones can also provide images for analyzing damages done by insects in forests, and this information can be used in the planning of forest management measures and timely felling. Some of our forest experts use the drone in their own work, for example in seedling inspections.

Unaudited Limited assurance

In this report: This publication consists of both audited and unaudited contents. The audited parts include the consolidated financial statements, the parent company financial statements, and the notes to the financial statements. The unaudited parts – such as Stora Enso in 2020, the Report of the Board of Directors, Stora Enso in capital markets, and Stora Enso as a taxpayer – are marked with a symbol on the top of the page. The contents of Stora Enso as a taxpayer have been assured by an independent third-party assurance provider with a level of Limited Assurance. The official audited financial statements in Finnish and an unofficial Swedish translation can be found on the company website › storaenso.com/download-centre

Financials

Unaudited

Stora Enso in 2020

Why to invest in Stora Enso

Part of the bioeconomy, Stora Enso is a leading global provider of renewable solutions in packaging, biomaterials, wooden construction and paper. Our fiber-based materials are renewable, recyclable and fossil free. Our solutions offer low-carbon alternatives to products based on finite resources and solve global sustainability challenges. We believe that everything that is made from fossil-based materials today can be made from a tree tomorrow. This is also the foundation of our entire innovation agenda.

Stora Enso has three strategic focus areas for growth: 1) Packaging Materials and Packaging Solutions driven by high demand for plastic free and eco-friendly circular packaging, 2) Building Solutions driven by a growing wooden buildings market, and 3) Biomaterials innovations where we focus on carbon for energy storage, bio-binders and carbon fibers, and target strong growth in new applications and markets. Substantial forest assets, sawmills in the Wood Products division and our pulp mills are the foundation for our value creation and support these three key focus areas. Paper is the cash flow generator to fund our growth. Stora Enso’s financial targets support the Group’s focus on growth and value creation.

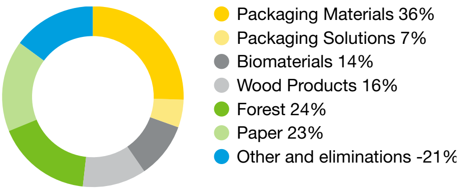
Stora Enso shares are listed on Nasdaq Helsinki Oy (STEAV, STERV) and Nasdaq Stockholm AB (STE A, STE R). In addition, the shares are traded in the USA as ADRs (SEOAY).

Key figures

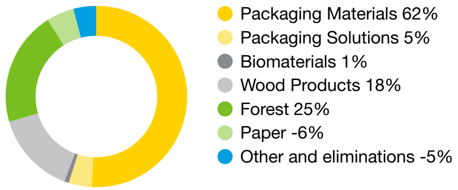
	2020	2019	Change	Target
Sales, EUR million	8 553	10 055	-14.9%	
Operational EBITDA, EUR million	1 270	1 614	-21.3%	
Operational EBIT, EUR million	650	1 003	-35.2%	
Operational EBIT margin	7.6%	10.0%		
Operating profit (IFRS), EUR million	922	1 305	-29.3%	
Net profit for the period, EUR million	617	856	-27.9%	
Net interest-bearing liabilities, EUR million	2 921	3 209	-9.0%	
Operational ROCE, %	5.8%	10.3%		>13%
Operational ROCE excl. Forest division	7.0%	12.8%		
EPS (basic), EUR	0.79	1.12	-28.9%	
Net debt/last 12 months’ operational EBITDA ratio	2.3	2.0		<2.0
Net debt/equity ratio	0.33	0.43		<0.60
Fixed costs to sales, %	26.7%	24.3%		<20%

In 2020, Stora Enso revised its long-term financial targets. There are new Group level targets for growth (to grow >5% per annum excluding Paper), and return on capital employed (the target of >13% remains, but now it is excluding the Forest division). Also, the dividend policy was updated to distribute 50% of EPS excluding fair valuation over the cycle. Other Group-level targets remain unchanged.

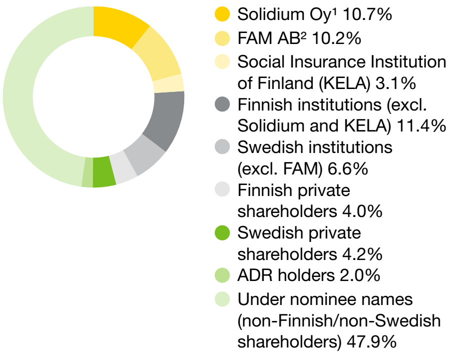
Sales 2020



Operational EBIT 2020



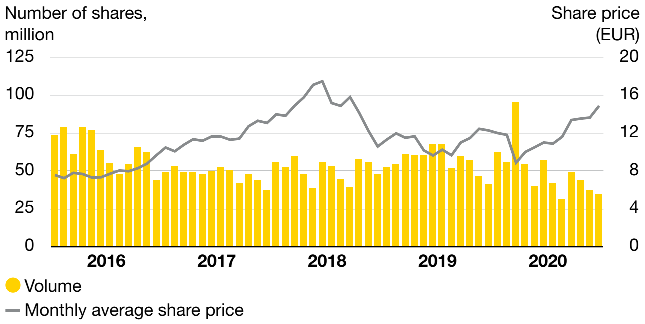
Ownership distribution, % of shares held



[1] Entirely owned by Finnish state.
[2] As confirmed to Stora Enso.

Share price performance and volumes

Helsinki, Stora Enso R



Financials

Unaudited

Report of the Board of Directors

Stora Enso introduction

Part of the bioeconomy, Stora Enso (the Group or the Company) is a leading global provider of renewable solutions in packaging, biomaterials, wooden construction and paper. Our customers include packaging manufacturers, brand owners, paper and board producers, publishers, retailers, printing houses, converters, and joinery and construction companies.

Our fiber-based materials are renewable and recyclable. Our solutions offer low-carbon alternatives to products based on finite resources. We believe that everything that is made from fossil-based materials today can be made from a tree tomorrow.

Stora Enso had 24 455 employees on average during 2020. Our sales in 20 20 were EUR 8.6 billion, with an operational EBIT of EUR 650 million. Stora Enso shares are listed on Nasdaq Helsinki Oy (STEAV, STERV) and Nasdaq Stockholm AB (STE A, STE R).

Markets and deliveries

The global demand for cartonboard remained largely stable over the year. The pandemic presented challenges for a certain number of our end use segments but boosted demand in essential goods such as pharma and food. Demand in the Asian region was stronger than the more mature European and North American markets.

Global containerboard demand increased slightly despite the decline in industrial production caused by the pandemic. The shift in spending from services to goods and strong e-commerce growth compensated the losses in manufacturing. Containerboard consumption was stable in Europe, while it increased in the Americas and China but declined in other parts of Asia.

European corrugated packaging demand in our main markets saw a slight decrease (-2%) due to the pandemic. The strong decline in industrial production in the first half of the year was partly offset by strong traction in e-commerce, food and retail sales. There was a fast recovery in the manufacturing sector in second half of the year.

Global demand for chemical market pulp demand rose by 2.6% during 2020. Softwood pulp deliveries decreased by -3.4% while hardwood pulp deliveries increased by 8.5% compared to 2019. Global market pulp demand increased in Asia, especially in China, and North America while it reduced in Europe. The global chemical market pulp capacity increased by 0.9% in 2020, the softwood capacity decreased by -1.1% while hardwood capacity saw a 1.8% increase. The overall shipment-capacity balance stood at 89%, 2 percent points down from 2019.

By the end of 2020, global pulp inventories came close to a balanced level after being elevated since 2018. During 2020, global pulp markets experienced low pulp prices, generally high inventories and a sharp demand decline from the Printing & Writing segment due to lockdowns and recession caused by the pandemic. Increased demand from tissue and packaging grades supported market pulp demand.

The global sawnwood consumption level declined during 2020 from the 2019 level by some -2% according to market estimates. Due to Covid-19 suppliers cut production especially in the second quarter. In Europe, the market decline was estimated at -2.8% and in North America -3.1%. Low inventory levels led to positive price development in the latter part of the year. Building activity and DIY markets kept the demand at a high level in most countries during 2020 regardless of lockdowns. In the US, restricted supply led to heavy price increases in the second half of 2020. In Australia, the demand was relatively stable during the year and the market in balance meaning price fluctuations were modest. The Japanese housing market contracted -10% in 2020, but reduced supplies from Europe and North America led to product shortages and an improved market balance by the year end.

The year 2020 was difficult for paper markets. Paper demand was hit hard by the pandemic in addition to continuing structural demand erosion. European paper demand was -18% weaker in 2020 compared to the previous year. As a result of an unforeseen decline in demand in European paper markets, the supply and demand balance turned unfavourable for paper producers. This resulted in declining paper prices. In North America, the demand declined by -22% and in Asia by -13% compared to 2019. Global paper consumption was -17% lower in 2020 than in 2019. However, the variation between paper grades was wide. The decline in the global demand for uncoated was -14%, whereas the demand for standard newsprint and coated mechanical declined by -25%.

The Group's external consumer board deliveries totalled 2 742 000 tonnes, which was 69 000 tonnes, or -2.4% lower compared to a year ago. This was due to lower volumes in Europe. External containerboard deliveries increased by 27 000 tonnes, or 2.9%, from 943 000 tonnes to 970 000 tonnes, mainly due to higher recycled containerboard deliveries. External corrugated board deliveries in Europe decreased slightly to 902 million m². Market pulp deliveries increased by 81 000 tonnes, or 3.4%, to record high 2 443 000 tonnes, mainly due to higher market pulp deliveries in the Packaging Materials division.

Production and external deliveries

	2020	2019	Change % 2020–2019
Consumer board deliveries, 1 000 tonnes	2 742	2 811	-2.4%
Consumer board production, 1 000 tonnes	2 759	2 775	-0.6%
Containerboard deliveries, 1 000 tonnes	970	943	2.9%
Containerboard production, 1 000 tonnes	1 304	1 303	0.1%
Corrugated packaging European deliveries, million m²	902	925	-2.5%
Corrugated packaging European production, million m²	1 004	1 033	-2.8%
Market pulp deliveries, 1 000 tonnes	2 443	2 362	3.4%
Wood product deliveries, 1 000 m³	4 692	4 918	-4.6%
Wood deliveries, 1 000 m³	11 469	11 717	-2.1%
Paper deliveries, 1 000 tonnes	3 106	4 130	-24.8%
Paper production, 1 000 tonnes	3 034	4 065	-25.4%

Estimated consumption of board, pulp, sawn softwood, and paper in 2020

Tonnes, million	Europe	North America	Asia and Oceania
Consumer board	10.8	9.2	24.5
Containerboard	33.7	31.9	82.9
Corrugated board (billion m²)[1]	10.6	n/a	n/a
Chemical market pulp	16.0	7.7	36.5
Sawn softwood (million m³)	94.4	93.7	n/a
Newsprint	4.0	1.7	6.7
Uncoated magazine paper	2.4	0.8	0.1
Coated magazine paper	3.1	1.4	2.1
Coated fine paper	3.2	2.4	9.0
Uncoated fine paper	6.1	5.8	18.4

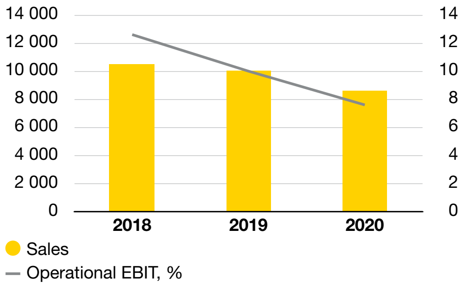
[1] European focus markets (Baltics, FI, PL, RU, SE)
Source: Afry Smart, ICCA, RISI, Numera, Euro-Graph, PPPC, EPIS, Hawkings Wright, Stora Enso, UNECE

Financials

External wood product deliveries decreased by 226 000 m^3 or -4.6% to 4 692 000 m^3, negatively impacted by the closure and divestment of Kitee and Pfarrkirchen sawmills in Finland and Germany. External paper deliveries totalled 3 106 000 tonnes, down 1 024 000 tonnes, or -24.8%, from 2019, due to lower deliveries in all paper grades and disposal and closures of Dawang Mill in China, and paper production at Oulu Mill in Finland.

Sales and operational EBIT

EUR million



Operational key figures, items affecting comparability and other non-IFRS measures

The list of Stora Enso's non-IFRS measures and the calculation of our key figures are presented at the end of the Report of the Board of Directors. See also the chapter Non-IFRS measures at the end of this report.

Financial results – Group

Sales, at EUR 8 553 (10 055) million, were 14.9% lower than a year earlier. Deliveries reduced in all divisions and the largest drop was in paper volumes. Sales prices were lower in all divisions, with the biggest negative price impacts coming from pulp and paper. The impact of the foreign exchange rate movements on sales was EUR 19 million positive. Structural changes reduced sales by EUR 226 million, the biggest ones being the Oulu Mill conversion in Finland, the divestment of the Dawang paper mill in China in October 2019, the closure of the paper machine 6 at Imatra Mills in Finland in December 2019, the divestment of the Pfarrkirchen Mill in Austria in during the first quarter of 2020, and the closure of the Kitee sawmill in Finland during the second quarter of 2020. Sales excluding the paper business decreased by 8.7%.

Operational EBIT, at EUR 650 (1 003) million, decreased by 35.2% or EUR 353 million and represents a margin of 7.6% (10.0%). Operational EBIT decreased due to lower sales prices and lower volumes in all divisions. The biggest negative impact came from the lower paper volumes and prices and the significantly lower pulp prices.

Variable costs were EUR 340 million lower, mainly fiber costs including wood, pulp and recycled paper. Fixed costs decreased EUR 117 million due to Covid-19 and profit protection programme actions. The net foreign exchange impact increased operational EBIT by EUR 123 million. The operational result from equity accounted investments was EUR 16 million lower, mainly due to the Bergvik Skog transaction in 2019.

The IFRS operating profit includes a positive net effect of EUR 469 (positive 493) million from IAS 41 forest valuation from subsidiaries and joint operations. The positive impact comes mainly from the increase in fair valuation in Stora Enso owned forests in Sweden. There is also a negative net effect of EUR 52 (positive 32) million from Stora Enso's share of net financial items, taxes and IAS 41 forest valuations of equity accounted investments.

Tangible and intangible asset impairments amounted to EUR 57 (78) million and impairment reversals amounted to EUR 0 (21) million.

The Group recorded items affecting comparability (IAC) with a negative impact of EUR 90 (negative 192) million on its IFRS operating profit and a positive impact of EUR 19 (positive 13) million on income taxes. The IACs relate mainly to asset restructurings in Biomaterials division, the Oulu Mill conversion in Finland and the Hylte Mill restructuring in Sweden.

The IFRS operating profit was EUR 922 (1 305) million.

Segment share of operational EBIT, IAC, fair valuations and non-operational items and operating profit/loss

	Year Ended 31 December					
	Operational EBIT		IAC, Fair Valuations and Non-Operational items		Operating Profit/Loss	
EUR million	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Packaging Materials	403	339	-12	13	391	352
Packaging Solutions	34	46	-6	-10	28	36
Biomaterials	9	233	-40	-54	-31	180
Wood Products	114	105	-3	-13	111	92
Forest	164	99	360	448	524	547
Paper	-38	213	-20	-59	-58	154
Other	-35	-32	-7	-23	-42	-56
Total	**650**	**1 003**	**271**	**302**	**922**	**1 305**
Net financial items					-150	-168
Profit before Tax					**773**	**1 137**
Income tax expense					-156	-281
Net Profit					**617**	**856**

Operational EBIT comprises the operating profit excluding items affecting comparability (IAC) and fair valuations from the segments and Stora Enso's share of the operating profit of equity accounted investments (EAI), also excluding items affecting comparability and fair valuations. IAC =Items affecting comparability are exceptional transactions that are not related to recurring business operations. The most common IAC are capital gains and losses, impairments or impairment reversals, disposal gains and losses relating to Group companies, provisions for planned restructurings, environmental provisions, changes in depreciation due to restructuring and penalties. Items affecting comparability are normally disclosed individually if they exceed one cent pe r share.
Fair valuations and non-operational items include CO_2 emission rights, non-operational fair valuation changes of biological assets, adjustments for differences between fair value and acquisition cost of forest assets upon disposal and the Group's share of income tax and net financial items of EAI. From 1 January 2020 onwards, the changes in the fair valuation of biological assets are categorized in non-operational and operational fair value changes. Non-operational fair value changes of biological assets reflect changes made to valuation assumptions and parameters, usually during the annual valuation process. Operational fair value changes of biological assets are included in Operational EBITDA and contain all other fair value changes, mainly due to inflation and differences in actual harvesting levels compared to the harvesting plan. The previous periods have been restated.

Items affecting comparability, fair valuations and non-operational items

	Year Ended 31 December	
EUR million	**2020**	**2019**
Impairments and impairment reversals	-72	-62
Restructuring costs excluding impairments	-23	-52
Acquisitions and disposals	6	-59
Other	0	-19
Items affecting comparability	**-90**	**-192**
Fair valuations and non-operational items	362	494
Total	**271**	**302**

Segment share of operative assets, operative liabilities and operating capital

	Year Ended 31 December					
	Operative Assets		Operative Liabilities		Operating Capital	
EUR million	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Packaging Materials	3 675	3 516	721	692	2 954	2 824
Packaging Solutions	372	372	132	131	240	241
Biomaterials	2 459	2 748	214	252	2 245	2 496
Wood Products	766	868	218	221	548	647
Forest	6 566	4 436	372	298	6 194	4 138
Paper	1 193	1 484	700	827	493	657
Other and eliminations	433	554	115	94	318	460
Total	**15 464**	**13 978**	**2 471**	**2 516**	**12 993**	**11 462**

Key figures

	2020	2019	2018
Sales, EUR million	8 553	10 055	10 486
Operational EBIT, EUR million	650	1 003	1 352
Operational EBIT margin	7.6%	10.0%	12.9%
Operating profit (IFRS), EUR million	922	1 305	1 390
Operating margin (IFRS)	10.8%	13.0%	13.3%
Return on equity (ROE)	7.6%	12.1%	15.5%
Operational ROCE	5.8%	10.3%	15.8%
Operational ROCE excl. Forest division	7.0%	12.8%	18.9%
Debt/equity ratio	0.33	0.43	0.31
EPS (basic), EUR	0.79	1.12	1.28
EPS excluding FV[2], EUR	0.45	0.61	1.26
Dividend and distribution per share[1], EUR	0,30	0.30	0.50
Payout ratio, excluding FV[2]	66.7%	49.2%	39.7%
Payout ratio (IFRS)	38.0%	26.8%	39.1%
Dividend and distribution yield, (R share)	1.9%	2.3%	5.0%
Price/earnings (R share), excluding FV[2]	34.78	21.23	8.01
Equity per share, EUR	11.17	9.42	8.51
Market capitalisation 31 Dec, EUR million	12 383	10 328	8 123
Closing price 31 Dec, A/R share, EUR	15.90/15.65	13.55/12.97	11.05/10.09
Average price, A/R share, EUR	12.06/11.52	12.88/11.05	16.36/14.61
Number of shares 31 Dec (thousands)	788 620	788 620	788 620
Trading volume A shares (thousands)	4 662	1 299	3 068
% of total number of A shares	2.6%	0.7%	1.7%
Trading volume R shares (thousands)	605 233	679 475	610 300
% of total number of R shares	98.8%	111.0%	99.7%
Average number of shares, basic (thousands)	788 620	788 620	788 620
Average number of shares, diluted (thousands)	789 182	789 533	789 883

Comparative figures for 2018 and 2019 have been restated
[1] See the Board of Directors' proposal for dividend distribution.
[2] Earnings per share (EPS) excl. FV, Payout ratio, excluding FV and Price/earnings (R share), excluding FV were added to the list of non-IFRS measures during 2020 replacing the key figures of EPS excl. IAC, Payout ratio, excluding IAC and Price/earnings (R share), excluding IAC. Comparatives are recalculated.

Net financial expenses at EUR 150 (168) million were EUR 18 million lower than a year ago. Net interest expenses, at EUR 132 million, decreased by EUR 15 million, mainly as a result of the lower average interest expense rate on borrowings. Other net financial expenses, at EUR 10 million, were EUR 5 million lower than a year ago. The net foreign exchange impact in respect of cash equivalents, interest-bearing assets and liabilities and related foreign-currency hedges amounted to a loss of EUR 8 (loss of EUR 6) million, mainly due to revaluation of foreign currency net debt in subsidiaries and joint operations located in China, Brazil, Poland and Russia.

The net tax charge totalled EUR 156 (281) million, equivalent to an effective tax rate of 20.1% (24.7%), as described in more detail in Note 9 Income taxes, of the Consolidated Financial Statements.

The loss attributable to non-controlling interests was EUR 9 (24) million, leaving a profit of EUR 626 (880) million attributable to Company shareholders.

Earnings per share excluding fair valuations were EUR 0.45 (0.61). Operational return on capital employed was 5.8% (10.3%).

The Group capital employed was EUR 11 714 million on 31 December 2020, an increase of EUR 1 082, mainly due to the increase of fair valuation of forest assets in Sweden resulting from valuation and accounting principles changes.

Breakdown of Capital Employed change

EUR million	Capital Employed
31 December 2019	**10 632**
Capital expenditure excluding investments in biological assets less depreciation	60
Investments in biological assets less depletion of capitalised silviculture costs	19
Impairments and reversal of impairments	-57
Fair valuation of forest assets	1 973
Unlisted securities (mainly PVO)	-125
Equity accounted investments	-22
Net liabilities in defined benefit plans	-11
Operative working capital and other interest-free items, net	-172
Net tax liabilities	-411
Translation difference	-171
Other changes	-1
31 December 2020	**11 714**

Financing

Cash flow from operations was EUR 1 344 (1 991) million and cash flow after investing activities was EUR 680 (1 386) million. Working capital decreased by EUR 195 (240) million, inventories decreased by EUR 179 million and short-term receivables by EUR 178 million having a positive impact on working capital. Payments related to the previously announced provisions were EUR 24 million.

Operative cash flow

EUR million	2020	2019
Operational EBITDA	1 270	1 614
IAC on operational EBITDA	-25	-128
Other adjustments	-97	265
Change in working capital	195	240
Cash Flow from Operations	**1 344**	**1 991**
Cash spent on fixed and biological assets	-661	-598
Acquisitions of equity accounted investments	-2	-7
Cash Flow after Investing Activities	**680**	**1 386**

Comparative 2019 figures have been restated.

At the end of the year, Group net interest-bearing liabilities were EUR 2921 (3 209) million. The decrease in net interest-bearing liabilities was mainly driven by a solid cash flow from operations after investments and dividend payments. Cash and cash equivalents net of bank overdrafts increased to EUR 1 655 (863) million mainly as a result of the new Green bond financing issued during the year and solid cash flow from operations after investments and dividend payments. The Group increased cash liquidity and available committed credit lines during the year due to the increased uncertainty caused by Covid-19. The net debt/equity ratio at 31 December 2020 decreased to 0.33 (0.43) mainly as a result of the market transaction based forest assets fair valuation change implemented during the fourth quarter. The ratio of net debt to the last 12 months' operational EBITDA increased to 2.3, compared to the ratio of 2.0 at the end of the previous year. The average interest rate on borrowings for the full year 2020 decreased to 3.2% (3.5%) with a run-rate of 3.0% as per the end of the fourth quarter.

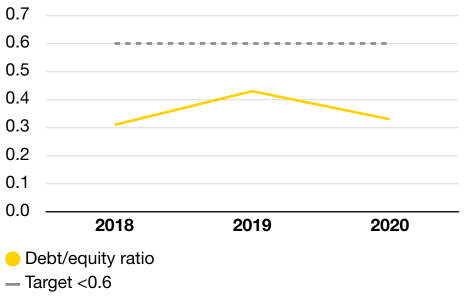
In April 2020 Stora Enso successfully issued a SEK 1 700 million green bond under its EMTN (Euro Medium Term Note) programme and Stora Enso's Green Bond Framework. The bond matures in April 2025. In June 2020, Stora Enso successfully tapped the above mentioned 2025 SEK Green Bond issued in April 2020 with an additional nominal of SEK 1 400 million. The bond consist of fixed and floating tranches and pays a floating coupon of STIBOR +2.20% and a fixed coupon of 2.375%.

In November 2020 Stora Enso successfully issued a new EUR 500 million green bond under its EMTN programme and Stora Enso's Green Bond framework. The bond matures in December 2030 and pays a fixed coupon of 0.625%.

Stora Enso has a EUR 600 million committed revolving credit facility that was fully undrawn at the year-end. In addition, Stora Enso has undrawn committed bilateral credit facility arrangements with commercial banks up to EUR 250 million. The original tenor of these bilateral arrangements varies from 18 to 24 months and they mature in 2021 and 2022. Stora Enso also has an undrawn committed EUR 150 million loan signed with European Investment Bank during the fourth quarter that can be drawn latest in 2022 for a five-year maturity. Additionally, Stora Enso has access to to statutory pension premium loans in Finland up to up to EUR 950 (950) million.

Financials

Debt/equity ratio



The market transaction based forest assets fair valuation change implemented during the fourth-quarter increased the Group's other comprehensive income in equity by EUR 1 195 million. Conversely, the fair valuation of cash flow hedges and equity investments fair valued through other comprehensive income in accordance with IFRS 9 decreased equity by EUR 91 (increased by EUR 95) million mainly due to lower fair valuation of the Group's shareholding in Pohjolan Voima Oy (PVO) partly offset by net fair valuation gains from outstanding cash flow hedge derivatives recorded in other comprehensive income.

At the end of the year, the ratings for Stora Enso's rated bonds were as follows:

Rating agency	Long/short-term rating	Valid from
Fitch Ratings	BBB- (stable)	8 August 2018
Moody's	Baa3 (stable) / P-3	1 November 2018

Financial results – Segments

As of 1 January 2020, Stora Enso merged its containerboard business with the Consumer Board division, creating a new Packaging Materials division. The remaining business in Packaging Solutions, together with the recently created Formed Fiber unit, constitute a more focused Packaging Solutions division. The Group also established a new Forest division as of 1 January. Certain historical figures for Packaging Materials, Packaging Solutions, Forest, Segment Other and the Group have been restated as described in the release from 19 March 2020.

Packaging Materials division

The Packaging Materials division is a global leader in the circular economy with our premium renewable and recyclable packaging materials based on both virgin and recycled fiber. Addressing the needs of today's eco-conscious consumers, we help customers replace fossil-based materials with low-carbon, renewable and recyclable alternatives for their food and drink, pharmaceutical or transport packaging. A wide selection of barrier coatings enables design optimisation for various demanding packaging end-uses.

EUR million	2020	2019
Sales	3 115	3 254
Sales (Consumer board)	2 523	2 564
Sales (Containerboard)	602	690
Operational EBITDA	641	574
Operational EBITDA (Consumer board)	578	434
Operational EBITDA (Containerboard)	63	139
Operational EBITDA margin	20.6%	17.6%
Operational EBIT	403	339
Operational EBIT margin	12.9%	10.4%
Operational ROOC	13.9%	12.4%
Cash flow from operations	694	632
Cash flow after investing activities	301	401
Board deliveries, 1 000 tonnes	4 043	4 111
Deliveries (Consumer board)	2 752	2 812
Deliveries (Containerboard)	1 291	1 299
Board production, 1 000 tonnes	4 063	4 078
Production (Consumer board)	2 759	2 775
Production (Containerboard)	1 304	1 303

Comparative 2019 figures have been restated.

Packaging Materials division sales at EUR 3 115 (3 254) million decreased by 4.3% mainly due to lower prices and volumes for containerboards. The closure of paper machine 6 closure at Imatra Mills in Finland in December 2019 impacted consumer board sales.

Operational EBIT at EUR 403 (339) million increased by 18.8%, mainly due to lower variable costs. Lower pulp prices had the biggest positive impact on variable costs. The Oulu Mill conversion costs had a negative impact of EUR 29 million.

Packaging Solutions division

The Packaging Solutions division develops and sells premium fiber-based packaging products and services. Our high-end eco-friendly packaging products are used by leading brands across multiple market sectors, including store retail, e-commerce and industrials. The portfolio includes corrugated and other converting, design services, automation solutions, and scalable innovations such as formed fiber and biocomposites.

EUR million	2020	2019
Sales	594	698
Operational EBITDA	61	71
Operational EBITDA margin	10.3%	10.2%
Operational EBIT	34	46
Operational EBIT margin	5.7%	6.6%
Operational ROOC	14.1%	18.9%
Cash flow from operations	51	93
Cash flow after investing activities	28	58
Corrugated packaging European deliveries, million m^2	999	1 026
Corrugated packaging European production, million m^2	1 004	1 033

Comparative 2019 figures have been restated.

Packaging Solutions division sales were EUR 594 (698) million, down 15% due to lower volumes and sales prices. Foreign exchange had a EUR 20 million negative impact on sales.

Operational EBIT at EUR 34 (46) million decreased 27% mainly due to lower volumes and investments into new businesses like formed fiber and biocomposites. Variable costs were lower mainly due to lower containerboard prices. Fixed costs were lower due to Covid-19 and profit protection programme actions.

Biomaterials division

The Biomaterials division meets the growing demand for the replacement of products made from fossil-based and hazardous materials with bio-based solutions. We use all fractions of biomass, like lignin and sugars, to develop new solutions. We work to replace fossil-based materials with new applications such as carbon for energy storage, bio-based binders, and bio-based carbon fiber. The division's offering includes a wide variety of pulp grades to meet the demands of paper, board, tissue, textile and hygiene product producers as well as materials from side streams of our processes, such as tall oil and turpentine from biomass.

EUR million	2020	2019
Sales	1 193	1 464
Operational EBITDA	128	356
Operational EBITDA margin	10.7%	24.3%
Operational EBIT	9	233
Operational EBIT margin	0.8%	15.9%
Operational ROOC	0.4%	9.4%
Cash flow from operations	96	423
Cash flow after investing activities	0	266
Pulp deliveries, 1 000 tonnes	2 427	2 520

Biomaterials division sales were EUR 1 193 (1 464) million, down 19% due to significantly lower pulp sales prices in all grades. Delivery volumes were also lower.

Operational EBIT, at EUR 9 (233) million decreased 96%, due to significantly lower sales prices in all grades and to some extent higher maintenance costs. Operational EBIT was positively impacted by lower variable costs, mainly logistics. Foreign exchange rates had a positive impact on operational EBIT.

Wood Products division

The Wood Products division is the largest sawn wood producer in Europe and a leading provider of sustainable wood-based solutions for the construction industry. Our growing Building Solutions business offers building concepts to support low-carbon construction and eco-friendly designs. We develop digital tools to simplify the designing of building projects with wood. We also offer applications for windows, doors and for packaging industries, and our pellets provide a sustainable heating solution.

EUR million	2020	2019
Sales	1 386	1 569
Operational EBITDA	160	153
Operational EBITDA margin	11.6%	9.8%
Operational EBIT	114	105
Operational EBIT margin	8.3%	6.7%
Operational ROOC	19.1%	16.6%
Cash flow from operations	211	183
Cash flow after investing activities	181	135
Wood products deliveries, 1 000 m^3	4 407	4 753

Wood Products division sales were EUR 1 386 (1 569) million, down 11.7%, due to structural changes, lower sales prices mainly in classic sawn and lower volumes. Pfarrkirchen mill in Germany was divested in Q1 2020, Uimaharju sawmill in Finland was transferred to Biomaterials division in the beginning of 2020, Kitee sawmill in Finland was closed and production was stopped in Q4 2019, Biocomposites business was transferred to Packaging Solutions division in Q3 2020. Structural changes decreased sales by EUR 80 million.

Operational EBIT at EUR 114 (105) million increased by 9% due to lower raw material and fixed costs.

Forest division

The Forest division creates value with sustainable forest management, competitive wood supply and innovation, which are the foundation for Stora Enso's renewable offerings. The division manages Stora Enso's forest assets in Sweden and the 41% share of Tornator, the majority of whose forest assets are located in Finland. The division is also responsible for wood sourcing for Stora Enso's Nordic, Baltic and Russian operations and B2B customers. Stora Enso is one of the biggest private forest owners in the world.

EUR million	2020	2019
Sales	2 046	2 321
Operational EBITDA	217	145
Operational EBITDA margin	10.6%	6.2%
Operational EBIT	164	99
Operational EBIT margin	8.0%	4.3%
Operational ROCE	3.9%	3.7%
Cash flow from operations	203	370
Cash flow after investing activities	166	333
Wood deliveries, 1 000 m³	37 369	38 775
Operational fair value change of biological assets	70	50

Comparative 2019 figures have been restated.

Forest division sales were EUR 2 046 (2 321) million, down 12% due to lower prices and volumes.

Operational EBIT at EUR 164 (99) million increased by 65% due to improved operational efficiency in Wood supply units including Group's own forest holdings in Sweden.

Paper division

Stora Enso is the second largest paper producer in Europe, with an established customer base and a wide product portfolio for print and office use. Customers benefit from Stora Enso's broad selection of paper products made from recycled and virgin fiber, our technical expertise and our sustainability know-how as well as our mill and customer service centre network.

EUR million	2020	2019
Sales	1 979	2 856
Operational EBITDA	66	318
Operational EBITDA margin	3.3%	11.1%
Operational EBIT	-38	213
Operational EBIT margin	-1.9%	7.4%
Operational ROOC	-6.7%	29.3%
Cash flow from operations	105	344
Cash flow after investing activities	31	264
Cash flow after investing activities to sales	1.6%	9.3%
Paper deliveries, 1 000 tonnes	3 106	4 130
Paper production, 1 000 tonnes	3 034	4 065

Paper division sales were EUR 1 979 (2 856) million, down 30.7% due to significantly lower volumes resulted from accelerated market demand decrease due to Covid-19. There is overcapacity in the market and sales price decreases had a negative impact to sales as well. Oulu paper mill Covid-19 and conversion impact to sales was negative EUR 281 million.

Operational EBIT at EUR -38 (213) million declined by 118.1% due to lower volumes and prices. Cost savings had a positive EBIT impact. Oulu paper mill Covid-19 and conversion impact was negative EUR 46 million.

Full year cash flow was positive EUR 30 million due to excellent working capital management.

Other

The segment Other includes Stora Enso's shareholding in the energy company Pohjolan Voima (PVO), and the Group's shared services and administration.

EUR million	2020	2019
Sales	928	1 076
Operational EBITDA	-3	-4
Operational EBITDA margin	-0.3%	-0.3%
Operational EBIT	-35	-32
Operational EBIT margin	-3.8%	-3.0%
Cash flow from operations	-17	-55
Cash flow after investing activities	-27	-71

Sales of the segment Other at EUR 928 (1 076) million reduced from previous year mainly due to lower internal sales of energy and logistics services.

Investments and capital expenditure

Additions to fixed and biological assets including internal costs capitalised in 2020 totalled EUR 687 (656) million. The total amount includes additions in biological assets of EUR 79 (88) million.

During the second quarter of 2020, the formed fiber production line commissioning was completed at Hylte Mill. The brand PureFiber™ by Stora Enso was launched and production started. The EUR 22 million investment at Skoghall Mill in Sweden in an expansion of the existing water treatment plant was taken in operation in April.

During the third quarter of 2020, the investment of EUR 25 million in the steam turbine in Maxau Mill, Germany was taken in operation. The investment improves the cost-competitiveness of the mill and reduces CO_2 emissions.

In August 2020, Stora Enso announced investment in building a pilot facility for producing a lightweight, fiber-based foam material, for protective packaging and cushioning. The pilot plant is built at Stora Enso's Fors Mill in Sweden. It is estimated that the plant will be ready in the fourth quarter of 2021. Decisions about commercialisation will follow, after evaluating the results of the pilot-scale production.

In September 2020, Stora Enso announced an investment of approximately EUR 79 million in a new production line for cross laminated timber (CLT) at its Ždírec sawmill in the Czech Republic. The investment will further enhance Stora Enso's position as a global provider of high-quality engineered wooden elements and as a market leader in CLT. Production is scheduled to begin during the third quarter of 2022. The estimated annual production capacity will be approximately 120 000 m³ after ramp-up. Also in September, Stora Enso announced an investment in dispersion barrier technology at its Forshaga site in Sweden as a step in its innovation agenda. The investment of approximately EUR 10 million enables the development and production of paperboard with barrier properties that are easier to handle in a recycling process, have a lower carbon footprint and can be compostable in industrial facilities. The new equipment is expected to come into use during the second quarter of 2021.

In November 2020, Stora Enso commenced a feasibility study and environmental permit application process on enhancing and expanding the pulp- and board-making capabilities at its Skoghall Mill in Sweden. The feasibility study evaluates a possible upgrade and expansion of existing integrated pulp capacity from 370 000 tonnes to 780 000 tonnes annually and a possible increase of 120 000 tonnes in board capacity. After the investment, the mill would be integrated close to 100%, with an additional 220 000 tonnes of softwood market pulp. If the investment is approved following the feasibility study and environmental permit application process, the capital expenditure for the upgrade and expansion is estimated to be approximately EUR 800–850 million. The feasibility study is expected to be completed by the end of 2021. Production would start earliest during the fourth quarter of 2023.

In December 2020, Stora Enso announced an investment of EUR 14 million to build a granulation and packing plant for lignin. According to Stora Enso's strategy, lignin is one of the key innovation areas for delivering growth on new applications, such as energy storage, binders and carbon fiber. The granulation plant will be located at Stora Enso's Sunila Mill in Finland. Also in December, Stora Enso announced an investment in centralising and modernising the wood handling capacity at its Imatra Mills in Finland. The investment of EUR 80 million will enhance Stora Enso's production capabilities for premium packaging board. The investment is planned to start in Q1 2021 and to be completed in Q3 2022.

The other main projects ongoing at the end of 2020 were the EUR 350 million conversion of the Oulu paper mill into kraftliner production in Finland and the EUR 10 million pilot facility at Sunila Mill in Finland for producing bio-based carbon materials from lignin.

Innovation, research and development

Stora Enso's expenditure on innovation, research and development in 2020 was EUR 146 (141) million, which was equivalent to 1.7% (1.4%) of sales.

Stora Enso is recognised as the renewable materials company. We believe that everything made with fossil-based materials today can be made from a tree tomorrow. Work for replacing fossil-based products with new bio-based applications continues.

Scale-up of DuraSense™ by Stora Enso biocomposites production at Hylte Mill, and PureFiber™ by Stora Enso formed fiber products, both in the Packaging Solutions division, lignin for phenol replacement at Sunila Mill, LineoT™ by Stora Enso in the Biomaterials division and ECO TAG™, as well as the New Retail Solution in Intelligent Packaging all continued in 2020. The speed of commercialisation varies but gradually more real customer applications are brought into use.

The Packaging Materials division continued to develop the generation 1 micro-fibrillated cellulose (MFC) films at Imatra Mills. Some adjustments will still be required to the paper machine 7 at Imatra Mills to enable Proof of Concept #2. The first trial orders were shipped during the year. The generation 2 dewatering development continues with collaboration partners.

The formed fiber project, the implementation of which started in February 2019, has developed very quickly and smoothly. The installation of the first two presses, related pulp handling and infrastructure were commissioned and products qualified with customers. Following the good success an expansion investment was launched in the autumn adding more capacity to the operations at Hylte Mill and establishing a first plant in China for the food service customers.

The Group focuses on the development of sustainable packaging applications to replace plastics, bio-based barriers solutions for packaging and biomaterial innovations around the lignin platform. Additionally, focus on digitalisation has increased with focus areas Robotic Process Automation (RPA), machine learning, smart operations, transparent supply chain, digital customer experience, and Intelligent Packaging.

Strong consumer demand to replace fossil-based plastics has positively impacted the attractiveness of new fiber-based solutions to our customers. These applications include materials for new packaging board grades, especially those aiming to replace single-use plastics and plastic packaging. For long-term success, Stora Enso collaborates with academia and research institutes; for fast results, we work together with startups. During the year, the cooperation with the Combient Foundry Venture Client Program has expanded. A first cycle was run in China in spring 2020 and in the autumn the first materials cycle was launched targeting innovative food packaging and new wood products. Stora Enso was once again recognised as the most start-up friendly corporation in Finland in 2020, as also in 2018.

To trigger innovation processes, we are more active in searching for collaborations with, customers, suppliers, institutes and academia. We have a high activity in ideation by our own employees. WeNovate, our group-wide tool for collecting and evaluating ideas from the divisions and functions, has supported the internal innovation culture development. In 2020, we ran 19 campaigns and had 16 open idea channels operating. In total almost 508 ideas were collected, compared to 1 200 in 2019. The most suitable ideas enter a state-gate based innovation process.

Stora Enso has established funds to be used in an agile manner for capital expenditure in novel projects, which have potential business cases. The Innovation Fund is an allocation for new pilot scale opportunities and new business models. The Digitalisation Fund is an allocation for piloting new digital tools and models. Applications for these resources are approved in the company's Investment Working Group. We have allocated an agility reserve to cover operational expenses related to cross-divisional projects in 2020.

Stora Enso defines innovation as the process of translating ideas into new value. Research and development work is a basic element in the process. The company employed about to 400 people in the following R&D centres:

- Research Centre and Pulp Competence Centre in Imatra (Finland)
- Research Centre and Pulp Competence Centre in Karlstad (Sweden)
- The Innovation Centre for biomaterials in Sickla, Stockholm (Sweden)
- The Innovation Centre for packaging in Helsinki (Finland)
- Biocomposite Competence Centre in Hylte (Sweden)
- Intelligent Packaging Centre in Tampere (Finland)
- Virdia demonstration plant in Louisiana and Research Centre in Virginia (United States)

Supporting Stora Enso's innovation strategy, we have several co-operation projects with research organisations and academic institutions. The aim is to build a clearer understanding of how our needs and the universities' capabilities can meet, first and foremost in the research sphere surrounding Stora Enso research priorities and the long-term scientific challenges for R&D in the divisions. The second target is to widen the contact network. Thirdly, we aim to identify topics where we have special interest regarding the universities' bachelor, master and PhD programmes, also for recruiting talents to mills and research/innovation centres.

Our collaboration partners include Aalto University in Finland, Chalmers University of Technology and the Royal Institute of Technology in Sweden, VTT Technical Research Centre of Finland, SweTree Technologies Ltd., Swedish University of Agricultural Science, Treesearch and Wallenberg Wood Science Center. Stora Enso is a member of national, European and trade associations focused on the bioeconomy and forest agendas including Confederation of European Paper Industries (CEPI), Forest Technology Platform (FTP), and the Swedish and Finnish Forest Industry Federations. Stora Enso is also a member in the EU's Biobased Industries Consortium (BIC) and the Bio-Based Industries Initiative Joint Undertaking, a partnership within the EU Horizon 2020 research programme.

Intellectual property (IP) is an increasingly important tool to support Stora Enso's transformation. In this context, IP rights relate to areas such as patents, utility models, designs, trademarks, domain names, know-how and trade secrets. IP landscape as well as FTO (Freedom to Operate) investigations are of equally high importance. During 2020, Stora Enso continued to strengthen its patent portfolio, with priority founding patent applications filed. Over 440 patents were granted worldwide during the year. The Group Intellectual Property (IP) has the responsibility for handling IP matters. The Group IP strategy has been approved by the CEO supported by the Group IP Steering Team.

Non-financial information

Requirements of non-financial information reporting according to the Finnish Accounting Act are reported below. The scope of the reporting includes those non-financial topics that relate to the Group's key risks.

Risks and policy principles related to these topics are additionally described on pages 10–16, including Stora Enso's reporting according to Task Force on Climate-related Financial Disclosures (TCFD) recommendations.

Business model

Replacing the use of fossil-based resources with renewable raw materials is the foundation for a sustainable bioeconomy. Stora Enso's products contribute to a low-carbon circular economy, in which materials are reused and recycled, while waste is minimised, to maximise environmental, social, and financial added value. As a leading renewable materials company with access to carbon-neutral biomass, Stora Enso is in a unique position to combat climate change. Stora Enso's business model description is in the beginning of the Report of Board of Directors and value creation model is presented in **Strategy 2020 on page 12**.

Stora Enso acknowledges the importance of the United Nations Sustainable Development Goals as part of a commonly agreed global ambition to end poverty, protect the planet and improve the lives and prospects of everyone, everywhere. Read more on **pages 10–11 in Sustainability 2020**.

Sustainability

Sustainability is a key element of Stora Enso's corporate governance, promoted by the Board of Directors, the CEO, and the Group Leadership Team (GLT). The CEO carries the ultimate responsibility for the successful implementation of the sustainability strategy. Work on sustainability is led by the Executive Vice President, Sustainability, who reports directly to the CEO. The Board of Directors' Sustainability and Ethics Committee oversees the implementation of Stora Enso's Sustainability Strategy and Ethics and Compliance Strategy. The Committee met four times in 2020.

Stora Enso's Sustainability Policy describes our overall approach and governance model. At the same time, our Code of Conduct and other policies, guidelines, and statements on specific sustainability topics all further elaborate our approach, while also guiding our employees in their everyday work. These documents are available at storaenso.com/sustainability.

More information on Stora Enso's approach to sustainability is published in **Sustainability 2020**.

Covid-19 pandemic

The global pandemic has underscored the importance of our work on the social agenda. During the year, we promoted the health and safety of our employees and others working in our premises through various measures. We took early action by imposing a global travel ban from early February. We also prohibited all physical meetings, strongly advising personnel to work remotely whenever feasible, restricting access to mill sites, and quarantined any affected employees. These practices were in place throughout most of the year. Our employees were advised to follow the rules and recommendations of national and local authorities both at work and in their private lives. We continue to closely monitor the Covid-19 situation. Read more on our adaption to the global pandemic and work on social agenda on pages 18–31 and 60–63 in **Sustainability 2020**.

Environmental matters

Forests, plantations, and land use
Key policy: Wood and fiber sourcing, and land management policy
Progress on responsible forestry is followed with a key performance indicator (KPI) measuring the proportion of land in wood production and harvesting owned and managed by Stora Enso that is covered by forest certification schemes. Our target is to maintain the high level of 96%. In 2020, coverage amounted to 98% (98% in 2019). At year-end Stora Enso owned or managed lands with a total area of 2.34 million hectares.

In 2020, the total amount of wood (including roundwood and wood chips) delivered to our mills was 35.0 million m³ (solid under bark) (36.3 million m³ in 2019). The proportion of third-party certified wood in the Group's total wood supply was 78% (75%).

Carbon dioxide
Key policy: Energy and carbon policy
Stora Enso's science-based target (KPI) is to reduce greenhouse gas emissions from our operations by 31% per tonne of pulp, paper and board produced by 2030 compared with the 2010 base-year. In 2020, our CO_2e emissions per saleable tonne of board, pulp, and paper were 26% lower than the 2010 benchmark level (26%[1] lower in 2019). The performance remained stable despite the Group's lower production in 2020 compared to 2019. During 2020, our performance was positively affected by the less fossil-intensive electricity purchased for our mills in Finland as well as energy efficiency improvements and further reductions of fossil fuel use at several mills.

[1] Recalculated due to additional data or organisational scope changes after previous report.

Water use
Key policy: Stora Enso's Environmental Guidelines
The objective of the Group's KPIs on total water withdrawal and process water discharges is to drive a downward trend from our 2016 baselines of 57 m³ and 27 m³ per saleable tonne of product, respectively. In 2020, our total water withdrawal was 65 m³ per saleable tonne (61 m³ in 2019) and our process water discharges amounted to 31 m³ per saleable tonne (29 m³ in 2019). The normalised performance as per tonne was partly affected by lower production levels. The water needed at our board, pulp and paper mills is not in direct relation to production volumes, and especially waste-water treatment at our mills require a regular flow of water to function properly.

Social and employee matters

Employees and wider workforce
Key policies: Minimum HR requirements, Health and Safety policy
On 31 December 2020, there were 23 189 (25 141) employees in the Group. The average number of employees in 2020 was 24 455, which 1 640 less than the average number in 2019. The numbers include 50% of the employees at Veracel in Brazil and Montes del Plata in Uruguay.

Personnel expenses totalled EUR 1 270 (1 331) million or 14.8% of sales. Wages and salaries were EUR 966 (1 004) million, pension costs EUR 152 (166) million and other employer costs amounted to EUR 151 (157) million.

At the end of 2020, the Group's top four countries in respect to the number of employees were Finland, Sweden, China, and Poland. 24% (26%) of employees were women.

Personnel turnover in 2020 was 12.7% (16.3%, restated). Illness-related absenteeism amounted to 3.6% (3.4%, restated) of total theoretical working hours.

In 2020, our Total Recordable Incident (TRI) rate decreased to 6.1 (7.0). The milestone for 2020 was 4.7. Tragically, during the year, two fatalities occurred at our Guangxi forestry operations in China, both involving contractor employees. We have investigated the incidents and their root causes together with the contractor and local authorities. The learnings from these tragic events will be acted upon at Stora Enso to prevent such accidents from recurring.

Stora Enso's KPI for leadership, the Leadership Index, measures employee perceptions of their managers. The index is calculated based on our annual employee survey. Our target is to achieve an index of 85/100 by 2022. In 2020, the Leadership Index improved to 84 (83).

Remuneration to the Board of Directors and key management is described in Note 7 of the Consolidated financial statements.

Suppliers
Key policy: Supplier Code of Conduct (SCoC)
Stora Enso's key performance indicator (KPI) for responsible sourcing measures the proportion of our total supplier spend covered by our SCoC, including all categories and regions. By the end of 2020, 96% of Stora Enso's total spend on materials, goods, and services was duly covered (96% at the end of 2019), which exceeds our target to maintain the high level of 95%.

Community
Key policies: Human Rights Policy, Guidelines for Social Responsibility

Guangxi, China
Stora Enso leases 81 000 hectares of land in Guangxi province China, of which 53 600 hectares is leased from state-owned forest farms. The remaining 27 400 hectares, or 34% of the total area, is social land leased from village collectives, individual households, and local forest farms.

Parts of the land leased by Stora Enso have been occupied for up to ten years for the purpose of growing crops and trees on a small scale. In some cases, the occupiers are claiming rights to the land based historical land ownership documents that have been superseded by state ownership in successive land reform processes.

At the end of the year, 5 350 hectares of productive land leased by Stora Enso was occupied, including 4 870 hectares of state-owned land and 480 hectares of social land. Approximately 4 000 people were growing crops and trees on the occupied land. In 2020, the Guangxi government's recent efforts to recover occupied land in the province reached areas where Stora Enso leases land from state-owned forest farms. Stora Enso is carefully monitoring the land recovery process and, for example, reserves the right to stop the proceedings at any point. We have also trained our local staff to identify causes for concern, to promote our grievance channel, and to engage with the occupiers to ensure that they are informed and do not feel threatened.

Bahia, Brazil
In Bahia, Brazil, work continued on a Sustainable Settlement Initiative launched in 2012 to provide farming land and educational support for local families in the landless people's social movements. In 2018, Veracel signed a new agreement with the social landless movements to complement the earlier agreed Sustainable Settlement Initiative.

Since 2012, Veracel has voluntarily approved the transfer of approximately 20 000 hectares of land to benefit landless people. By the end of 2020, 215 hectares or 0.3% of productive land owned by Veracel remained occupied by movements not involved in the agreements. Veracel will continue to seek repossessions of the remaining occupied areas through legal processes.

At the end of 2020, the total land area owned by Veracel was 213 000 hectares, of which 82 000 hectares are planted with eucalyptus for pulp production.

Respect for human rights

Key policy: Human Rights policy
Stora Enso's commitment to respect human rights covers all our operations, including our employees, contractors, suppliers, and neighbouring communities. In addition to our commitment to the UN Guiding Principles on Business and Human Rights, Stora Enso's annual Slavery and Human Trafficking Statement is available at storaenso.com/sustainability. Human rights are integrated into our Sustainability Agenda, which is aligned with the ten principles of the UN Global Compact.

While we respect and consider all human rights important, our highest priority human rights remain the primary focus of our work:

- Health and safety
- Fair labour (fair employment conditions, forced labour, freedom of association, non-discrimination and non-harassment)
- Land and natural resource rights acquisition and management
- Grievance mechanisms
- Children's rights (relevant to the forest sector).

Financials

We continued to develop our human rights due diligence programme in 2020. By the end of the year, we had finalised 22 out of 24 actions addressing development areas that were identified in 2019.

Anti-corruption and bribery matters

Key policies: Business practice policy, the Stora Enso Code (Code of Conduct)
As to Business Ethics, in 2020, a total of 86 reports received through Stora Enso's various grievance channels were identified as potential non-compliance cases (57 in 2019). A total of 76 investigations of potential non-compliance cases were completed in 2020 (40 in 2019), also including open cases from previous years. Proven cases leading to disciplinary action, legal action and/or process improvements were identified in 28 (26) of the investigations. Based on our assessments, 10 of the proven cases can be considered to relate to corruption and/or fraud (9 in 2019). All these cases resulted in employee dismissal or disciplinary process. Two of the cases resulted in the termination of business relationships.

The company's code of conduct index monitors and evaluates employees' perceptions of Stora Enso's work on topics covered by the Stora Enso Code and it is based on the annual employee survey results. In 2020, the index increased to 86 in 2020 (84 in 2019). Our objective is to maintain the positive trend by increasing our efforts in communications and training during 2021.

Environmental investments and liabilities

In 2020 Stora Enso's environmental investments amounted to EUR 91 (54) million. These investments were mainly to improve the quality of air and water, to enhance resource efficiency and energy self-sufficiency, and to minimise the risk of accidental spills.

Stora Enso's environmental costs in 2020 excluding interest and including depreciation totalled EUR 195 (172) million. These costs include taxes, fees, refunds, permit-related costs, and repair and maintenance costs, as well as waste water treatment chemicals and certain other materials.

Provisions for environmental remediation amounted to EUR 91 (97) million at 31 December 2020, details of which are in Note 22, Other Provisions, of the Consolidated financial statements. There are currently no active or pending legal claims concerning environmental issues that could have a material adverse effect on Stora Enso's financial position. Payments related to environmental remediation measures amounted to EUR 18 (12) million.

Risks and risk management

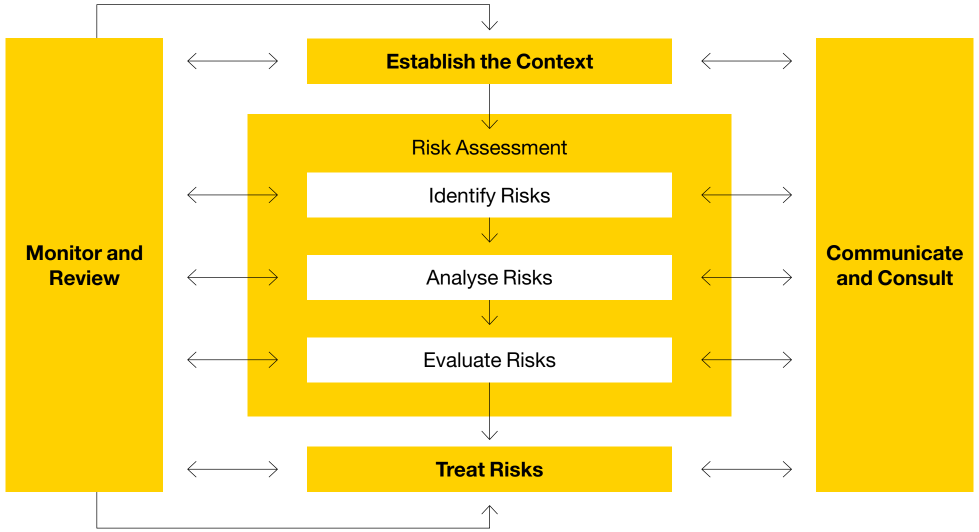
Our approach to risk management

Risk is an integral element of business and corporate governance, and it is characterised by both threats and opportunities, which may have an impact on future performance and the financial results of Stora Enso, as well as on its ability to meet certain social and environmental objectives. Stora Enso is committed to ensuring that systematic, holistic and proactive management of risks and opportunities is among its organisational core capabilities, and that a culture is fostered where both are carefully considered in all business decisions. Through consistent application of dynamic risk analysis and scenario planning, we enhance opportunities and manage risk in order to reduce threats which may prevent us from reaching our business goals.

Risk governance

Stora Enso defines risk as the effect of uncertainty on our ability to meet organisational values, objectives and goals. The Group Risk and Internal Control Policy, which is approved by the Board of Directors, sets out the overall approach to governance and the management of risks in accordance with the COSO (Committee of Sponsoring Organizations) framework and in line with the ISO 31000 standard. The Board retains the ultimate responsibility for the overall risk management process and for determining predominantly through Group policies the appropriate and acceptable level of risk. The Board has established a Financial and Audit Committee to provide support to the Board in monitoring the adequacy of the risk management process within Stora Enso, and specifically regarding the management and reporting of financial risks. This oversight scope includes also monitoring of the cybersecurity risk. The Sustainability and Ethics Committee is responsible for overseeing the company's sustainability and ethical business conduct, its

Risk management process



strive to be a responsible corporate citizen, and its contribution to sustainable development.

The head of Enterprise Risk Management, reporting to the CFO, is responsible for the design, development and monitoring of the top-down implementation of the Group risk management framework. Each division and Group function head, together with their respective management teams, are responsible for process execution and cascading the framework and guidelines further down in the organisation. The Internal Audit unit evaluates the effectiveness and efficiency of the Stora Enso risk management process.

During 2020, the dedicated Group level coordination team continued its' work related to the implementation of the TCFD (Task Force on Climate-related Financial Disclosures) recommendations. Also, collaboration between different risk and assurance functions was strengthened with more systematic cross-functional cooperation.

Risk management process

Risk management is embedded in all decision-making processes, with holistic risk assessments conducted also as part of all significant investment decisions. In connection with the annual strategy process, business divisions and group service and support functions conduct a holistic baseline risk assessment, linked to their key objectives. Specific guidance regarding the risk management process is outlined in the enterprise risk management instructions.

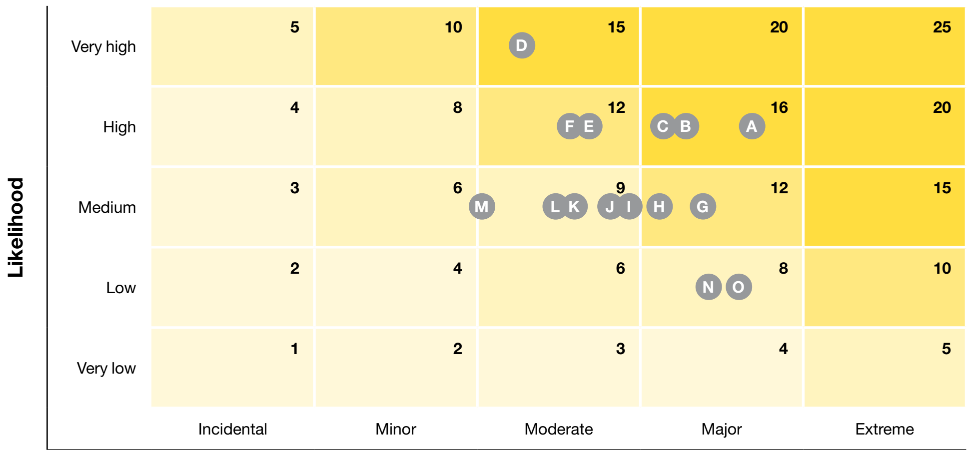
Business entities and functions identify the sources of risk events including changes in circumstances and their causes and potential consequences. Stora Enso's risk model outlines the overall risk universe which is used to support holistic risk identification and risk consolidation, while also providing taxonomy as well as consistency in risk terminology.

Risk analysis involves developing an understanding of the risk to provide an input for risk evaluation. The purpose of risk evaluation is to determine the risk priorities and to support decision making to determine which risks require treatment/actions. Risks are assessed in terms of their impact and likelihood of occurrence, often based on specific risk scenarios. The effectiveness of existing risk reduction is factored in to define the residual risk level. Pre-defined impact scales consider financial, safety and reputational impacts, on both a quantitative and qualitative basis.

Risk treatment involves selecting one or more risk management option, such as avoidance,

Main risk factors

Risk map



Impact – annualised Group EBITDA impact / share price impact / reputational impact

Key risks in 2020

Risk	Risk classification	Time span*	Change vs 2019	Level of possible management influence
Major impact – high likelihood				
A Macroeconomy, geopolitics, and currency rates	S/F	ST	↑	
B Global warming – physical impacts	S	LT	↑	
C Regulatory changes	S/C	MT	↑	
Moderate impact – very high likelihood				
D Personal safety – employees and wider workforce	O	ST	→	
Moderate impact – high likelihood				
E Information technology, security and digitalisation	O	MT	→	
F Sourcing	S/O	MT	→	
Major impact – medium likelihood				
G Ethics and compliance	C	MT	→	
H People and capabilities	O	MT	→	
Moderate impact – medium likelihood				
I Competition and market demand	S	MT	→	
J Physical assets	O	ST/LT	↑	
K Product safety and compliance	O/C	MT	→	
L Strategic investments	C	MT	↓	
M Communities and human rights	O/C	MT	→	
Minor impact – low likelihood				
N Forest and land use	O/C	MT	→	
O Mergers, acquisitions and divestments	O/C	MT	→	

* The most relevant timeframe when underlying risk factors are expected to manifest themselves

Symbols
S = Strategic
O = Operational
C = Compliance
F = Financial market and reporting
ST = Short-term (next 12 months)
MT = Medium term (1–5 years)
LT = Long-term (upto 25–30 years)

Change vs 2019
Increased ↑
Decreased ↓
Stable →

Level of possible management influence

Low High

reduction, sharing or retention. Additional risk mitigation actions are determined for risks which exceed the perceived risk tolerance incorporating the assignment of responsibility, schedule and timetable of the risk response actions.

Following the annual baseline assessment, prioritised and emerging risks, as well as the corresponding risk mitigation and business continuity plans related to those risks, are reviewed in divisional business review meetings on a semi-annual basis.

Despite the measures taken to manage risks and mitigate the impact of risks, and while some of the risks remain beyond the direct control of the management, there can be no absolute assurance that risks, if they occur, will not have a materially adverse effect on Stora Enso's business, financial condition, operating profit or ability to meet financial obligations.

Strategic risks

Macroeconomy, geopolitics, and currency rates

Stora Enso operates in more than 30 countries and is affected by the global economy. Changes in broad economic conditions, sharp market corrections, increasing volatility in foreign exchange rates and chronic fiscal imbalances could have negative and material impact on the Group's profit, cash flows and financial position. A prolonged global recession may materially and adversely affect Stora Enso's performance and financial condition. A recession may also materially affect the Group's customers, suppliers and other parties with whom it does business. Exchange rate fluctuations may have a material impact on the reported results through transaction and translation risk impact.

A significant and sustained economic downturn or economic shock, such as the one triggered by Covid-19 during 2020, may involve materially adverse impact on the Group's operational performance and financial condition. While the global economic outlook has brightened towards the end of 2020, our baseline assumptions show a weaker rebound in 2021 than anticipated earlier. Recent positive vaccine news have shifted the balance of risks substantially and opened the door to a more rapid relaxation of restrictions. However, further downside risks, including rising risk aversion among households, businesses and investors, fragility of systemic resilience, and subdued growth over the medium term are still notable. Consequently, the overall macroeconomic risk is considered to have increased on relative basis, compared to the conditions at end of 2019.

Stora Enso is exposed to several financial market risks that the Group is responsible for managing under policies approved by the Board of Directors. The objective is to achieve cost-effective funding in Group companies and manage financial risks using financial instruments to reduce earnings volatility. The main exposures for the Group besides currency risk are interest rate risk, funding risk, commodity price risk and credit risk.

Financial risks are discussed in detail in Note 24, Financial risk management, of the Consolidated financial statements.

Policy principles and mitigation measures

The Group has a diversified portfolio of businesses which mitigates exposure to any one country or product segment. We monitor the external environment continuously and our planning assumptions and dynamic scenario modelling take account of important near- to medium-term and long-term drivers and risks related to key macro-economic factors. We closely monitor the Board-approved risk appetite compliance for specific financial metrics and actively manage cash flow and liquidity. We hedge 50% of the highly probable 12-month net foreign exchange flows in main currency pairs. Currency translation risk is reduced by funding assets, whenever economically possible, in the same currency as the asset. The divisions regularly monitor their order flows and other leading indicators, where available, so that they may respond quickly to deterioration in trading conditions. In the event of a significant deterioration in general economic condition and in main leading economic indicators, the Group identifies and implements cost reduction measures to offset the impact on margins from deterioration in sales.

Related opportunities

- A diverse business portfolio and geographical presence, competitive strength and resilient balance sheet reduce the Group's risk exposures
- Strategic opportunities in changing currency and macroeconomic environment.

Global warming – physical impacts

Physical risks related to climate change are assessed based on stress scenario on long-term (25-30 years) basis. Changes in precipitation patterns, periods of drought, typhoons and severe frost periods in the subtropics could cause damage to operations and tree plantations. Increases in average temperatures could lead to changes in the tree species composition of forests. Drought periods together with high temperatures increase the risk of forest fires and insect outbreaks, potentially affecting forests and regional wood prices. Milder winters will impact harvesting and transport of wood in northern regions and the related costs. Water stress to our production units is not seen as a material risk given geographical location. The increase in risk level vs 2019 is driven by the lack of political decisions and multilateral coordination to mitigate the climate change, increasing the probability of physical impacts. See also "Competition and market demand", "Regulatory changes" and "Sourcing".

Policy principles and mitigation measures

Physical risks are to great extent subject to risk transfer and thereby within the cover of our property and business interruption insurance programs. With regards to forest and plantation assets, making roughly 35% of the Group's balance sheet, Stora Enso benefits from strong strategic resilience through geographical diversification within the asset portfolio. Moreover, risks related to insect damages such as bark beetle infestation in Nordic forest assets is limited by better inherent endurance of Nordic forest compared for instance to Central-European forests. Diligent plantation planning is ensured to avoid frost sensitive areas and non-controversial tree breeding and R&D programmes are applied to increase tolerance of extreme temperatures. Stora Enso maintains a diversity of forest types and structures and enforces diversification in wood sourcing. Wood harvesting in soft soils involves the implementation of best practices guidelines.

Related opportunities

Nordic forests in Finland and Sweden benefit from increased heat summation and longer growing seasons, leading to acceleration in forest growth with direct positive impact on the value of own forest asset and indirect impact related to market wood availability and cost.

Competition and market demand

Continued competition and supply and demand imbalances in the raw material, energy and products market, driven by megatrends such as eco-awareness and climate change, may have an impact on profitability. The paper, pulp, packaging and wood products industries are mature, capital intensive and highly competitive. Stora Enso's principal competitors include a number of large international forest products companies and numerous regional and more specialised competitors. Customer demand for products is influenced by the general economic conditions and inventory levels and affects product price levels. Product prices, which tend to be cyclical in this industry, are affected by capacity utilisation, which decreases in times of economic slowdowns. Changes in prices differ between products and geographic regions.

The following table shows the operating profit sensitivity to a +/- 10% change in either price or volume for different segments based on figures for 2020.

Operating profit: Impact of changes +/- 10%, EUR million

Segments	Price	Volume
Packaging Materials	296	118
Packaging Solutions	58	20
Biomaterials	109	32
Wood Products	135	44
Forest	201	15
Paper	180	50

Furthermore, as a global warming-related risk, extreme weather events may disrupt the operations of our customers, and consequently result in increased volatility on product demand.

Policy principles and mitigation measures

The ability to respond to changes in product demand and consumer preferences and to develop new products on a competitive and economic basis calls for innovation, continuous capacity management and structural development.
The risks related to factors such as demand, price, competition and customers are regularly monitored by each division and unit as a routine part of business management. These risks are also continuously monitored and evaluated on a Group level to gain a perspective of the Group's total asset portfolio and overall long-term profitability potential.

Financials

Related opportunities
Stora Enso, as one of the biggest private forest owners in the world, benefits from a strategic renewable resource base. Our expertise in wood and wood based renewable materials is focused on responding to changing customer and consumer preferences, driven by the climate change. Products based on renewable materials with a low carbon footprint help customers and society at large to reduce CO_2 emissions by providing an alternative to solutions based on fossil fuels or other non-renewable materials.

Operational risks

Personal safety – employees and wider workforce
Failure to maintain high levels of safety management can result in harm to the Group's employees and contractors, and also to communities near our operations and the environment. Impacts in addition to physical injury, health effects and environmental damage could include liability to employees or third parties, impairment of the Group's reputation, or inability to attract and retain skilled employees. Government authorities could additionally enforce the closure of our operations on a temporary basis.

Personnel safety and security can never be compromised and thus Stora Enso must be aware of potential safety risks and provide adequate guidelines to people for managing risks related to, for example, travelling, working and living in countries with security or crime concerns. Focusing on the security of key personnel is also important from a business continuity perspective.

Policy principles and mitigation measures
Stora Enso's goal is to provide an accident-free workplace. Encouraging a company-wide safety culture means that everyone is responsible for making every workday healthy and safe - from our top management and throughout the company. Safety management at Stora Enso is based on international standards such as OHSAS 18001 and ISO 45001, but our processes go beyond these requirements.

Stora Enso's approach to safety extends to contractors, suppliers, and on-site visitors. We encourage everyone to give feedback and provide ideas on how to further improve safety. Additionally, we promote safety among our contractors and suppliers through a dedicated e-learning - Safety Trail. We also emphasise the importance of safety by asking suppliers for information on their safety performance in our tendering process.

Stora Enso's Health and Safety Policy defines the objectives for our safety management as well as our governance model on how we manage health and safety topics in practice and how we integrate them into annual planning and reporting.

Other key documents applied in our people and safety management include our:
- Stora Enso Code - our code of conduct
- Supplier Code of Conduct
- Minimum Human Resources Requirements - Labour Conditions
- Global Framework Agreement
- Diversity Policy

For more information please see **Sustainability 2020**: Employees and wider workforce.

Related opportunities
- Leading health and safety performance strengthens the brand as an employer.
- Improved engagement, efficiency and productivity.

Information technology, security, and digitalisation
The Group is dependent on IT systems for both internal and external communications and for the day-to-day management of its operations. The Group's information systems, personnel and facilities are subject to cyber security risk. Other operational IT related risks relate to the potential unavailability of IT services due to human error in operations, damaged hardware in data rooms and data centres, network connection issues and the failure of suppliers to follow service level agreements.

Accidental disclosure of confidential information due to a failure to follow information handling guidelines or due to an accident or criminal act may result in financial damage, penalties, disrupted or delayed launch of new lines of business or ventures, loss of customer and market confidence, loss of research secrets and other business critical information. Further risks involve the loss of backup media and violation of data privacy regulations.

The digital transformation of businesses continues to alter the ways in which organisations operate. Digital capabilities penetrate all aspects of business and operating models, reshaping how companies and functions generate value. Therefore, digitalisation also involves potentially disruptive forces. Moreover, customers, regulators and other stakeholders expect companies to understand what data they have or could have, what risks it poses, and to have plans to manage it well.

Business process erosion, failure to take advantage of the upside that technology offers or inability to harvest related synergies could significantly impair Stora Enso's competitiveness in the market place.

Policy principles and mitigation measures
The management of risks is actively pursued in the Information Risk Management System and best practice change management and project methodologies are applied. A number of security controls have been implemented to strengthen the protection of confidential information and to facilitate compliance with international regulations. Specific measures include a thorough RfP process in supplier selection for business-critical services, supplier audits, annual controls and audit, data centres located in low-risk areas, backup connections for critical services, disaster recovery plans, targeted scanning and investigation activities, encryption of communication, information and devices, remote management of security on devices and information security awareness training.

Stora Enso has an extensive digitalisation programme with the aim to develop a competitive advantage by making full use of the opportunities to drive revenue growth and internal efficiency. Moreover, Stora Enso has established a programme with external partners to search for technological development initiatives with a clear business purpose. With experimental and fast prototyping, these projects will help to identify and further develop initiatives that will speed up Stora Enso's digital agenda by exploring new technologies and capabilities.

Related opportunities
- Efficient operations, performance optimisation, innovative product offerings, and new customer services through digitisation and sophisticated IT systems.
- New technologies offer significant potential for higher level of process optimisation and automatisation, generating new business and enhanced value propositions for customers and consumers.

Sourcing
Violation of Supplier Code of Conduct could result in contractual, financial and reputational damages and loss of sales, if Stora Enso were to be blacklisted by customers. Similarly, poor occupational safety performance of subcontractors can be a risk to our reputation. Increasing input costs or availability of materials, goods and services may adversely affect Stora Enso's profitability. Securing access to reliable low-cost supplies and proactively managing costs and productivity are of key importance. Reliance on outside suppliers for natural gas, oil and coal, and nearly half of the electricity consumed, leaves the Group susceptible to changes in energy market prices and disturbances in the supply chain. As a global warming-related physical risk, potential acute availability shocks or chronic shortage of water may in the long term impact the Group's operations through our supply chains. There is also an increased risk for disturbances in the supply chain due to cyber incidents, pandemic related lockdown measures, political instability and other drivers related to global trade.

The following table shows Stora Enso's major cost items.

Composition of costs in 2020

Operative costs	% of costs	% of sales
Logistics and commissions	11%	10%
Manufacturing costs		
Fiber	32%	30%
Chemicals and fillers	9%	9%
Energy	6%	5%
Material	6%	5%
Personnel	16%	15%
Other	13%	12%
Depreciation	7%	7%
Total costs and sales	**100%**	**93%**
Total operative costs and sales in EUR million	**7 954**	**8 553**
Equity accounted investments (EAI), operational		51
Operational EBIT (EUR million)		**650**

In many areas Stora Enso is dependent on suppliers and their ability to deliver a product or a service at the right time and of the right quality. The most important products are fiber, chemicals and energy, and machinery and equipment in capital investment projects. Increased demand for carbon neutral primary and secondary biomass fuels may increase energy costs. Drought periods and changing precipitation patterns may affect hydropower generation and electricity prices for units in Europe. Sea level rise will in long term impact the accessibility to ports and salt water intrusion may cause disruption in inbound and outbound supply chain operations. The most important services are transport and various outsourced business support services. For some of these inputs, the limited number of suppliers is a risk.

Policy principles and mitigation measures

Input cost volatility is closely monitored on the business unit, divisional and Group level. The Group applies consistent long-term energy risk management. The price and supply risks are mitigated through increased own generation, shareholding in competitive power assets such as PVO/TVO, physical long-term contracts and financial derivatives. The Group hedges price risks in raw material and end-product markets and supports the development of financial hedging markets. The Group uses a wide range of suppliers and monitors them to avoid situations that might jeopardise continued production, business transactions or development projects.

Suppliers and subcontractors must also comply with Stora Enso's sustainability requirements as they are part of Stora Enso's value chain, and their weak sustainability performance could harm Stora Enso and its reputation. Stora Enso's sustainability requirements for suppliers and audit schemes cover its raw materials, and other goods and services procured. Suppliers are assessed for risks related to their environmental, social and business practices through self-assessment questionnaires and supplier audits. Findings from such assessments are continuously followed up and progressive blacklisting procedures are applied as necessary.

Related opportunities

- Add value and bring innovation to our business globally by building strong and measurable relationships with the best suppliers.
- Enforce harmonised sourcing processes to increase capabilities, increase tender quality to reduce cost, and develop sustainable suppliers to reduce risk.

People and capabilities

Recruiting, retaining and developing a competent workforce and managing key talent throughout Stora Enso's global organisation are crucial to success. Competition for personnel is intense and the Group may not be successful in attracting or retaining qualified personnel. A significant portion of Stora Enso employees are members of labour unions and there is a risk that the Group may face labour market disruptions especially in times of restructuring and redundancies due to divestments and mill closures or during labour market negotiations. Moreover, in Finland, the Forest Industry Association has imposed fundamental changes to central agreements and hence Stora Enso will move into a collective bargaining model gradually from 2022. This change and the implementation of adopted process involves increased uncertainty related to labour relations. The loss of key employees, the Group's inability to attract new or adequately trained employees, or a delay in hiring key personnel could seriously harm the Group's business and impede the Group and its business divisions from reaching their strategic objectives. Labour market disruptions and strikes could have adverse material effects on the business, financial conditions and profitability.

Policy principles and mitigation measures

Stora Enso manages the risks and loss of key talents through a combination of different actions. Some of the activities aim at providing a better overview of the workforce of the whole Group, making the Stora Enso employer brand better known both internally and externally, globalising some of the remuneration practices and intensifying the efforts to identify and develop talents. Finally, the Group actively focuses on talent and management assessments, including succession planning for key positions. The majority of employees are represented by labour unions under several collective agreements in different countries where Stora Enso operates, thus relations with unions are of high importance to manage labour disruption risks.

Related opportunities

- Skilled and dedicated employees are essential for success.
- Engaged high performing people enable the implementation of transformation strategy and commercial success.

Physical assets

The physical assets that comprise the installed capacity of the production facilities have inherent risks or the potential for failure, and also involve risks for off-specification operation that could result in poor product quality, unplanned production downtime and lower output or increased production costs. In addition to the inherent risks of material process failure, the management must also consider the relative importance, e.g. criticality, of each asset on the plant's ability to meet delivery commitments and the business plan. In some instances, the risks are the result of inherent design deficiencies, failures in mode of operation or operating practices. In Stora Enso the significant asset risks lie predominantly in integrated (but also non-integrated) pulp and related energy production. The risks related to physical assets have slightly increased compared to end of 2019, driven by some delays in maintenance debt reduction, partly because of Covid-19 restrictions.

Policy principles and mitigation measures

Protecting production assets and business results is a high priority for Stora Enso to achieve the target of avoiding any unplanned production stoppages. This is achieved through structured methods of identifying, measuring and controlling different types of process risk and exposure. Divisional risk specialists manage this process together with insurance companies and other loss prevention specialists. Each year a number of technical risk inspections are carried out at production units. Risk improvement programmes and cost-benefit analyses of proposed investments are managed via internal reporting and risk assessment tools. Internal and external property loss prevention guidelines, fire loss control assessments, key machinery risk assessments and specific loss prevention programmes are also utilised. Planned stoppages for maintenance and other work are important to keep machinery in good order. Preventive maintenance programmes and spare part criticality analyses are utilized to secure the high availability and efficiency of key machinery.

Related opportunities

- Optimised maintenance and well controlled loss prevention programmes.
- Potential for competitive advantage through improved productivity and overall efficiency.

Product safety and compliance

Some of our products are used for package liquids and food consumer products, so any defects could affect health or packaging functions and result in costly product recalls. Wood products are incorporated into buildings, and this may involve product liability resulting from failures in structural design, product selection or installation. Failure to ensure product safety could result in product recalls involving significant costs including compensation for indirect costs of customers, and reputational damage.

Policy principles and mitigation measures

The mills producing food and drink contact products have established certified hygiene management systems based on risk and hazard analysis. To ensure the safety of its products, Stora Enso actively participates in CEPI (Confederation of European Paper Industry) working groups on chemical and product safety. In addition, all Stora Enso mills have certified ISO quality management systems. Furthermore, contractual liability limitation and insurance protection are used to limit the risk exposure to Stora Enso.

Related opportunities

- Differentiation and value creation through superior product quality and the highest level of product conformity.

Forest and land use

Wood is our most important raw material. Failure to meet stakeholder expectations or to ensure the chain of custody and economically, socially and environmentally sustainable forest and land management practices throughout our wood procurement and plantation operations could also result in significant reputational and financial loss to Stora Enso. Unpredicted changes in forest certification schemes could limit the availability of certified raw materials. Furthermore, global challenges such as population growth, global warming, increasing demand for agricultural land and bioenergy, and the widening gap between the supply and demand for wood, all require us to use natural resources even more efficiently. See also "Global warming - physical impacts", "Regulatory changes", and "Communities and human rights".

Policy principles and mitigation measures
Our Policy for Wood and Fiber Sourcing, and Land Management, robust traceability systems and our active promotion of forest certification all help to ensure that no wood or fiber from unacceptable sources enters our supply chain. In addition, when sourcing logging residues and other forest biomass for energy use, we follow the specific guidelines developed for the harvesting of forest energy, which include strict environmental considerations.

Related opportunities
As trees absorb carbon dioxide (CO_2) from the atmosphere and – together with wood-based products – act as carbon sinks, wood from sustainably managed forests represents a carbon neutral, renewable alternative to many non-renewable materials. If forests and plantations are managed sustainably, new generations of trees will replace those that are logged, sequestering more CO_2 from the atmosphere. Well-managed forests can make entire ecosystems more resilient to negative impacts, and benefit from positive ones.

Mergers, acquisitions, and divestments
Failure to achieve the expected benefits from any acquisition or value from assets or businesses sold can have serious financial impacts. The Group could find itself liable for past acts or omissions of the acquired business, without any adequate right of redress. Failure to achieve expected values from the sales of assets or deliveries beyond the expected receipt of funds may also impact the Group's financial position. In connection with an acquisition, past practices with targets related to e.g. pollution, competition law compliance or corruption could result in additional costs for Stora Enso and cause reputational damage. Divestments may involve additional costs due to historical and unaccounted liabilities. Business restructuring may also involve reputational impacts.

Policy principles and mitigation measures
Rigorous M&A guidelines, including due diligence procedures are applied to the evaluation and execution of all acquisitions that require the approval of the Board of Directors. Structured governance and policies such as the policy for responsible right-sizing, are followed when making restructuring decisions.

Related opportunities
A strong balance sheet and cash flow enable value enhancing M&A, when the timing and opportunity are right.

Compliance risks

Regulatory changes
The Group's businesses may be affected by political or regulatory developments in any of the countries and jurisdictions in which the Group operates, including changes to fiscal, tax, environmental or other regulatory regimes. Potential impacts include higher costs and capital expenditure to meet new environmental requirements, expropriation of assets, imposition of royalties or other taxes targeted at our industry, and requirements for local ownership or beneficiation.

The EU Green Deal and its climate targets for 2030 and 2050 have resulted in proliferation of future legislation which will impact Stora Enso. The policy initiatives from European commission will include policies and legislation on areas such as EU Forest Strategy, EU ETS, Carbon Border Adjustment mechanism, Sustainable products initiative, Packaging and Packaging waste revision as well as EU taxonomy.

In particular, the EU energy and carbon policies may impact the availability and price of wood fiber. Concerning the EU Emissions Trading Scheme (ETS) 4th trading period, carbon leakage will remain, but the allocation of free allowances is expected to decline. A stress scenario over the next ten years and with a carbon allowance price at 50 EUR/t, assuming the current proposal for the 4th ETS trading period, implies an annual financial impact below Group materiality threshold, even when factoring in increased costs from purchased electricity.

Increased demand for carbon neutral primary and secondary biomass fuels may increase energy costs. General opinion and political consensus to limit wood harvesting, arising from the view to further increase forests' function as carbon sinks while ignoring the net-positive climate impact of forest products, could limit the availability of wood, increase costs and reduce investment opportunities. Additionally, political instability may result in civil unrest, nullification of existing agreements, harvesting permits or land leases.

Regulation as part of the EU's Action Plan on sustainable finance brings new climate related obligations on both investors and corporates, in particular through the EU Taxonomy on sustainable activities and integration of ESG risks in investment processes. There is uncertainty as to how Stora Enso's share will be classified as an investment object in light of this emerging regulation, but good management of financial climate and other sustainability related risks and opportunities, as well as disclosure thereof, will improve the likelihood of a favourable perception by the capital markets and thus the cost of capital.

Stora Enso has been granted various investment subsidies and has given certain investment commitments in different countries e.g. Finland, China and Sweden. If committed planning conditions are not met, local officials may pursue administrative measures to reclaim some of the formerly granted investment subsidies or to impose penalties on Stora Enso, and the outcome of such a process could result in a negative financial impact on Stora Enso.

The risks related to regulatory changes have increased during 2020 driven by more protectionist policies amongst key economies and due to potential downside impacts related to key transition risks, such as the EU Green Deal programme.

Policy principles and mitigation measures
- Active monitoring of regulatory and political developments in the countries where the Group operates
- Participation in policy development mainly through industry associations and other partnership programmes

Related opportunities
- Regulatory changes involve market growth potential for sustainable products. Resource efficiency, the low-carbon circular economy and renewability are increasingly important sources of competitive advantage.

Ethics and compliance
Stora Enso operates in a highly regulated business area and is thereby exposed to risks related to breach of applicable laws and regulations (e.g. capital markets regulation, company and tax laws, customs regulation and safety regulation) and breaches of group policies such as the Stora Enso Code, Supplier Code of Conduct and Business Practice Policy regarding fraud, anti-trust, corruption, conflict of interests and other misconduct. Stora Enso may face high compliance and remediation costs under environmental laws and regulations. See also Information systems, security, and digitalisation. Potential impacts include prosecution, fines, penalties, and contractual, financial and reputational damage.

Policy principles and mitigation measures
Stora Enso's Ethics and Compliance Programme, including policy setting, value promotion, training and knowledge sharing and grievance mechanisms are kept continuously up to date and developed. Other compliance mechanisms include Stora Enso Group's internal control system and Internal Audit assurance, the Supplier Code of Conduct in supplier contracts, supplier risk assessments, supplier trainings, supplier audits and black-listing procedures. In response to capital markets regulations, Stora Enso's Disclosure Policy emphasises the importance of transparency, credibility, responsibility, proactivity and interaction.

Environmental risks are minimised through environmental management systems and environmental due diligence for acquisitions and divestments, and indemnification agreements where effective and appropriate remediation projects are required. Special remediation projects related to discontinued activities and mill closures are executed based on risk assessments.

Related opportunities
- Focusing on wider ethical topics rather than mere compliance with regulations will lead to successful business, foster accountability and enhance corporate reputation.

Strategic investments
Stora Enso's business strategy is to transform itself from a traditional paper and board producer to a customer-focused renewable materials growth company. The success of this transformation depends on the Group's ability to understand the needs of the customer and find the best way to serve them with the right offering and with the right production asset portfolio. Failure to complete strategic projects in

accordance with the agreed schedule, budget or specifications can have serious impacts on our financial performance. Significant, unforeseen changes in costs or an inability to sell the envisaged volumes or achieve planned price levels may prevent us from achieving our business goals. The lower risk level compared to last year is due to lower committed strategic capital expenditure and the good progress in the Oulu Mill conversion project. Hence the risk associated with the implementation is lower.

Policy principles and mitigation measures
Risks are mitigated through profound and detailed pre-feasibility and feasibility studies which are prepared for each large investment. The Group's investment guidelines stipulate the process, governance, risk assessment, management and monitoring procedures for strategic projects, including climate related risk factors. The guidelines also require the calculation of potential cost and income for CO_2 emissions as part of the investment proposal.

Environmental and Social Impact Assessments (ESIAs) are conducted for all new projects that could cause significant adverse effects in local communities. Post completion audits are carried out for all significant investments.

Related opportunities
- Replacing fossil-based materials by innovating and developing new products and services based on wood and other renewable materials.

Communities and human rights
Social risks may harm existing operations and the execution of investments, especially in growth markets. Failure to successfully manage relationships with local communities and non-governmental organisations (NGOs) could disrupt our operations and adversely affect the Group's reputation. The Group operates in certain countries, where land and resource ownership rights remain unclear and where related disputes may arise.

In order to transform to a renewable materials company, business restructuring may be required which in some cases can lead to site closures and hence have a significant impact on local communities.

Potential impacts include reputational impacts and negative media coverage, harm to communities and rights holders, disruption of operations, and loss of the licence to operate.

Policy principles and mitigation measures
Stora Enso strives to identify and minimise risks related to social issues in good time, in order to guide decision-making in its investment processes, restructuring planning as well as in its ongoing operations. Tools such as sustainability risk assessment, human rights due diligence and Environmental and Social Impact Assessments (ESIA) help ensure that no unsustainable projects are initiated, and all related risks and opportunities are fully understood in all operations. These tools also enable project plans and operating practices to be adapted to suit local circumstances. Furthermore, dialogue with NGOs is a part of the Group's stakeholder engagement. More information on community engagement is presented in Stora Enso's Sustainability Report.

Related opportunities
- Ensuring that the communities around our operations thrive economically, socially, and environmentally is crucial for the success and sustainability of Stora Enso.
- Clear business benefits to Stora Enso through a strong focus on social responsibility, as customers, business partners, investors and potential employees become more and more attracted to socially responsible companies.

For more information, please see Sustainability 2020: Human rights.

Climate-related financial disclosures (TCFD)

The Financial Stability Board's (FSB) Task Force on Climate-related Financial Disclosures (TCFD) recommends a framework for disclosing climate-related risks and opportunities that goes beyond current practices. In the online index table, we list our disclosures with reference to TCFD recommendations, and refer to those locations where these issues are addressed in our annual reporting. The location references are complemented in the index with additional information, as necessary.

Scenario analysis in 2020
The TCFD recommendations encourage companies to use scenario analysis to help ensure that their strategies are resilient to climate change in a range of possible future states. Leading practice shows that this is best approached by breaking down the full scope of scenario analysis into a set of smaller scopes considering asset type and geography, and to apply prioritisation in conducting the full scenario analysis.

Stora Enso is one of the largest private forest owners in the world with forest assets valued at more than EUR 7 billion (land and biological assets, including Stora Enso's share of Tornator) in 2020, including the biological assets of EUR 6.4 billion in Sweden and Finland. Furthermore, 65% of Stora Enso's wood was sourced from Finland, Sweden, Norway and Northwestern part of Russia. Effects of climate change such as milder winters have already shown to have material impact on the harvesting and transport of wood in northern regions and related costs. To support our annual Enterprise Risk Assessment (ERM), in 2020 Stora Enso developed a scenario analysis with the qualitative assessment of the physical climate impacts on the Nordic forests and our business until 2050. This work was based on the Business-As-Usual scenario by the International Panel for Climate Change (RCP 8.5 scenario) that would deliver a temperature increase of 4–5 degrees. The climate change attributes considered are pests, diseases, droughts, wildfires, floods, periods of frost, water scarcity, changes to precipitation patterns, sea level rise and changing temperatures.

The results show that whilst under the right circumstances a higher temperature increases the growth rate of the forest and hence positively affects wood availability and forest valuation, the other attributes assessed primarily decrease wood availability and increase wood prices. In 2021, we will continue analysing our strategic resilience using different climate-scenarios as part of our annual risk assessment. We will advance the work on physical impacts as well as assess the business impact from a global transition required to limit the temperature increase in line with the Paris agreement.

For more information about our disclosures with reference to the TCFD recommendations and the locations where these issues are addressed in our annual reporting, see the TCFD index table on our website.

Opportunities from substituting non-renewable materials
In 2020, Stora Enso worked with the Swedish University of Agricultural Sciences (SLU) to further develop the scientific methodologies for calculating climate impact for forest product companies, including the contribution achieved from substituting fossil based and other non-renewable materials – for example plastics or concrete. According to the SLU report Stora Enso is estimated to have a positive impact on the climate equivalent to a reduction of 11.5 million tonnes of CO_2e from the atmosphere (2019 data). Throughout 2020, Stora Enso also worked with the World Business Council for Sustainable Development on the publication of a new report on the circular bioeconomy, titled "The business opportunity contributing to a sustainable world" to help articulate the business case for low-carbon and circular products from the circular bioeconomy.

Corporate governance in Stora Enso

Stora Enso complies with the Finnish Corporate Governance Code issued by the Securities Market Association (the "Code"). The Code is available at cgfinland.fi. Stora Enso also complies with the Swedish Corporate Governance Code ("Swedish Code"), with the exception of the deviations listed in Appendix 1 of the Corporate Governance Report. The deviations are due to differences between the Swedish and Finnish legislation, governance code rules and practices, and in these cases Stora Enso follows the practice in its domicile. The Swedish Code is issued by the Swedish Corporate Governance Board and is available at corporategovernanceboard.se.

Legal proceedings

Contingent liabilities
Stora Enso has undertaken significant restructuring actions in recent years which have included the divestm ent of companies, sale of assets and mill closures. These transactions include a risk of possible environmental or other obligations the existence of which would be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Group. Stora Enso is party to legal proceedings that arise in the ordinary course of business and which primarily involve claims arising out of commercial law. The management does not consider that liabilities related to such proceedings before insurance recoveries, if any, are likely to be material to the Group's financial condition or results of operations.

Legal proceedings in Latin America

Veracel

On 11 July 2008, Stora Enso announced that a federal judge in Brazil had issued a decision claiming that the permits issued by the State of Bahia for the operations of Stora Enso's joint operations company Veracel were not valid. The judge also ordered Veracel to take certain actions, including reforestation with native trees on part of Veracel's plantations and a possible fine of, at the time of the decision, BRL 20 (EUR 3) million. Veracel disputes the decision and has filed an appeal against it. Veracel operates in full compliance with all Brazilian laws and has obtained all the necessary environmental and operating licences for its industrial and forestry activities from the relevant authorities. In November 2008, a Federal Court suspended the effects of the decision. No provisions have been recorded in Veracel's or Stora Enso's accounts for the reforestation or the possible fine.

Changes in organisational structure

Stora Enso established a new Forest division and started reporting it separately at the beginning of 2020. The new division includes the Group's Swedish forest assets and its 41% share of the equity accounted investment Tornator with the majority of its forest assets located in Finland. The Forest division also includes wood supply operations in Finland, Sweden, Russia and the Baltic countries.

Stora Enso merged its containerboard business previously under the Packaging Solutions division with the Consumer Board division, creating a new Packaging Materials division. The remaining business in Packaging Solutions together with the formed fiber and biocomposite businesses unit, constitutes a more focused Packaging Solutions division. The change was effective as of 1 January 2020.

Changes in Group management

Jari Suominen was appointed EVP, Head of Forest division as of 1 January 2020. He remained a member of the Group Leadership Team.

David Ekberg was appointed as EVP, Head of Packaging Solutions division and member of the Group Leadership Team as of 1 April 2020.

Lars Völkel was appointed EVP, Head of Wood Products division, and member of the Group Leadership Team as of 1 July 2020.

Katariina Kravi was appointed EVP, Head of Human Resources, and member of the Group Leadership Team as of 1 September 2020. The previous Head of HR, **Malin Bendz,** left her position at Stora Enso in January 2020.

Annette Stube was appointed EVP, Head of Sustainability, and member of the Group Leadership Team as of 1 September 2020. She succeeded **Noel Morrin,** who retired at the end of 2020.

Tobias Bäärnman, Chief Strategy and Innovation Officer, and **Teemu Salmi,** CIO and Head of IT & Digitalisation, were appointed as members of the Group Leadership Team as of 1 November 2020.

Share capital

Stora Enso Oyj's shares are divided into A and R shares. The A and R shares entitle holders to the same dividend but different voting rights. Each A share and each ten R shares carry one vote at a shareholders' meeting. However, each shareholder has at least one vote.
During 2020, a total of 2 419 A shares converted into R shares were recorded in the Finnish Trade Register. On 31 December 2020, Stora Enso had 176 254 415 A shares and 612 365 572 R shares in issue. The company did not hold its own shares. The total number of Stora Enso shares in issue was 788 619 987 and the total number votes at least 237 490 972.

Board of Directors is authorised to decide on the repurchase and on the issuance of Stora Enso R shares. The amount of shares to be issued or repurchased shall not exceed a total of 2 000 000 R shares, corresponding to approximately 0.25% of all shares and 0.33% of all R shares.

Financials

Major shareholders as of 31 December 2020

By voting power	A shares	R shares	% of shares	% of votes
1 Solidium Oy[1]	62 655 036	21 792 540	10.7%	27.3%
2 FAM AB[2]	63 123 386	17 000 000	10.2%	27.3%
3 Social Insurance Institution of Finland	23 825 086	973 982	3.1%	10.1%
4 Ilmarinen Mutual Pension Insurance Company	4 312 762	16 593 924	2.7%	2.5%
5 Varma Mutual Pension Insurance Company	5 163 018	1 140 874	0.8%	2.2%
6 MP-Bolagen i Vetlanda AB	4 828 000	1 000 000	0.7%	2.1%
7 Elo Mutual Pension Insurance Company	2 000 000	8 111 225	1.3%	1.2%
8 Erik Johan Ljungberg's Education Foundation	1 780 540	2 336 224	0.5%	0.8%
9 SEB Investment Management	–	12 162 195	1.5%	0.5%
10 Bergslaget's Healthcare Foundation	626 269	1 609 483	0.3%	0.3%
11 The State Pension Fund	–	5 713 755	0.7%	0.2%
12 Unionen (Swedish trade union)	–	3 782 750	0.5%	0.2%
13 Lannebo Funds	–	3 690 000	0.5%	0.2%
14 The Society of Swedish Literature in Finland	–	3 000 000	0.4%	0.1%
15 OP-Suomi Investment Fund	–	2 914 494	0.4%	0.1%
Total	**168 314 097**	**101 821 446**	**34.3%**	**75.2%**
Nominee-registered shares[3]	74 882 644	480 357 046	70.4%	51.8%

[1] Entirely owned by the Finnish State.
[2] As confirmed to Stora Enso.
[3] According to Euroclear Finland.
The list has been compiled by the Company on the basis of shareholder information obtained from Euroclear Finland, Euroclear Sweden and a database managed by Citibank, N.A (Citi). This information includes only directly registered holdings, thus certain holdings (which may be substantial) of shares held in nominee or brokerage accounts cannot be included. The list is therefore incomplete.

Share distribution as at 31 December 2020

By size of holding, A share	Shareholders	% of shareholders	Shares	% of shares
1–100	5 507	54.50%	234 386	0.10%
101–1 000	3 996	39.60%	1 431 560	0.80%
1 001–10 000	551	5.50%	1 271 602	0.70%
10 001–100 000	28	0.30%	601 791	0.30%
100 001–1 000 000	–	–%	–	–%
1 000 001–	7	0.10%	172 715 076	98.00%
Total	**10 089**	**100.00%**	**176 254 415**	**100.00%**

By size of holding, R share	Shareholders	% of shareholders	Shares	% of shares
1–100	12 641	31.70%	665 866	0.10%
101–1 000	20 727	51.90%	8 568 192	1.40%
1 001–10 000	5 924	14.90%	15 802 281	2.60%
10 001–100 000	478	1.20%	12 712 655	2.10%
100 001–1 000 000	78	0.20%	22 356 613	3.70%
1 000 001–	21	0.10%	552 259 965	90.10%
Total	**39 869**	**100.00%**	**612 365 572**	**100.00%**

According to Euroclear Finland.
This list includes only directly registered shares in Euroclear Finland. E.g. Stora Enso's Swedish shareholders are listed under their nominee bank in this list.

Ownership distribution as at 31 December 2020

	% of shares	% of votes
Solidium Oy[1]	10.7%	27.3%
FAM AB[2]	10.2%	27.3%
Social Insurance Institution of Finland (KELA)	3.1%	10.1%
Finnish institutions (excl. Solidium and KELA)	11.4%	8.3%
Swedish institutions (excl. FAM)	6.6%	5.2%
Finnish private shareholders	4.0%	2.4%
Swedish private shareholders	4.2%	2.7%
ADR holders	2.0%	0.7%
Under nominee names (non-Finnish/non-Swedish shareholders)	47.9%	16.1%

[1] Entirely owned by the Finnish State.
[2] As confirmed to Stora Enso.

Outlook

Stora Enso resumes an annual outlook even though the uncertainties due to the ongoing pandemic in the global economy are expected to remain in 2021. Provided that the vaccination programmes progress as planned and the virus is contained, there are expectations of economic recovery. Until then, demand for our products remains mixed.

Operational EBIT in 2021 is expected to be higher than the 2020 operational EBIT.

Stora Enso will conclude its EUR 400 million profit protection programme by the end of 2021. The expected fixed and variable cost savings for the year are approximately EUR 80 million. The Group will continue to focus on customer service and cash flow generation in 2021.

Short-term risks and uncertainties

The global outlook has brightened. While we expect a weaker rebound in 2021 than anticipated in the end of Q3/2020, recent vaccine progress has shifted the balance of risks substantially and opened the door to a more rapid relaxation of restrictions. The global output is constrained by social distancing in the near term, before large-scale and permanent reductions in restrictions might begin around mid-2021. Nevertheless, and despite a strong initial recovery, high unemployment, stagnant investments, business insolvencies and surging corporate and sovereign debt, as well as dramatic market corrections triggered by unconventional monetary policy measures may limit the revival in 2021. In addition, Stora Enso continues to face uncertainty in the short and medium term. However, compared with previous recessions, both the industry in general and Stora Enso in particular with its diversified business portfolio and relatively strong balance sheet, are considered more resilient to economic shock and morbid business conditions.

Stora Enso maintains a Covid-19 risk assessment process to determine the potential near- and medium-term implications of the direct and indirect impacts on Stora Enso's business operations. The process builds on several alternative scenarios, involving the identification and planning of business contingency and cash preservation measures to limit the potential impacts across Stora Enso's business divisions and to ensure sufficient liquidity in all conditions. The contemplated worst-case scenarios, which assume faltering vaccine progress and delayed W-shaped recovery, would not, in Stora Enso's view, lead to circumstances that would compromise Stora Enso's ability to continue as a going concern.

The trend towards nationalist anti-globalist policies may grow following the Covid-19 pandemic, with border checks on goods and people becoming more stringent and national interests being promoted. There is also a risk that even open economies, such as those in Western Europe and Asian business hubs, enact policies in direct opposition to globalisation. The tail risk related to the UK's exit from the EU, subsequent to the trade deal between the two, is mainly limited to near-term congestion in logistics, while the UK market demand is not expected to suffer notable impacts.

Sensitivity analysis

Energy sensitivity analysis: the direct effect of a 10% increase in electricity and fossil fuel market prices would have a negative impact of approximately EUR 11 million on operational EBIT for the next 12 months.

Wood sensitivity analysis: the direct effect of a 10% increase in wood prices would have a negative impact of approximately EUR 177 million on operational EBIT for the next 12 months.

Pulp sensitivity analysis: the direct effect of a 10% increase in pulp market prices would have a positive impact of approximately EUR 105 million on operational EBIT for the next 12 months.

Chemical and filler sensitivity analysis: the direct effect of a 10% increase in chemical and filler prices would have a negative impact of approximately EUR 32 million on operational EBIT for the next 12 months.

A decrease of energy, wood, pulp or chemical and filler prices would have the opposite impact.

Foreign exchange rates transaction risk sensitivity analysis for the next twelve months: the direct effect on operational EBIT of a 10% strengthening in the value of the US dollar, Swedish krona and British pound would be approximately positive EUR 133 million, negative EUR 20 million and positive EUR 22 million annual impact, respectively. Weakening of the currencies would have the opposite impact. These numbers are before the effect of hedges and assuming no changes occur other than a single currency exchange rate movement in an exposure currency.

The Group's consolidated income statement on operational EBIT level is exposed to a foreign-currency translation risk worth approximately EUR 120 million cost exposure in Brazilian real (BRL) and approximately EUR 28 million income exposure in Chinese Renminbi (CNY). These exposures are arising from the foreign subsidiaries and joint-operations located in Brazil and China, respectively. For these exposures a 10% strengthening in the value of a foreign currency would have a negative EUR 12 million and a positive EUR 3 million impact on operational EBIT, respectively.

Events after the balance sheet date

On the 20 January 2021, the Court of Justice of the European Union has given a preliminary ruling (Lexel AB -case, C-484/19) which might have an impact on Stora Enso's pending disputes concerning the deduction of interest expenses in Sweden.

Proposal for the distribution of dividend

The Board of Directors proposes to the AGM that a dividend of EUR 0.30 per share be distributed on the basis of the balance sheet adopted for the year 2020. The Board of Directors has assessed the Company's financial situation and liquidity before making the proposal. There have been no material changes in the parent company's financial position since 31 December 2020, the liquidity of the parent company remains good and the proposed dividend does not risk the solvency of the company. Stora Enso's policy is to distribute 50% of earnings per share (EPS) excluding fair valuation over the cycle. In 2020, EPS excluding fair valuation was EUR 0.45.

The Parent Company distributable shareholders' equity on 31 December 2020 amounted to EUR 1 582 387 493.42, including the profit for the period of EUR 505 709 365.15. The Board of Directors proposes to the Annual General Meeting of the Company that the distributable funds be used as follows:

A dividend of EUR 0.30 per share from the distributable shareholders' equity to be distributed on 788 619 987 shares, not to exceed EUR 236 585 996.10, which would leave EUR 1 345 801 497.32 in distributable shareholders' equity.

The dividend would be paid to shareholders who on the record date of the dividend payment, 23 March 2021, are recorded in the shareholders' register maintained by Euroclear Finland Oy or in the separate register of shareholders maintained by Euroclear Sweden AB for Euroclear Sweden registered shares. Dividends payable to Euroclear Sweden registered shares will be forwarded by Euroclear Sweden AB and paid in Swedish crowns. Dividends payable to ADR holders will be forwarded by Citibank N.A. and paid in US dollars.

The Board of Directors proposes to the AGM that the dividend be paid on or about 30 March 2021.

Annual General Meeting

Stora Enso Oyj's Annual General Meeting (AGM) will be held on Friday 19 March 2021. The Annual General Meeting 2021 will be held with exceptional procedures based on the temporary legislative act to limit the spread of the Covid-19 pandemic approved by the Finnish Parliament. This means that the shareholders of the Company and their proxy representatives may participate in the meeting and exercise their rights as shareholders only through voting in advance as well as by making counterproposals and presenting questions in advance. More information is available at storaenso.com/agm

Non-IFRS measures

The Group's key non-IFRS performance metric is operational EBIT, which is used to evaluate the performance of its operating segments and to steer allocation of resources to them.Operational EBIT comprises the operating profit excluding items affecting comparability (IAC) and fair valuations from the segments and Stora Enso's share of the operating profit of equity accounted investments (EAI), also excluding items affecting comparability and fair valuations.

Items affecting comparability are exceptional transactions that are not related to recurring business operations. The most common IAC are capital gains and losses, impairments or impairment reversals, disposal gains and losses relating to Group companies, provisions for

Financials

planned restructurings, environmental provisions, changes in depreciation due to restructuring and penalties. Items affecting comparability are normally disclosed individually if they exceed one cent per share.

Fair valuations and non-operational items include CO_2 emission rights, non-operational fair valuation changes of biological assets, adjustments for differences between fair value and acquisition cost of forest assets upon disposal and the Group's share of income tax and net financial items of EAI. From 1 January 2020 onwards, the changes in the fair valuation of biological assets are categorized in non-operational and operational fair value changes. Non-operational fair value changes of biological assets reflect changes made to valuation assumptions and parameters, usually during the annual valuation process. Operational fair value changes of biological assets are included in Operational EBITDA and contain all other fair value changes, mainly due to inflation and differences in actual harvesting levels compared to the harvesting plan. The previous periods have been restated.

Cash flow from operations (non-IFRS) is a Group specific way to present operative cash flow starting from operational EBITDA instead of operating profit.

Cash flow after investing activities (non-IFRS) is calculated as follows: cash flow from operations (non-IFRS) excluding cash spent on intangible assets, property, plant and equipment, and biological assets and acquisitions of EAIs.

The full list of the non-IFRS measures is presented at the end of this report.

Calculation of key figures

Operational return on capital employed, operational ROCE (%)	100 × Annualised operational EBIT / Capital employed[1, 2]
Operational return on operating capital, operational ROOC (%)	100 × Annualised operational EBIT / Operating capital[2]
Return on equity, ROE (%)	100 × Net profit/loss for the period / Total equity[2]
Net interest-bearing liabilities	Interest-bearing liabilities – interest-bearing assets
Net debt/equity ratio	Net interest-bearing liabilities / Equity[3]
Earnings per share (EPS)	Net profit/loss for the period[3] / Average number of shares
Payout ratio, excl. FV, %	100 × Dividend distribution / share / EPS excl. FV
Dividend and distribution yield, %	100 × Dividend distribution / share / Closing price of share
Price/earnings ratio (P/E), excl. FV	Closing price of share / EPS excl. FV
Operational EBIT	Operating profit/loss excluding items affecting comparability (IAC) and fair valuations (FV) of the segments and Stora Enso's share of operating profit/loss excluding IAC and fair valuations of its equity accounted investments (EAI)
Operational EBITDA	Operating profit/loss excluding silviculture costs and damage to forests, fixed asset depreciation and impairment, IACs and fair valuations. The definition includes the respective items of subsidiaries, joint arrangements and equity accounted investments.
Net debt/last 12 months' operational EBITDA ratio	Net interest-bearing liabilities / LTM operational EBITDA
Fixed costs	Maintenance, personnel and other administrative type of costs, excluding IAC and fair valuations
Last 12 months (LTM)	12 months prior to the end of reporting period
TRI rate	Total recordable incident rate = number of incidents per one million hours worked

1 Capital employed = Operating capital – Net tax liabilities
2 Average for the financial period
3 Attributable to owners of the Parent

List of non-IFRS measures

Operational EBITDA
Operational EBITDA margin
Operational EBIT
Operational EBIT margin
Profit before tax excl. IAC and FV
Capital expenditure
Capital expenditure excl. investments in biological assets
Capital employed
Depreciation and impairment charges excl. IAC
Operational ROCE
Earnings per share (EPS), excl. FV
Fixed costs to sales
Operational ROOC
Net debt/last 12 months' operational EBITDA ratio
Cash flow from operations
Cash flow after investing activities

Consolidated financial statements

Consolidated income statement

		Year ended 31 December	
EUR million	**Note**	**2020**	**2019**
Sales	3	**8 553**	**10 055**
Other operating income	5	147	165
Changes in inventories of finished goods and work in progress		-84	-102
Materials and services		-5 043	-5 964
Freight and sales commissions		-806	-904
Personnel expenses	6	-1 270	-1 331
Other operating expenses	5	-394	-686
Share of results of equity accounted investments	13	-1	229
Change in net value of biological assets	12	428	442
Depreciation, amortisation and impairment charges	10	-609	-597
Operating profit	3	**922**	**1 305**
Financial income	8	19	8
Financial expense	8	-168	-176
Profit before Tax		**773**	**1 137**
Income tax	9	-156	-281
Net profit for the year		**617**	**856**
Attributable to			
Owners of the Parent	18	626	880
Non-controlling Interests	19	-9	-24
Net profit for the year		**617**	**856**
Earnings per share			
Basic and diluted earnings per share, EUR	32	0.79	1.12

Consolidated statement of comprehensive income

		Year ended 31 December	
EUR million	**Note**	**2020**	**2019**
Net profit for the year		**617**	**856**
Other Comprehensive Income (OCI)			
Items that will not be reclassified to profit and loss			
Equity instruments at fair value through OCI	14	-136	109
Actuarial gains and losses on defined benefit plans	20	20	-78
Revaluation of forest land	12	1 504	0
Share of OCI of equity accounted investments (EAI)	13	12	0
Income tax relating to items that will not be reclassified	9	-315	6
		1 086	**37**
Items that may be reclassified subsequently to profit and loss			
Cumulative translation adjustment (CTA)	28	-143	206
Net investment hedges and loans	28	16	-9
Cash flow hedges and cost of hedging	27	54	-14
Share of OCI of non-controlling interests (NCI)	19	1	0
Share of OCI of equity accounted investments (EAI)	13	0	11
Income tax relating to items that may be reclassified	9	-15	2
		-87	**196**
Total comprehensive income		**1 616**	**1 089**
Attributable to			
Owners of the Parent		1 625	1 113
Non-controlling interests	19	-9	-24
Total comprehensive income		**1 616**	**1 089**

The accompanying Notes are an integral part of these Consolidated financial statements.

Consolidated statement of financial position

EUR million		Note	As at 31 December 2020	2019
Assets				
Goodwill	O	11	281	302
Other intangible assets	O	11	134	169
Property, plant and equipment	O	11	5 007	5 101
Right-of-use assets	O	11	452	508
		11	**5 874**	**6 080**
Forest assets	O	12	6 256	4 136
Biological assets	O	12	4 250	3 627
Forest land	O	12	2 005	509
Emission rights	O		36	37
Equity accounted investments	O	13	456	483
Listed securities	I	14	16	12
Unlisted securities	O	14	401	526
Non-current interest-bearing receivables	I	25	93	72
Deferred tax assets	T	9	117	81
Other non-current assets	O	15	28	37
Non-current assets			**13 276**	**11 463**
Inventories	O	16	1 270	1 391
Tax receivables	T		14	11
Operative receivables	O	17	1 145	1 289
Interest-bearing receivables	I	25	66	23
Cash and cash equivalents	I		1 661	876
Current assets			**4 155**	**3 590**
Total assets			**17 431**	**15 053**

EUR million		Note	As at 31 December 2020	2019
Equity and liabilities				
Share capital		18	1 342	1 342
Share premium			77	77
Fair value reserve			1 506	397
Cumulative translation adjustment		28	-267	-136
Invested non-restricted equity fund			633	633
Retained earnings			4 891	4 236
Net profit for the year			626	880
Equity attributable to owners of the Parent			**8 809**	**7 429**
Non-controlling Interests		19	-16	-7
Total equity			**8 793**	**7 423**
Post-employment benefit obligations	O	20	473	458
Provisions	O	22	102	110
Deferred tax liabilities	T	9	1 332	875
Non-current interest-bearing liabilities	I	26	3 822	3 232
Other non-current operative liabilities	O	23	13	40
Non-current liabilities			**5 743**	**4 713**
Current portion of non-current debt	I	26	472	376
Interest-bearing liabilities	I	26	456	572
Bank overdrafts	I	26	6	13
Provisions	O	22	46	55
Other operative liabilities	O	23	1 837	1 854
Tax liabilities	T	9	78	48
Current liabilities			**2 895**	**2 917**
Total liabilities			**8 637**	**7 630**
Total equity and liabilities			**17 431**	**15 053**

Items designated "O" comprise Operating Capital, items designated "I" comprise Interest-bearing Net Liabilities, items designated "T" comprise Net Tax Liabilities.
The accompanying Notes are an integral part of these Consolidated financial statements.

Strategy
Sustainability
Financials
Governance
Remuneration

Consolidated cash flow statement

EUR million	Note	Year ended 31 December 2020	2019
Cash flow from operating activities			
Net profit for the year		617	856
Adjustments and reversal of non-cash items:			
Taxes	9	156	281
Depreciation and impairment charges	10	609	597
Change in value of biological assets	12	-428	-442
Change in fair value of share awards and total return swaps		-4	0
Share of results of equity accounted investments	13	1	-229
CTA and profits and losses on sale of fixed assets and investments[1]	5	-2	172
Net financial items	8	150	168
Other adjustments		15	5
Dividends received from equity accounted investments	13	36	343
Interest received		2	7
Interest paid		-122	-150
Other financial items, net		-13	-10
Income taxes paid	9	-82	-178
Change in net working capital, net of businesses acquired or sold		195	240
Net cash provided by operating activities		**1 128**	**1 660**
Cash flow from investing activities			
Acquisition of subsidiary shares and business operations, net of acquired cash	4	0	-464
Acquisition of shares in equity accounted investments	13	-2	-7
Acquisition of unlisted securities	14	-14	0
Cash flow on disposal of subsidiary shares and business operations, net of disposed cash	4	-3	-19
Cash flow on disposal of unlisted securities	14	1	6
Cash flow on disposal of intangible assets and property, plant and equipment	11	17	12
Capital expenditure	3, 11	-582	-510
Investment in biological assets	12	-79	-88
Proceeds from/payment of non-current receivables, net		-18	-18
Net cash used in investing activities		**-681**	**-1 089**

EUR million	Note	Year ended 31 December 2020	2019
Cash flow from financing activities			
Proceeds from issue of new long-term debt	26	1 081	870
Repayment of long-term debt and lease liabilities	26	-399	-1 284
Change in short-term borrowings	26	-99	-33
Dividends paid		-223	-394
Buy-out of interest in subsidiaries from non-controlling interests	19	0	-8
Equity injections from, less dividends to, non-controlling interests	19	0	-4
Purchase of own shares		-6	-3
Net cash used in financing activities		**354**	**-856**
Net change in cash and cash equivalents		**801**	**-285**
Translation adjustment		-9	19
Net cash and cash equivalents at beginning of year		863	1 128
Net cash and cash equivalents at year end		**1 655**	**863**
Cash and cash equivalents at year end[2]		**1 661**	**876**
Bank overdrafts at year end		**-6**	**-13**
Net cash and cash equivalents at year end		**1 655**	**863**

[1] CTA = Cumulative Translation Adjustment
[2] Cash and cash equivalents comprise cash-in-hand, deposits held at call with banks and other liquid investments with original maturity of less than three months. Bank overdrafts are included in current liabilities.
The accompanying Notes are an integral part of these Consolidated financial statements.
Comparative 2019 figures have been restated.

Consolidated cash flow statement

Supplemental cash flow information

		Year ended 31 December	
EUR million	**Note**	**2020**	**2019**
Change in net working capital consists of:			
Change in inventories		101	161
Change in interest-free receivables:			
Current		118	205
Non-current		0	13
Change in interest-free liabilities:			
Current		-25	-127
Non-current		0	-12
Change in net working capital, net of businesses acquired or sold		**195**	**240**
Cash and cash equivalents consist of:			
Cash on hand and at banks		828	676
Cash equivalents		833	199
Cash and cash equivalents		**1 661**	**876**
Non-cash investing activities			
Total capital expenditure excluding right-of-use assets		589	550
Amounts paid		-582	-510
Non-cash part of additions to intangible assets and property, plant and equipment		**8**	**40**
Cash flow on acquisitions of subsidiaries and business operations			
Purchase consideration on acquisitions, cash part	4	0	-527
Cash and cash equivalents in acquired companies, net of bank overdraft	4	0	64
Net cash flow on acquisition		**0**	**-464**
Cash flow on disposals of subsidiaries and business operations			
Cash part of the consideration	4	-1	-15
Cash and cash equivalents in divested companies	4	-2	-4
Net cash flow from disposal		**-3**	**-19**

The accompanying Notes are an integral part of these Consolidated financial statements.

Statement of changes in equity

					Fair Value Reserve									
EUR million	**Share Capital**	**Share Premium and Reserve Fund**	**Invested Non-Restricted Equity Fund**	**Treasury Shares**	**Step Acquisition Revaluation Surplus**	**Equity instruments through OCI**	**Cash flow hedges**	**Revaluation reserve**	**OCI of Equity Accounted Investments**	**CTA and Net Investment Hedges and Loans**	**Retained Earnings**	**Attributable to Owners of the Parent**	**Non-controlling Interests**	**Total**
Balance at 1 January 2019	**1 342**	**77**	**633**	**—**	**4**	**304**	**-7**	**—**	**-11**	**-335**	**4 706**	**6 714**	**18**	**6 732**
Net profit for the year	—	—	—	—	—	—	—	—	—	—	880	880	-24	856
OCI before tax	—	—	—	—	—	109	-14	—	11	197	-78	225	—	225
Income tax relating to OCI	—	—	—	—	—	—	1	—	—	1	6	9	—	9
Total Comprehensive Income	**—**	**—**	**—**	**—**	**—**	**109**	**-13**	**—**	**11**	**198**	**808**	**1 113**	**-24**	**1 089**
Dividend	—	—	—	—	—	—	—	—	—	—	-394	-394	-1	-395
Acquisitions and disposals	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Purchase of treasury shares	—	—	—	-4	—	—	—	—	—	—	—	-4	—	-4
Share-based payments	—	—	—	4	—	—	—	—	—	—	-3	—	—	—
Balance at 31 December 2019	**1 342**	**77**	**633**	**—**	**4**	**413**	**-20**	**—**	**—**	**-136**	**5 116**	**7 429**	**-7**	**7 423**
Net profit for the year	—	—	—	—	—	—	—	—	—	—	626	626	-9	617
OCI before tax	—	—	—	—	—	-136	54	1 504	12	-127	20	1 328	1	1 329
Income tax relating to OCI	—	—	—	—	—	-1	-11	-310	—	-4	-5	-330	—	-330
Total Comprehensive Income	**—**	**—**	**—**	**—**	**—**	**-137**	**43**	**1 195**	**12**	**-131**	**642**	**1 625**	**-9**	**1 616**
Dividend	—	—	—	—	—	—	—	—	—	—	-237	-237	—	-237
Acquisitions and disposals	—	—	—	—	-4	—	—	—	—	—	4	—	—	—
Purchase of treasury shares	—	—	—	-6	—	—	—	—	—	—	—	-6	—	-6
Share-based payments	—	—	—	6	—	—	—	—	—	—	-8	-3	—	-3
Balance at 31 December 2020	**1 342**	**77**	**633**	**—**	**—**	**277**	**23**	**1 195**	**12**	**-267**	**5 518**	**8 809**	**-16**	**8 793**

CTA = Cumulative Translation Adjustment, NCI = Non-controlling Interests, OCI = Other Comprehensive Income, EAI = Equity Accounted Investments

Notes to the consolidated financial statements

Note 1 Accounting principles

Principal activities

Stora Enso Oyj ("the Company") is a Finnish public limited liability company organised under the laws of the Republic of Finland and with its registered address at Kanavaranta 1, 00160 Helsinki. Its shares are currently listed on Nasdaq Helsinki and Stockholm. The operations of Stora Enso Oyj and its subsidiaries (together "Stora Enso" or "the Group") are organised into the following reportable segments: Packaging Materials, Packaging Solutions, Biomaterials, Wood Products, Forest, Paper and segment Other. The Group's main market is Europe, with an expanding presence in Asia and South America.

The Financial Statements were authorised for issue by the Board of Directors on 28 January 2021.

Basis of preparation

The Consolidated Financial Statements of Stora Enso Oyj have been prepared in accordance with International Financial Reporting Standards (IFRS), as adopted by the European Union, including International Accounting Standards (IAS) and interpretations issued by the IFRS Interpretations Committee (IFRIC). The Consolidated Financial Statements of Stora Enso Oyj have been prepared according to the historical cost convention, except as disclosed in the accounting policies. The detailed accounting principles are explained in the related notes with a few exceptions where the accounting principles are presented in this note. The Consolidated financial statements are presented in euros, which is the parent company's functional currency.

All figures in this Annual Report have been rounded to the nearest million, unless otherwise stated. Therefore, figures in this report may not add up precisely to the totals presented and may vary from previously published financial information.

New and amended standards and interpretations adopted in 2020

The Group has applied the following new and amended standards and interpretations which are effective from 1 January 2020:

- Amendments to IAS 1 and IAS 8: Definition of Material. Amendments will clarify the definition of material and align the definition used in the Conceptual Framework and the standards themselves. The effective date for these amendments is 1 January 2020. The Group is considering an amended materiality definition in the Group's consolidated financial statements and disclosures.
- Amendments to References to the Conceptual Framework in the IFRS Standards. The revised Conceptual Framework includes: a new chapter on measurement; guidance on reporting financial performance; improved definitions and guidance - in particular the definition of a liability; and clarifications in important areas, such as the roles of stewardship, prudence, and measurement uncertainty in financial reporting. The effective date for these amendments is 1 January 2020. The amendments do not have a significant effect on the Group.
- Amendments to IFRS 3 Business combinations. The amendments will help companies determine whether an acquisition made is of a business or a group of assets. The amended definition emphasises that the output of a business is to provide goods and services to customers, whereas the previous definition focused on returns in the form of dividends, lower costs, or other economic benefits to investors and others. The effective date for these amendments is 1 January 2020. The amendments do not have significant effect on the Group.
- Amendments to IFRS 9, IAS 39 and IFRS 7. The amendments are related to the Interest Rate Benchmark Reform and require qualitative and quantitative disclosures to enable users of financial statements to understand how an entity's hedging relationships are affected by the uncertainty arising from the interest rate benchmark reform. The effective date for these amendments is 1 January 2020. The amendments do not have a significant effect on the Group.
- Other standards, standard amendments and interpretations do not have a material effect on the Group's consolidated financial statements or disclosures.

Changes in accounting principles

Valuation of Nordic forest assets

Stora Enso changed the valuation method for its forest assets and the accounting principle for forest land in the Nordics at the end of 2020. Forest assets are defined as biological assets (standing growing trees) and the related forest land. As a result of the valuation method change, the forest assets in Sweden are valued using a market approach. Due to the change in accounting principle, the forest land in Sweden and Finland are accounted for under the revaluation method instead of cost method.

Forest assets in Sweden are valued by using a market approach method based on the forest market transactions in those areas where Stora Enso's forests are located. In Sweden reliable market transaction data is available and provides a more transparent and observable valuation basis. The total forest assets net cash flows consist of cash flows related to standing trees (biological assets) and separate cash flows regarding forest land. The standing trees valuation is computed based on a discounted cash flow (DCF) method and using a discount rate implied by the market transactions in accordance with the IAS 41 Agriculture standard. The discount rate is determined as the rate at which the market transaction prices match the total forest assets cash flows. For forest land, previously accounted at cost, the revaluation method is applied as defined in the IAS 16 Property, plant and equipment standard. Forest land is revalued using a DCF method based on future net cash flow streams related to trees to-be-planted in the future as well as other land related income, such as hunting rights, wind power leases and soil material sales. The discount rate is the same for biological assets and forest land.

For the other Nordic forest assets, owned mainly in Finland through the Group's 41% shareholding in the equity accounted investment Tornator, the market approach is not considered to be an accurate valuation method as the reliable market data is not available with enough details. The discounted cash flow method will continue to be used for valuation of biological assets, where the discount rate applied is determined using the weighted average cost of capital method. The forest land, previously accounted at cost, is revalued by using a DCF method based on its future net cash flow streams related to trees to-be-planted in the future as well as other related income.

For the plantation forests, there is no changes in accounting principles or in the valuation method as there is no reliable market transaction data available. Therefore in plantations, biological assets are continued to be valued using DCF method and related forest land is continued to be accounted at cost. Plantation forest assets are classified as a separate asset class as compared to Nordic forest land to reflect the different nature, usage and characteristics. The main difference is the short-term growing cycle of 6–12 years in plantations versus the long-term growing cycle of 60–100 years in Nordic forests. There are also differences in regeneration methods, forest management and use of the assets for other purposes.

Changes in accounting principles to Swedish forest assets increased the carrying amount of forest land from EUR 324 million to EUR 1 829 million, resulting in EUR 1 504 million increase in forest land, EUR 1 195 increase in Other Comprehensive Income (OCI, revaluation reserve) and EUR 310 million increase in the deferred tax liability. Accounting principle change related to other Nordic forest assets, owned mainly in Finland, is not considered to be material. The increase in forest land assets is recognised in OCI net of deferred taxes and accumulated in revaluation reserve in equity and does not have impact on the income statement. The fair value changes in biological assets continue to be recognised in the income statement. The comparative periods have not been restated and in the comparative periods forest land is measured at cost. See Note 12 Forest assets for more details.

The Group has also changed its forest land presentation principles. Previously, forest land assets were included in the statement of financial position on the line Property, plant and equipment, and as part of the Land and water asset class, as specified in Note 11. In accordance with new presentation principles, forest land assets and corresponding comparative figures are presented on a separate line in the statement of financial position.

Changes in segment reporting

As of 1 January 2020, Stora Enso merged its containerboard business in Packaging Solutions division with the Consumer Board division, creating a new Packaging Materials reportable segment. The remaining business in Packaging Solutions, together with the recently created Formed Fiber unit, constitute Packaging Solutions division.

As of 1 January 2020, Stora Enso established new Forest division as a separately reported segment. Forest division includes Stora Enso's Swedish forest assets and the 41% share of Tornator with the majority of its forest assets located in Finland. The segment also includes wood supply operations in Finland, Sweden, Russia and the Baltic countries. These were previously reported as part of the segment Other. The division's key focus areas are sustainable forest management, competitive wood supply to Stora Enso's mills and innovation. Plantations in Latin America and China, linked to local mills, continue to be reported as before under the Biomaterials and Packaging Materials divisions. After establishing the new Forest division, the remaining segment Other reporting includes Group functions, logistics, other operations and Stora Enso's shareholding in the energy company Pohjolan Voima (PVO).

Comparative figures have been restated accordingly. As of 1 January 2020, the reportable segments are Packaging Materials, Packaging Solutions, Biomaterials, Wood Products, Forest, Paper, and the segment Other.

Consolidation principles

The Consolidated financial statements include the parent company, Stora Enso Oyj, and all companies controlled by the Group. Control is defined as when the Group:

- has power over the investee,
- is exposed, or has rights, to variable returns from its involvement with the investee; and
- has the ability to use its power to affect its returns.

If facts and circumstances indicate that there are changes to the three elements of control listed above the Group reassess whether or not it controls an investee. Acquired companies are accounted for under the acquisition method whereby they are included in the consolidated financial statements from the date the control over the subsidiary is obtained, whereas, conversely, disposed companies are included up to the date when the control is lost. The principal subsidiaries and joint operations are listed in Note 30 Group companies.

All intercompany transactions, receivables, liabilities and unrealised profits, as well as intragroup profit distributions, are eliminated. Accounting policies for subsidiaries, joint arrangements and all equity accounted investments are adjusted where necessary to ensure consistency with the policies adopted by Stora Enso. Non-controlling interests are presented as a separate component of equity.

Associated companies over which Stora Enso exercises significant influence are accounted for using the equity method, which involves recognising the Group's share of the equity accounted investment profit or loss for the year less any impaired goodwill in the consolidated income statement. These companies are undertakings in which the Group has significant influence, but which it does not control. Significant influence means the power to participate in the financial and operating policy decisions of the company without control or joint control over those policies. The most significant of such companies are listed in Note 13 Equity accounted investments.

The Group's interest in an associated company is carried in the consolidated statement of financial position at an amount that reflects its share of the net assets of the associate together with any remaining goodwill upon acquisition. When the Group share of losses exceeds the carrying amount of an investment, the carrying amount is reduced to zero and any recognition of further losses ceases unless the Group is obliged to satisfy obligations of the investee that it has guaranteed or which it is otherwise committed to.

Joint control is the contractually agreed sharing of control of the joint arrangement, which exists only when decisions on relevant activities require the unanimous consent of the parties sharing control.

Joint operations are joint arrangements whereby the partners who have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement. A joint venture is a joint arrangement whereby the partners who have joint control of the arrangement have rights to the net assets of the joint arrangement.

The Group has two joint operations: Veracel and Montes del Plata. In relation to its interest in joint operations, as a joint operator, the Group recognises its share of assets, liabilities, revenues and expenses of the joint operation. The share is determined based on rights to the assets and obligations for the liabilities of each joint operator.

- Veracel is a joint owned (50%/50%) company of Stora Enso and Suzano located in Brazil. The pulp mill produces 1.2 million tonnes of bleached eucalyptus hard wood pulp per year and both owners are entitled to half of the mill's output. The eucalyptus is sourced mostly from the company's own forestry plantations. The mill commenced production in May 2005.
- Montes del Plata is a joint owned (50%/50%) company of Stora Enso and Arauco located in Uruguay. The Montes del Plata Pulp Mill's annual capacity is 1.4 million tonnes of bleached eucalyptus hard wood pulp and Stora Enso's part, 0.7 million tonnes, is sold entirely as market pulp. The eucalyptus is sourced mostly from the company's own forestry plantations. The mill commenced production in June 2014.

Revenue recognition

Sales comprise products, raw materials and services less indirect sales tax and discounts, and are adjusted for exchange differences on sales in foreign currencies. Sales are recognised after Stora Enso has transferred the control of goods and services to a customer and the Group retains neither a continuing right to dispose of the goods, nor effective control of those goods; usually, this means that sales are recorded upon the delivery of goods to customers in accordance with the agreed terms of delivery.

Stora Enso's terms of delivery are based on Incoterms 2020, which are the official rules for the interpretation of trade terms as issued by the International Chamber of Commerce (ICC). The main categories of the terms covering Group sales are:

- "D" terms, under which the group is obliged to deliver the goods to the buyer at the agreed place in the manner specified in the chosen rule, in which case the Point of Sale is the moment of delivery to the buyer.
- "C" terms, whereby the Group arranges and pays for the external carriage and certain other costs, though the Group ceases to be responsible for the goods once they have been handed over to the carrier in accordance with the relevant term. The Point of Sale is thus the handing over of the goods to the carrier contracted by the seller for the carriage to the agreed destination.
- "F" terms, being where the buyer arranges and pays for the carriage, thus the Point of Sale is the handing over of the goods to the carrier contracted by the buyer at the agreed point.

Where local rules may result in invoices being raised in advance of the above, the effect of this revenue advancement is quantified, and an adjustment is made accordingly.Stora Enso's sales mainly comprise sales of products and the revenue is typically recognised at a point in time when Stora Enso transfers control of these products to a customer. Revenues from services are recognised over time once the service has been performed. More detailed information regarding Stora Enso's principal activities from which the Group generates its revenue and disaggregation of revenue is presented in Note 3 Segment information.

Foreign currency transactions

Transactions in foreign currencies are recorded at the rate of exchange prevailing at the transaction date, but at the end of the month foreign-currency-denominated receivables and liabilities are translated using the month-end exchange rate. Foreign exchange differences for operating items are recorded in the appropriate income statement account in the operating profit, and, for financial assets and liabilities, they are entered in the financial items of the consolidated income statement, except when deferred in equity as qualifying cash flow hedges, net investment hedges or net investment loans. Translation differences on non-monetary financial assets,

Financials

such as equities classified at fair value through other comprehensive income (FVTOCI), are included in equity.

Foreign currency translations

The Income Statements of Group companies with functional and presentational currencies other than the euro are translated into the Group reporting currency using the average exchange rates for the year, whereas the statements of the financial position of these companies are translated using the exchange rates at the reporting date. The Group is exposed to currency risks arising from exchange rate fluctuations on the value of its net investment in non-euro area foreign entities. Exchange differences arising from the retranslation of net investments in foreign entities that are non-euro foreign subsidiaries, joint operations or equity accounted investments, and of financial instruments that are designated to hedge such investments, are recorded directly in equity as cumulative translation adjustment (CTA). See Note 28 Cumulative translation adjustments and equity hedging for more details.

Future standard changes endorsed by the EU but not yet effective in 2020

- Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 Interest Rate Benchmark Reform – Phase 2. The amendments relate to the modification of financial assets, financial liabilities and lease liabilities, specific hedge accounting requirements, and disclosure requirements applying IFRS 7 to accompany the amendments regarding modifications and hedge accounting. The effective date is 1 January 2021. The amendments do not have a significant effect on the Group.
- No other published standards, standard amendments or interpretations which would be expected to have a significant effect on the Group's consolidated financial statements or disclosures.

Future standard changes not yet effective and not yet endorsed by the EU in 2020

- Amendments to IAS 1 Presentation of Financial Statements: Classification of Liabilities as current or non-current. The amendments clarify how to classify debt and other liabilities as current or non-current. The effective date is 1 January 2023. The Group is assessing the impact of these amendments.
- Amendments to IFRS 3 Business Combinations, IAS 16 Property, Plant and Equipment, IAS 37 Provisions, Contingent Liabilities and Contingent Assets and Annual Improvements 2018-2020. The amendments to IFRS 3 are including minor updates to the standard. The amendments to IAS 16 prohibits an entity from deducting from the cost of an item of PPE any proceeds received from selling items produced while the entity is preparing the asset for its intended use. The amendment to IAS 37 clarifies that the direct costs of fulfilling a contract include both the incremental costs of fulfilling the contract and an allocation of other costs directly related to fulfilling contracts. Annual Improvements to IFRS Standards 2018–2020 is including minor amendments to IFRS 9, IFRS 16 and IAS 41 standards. The effective date is 1 January 2022. The Group is assessing the impact of these amendments.
- IFRS 17 Insurance Contracts: This standard replaces IFRS 4, which currently permits a wide variety of practices in accounting for insurance contracts. The effective date is 1 January 2023. The standard is not relevant to the Group.
- Other published standards, standard amendments or interpretations are not expected to have a significant effect on the Group's consolidated financial statements or disclosures.

Note 2 Critical accounting estimates and judgements

Use of estimates

The preparation of consolidated financial statements conforming to IFRS requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, as well as the disclosure of contingent assets and liabilities at the dates of the financial statements and the reported amounts of revenues and expenses during the period. The estimates are based on historical experience and various other assumptions that are believed to be reasonable, though actual results and timing could differ from the estimates. Management believes that the accounting policies below represent those matters requiring the exercise of judgement where a different opinion could result in changes to reported results.

Property, plant and equipment, intangible assets and right-of-use assets

The carrying amounts of property, plant and equipment and intangible assets and right-of-use assets are assessed at each reporting date to determine whether there is any indication that an asset may be impaired. If an indicator of impairment exists, the asset's recoverable amount is determined and compared with its carrying amount. The recoverable amount of an asset is estimated as the higher of fair value less the cost of disposal and the value in use, with an impairment charge recognised whenever the carrying amount exceeds the recoverable amount. The value in use is calculated using a discounted cash flow method which is most sensitive to the discount rate as well as the expected future cash flows. The key assumptions used in the impairment testing, are explained further in Note 10 Depreciation, amortisation and impairment charges.

Management believes that the assigned values and useful lives, as well as the underlying assumptions, are reasonable, though different assumptions and assigned lives could have a significant impact on the reported amounts. For material intangible assets and property, plant and equipment in an acquisition, an external advisor makes a fair valuation of the acquired intangible assets and property, plant and equipment and assists in determining their remaining useful life.

Goodwill

Goodwill is tested per Cash Generating Unit (CGU) or by a group of CGUs at least on an annual basis and recoverable amount is calculated using the discounted cash flow valuation method (value in use). Impairment charge is recognised if the carrying amount exceeds the recoverable amount. The discounted cash flow method uses future projections of cash flows from each of the reporting units in a CGU or a group of CGUs and includes, among other estimates, projections of future product pricing, production levels, product costs, market supply and demand, projected capital expenditures and an assumption of the weighted average cost of capital. The discount rates used for the net present value calculation of projected cash flows reflect the best estimate of the weighted average cost of capital.

The Group has evaluated the most sensitive estimates which when changed could have a material effect on the fair value of the assets or goodwill and therefore could lead to an impairment. These estimates are expected sales prices, expected operating costs and discount rate. The key assumptions used in the impairment testing are explained further in Note 10 Depreciation, amortisation and impairment charges.

Biological assets

The Group has biological assets in subsidiaries, joint operations and associated companies. Biological assets, in the form of standing trees, are accounted for under the IAS 41 Agriculture standard, which requires that the assets are measured at fair value less the costs to sell. Fair value is determined using discounted cash flows from continuous operations based on sustainable forest management plans taking into account the growth potential of one cycle. These discounted cash flows require estimates of growth, harvest, sales price, costs and discount rate. In determining the value of biological assets the management of subsidiaries, joint operations and associated companies need to make appropriate estimates of future price levels and trends for sales and costs, and to undertake regular surveys of the forest to establish the volumes of wood available for cutting and their current growth rates.

See next chapter for estimates and judgement applied in valuation of Swedish forest assets and Note 12 Forest assets for more detailed information about Nordic and plantation forest assets.

Swedish forest assets

The Group has changed the accounting principles and valuation method for Nordic forests at the end of 2020. In accordance with the new valuation method, the fair value of forest assets in Sweden is determined using a market approach method, which is based on the forest market transactions in the areas where Stora Enso's forests are located. Market prices between areas vary significantly and judgement is applied to define relevant areas for market transactions used in valuation. The valuation of the forest assets is based on detailed transaction data and price statistics as provided by different market data suppliers. Market transaction data is adjusted to consider characteristics and nature of Stora Enso's forest assets and to exclude certain non-forest assets and transactions considered as outliers compared to other transactions. The valuation takes into account where the forest land is located, price levels and volume of standing stock. The value of the forest assets will be affected by changes in transaction prices and by how the volume of standing stock develops. Stora Enso is applying weighted three-year average market transaction prices considered to include a sufficient amount of transactions and estimated to represent market conditions at reporting date.

The value of the forest assets is allocated to biological assets (standing trees) and forest land. Allocation of the combined fair value of forest assets is based on the income approach where separate present values of expected net cash flows are calculated for both biological assets and forest land. The discount rate is determined as the rate at which the valuation based on market transaction prices matches the total forest assets combined cash flows for standing trees and forest land. The total net cash flows for each of the components include estimates in respect of future harvesting volumes, sales price levels, and cost development. See Note 12 Forest assets for more information.

Control assessment of joint operations and associates

Note 1 Accounting principles describe Veracel and Montes del Plata as joint operations. In both companies Stora Enso's ownership is 50%. The interpretations as joint operations are based on shareholders' agreements which give Stora Enso rights to a share of returns and make the Group liable indirectly for the liabilities, as our ability to pay for the pulp is used to finance debts. The Group recognises its share of assets, liabilities, revenues and expenses of the joint operation, based on rights and obligations.

Associate companies are accounted for using the equity method. Stora Enso does not control the companies alone or jointly with other parties, but has significant influence and thus retains its significant non-controlling interest as equity accounted investments. These companies are presented in Note 13 Equity accounted investments.

Fair value of financial instruments

Where the fair value of financial assets and liabilities cannot be derived directly from publicly quoted market prices, other valuation techniques, such as discounted cash flow models, transaction multiples, the Black and Scholes model and the Gordon model, are employed. The key judgements include future cash flows, credit risk, volatility and changes in assumptions about these factors which could affect the reported fair value of the financial instruments. Investments in debt and equity instruments of unlisted entities, such as Pohjolan Voima Oy (PVO), represent a significant portion of the Group's assets and require significant management judgement, as explained in more detail in Notes 14 Equity instruments and 24 Financial risk management.

Income taxes

Tax assets and liabilities are reviewed on a periodic basis and balances are adjusted appropriately. The deferred tax assets, whether arising from temporary differences or from tax losses, are recognised only to the extent that it is probable that future taxable profits will be available against which the assets can be utilised. Management considers that adequate provision has been made for future tax consequences based on the current facts, circumstances and tax law. However, should any tax positions be challenged and not prevail, different outcomes could result and have a significant impact on the amounts reported in the consolidated financial statements. See Note 9 Income taxes for more detailed information.

Post-retirement benefits

The determination of the Group pension obligation and expense is subject to the selection of certain assumptions used by actuaries in calculating such amounts, including, among others, the discount rate, the annual rate of increase in future compensation levels and estimated lifespans. Amounts charged in the Income statement are determined by independent actuaries; however, where actual results differ from the initial estimates, together with the effect of any change in assumptions or other factors, these differences are recorded directly in equity, as disclosed in the statement of comprehensive income. See Note 20 Post-employment benefits for detailed information on the assumptions used in the pension obligation calculations.

Environmental provisions

The Group has made provisions for known environmental liabilities where legal or constructive obligation exist, based on the management's best estimate of the remediation costs. There is some uncertainty regarding the timing and amount of these costs and therefore the final liability could differ significantly from the original estimate. See Note 22 Provisions for more detailed information.

Accounting implications of the effects of Covid-19

The Group has assessed the potential accounting implications of decreased economic activity as a result of Covid-19 pandemic. The Group has also assessed impact on significant accounting estimates and management judgement and identified certain items, which have been evaluated in more detail. The review of significant estimates and judgement did not result in any material adjustments to the carrying amounts of assets and liabilities or amounts recognised in income statement.

The IAS 36 Impairment of Assets standard requires non-financial assets to be tested for impairment whenever there is an indication that those assets might be impaired. The uncertainty in the economic environment may decrease the reliability of long-term forecasts used in the impairment testing models. See Note 10 Depreciation, amortisation and impairment charges for more details about impairment testing.

The Group has reviewed and updated its expected credit loss model for trade receivables to take into account the macro-economic developments. Change did not result in a significant increase of credit loss allowances for trade receivables, but the credit risk may increase if the current trading conditions deteriorate further. See Note 17 Operative Receivables for more details There has been minor increase in the valuation allowance made for old, slow moving and obsolete finished goods and spare parts. See Note 16 Inventories for more details.

The Group's units in certain countries have received various forms of assistance from the authorities intended to support employment or temporarily improve cash flows. The savings in income statement or cash flow improvements from the obtained relief measures were not significant for the Group in 2020.

Note 3 Segment information

Accounting principles

Stora Enso's reportable segments are Packaging Materials, Packaging Solutions, Biomaterials, Wood Products, Forest, and Paper and the segment Other. Operating segments reflect the Group's management structure and the way financial information is regularly reviewed by Stora Enso's President and CEO who is responsible for allocating resources and assessing the performance of the operating segments. Costs, revenues, assets and liabilities are allocated to business segments on a consistent basis. Transactions between operating segments are based on arm's length terms, and they are eliminated on consolidation. See Note 1 Accounting principles for details related to changes in segment reporting. The activities of the reportable segments are:

Packaging Materials
The Packaging Materials division is a global leader in the circular economy with our premium renewable and recyclable packaging materials based on both virgin and recycled fiber. Addressing the needs of today's eco-conscious consumers, we help customers replace fossil-based materials with low-carbon, renewable and recyclable alternatives for their food and drink, pharmaceutical or transport packaging. A wide selection of barrier coatings enables design optimisation for various demanding packaging end-uses.

Packaging Solutions
The Packaging Solutions division develops and sells premium fiber-based packaging products and services. Our high-end eco-friendly packaging products are used by leading brands across multiple market sectors, including store retail, e-commerce and industrials. The portfolio includes corrugated and other converting, design services, automation solutions, and scalable innovations such as formed fiber and biocomposites.

Biomaterials
The Biomaterials division meets the growing demand for the replacement of products made from fossil-based and hazardous materials with bio-based solutions. We use all fractions of biomass, like lignin and sugars, to develop new solutions. We work to replace fossil-based materials with new applications such as carbon for energy storage, bio-based binders, and bio-based carbon fiber. The division's offering includes a wide variety of pulp grades to meet the demands of paper, board, tissue, textile and hygiene product producers as well as materials from side streams of our processes, such as tall oil and turpentine from biomass.

Wood Products
The Wood Products division is the largest sawn wood producer in Europe and a leading provider of sustainable wood-based solutions for the construction industry. Our growing Building Solutions business offers building concepts to support low-carbon construction and eco-friendly designs. We develop digital tools to simplify the designing of building projects with wood. We also offer applications for windows, doors and for packaging industries, and our pellets provide a sustainable heating solution.

Forest
The Forest division creates value with sustainable forest management, competitive wood supply and innovation, which are the foundation for Stora Enso's renewable offerings. The division manages Stora Enso's forest assets in Sweden and the 41% share of Tornator, the majority of whose forest assets are located in Finland. The division is also responsible for wood sourcing for Stora Enso's Nordic, Baltic and Russian operations and B2B customers. Stora Enso is one of the biggest private forest owners in the world.

Paper
Stora Enso is the second largest paper producer in Europe, with an established customer base and a wide product portfolio for print and office use. Customers benefit from Stora Enso's broad selection of paper products made from recycled and virgin fiber, our technical expertise and our sustainability know-how as well as our mill and customer service centre network.

Segment Other
The segment Other includes Stora Enso's shareholding in the energy company Pohjolan Voima (PVO), and the Group's shared services and administration.

Sales by segment

	External	Internal	Total	External	Internal	Total
EUR million		**2020**			**2019**	
Packaging Materials	2 999	116	3 115	3 091	163	3 254
Packaging Solutions	578	16	594	680	18	698
Biomaterials	1 025	168	1 193	1 193	271	1 464
Wood Products	1 295	91	1 386	1 457	112	1 569
Forest	698	1 348	2 046	790	1 531	2 321
Paper	1 931	48	1 979	2 800	56	2 856
Other	27	901	928	45	1 031	1 076
Elimination of internal sales		-2 687	-2 687		-3 184	-3 184
Total	**8 553**	**0**	**8 553**	**10 055**	**0**	**10 055**

Disaggregation of revenue

EUR million	2020	2019
Product sales	8 460	9 935
Service sales	93	120
Total	**8 553**	**10 055**

Product and service sales by segment

EUR million		2020	2019
Packaging Materials	Product sales	3 103	3 240
	Service sales	11	14
Packaging Solutions	Product sales	593	696
	Service sales	1	2
Biomaterials	Product sales	1 164	1 436
	Service sales	29	27
Wood Products	Product sales	1 362	1 550
	Service sales	24	19
Forest	Product sales	2 019	2 276
	Service sales	27	45
Paper	Product sales	1 971	2 842
	Service sales	8	14
Other	Product sales	139	183
	Service sales	789	892
Inter-segment sales	Product sales	-1 893	-2 288
	Service sales	-795	-895
Total		**8 553**	**10 055**

Financials

Segment share of operating profit/loss

	Year Ended 31 December	
	Operating Profit/Loss	
EUR million	**2020**	**2019**
Packaging Materials	391	352
Packaging Solutions	28	36
Biomaterials	-31	180
Wood Products	111	92
Forest	524	547
Paper	-58	154
Other	-42	-56
Total	**922**	**1 305**
Net financial items	-150	-168
Profit before Tax	**773**	**1 137**
Income tax expense	-156	-281
Net Profit	**617**	**856**

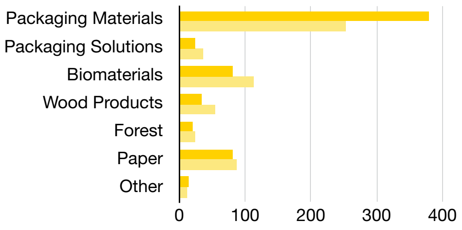
Operating Capital, depreciation, impairments and impairment reversals, disposal gains and losses, and capital expenditure by segment

	Year Ended 31 December					
	Operating Capital		Depreciation/Impairments/ Impairment reversals/ Disposal gains and losses		Capital Expenditure	
EUR million	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Packaging Materials	2 954	2 824	205	193	378	253
Packaging Solutions	240	241	30	30	23	35
Biomaterials	2 245	2 496	145	144	80	114
Wood Products	548	647	46	55	34	54
Forest	6 194	4 138	21	18	20	24
Paper	493	657	122	125	80	87
Other	318	460	40	31	13	12
Total	**12 993**	**11 462**	**609**	**597**	**628**	**579**

Operating capital ("O" items) is designated thus in the Balance Sheet and represents the sum of Intangible Asset and Property, Plant and Equipment, right-of-use assets, forest assets, emission rights, unlisted shares, other non-current assets, inventories, current operative receivables and liabilities, provisions and other non-current operative liabilities.

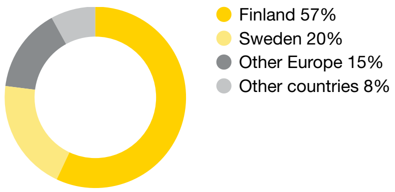
Capital expenditure by segment

EUR million



*excluding bioasset capex

Capital expenditure by location*



*excluding bioasset capex

Goodwill by segment

	Year Ended 31 December	
	Goodwill	
EUR million	**2020**	**2019**
Packaging Materials	26	31
Packaging Solutions	6	6
Biomaterials	43	49
Wood Products	112	117
Forest	0	0
Paper	95	100
Other	0	0
Total	**281**	**302**

In 2020 or 2019, the goodwill testing did not result in any impairment. See Note 10 Depreciation, amortisation and impairment charges for more details related to impairment testing.

Average personnel

	Year Ended 31 December	
Segment	**2020**	**2019**
Packaging Materials	5 557	5 631
Packaging Solutions	5 094	6 115
Biomaterials	1 822	1 752
Wood Products	4 026	4 106
Forest	1 520	1 565
Paper	4 356	4 861
Other	2 080	2 066
Total	**24 455**	**26 096**

	Year Ended 31 December	
Location	**2020**	**2019**
Austria	1 014	999
Baltic States	1 410	1 362
Belgium	527	529
Czech Republic	992	941
Finland	6 317	6 615
Germany	882	975
Poland	2 074	2 136
Russia	1 130	1 125
Sweden	5 139	5 215
Other Europe	262	277
Total Europe	**19 747**	**20 175**
Brazil	423	418
China (incl. Hong Kong)	3 729	4 890
USA	94	95
Uruguay	313	314
Other countries	148	204
Total	**24 455**	**26 096**

	As at 31 December	
	2020	**2019**
Year-End Personnel	**23 189**	**25 141**

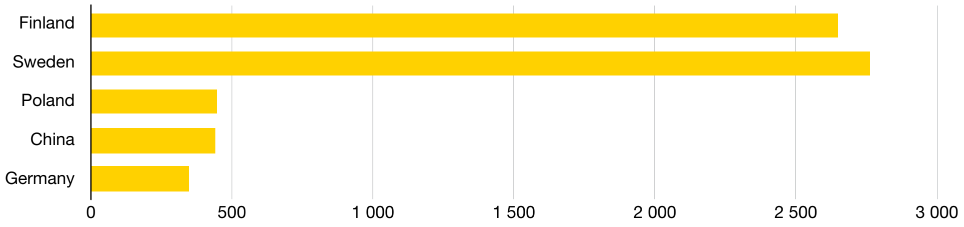
Financials

External sales by destination and origin

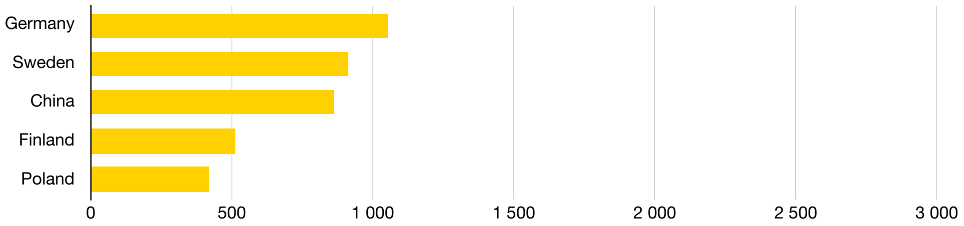
	Sales by Destination		Sales by Origin		Balance of Trade	
EUR million	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Austria	292	276	348	393	56	117
Baltic States	232	256	262	274	30	18
Belgium	87	120	201	256	114	136
Czech Republic	153	159	231	241	78	82
Denmark	90	105	15	19	-75	-86
Finland	510	580	2 650	3 357	2 140	2 776
France	357	460	30	15	-327	-445
Germany	1 053	1 317	298	439	-755	-878
Italy	339	418	0	0	-339	-418
Netherlands	210	276	0	0	-210	-276
Poland	419	504	444	510	25	6
Russia	248	305	211	230	-37	-75
Spain	195	239	0	0	-195	-239
Sweden	912	956	2 763	2 987	1 851	2 030
UK	331	458	-16	16	-347	-442
Other Europe	738	876	88	99	-650	-777
Total Europe	**6 166**	**7 308**	**7 525**	**8 835**	**1 359**	**1 527**
Australia / New Zealand	129	168	25	36	-104	-132
Brazil	53	70	223	300	170	230
China (incl. Hong Kong)	860	904	441	483	-419	-421
Japan	242	290	0	0	-242	-290
Middle East	220	241	0	0	-220	-241
Uruguay	27	25	304	371	277	346
USA	252	281	34	27	-218	-254
Other countries	606	768	1	3	-605	-765
Total	**8 553**	**10 055**	**8 553**	**10 055**	**0**	**0**

Major markets

Top 5 countries, sales by origin 2020
EUR million



Top 5 countries, sales by destination 2020
EUR million



Total assets and capital employed by location

	As at 31 December			
	Total Assets		Capital Employed	
EUR million	**2020**	**2019**	**2020**	**2019**
Austria	170	174	108	102
Baltic States	139	136	109	113
Belgium	203	223	117	130
Czech Republic	148	151	115	126
Finland	5 176	4 378	2 708	2 715
Germany	322	337	1	-15
Poland	491	573	392	436
Russia	159	192	91	126
Sweden	7 225	5 129	5 116	3 546
Other Europe	168	98	69	51
Total Europe	**14 201**	**11 390**	**8 827**	**7 330**
Brazil	280	387	260	357
China (incl. Hong Kong)	1 265	1 359	1 107	1 212
Uruguay	1 550	1 735	1 464	1 624
USA	89	109	39	62
Other countries	46	73	17	48
Total	**17 431**	**15 053**	**11 714**	**10 632**

Total capital employed represents operating capital less net tax liabilities.

Reconciliation of operating capital to total asset

	As at 31 December	
EUR million	**2020**	**2019**
Operating Capital	**12 993**	**11 462**
Operative liabilities	2 471	2 516
Interest-bearing receivables	1 834	982
Tax receivables	131	92
Total Assets	**17 431**	**15 053**

Operating Capital, depreciation, impairments and impairment reversals, disposal gains and losses, and capital expenditure by location

	Year Ended 31 December					
	Operating Capital		Depreciation/Impairments/ Impairment reversals/ Disposal gains and losses		Capital Expenditure	
EUR million	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Austria	111	106	8	8	7	9
Baltic States	110	113	9	7	15	24
Belgium	133	150	27	27	15	8
Czech Republic	120	130	5	6	8	4
Finland	2 647	2 658	205	179	360	278
Germany	4	-12	22	27	22	25
Poland	404	450	23	31	20	25
Russia	89	123	7	8	10	13
Sweden	6 447	4 378	130	120	124	136
Other Europe	66	52	3	0	0	0
Total Europe	**10 130**	**8 147**	**440**	**414**	**580**	**523**
Brazil	254	359	15	19	15	11
China (incl. Hong Kong)	1 104	1 210	60	70	10	15
Uruguay	1 485	1 638	43	44	19	27
USA	3	62	49	47	3	3
Other countries	16	47	3	3	1	0
Total	**12 993**	**11 462**	**609**	**597**	**628**	**579**

Note 4 Acquisitions and disposals

Accounting principles

Acquired companies are accounted for under the acquisition method whereby they are included in the Consolidated financial statements from the date the control over the subsidiary is obtained, whereas, conversely, disposals are included up to the date when the control is lost.

Acquisition of Group companies

EUR million	2020	2019
Net assets acquired		
Cash and cash equivalents	0	64
Property, plant and equipment and Intangible assets	3	332
Biological assets	22	2 598
Working capital	0	-28
Tax assets and liabilities	-5	-598
Interest-bearing assets and liabilities	0	-793
Fair value of net assets acquired	**20**	**1 575**
Purchase consideration, cash part	0	527
Purchase consideration, non-cash	0	1 106
Total purchase consideration	**0**	**1 633**
Fair value of net assets acquired	-20	-1 575
Goodwill	**-20**	**57**
Cash outflow with purchase consideration on acquisitions	0	-527
Cash and cash equivalents of acquired subsidiaries	0	64
Cash flow on acquisition, net of acquired cash	**0**	**-464**

Stora Enso has not acquired any companies or business operations in 2020. Amounts presented in 2020 are related to Bergvik Skog AB restructuring measurement period adjustments in 2020.

Acquisitions – Bergvik Skog AB restructuring in 2019

On 31 May 2019, Bergvik Väst AB, a subsidiary of Bergvik Skog AB, was distributed as dividends to the shareholders of Bergvik Skog AB. On the same date the Group acquired an additional 20% of shares in Bergvik Väst AB from other shareholders resulting in a total holding in Bergvik Väst AB of 69.8%. Simultaneously, Bergvik Väst AB was demerged and Stora Enso became the 100% owner of a new subsidiary holding around 69.8% of the former Bergvik Väst AB assets and liabilities. The acquisition date of the new subsidiary was 31 May 2019. As a result of the transaction, Stora Enso's direct forest holdings in Sweden are 1.4 million hectares, of which 1.15 million hectares is productive forest land. Acquired entity is part of the Forest division.

The fair values of the identifiable assets and liabilities based on final acquisition accounting (including measurement period adjustments) are presented in the following table:

EUR million	Acquisition of 69.8% of Bergvik Väst AB
Cash and cash equivalents	64
Land	308
Other property, plant and equipment	8
Biological assets	2 620
Working capital	-35
Tax liabilities	-603
Interest-bearing liabilities	-793
Fair value of net assets acquired	**1 569**
Purchase consideration on acquisition, cash part	500
Fair value of 49.8% of shares in Bergvik Väst AB, non-cash	1 106
Total purchase consideration	**1 605**
Fair value of net assets acquired	-1 569
Goodwill	**36**
Cash out flow with purchase consideration on acquisitions	-500
Cash and cash equivalents of acquired subsidiaries	64
Cash flow on acquisition, net of acquired cash	**-436**

The fair value of the shares received as dividends was determined based on the acquired net assets value of Bergvik Väst AB, whereby the fair values of the biological assets and land were estimated through a discounted cash flow model. A deferred tax liability was also included in the acquisition balances.

The post combination review was completed during the first of half of 2020 and therefore acquisition accounting is considered to be final.The fair values of the acquired assets, liabilities and goodwill in the table above are representing final acquisition accounting. Measurement period adjustments in 2020 included biological assets increase of EUR 22 million, land increase of EUR 3 million and goodwill decrease of EUR 20 million. Also deferred tax liabilities increased EUR 5 million. Measurement period adjustments in 2019 included increase of EUR 75 million in biological assets, increase of EUR 8 million in tax liabilities, decrease of EUR 21 million in goodwill, increase of EUR 48 million in non-cash consideration and decrease of EUR 1 million in cash consideration. The measurement period adjustments were mainly related to updates in biological asset valuation to better reflect the conditions existing at acquisition date.

The goodwill represents the value of securing a competitive raw material supply for the long term in Sweden. With direct ownership, Stora Enso will have better visibility of its wood supply and the acquisition provides better opportunities to further develop sustainable forest management and strengthening of the Group's competitiveness. The goodwill has been allocated to those Divisions benefiting from the acquisition.

Almost all the revenues of the acquired entity are internal from Stora Enso Group point of view. The acquired entity's net profit has been reported for the first five months of 2019 in the Group result as part of the Share of results of the equity accounted investments. Therefore, even if the acquisition had taken place from 1 January 2019, it would not have had a significant impact on the Group sales and net profit for 2019. Related transaction costs during 2019 amounted to EUR 3 million and were recorded to Other operating expenses. In 2019 and in connection to the restructuring, a cumulative translation adjustment (CTA) of EUR -171 million was released from equity through profit and loss. In addition, a net gain of EUR 129 million on the transaction was presented in Share of results of equity accounted investments.

The Group owns 49.8% of shares in Bergvik Skog AB which continue to be reported as an equity accounted investment. See Note 13 Equity accounted investments for more details.

Acquisitions - Other in 2019

In September 2019, Stora Enso bought out non-controlling interests in Stora Enso China Packaging. Stora Enso previously owned 90% of the parent company of the China Packaging Group and with the purchase, the Group's ownership increased to 100%. China Packaging is included in the Packaging Solutions division. The transaction did not have a material impact on the Group.

In May 2019, and separately from Bergvik Skog AB restructuring, Stora Enso also acquired 100% of the nursery business Bergvik Skog Plantor AB from Bergvik Skog AB, three wind turbine projects, and a real estate company. These acquired entities are included in the Forest division. These transactions did not have a material impact on the Group.

Disposal of Group companies

	Year Ended 31 December	
EUR million	**2020**	**2019**
Net Assets Sold		
Cash and cash equivalents	2	4
Property, plant and equipment and Intangible assets	3	8
Working capital	2	3
Interest-bearing assets and liabilities	-5	-43
Non-controlling interest	0	11
Net assets in disposed companies	**1**	**-16**
Total disposal consideration	**-1**	**-15**
CTA release	0	3
Transaction costs	0	0
Total net gain/loss	**-2**	**4**
Attributable to the owners of the parent	**-2**	**4**
Attributable to the non-controlling interest	**0**	**0**

In March 2020, Stora Enso divested 100% of shares of its subsidiary consisting of sawn construction timber mill at Pfarrkirchen in Germany, to the fund LEO II. – VV1 GmbH. The sold company was part of the Wood Products division. The transaction did not have a material impact on the Group.

On 25 July 2019, Stora Enso signed an agreement to divest its 60% shareholding in the Dawang Mill in China, to its joint venture partner, Shandong Huatai Paper. Stora Enso Huatai (Shandong) Paper Co Ltd operated the Dawang paper mill in China and started operation in 2008. The disposal was completed in October 2019. During the third quarter of 2019 the Group recorded an impairment in fixed assets amounting to EUR 5 million in order to reduce the value of the net assets disposed to the recoverable value. The final consideration paid by Stora Enso for the divestment of the shares was EUR 17 million. In addition, a cumulative translation adjustment (CTA) gain of EUR 3 million was released from equity through profit and loss at closing. Stora Enso Huatai Paper was part of the Paper division.

In October 2019, Stora Enso divested 100% of shares of its Swedish subsidiary Skaftåsen Vindkraft AB. The company was acquired in May 2019 in connection to Bergvik Skog AB restructuring. Skaftåsen Vindkraft AB was part of the Forest division. The transaction did not have a material impact on the Group.

Note 5 Other operating income and expense

Accounting principles

Research and development

Research costs are expensed as incurred in other operating expenses in the consolidated income statement. Development costs are also expensed as incurred unless they meet the criteria to be recognised as intangible assets in accordance with IAS 38, in which case they are capitalised as intangible assets and depreciated over their expected useful lives.

Government grants

Government grants relating to the purchase of property, plant and equipment are deducted from the carrying value of the asset, while the net cost is capitalised. Other government grants are recognised as income on a systematic basis over the periods necessary to match them with the related costs which they were intended to compensate.

Emission rights and trading

The Group’s participation in the European Emissions Trading Scheme, in which it has been allocated allowances to emit a fixed tonnage of carbon dioxide over a fixed period of time, gives rise to an intangible asset for allowances, a government grant and a liability for the obligation to deliver allowances equal to those emissions that have been made during the compliance period. Emission allowances recorded as intangible assets are recognised when the Group is able to exercise control and are measured at level 1 fair value at the date of initial recognition. If the market value for the emission allowances falls significantly below the carrying amount, the decrease is considered permanent and impaired to market price. At that point an impairment charge is booked for allowances which the Group will not use internally. The liability to deliver allowances is recognised based on actual emissions. This liability will be settled using allowances on hand and measured at the carrying amount of those allowances, with any excess emissions measured at the market value of the allowances at the period end.

In the consolidated income statement, the Group will expense emissions made at the fair value of the rights at their grant date, under materials and services, together with purchased emission rights at their purchase price. Such costs will be offset under other operating income by the income from the original grant of the rights used at their fair value at the grant date, together with income from the release or sale of surplus rights. The consolidated income statement will thus be neutral in respect of all the rights consumed that were within the original grant. Any net effect represents the costs of purchasing additional rights to cover excess emissions, or the sale of unused rights in case that the realised emissions are below the allowances received free of charge or the impairment of allowances that are not required for internal use.

Green certificates

Stora Enso is part of the local green energy production system which entitles selected mills in Sweden, Belgium and Poland to receive green certificates based on megawatt hours of green energy produced. Green certificates represent the environmental value of renewable energy generated. The certificates can be traded separately from the energy produced. Several countries use green certificates as a means to bring green electricity generation closer to a market economy instead of more bureaucratic investment support and feed-in tariffs. The certificates are typically received free of charge and they can be traded in the local market to offset part of the production costs. Green certificates are often sold to electricity distributors which have a quota obligation to buy a certain percentage of their electricity from renewable sources. Green certificates validate that the electricity has been produced from renewable sources.

All certificates received are recognized at grant date market value only in the Balance Sheet. Certificates are posted to prepaid costs and accrued income, and a corresponding liability is entered into accrued liabilities and deferred income. As such, fluctuation in market prices does not have an impact on the Income statement. The income is recognised only when the certificate is sold.

Other operating income and expense

	Year Ended 31 December	
EUR million	**2020**	**2019**
Other operating income		
Emission rights granted and disposal gains	49	50
Sale of green certificates	24	26
Capital gains on sale of intangible assets and property, plant and equipment	3	2
Dividend and gain on sale of unlisted shares	1	2
Insurance compensation	5	7
Rent and other	42	68
Government grants	22	9
Total	**147**	**165**
Other operating expenses include		
Lease expenses	39	34
Research and development	100	100
Credit losses, net of reversals	4	9
CTA release	0	185
Materials and services include		
Emissions rights to be delivered and disposal losses	**31**	**33**

The Group has recorded an other operating income of EUR 49 (EUR 50) million related to emissions. Under materials and services an expense of EUR 31 (EUR 33) million has been booked related to the cost of CO_2 emissions from production. Actual realised profits amounted to EUR 16 (EUR 17) million on the disposal of surplus rights and EUR 5 (EUR 4) million is the value of excess emission rights held at the year end.

The Group also generates income from its renewable power generation in Belgium, Sweden and Poland. Based on this, the Group is entitled to green certificates related to our investments in green energy production in these countries. Green certificates are sold onwards to electricity retailers for fulfilling their renewable quota obligations. The income from the sale of green certificates amounted to EUR 24 (EUR 26) million.

Lease expenses include expenses relating to short-term leases of EUR 10 (EUR 13) million, low-value assets of EUR 22 (EUR 19) million and variable lease payments not included in the measurement of lease liabilities of EUR 3 (EUR 3) million. Lease expenses also include service payments included in lease contracts, which are not included in the measurement of lease liabilities. More details regarding CTA are presented in Note 4 Acquisition and disposals.

Auditor's fees and services

	Year Ended 31 December	
EUR million	**2020**	**2019**
Audit fees	4	4
Audit-related	0	0
Tax fees	0	0
Other fees	0	0
Total	**4**	**4**

Aggregate fees for professional services rendered to the Group principal auditor PwC amounted to EUR 4 (EUR 4) million. Audit fees relate to the auditing of the annual financial statements or ancillary services normally provided in connection with statutory and regulatory filings. Audit-related fees are incurred for assurance and associated services that are reasonably related to the performance of the audit or for the review of financial statements.

Note 6 Personnel expenses

Personnel expenses

	Year Ended 31 December	
EUR million	**2020**	**2019**
Wages and salaries	966	1 004
Pensions (see below)	152	166
Share-based remuneration (Note 21)	1	3
Other statutory employer costs	134	136
Other voluntary costs	17	21
Total	**1 270**	**1 331**

Pensions

	Year Ended 31 December	
EUR million	**2020**	**2019**
Defined benefit plans	16	10
Defined contribution plans	136	156
Total	**152**	**166**

The average number of employees in 2020 amounted to 24 455 compared with 26 096 in 2019. Pension costs are discussed further in Note 20 Post-employment benefits.

In 2020, the expense of the share-based remuneration was EUR 1 (EUR 3) million. Share-based remuneration comprising of share awards and related hedges are described in more detail in Note 21 Employee variable compensation and equity incentive schemes. Remuneration of the Group Leadership Team and Board are described in Note 7 Board and executive remuneration.

Financials

Note 7 Board and executive remuneration

Board and committee remuneration

	Year Ended 31 December				
	2020			2019	
EUR thousand (before taxes)	Cash	Value of shares[1]	Total[4]	Total	Committee memberships
Board members at 31 December 2020					
Jorma Eloranta, Chair	144	79	222	217	Remuneration, Nomination[2,3], Financial and Audit
Hans Stråberg, Vice Chair	74	45	118	115	Remuneration, Nomination[2,3]
Håkan Buskhe	52	30	82		Sustainability and Ethics
Elisabeth Fleuriot	60	30	91	88	Financial and Audit
Hock Goh	60	30	91	80	Financial and Audit
Mikko Helander	52	30	82	74	Sustainability and Ethics
Christiane Kuehne	56	30	87	84	Sustainability and Ethics
Antti Mäkinen	52	30	82	80	Remuneration
Richard Nilsson	67	30	97	95	Financial and Audit
Former Board members					
Göran Sandberg (until 4 June, 2020)	0	0	0	80	
Total remuneration as Directors[1]	**617**	**336**	**953**	**913**	

[1] 40% of the Board remuneration, excluding Committee remuneration, in 2020 was paid in Stora Enso R shares purchased from the market and distributed as follows: to Chair 7 209 R shares, Vice Chair 4 098 R shares, and members 2 781 R shares each. The Company has no formal policy requirements for the Board members to retain shares received as remuneration.
[2] Stora Enso's Shareholders' Nomination Board has been appointed by the AGM in 2016 to exist until otherwise decided. The Shareholders' Nomination Board according to its Charter as approved by the AGM comprises of four members: the Chair and Vice Chair of the Board of Directors, as well as two members appointed by the two largest shareholders (one each) as of 31 August each year. No separate remuneration is paid to members of the Nomination Board.
[3] Marcus Wallenberg, appointed by FAM AB, is Chair of the Nomination Board. Harri Sailas is the member of the Shareholders' Nomination Board appointed by Solidium Oy. Jorma Eloranta and Hans Stråberg were appointed as members of the Shareholders' Nomination Board in their roles as Chair and Vice Chair of the Board of Directors.
[4] The Company additionally pays the transfer tax for share purchases for each member, in line with AGM decision, which amount is considered also taxable income for each member.

Shareholders at the Annual General Meeting (AGM) have established a Shareholders' Nomination Board to exist until otherwise decided and to annually prepare proposals for the AGM's approval concerning the number of members of the Board of Directors, the Chair, Vice Chair and other members of the Board, as well as the remuneration for the Chair, Vice Chair and members of the Board and its committees.

Board share interests at 31 December 2020

	Shares held[1]	
	A	R
Board members at 31 December 2020		
Jorma Eloranta, Chair	1 150	34 285
Hans Stråberg, Vice Chair		45 389
Håkan Buskhe		2 781
Elisabeth Fleuriot		26 512
Hock Goh		31 265
Mikko Helander		7 079
Christiane Kuehne		11 073
Antti Mäkinen		7 498
Richard Nilsson		23 615
Total shares held	**1 150**	**189 497**

[1] Board members' related persons hold no Stora Enso shares.

The following Board members also served in 2020

	Shares held when Board membership ended	Effective date of Board membership ending
Göran Sandberg	6 792	4 June 2020

Group Leadership Team (GLT) remuneration and share interests

The table below includes the remuneration earned by GLT members during the year, including those shares with performance conditions that have ended and are due to vest in the coming year. The company recommends and expects the CEO and GLT members to hold Stora Enso shares at a value corresponding to at least one annual base salary. Stora Enso shares received as remuneration are therefore recommended not to be sold until this level has been reached.

The aggregate cost of earned remuneration for GLT in 2020 amounted to EUR 9.0 (EUR 11.4) million. The total number of GLT members was fifteen (eleven) at the year end in 2020.

In accordance with their respective pension arrangements, GLT members may retire at sixty-five years of age with pensions consistent with local practices in their respective home countries. Contracts of employment provide for six months' notice prior to termination with severance compensation of twelve months basic salary if the termination is at the Company's request.

The outcome of the financial targets relating to the Short term incentive programmes for the performance year 2020, and Long term incentive programmes for the performance years 2018 to 2020 were reviewed and confirmed by the Remuneration Committee, and approved by the Board of Directors in January 2021.

Note 21 Employee variable compensation and equity incentive schemes includes details of incentive schemes and share opportunity programmes for the management and staff of Stora Enso.

Group Leadership Team remuneration

	Year Ended 31 December						
	2020			2019[1]			
EUR thousand	CEO	Others[3]	GLT Total	CEO[2]	Former CEO[4]	Others	GLT Total
Remuneration[1,7]							
Annual salary	894	3 667	4 561	75	887	3 756	4 717
Local housing (actual costs)	0	0	0	0	0	0	0
Other benefits	29	393	422	2	19	373	394
Termination benefits	0	0	0	0	0	0	0
Short term incentive programme[6]	171	710	881	14	86	428	529
Long term incentive programme[6]	189	1 212	1 401	363	0	2 948	3 311
	1 283	**5 982**	**7 265**	**454**	**992**	**7 505**	**8 951**
Pension Costs							
Mandatory plans	284	904	1 188	23	62	1 396	1 481
Stora Enso voluntary plans[5]	0	590	590	0	464	539	1 003
	284	**1 494**	**1 778**	**23**	**526**	**1 935**	**2 484**
Total Compensation	**1 567**	**7 476**	**9 043**	**477**	**1 518**	**9 440**	**11 435**

[1] Due to changes in the Finnish Corporate Governance code requiring companies to report remuneration that is paid or due, the 2019 amounts have been restated from amounts paid in 2019 to amounts earned in 2019. The figures are in accordance with the Remuneration report disclosed separately. Due to this the figures presented in the above table do not directly reconcile with the amounts recognised as personnel expenses in the Income statement as presented in the below table Group Leadership Team remuneration in Income statement.
[2] For the CEO, short term incentives for the financial year 2019 have been prorated for time as CEO.
[3] Amounts include earnings related to the new GLT members David Ekberg from 1 April, Lars Völkel from 1 July, Annette Stube and Katariina Kravi from 1 September, Tobias Bäärnman and Teemu Salmi from 1 November. Amounts include earnings related to Malin Bendz until January 15 and Noel Morrin until August 31.
[4] For the former CEO, short term incentives for the financial year 2019 have been prorated for time as GLT. The former CEO did not receive any other termination benefits such as severance pay.
[5] The former CEO participates in the Swedish Executive Pension Plan where pension accruals are unfunded for all participants, the liability is calculated and insured in accordance with Swedish legislation. The liability for the former CEO amounts to EUR 3 052 thousand.
[6] Amounts relate to amounts due at year end, which will be paid in 2021. LTI value is calculated using the December 30, 2020 closing price of EUR 15.65. The final value of the vested shares will depend on the share price on vesting date March 1, 2021.
[7] Remuneration for executives is disclosed only for the period during which they were GLT members.

Financials

Group Leadership Team remuneration in Income statement

	Year ended 31 December						
	2020			2019			
EUR thousand	CEO	Others	GLT Total	CEO	Former CEO	Others	GLT Total
Salaries and other short-term employee benefits	1 094	4 770	5 864	91	992	4 557	5 640
Long Term Incentive programme[1]	58	237	294	164	-259	455	360
Post-employment benefits	284	1 494	1 778	23	526	1 935	2 484
Total recognised in Income statement	**1 436**	**6 501**	**7 936**	**278**	**1 259**	**6 947**	**8 484**

[1] The costs of long-term incentive (LTI) programmes are recognised as costs over the three year vesting period based on the share price at grant date and estimate of equity instruments that will eventually vest.

Executives other than CEO

Short term incentive (STI) programmes for management

In 2020, GLT members have STI programmes with up to a maximum of 50% or 60% of their annual fixed salary, payable the year after the performance period. 70% of the STI for 2020 was based on financial measures and 30% Group Cash Flow and safety targets.

Long term incentive (LTI) programmes for management

Since 2018, the LTI programmes have had three-year targets and vest in one portion only after three years, and the absolute maximum vesting level is 100% of the number of shares granted. The opportunity under the programmes is in Performance Shares, where the shares are vested in accordance with performance criteria proposed by the Remuneration Committee and approved by the Board of Directors.

During the year the 2020 programme was launched, in which the GLT members (in GLT at year end) can potentially receive a value corresponding to 294 390 shares before taxes, assuming the maximum vesting level during the three-year vesting period (2020–2022) is achieved. The total number of shares actually transferred will be lower because a portion of shares corresponding to the tax obligation will be withheld to cover income tax.

The fair value of employee services received in exchange for share-based compensation payments is accounted for in a manner that is consistent with the method of settlement and is either cash or equity settled as described in more detail in Note 21. For the equity settled part, it is possible that the actual cash cost does not agree with the accounting charges because the share price is not updated at the time of the vesting. The figures in the Group Leadership Team Remuneration table refer to individuals who were executives at year end.

At the end of the year, the performance period for the 2018 programme ended, and will vest in one portion after three years in March 2021, dependent on Economic Value Added (EVA) for the Stora Enso Group and Earnings Per Share (EPS) for the Stora Enso Group. The number of shares due for executives (GLT members at year end) from Performance Share programmes that ended during 2020 amounted to 77 484 with a cash value of EUR 1 212 237 before taxes, based on the share close price of EUR 15.65 on 30 December 2020. The total number of shares actually transferred will be lower because a portion of shares corresponding to the tax obligation will be withheld to cover income tax.

President & Chief Executive Officer – Annica Bresky

The CEO has been employed by Stora Enso since 1 May 2017 and assumed the position as CEO on 1 December 2019. She has a notice period of six months with a severance payment of twelve months salary on termination by the company but with no contractual payments on any change of control. The CEO's benefits include pension provisions. The CEO's pension plan has contributions equal to the collectively agreed pension plan in Sweden (ITP1), with a pensionable salary consisting of annual base salary, vacation pay, and actual paid STI. The retirement age is sixty-five years.

Short term incentive (STI) programme for CEO

In 2020, the CEO is entitled to an STI programme decided by the Board each year giving a maximum of 75% of the annual fixed salary. The STI for 2020 was 70% based on financial measures, and 30% based on Group Cash Flow and safety targets.

Long term incentive (LTI) programmes for CEO

The CEO participates in 2018, 2019 and 2020 share based LTI programmes. The programmes have three-year targets and vest in only one portion after three years. The 2018 programme is related to performance periods 2018–2020, the 2019 programme is related to performance periods 2019–2021 and the 2020 programme is related to performance periods 2020–2022. The opportunity in the programmes is in performance shares, where shares vest in accordance with performance criteria proposed by the Remuneration Committee and approved by the Board of Directors.

During the year the 2020 LTI programme was launched in which the CEO has the potential to receive a value corresponding to a maximum of 75 080 shares before taxes. The grant value of EUR 861 430 is based on the share price at the grant date, assuming a maximum vesting level during the three-year vesting period (2020-2022) is achieved. The total number of shares actually transferred will be lower because a portion of shares corresponding to the tax obligation will be withheld to cover income tax.

At the end of the year, the performance period for the 2018 programme ended and will vest in one portion after three years in March 2021, dependent on Economic Value Added (EVA) and Earnings Per Share (EPS) for the Stora Enso Group. The number of shares due for the CEO from Performance Share programmes that ended during 2020 amounted to 12 066 with a cash value of EUR 188 773 before taxes, based on the share close price of EUR 15.65 on 30 December 2020. The total number of shares actually transferred will be lower because a portion of shares corresponding to the tax obligation will be withheld to cover income tax.

Group Leadership Team share interests

Executives in office at the year end	R shares held[1]	Shares due 2021[2]	Performance share opportunity 2022–2023[5]	Restricted share opportunity 2022–2023[5]
Annica Bresky	14 511	12 066	102 240	–
Seppo Parvi	46 401	9 936	49 190	–
Tobias Bäärnman	–	2 807	9 158	3 052
David Ekberg	625	–	21 968	1 442
Johanna Hagelberg	24 795	7 794	34 690	–
Kati ter Horst	56 467	12 146	67 040	–
Hannu Kasurinen	35 486	3 742	37 043	2 467
Katariina Kravi	–	–	21 500	–
Ulrika Lilja	20 067	6 778	30 760	–
Per Lyrvall[3]	69 199	9 731	43 740	–
Markus Mannström	25 251	9 783	43 540	–
Teemu Salmi	6 620	5 614	14 798	4 932
Annette Stube	–	–	20 000	–
Jari Suominen	49 002	9 153	48 910	–
Lars Völkel	–	–	28 000	–
Total, serving officers[4]	**348 424**	**89 550**	**572 577**	**11 893**

[1] None of the GLT members holds A shares.
[2] Shares due to GLT member are gross of taxes for the LTI programmes with performance periods that ended in 2020 and are due to be paid 2021.
[3] Spouse holds 1 257 of the shares.
[4] The Company recommends and expects GLT members to hold Stora Enso shares at a value corresponding to at least one annual base salary. Stora Enso shares received as remuneration are therefore recommended not to be sold until this level has been reached.
[5] Potential shares to GLT members are gross of taxes for LTI programmes with performance periods that end in 2021–2022 and are due to be paid 2023–2024.

The following Executive Officers also served in 2020	R shares held when GLT membership ended	Performance Share Awards when GLT Membership Ended	Restricted Share Awards When GLT Membership Ended	Effective date of GLT membership ending
Malin Bendz	19 162	31159 [1]	–	15 January 2020
Noel Morrin	45 165	33110 [2]	–	31 August 2020

[1] These shares are forfeited at end of employment.
[2] These shares are forfeited at end of employment, except for the LTI 2018 shares which have been earned at the time employment ended and vest at the normal vesting date in March 2021.

Financials

Note 8 Net financial items

Accounting principles

Net financial items comprise net interest expenses, foreign exchange gains and losses and other financial income and expenses mainly arising from interest-bearing assets and liabilities.

Financial income and expense

	Year Ended 31 December	
EUR million	**2020**	**2019**
Net financial expense in the income statement		
Financial income	19	8
Financial expense	-168	-176
Total	**-150**	**-168**
Represented by		
Interest expense		
Interest expense from borrowings measured at amortised cost	-106	-121
Net interest from interest rate derivatives measured at fair value through OCI	-14	-13
Interest expense on leases	-19	-20
Interest capitalised	5	0
Interest income on loans and receivables measured at amortised cost	2	7
Net interest expense	**-132**	**-147**
Foreign exchange gains and losses		
Currency derivatives	14	0
Borrowings, cash equivalents and lease liabilities	-22	-6
Net foreign exchange gains and losses	**-8**	**-6**
Other financial income	3	0
Other financial expense	-8	-8
Net interest on net defined benefit liabilities	-5	-7
Net other financial expense	**-10**	**-15**
Total	**-150**	**-168**

Gains and losses on derivative financial instruments are shown in Note 27 Derivatives.

In 2020, the net interest expense decreased mainly as a result of lower average interest expense rate on borrowings. The amount of interest costs capitalised during the year amounted to EUR 5 million (EUR 0), which were related to Oulu mill conversion project in Finland. The average interest rate used for capitalisation was 3.3% (-). Costs on long-term debt issues capitalised as part of non-current debt amounted to EUR 11 (EUR 12) million in the statement of financial position. During the year, EUR 4 (EUR 5) million was amortised through interest expense by using the effective interest rate method.

Exchange gains and losses for currency derivatives mainly relate to non-hedge accounted instruments fair valued in the income statement. The amount reported as other financial income mainly consists of fair valuation gains, while other financial expense in the table above mainly relates to net financial fees for unused committed credit facilities, guarantees and rating agencies.

Note 9 Income taxes

Accounting principles

The Group income tax expense/benefit includes taxes of group companies based on taxable profit/loss for the period, together with tax adjustments for previous periods and the change in deferred income taxes. Tax assets and liabilities reflect uncertainty related to income taxes, if any.

Deferred income taxes are provided using the liability method, as measured with enacted, or substantially enacted, tax rates, to reflect the net tax effects of all temporary differences between the tax bases and the accounting bases of assets and liabilities. No deferred tax is recognised for the initial recognition of goodwill and the initial recognition of an asset or liability in a transaction which is not a business combination, and at the time of the transaction this affects neither accounting profit nor taxable profit. Deferred tax assets reduce income taxes payable on taxable income in future years. The deferred tax assets, whether arising from temporary differences or from tax losses, are recognised only to the extent that it is probable that future taxable profits will be available against which the assets can be utilised.

Tax expense

	Year Ended 31 December	
EUR million	**2020**	**2019**
Current Tax	-109	-132
Deferred Tax	-46	-149
Total Income Tax	**-156**	**-281**

Income tax rate reconciliation

	Year Ended 31 December	
EUR million	**2020**	**2019**
Profit before tax	773	1 137
Tax at statutory rates applicable to profits in the country concerned[1]	-165	-235
Non-deductible expenses and tax exempt income[2]	0	-41
Valuation of deferred tax assets	10	-53
Taxes from prior years	-4	2
Changes in tax rates and tax laws	4	-2
Profits from equity accounted investments	0	48
Other	1	0
Total income taxes	**-156**	**-281**
Effective tax rate	**20.1%**	**24.7%**
Statutory tax rate (blended)	**21.4%**	**20.7%**

[1] Includes a EUR 0 million impact from countries with tax holidays and tax benefits in 2020 and a EUR 17 million impact from tax holidays and other tax benefits in 2019.
[2] The tax value of non-deductible expenses of EUR 12 million has been netted against tax exempt income of EUR 12 million in 2020, and tax value of non-deductible expenses of EUR 50 million has been netted against tax exempt income of EUR 9 million in 2019.

The statutory tax rate is a weighted average of the statutory tax rates prevailing in jurisdictions where Stora Enso operates.

Change in deferred taxes in 2020

EUR million	Value at 1 Jan 2020	Income Statement	OCI	Acquisitions/ disposals	Translation difference	Value at 31 Dec 2020
Forest assets[1]	-722	-105	-310	-5	-33	-1 175
Fixed assets	-195	26	0	0	-4	-173
Financial instruments	1	0	-12	0	0	-11
Untaxed reserves	-24	-12	0	0	-3	-39
Pensions and provisions	69	-8	-3	0	-2	56
Tax losses and tax credits carried forward	84	22	0	0	-2	104
Other deferred taxes	-7	28	0	0	2	23
Total	**-794**	**-49**	**-325**	**-5**	**-42**	**-1 215**
Equity hedges (CTA)		5	-5			
Net investment loans		-1	1			
Change in deferred tax		**-45**	**-329**	**-5**	**-42**	
Assets[2]	81					117
Liabilities[2]	-875					-1 332

[1] Previously forest assets presented on same line as other property, plant and equipment items and to minor extent within untaxed reserves. Opening balances restated.
[2] Deferred tax assets and liabilities have been offset in accordance with IAS 12.
OCI = Other Comprehensive income, CTA = Cumulative Translation Adjustment

Change in deferred taxes in 2019

EUR million	Value at 1 Jan 2019	Income Statement	OCI	Acquisitions/ disposals	Translation difference	Value at 31 Dec 2019
Forest assets[1]	-2	-114		-605	-1	-722
Fixed assets	-173	-22	0	0	0	-195
Financial instruments	-1	0	2	0	0	1
Untaxed reserves	-19	-6	0	-1	2	-24
Pensions and provisions	62	2	6	0	-1	69
Tax losses and tax credits carried forward	90	-5	0	0	-1	84
Other deferred taxes	-5	-2	0	0	0	-7
Total	**-48**	**-147**	**8**	**-606**	**-1**	**-794**
Equity hedges (CTA)		-1	1			
Change in deferred tax		**-148**	**9**	**-606**	**-1**	
Assets[2]	120					81
Liabilities[2]	-168					-875

[1] Previously forest assets presented on same line as other property, plant and equipment items and to minor extent within untaxed reserves. Opening balances restated.
[2] Deferred tax assets and liabilities have been offset in accordance with IAS 12.

The recognition of deferred tax assets is based on the Group's estimations of future taxable profits available against which the group can utilise the benefits.

Tax losses

	As at 31 December					
	Tax losses carried forward		Recognised tax values		Unrecognised tax values	
EUR million	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Expiry within five years	607	786	35	63	88	79
Expiry after five years	239	20	52	4	0	0
No expiry	1 131	1 212	15	11	221	242
Total	**1 977**	**2 018**	**102**	**78**	**309**	**321**

Tax losses of EUR 329 (EUR 328) million relate to Finland. A deferred tax asset of EUR 66 (EUR 66) million has been recognized relating to these tax losses, as it is evident considering the recent history of profit in Finland, the outlook and tax planning opportunities that the full amount of tax losses in Finland will be utilized before its expiration.

Non-recognised deferred tax assets on deductible temporary differences amounted to EUR 25 (EUR 50) million. There is no expiry date for these differences. Taxable temporary differences in respect of investments in subsidiaries, branches and associates and interests in joint ventures, for which deferred tax liabilities have not been recognised amounted to EUR 323 (EUR 330) million.

Uncertain tax positions

At balance sheet date there were on-going tax audits in several jurisdictions. It is not expected that any significant additional taxes in excess of those already recorded for will arise as a result of these audits.

The tax liabilities of EUR 78 (EUR 48) million include an amount of EUR 37 (EUR 33) million for an uncertain tax position in Sweden due to disputes concerning the deduction of interest expense. On the 20 of January 2021, the Court of Justice of the European Union has given a preliminary ruling (Lexel AB -case, C484/19) which might have an impact on Stora Enso's pending disputes concerning the deduction of interest expenses in Sweden.

Note 10 Depreciation, amortisation and impairment charges

Accounting principles

Depreciation, amortisation and impairment charges

Depreciation or amortisation of an asset begins when it is available for use in the location and condition necessary for it to be operated in the manner intended by management. Depreciation or amortisation ceases when the asset is derecognised or classified as held for sale in accordance with IFRS 5. Depreciation or amortisation does not cease when the asset becomes idle. Tangible and intangible assets are depreciated and amortised on a straight-line basis during their useful lives. Useful lives are reviewed periodically. If an asset is disposed of, proceeds exceeding the carrying value of the asset up to its historical cost are netted against depreciation, amortisation and impairment charges. Only disposal proceeds exceeding the historical cost of an asset are presented as other operating income (Note 5). If the asset's book value is higher than the disposal proceeds, the difference is recognised as an impairment in the period when reliable estimate of disposal loss is available, at the latest when a binding sales contract is signed. Right-of-use (ROU) assets are depreciated using the straight line method from the commencement date of the contract to the earlier of the end of the lease term or the end of the useful life of the ROU assets.

The carrying amounts of intangible assets, property, plant and equipment and ROU assets are reviewed at each reporting date to determine whether there is any indication of impairment, whereas goodwill is tested annually. If any such indication exists, the recoverable amount is estimated as the higher of the fair value less costs of disposal and the value in use, with an impairment loss being recognised whenever the carrying amount exceeds the recoverable amount.

A previously recognised impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount, however, not to an extent higher than the carrying amount that would have existed had no impairment loss been recognised in prior years. For goodwill, however, a recognised impairment loss is not reversed.

Whilst intangible assets, property, plant and equipment and ROU assets are subject to impairment testing at the cash generating unit (CGU) level, goodwill is subject to impairment testing at the CGU level for groups of CGUs, which represents the lowest level within the Group at which goodwill is monitored for internal management purposes.

Depreciation, amortisation and impairment charges

EUR million	Year ended 31 December 2020	2019
Depreciation and amortisation		
Intangible assets	30	27
Buildings and structures	84	83
Plant and equipment	370	356
Right-of-use assets	66	70
Other tangible assets	9	10
Total	**559**	**546**
Impairment		
Intangible assets	19	4
Buildings and structures	13	5
Plant and equipment	21	66
Right-of-use assets	2	3
Other tangible assets	2	0
Total	**57**	**78**
Reversal of impairment		
Buildings and structures	0	-21
Total	**0**	**-21**
Disposal gains/losses		
Gain on sale of assets	-10	-7
Loss on sale of assets	3	2
Total	**-7**	**-5**
Depreciation, amortisation and impairment charges	**609**	**597**

Depreciation and amortisation

The total depreciation and amortisation charge amounted to EUR 559 million and was EUR 13 million more than in 2019, mainly due to depreciation of Plant and equipment assets. A breakdown of depreciation, amortisation and impairment charges by divisions is set out in Note 3 Segment information.

Disposal gains and losses

There were no material disposal gains or losses relating to fixed assets in 2020 or 2019.

Impairment testing

The recoverable amount for the cash generating units (CGUs) has been determined based on a value in use calculation using cash flow projections from financial estimates approved by the Board of Directors and management. The pre-tax discount rates are calculated for each CGU taking into account the business environment of the CGU and the tax and risk profile of the country in which the cash flow is generated. The table in the goodwill impairment testing section below sets out the pre-tax discount rates used for goodwill impairment testing, which are similar to those used in the impairment testing of other intangible assets, property, plant and equipment, and ROU assets.

Impairments were tested using a value in use method for each CGU based on the following main assumptions:

- Sales price estimates in accordance with internal and external specialist analysis
- Cash flows and discount rates were prepared in nominal terms (2019 in real terms)
- Current cost structure to remain unchanged
- For goodwill testing, a five-year future period was used, after which the perpetuity value was determined using inflation based growth rates, whereas for intangible assets, property, plant and equipment, and ROU assets, testing the period was the remaining expected economic life of the assets.

Property, plant and equipment, other intangible assets and ROU assets impairments

The total impairment charges on property, plant and equipment, other intangible assets and ROU assets in 2020 amounted to EUR 57 (EUR 78) million and resulted from business restructuring, Group company disposals and impairment testing. Impairment reversals amounted to EUR 0 (EUR 21) million. In 2020, certain assets in Nordic and Innovation CGU in the Biomaterials division were tested for fixed asset impairment and an impairment charge of EUR 42 (EUR 43) million was recognised.

Goodwill impairment testing

In 2020 or 2019, the Goodwill testing did not result in any impairment.

The most material groups of cash generating units containing goodwill

	Year ended 31 December			
	2020		2019	
EUR million	Goodwill at year end	Pre-tax discount rate	Goodwill at year end	Pre-tax discount rate [1]
Wood Products - Central Europe	106	6.8%	108	5.4%
Paper - Newsprint and Book Paper	49	8.2%	52	5.7%
Paper - Uncoated Magazine Paper	40	6.8%	40	5.7%
Biomaterials - Nordic and Innovation	43	6.8%	49	5.9%
Other CGUs [2]	43		54	
Total	**281**		**302**	

[1] 2019 discount rates are prepared in real terms.
[2] Other CGUs line is including Packaging Solutions - Europe, Packaging Materials operations in Sweden, Wood Products - Northern Europe and Office Paper cash generating units.

The calculation of value-in-use is highly sensitive to discount rates, sales prices, and costs. The Sensitivity analysis table below summarises amounts by which the value assigned to the key assumption must change in order for the unit's recoverable amount to be equal to its carrying amount for the CGU for which a reasonably possible change in an assumption could result in an impairment. The recoverable amount for the CGU Biomaterials - Nordic and Innovation amounted to EUR 498 million in 2020 compared with the carrying amount of EUR 385 million.

Goodwill testing sensitivity analysis

EUR million	Biomaterials – Nordic and Innovation
Increase in the discount rate (percentage points)	0.9%
Annual decrease in the sales prices	-0.5%
Annual increase in the costs	0.6%

Summary of impairment and impairment reversals per division

EUR million	Year ended 31 December 2020	2019
Packaging Materials	0	-14
Packaging Solutions	3	5
Biomaterials	42	43
Wood Products	0	8
Forest	0	0
Paper	3	11
Other	9	4
Total (impairment +) / (Impairment reversal -)	**57**	**56**

Comparative 2019 figures have been restated according to the current division structure.

Note 11 Intangible assets, property, plant and equipment and right-of-use assets

Accounting principles

Computer software development costs

The cost of development or acquisition of new software clearly associated with an identifiable and unique product that will be controlled by the Group and has a probable benefit exceeding its cost beyond one year is recognised as an intangible asset and will be amortised over the expected useful life of the software between 3 to 10 years. Website costs are expensed as incurred.

Goodwill

Goodwill represents future economic benefits arising from assets that are not capable of being individually identified and separately recognised by the Group on an acquisition. Goodwill is computed as the excess of the cost of an acquisition over the fair value of the Group's share of the fair value of net assets of the acquired subsidiary at the acquisition date, and is allocated to those groups of cash generating units expected to benefit from the acquisition for the purpose of impairment testing. In compliance with IFRS 3, the cost of an acquisition is equal to the sum of the consideration transferred, the value of the non-controlling interest in the acquisition, and the fair value of the previously held interest in the acquired subsidiary. Goodwill arising on the acquisition of non-euro foreign entities is treated as an asset of the foreign entity denominated in the local currency and translated at the closing rate.

Goodwill is not amortised but tested for impairment on an annual basis, or more frequently if there is an indication of impairment. Gains and losses on the disposal of a Group entity include any goodwill relating to the entity sold.

Goodwill arising from the acquisition of an equity accounted investment or joint arrangement is included in the carrying amount of the investment and is assessed for impairment as part of that investment. Any excess of the Group's share of the net fair value over the cost of the acquisition, after reassessment, is recognised immediately in the income statement.

Intangible assets

Intangible assets are stated at their historical cost and amortised on a straight-line basis over their expected useful lives, which usually varies from 3 to 10 years and up to 20 years for patents. An adjustment is made for any impairment. Intangible items acquired must be recognised as assets separately from goodwill if they meet the definition of an asset, are either separable or arise from contractual or other legal rights, and their fair value can be measured reliably.

Intangible assets recognised separately from goodwill in acquisitions consist of marketing and customer-related or contract and technology-based intangible assets. Typical marketing and customer-related assets include trademarks, trade names, service marks, collective marks, certification marks, customer lists, order or production backlogs, customer contracts and the related customer relationships. Contract and technology-based intangible assets are normally licensing and royalty agreements or patented technology and trade secrets, such as confidential formulas, processes or recipes. The fair value determination of customer contracts and related relationships is derived from expected retention rates and cash flow over the customers' remaining estimated lifetime. The value of trademarks is derived from a discounted cash flow analysis using the relief from royalty method.

Property, plant and equipment

Property, plant and equipment acquired by Group companies are stated at their historical cost, which are augmented where appropriate by asset retirement costs. Assets arising on the acquisition of a new subsidiary are stated at fair value at the date of acquisition. Depreciation is computed on a straight-line basis, and adjusted for any impairment and disposal charges. The Consolidated statement of financial position value represents the cost deducted by received grants and subsidies and less the accumulated depreciation and any impairment charges. Interest costs on borrowings to finance the construction of these assets are capitalised as part of the cost during the construction period when the requirements are fulfilled.

Land and water areas are not depreciated, as these are deemed to have an indefinite life, but otherwise depreciation is based on the following expected useful lives:

Asset class	Depreciation years
Buildings, industrial	10–50
Buildings, office & residential	20–50
Groundwood mills	15–20
Hydroelectric power	40
Paper, board and pulp mills, main machines	20–30
Heavy machinery	10–20
Converting factories	10–15
Sawmills	10–15
Computers	3–5
Vehicles	5
Office equipment	3–5
Railway, harbours	20–25
Forest roads	10–15
Roads, fields, bridges	15–20

Ordinary maintenance and repair charges are written as expensed when incurred, but the costs of significant renewals and improvements are capitalised and depreciated over the remaining useful lives of the related assets. Retirements, sales and disposals of property, plant and equipment are recorded by deducting the cost and accumulated depreciation from the accounting records with any resulting terminal depreciation adjustments reflected in impairment charges in the Consolidated income statement. Capital gains are shown in other operating income.

Spare parts are accounted for as property, plant and equipment if they are major and used over more than one period, or if they are used only in connection with an item of property, plant and equipment. In all other cases, spare parts are carried as part of the inventory and recognised in profit or loss as consumed items.

Right-of-use (ROU) assets

At inception of a contract, the Group assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. ROU assets are initially measured at cost, which comprises the initial amount of the lease liability adjusted mainly for lease payments made at or before the commencement date. The Group allocates the consideration in the contract to each lease component and will separate non-lease components if these are identifiable. Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions.

The ROU assets are subsequently depreciated using the straight line method from the commencement date to the earlier of the end of the lease term or the end of the useful life of the ROU asset. In addition, the ROU asset is adjusted for certain remeasurements of the lease liability. ROU assets are tested for impairment in accordance with IAS 36.

The Group has elected not to recognise ROU assets for short-term leases that have a lease term of 12 months or less and leases of low value assets. Leases of low value assets mainly include IT and office equipment, certain vehicles and machinery and other low value items. The Group recognises the lease payments associated with these leases as an expense on a straight-line basis over the lease term (Note 5).

Intangible assets

EUR million	Computer software	Other intangible assets	Assets in progress	Goodwill	Total
	Year ended 31 December				
Acquisition cost					
At 1 January 2019	225	177	27	1 194	1 623
Translation difference	0	4	0	3	7
Reclassifications	6	-75	-10	0	-78
Additions[2]	8	3	11	57	78
Disposals[1]	-4	-6	0	0	-10
At 31 December 2019	**236**	**102**	**29**	**1 253**	**1 620**
Translation difference	-2	-3	-1	-4	-9
Reclassifications	17	5	-19	0	2
Additions[2]	3	1	9	-20	-7
Disposals[1]	-20	-8	0	-535	-562
At 31 December 2020	**233**	**98**	**17**	**695**	**1 044**
Accumulated amortisation and impairment					
At 1 January 2019	158	17	0	951	1 126
Translation difference	0	0	0	0	1
Disposals[1]	-4	-6	0	0	-10
Amortisation	16	12	0	0	27
Impairment	0	4	0	0	4
At 31 December 2019	**170**	**27**	**0**	**951**	**1 148**
Translation difference	-2	-3	0	-2	-6
Disposals[1]	-20	-8	0	-535	-562
Amortisation	18	12	0	0	30
Impairment	9	9	0	0	19
At 31 December 2020	**176**	**38**	**0**	**414**	**629**
Net Book Value at 31 December 2020	**57**	**60**	**17**	**281**	**415**
Net Book Value at 31 December 2019	**65**	**75**	**29**	**302**	**471**

[1] Company disposals are included in Disposals line. Company disposals are discussed in more detail in Note 4 Acquisitions and disposals.
[2] Company acquisitions are included in the Additions line. Company acquisitions are discussed in more detail in Note 4 Acquisitions and disposals.

Property, plant and equipment

EUR million	Land and water	Buildings and structures	Plant and equipment	Other tangible assets	Assets in progress	Total
	Year ended 31 December					
Acquisition cost						
At 1 January 2019	131	3 335	13 413	420	440	17 739
Translation difference	0	11	-49	1	9	-28
Reclassifications	-1	61	322	17	-403	-3
Reclassifications to biological assets	0	-1	-2	0	0	-2
Additions[2]	1	42	228	28	299	598
Disposals[1]	-1	-73	-476	-6	-1	-557
At 31 December 2019	**129**	**3 376**	**13 438**	**459**	**345**	**17 746**
Translation difference	-1	-84	-79	-1	-2	-167
Reclassifications	0	19	166	4	-192	-2
Reclassifications to biological assets	0	-2	-1	0	0	-4
Additions[2]	0	16	157	4	399	576
Disposals[1]	0	-23	-424	-11	-1	-460
At 31 December 2020	**128**	**3 301**	**13 256**	**455**	**549**	**17 690**
Accumulated depreciation and impairment						
At 1 January 2019	4	2 044	10 285	361	9	12 703
Translation difference	0	-3	-54	0	2	-55
Additions[2]	0	7	17	19	0	43
Disposals[1]	-1	-68	-469	-6	0	-543
Depreciation	0	81	356	11	0	448
Impairments and reversals	0	-16	66	0	0	50
At 31 December 2019	**4**	**2 044**	**10 201**	**386**	**11**	**12 645**
Translation difference	0	-21	12	0	0	-9
Disposals[1]	0	-22	-419	-11	-1	-453
Depreciation	0	82	370	11	0	464
Impairments and reversals	0	13	21	0	2	36
At 31 December 2020	**3**	**2 096**	**10 186**	**386**	**11**	**12 683**
Net Book Value at 31 December 2020	**124**	**1 205**	**3 071**	**69**	**538**	**5 007**
Net Book Value at 31 December 2019	**125**	**1 332**	**3 237**	**73**	**334**	**5 101**

[1] Company disposals are included in the Disposals line. Company disposals are discussed in more detail in Note 4 Acquisitions and disposals.
[2] Company acquisitions are included in the Additions line. Company acquisitions are discussed in more detail in Note 4 Acquisitions and disposals.

In accordance with the new presentation, the Group has changed its forest asset and forest land presentation principles. Previously forest land assets were presented as part of the Land and water asset class and included in the balance sheet line Property, plant and equipment. In accordance with new presentation principles, forest land is presented as a separate balance sheet line and considered as part of forest assets, which are specified in more detail in Note 12. Comparative periods have been restated.

Right-of-use assets

	Year ended 31 December				
EUR million	**Land and water**	**Forest land**	**Buildings and structures**	**Plant and equipment and other**	**Total**
Acquisition cost					
At 1 January 2019	23	269	80	158	530
Translation difference	1	2	2	0	5
Reclassifications	80	0	2	0	82
Reclassifications to biological assets	0	-12	0	0	-12
Additions	0	7	6	15	29
Disposals	0	0	0	-2	-2
Other changes	-1	-19	0	-34	-53
At 31 December 2019	**104**	**249**	**89**	**138**	**579**
Translation difference	-2	-9	0	-2	-14
Reclassifications	0	0	-1	0	0
Reclassifications to biological assets	0	-12	0	0	-12
Additions	3	6	9	21	39
Disposals	-5	0	-3	-7	-15
Other changes	0	0	2	-1	1
At 31 December 2020	**99**	**233**	**97**	**148**	**577**
Accumulated depreciation and impairment					
At 1 January 2019	0	0	0	0	0
Disposals	0	0	0	-2	-2
Depreciation	3	7	20	40	70
Impairment	3	0	0	0	3
Other changes	0	0	0	0	1
At 31 December 2019	**6**	**7**	**20**	**38**	**71**
Disposals	-3	0	-2	-7	-13
Depreciation	3	5	21	37	66
Impairment	1	0	0	1	2
Other changes	0	0	0	0	-1
At 31 December 2020	**6**	**12**	**38**	**70**	**125**
Net Book Value at 31 December 2020	**93**	**221**	**59**	**79**	**452**
Net Book Value at 31 December 2019	**98**	**242**	**69**	**99**	**508**

Stora Enso's most material right-of-use assets capitalised consist of land areas used in forestry and industrial operations, various machinery and equipment leases including operative machinery, vessels and other logistic equipment and properties including offices, warehouses and other operative properties. Some of the leases contain renewal options and extension options that are considered in the lease term if the Group is reasonably certain to exercise the option.

The Group has changed its forest asset and forest land presentation principles. Previously, forest land right-of-use assets were presented as part of the Land and water asset class. In accordance to the new presentation principles, leased forest land is presented as its own right-of-use asset class, and comparative figures for leased land and water areas have been restated.

Intangible assets and property, plant and equipment, and right-of-use asset additions

The total capital expenditure excluding investments in biological assets for the year in Stora Enso Oyj and its subsidiaries amounted to EUR 628 (EUR 579) million. Details of ongoing projects and future plans are discussed in more detail in the Report of the Board of Directors.

Note 12 Forest assets

Accounting principles

The forest assets of Stora Enso are defined as standing growing trees, classified as biological assets, and related forest land. The biological assets of Stora Enso consist of standing trees to be used as raw material in pulp and mechanical wood production and as biofuels.

Forest asset valuation is based on continuous operations and sustainable forest management, also taking into consideration environmental restrictions and other reservations. Biological assets are recognised and valued in accordance with the IAS 41 Agriculture standard at fair value and forest land assets are recognised in accordance with the IAS 16 Property, plant and equipment standard. Leased forest land assets are presented as part of right-of-use assets in Note 11 Intangible assets, property, plant and equipment, and right-of-use assets.

The Group changed its accounting policy related to Nordic forest asset valuation at the end of 2020 as explained in Note 1 Accounting principles. The Group has also changed its forest land presentation principles. Previously, forest land assets were included in the statement of financial position line Property, plant and equipment, and as part of the Land and water asset class, as specified in Note 11. Related to presentation principle changes, corresponding comparative figures are presented on a separate line in the statement of financial position and as part of forest assets.

Nordic and plantation forest assets are classified as different classes of assets due to different nature, usage and characteristics of the assets. The main difference is the short-term growing cycle of 6–12 years in plantations versus the long-term growing cycle of 60–100 years in Nordic forests. There are also differences in regeneration methods, forest management, and the use of the assets for other purposes.

Nordic forest assets include holdings in Sweden and Finland (also including minor forest asset holdings in Estonia and Romania) and plantation forest assets include holdings in China, Brazil, Uruguay and Laos. Accounting policies for the different class of forest assets are presented separately below. The Group has forest assets in its own subsidiaries in Sweden, China, and Laos, as well as in joint operations in Brazil and Uruguay, and in equity accounted investments in Finland and Brazil. Stora Enso also ensures that the Group's share of the valuation of forest holdings in equity accounted investments and joint operations are consistent with Group accounting policies. At harvesting, biological assets are transferred to the inventory.

Nordic forest assets

Forest assets in Sweden are recognised at fair value and valued by using a market approach method on the basis of the forest market transactions in the areas where Stora Enso's forests are located. Stora Enso intends to use forest assets to balance the wood supply for its industrial operations and to seek opportunities for further optimisation of its forest asset holdings. The total forest assets value is calculated with verified inventory data and regional standing stock prices, considering among others:

- regional market transaction data based on the forest assets' geographical locations,
- standing stock prices by forest cubic meter (m^3 fo) combined from traded forest estates and
- regional standing stock inventory.

Information relating to forest asset transactions are available from several market sources. The market transaction information can be viewed as market-corroborated inputs. Certain adjustments are made to refine the market-corroborated inputs using unobservable inputs, therefore inputs are categorised to fair value hierarchy measurement level 3. The judgements are further explained in Note 2 Critical accounting estimates and judgements.

The total value of the forest assets in Sweden is allocated across standing trees, which are recognised as biological assets and forest land. Allocation of the combined value fair value of forest assets is based on the income approach where separate present values of expected net cash flows are calculated for both biological assets and forest land. The discount rate is determined as the rate at which the valuation based on market transaction prices matches the total forest assets combined cash flows for standing trees and forest land. The discount rate is estimated to be the same for biological assets and forest land as the nature and timing of the cash flows are similar.

Biological assets are measured at fair value in accordance IAS 41. The fair value is based on the income approach and the discounted cash flow method whereby the fair value of the biological assets is calculated using cash flows from continuous operations, taking into account the growth potential of one cycle. Forest land is measured at fair value using the revaluation method as defined in the IAS 16 standard. Fair value of forest land is measured based on income approach, including net cash flows related to trees to-be-planted in the future as well as other land related income, such as hunting rights, wind power leases and soil material sales.

Other Nordic forest assets, owned mainly in Finland through Group's 41% shareholding in the equity accounted investment Tornator, are recognised at fair value using the income approach. The valuation of biological assets is based on the discounted cash flow method calculated using cash flows from continuous operations, taking into account the growth potential of one cycle. The forest land is measured at fair value using the revaluation method as defined in IAS 16. The forest land fair value measurement is based on the income approach and the discounted cash flow method, including cash flows from trees to-be-planted in the future as well as other related income. The discount rate applied for both biological assets and forest land is determined using the weighted average cost of capital method.

Changes in the fair value of biological assets are recognised in the income statement. Changes in the fair value of forest land, net of deferred taxes, are recognised in other comprehensive income (OCI) and accumulated in a revaluation reserve in equity. Revaluation reserve is not recycled to the income statement upon disposal. If the fair value of forest land were to be less than cost, the difference would be recognised in the income statement as an impairment loss.

Plantation forest assets

In plantation forest areas, biological assets are recognised at fair value in accordance with the IAS 41 standard and based on the income approach in those areas where the Group has forest land. Fair value measurement is based on fair value hierarchy measurement level 3. Forest land is measured initially and subsequently at cost, using the cost model as defined in IAS 16.

The valuation of biological assets is based on the discounted cash flow method calculated using cash flows from continuous operations and based on sustainable forest management, taking into account growth potential of one cycle. The fair value of the biological assets is based on the productive forestland. The yearly harvest from the forecasted tree growth is multiplied by wood prices and the cost of silviculture and harvesting is then deducted. The fair value of the biological assets is measured as the present value of the harvest from one growth cycle, taking into consideration environmental restrictions and other reservations. The discount rate applied is determined using the weighted average cost of capital method.

Young standing timber less than two years old (less than three years in Montes del Plata) is considered to be an immature asset and is accounted at cost. Fair value is deemed to approximate the cost when little biological transformation has taken place or the impact of the transformation on the price is not expected to be significant, which varies according to the location and species of the assets.

Changes in the fair value of biological assets are recognised in the income statement. The forest land is measured at cost and not depreciated.

The value of forest assets disclosed in the Consolidated statement of financial position from subsidiary companies and joint operations amounts to EUR 6 256 (4 136) million as shown below. The Group's indirect share of forest assets held by associated companies amounts to EUR 837 (798) million. The total forest asset value amounts to EUR 7 093 (4 934) million.

Forest assets

	Biological assets Year Ended 31 December		Forest land[4] Year Ended 31 December		Forest assets total Year Ended 31 December	
EUR million	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Subsidiaries and joint operations						
Value at 1 January	**3 627**	**457**	**509**	**198**	**4 136**	**655**
Translation differences	99	40	-12	6	88	47
Unrealized change in fair value[1 2]	560	546	1 504	0	2 065	546
Additions[3]	81	2 675	3	305	84	2 981
Disposals	0	-1	0	0	0	-2
Change due to harvesting[1]	-128	-98	0	0	-128	-98
Other operative changes[1]	-4	-6	0	0	-4	-6
Reclassification from PPE	16	14	0	0	16	14
Value at 31 December	**4 250**	**3 627**	**2 005**	**509**	**6 256**	**4 136**
Associated companies						
Tornator Oyj (41%)	769	740	56	38	825	778
Arauco Florestal Arapoti S.A. (20%)	8	14	4	6	12	19
Value at 31 December	**778**	**753**	**60**	**44**	**837**	**798**
Total	**5 028**	**4 380**	**2 065**	**553**	**7 093**	**4 934**

[1] Items are recorded in the profit and loss lines for biological assets. For forest land, changes in fair value are recognised directly in equity.
[2] The impact in 2020 is mainly due to valuation and accounting principles changes for Swedish forests. See Note 1 for more details.
[3] Additions in 2019 mainly including assets acquired through Bergvik Skog AB restructuring.
[4] Previously presented as part of Land and water in Note 11 Intangible assets and property, plant and equipment and right-of-use assets. Not including leased forest land.

Valuation and standing stock of forest assets in main subsidiaries, joint operations and associate company

			As at 31 December 2020					
			Swedish forests	Guangxi	Veracel (50%)	MdP (50%)	Tornator (41%)	Total[3]
Land area	Total area	ha	1 398 000	81 000	112 000	135 000	291 000	2 017 000
	- of which owned		1 398 000	—	107 000	95 000	291 000	1 891 000
	- of which leased		—	81 000	5 000	39 000	—	126 000
	Productive area	ha	1 145 000	75 000	47 000	94 000	269 000	1 629 000
Total area	Standing stock	million m³ fo.[1]	145.0	4.3	4.4	13.0	31.8	198.5
	Standing stock	million m³ u.b.[2]	120.4	3.5	3.7	10.7	26.1	164.3
Productive Forest land	Standing stock	million m³ fo.[1]	143.0	4.2	4.4	13.0	31.4	195.9
	Standing stock	million m³ u.b.[2]	118.7	3.4	3.7	10.7	25.8	162.2
	Estimated growth	million m³ u.b.[2]/p.a.	5.0	1.1	1.4	2.5	1.1	11.1
	Harvesting	million m³ u.b.[2]/p.a.	3.8	1.0	0.8	1.0	1.2	7.8
Biological assets		EUR million	3 774	176	66	230	769	5 016
Biological assets	Productive area	EUR/ha	3 298	2 359	1 412	2 438	2 860	3 078
Forest land		EUR million	1 829	—	26	150	56	2 061
Total forest assets		**EUR million**	**5 603**	**176**	**92**	**380**	**825**	**7 077**
Leased forest land		EUR million	—	183	1	37	—	221

[1] Forest cubic meters
[2] Solid under bark (sub) cubic meters
[3] Total figures exclude minor forest ownerships in Laos and associate company Arauco Florestal Arapoti S.A. in Brazil

			As at 31 December 2019					
			Swedish forests[5]	Guangxi	Veracel (50%)	MdP (50%)	Tornator (41%)	Total[4 5]
Land area	Total area	ha	1 398 000	81 000	112 000	131 000	286 000	2 008 000
	- of which owned		1 398 000	—	107 000	95 000	286 000	1 886 000
	- of which leased		—	81 000	5 000	36 000	—	123 000
	Productive area	ha	1 145 000	76 000	50 000	86 000	262 000	1 619 000
Total area	Standing stock	million m³ fo.[1]	146.3	4.3	3.8	10.0	31.5	195.8
	Standing stock	million m³ u.b.[2]	121.5	3.5	3.1	8.2	25.4	161.8
Productive Forest land	Standing stock	million m³ fo.[1]	143.2	4.2	3.8	10.0	31.0	192.1
	Standing stock	million m³ u.b.[2]	120.3	3.1	3.1	8.2	25.1	159.8
	Estimated growth[3]	million m³ u.b.[2]/p.a.	4.7	0.7	0.8	1.6	1.1	8.9
	Harvesting[3]	million m³ u.b.[2]/p.a.	3.4	1.0	0.9	1.4	1.0	7.8
Biological assets		EUR million	3 133	181	86	222	740	4 362
Biological assets	Productive area	EUR/ha	2 738	2 385	1 716	2 608	2 824	2 695
Forest land		EUR million	309	—	36	164	38	548
Total forest assets		**EUR million**	**3 442**	**181**	**122**	**387**	**778**	**4 910**
Leased forest land		EUR million	—	201	1	40	—	241

[1] Forest cubic meters
[2] Solid under bark (sub) cubic meters
[3] Swedish Forests harvesting volume is annualised based on June-December outcome. Estimated growth is a full year estimate.
[4] Total figures exclude minor forest ownerships in Laos and equity accounted investment Arauco Florestal Arapoti S.A. in Brazil
[5] Swedish forest total area (ha), productive area (ha) and biological assets per productive ha recalculated based on information received after 2019 reporting.

Subsidiaries and joint operations

At 31 December 2020 forest assets (excl. leases) were located by value, in Sweden 90% (83%), China 3% (4%), Brazil 1% (3%) and Uruguay 6% (9%). The land area comes to 1 726 (1 722) thousand hectares of which 7% (7%) is leased and under 1% (1%) is restricted. From Stora Enso's total forest holdings 1 361 (1 349) thousand hectares is productive forest land. The harvested wood amounted to 7 (7) million m³ sub. The Montes del Plata and Veracel amounts take into account the ownership share.

Swedish forests

At the end of 2020, the value of the biological assets in Swedish forests amounted to EUR 3 774 (3 133) million and related forest land amounted to EUR 1 829 (309) million. The increase of EUR 1 504 million in forest land value in 2020 is related to the accounting principle change to measure Nordic forest land at fair value using the revaluation method. The increase of EUR 641 million in biological asset value in 2020 is mainly due to the change to a transaction based valuation method and, as a consequence, in a lower discount rate applied in the valuation of biological assets and due to foreign exchange impact. Biological asset value was negatively impacted by changes in parameters applied in discounted cash flow model. Deferred taxes liabilities related to forest assets amounted to EUR 1 153 (709) million. The discount rate of 3.6% (4.2%) is applied in the valuation. In 2020 the discount rate is determined as the rate at which the valuation based on market transaction prices matches the total forest assets combined cash flows for biological assets and forest land. In 2019 discount rate was determined using the weighted average cost of capital method.

The productive land in Swedish forests amounted to 1 145 (1 145) thousand hectares with a standing stock of 118.7 (120.3) million m³ sub and 143.0 (143.2) million forest m³ (fo.). The weighted three-year average market transaction price applied in the valuation for Swedish forests assets in 2020 is EUR 39 per forest m³. The forest asset value corresponds to an average of EUR 4 900 per ha of productive forest land. The annual harvesting is on average 3.8 (3.4) million m³ sub.

The valuation of the forest assets is based on detailed transaction data and price statistics as provided by different market data suppliers. Market transaction data is adjusted to consider the characteristics and nature of Stora Enso's forest assets and to exclude certain non-forest assets and outliers. The valuation takes into account where the forest land is located, price levels and volume of standing stock. Market prices between areas varies significantly. Future changes in value of Swedish forest assets are impacted by changes in market transaction prices and changes in volume of standing stock, considering growth and other changes. See Note 1 for details related to changes in accounting principles and Note 2 for information related estimates and judgment applied in the valuation.

Forest asset location and volume in 2020

		North	Middle	South	Total
Productive area	ha	191 000	949 000	5 000	1 145 000
Percentage of total	%	17%	83%	0%	100%
Standing stock	million m³ fo.	16.2	125.9	0.8	143.0
Percentage of total	%	11%	88%	1%	100%

Guangxi

At the end of 2020, the value of the biological assets in Guangxi, China, amounted to EUR 176 (181) million. All the forest land in China is leased. The biological assets included young standing timber with a value of EUR 33 (34) million. The movement is driven by higher sales prices and costs and decreases volumes. The discount rate of 8.4% (8.9%) used in the discounted cash flows (DCF) is determined using the weighted average cost of capital method decreased slightly. The productive land in Guangxi totals to 75 (76) thousand hectares with a standing stock of 3.4 (3.1) million m³ sub. The annual harvesting is on average 1.0 (1.0) million m³ sub.

Veracel

Veracel Celulose S.A. (Veracel), a 50% joint operation company in Brazil, had biological assets fair valued at EUR 132 (172) million, of which Stora Enso's share was EUR 66 (86) million. Decrease is driven by foreign exchange impact and slightly lower volumes. Sales prices increased slightly. The biological assets included young standing timber with a value of EUR 22 (33) million. The discount rate of 8.8% (9.0%) used in the DCF is determined using the weighted average cost of capital method decreased slightly. The related forest land is measured at cost. Stora Enso's share (50%) of the land area is 112 (112) thousand hectares. Stora Enso's share of the productive land in Veracel, Brazil totals 47 (50) thousand hectares with a share of standing stock of 3.7 (3.1) million m^3 sub. The ownership share of annual harvesting is on average 0.8 (0.9) million m^3 sub.

Montes del Plata

Montes del Plata (MdP), a 50% joint operation company in Uruguay, had biological assets with a fair value of EUR 460 (445) million, of which Stora Enso's share was EUR 230 (222) million. The biological assets included young standing timber with a value of EUR 46 (55) million. The discount rate of 6.5% (8.0%) used in the DCF is determined using the weighted average cost of capital method decreased in 2020. The related forest land is measured at cost. Stora Enso's share (50%) of the land area is 135 (131) thousand hectares. Stora Enso's share of the productive land in Montes del Plata, Uruguay totals 94 (86) thousand hectares with a share of standing stock of 10.7 (8.2) million m^3 sub. The ownership share of annual harvesting is on average 1.0 (1.4) million m^3 sub.

Associated companies

The Group has two associated companies holding forest assets.

Tornator

Tornator Oyj (Tornator), a 41% owned Finnish associated company, had biological assets with a value of EUR 1 877 (1 805) million, of which Stora Enso's share was EUR 769 (740) million. Forest land had a value of EUR 136 (94) million of which Stora Enso's share was EUR 56 (38) million. The increase in the fair value of biological assets is mainly due to purchases and other minor changes. The increase in the value of forest land is due to purchases and accounting principle change to measure forest land at fair value. Stora Enso's 41% share of the productive forest land in Tornator totals to 269 (262) thousand hectares with a share of standing stock of 25.8 (25.1) million m^3 sub. The ownership share of annual harvesting is on average 1.2 (1.0) million m^3 sub.

Arauco Florestal Arapoti

Arauco Florestal Arapoti S.A., the 20% owned Brazilian associated company, had biological assets with a fair value of EUR 42 (67) million, of which Stora Enso's share was EUR 8 (14) million. The related forest land is measured at cost.

Biological asset valuation sensitivities of significant assumptions of a +/- 10% movement

	Wood market prices	Growth rate	Discount rate
Guangxi	+/-31	+/-1	+/-3
Veracel	+/-7	+/-7	+/-2
Montes del Plata	+/-24	+/-24	+/-6

Swedish forest asset valuation is sensitive for changes in market transaction prices and volume of standing stock. A change in the average market price of forest assets of EUR 1 per forest m^3 would impact the value of forest assets by EUR 143 million. A change in the volume of standing stock of 1 million forest m^3 would impact the value of forest assets by EUR 39 million.

Note 13 Equity accounted investments

Accounting principles

Consolidation principles

Associated companies over which Stora Enso exercises significant influence are accounted for using the equity method, which involves recognising the Group's share of the equity accounted investment profit or loss for the year in the Consolidated income statement. The Group's interest in an associated company is carried in the Consolidated statement of financial position at an amount that reflects its share of the net assets of the associate.

The Group's share of results in equity accounted investments is reported in the operating profit to reflect the operational nature of these investments, especially those in wood supply. There is no material goodwill in the Statements of financial position for equity accounted investments. Similarly, dividends received from equity accounted investments are presented in the net cash provided by operating activities in the Consolidated Cash Flow Statement.

Principal equity accounted investments

			As at 31 December			
			Proportion of ownership interest/voting rights held %		EUR million	
Company	Reportable segment	Domicile and principal place of operations	2020	2019	2020	2019
Tornator Oyj	Forest	Finland	41.00	41.00	402	381
Arauco Florestal Arapoti S.A.	Forest	Brazil	20.00	20.00	13	19
Bergvik Skog AB[1]	Forest	Sweden	49.79/36.70	49.79/36.70	11	54
Others					30	29
Carrying Value at 31 December					**456**	**483**

[1] The group's shareholding in Bergvik Skog AB is 49.79%, however, the voting rights are limited to 36.7%.

Group share of equity accounted investments income statements

	Year Ended 31 December	
EUR million	**2020**	**2019**
Sales	131	170
Net operating expenses	-93	-121
Other operating income[1]	0	129
IAS 41 valuation	13	127
Operating Profit	**50**	**305**
Net financial items	-42	-55
Net Profit before Tax	**8**	**249**
Income tax	-9	-21
Net Profit for the Year	**-1**	**229**

[1] 2019 Other operating income relates to Bergvik Skog AB restructuring, see Note 4 Acquisitions and disposals

The average number of personnel in the equity accounted investments was 1 575 in 2020, compared with 1 637 in 2019.

A summary of the financial information in respect of the Group's material associate, Tornator Oyj, and Bergvik Skog AB is set out below. The Group's share of these associated companies are reported under the Forest division and covers the majority of the Group's total share of results of equity accounted investments. The summarised financial information below represents amounts shown in the associate's financial statements prepared in accordance with IFRS.

Tornator Oyj

EUR million	2020	2019
Current assets	79	43
Non-current assets	2 040	1 918
Current liabilities	52	672
Non-current liabilities	850	144
Tax liabilities	236	216
Sales	141	112
Net profit for the year	52	262
Other comprehensive income	30	-1
Total comprehensive income	82	261
Dividends received from the associate during the financial year	12	14
Net assets of the associate	980	929
Proportion of the Group's ownership interest in Tornator Oyj	41.00%	41.00%
Carrying amount of the Group's interest in Tornator Oyj	**402**	**381**

Stora Enso's Finnish forest holdings were divested into an equity accounted investment, Tornator, in 2002. The Group's current 41% ownership is valued at EUR 402 (EUR 381) million at the year-end for 2020. In 2020, the Group's share of Tornator's net profit was EUR 21 (EUR 107) million, including a forest valuation gain of EUR 14 (128) million.

Bergvik Skog AB

EUR million	2020	2019
Current assets	22	478
Non-current liabilities	0	369
Sales	0	92
Net profit for the year	-42	243
Other comprehensive income	0	27
Total comprehensive income	-42	270
Dividends received from the associate during the financial year[1]	23	1 434
Net assets of the associate	22	109
Proportion of the Group's ownership interest in Bergvik Skog AB	49.79%	49.79%
Carrying amount of the Group's interest in Bergvik Skog AB	11	54

[1] The 2019 amount relates to Bergvik Skog AB restructuring, of which EUR 331 million was paid in cash

The Group owns 49.79% of shares in Bergvik Skog AB which continue to be reported as an equity accounted investment. Details on the 2019 Bergvik Skog AB restructuring are shown in Note 4 Acquisitions and disposals. Stora Enso's shareholding in the company was valued at EUR 11 (EUR 54) million at the year-end in 2020.

Aggregate information of equity accounted investments that are not individually material

	As at 31 December	
EUR million	**2020**	**2019**
Current assets	23	27
Non-current assets	36	39
Current liabilities	13	12
Non-current liabilities	1	2
Tax liabilities	2	4
Sales	73	78
Net profit for the year	-1	0
Dividends received during the financial year	1	0
Equity in the Group Statement of Financial Position	43	48
Equity Accounting Value	**43**	**48**
Equity Accounting Value for Tornator Oyj	402	381
Equity Accounting Value for Bergvik Skog AB	11	54
Total Equity Accounting Value	**456**	**483**

Equity accounted investment company balances

	As at 31 December	
EUR million	**2020**	**2019**
Receivables from Equity Accounted Investments		
Non-current loan receivables	2	2
Liabilities due to Equity Accounted Investments		
Trade payables	**41**	**38**

Equity accounted investment transactions

	Year Ended 31 December	
EUR million	**2020**	**2019**
Sales to equity accounted investments	17	28
Purchases from equity accounted investments	62	109

The Group engages in transactions with equity accounted investments such as sales and purchases of wood. All agreements are negotiated at arm's length and are conducted on terms that the Group considers customary in the industry and generally no less favourable than would be available from independent third parties. Equity accounted investment company trade receivables and both sales to equity accounted investments and purchases from equity accounted investments decreased due to Bergvik Skog AB restructuring.

Total loans including interest receivable to equity accounted investments at the year-end 2020 amounted to EUR 2 (EUR 2) million.

Note 14 Equity instruments

Accounting principles

The Group has elected to classify its equity investments in Pohjolan Voima shares and certain listed shares held by the Group at fair value through other comprehensive income (FVTOCI) under IFRS 9 by applying the irrevocable election for equity instruments under the standard due to the long-term nature of the ownership. The gains and losses resulting from changes in the fair value of equity investments under FVTOCI are not recycled to the Income Statement upon impairment or disposal, only the dividend income is recognised in the income statement. In addition, the Group also has certain equity investments in unlisted securities that are classified as fair value through income statement.

Summary of values

	Year Ended 31 December	
EUR million	**2020**	**2019**
Acquisition cost at 1 January		
Listed securities	3	4
Unlisted securities	120	125
Investments classified as equity instruments	**123**	**129**
OCI in opening balance	415	306
Equity Instruments at 1 January	**538**	**435**
Translation difference	1	0
Additions	15	1
Change in fair values accounted for as OCI	-136	109
Disposals	-1	-6
Income Statement - gains and losses	1	0
Carrying Amount at 31 December	**417**	**538**

Unrealised gains and losses on listed and unlisted securities

	Year Ended 31 December	
EUR million	**2020**	**2019**
Net unrealised holding gains (OCI)	**279**	**415**
Cost	138	123
Fair Value	**417**	**538**
Net unrealised holding gains (OCI)	279	415
Deferred tax	-3	-2
Net Unrealised Holding Gains Shown in Equity as OCI	**277**	**413**
Change in Net Unrealised Holding Gains Shown in Equity as OCI	**-136**	**109**

PVO shares

The Group holds a 15.6% (15.6%) interest in Pohjolan Voima Oy (PVO), a privately-owned group of companies in the energy sector that produces electricity and heat for its shareholders in Finland. Each subsidiary of the PVO group has its own class of shares that entitle the shareholder to the energy produced in proportion to its ownership of that class of share. The shareholders then have an obligation to cover the costs of production, which are generally lower than market prices. Stora Enso did not receive actual dividend payments from PVO during 2020. The holding is fair valued quarterly using an average of two methods: the discounted cash flow model and trading multiples. The valuation is categorised at level 3 in the fair value hierarchy according to IFRS 13; levels are explained in Note 25 Fair values.

The electricity prices in the model are based on Nordpool prices. Liquid future derivative prices are used for the available years in the model and thereafter increased by an inflation factor. The historical financial statements provide the basis for the cost structure for each of the power assets, which are adjusted by the inflation factor in future years. The discount rate of 3.69% used in the valuation model is determined using the weighted average cost of capital method. A +/- 5% change in the electricity price used in the DCF would change the valuation by EUR +43 million and -37 million, respectively. A +/- 1% change in the discount rate would change the valuation by EUR -30 million and +90 million, respectively.

As an outcome of the arbitration proceedings, a settlement agreement was signed during 2018 between the plant owner Teollisuuden Voima Oyj (TVO) and the plant supplier AREVA-Siemens Consortium concerning the costs and losses caused by the delay of the Olkiluoto 3 project. As a result, the plant supplier agreed to compensate EUR 450 million to the plant owner TVO. Additional maximum EUR 400 million compensation was agreed in case the supplier consortium companies failed to complete the Olkiluoto 3 project by the end of 2019.

In December 2019 TVO announced that the project was further delayed, with the regular electricity generation expected to start in March 2021. In August 2020 Teollisuuden Voima Oyj (TVO) announced that the regular electricity production at Olkiluoto 3 (OL3) nuclear power plant is now expected to commence in February 2022. The revised schedule is based on the updated start-up schedule received from Areva-Siemens Consortium. The updated schedule and the arbitration proceeding outcomes have been taken into account in the year-end PVO valuation. Stora Enso's indirect share of the capacity of Olkiluoto 3 is approximately 8.9%, through its PVO B2 shares.

During 2020 Stora Enso also gave a EUR 13 million convertible shareholder loan note to Pohjolan Voima Oy.

PVO shareholding at 31 December 2020

EUR million	Share Series	% Holding	Asset Category	Fair Value 2020	Fair Value 2019
PVO-Vesivoima Oy	A	20.6	Hydro	132	221
Teollisuuden Voima Oyj	B	15.7	Nuclear	257	275
Teollisuuden Voima Oyj	B2	14.8	Nuclear under construction	0	22
Other	C,C2,V,M	Various	Various	4	4
Total				**394**	**522**

The valuation in 2020 amounted to EUR 394 (EUR 522) million against a cost value of EUR 117 (EUR 117) million, with the revaluation of EUR 277(EUR 405) million being taken to other comprehensive income. The change in PVO's value is mainly caused by a decrease in electricity market prices. No deferred tax is appropriate, as under Finnish tax regulations holdings above 10% are exempt from tax on disposal proceeds.

Principal equity instruments

	31 December 2020			
EUR million	**Holding %**	**Number of Shares**	**Acquisition Cost**	**Fair Value**
Packages Ltd, Pakistan - listed shares	6.0	5 396 650	3	16
Total Listed Securities			**3**	**16**
Pohjolan Voima Oy - unlisted shares	15.6	5 073 972	117	394
Others - unlisted securities			18	7
Total Unlisted Securities			**135**	**401**
Total Equity instruments at 31 December 2020			**138**	**417**
Total Equity Instruments at 31 December 2019			**123**	**538**

Note 15 Other non-current assets

	As at 31 December	
EUR million	**2020**	**2019**
Prepaid expenses and accrued income	15	17
Tax credit	4	5
Other non-current operative assets	9	15
Total	**28**	**37**

Note 16 Inventories

Accounting principles

Inventories are reported at lower of cost and net realisable value with the cost determined by the first-in first-out (FIFO) method or, alternatively, by the weighted average cost where it approximates FIFO. The cost of finished goods and work in progress comprises raw material, direct labour, depreciation, other direct costs and related production overheads, but excludes interest expenses. Net realisable value is the estimated selling price in the ordinary course of business, less the costs of completion and sale.

Where market conditions result in the manufacturing costs of a product exceeding its net realisable value, a valuation allowance is made. Valuation allowances are also made for old, slow moving and obsolete finished goods and spare parts. Such valuation allowances are deducted from the carrying value of the inventories in the consolidated statement of financial position.

	As at 31 December	
EUR million	**2020**	**2019**
Materials and supplies	331	372
Work in progress	65	84
Finished goods	597	672
Spare parts and consumables	329	317
Other inventories	13	17
Advance payments and cutting rights	64	53
Obsolescence allowance - spare parts and consumables	-109	-101
Obsolescence allowance - finished goods	-12	-16
Net realisable value allowance	-8	-6
Total	**1 270**	**1 391**

EUR 3 844 (EUR 4 693) million of inventories have been expensed during the year, which are included in the materials and supplies line and relate to materials. EUR 22 (EUR 14) million of inventory write-downs have been recognised as an expense. EUR 16 (EUR 8) million have been recognised as a reversal of previous write-downs.

Note 17 Operative receivables

Accounting principles

Trade receivables

Trade receivables are recognised initially at fair value and subsequently at their anticipated realisable value with an estimate made for loss allowance on expected credit losses based on a forward-looking and objective review of all outstanding amounts at period end. A simplified approach under IFRS 9 has been implemented for trade receivables and loss allowances are recognised based on expected lifetime credit losses in the Consolidated income statement within other operating expenses. For non-defaulted receivables, expected credit losses are estimated based on externally generated customer level probability of default data that is used in the forward-looking loss allowance calculation model. As a result of the Covid-19 pandemic in 2020, the loss allowance model for non-defaulted receivables was updated by introducing a new macroeconomic indicator that considers the macroeconomic developments and further incorporates forward-looking data to the calculation model. The rebuttable presumption that default does not occur later than when a financial asset is 90 days past due has been applied in the calculation model and a default is normally estimated to occur when trade receivables are at least 90 days overdue or there is otherwise objective evidence supporting the conclusion that a default has occurred. Trade receivables are presented in current assets under Operative receivables in the Consolidated statement of financial position.

Trade receivables under factoring arrangements

Stora Enso uses factoring arrangements as one of the working capital management tools. Sold trade receivables are derecognised once significant related risks and rewards of ownership have been transferred to the buyer. Outstanding balances for trade receivables that were not yet sold at period end but qualify to be sold under factoring programs in the next period, are classified as trade receivables fair valued through other comprehensive income in accordance with the business model and contractual cash flow characteristics tests under IFRS 9. Please refer to Note 25 Fair values for further details.

Current operative receivables

	As at 31 December	
EUR million	**2020**	**2019**
Trade receivables - gross carrying amount	**893**	**1 006**
Loss allowance	-35	-38
Prepaid expenses and accrued income	96	96
Other receivables	190	224
Total	**1 145**	**1 289**

Age analysis of trade receivables

	As at 31 December	
EUR million	**2020**	**2019**
Not overdue	819	865
Less than 30 days overdue	26	65
31 to 60 days overdue	0	9
61 to 90 days overdue	1	2
91 to 180 days overdue	0	3
Over 180 days overdue	46	63
Total	**893**	**1 006**

Strategy
Sustainability
Financials
Governance
Remuneration

As at 31 December 2020, a gross amount of EUR 74 (EUR 142) million of trade receivables were overdue. These relate to a number of countries and unrelated customers that have no recent history of default. At 31 December 2020, lifetime expected credit losses for trade receivables amounted to EUR 35 (EUR 38) million. Loss allowances for trade receivables are estimated on an individual basis based on a forward-looking model where estimated probabilities of customer default are used in the calculation model. If the Group has concerns regarding the financial status of a customer, an advance payment or an irrevocable letter of credit drawn from a bank is required. At the year end, the letters of credit awaiting maturity totalled EUR 39 (EUR 33) million. Please refer to Note 24 Financial risk management for details of customer credit risk management.

Age analysis of loss allowance

	As at 31 December	
EUR million	**2020**	**2019**
Not overdue and less than 90 days overdue	1	1
More than 90 days overdue	33	37
Total	**35**	**38**

Reconciliation of loss allowance

	As at 31 December	
EUR million	**2020**	**2019**
Opening balance at 1 January	38	36
Change in loss allowance booked through Income Statement	4	9
Write-downs	-7	-6
Closing Balance at 31 December	**35**	**38**

The actual credit losses during 2020 amounted to EUR 7 (EUR 6) million of trade receivables being written-off from the Group's balance sheet.

Stora Enso has entered into factoring agreements to sell trade receivables in order to accelerate cash conversion. These agreements resulted in full derecognition of trade receivables amounting to a nominal value of EUR 155 (EUR 255) million at the end of the year. The continuing involvement of Stora Enso in the sold receivables was estimated as being insignificant due to the non-recourse nature of the factoring arrangements involved.

Note 18 Shareholders' equity

Accounting principles

Dividend and capital repayments
Any dividend or capital repayment proposed by the Board is not deducted from distributable shareholders' equity until approved by the shareholders at the Annual General Meeting.

At 31 December 2020, shareholders' equity amounted to EUR 8 809 (EUR 7 429) million, compared to the market capitalisation on Nasdaq Helsinki of EUR 12 383 (EUR 10 328) million. The market values of the shares were EUR 15.90 (EUR 13.55) for A shares and EUR 15.65 (EUR 12.97) for R shares.

The A shares entitle the holder to one vote per share, whereas R shares entitle the holder to one vote per ten shares with a minimum of one vote, though the accountable par of both shares is the same. A shares may be converted into R shares at any time at the request of a shareholder. At 31 December 2020, the company's fully paid-up share capital, as entered in the Finnish Trade Register, was EUR 1 342 million (EUR 1 342 million). The current accountable par of each issued share is EUR 1.70 (EUR 1.70).

At 31 December 2020, Directors and Group Leadership Team members owned 1 150 (1 150) A shares and 537 921 (478 403) R shares representing 0.02% of the total voting rights of the company. Full details of Director and Executive interests are shown in Note 7 Board and executive remuneration. A full description of company share award programmes is shown in Note 21 Employee variable compensation and equity incentive schemes. However, none of these have any impact on the issued share capital.

Change in share capital and number of shares

	A shares	R shares	Total
At 1 January 2019	**176 312 672**	**612 307 315**	**788 619 987**
Conversion of A shares to R shares	-55 838	55 838	–
At 31 December 2019	**176 256 834**	**612 363 153**	**788 619 987**
Conversion of A shares to R shares	-2 419	2 419	–
At 31 December 2020	**176 254 415**	**612 365 572**	**788 619 987**
Number of votes as at 31 December 2020[1]	**176 254 415**	**61 236 557**	**237 490 972**
Share Capital at 31 December 2020, EUR million	**300**	**1 042**	**1 342**
Share Capital at 31 December 2019, EUR million	**300**	**1 042**	**1 342**

[1] R share votes are calculated by dividing the number of R shares by 10.
The issued shares by 9 March 2021 will represent the total shares eligible to vote at the forthcoming Annual General Meeting.

Note 19 Non-controlling interests

Accounting principles

Non-controlling interests are presented within the equity of the Group in the Consolidated statement of financial position. The proportionate shares of profit or loss attributable to non-controlling interests and to equity holders of the parent company are presented in the Consolidated income statement after the profit for the period. Transactions between non-controlling interests and Group shareholders are transactions within equity and are thus shown in the Statement of changes in equity. The measurement type of non-controlling interests is decided separately for each acquisition.

Non-controlling interests

	Year Ended 31 December	
EUR million	**2020**	**2019**
At 1 January	-7	18
Acquisitions	0	-7
Disposals	0	8
Share of profit for the period	-9	-24
Share of other comprehensive income	1	0
Dividends	0	-1
At 31 December	**-16**	**-7**

Principal non-controlling interests

Company	Principal Place of Business	As at 31 December 2020 Proportion of Ownership Interests Held by Non-controlling Interests, %	2020 EUR million	2019 EUR million
Stora Enso Pulp and Paper Asia AB Group	Sweden and China	See separate table below	-18	-9
Others	-		2	2
Total			**-16**	**-7**

Non-controlling interests in Stora Enso Pulp and Paper Asia AB Group

Company	Principal Place of Business	31 December 2020 Direct-% of NCI	Indirect-% of NCI	Total-% of NCI	31 December 2019 Direct-% of NCI	Indirect-% of NCI	Total-% of NCI
Stora Enso Pulp and Paper Asia AB	Sweden and China	5.79	—	5.79	5.79	—	5.79
Guangxi Stora Enso Forestry Co Ltd	China	5.00	5.50	10.50	5.00	5.50	10.50
Stora Enso (Guangxi) Packaging Company Ltd	China	15.00	4.92	19.92	15.00	4.92	19.92
Stora Enso (Guangxi) Forestry Company Ltd	China	15.00	4.92	19.92	15.00	4.92	19.92

In 2020 non-controlling interest in Stora Enso decreased by EUR 9 million mostly due to negative result in Stora Enso Pulp and Paper Asia AB Group. Net loss in Stora Enso Pulp and Paper Asia AB Group was EUR 54 (EUR 111) million.

Summarised financial information in respect of the subsidiaries that have material non-controlling interests is set out below.

Stora Enso Pulp and Paper Asia AB Group

EUR million	2020	2019
Assets	1 167	1 268
Shareholders' equity attributable to the owners of the parent	-114	-74
Non-controlling interests[1]	-18	-9
Total Equity	**-132**	**-82**
Liabilities	1 298	1 350
Net loss for the year	-54	-111
Attributable to:		
Owners of the parent	-44	-91
Non-controlling interests	-10	-20
Net Loss for the Year	**-54**	**-111**
Net cash outflow from operating activities	45	-15
Net cash outflow from investing activities	-36	-32
Net cash inflow from financing activities	10	13
Net Cash Outflow/Inflow	**19**	**-34**

[1] No dividends were paid to non-controlling interests in 2020 or 2019.

Note 20 Post-employment benefits

Accounting principles

Employee benefits

The Group operates a number of defined benefit and contribution plans throughout the world, the assets of which are generally held in separate trustee administered funds. Such pension and post-retirement plans are generally funded by payments from employees and by the relevant group companies, taking into account the recommendations of independent qualified actuaries. Employer contributions to the defined contribution pension plans are charged to the Consolidated income statement in the year they relate to.

For defined benefit plans, accounting values are assessed using the projected unit credit method. Under this method, the cost of providing pensions is charged to the consolidated income statement to spread the regular cost over the service lives of employees in accordance with the advice of qualified actuaries who carry out a full valuation of the plan every year in all major pension countries. The pension obligation is measured as the present value of the estimated future cash outflows using interest rates of highly rated corporate bonds or government securities, as appropriate, that match the currency and expected duration of the related liability.

The Group immediately recognises all actuarial gains and losses arising from defined benefit plans directly in equity, as disclosed in its consolidated statement of comprehensive income. Past service costs are identified at the time of any amendments to the plans and are recognised immediately in the consolidated income statement regardless of vesting requirements. In the Group's consolidated statement of financial position, the full liability for all plan deficits is recorded.

The Group has established a number of pension and other benefit plans for its operations throughout the world, the cost amounted to EUR 152 (166) million in 2020, as shown in Note 6 Personnel expenses. The majority of the plans are defined contribution schemes and the charge amounted to EUR 136 (156) million.

Stora Enso's total defined benefit obligations for current and former members of staff amount to EUR 1 210 (1 219) million, though assets of EUR 737 (761) million have been put aside in various pension schemes to cover these liabilities. The net funding position of the defined benefit plans is shown in full in the statement of financial position and amounted to EUR 473 million in 2020, an increase of EUR 14 million on the previous year's liability of EUR 458 million. Interest costs are entered under financial costs. The 2020 defined benefit expense in the income statement amounts to EUR 20 million and the actuarial losses recorded in other comprehensive income amount to EUR 21 million. The 2019 defined benefit expense in the income statement amounted to EUR 17 million and the actuarial gains recorded in other comprehensive income amounted to EUR 77 million. In 2021, contributions of EUR 21 million are expected to be paid. In 2020, reimbursements of EUR 24 (-23) million were received.

The Group policy for funding deficits is intended to satisfy local statutory funding requirements for tax deductible contributions together with adjusting the discount factors used in the actuarial calculations for market rates. However, the emphasis of the Group is to provide defined contribution schemes for its post-employment benefits, thus all aspects of the provision and accounting for defined benefit schemes are evaluated. The net liability in the Group statement of financial position reflects the actual deficits in the defined benefit plans. Details of the pension arrangements, assets and investment policies in the Group's main operating countries are shown below.

Finland

The Group funds its Finnish pension obligations mainly through defined contribution schemes, the charge in the income statement being EUR 56 (69) million. By contrast, the remaining obligations covered by defined benefit schemes resulted in a charge of EUR 0 (0) million excluding finance costs. Pension cover since 2001 has been organised entirely through local insurance companies. As statutory pensions in Finland provide by far the greatest proportion of pensions, Group liabilities are proportionately much smaller than in comparable countries.

Plan assets in Finland are managed by insurance companies. Details of the exact structure and investment strategy surrounding plan assets are not available to participating employers, as the assets actually belong to the insurance companies themselves. The assets are managed in accordance with EU regulations, and also national requirements, under which there is an obligation to pay guaranteed benefits irrespective of market conditions.

Germany

German pension costs amounted to EUR 8 (EUR 9) million, of which EUR 7 (8) million related to defined contribution schemes and EUR 1 (EUR 1) million to defined benefits excluding finance costs. The net liability decreased from EUR 259 million to EUR 250 million. The decrease in net liability arose mainly from changes in financial assumptions and experience. Defined benefit pension plans are mainly accounted for in the statement of financial position through book reserves with some minor plans using insurance companies or independent trustees. Retirement benefits are based on years worked and salaries received during the pensionable service and the commencement of pension payments are linked to the national pension scheme's retirement age. Pensions are paid directly by the companies themselves to their former employees, the security for the pensioners is provided by the legal requirement that the book reserves held in the statement of financial position are insured up to certain limits.

Sweden

In Sweden, all blue-collar staff and part of white-collar staff are covered by defined contribution schemes, the charge in the Income statement being EUR 55 (55) million. Defined benefit schemes are covering majority of white-collar staff and resulted in a charge of EUR 10 (EUR 8) million excluding finance costs.

Total defined benefit obligations amounted to EUR 434 (411) million and the assets totalled EUR 275 (284) million, leaving a net liability of EUR 159 million at the year end, compared with a net liability of EUR 127 million the year before. Change in net liability arose from a decrease in the discount rate, changes in financial assumptions and a refund received from the foundation. Stora Enso has undertaken to pay all local legal pension liabilities for the main ITP scheme to the foundation, thus the remaining liability relates to other small schemes. The long-term investment return target for the foundation is a 3% real return after tax. Stora Enso's Swedish pension fund conducts an annual asset/liability study to optimise its risk parameters.

Other countries

Obligations and assets in the remaining countries were material only in the United Kingdom, at EUR 142 (146) million and EUR 129 (136) million, respectively, leaving a net liability of EUR 13 (EUR 10) million at the end of 2020. This increase in net liability arose from changes in actuarial assumptions.

Net defined benefit obligation reconciliation

	Defined Benefit Obligation		Fair Value of Plan Assets		Net Defined benefit liability / (asset)	
EUR million	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Defined benefit obligation at 1 January	**1 219**	**1 115**	**-761**	**-714**	**458**	**401**
Current service cost	15	11			15	11
Past service cost	2	-1	-2	0	1	-1
Interest expense(+) income (-)	12	20	-7	-13	5	7
Total included in Income Statement	**29**	**30**	**-9**	**-13**	**20**	**17**
Actuarial gains and losses arising from changes in demographic assumptions	0	-22			0	-22
Actuarial gains and losses arising from changes in financial assumptions	26	118			26	118
Actuarial gains and losses arising from experience adjustments	-19	38			-19	38
Return on plan assets, excluding amounts included in interest expense(+) income (-)			-28	-57	-28	-57
Total remeasurement gains (-) / losses (+) included in Other Comprehensive Income	**8**	**134**	**-28**	**-57**	**-21**	**77**
Benefit payments	-55	-58	40	48	-15	-9
Employer contributions and refunds			24	-23	24	-23
Translation difference	9	0	-3	-2	6	-1
Net disposals/acquisitions	0	-6	0	2	0	-3
Other	0	3	0	-3	0	0
Defined benefit obligation at 31 December	**1 210**	**1 219**	**-737**	**-761**	**473**	**458**

Defined benefit plans: Country assumptions used in calculating benefit obligations

	Year ended 31 December					
	Finland		**Germany**		**Sweden**	
	2020	**2019**	**2020**	**2019**	**2020**	**2019**
Discount rate %	0.2	0.4	0.4	0.8	1.1	1.5
Future salary increase %	2.1	2.2	2.5	2.5	2.7	2.9
Future pension increase %	1.2	1.3	1.5	1.8	1.8	2.0
Average current retirement age	64.2	64.0	65.0	65.0	65.0	65.0
Weighted average life expectancy	87.0	87.0	87.7	85.0	88.5	88.4
Duration of pension plans	10.0	10.0	13.2	13.8	17.1	17.4

Financials

Sensitivity of the defined benefit pension obligation

		Impact on defined benefit obligation	
	Change in assumption	Increase in assumption	Decrease in assumption
Discount rate	0.50%	Decrease by 7.0%	Increase by 7.9%
Salary growth rate	0.50%	Increase by 1.9%	Decrease by 1.7%
Pension growth rate	0.50%	Increase by 5.7%	Decrease by 5.1%
Life expectancy	1 year	Increase by 4.6%	Decrease by 4.4%

Interest rate risk: The obligations are assessed using market rates of high-quality corporate or government bonds to discount the obligations and are therefore subject to any volatility in the movement of the market rate. The net interest income or expense recognised in profit and loss are also calculated using the market rate of interest.

Mortality risk: In the event that members live longer than assumed, the obligations may be understated originally and a deficit may emerge if funding has not adequately provided for the increased life expectancy.

Defined benefit plan summary by country as at 31 December 2020

	31 December 2020				
EUR million	**Finland**	**Germany**	**Sweden**	**Other**	**Total**
Present value of funded obligations	266	27	412	230	936
Present value of unfunded obligations	0	226	22	26	274
Defined benefit obligations (DBO)	**266**	**254**	**434**	**256**	**1 210**
Fair value of plan assets	-254	-4	-275	-205	-737
Net liability in the Balance Sheet	**13**	**250**	**159**	**51**	**473**
Represented by					
Defined benefit pension plans	13	250	159	27	449
Other post-employment benefits	0	0	0	24	24
Net liability in the Balance Sheet	**13**	**250**	**159**	**51**	**473**

Defined benefit plan summary by country as at 31 December 2019

	31 December 2019				
EUR million	**Finland**	**Germany**	**Sweden**	**Other**	**Total**
Present value of funded obligations	286	16	389	230	922
Present value of unfunded obligations	0	246	22	29	298
Defined benefit obligations (DBO)	**286**	**263**	**411**	**259**	**1 219**
Fair value of plan assets	-264	-4	-284	-209	-761
Net liability in the Balance Sheet	**22**	**259**	**127**	**50**	**458**
Represented by					
Defined benefit pension plans	22	259	127	24	432
Other post-employment benefits	0	0	0	27	27
Net liability in the Balance Sheet	**22**	**259**	**127**	**50**	**458**

Plan assets

	As at 31 December							
	2020				2019			
EUR million	**Quoted**	**Unquoted**	**Total**	**%**	**Quoted**	**Unquoted**	**Total**	**%**
Equity	97	33	130	17.7	70	41	111	14.6
Debt	72	31	103	14.0	7	96	103	13.6
Property	0	40	40	5.4	0	35	35	4.6
Cash	31	0	31	4.2	41	0	41	5.4
Assets held by insurance companies	0	322	322	43.7	0	330	330	43.4
Others	13	98	111	15.0	15	125	140	18.4
Total pension fund assets	**213**	**525**	**737**	**100.0**	**133**	**628**	**761**	**100.0**

Plan assets do not include any real estate or other assets occupied by the group or the Company's own financial instruments. Disclosed asset classification has been updated in 2020 and comparative figures have been restated to follow the current classification.

The two main financial factors affecting group pension liabilities are changes in interest rates and inflation expectations, so the aim of asset investment allocations is to neutralise these effects and maximise returns.

Note 21 Employee variable compensation and equity incentive schemes

Accounting principles

Share awards

The costs of all employee-related share-based payments are charged to the consolidated income statement as personnel expenses over the vesting period. The share programmes may be hedged using Total Return Swaps (TRS) which are settled with cash payments, allowing the company to receive cash compensation to partially offset any change in the share price between the grant and settlement dates. Group TRS instruments do not qualify for hedge accounting and therefore periodic changes to their fair value are recorded in the Income statement in operative costs alongside the share-based programme costs to which they relate.

As a result of the IFRS 2 amendment; Classification and Measurement of Share-based Payment Transactions, effective from 1 January 2018, all share-based payment transactions are classified as equity-settled share awards. Please refer to the Note 1 Accounting principles for further details. The equity-settled share awards (net of tax), are measured at the fair value of the equity instruments on the grant date, and are adjusted for the present value of expected dividends. The fair value of the equity-settled share-based payments determined on the grant date is expensed on a straight-line basis over the vesting period, based on the estimate of equity instruments that will eventually vest, with a corresponding increase in equity.

Short term incentive (STI) programmes

Salaries for senior management are negotiated individually. Stora Enso has incentive plans that take into account the performance, development and results of both business units and individual employees. This performance-based variable compensation system is based on profitability as well as on attaining key business targets.

Group Executives, as well as division and business unit management have STI programmes in which the payment is calculated as a percentage of the annual base salary with a maximum level ranging from 8% to 75%. Non-management employees participate in an STI programme with a maximum incentive level of 7%. All incentives are discretionary. These performance-based programmes cover most employees globally, where allowed by local practice and regulations. For the performance year 2020, the annual incentive programmes were based on financial targets as well as safety and cash flow targets. The financial success metrics in the STI programme are: Operational EBITDA and Operative Working Capital to sales.

Long term incentive (LTI) programmes

Since 2005, new share based programmes for executives have been launched every year. The 2018 programme, with performance measures that ended in 2020 and will vest in 2021, as well as the current outstanding programmes including the programme that was launched during 2020 have three year targets and vest in one portion after three years.

Three quarters (75%) of the opportunity under the programmes are in performance shares, where shares will vest in accordance with performance criteria proposed by the Remuneration Committee and approved by the Board of Directors. The financial success metric is 3-year Economic Value Added (EVA) and Earnings Per Share (EPS) for the Stora Enso Group. One quarter (25%) of the opportunity under the programmes are in Restricted Shares, for which vesting is only subject to continued employment. The opportunity for members of the GLT has been awarded only in performance shares.

Outstanding restricted and performance share opportunities before taxes are shown in the table below. The total number of shares actually transferred will be less than that shown below because a portion of shares corresponding to employees' tax obligation will be withheld to cover income tax.

Share awards at 31 December 2020

	Outstanding restricted and performance share awards at year end			
Number of shares	**2021**	**2022**	**2023**	**Total**
2018 programme	686 264			686 264
2019 programme		811 270		811 270
2020 programme			1 056 299	1 056 299
Total	**686 264**	**811 270**	**1 056 299**	**2 553 833**

The costs of the Stora Enso share-based programmes are recognised as costs over the vesting period, which is the period between the grant and vesting. The total impact of share-based programmes in the Income statement amounted to an expense of EUR 1 (EUR 3) million, all of which were related to restricted and performance share awards. There were no Total Return Swaps (TRS) in use at the end of 2020.

Note 22 Provisions

Accounting principles

Provisions

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events, and it is probable that an outflow of resources will be required to settle the obligation, and a reliable estimate of the amount of the obligation can be made. Provisions for dismantling, removal or site restoration are measured at the management's best estimate. The expenditure required to settle the obligation is added to the carrying amount of the assets at acquisition date and depreciated over the useful life of the asset. Provisions are discounted back to their current net present value if the effect of the time value of money is material. As provisions are based on management's best estimate, there is some uncertainty regarding the timing and amount of the costs.

Environmental obligations

Environmental expenditures resulting from the remediation of an existing condition caused by past operations, and which do not contribute to current or future revenues, are expensed as incurred. Environmental liabilities are recorded when it is probable, based on current interpretations of environmental laws and regulations, that a present obligation has arisen and the amount of such liability can be reliably estimated.

Restructuring obligations

A restructuring provision is recognised in the period in which the Group becomes legally or constructively committed to the plan. The relevant costs are those that are incremental to, or incurred as a direct result of, the exit plan, or are the result of a continuing contractual obligation with no ongoing economic benefit, or represent a penalty incurred to cancel the obligation.

Other obligations

Other obligatory provisions are recognised regarding different legal or constructive obligations as guarantees to customers, ongoing lawsuits, claims, or similar.

Provisions

EUR million	Environmental provisions	Restructuring provisions	Other provisions	Total provisions
Carrying Value at 1 January 2019	**99**	**8**	**10**	**117**
Translation difference	-1	0	0	-1
Company acquisitions	0	0	18	18
Charge in Income Statement				
New provisions	7	40	5	51
Increase in existing provisions	6	0	1	8
Reversal of existing provisions	-1	-2	-1	-4
Payments	-12	-5	-7	-24
Carrying Value at 31 December 2019	**97**	**41**	**26**	**165**
Translation difference	2	1	-1	2
Charge in Income Statement				
New provisions	13	17	14	45
Increase in existing provisions	5	0	2	7
Reversal of existing provisions	-8	-15	0	-22
Payments	-18	-17	-11	-47
At 31 December 2020	**91**	**28**	**30**	**149**
Allocation between current and non-current provisions				
Current provisions: Payable within 12 months	3	24	19	46
Non-current provisions: Payable after 12 months	88	4	11	102
Total at 31 December 2020	**91**	**28**	**30**	**149**

Environmental obligations

Provisions for environmental remediation amounted to EUR 91 million at 31 December 2020, which was a net decrease of EUR 6 million compared with 31 December 2019. The most material environmental provision is based on an agreement between Stora Enso and the City of Falun that obligates the Group to purify runoff from the Kopparberg mine before releasing the water into the environment. The provision at year end amounted to EUR 36 (EUR 37) million.

Restructuring provisions

The Group has undergone major restructuring in recent years, from divestments to mill closures and administrative cost-saving programmes. The liability at the end of 2020 for restructuring provisions amounted to EUR 28 (EUR 41) million and covered the costs of closing down operations, demolition, clearance and redundancy costs for reducing staff numbers.

Note 23 Operative liabilities

Non-current operative liabilities

	As at 31 December	
EUR million	**2020**	**2019**
Post-employment benefit obligations	473	458
Provisions	102	110
Share-based payments	1	2
Other payables	12	37
Total	**588**	**607**

Current operative liabilities

	As at 31 December	
EUR million	**2020**	**2019**
Trade payables	1 314	1 332
Payroll and staff-related accruals	233	242
Accrued liabilities and deferred income	175	194
Current portion of provisions	46	55
Advances received	26	20
Other payables	89	67
Total	**1 883**	**1 909**

Note 24 Financial risk management

Risk management principles and process

Stora Enso is exposed to several financial market risks that the Group is managing under the policies approved by the Board of Directors. The objective is to ensure cost-effective funding of Group companies and manage financial risks effectively. The Stora Enso Group Financial Risk Policy governs all financial transactions in Stora Enso. This policy and any future amendments take effect once they are approved by the Board of Directors and all policies covering the use of financial instruments must comply with it. The Group's joint operations companies operate under their own financial risk policies, which may not be fully similar to the Group's policies.

The major financial market risks are detailed below with the main exposures for the Group being interest rate risk, foreign exchange risk, liquidity and refinancing risk, and commodity price risk, especially for fiber, pulp, and energy.

Interest rate risk

The Group is exposed to an interest rate risk that is the risk of fluctuating interest rates affecting the interest expense of the Group and value of its assets and liabilities. Stora Enso is exposed to the interest rate risk through interest-bearing assets and liabilities, such as loans, financial instruments and lease liabilities, but also through commercial agreements and operative assets and liabilities such as biological assets. The Group's aim is to keep interest costs stable. The Group's aggregate duration should not exceed the average loan maturity, but should aim towards a longer duration. A duration above the average loan maturity is approved by the Board of Directors.

The Group may use interest-rate swaps and cross-currency swaps to manage the interest-rate risk by synthetically converting floating-rate loans into fixed-rate loans through the use of derivatives. The Group's floating and fixed rate interest-rate position as per the year-end is presented in the following table:

Floating and fixed interest-rate position

	As at 31 December 2020		As at 31 December 2019	
EUR million	**Floating rate**	**Fixed rate**	**Floating rate**	**Fixed rate**
Non-current interest-bearing receivables[1]	1	90	0	74
Current interest-bearing receivables	0	0	0	0
Cash and cash equivalents	1 661	0	876	0
Interest-bearing liabilities[2]	-1 642	-3 050	-1 509	-2 603
Interest-bearing assets and liabilities excluding derivatives	**19**	**-2 959**	**-633**	**-2 530**
Interest-rate and cross-currency swaps	894	-894	810	-810
Interest-bearing assets and liabilities, net of derivatives	**913**	**-3 853**	**177**	**-3 339**

[1] Excluding interest receivable and listed securities
[2] Non-current interest-bearing liabilities, current portion of non-current debt, short-term interest bearing liabilities and bank overdrafts excluding derivative liabilities and interest payable

The average interest reset period for the Group's net interest-bearing liabilities, including all interest rate derivatives but excluding cash and cash equivalents, is some 4.6 (4.2) years.

As of 31 December 2020, one percentage point increase in interest rates would increase annual net interest expenses by approximately EUR 5 (EUR 6) million and a similar decrease in interest rates would decrease net interest expenses by EUR 3 (EUR 5) million. This assumes that the duration and the funding structure of the Group remain constant throughout the year. This simulation calculates the interest effect of a 100 basis point parallel shift in interest rates on all floating rate instruments excluding cash equivalents from their next reset date to the end of the year. In addition, all short-term loans maturing during the year are assumed to be rolled over on maturity to year end using the new higher or lower interest rate.

A one percentage point parallel change up or down in interest rates would also result in fair valuation gains or losses of EUR 28 (EUR 31) million before taxes in the cash flow hedge reserve in OCI regarding interest rate and cross-currency swaps under cash flow hedge accounting. Note 27 Derivatives summarises the nominal and fair values of the outstanding interest rate derivative contracts.

Foreign exchange risk – transaction risk

The Group operates globally and is exposed to a foreign-currency transaction risk arising from exchange rate fluctuations. Foreign exchange transaction risk exposure comprises both the geographical location of Stora Enso production facilities around the world, sourcing of raw materials and sales of end products in foreign currencies, mainly denominated in US dollars, British pounds and Swedish crowns. Stora Enso group companies with functional currency other than euro are also exposed to a foreign-currency transaction risk arising from EUR denominated net cash flows in their local currencies. These EUR exposures mainly arise from Stora Enso subsidiaries located in Sweden, Czech Republic and Poland.

The currency transaction risk is the impact of exchange rate fluctuations on the Group's Income statement, which is the effect of currency rates on expected future cash flows and subsequent trade receivables or payables. The Group's standard policy to mitigate the risk is to hedge 45–55% of the highly probable forecast cash flows in major currencies for the next 12 months by using derivative financial instruments, such as foreign exchange forwards and currency options. The Group may also hedge periods between 12 months and 36 months, or change the above mentioned hedging ratio for the next 12 months upon the discretion of the Group's management.

For operative receivables and payables in foreign currencies, the objective of the Group is to hedge 50–100% of the outstanding net receivable balance in major currency pairs.

The table below presents the estimated net operative foreign currency transaction risk exposures for the main currencies for the next 12 months and the related foreign-currency hedges in place as at 31 December, retranslated using year end exchange rates. The net operative receivables and payable exposures, representing the balances as at 31 December, include foreign currency exposures generated by external and intercompany transactions in line with the requirements of IFRS 7. A positive amount of exposure in the table below represents an estimated future inflow or receivable of a foreign currency amount.

Operative foreign currency transaction risk exposure

	As at 31 December 2020						As at 31 December 2019					
EUR million	**EUR**	**SEK**	**USD**	**GBP**	**AUD**	**UYU**	**EUR**	**SEK**	**USD**	**GBP**	**AUD**	**UYU**
Estimated annual net cash flow exposure in hedged foreign-currency flows[1]	920	-197	1 330	222	46	-40	898	-187	1 173	304	42	-50
Cash flow hedges for the next 12 months	-433	94	-629	-97	-21	22	-558	99	-616	-138	-19	24
Estimated annual net cash flow exposure, net of hedges	**488**	**-104**	**700**	**125**	**24**	**-18**	**340**	**-87**	**557**	**166**	**23**	**-26**
Hedging percentage as at 31 December for next 12 months	**47%**	**48%**	**47%**	**44%**	**46%**	**54%**	**62%**	**53%**	**53%**	**45%**	**45%**	**47%**
Weighted-average hedged rate against EUR[2]	—	10.40	1.18	0.90	1.63	55.61	—	10.55	1.17	0.91	1.64	42.34
Operative receivables and payables net exposure	-8	6	192	20	26	-5	-15	-1	168	31	19	-7
Net receivable currency hedges	-10	0	-126	-14	-15	0	7	0	-110	-43	-19	0
Net operative receivables exposure, net of hedges	**-18**	**6**	**66**	**5**	**11**	**-5**	**-8**	**-1**	**58**	**-13**	**0**	**-7**
Estimated annual net transaction risk exposure after hedges	**470**	**-98**	**766**	**130**	**36**	**-24**	**333**	**-88**	**614**	**153**	**23**	**-33**

[1] Cash flows are forecasted highly probable net operating foreign-currency cash flows in hedged currencies. The exposure presented in the EUR column relates to operative transaction risk exposure from EUR denominated cash flows in Group companies located in Sweden, Czech Republic and Poland with functional currency other than EUR.
[2] The weighted-average exchange rate against EUR is calculated based on bought leg of option collar structure and forward contracts' forward rate and therefore represents the weighted-average hedged rate based on the least favourable hedged rate from the Group's point-of-view.

The following table includes the estimated effect on annual operating profit of a currency weakening of an exposure currency against EUR. The sensitivities have been calculated based on a 5% movement in EUR, SEK, USD, GBP and AUD while 10% movement in UYU. These changes are estimated as reasonably possible changes in exchange rates, measured against year-end closing rates. A corresponding strengthening of the exposure currency would have an approximately equal opposite impact. A negative amount in the table reflects a potential net loss in the income statement or equity and, conversely, a positive amount reflects a potential net gain. In practice, the actual foreign currency results may differ from the sensitivity analysis presented below, since the income statements of subsidiaries with functional currencies other than the euro are translated into the Group reporting currency using the average exchange rates for the year, whereas the statements of the financial position of such subsidiaries, including currency hedges, trade receivables and payable, are translated using the exchange rates at the reporting date. The translation risk exposures are discussed more in detail under the Translation risk chapter below.

The calculation includes currency hedges and assumes that no changes other than a single currency exchange rate movement have taken place in the underlying transaction risk exposure currency. The currency effects are based on estimated operative foreign currency flows for the next twelve months, hedging levels at the year end, and the assumption that the currency cash flow hedging levels and all other variables will remain constant during the next twelve months. Hedging instruments include foreign exchange forward contracts and foreign exchange options. Indirect currency effects with an impact on prices and product flows, such as a product becoming cheaper to produce in a different geographical location, have not been considered in this calculation.

Sensitivity analysis of operative foreign currency transaction risk exposure

	As at 31 December 2020						As at 31 December 2019					
EUR million	**EUR**	**SEK**	**USD**	**GBP**	**AUD**	**UYU**	**EUR**	**SEK**	**USD**	**GBP**	**AUD**	**UYU**
Exposure currency change by[1]	-5%	-5%	-5%	-5%	-5%	-10%	-5%	-5%	-5%	-5%	-5%	-10%
Effect on estimated annual net cash flows in hedged flows	-46	10	-66	-11	-2	4	-45	9	-59	-15	-2	5
Effect on cash flow hedging OCI reserve before taxes as at year end[2]	22	-5	31	5	1	-2	28	-5	31	7	1	-2
Effect on net operative receivables and payables after hedges[3]	1	0	-3	0	-1	1	0	0	-3	1	0	1
Estimated annual EBIT impact[4]	**-23**	**5**	**-38**	**-6**	**-2**	**3**	**-17**	**4**	**-31**	**-7**	**-1**	**4**

[1] The sensitivity analysis for EUR denominated annual net cash flows, operative net receivables and related hedges refer to the EUR denominated transaction risk arising from EUR denominated foreign-currency cash flows in Sweden, Czech Republic and Poland with functional currency other than EUR.
[2] The effect on OCI cash flow hedging reserve before taxes at year end is related to the fair value change in derivative contracts qualifying as cash flow hedges of highly probable forecast transactions under IFRS 9.
[3] Currency effect related to net operative receivables or payables and related hedges.
[4] The estimated annual EBIT impact includes currency effects in respect of operative exposures in the Statement of Financial Position, forecast cash flows in hedged flows and the related hedges.

The following table presents the financial foreign currency exposure and the related hedges in place as at 31 December for the main currencies. Net debt includes foreign-currency external loan payables and receivables, foreign-currency internal loan payables and loan receivables and cash equivalents. Loans designated as net investment loans under IAS 21 are excluded from the table as they reduce the foreign-currency exposures on a Group level. The currency derivatives mainly hedge financial exposures in the statement of financial position and from time to time they may also hedge forecast cash flows not qualifying under hedge accounting in accordance with IFRS 9. These forecast cash flows are not included in the table below. A negative amount of exposure in the table represents a net payable of a foreign currency amount.

Additionally, the table includes the estimated effect on the income statement of a currency weakening of an exposure currency against EUR. The sensitivities have been calculated based on a 5% movement in SEK, USD, CNY, and PLN. These changes are estimated as reasonably possible changes in exchange rates, measured against year-end closing rates. A corresponding strengthening of the exposure currency would have an approximately equal opposite impact. A negative amount in the table reflects a potential net loss in the Income statement and, conversely, a positive amount reflects a net potential gain. In practice, the actual foreign currency results may differ from the sensitivity analysis below as the exposure amounts may change during the year.

Financial foreign currency exposure and estimated currency effects in income statement

	As at 31 December 2020				As at 31 December 2019			
EUR million	**SEK**	**USD**	**CNY**	**PLN**	**SEK**	**USD**	**CNY**	**PLN**
Foreign-currency net debt[1]	-156	-108	410	51	-36	-142	472	100
Currency hedges	135	-33	-244	-21	0	0	-249	-4
Net exposure after hedges	**-21**	**-140**	**166**	**30**	**-36**	**-142**	**223**	**96**
Exposure currency change by	-5%	-5%	-5%	-5%	-5%	-5%	-5%	-5%
Effect in the Income Statement[2]	**1**	**7**	**-8**	**-2**	**2**	**7**	**-11**	**-5**

[1] The Group has designated certain internal loans to Chinese subsidiaries as net investment loans under IAS 21. The loans are denominated in EUR, USD, and CNY. The underlying foreign currency gain or loss will be posted as part of CTA in Equity. The nominal amount of net investment loans amounted to EUR 286 (EUR 176) million as per the year end and reduces the currency exposure for relevant currencies in the above table.
[2] Gains and losses are recognised as part of Net financial items in the Income Statement

Foreign exchange risk – translation risk

Translation risk results from fluctuations in exchange rates affecting the value of Stora Enso's consolidated net foreign currency denominated assets, liabilities, and income. Translation risk is reduced by funding assets, whenever economically possible, in the same currency as the asset itself. The Group may also enter into foreign exchange forwards, foreign exchange options or foreign currency denominated loans to hedge its net investments in foreign entities with different functional currencies than the Group.

The balance sheets of foreign subsidiaries, equity accounted investments and foreign currency denominated equity instruments in the scope of IFRS 9 are translated into euros using exchange rates prevailing on the reporting date, thus exposing consolidated group equity to fluctuations in currency rates. The resulting translation differences, along with other movements such as the translation rate difference in the income statement, are recorded directly in shareholders' equity. These cumulative differences materialise through the Income statement on the disposal, in whole or in part, of the foreign entity.

The following table presents the translation risk exposure in the Group's Income statement arising from the translation of subsidiaries' and joint operations' foreign-currency income statements into the presentation currency of the Group in the consolidated financial statements.

Translation exposure in Income statement

	As at 31 December 2020						As at 31 December 2019					
EUR million	**SEK**	**USD**	**GBP**	**BRL**	**CZK**	**CNY**	**SEK**	**USD**	**GBP**	**BRL**	**CZK**	**CNY**
Translation exposure in Income Statement[1]	38	-165	81	-120	-7	28	102	-238	6	-163	-34	17
Exposure currency change by	-5%	-5%	-5%	-10%	-5%	-5%	-5%	-5%	-5%	-10%	-5%	-5%
Effect on EBIT from translation risk exposure	**-2**	**8**	**-4**	**12**	**—**	**-1**	**-5**	**12**	**—**	**16**	**2**	**-1**

[1] Includes external sales, costs, depreciation and fair valuations of non-euro based entities, retranslated using year end exchange rates.

The next table presents the translation exposure for geographical areas for which the Group has applied net investment hedging techniques to reduce the foreign-currency translation exposure in the consolidated equity. In practise, the Group also incurs material unhedged translation risk exposures in other geographical areas such as Sweden and China. The exposures used in the calculations are based on the foreign currency denominated equity and the hedging levels as at 31 December. Full details of actual CTA movements and hedging results are given in Note 28 Cumulative translation adjustment and equity hedging. The sensitivity analysis includes the effects of currency hedges of net investments in foreign entities and assumes that no changes take place other than a single currency exchange rate movement on 31 December each year.

Translation exposure in Equity

	As at 31 December	
EUR million	**2020**	**2019**
Translation exposure on equity in USD area[1]	**1 323**	**1 425**
EUR/USD equity hedges[2]	-244	-267
Translation exposure after hedges	**1 079**	**1 157**
Sensitivity before hedges - EUR strengthening 5%	-66	-71
Sensitivity after hedges - EUR strengthening 5%	-54	-58

[1] Includes the joint operation Montes del Plata in Uruguay, which has USD as its functional currency.
[2] USD denominated bonds classified as hedges of net investments in foreign assets.

Liquidity and refinancing risk

Funding risk arises from the difficulty of obtaining finance for operations at a given point in time. Stora Enso's funding policy states that the average maturity of outstanding loans and committed credit facilities covering short-term borrowings should be at least four years. The policy further states that the Group must have cash equivalents and undrawn committed credit facilities to cover all debt maturing within the next 12 months, including supply chain financing and factoring. At 31 December 2020, unused committed credit facilities were at EUR 600 (EUR 600) million. The EUR 600 million committed credit facility agreement with a syndicate of 13 banks matures in January 2023 and is used as a backup for general corporate purposes. Stora Enso also has undrawn committed bilateral credit facility arrangements with commercial banks up to EUR 250 million. The original tenor of these bilateral arrangements varies from 18 to 24 months and they mature in 2021 and 2022. In addition, Stora Enso has an undrawn committed EUR 150 million loan signed with European Investment Bank during the fourth quarter that can be drawn latest in 2022 for a five-year maturity. Finally, Stora Enso has access to various additional long-term sources of funding up to EUR 950 (EUR 950) million. These mainly relate to available funding sources from Finnish pension funds.

Refinancing risk, or the risk that maturing debt is not refinanced in the markets, is mitigated by Stora Enso's target of maintaining an even maturity profile of outstanding debt. The table below shows maturity analysis for the Group's contractual financial liabilities classified under principal headings based on the remaining period to contractual maturity at the reporting date. Forward interest rates as at the year-end were used for estimating contractual finance charges for the upcoming years.

Contractual maturity repayments of financial liabilities, settlement net: 2020

EUR million	**2021**	**2022**	**2023**	**2024**	**2025**	**2026+**	**Total**
Bond loans	299	0	300	299	434	1 469	2 801
Loans from credit institutions	93	404	397	35	150	4	1 083
Lease liabilities	80	66	45	37	30	138	397
Other non-current financial liabilities	0	5	0	0	0	0	5
Non-current borrowings including current portion	**471**	**475**	**742**	**371**	**614**	**1 612**	**4 285**
Estimated contractual finance charges	98	92	79	67	59	311	706
Contractual repayments on non-current borrowings	**570**	**566**	**822**	**439**	**673**	**1 922**	**4 991**
Short-term borrowings, carrying amounts	413	0	0	0	0	0	413
Gross-settled derivative liabilities - receipts	1 796	0	0	0	0	0	1 796
Gross-settled derivative liabilities - payments	-1 743	0	0	0	0	0	-1 743
Net-settled derivative liabilities	-27	-15	-11	-2	-1	-1	-58
Trade payables	1 314	0	0	0	0	0	1 314
Bank overdrafts	6	0	0	0	0	0	6
Estimated contractual finance charges	7	0	0	0	0	0	7
Total Contractual Repayments at 31 December 2020	**2 335**	**551**	**810**	**436**	**672**	**1 921**	**6 725**

Contractual maturity repayments of financial liabilities, settlement net: 2019

EUR million	**2020**	**2021**	**2022**	**2023**	**2024**	**2025+**	**Total**
Bond loans	0	287	0	300	287	1 113	1 987
Loans from credit institutions	295	214	194	401	37	20	1 162
Lease liabilities	80	67	51	42	34	167	440
Other non-current financial liabilities	0	5	0	0	0	0	5
Non-current borrowings including current portion	**375**	**573**	**245**	**743**	**358**	**1 299**	**3 593**
Estimated contractual finance charges	109	96	85	71	57	355	773
Contractual repayments on non-current borrowings	**483**	**670**	**330**	**814**	**416**	**1 654**	**4 366**
Short-term borrowings, carrying amounts	516	0	0	0	0	0	516
Gross-settled derivative liabilities - receipts	1 618	0	0	0	0	0	1 618
Gross-settled derivative liabilities - payments	-1 621	0	0	0	0	0	-1 621
Net-settled derivative liabilities	-20	-15	-14	-10	-2	-1	-62
Trade payables	1 331	0	0	0	0	0	1 331
Bank overdrafts	13	0	0	0	0	0	13
Estimated contractual finance charges	12	0	0	0	0	0	12
Total Contractual Repayments at 31 December 2019	**2 333**	**655**	**316**	**804**	**414**	**1 653**	**6 174**

Financial transactions counterparty credit risk

Financial counterparty risk is the risk of fluctuations in the value of the Group’s assets as a result of counterparties being unable to meet their obligations arising from financial contracts. The exposure to a financial counterparty risk is measured as the maximum loss that Stora Enso can suffer directly in the event of a single counterparty’s credit default. This risk is minimised by:

- entering into transactions only with leading financial institutions and with industrial companies that have a good credit rating;
- only investing in liquid funds and deposits with financial institutions or companies that have a minimum credit rating of BBB-.
- at least the higher of 50% of cash equivalents, or EUR 150 million, of cash equivalents to be held at counterparties with a minimum rating of A- or equivalent using credit ratings from main rating agencies;
- investing at least EUR 75 million of the Group's cash and cash equivalents at counterparties other than the counterparty at which most of Stora Enso's cash and cash equivalents are held;
- requiring parent company guarantees when dealing with any subsidiary of a rated company.

The Group Financial Risk Policy defines the limits for accepted counterparty risk, based on the tenor of financial contract and counterparty’s credit rating.

At the year end 2020, there were no significant concentrations of risk with respect to counterparties of derivative contracts, with the highest counterparty mark-to-market exposure being at EUR 18 (EUR 5) million and credit rating of BBB+ (A-) using Standard and Poor’s credit rating symbols.

Customer credit risk

Customer credit risk is Stora Enso’s exposure to contracts arising from deterioration in the financial health of its customers. The Group uses various measures to reduce customer credit risks, including, but not limited to, letters of credit, prepayments and bank guarantees. The Group has also obtained export guarantees, covering both political and commercial risks, which are used in connection with individual customers outside the OECD area. Management considers that no significant concentration of credit risk with any individual customer, counterparty or geographical region exists for Stora Enso. The aging information of trade receivables and related loss allowances are given in Note 17 Operative receivables.

Commodity price risk

Outstanding commodity hedges

	As at31 December 2020				31 December 2019			
	Underlying amount of commodity hedged	**Average hedged commodity price**	**Nominal amount hedged in EUR million**	**Fair value EUR million**	**Underlying amount of commodity hedged**	**Average hedged commodity price**	**Nominal amount hedged in EUR million**	**Fair value EUR million**
Coal component of natural gas purchases	–	–	–	–	54 000 tonnes	USD 58.00	3	–
Electricity purchases								
- Nordic region	1 095 000 MWh	EUR 30.39	33	2	1 361 040 MWh	EUR 36.99	50	-5
- Central Europe	201 480 MWh	EUR 42.26	9	1	315 840 MWh	EUR 40.04	13	1
Oil component of natural gas purchases	–	–	–	–	59 400 barrels	USD 62.60	3	–
Oil purchases	219 516 barrels	USD 52.55	10	–	203 504 barrels	USD 58.92	11	1

The Group is exposed to commodity and energy price volatility that will have an impact on the Group's profitability. Electricity hedge derivatives are part of energy price risk management in the Group, whilst other commodity risks are measured and hedged if economically possible. The Group may apply oil and coal risk component hedging for natural gas purchases as described in the table above. In addition to electricity hedge derivatives, the Group also manages energy price risk by entering into long-term physical fixed price purchase agreements, and by holding a 15.6% stake in Pohjolan Voima Oy (PVO), which is a privately owned group of companies in the energy sector in Finland. The fair value of the shares amounted to EUR 394 (EUR 522) million as per the year-end. The fair value of these shares is dependent on electricity market prices and discussed in more detail in Note 14 Equity instruments.

A 10% movement in energy and raw material prices would result in a EUR 7 (EUR 9) million change in the fair value of commodity financial hedges described in the above table. The majority of these fair value changes, after taxes, are recorded directly in Equity under Hedging Reserves, until the contracts mature and the result is entered in the Income statement. These estimates only represent the sensitivity of commodity financial instruments to market risk and not the Group's full exposure to raw material and energy price risks as a whole, since the actual underlying purchases are not financial instruments within the scope of the IFRS 7 standard. At the end of 2020, the maturities of the energy and commodity contracts, including both financial hedges and fixed-price physical purchase agreements, ranged between 2021 and 2024. In 2019, the maturities ranged between 2020 and 2024.

In an effort to mitigate other commodity price risk exposures in relation to wood fibre price risk, the Group is a significant owner of forest assets in the Nordic region. In 2019, Stora Enso finalised the restructuring of Bergvik Skog's forest holdings in Sweden and increased the Group's forest holdings in Sweden to 1.4 million hectares. The forest assets were placed in a fully owned subsidiary and consolidated line-by-line into Stora Enso's financial statements. The Group's biological assets are discussed in more detail in Note 12 Forest assets. In addition, Stora Enso holds 41.00% share in Tornator Oyj, which is a significant forest owner in Finland. The Group's share in Tornator is reported as an equity-accounted investment and discussed in more detail in Note 13 Equity accounted investments.

Equity price risk

The Group has certain investments in publicly traded securities. Currently these relate to Packages Ltd shares in Pakistan. The market value of these equity investments was EUR 16 (EUR 12) million at the year end. Market value changes in these investments are recorded, after taxes, directly under Shareholders’ Equity in the Equity instruments through OCI reserve. Detailed discussion regarding the publicly traded securities can be found from Note 14 Equity instruments.

Capital risk management

Stora Enso’s debt structure is focused on capital markets and commercial banks. Group objectives when managing capital are to safeguard the ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders, as well as to maintain an optimal capital structure to reduce the cost of capital. In order to maintain or adjust the capital structure, the Group may, subject to shareholder approval as appropriate, vary the dividends paid to shareholders, buy its own shares on financial markets, return capital to shareholders, issue new shares or sell assets to reduce debt. The Group strives to pay stable dividends linked to the long-term performance with the aim of distributing 50% of Earnings per share (EPS) excluding fair valuations over the cycle.

The Group monitors its capital on the basis of a target net debt-to-equity ratio of 0.60 or less, and ensuring that Net-debt-to-Operational EBITDA ratio remains below 2.0, indicating a solid financial position, and financial flexibility.

Strategy
Sustainability
Financials
Governance
Remuneration

Capital structure

	As at 31 December	
EUR million	**2020**	**2019**
Interest-bearing liabilities	4 756	4 192
Interest-bearing assets	1 836	983
Net debt	**2 921**	**3 209**
Equity attributable to owners of the parent	**8 809**	**7 429**
Operational EBITDA[1]	**1 270**	**1 614**
Net debt to equity ratio	**0.33**	**0.43**
Net debt to operational EBITDA	**2.30**	**1.99**

[1] Operational EBITDA definition is included in the "Non-IFRS measures" chapter in the Report of the Board of Directors.

Montes del Plata, a joint operation of Stora Enso, and the Group's subsidiary Stora Enso (Guangxi) Packaging Company Ltd have complied with financial covenants related to debt-to-assets ratio during the reported periods.

Note 25 Fair values

Accounting principles

Financial assets

The Group classifies its financial assets into three categories, which are amortised cost, fair value through other comprehensive income and fair value through profit and loss. The classification is made according to the IFRS 9 standard and management determines the classification of investments at the time of initial recognition.

With investments in debt instruments, the classification is made based on the business model and contractual cash flow characteristics of debt instruments. Investments in debt instruments, for which the business model objective is to hold the financial instruments to collect contractual cash flows and those cash flows are solely payments of principal and interest, are classified as amortised cost and presented under current or non-current assets in the consolidated statement of financial position. Investments in debt instruments, for which the business model objective is to hold the financial instruments for both to collect contractual cash flows and sell financial instruments and the cash flows are solely payments of principal and interest, are classified as fair value through other comprehensive income and presented under current or non-current assets in the consolidated statement of financial position.

The Group's investments into equity instruments, such as listed and unlisted securities, are classified as fair value through profit and loss unless the Group has at inception decided to apply the irrevocable election under IFRS 9 to classify the investments as fair value through other comprehensive income with only dividend income from the investments being recognised in the income statement.

Investments that are not measured at amortised cost or at fair value through other comprehensive income are classified as fair value through profit and loss and are therefore fair valued through the consolidated income statement and presented under current or non-current assets in the consolidated statement of financial position.

Financial liabilities

The Group's financial liabilities are classified into amortised cost or fair value through profit and loss categories. Financial liabilities are measured at amortised cost unless the Group has decided to apply a fair value option to designate a financial liability to be measured at fair value through profit and loss.

Derivatives

Derivative financial assets and liabilities are measured at fair value and classified as fair value through profit and loss or, if the Group has applied hedge accounting, at fair value through other comprehensive income according to the IFRS 9 standard. Derivative financial instruments and hedge accounting are discussed in more detail in Note 27 Derivatives.

Fair value of financial instruments

The fair values of publicly traded derivatives and listed securities, are based on quoted market prices at the reporting date; the fair values of interest rate swaps are calculated as the present value of the estimated future cash flows, and the fair values of foreign exchange forward contracts are determined using forward exchange rates at the reporting date. The valuation principles for derivative financial instruments have been described in more detail in Note 27 Derivatives.

In assessing the fair values of non-traded derivatives and other financial instruments, the Group uses a variety of methods and makes assumptions based on the market conditions at each reporting date. Quoted market prices or dealer quotes for identical or similar instruments are used for non-current debt. Other techniques, such as option pricing models and estimated discounted value of future cash flows, are used to determine fair values for the remaining financial instruments. The face values, less any estimated credit adjustments, for financial assets and liabilities with a maturity of less than one year are assumed to approximate their fair values. The fair values of financial liabilities for disclosure purposes are estimated by discounting the future contractual cash flows at the current market interest rates available to the Group for similar financial instruments.

Purchases and sales of financial instruments are recognised based on trade date accounting, which is the date on which the Group commits to purchasing or selling the financial instrument. Financial instruments are derecognised when the rights to receive or the cash flows from the financial instruments have expired or have been transferred and the Group has substantially transferred all risks, rewards and obligations of the ownership of the financial asset or liability.

Fair value hierarchy

The Group uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique:

- Level 1: quoted (unadjusted) prices in active markets for identical assets or liabilities;
- Level 2: other techniques, for which all inputs which have a significant effect on the recorded fair value are observable, either directly or indirectly;
- Level 3: techniques which use inputs which have a significant effect on the recorded fair values that are not based on observable market data.

The Group evaluates the categorisation of its fair value measurements within the fair value hierarchy on a regular basis at the end of the reporting period. There were no transfers recognised in the fair value hierarchy between Levels 1 and 2 and no transfers into or out of Level 3 fair value measurements during 2020 and 2019. See Note 14 Equity instruments for more information on Level 3 fair value measurement of listed and unlisted securities.

Carrying amounts of financial assets and liabilities by measurement and fair value categories: 2020

EUR million	Amortised cost	Fair value through OCI	Fair value through income statement	Total carrying amount	Fair value	Fair value hierarchy Level 1	Level 2	Level 3	Note
Financial assets									
Listed securities	—	16	—	16	16	16	—	—	14
Unlisted securities	—	394	7	401	401	—	—	401	14
Non-current interest-bearing receivables	91	2	—	93	93	—	2	—	26
Trade and other operative receivables	814	44	—	858	858	—	44	—	17
Short-term interest-bearing receivables	1	60	6	66	66	—	65	—	26
Cash and cash equivalents	1 661	—	—	1 661	1 661	—	—	—	
Total	**2 566**	**515**	**13**	**3 094**	**3 094**	**16**	**111**	**401**	

EUR million	Amortised cost	Fair value through OCI	Fair value through income statement	Total carrying amount	Fair value	Fair value hierarchy Level 1	Level 2	Level 3	Note
Financial liabilities									
Non-current interest-bearing liabilities	3 801	19	2	3 822	4 233	—	21	—	26
Current portion of non-current debt	472	—	—	472	472	—	—	—	26
Short-term interest-bearing liabilities	444	11	1	456	456	—	12	—	26
Trade and other operative payables	1 547	—	—	1 547	1 547	—	—	—	23
Bank overdrafts	6	—	—	6	6	—	—	—	
Total	**6 270**	**30**	**3**	**6 303**	**6 715**	**—**	**33**	**—**	

Hedge accounted derivatives are presented under fair value through OCI and non-hedge accounted derivatives under fair value through income statement categories in the above tables for financial assets and liabilities.

Carrying amounts of financial assets and liabilities by measurement and fair value categories: 2019

EUR million	Amortised cost	Fair value through OCI	Fair value through income statement	Total carrying amount	Fair value	Fair value hierarchy Level 1	Level 2	Level 3	Note
Financial assets									
Listed securities	—	12	—	12	12	12	—	—	14
Unlisted securities	—	522	3	526	526	—	—	526	14
Non-current interest-bearing receivables	71	1	—	72	72	—	1	—	26
Trade and other operative receivables	930	38	—	968	968	—	38	—	17
Short-term interest-bearing receivables	3	17	3	23	23	—	20	—	26
Cash and cash equivalents	876	—	—	876	876	—	—	—	
Total	**1 879**	**591**	**7**	**2 477**	**2 477**	**12**	**59**	**526**	

EUR million	Amortised cost	Fair value through OCI	Fair value through income statement	Total carrying amount	Fair value	Fair value hierarchy Level 1	Level 2	Level 3	Note
Financial liabilities									
Non-current interest-bearing liabilities	3 207	21	4	3 232	3 549	—	24	—	26
Current portion of non-current debt	376	—	—	376	376	—	—	—	26
Short-term interest-bearing liabilities	546	24	1	572	572	—	26	—	26
Trade and other operative payables	1 574	—	25	1 598	1 598	—	—	25	23
Bank overdrafts	13	—	—	13	13	—	—	—	
Total	**5 716**	**45**	**30**	**5 790**	**6 107**	**—**	**50**	**25**	

Hedge accounted derivatives are presented under fair value through OCI and non-hedge accounted derivatives under fair value through income statement categories in the above tables for financial assets and liabilities.

In the previous tables, the fair value is estimated to be equal to the carrying amount for short-term financial assets and financial liabilities, such as trade receivables and payables due to their short time to maturity and limited credit risk. The fair value of non-current interest-bearing liabilities, considered as a level 2 fair value measurement, is estimated based on a discounted cash flow analysis in which the yield curves observable at commonly quoted intervals are used as a discount factor in the model.

In 2014, Stora Enso acquired 100% of shares in the US-based company Virdia Inc. The transaction included potential pay-outs depending on the completion of specific technical and commercial milestones. The present value of the estimated pay-outs, considered as a level 3 fair value measurement, is estimated based on certain probability criteria. At year end, the fair value amounted to EUR 0 (EUR 25) million and is presented in the table above under trade and other operative payables. In January 2020, the milestones were settled with an amount of approximately EUR 25 million.

Reconciliation of level 3 fair value measurement of financial assets and liabilities

EUR million	2020	2019
Financial assets		
Opening balance at 1 January	526	422
Gains/losses recognised in income statement	1	0
Gains/losses recognised in other comprehensive income	-140	109
Additions	15	0
Disposals	-1	-5
Closing balance at 31 December	**401**	**526**

EUR million	2020	2019
Financial liabilities		
Opening balance at 1 January	-25	-21
Gains/losses recognised in income statement	0	-4
Deductions	25	0
Closing balance at 31 December	**0**	**-25**

Note 26 Interest-bearing assets and liabilities

Accounting principles

Interest-bearing assets – loan receivables

Loan receivables are debt instruments with fixed or determinable payments that are not quoted on an active market. They are recorded initially at fair value and subsequently measured at an amortised cost. Loss allowance for expected credit losses is calculated based on the general approach under IFRS 9, where loss allowance is recognised based on 12-month expected credit losses if there has not been a significant increase in credit risk since the initial recognition. A significant increase in the credit risk will be evaluated based on a comparison of the risk of a default occurring on the financial instrument as at the reporting date with the risk of default occurring on the financial instrument as at the date of initial recognition. The Group may use, for example, rates of credit default swaps (CDS) observable on financial markets to produce the risk assessment.

Interest income on loan receivables is included in financial income and expense. Loan receivables with a maturity less than 12 months are included in current assets under interest-bearing receivables, and those with maturities greater than 12 months, in non-current interest-bearing receivables.

Interest-bearing liabilities

Interest-bearing liabilities are recognised initially at fair value, net of transaction costs incurred. In subsequent periods, interest-bearing liabilities are measured at amortised cost using the effective interest method. Any difference between the proceeds net of transaction costs and redemption value is recognised in the Consolidated income statement over the maturity period of the borrowings. Interest expenses are accrued for and recorded in the Consolidated Income statement for each period.

Interest-bearing liabilities with an original maturity greater than 12 months are classified as non-current interest-bearing liabilities in the Consolidated statement of financial position, though repayments falling due within 12 months are presented in current liabilities under the current portion of non-current debt. Short-term commercial paper, bank and other interest-bearing liabilities, for which the original maturity is less than 12 months, are presented in current liabilities under interest-bearing liabilities.

Lease liabilities

At inception of a contract, the Group assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. Lease liabilities are initially capitalised at the commencement of the lease and measured at the present value of the lease payments that are not paid at the commencement date, discounted using the Group's incremental borrowing rate. The lease term applied corresponds to the non-cancellable period except in cases where the Group is reasonably certain to exercise renewal option or prolong the contract. The Group allocates the consideration in the contract to each lease component and separates non-lease components if these are identifiable. Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions.

The lease liabilities are subsequently measured at amortised cost using the effective interest method. Lease payment is allocated between the capital liability and finance charges to achieve a constant interest rate on the outstanding liability balance. Lease liabilities are remeasured mainly when there is a change in future lease payments arising from a change in an index or rate, or if there is a change in the Group's assessment whether it will exercise an extension option. When lease liability is remeasured, a corresponding adjustment is generally made to the carrying amount of the right-of-use asset.

The Group has elected not to recognise lease liabilities for short-term leases that have a lease term of 12 months or less and leases of low value assets. Leases of low value assets mainly include IT and office equipment, certain vehicles and machinery and other low value items. The Group recognises the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

Interest-bearing assets

	As at 31 December	
EUR million	**2020**	**2019**
Listed securities	16	12
Long-term derivative assets	2	1
Long-term deposits	87	68
Long-term loans to equity accounted investments	2	2
Other long-term loan receivables	2	1
Total non-current interest-bearing assets	**109**	**84**
Short-term derivative assets	65	20
Short-term deposits	0	3
Other short-term loan receivables	1	0
Cash equivalents	1 661	876
Total current interest-bearing assets	**1 726**	**898**
Total interest-bearing assets	**1 836**	**983**

The annual average interest income rate for deposits and loan receivables during 2020 was approximately 0.2% (0.6%). Current interest-bearing receivables did not include any material accrued interest at 31 December 2020. The Group has evaluated that there has not been a significant increase in credit risk related to interest-bearing receivables after the initial recognition. Accordingly, they are considered to have a low credit risk and loss allowance is recognised based on 12-month expected credit losses.

Interest-bearing liabilities

	As at 31 December	
EUR million	**2020**	**2019**
Bond loans	2 789	1 978
Loans from credit institutions	1 083	1 162
Lease liabilities	397	440
Long-term derivative financial liabilities (see Note 25)	21	24
Other non-current liabilities	5	5
Non-current interest-bearing liabilities including current portion	**4 294**	**3 608**
Short-term borrowings	413	516
Interest payable	35	33
Short-term derivative financial liabilities (see Note 25)	9	23
Bank overdrafts	6	13
Total Interest-bearing Liabilities	**4 756**	**4 192**

EUR million	**2020**	**2019**
Carrying value at 1 January	4 192	3 344
Additions in lease liabilities due to adoption of IFRS 16	0	525
Acquisition of subsidiary companies	0	793
Proceeds of new long-term debt	1 081	870
Additions in lease liabilities	39	29
Repayment of long-term debt	-333	-1 216
Repayment of lease liabilities and interest	-85	-88
Change in short-term borrowings and interest payable	-101	-58
Change in derivative financial liabilities	-17	-21
Translation differences and other	-20	13
Total Interest-bearing Liabilities	**4 756**	**4 192**

Events during 2020 and 2019

Stora Enso has a Green Bond Framework as part of its Sustainable Finance approach. The ambition is to offer a loan-format to support sustainability-focused fixed income investors and to report the direct environmental impacts of some investments and business activities.

In April 2020, Stora Enso successfully issued a SEK 1 700 million green bond under its EMTN (Euro Medium Term Note) programme and Stora Enso's Green Bond Framework. The bond matures in April 2025. In June 2020, Stora Enso successfully tapped the above mentioned 2025 SEK Green Bond issued in April 2020 with an additional nominal of SEK 1 400 million. The bond consist of fixed and floating tranches and pays a floating coupon of STIBOR +2.20% and a fixed coupon of 2.375%.

In November 2020, Stora Enso successfully issued a new EUR 500 million green bond under its EMTN (Euro Medium Term Note) programme and Stora Enso's Green Bond framework. The bond matures in December 2030 and pays a fixed coupon of 0.625%.

In February 2019, Stora Enso successfully issued its first Green Bonds with a total nominal value of SEK 6 000 million. The bonds consist of three tranches with SEK 3 000 million maturing in August 2021 and paying a floating coupon of STIBOR +0.85%, SEK 1 250 million maturing in February 2024 and paying a floating coupon of STIBOR +1.45%, and SEK 1 750 million maturing in February 2024 and paying a fixed coupon of 1.875%. There are no financial covenants for the bonds.

Please refer to the Stora Enso Sustainability report for further information regarding the use of proceeds and Stora Enso's Sustainable Finance strategy.

In the second quarter of 2019, Stora Enso issued SEK 1 000 million loan in Green Bond format under the EMTN and Green Bond frameworks. The loan matures in 2026. In addition, Stora Enso entered into a new amortising credit-institution loan with the nominal of SEK 1 500 million. The loan had a original maturity date in 2021 but it was prepaid already during 2020.

During 2020, Stora Enso's total repayments of bond notes amounted to a nominal of EUR 0 (USD and EUR bond notes of EUR 219) million. During 2020 Stora Enso renegotiated loan terms of its two existing credit-institution loans by extending the maturities and amending the other loan terms such as interest rate of the loans. This resulted in EUR 2 million initial modification net gain being recognised in the Income Statement. The modification gain will be amortised over the remaining lifetime of the loans.

Interest-bearing liabilities - maturities, interest rates and currency breakdown

Stora Enso's borrowings maturities range from 2021 to the longest borrowing maturing in 2036. Borrowings have either fixed or floating interest rates ranging from 0.5% (0.5%) to 7.3% (7.3%). The average interest rate on borrowings for the full year amounted to 3.2% (3.5%) with a run-rate of 3.0% as per the year end. Part of Stora Enso's borrowings have been fixed through floating-to-fixed interest rate swaps and cross-currency swaps. The majority of Group loans are denominated in euros, US dollars, Swedish crowns or Chinese renminbis. Detailed maturity analysis of the Group's borrowings are set out in Note 24 Financial risk management.

Net debt

In 2020 net interest-bearing liabilities decreased by EUR 288 (increased by EUR 1 117) million to EUR 2 921 (EUR 3 209) million. Net interest-bearing liabilities are equal to total interest-bearing liabilities less total interest-bearing assets such as cash equivailents and deposits. Cash and cash equivalents net of overdrafts increased by EUR 792 (decreased by EUR 265) million to EUR 1 655 (EUR 863) million as at 31 December 2020. In 2020, the total cash outflow for leases was EUR 85 (EUR 88) million including interest component of EUR 19 (EUR 20) million.

The ratio of net debt to the last 12 months' operational EBITDA was 2.3 (2.0). The net debt/equity ratio was 0.33 (0.43) as per the year-end.

Bond loans

Issue/ Maturity Dates	Description of Bond	Interest Rate %	Currency of Bond	Nominal Value Issued	Outstanding As at 31 December 2020	Outstanding As at 31 December 2019	Carrying Value As at 31 December 2020	Carrying Value As at 31 December 2019
All Liabilities are Held by the Parent Company				**Currency million**			**EUR million**	
Fixed Rate								
2006-2036	Global 7.250% Notes 2036	7.25	USD	300	300	300	242	264
2016-2023	Euro Medium Term Note	2.125	EUR	300	300	300	299	299
2017-2027	Euro Medium Term Note	2.5	EUR	300	300	300	299	299
2018-2028	Euro Medium Term Note	2.5	EUR	300	300	300	298	298
2019-2024	Euro Medium Term Note (Green Bond)	1.875	SEK	1 750	1 750	1 750	174	167
2020-2025	Euro Medium Term Note (Green Bond)	2.375	SEK	1 550	1 550	0	155	0
2020-2030	Euro Medium Term Note (Green Bond)	0.625	EUR	500	500	0	494	0
Total Fixed Rate Bond Loans							**1 962**	**1 326**
Floating Rate								
2015-2025	Euro Medium Term Note	Euribor+2.25	EUR	125	125	125	125	125
2015-2027	Euro Medium Term Note	Euribor+2.35	EUR	25	25	25	25	25
2019-2021	Euro Medium Term Note (Green Bond)	Stibor+0.85	SEK	3 000	3 000	3 000	299	287
2019-2024	Euro Medium Term Note (Green Bond)	Stibor+1.45	SEK	1 250	1 250	1 250	124	119
2019-2026	Euro Medium Term Note (Green Bond)	Stibor+1.60	SEK	1 000	1 000	1 000	99	95
2020-2025	Euro Medium Term Note (Green Bond)	Stibor+2.20	SEK	1 550	1 550	0	155	0
Total Floating Rate Bond Loans							**827**	**651**
Total Bond Loans							**2 789**	**1 978**

Note 27 Derivatives

Accounting principles

Derivative financial instruments and hedge accounting

Derivative financial instruments are initially recognised in the consolidated statement of financial position at fair value and subsequently measured at their fair value at each reporting date according to valuation methods described in this note. Derivative contracts with maturity greater than 12 months are classified as non-current interest-bearing receivables and liabilities, and contracts maturing within 12 months are presented under current interest-bearing receivables and liabilities.

When derivative contracts are entered into, the Group designates them as either hedges of highly probable forecast transactions or firm commitments (cash flow hedges), hedges of the exposure to changes in the fair value of recognised assets or liabilities (fair value hedges), hedges of net investments in foreign entities, or derivative financial instruments not meeting the hedge accounting criteria in accordance with IFRS 9. The method of recognising the resulting gains or losses on derivative instruments is dependent on the nature of the item being hedged.

At the inception of a hedge, the Group documents the relationship between the hedging instrument and the hedged item, as well as its risk management objective and strategy for undertaking various hedging transactions. This process includes linking all financial instruments designated under hedge accounting to specific assets and liabilities or to specific firm commitments or highly probable forecast transactions in order to verify and document the hedge relationship between the hedged item and the hedging instrument as required by IFRS 9. The Group also documents its qualitative prospective assessment at the hedge inception of whether the derivatives used in a hedge relationship are highly effective in offsetting changes in fair value or cash flows of hedged items. Hedge effectiveness will be assessed in accordance with IFRS 9 requirements.

The hedge ratio used for hedging relationships is usually 1:1. For currency and commodity hedging purposes, the Group uses a hedge designation where the critical terms of the hedging instrument and the hedged item will coincide in terms of the notional amount and timing. In respect of interest rate hedging, the interest rate basis between swap contracts and underlying debt will coincide. Since the critical terms of the hedges and underlying risks match, the hedging instruments are considered to offset any changes related to the anticipated transactions.

Potential sources of ineffectiveness that may be expected to occur in relation to currency and commodity hedges are mainly related to the forecasted transaction not occurring in the amount or at the time expected. For interest rate hedges, cross-currency basis spread or initial fair value of the hedging instrument at the date of hedge designation may result in ineffectiveness being recognised in the income statement. Potential sources of ineffectiveness for all the aforementioned hedges also include possible effects of credit risk dominating fair value changes arising from the hedging instrument and the hedged item designated under the hedging relationship.

Cash flow hedges

Derivatives used in currency cash flow hedges are mainly forward contracts and options, with swaps mainly used for commodity and interest rate hedging purposes. In respect of commodity hedges, the Group may also use risk component hedging to hedge highly probable forecast purchases of natural gas. These purchases create natural gas price exposure which translates as coal and crude oil risk components that can be hedged by using API2 coal and Dated Brent crude oil linked swaps, which are expected to fully offset changes in the market value of the hedged risk components. Both of the risk components are separately identifiable and reliably measurable due to the pricing formula being specified in the natural gas purchase agreement.

In 2020, the Group entered into new interest rate swap contracts with a total nominal value of SEK 1 250 million. The interest rate swaps have been designated as cash flow hedges of newly issued SEK denominated floating-rate green bond and related tap issue maturing in 2025. In 2019, the group entered into new interest rate swap contracts with a total nominal value of SEK 4 000 million. The interest rate swaps have been designated as cash flow hedges of the issued SEK denominated floating-rate green bonds maturing in 2021, 2024 and 2026.

Changes in the fair value of derivatives designated and qualifying as cash flow hedges, and which are effective, are recognised in a separate equity category of OCI cash flow hedges reserve, the movements of which are disclosed in the consolidated statement of comprehensive income. For currency forwards, both the spot element and forward points have been included to the hedge designation. In case of currency options, the time value of an option is excluded from the hedge designation and only the intrinsic value component of an option is designated as the hedging instrument. The changes in option time value are recognised in a cost of hedging reserve within OCI. The cumulative gain or loss of a derivative deferred in equity is transferred to the consolidated income statement and classified as an income or expense in the same period in which the hedged item affects the consolidated income statement. The unrealised gains and losses related to cash flow hedges are expected to be recycled through the income statement within one to three years with the longest hedging contract maturing in 2027 (2027). However, the majority of the contracts are expected to mature in 2021.

Realised results of hedge accounted derivative instruments hedging foreign currency sales transactions or purchases are booked as adjustments to sales or materials and services, depending on the nature of the underlying hedged item. In respect of hedges of exposures to foreign currency risk of future transactions resulting in the recognition of non-financial assets, the gains and losses deferred to the cash flow hedges reserve within OCI are transferred from equity to be included in the initial acquisition cost of the non-financial asset at the time of recognition. The Group may hedge foreign-currency risk of external or internal foreign-currency purchases where the underlying amount purchased in a foreign-currency impacts the value of inventory in a local currency. In such cases the gains and losses are initially booked as an adjustment to raw material inventory and recycled further to finished goods inventory with being ultimately recognised in the consolidated income statement at the time when the hedged items are sold to an external customer. In case of non-current assets, the deferred amounts are ultimately recognised in the income statement through depreciation over the lifetime of the non-financial assets.

When a hedging instrument expires or is sold, terminated or exercised or no longer meets the hedge accounting criteria under IFRS 9, any cumulative gain or loss deferred in equity at that time remains in equity and is accounted for as an adjustment to income or expense when the committed or forecast transaction is ultimately recognised in the consolidated income statement. However, if the underlying forecasted transaction is no longer expected to occur, the cumulative gain or loss reported in equity from the period when the hedge was effective is immediately recognised in the consolidated income statement.

Fair value hedges

In case of fair value hedges, the Group uses either derivatives or borrowings as a hedging instrument to manage the risk associated with the fair value of a hedged item. The gains and losses on hedging instruments designated and qualifying as fair value hedges, and which are highly effective, are recorded in the consolidated income statement, along with any changes in the fair value of the hedged assets or liabilities attributable to the hedged risk.

Net investment hedges

For hedges of net investments in foreign entities, the Group uses either derivatives or foreign-currency borrowings for this purpose. If the hedging instrument is a derivative, any gain or loss thereon relating to the effective portion of the hedge is recognised in equity in CTA as disclosed in the consolidated statement of comprehensive income; the gain or loss relating to the ineffective portion is immediately recognised in the consolidated income statement. In addition, exchange gains and losses arising on the translation of a foreign-currency borrowing that hedges net investment in a foreign operation are also recognised in CTA, with any ineffective portion being immediately recognised in the consolidated income statement. The gains and losses recognised in CTA are recycled from equity to the consolidated income statement at the time when the underlying hedged net investment is disposed.

Non-hedge accounted derivatives
Certain derivative transactions, while providing effective economic hedges under Group risk management policies, do not qualify for hedge accounting under the specific rules in IFRS 9 and therefore changes in the fair value of such non-qualifying hedges are accounted for at fair value in the consolidated income statement. For non-hedge accounted derivatives economically hedging foreign-currency risk of net of operative receivables and payables, the fair value changes are recognised in operating profit under other operating income and expense. For other non-hedge accounted derivatives, the fair value changes are recognised in the consolidated income statement under financial income and expense.

Valuation of derivatives
Derivative financial instruments are recorded in the statement of financial position at their fair values defined as the amount at which the instrument could be exchanged in an orderly transaction between market participants at the measurement date. The fair values of such financial items have been estimated on the following basis:

- Currency forward contract fair values are calculated using forward exchange rates at the reporting date.
- Currency option contract fair values are calculated using reporting date market rates together with common option pricing models.
- Commodity contract fair values are computed with reference to quoted market prices on futures exchanges or other reliable market sources.
- Interest rate swaps fair values are calculated using a discounted cash flow method.
- Cross-currency swaps fair values are calculated using a discounted cash flow method with the exchange of notionals being also included into the valuation model.

Total foreign exchange gains and losses in the income statement excluding hedges

	Year ended 31 December	
EUR million	**2020**	**2019**
Other operating income[1]	-19	12
Other operating expense[2]	9	-10
Borrowings, cash equivalents and lease liabilities	-22	-6
Total	**-32**	**-3**

[1] 2019 figures reported under Sales, comparative figures are not restated.
[2] 2019 figures reported under Materials and services, comparative figures are not restated.

Hedge gains and losses in operating profit

	Year ended 31 December	
EUR million	**2020**	**2019**
Cash flow hedge accounted derivatives		
Currency hedges	-2	-83
Commodity hedges	-23	12
Total	**-24**	**-71**
As adjustments to sales	-1	-79
As adjustments to materials and services	-23	8
Realised from OCI through income statement	**-24**	**-71**
Currency hedges ineffectiveness	0	-3
Commodity hedges ineffectiveness	-1	0
Net losses from cash flow hedges	**-25**	**-74**
Non-hedge accounted derivatives		
Net receivable hedges	10	-17
Net gains/losses on non-hedge accounted derivatives	**10**	**-17**
Net hedge losses in operating profit	**-16**	**-91**

In 2020, certain forecasted future transactions were no longer expected to occur, and due to this hedge accounting was ceased for those transactions. This resulted in a loss of EUR 1 (EUR 3) million being booked in the Group's operating profit and the loss being presented in the table above as ineffectiveness from cash flow hedges.

Hedge gains and losses in financial items

	Year ended 31 December	
EUR million	**2020**	**2019**
Cash flow hedge accounted derivatives		
Interest rate hedges ineffectiveness	2	0
Net gains/losses from cash flow hedges	**2**	**-1**
Non-hedge accounted derivatives		
Currency derivatives	14	0
Net gains on non-hedge accounted derivatives	**14**	**0**
Net gains/losses in financial items	**16**	**-1**

Nominal and fair values of derivative instruments

	As at 31 December							
EUR million	Nominal values	Positive fair values	Negative fair values	Net fair values	Nominal values	Positive fair values	Negative fair values	Net fair values
	2020				2019			
Currency derivatives								
Forwards: Operational cash flow hedging	1 041	40	-2	37	759	6	-9	-4
Options: Operational cash flow hedging	645	14	-1	13	1 458	9	-8	1
Total cash flow hedge accounted	**1 686**	**53**	**-3**	**50**	**2 217**	**15**	**-17**	**-2**
Forwards: Trade and loan receivables hedging	436	6	-1	4	414	3	-1	3
Total non-hedge accounted	**436**	**6**	**-1**	**4**	**414**	**3**	**-1**	**3**
Total currency derivatives	**2 122**	**59**	**-5**	**54**	**2 631**	**18**	**-18**	**0**
Commodity derivatives								
Electricity swaps: Costs hedging	42	8	-4	3	63	1	-5	-4
Oil swaps: Costs hedging	10	1	-1	0	14	1	0	1
Coal swaps: Costs hedging	0	0	0	0	3	0	0	0
Total cash flow hedge accounted	**52**	**8**	**-5**	**3**	**80**	**2**	**-5**	**-3**
Total commodity derivatives	**52**	**8**	**-5**	**3**	**80**	**2**	**-5**	**-3**
Interest rate derivatives								
Interest rate swaps: Financial expenses hedging	694	0	-17	-17	563	0	-12	-11
Cross-currency swaps: Financial expenses hedging	200	0	-6	-6	200	0	-15	-15
Total cash flow hedge accounted	**894**	**0**	**-23**	**-23**	**763**	**0**	**-27**	**-27**
Total interest rate derivatives	**894**	**0**	**-23**	**-23**	**763**	**0**	**-27**	**-27**
Total cash flow hedge accounted	**2 631**	**62**	**-32**	**30**	**3 060**	**18**	**-49**	**-32**
Total non-hedge accounted	**436**	**6**	**-1**	**4**	**414**	**3**	**-1**	**3**
Total derivatives	**3 068**	**67**	**-33**	**34**	**3 474**	**21**	**-50**	**-29**

Positive and negative fair values of financial derivative instruments are shown under interest-bearing receivables and liabilities, and non-current interest-bearing receivables and liabilities. The presented fair values in the table include accrued interest and option premiums.

Changes in fair values of hedged items and hedging instruments 2020

EUR million	Change in value of hedged item to determine hedge effectiveness	Change in value of outstanding hedging instruments	Ineffectiveness
Foreign exchange risk - Forward and option contracts (excluding option time value)	-51	51	0
Foreign exchange risk - Net investment hedges	-23	23	0
Commodity price risk - Commodity swaps[1]	17	-18	-1
Interest rate risk - Interest rate swaps	6	-6	0
Interest rate and foreign exchange risk - Cross-currency swaps[2]	-7	9	2

[1] Ineffectiveness booked in Operating profit.
[2] Ineffectiveness booked in Net financial items.

Changes in fair values of hedged items and hedging instruments 2019

EUR million	Change in value of hedged item to determine hedge effectiveness	Change in value of outstanding hedging instruments	Ineffectiveness
Foreign exchange risk - Forward and option contracts (excluding option time value)[1]	64	-67	-3
Foreign exchange risk - Net investment hedges	6	-6	0
Commodity price risk - Commodity swaps	23	-23	0
Interest rate risk - Interest rate swaps	4	-4	0
Interest rate and foreign exchange risk - Cross-currency swaps	-1	1	0

[1] Ineffectiveness booked in Operating profit.

Breakdown of cash flow hedging reserve and net investment hedges in equity 2020

EUR million	At 1 Jan 2020	Change in fair value recognised in OCI/CTA	Reclassified from OCI to profit and loss	Tax impact	At 31 Dec 2020
Foreign exchange risk - Operational cash flow hedging	-2	50	2	-10	39
Commodity price risk - Commodity swaps	-2	-17	24	-2	3
Interest rate risk - Interest rate swaps	-8	-6	0	1	-13
Interest rate and foreign exchange risk - Cross-currency swaps	-11	9	-7	0	-9
Cost of hedging reserve	1	0	0	0	0
Total cash flow hedge reserve in OCI	**-22**	**35**	**18**	**-11**	**20**
Foreign exchange risk - Net investment hedges	12	23	0	-5	30
Total net investment hedges in CTA	**12**	**23**	**0**	**-5**	**30**
Total hedging reserves	**-10**	**58**	**18**	**-15**	**51**

Breakdown of cash flow hedging reserve and net investment hedges in equity 2019

EUR million	At 1 Jan 2019	Change in fair value recognised in OCI/CTA	Reclassified from OCI to profit and loss	Tax impact	At 31 Dec 2019
Foreign exchange risk - Operational cash flow hedging	-17	-67	86	-4	-2
Commodity price risk - Commodity swaps	25	-23	-12	9	-2
Interest rate risk - Interest rate swaps	-5	-4	0	1	-8
Interest rate and foreign exchange risk - Cross-currency swaps	-10	1	1	-3	-11
Cost of hedging reserve	-2	3	0	-1	1
Total cash flow hedge reserve in OCI	**-9**	**-90**	**75**	**1**	**-22**
Foreign exchange risk - Net investment hedges	20	-6	-4	1	12
Total net investment hedges in CTA	**20**	**-6**	**-4**	**1**	**12**
Total hedging reserves	**11**	**-96**	**72**	**3**	**-10**

Financial impact of netting for instruments subject to an enforceable master netting agreement 2020

	Not offset in the statement of financial position			
EUR million	Gross amount of recognised financial instruments	Related liabilities (-) or assets (+) subject to master netting agreements	Collateral received (-) or given (+)	Net exposure
Derivative assets	67	-25	0	42
Derivative liabilities	-33	25	0	-8

Financial impact of netting for instruments subject to an enforceable master netting agreement 2019

	Not offset in the statement of financial position			
EUR million	Gross amount of recognised financial instruments	Related liabilities (-) or assets (+) subject to master netting agreements	Collateral received (-) or given (+)	Net exposure
Derivative assets	21	-14	0	7
Derivative liabilities	-50	14	0	-36

The Group enters into derivative transactions under master netting agreements agreed with each counterparty. In case of an unlikely credit event, such as default, all outstanding transactions under the agreements are terminated, and only a single net amount per counterparty is payable for settlement of all transactions. The agreements do not meet the criteria for offsetting in the statement of financial position, because offsetting is enforceable only in the occurrence of certain future events.

Note 28 Cumulative translation adjustment and equity hedging

Accounting principles

The Group operates internationally and is thus exposed to currency risks arising from exchange rate fluctuations on the value of its net investment in non-euro area foreign subsidiaries, joint operations, and equity accounted investments. Exchange differences arising from the retranslation of net investments in foreign entities that are non-euro foreign subsidiaries, joint operations or equity accounted investments, and of financial instruments that are designated as and are hedges of such investments, are recorded directly in the shareholders' equity in the cumulative translation adjustment (CTA). Movements in CTA (including related hedges) are shown in the consolidated statement of comprehensive income.

The cumulative translation adjustments of disposals and liquidations are combined with their gain or loss on disposal. The CTA is recycled in the consolidated income statement upon disposal of a business unit.

The Group policy for translation risk exposure is to minimise this by funding assets whenever possible and economically viable in the same currency, but if matching the assets and liabilities in the same currency is not possible, hedging of the remaining translation risk may take place. The gains and losses net of tax on all financial liabilities and instruments used for hedging purposes are offset in CTA against the respective currency movements arising from the restatement of the net investments at current exchange rates on the reporting date. The Group has also applied net investment loan accounting under IAS 21 for certain intragroup loans.

Cumulative translation adjustment - movement

	Year ended 31 December	
EUR million	**2020**	**2019**
At 1 January		
CTA on net investments	-148	-355
Net investment hedges and loans	18	27
Income tax related to hedges and loans	-6	-7
Net CTA in Equity	-136	-335
CTA movement OCI		
Restatement of opening equity	-157	7
Difference in Income Statement translation	18	13
CTA release through the Income Statement	0	182
CTA other changes	-4	5
Net investment hedges and loans	16	-9
Income tax related to hedges and loans	-4	1
CTA movement OCI total	-131	198
At 31 December		
CTA on net investments	-292	-148
Net investment hedges and loans	34	18
Income tax related to hedges and loans	-10	-6
Net CTA in Equity	-267	-136

The release of cumulative translation adjustments to the income statement amounted to EUR 0 (EUR -182) million. In 2019 a loss of EUR 171 million was related to the Bergvik Skog restructuring in Sweden.

Cumulative translation adjustment - financial position

	As at 31 December					
	Cumulative Translation Adjustments (CTA)		Net Investment Hedges and Loans		Net CTA in the Statement of Financial Position	
EUR million	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Brazil	-299	-209		0	-299	-209
China	74	73	-6	0	67	73
Czech Republic	29	33	-9	-9	20	24
Poland	-49	-24	17	17	-32	-7
Russia	-91	-55		0	-91	-55
Sweden	6	-128	47	47	52	-82
Uruguay (USD)	43	158	-14	-37	29	122
USA	-1	6		0	-1	6
Others	-4	-1		0	-4	-1
CTA before Tax	**-292**	**-148**	**34**	**18**	**-258**	**-130**
Taxes			-10	-6	-10	-6
Net CTA in Equity	**-292**	**-148**	**25**	**12**	**-267**	**-136**

The main movements in CTA in 2020 were a gain of EUR 134 (EUR 158) million related to the Swedish crown, loss of EUR 122 (gain of EUR 25) million related to the US dollar, loss of EUR 35 (gain of EUR 15) million related to Russian Ruble, loss of EUR 25 (gain of EUR 4) million related to Polish Zloty, and loss of EUR 90 (EUR 5) million related to Brazilian Real.

The net amount of hedging gain included in the CTA during the period amounted to EUR 13 (loss of EUR 8) million. At December 2020 the total amount of net investment hedges and loans amounted to gain of EUR 25 (EUR 12) million.

Hedging instruments and unrealised hedge losses

	As at 31 December					
	Nominal amount (Currency)		Nominal amount (EUR)		Unrealised Losses (EUR)	
EUR million	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Borrowings						
USD area	300	300	244	267	-11	-25
Total Hedging			**244**	**267**	**-11**	**-25**

The group is currently only hedging its equity exposure to the US dollar arising from its joint operation located in Uruguay with USD functional currency.

Net Investment loans

At 31 December 2020 Net investment loans had an impact of EUR 5 (0) million on CTA in Equity.

Note 29 Commitments and contingencies

Accounting principles

Guarantees

The guarantees entered into with financial institutions and other credit guarantors generally oblige the group to make payment in the event of default by the borrower. The guarantees have an off-balance sheet credit risk representing the accounting loss that would be recognised at the reporting date if the counterparties fail to perform completely as contracted. The credit risk amounts are equal to the contract sums, assuming the amounts are not paid in full and are irrecoverable from other parties.

Commitments

	As at 31 December	
EUR million	**2020**	**2019**
On own behalf		
Mortgages	0	2
Other commitments	14	3
On behalf of equity accounted investments		
Guarantees	2	4
On behalf of others		
Guarantees	6	6
Other commitments	36	13
Total	**58**	**28**
Mortgages	0	2
Guarantees	8	10
Other commitments	50	17
Total	**58**	**28**

In 2020, the Group's commitments amounted to EUR 58 (EUR 28) million. In addition, the parent company Stora Enso Oyj has guaranteed the liabilities of many of its subsidiaries and joint operations up to EUR 1 219 (EUR 1 508) million as of 31 December 2020.

Capital commitments

	As at 31 December	
EUR million	**2020**	**2019**
Total	**207**	**223**

Capital expenditure commitments are not recognised in the balance sheet and these include the Group's share of direct capital expenditure contracts in joint operations. Commitments in relation to capital expenditure mainly relate to the Oulu mill conversion and other ongoing projects at the Imatra Mill in Finland and the Ždírec sawmill in Czech Republic.

Contingent liabilities

Stora Enso has undertaken significant restructuring actions in recent years which have included the divestment of companies, sale of assets and mill closures. These transactions include a risk of possible environmental or other obligations the existence of which would be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Group. A provision has been recognised for obligations for which the related amount can be estimated reliably and for which the related future cost is considered to be at least probable.

Stora Enso has been granted various investment subsidies and has given certain investment commitments in different countries e.g. Finland, China and Sweden. If committed planning conditions are not met, local officials may pursue administrative measures to reclaim some of the formerly granted investment subsidies or to impose penalties on Stora Enso, and the outcome of such a process could result in a negative financial impact on Stora Enso.

Stora Enso is party to legal proceedings that arise in the ordinary course of business and which primarily involve claims arising out of commercial law. The management does not consider that liabilities related to such proceedings before insurance recoveries, if any, are likely to be material to the Group's financial condition or results of operations.

Legal proceedings in Latin America

Veracel

On 11 July 2008, Stora Enso announced that a federal judge in Brazil had issued a decision claiming that the permits issued by the State of Bahia for the operations of Stora Enso's joint operations company Veracel were not valid. The judge also ordered Veracel to take certain actions, including reforestation with native trees on part of Veracel's plantations and a possible fine of, at the time of the decision, BRL 20 (EUR 3) million. Veracel disputes the decision and has filed an appeal against it. Veracel operates in full compliance with all Brazilian laws and has obtained all the necessary environmental and operating licences for its industrial and forestry activities from the relevant authorities. In November 2008, a Federal Court suspended the effects of the decision. No provisions have been recorded in Veracel's or Stora Enso's accounts for the reforestation or the possible fine.

The tax authority has claimed that part of the PIS (social integration programme) and COFINS (contribution for the financing of social security) paid by Veracel on the purchase of raw materials and services in years 2006-2016 was not eligible for tax credit. Stora Enso and Veracel consider the remaining pending claims unjustified and no provisions have been recorded in Veracel's or Stora Enso's accounts for this matter. The dispute was still pending at balance sheet date. The remaining pending claim relating to Stora Enso's share in Veracel is BRL 40 million (EUR 6 million). The outlook of the dispute is considered to be more positive than in earlier years and there will be no further reporting on this dispute.

Financials

Note 30 Group companies

Subsidiaries	Country	Group ownership, % 2020	Group ownership, % 2019
A/O Ladenso	Russia	100.00	100.00
AB Stabergsvikens tomter	Sweden	100.00	100.00
Anjala Fiber & Energy Oy	Finland	100.00	100.00
AO Stora Enso	Russia	100.00	100.00
AS Stora Enso Latvija	Latvia	100.00	100.00
Bergnät 1 AB	Sweden	100.00	100.00
Bergnät 2 AB	Sweden	100.00	100.00
Box Inc AB	Sweden	100.00	100.00
Cellutech AB	Sweden	100.00	100.00
Centrum Dystrybucji i Obróbki Drewna Sp. z.o.o.	Poland	100.00	100.00
Changzhou Stora Enso Packaging Technology Co. Ltd.	China	100.00	100.00
DanFiber A/S	Denmark	51.00	51.00
Dongguan Stora Enso Inpac Packaging Co. Ltd.	China	100.00	100.00
Efora Oy	Finland	100.00	100.00
Enso Alueverkko Oy	Finland	100.00	100.00
Euro - Timber, spol. s.r.o.	Slovak Republic	100.00	100.00
FPB Holding GmbH & Co. KG	Germany	99.98	99.97
Guangxi Stora Enso Forestry Co. Ltd.	China	89.50	89.50
Herman Andersson Oy	Finland	100.00	100.00
HESPOL Sp. z.o.o.	Poland	100.00	100.00
Hälsingeskogen vind AB	Sweden	100.00	0.00
Jiashan Stora Enso Inpac Packaging Co. Ltd.	China	100.00	100.00
Lumipaper Ltd	UK	100.00	100.00
Lumipaper NV	Belgium	100.00	100.00
Mena Wood Oy Ltd	Finland	100.00	100.00
Merivienti Oy	Finland	0.00	100.00
OAO Olonetsles	Russia	99.48	96.88
OOO Setles	Russia	100.00	100.00
OOO Setnovo	Russia	100.00	100.00
OOO Stora Enso Forest West	Russia	100.00	100.00
OOO Stora Enso Packaging BB	Russia	100.00	100.00
OOO Stora Transport	Russia	100.00	100.00
OOO Terminal	Russia	100.00	100.00
Primaskog 1 AB	Sweden	100.00	0.00
Primaskog 2 AB	Sweden	100.00	0.00
Primaskog 3 AB	Sweden	100.00	0.00
Primaskog 4 AB	Sweden	100.00	0.00
Primaskog 5 AB	Sweden	100.00	0.00
Primaskog 6 AB	Sweden	100.00	0.00
Primaskog 7 AB	Sweden	100.00	0.00
Primaskog 8 AB	Sweden	100.00	0.00
Primaskog 9 AB	Sweden	100.00	0.00
Skogsutveckling Syd AB	Sweden	66.67	66.67
Stora Enso China Packaging (HK) Co., Limited	Hong Kong	100.00	100.00
Stora Enso (Guangxi) Forestry Company Ltd.	China	80.08	80.08
Stora Enso (Guangxi) Packaging Company Ltd.	China	80.08	80.08

Subsidiaries	Country	Group ownership, % 2020	Group ownership, % 2019
Stora Enso (HK) Ltd	Hong Kong	100.00	100.00
Stora Enso (Southern Africa) (Pty) Ltd	South Africa	100.00	100.00
Stora Enso AB	Sweden	100.00	100.00
Stora Enso Amsterdam B.V.	Netherlands	100.00	100.00
Stora Enso Arapoti Holding Florestal S.A.	Brazil	100.00	100.00
Stora Enso Australia Pty Ltd	Australia	100.00	100.00
Stora Enso Austria GmbH	Austria	100.00	100.00
Stora Enso Belgium NV	Belgium	100.00	100.00
Stora Enso Bergskog 1 AB	Sweden	100.00	0.00
Stora Enso Bergskog 2 AB	Sweden	100.00	0.00
Stora Enso Bioenergi AB	Sweden	100.00	100.00
Stora Enso Bois SAS	France	100.00	100.00
Stora Enso Brasil Ltda	Brazil	100.00	100.00
Stora Enso China Co., Ltd	China	100.00	100.00
Stora Enso China Holdings AB	Sweden	100.00	100.00
Stora Enso Corbehem SAS	France	100.00	100.00
Stora Enso Danmark A/S	Denmark	100.00	100.00
Stora Enso Eesti AS	Estonia	100.00	100.00
Stora Enso Espana S.A.U	Spain	100.00	100.00
Stora Enso Fors AB	Sweden	100.00	100.00
Stora Enso France SAS	France	100.00	100.00
Stora Enso Germany GmbH	Germany	100.00	100.00
Stora Enso Holding France SAS	France	100.00	100.00
Stora Enso Holdings UK Ltd	UK	100.00	100.00
Stora Enso Ingerois Oy	Finland	100.00	100.00
Stora Enso Inpac Corrugated Packaging (Hebei) Company Limited	China	100.00	100.00
Stora Enso Inpac Hebei Protective Packaging Co., Ltd.	China	100.00	100.00
Stora Enso Inpac Packaging Co. Ltd	China	100.00	100.00
Stora Enso International Oy	Finland	100.00	100.00
Stora Enso Italia Srl	Italy	100.00	100.00
Stora Enso Japan K.K.	Japan	100.00	100.00
Stora Enso Kabel GmbH	Germany	99.98	99.97
Stora Enso Langerbrugge NV	Belgium	100.00	100.00
Stora Enso Lao Co. Ltd	Laos	100.00	100.00
Stora Enso Laos Plantation AB	Sweden	100.00	100.00
Stora Enso LLC	Ukraine	100.00	100.00
Stora Enso Maxau GmbH	Germany	100.00	100.00
Stora Enso Mexico S.A.	Mexico	100.00	100.00
Stora Enso Middle East DMCC	United Arab Emirates	100.00	100.00
Stora Enso Narew Sp.z.o.o.	Poland	100.00	100.00
Stora Enso North American Sales, Inc.	USA	100.00	100.00
Stora Enso Oulu Holding Oy	Finland	100.00	0.00
Stora Enso Oulu Oy	Finland	100.00	100.00
Stora Enso Packagent Oy	Finland	0.00	100.00
Stora Enso Packaging AB	Sweden	100.00	100.00

Subsidiaries	Country	Group ownership, % 2020	Group ownership, % 2019
Stora Enso Packaging AS	Estonia	100.00	100.00
Stora Enso Packaging Oy	Finland	100.00	100.00
Stora Enso Packaging SIA	Latvia	100.00	100.00
Stora Enso Packaging UAB	Lithuania	100.00	100.00
Stora Enso Paper AB	Sweden	100.00	100.00
Stora Enso Paper France SAS	France	100.00	100.00
Stora Enso Paper GmbH	Germany	100.00	100.00
Stora Enso Paper Oy	Finland	100.00	100.00
Stora Enso Paper UK Ltd	UK	100.00	100.00
Stora Enso Pension Trust Ltd.	UK	100.00	100.00
Stora Enso Plantor AB	Sweden	100.00	100.00
Stora Enso Poland S.A.	Poland	100.00	100.00
Stora Enso Polska Sp.z.o.o.	Poland	100.00	100.00
Stora Enso Portugal Lda	Portugal	100.00	100.00
Stora Enso Praha s.r.o.	Czech Republic	100.00	100.00
Stora Enso Publication Papers Oy Ltd	Finland	100.00	100.00
Stora Enso Pulp AB	Sweden	100.00	100.00
Stora Enso Pulp and Paper Asia AB	Sweden	94.21	94.21
Stora Enso Sachsen GmbH	Germany	100.00	100.00
Stora Enso Skog AB	Sweden	100.00	100.00
Stora Enso Skog AS	Norway	100.00	100.00
Stora Enso Skog och Mark AB	Sweden	100.00	100.00
Stora Enso South East Asia Pte Ltd	Singapore	100.00	100.00
Stora Enso Timber AB	Sweden	100.00	100.00
Stora Enso Timber Deutschland GmbH	Germany	0.00	100.00
Stora Enso Timber DIY Products B.V.	Netherlands	100.00	100.00
Stora Enso Treasury Stockholm AB	Sweden	100.00	100.00
Stora Enso UK Limited	UK	100.00	100.00
Stora Enso US Inc.	USA	100.00	0.00
Stora Enso Veitsiluoto Oy	Finland	100.00	100.00
Stora Enso Verwaltungs GmbH	Germany	100.00	100.00
Stora Enso Wood Products d.o.o. Koper	Slovenia	100.00	100.00
Stora Enso Wood Products GmbH	Austria	100.00	100.00
Stora Enso Wood Products Japan K.K.	Japan	100.00	100.00
Stora Enso Wood Products Oy Ltd	Finland	100.00	100.00
Stora Enso Wood Products Planá s.r.o.	Czech Republic	100.00	100.00
Stora Enso Wood Products Sp.z.o.o.	Poland	100.00	100.00
Stora Enso Wood Products Zdirec s.r.o.	Czech Republic	100.00	100.00
Stora Enso WP Bad St. Leonhard GmbH	Austria	100.00	100.00
Stora Enso WP HV s.r.o.	Czech Republic	100.00	100.00
Stora Kopparbergs Bergslags AB	Sweden	100.00	100.00
Sydved AB	Sweden	66.67	66.67
UAB Stora Enso Lietuva	Lithuania	100.00	100.00
Virdia B2X, LLC	USA	100.00	100.00
Virdia LLC	USA	100.00	100.00
Virdia Ltd	Israel	100.00	100.00
VLAR Papier NV	Belgium	100.00	100.00

Associated companies	Country	Group ownership, % 2020	Group ownership, % 2019
Arauco Florestal Arapoti S.A.	Brazil	20.00	20.00
Bergvik Skog AB	Sweden	49.79	49.79
Encore Ympäristöpalvelut Oy	Finland	30.41	30.41
Honkalahden Teollisuuslaituri Oy	Finland	50.00	50.00
Kemi Shipping Oy	Finland	50.00	50.00
Kemira Cell Sp.z.o.o.	Poland	45.00	45.00
Metsäteho Oy	Finland	23.95	23.95
Oy Keskuslaboratorio - Centrallaboratorium Ab	Finland	32.24	32.24
Perkaus Oy	Finland	33.33	33.33
Pressretur AB	Sweden	33.33	33.33
Puhoksen Satama Oy	Finland	50.00	50.00
SELF Logistika SIA	Latvia	50.00	50.00
Steveco Oy	Finland	34.39	34.39
Suomen Keräyspaperi Tuottajayhteisö Oy	Finland	40.09	40.09
SweTree Technologies AB	Sweden	23.83	29.93
Tornator Oyj	Finland	41.00	41.00
Trätåg AB	Sweden	50.00	50.00
TreeToTextile AB	Sweden	25.75	25.00
ZMP GMBH	Austria	30.00	30.00
Österbergs Förpackningsmaskiner AB	Sweden	50.00	50.00

Other companies	Country	Group ownership, % 2020	Group ownership, % 2019
AMEXCI AB	Sweden	9.10	9.10
Arevo AB	Sweden	7.89	7.89
Clic Innovation Oy	Finland	9.87	9.87
Combient AB	Sweden	5.40	5.40
East Office of Finnish Industries Oy	Finland	4.00	4.00
Packages Limited	Pakistan	6.40	6.40
Pohjolan Voima Oy	Finland	15.61	15.61
Radioskog AB	Sweden	10.00	10.00
RK Returkartong AB	Sweden	8.40	8.40
SSG Standard Solutions Group AB	Sweden	14.29	14.29
Sölvesborgs Stuveri & Hamn AB	Sweden	7.36	7.36
Union Developement Récup. Pap.	France	10.70	10.70

Joint operations	Country	Group ownership, % 2020	Group ownership, % 2019
Celulosa y Energia Punta Pereira S.A.	Uruguay	50.00	50.00
El Esparragal Asociación Agraria de Responsabilidad Limitada	Uruguay	50.00	50.00
Eufores S.A.	Uruguay	50.00	50.00
Forestal Cono Sur S.A.	Uruguay	50.00	50.00
Ongar S.A.	Uruguay	50.00	50.00
Stora Enso Uruguay S/A	Uruguay	50.00	50.00
Terminal Logística e Industrial M`Bopocuá S.A.	Uruguay	50.00	50.00
Veracel Celulose SA	Brazil	50.00	50.00
Zona Franca Punta Pereira S.A.	Uruguay	50.00	50.00

Note 31 Related party transactions

Balances and transactions between the Group and its subsidiaries and joint operations, which are classified as related parties, have been eliminated on consolidation and are not disclosed in this note.

The Group has classified Solidium Oy as a related party. This is entirely owned by the State of Finland, and owned 10.7% of Stora Enso shares and 27.3% of all votes on 31 December 2020. The group has applied an exemption, as stated in IAS 24 paragraph 25, not to disclose transactions and outstanding balances with government-related entities.

The Group has classified FAM AB as a related party. FAM AB owned 10.2% of Stora Enso shares and 27.3% of all votes on 31 December 2020.

The key management personnel of the Group are the members of the Group Leadership Team and the Board of Directors. The compensation of key management personnel is presented in Note 7 Board and executive remuneration.

In the ordinary course of business, the Group engages in transactions on commercial terms with equity accounted investments and other related parties that are not any more favourable than those that would be available to other third parties – with the exception of Veracel. Stora Enso intends to continue with transactions on a similar basis with its equity accounted investments, further details of which are shown in Note 13 Equity accounted investments.

Group companies, including subsidiary companies and joint operations, are listed in Note 30 Group companies.

Paper for recycling

The Group owns non-controlling interests in several paper recyclers, from which paper for recycling is purchased at market prices.

Forest assets and wood procurement

The Group has a 41.0% interest in Tornator with the remaining 59.0% being held mainly by Finnish institutional investors. Stora Enso has long-term purchase contracts with the Tornator Group for approximately 2 million cubic metres of wood annually at market prices, and in 2020 purchases of 2 (2) million cubic metres came to EUR 73 (67) million.

The Group procures wood at market prices from Kopparfors Fastigheter AB, a fully owned subsidiary of Kopparfors Skogar AB, which is completely owned by FAM AB. In 2020 the purchases from the related party amounted to EUR 21 (6) million and the sales of services by Stora Enso to the said related party amounted to EUR 0 (4) million. At the end of 2020 the Group had EUR 3 (1) million of open payables to and EUR 0 (1) million of open receivables from the related party.

Stevedoring

The Group owns 34.4% of shares in Steveco Oy, a Finnish company engaged in loading and unloading vessels. The other shareholders in Steveco are UPM-Kymmene, Finnlines and Ahlström Capital. The stevedoring services are provided by Steveco at market prices and in 2020 amounted to EUR 23 (25) million.

Note 32 Earnings per share

Accounting principles

Basic earnings per share, attributable to the owners of the parent company, are calculated by dividing the net profit attributable to shareholders by the weighted average number of ordinary shares in issue during the year, excluding ordinary shares purchased by the group and held as treasury shares. Diluted earnings per share are calculated by adjusting the weighted average number of ordinary shares plus the diluted effect of all potential dilutive ordinary shares, such as shares from share-based payments.

Earnings per share

	Year Ended 31 December	
	2020	**2019**
Net profit for the period attributable to the owners of the parent, EUR million	626	880
Total comprehensive income attributable to the owners of the parent, EUR million	1 625	1 113
Weighted average number of A and R shares	788 619 987	788 619 987
Weighted average number of share awards	561 769	912 677
Weighted diluted number of shares	789 181 756	789 532 664
Basic Earnings per Share, EUR	**0.79**	**1.12**
Diluted Earnings per Share, EUR	**0.79**	**1.12**
Total Recognised Income and Expense per Share, EUR	**2.06**	**1.41**

Financials

Parent Company Stora Enso Oyj financial statements

Parent company income statement

		Year ended 31 December	
EUR million	**Note**	**2020**	**2019**
Sales	2	**2 190**	**2 641**
Changes in inventories of finished goods and work in progress + / -		1	-15
Production for own use		1	1
Other operating income	3	187	191
Materials and services	4	-1 587	-1 899
Personnel expenses	5	-217	-229
Depreciation and impairment	6	-127	-118
Other operating expenses	7	-442	-478
		2 185	2 546
Operating profit		**5**	**95**
Financial income and expenses	9	356	189
Profit before Appropriations and Taxes		360	284
Appropriations	10	146	-53
Income tax expense	11	-1	0
Profit for the period		**506**	**230**

Parent company statement of financial position

		As at 31 December	
EUR million	**Note**	**2020**	**2019**
Assets			
Non-current assets			
Intangible assets	13	60	79
Tangible assets	13	876	883
Investments	14	8 275	7 934
Non-current assets total		9 211	8 897
Current assets			
Inventories	15	310	295
Short-term receivables	16	668	935
Financial securities	17	1 275	276
Cash in hand and at bank		678	506
Total current assets		2 930	2 012
Total assets		**12 141**	**10 909**
Equity and liabilities			
Equity	18		
Share capital		1 342	1 342
Share premium		3 639	3 639
Fair value reserve		-6	-10
Invested non-restricted equity fund		633	633
Retained earnings		449	456
Profit for the period		506	230
Total equity		6 563	6 291
Accumulated appropriations	19	167	254
Obligatory provisions	20	23	28
Liabilities			
Non-current liabilities	22	2 915	2 195
Current liabilities	23	2 473	2 141
Total liabilities		5 387	4 336
Total equity and liabilities		**12 141**	**10 909**

Parent company cash flow statement

EUR million	Year ended 31 December 2020	2019
Cash provided by operating activities		
Profit for the period	506	230
Adjustments and reversal of non-cash items:		
Direct taxes	1	0
Appropriations	-146	53
Depreciation according to plan and impairment	127	118
Unrealised foreign exchange gains and losses	-38	57
Other non-cash items	-2	0
Financial income and expenses	-356	-189
Change in working capital:		
Increase(-)/decrease(+)		
in current non-interest-bearing receivables	18	96
Increase(-)/decrease(+) in inventories	-14	31
Increase(+)/decrease(-)		
in current non-interest-bearing liabilities	14	-94
Cash flow from operating activities before financial items and taxes	110	303
Interest received from operating activities	41	30
Interest paid from operating activities	-66	-73
Dividends received from operating activities	370	267
Other financial items, net	13	8
Direct taxes paid	-2	-2
Cash provided by operating activities	**466**	**533**
Net cash provided by investing activities		
Investments in tangible and intangible assets	-102	-155
Capital gains from sale of tangible and intangible assets	1	3
Investments in subsidiary shares and other capital contributions	-262	-2
Proceeds from disposal of subsidiary shares and other repayment of capital	16	7
Proceeds from disposal of other investments	1	2
Payments of non-current loan receivables	-500	-843
Proceeds from non-current loan receivables	803	371
Net cash provided by investing activities	**-43**	**-617**
Cash flow from financing activities		
Proceeds from (issue of) long-term liabilities	1 040	801
Proceeds from (payment of) long-term liabilities	-340	-101
Proceeds from (issue of) short-term liabilities	892	733
Proceeds from (payment of) short-term liabilities	-640	-1 042
Dividends paid	-223	-394
Group contributions received	1	0
Cash flow from financing activities	**729**	**-3**
Net change in cash and cash equivalents	**1 153**	**-87**
Translation differences	19	0
Cash and cash equivalents at start of year	782	868
Cash and cash equivalents at year end	**1 953**	**782**
Cash and cash equivalents at year end includes:		
Financial securities	**1 275**	**276**
Cash in hand and at bank	**678**	**506**
Cash and cash equivalents total	**1 953**	**782**

Notes to the parent company financial statements

Note 1 Accounting principles

The financial statements of Stora Enso Oyj have been prepared in accordance with the Finnish Accounting Act and other current rules and regulations concerning financial statements in Finland.

Derivative contracts

Stora Enso is exposed to several financial market risks that the Group is responsible for managing under policies approved by the Board of Directors. The objective is to have cost-effective funding in Group companies and to manage financial risks using financial instruments in order to decrease earnings volatility. The main exposures for the Group are interest rate risk, currency risk, funding risk and commodity price risk, especially for fibre and energy. The parent company manages these risks centrally in the Group. The Group's risk management principles are presented in more detail in Note 24 Financial Risk Management to the consolidated financial statements.

Derivative contracts are measured at fair value on the balance sheet. Derivatives with external counterparties that are subject to hedge accounting are recognised as financial assets and liabilities at fair value through the income statement in the same manner as the parent company's derivatives with other Group companies as counterparties. The parent company's derivative contracts that are used to hedge the parent company's own cash flow are measured at fair value, and the change in fair value (effective part) is recognised, in line with hedge accounting principles, in the fair value reserve in equity on the balance sheet, while the ineffective part is recognised in the parent company's income statement. The fair value of derivatives not included in hedge accounting is entered immediately in the income statement.

Interest income and expenses related to derivatives that are used to manage the interest rate risk are allocated over the contract period and are used to adjust interest expenses related to hedged loans. Option premiums are recognised as advance payments until the options mature.

With regard to derivatives, more information about the measurement principles, fair values and changes in fair value is provided in Note 25.

Pensions

Statutory pension security is arranged through employment pension insurance companies outside the Group. Some employees have additional pension security through life insurance companies outside the Group. Pension contributions are allocated in accordance with performance-based salaries and wages for the financial period.

Intangible and tangible assets and depreciation

The balance sheet value of intangible and tangible assets is their direct acquisition cost less depreciation according to plan and any impairment. Depreciation according to plan is recognised for intangible and tangible assets, based on their expected useful lives.

Depreciation is based on the following useful lives:	
Buildings and structures	10–50 years
Production machinery and equipment	10–20 years
Light machinery and equipment	3–5 years
Intellectual property rights	3–20 years

No depreciation is recognised for land and water areas.

Inventories

Inventories are measured at acquisition cost or at net realisable value if lower. Acquisition cost is determined using the FIFO method or the weighted average cost method. The cost of finished goods and work in progress comprises raw materials, direct labour, depreciation and other direct costs, as well as the related production overhead. Net realisable value is the estimated selling price less the costs of completion and sale.

Leasing

Leasing payments are recognised in other operating expenses. The remaining leasing payments under leasing agreements are presented in Note 24 Commitments and Contingencies.

Expenditure on research and development

Expenditure on research and development is recognised as an expense for the financial period.

Income taxes

The tax expense on the income statement includes income taxes based on the taxable profit for the financial period and tax adjustments for previous periods. The parent company does not recognise deferred tax assets and liabilities, excluding derivatives, in its financial statements. Deferred tax assets and liabilities that can be recognised on the balance sheet are presented in Note 21.

Obligatory provisions

Future costs and losses that no longer generate corresponding income, to which the company is committed or by which the company is obligated, are recognised in the income statement according to their nature and in obligatory provisions on the balance sheet.

Emission rights

During 2020, the company was issued 0.5 million tonnes of free emission allowances in accordance with the EU Emissions Trading Directive. Emission allowances are recognised through a net cash cost basis, meaning that the difference between the actual emissions and the emission allowances received is recognised through profit or loss if the actual emissions are larger than the emission allowances received. During the financial period, the emissions emitted were 0.4 million tonnes. The emission rights purchased during the financial period are recognised in other operating expenses, and the emission rights sold during the financial period are recognised in other operating income.

At the end of the financial period, the market value of the emission rights was EUR 32.54 per tonne.

Comparability of the information for the financial period

On 1 January 2020, Stora Enso merged its container board business into the Consumer Board division. As a result of the merger, the name of the division changed into Packaging Materials. Stora Enso has also established a new Forest division. The changes took effect on 1 January 2020. Comparatives have been restated in Note 2.

Note 2 Net sales by division and market area

	Year ended 31 December	
EUR million	**2020**	**2019**
By division		
Packaging Materials	1 319	1 476
Packaging Solutions	4	1
Biomaterials	140	231
Forest	667	846
Other	60	87
Total	**2 190**	**2 641**
Distribution by region		
Finland	978	1 258
Other Europe	814	925
North and South America	119	121
Asia and Oceania	209	263
Africa	25	29
Others	43	45
Total	**2 190**	**2 641**

Note 3 Other operating income

	Year ended 31 December	
EUR million	**2020**	**2019**
Rent and equivalents	4	4
Gains on sale of fixed assets	1	2
Insurance compensation	0	2
Production and maintenance services	2	4
Subsidies, grants and equivalents	1	2
Administration services	145	141
Proceeds from sales of emission rights	16	17
Other operating income	18	20
Total	**187**	**191**

Note 4 Materials and services

	Year ended 31 December	
EUR million	**2020**	**2019**
Materials and supplies		
Purchases during the period	1 113	1 376
Change in inventories +/-	8	15
External services	466	508
Total Materials and Services	**1 587**	**1 899**

Note 5 Personnel expenses and average number of employees

	Year ended 31 December	
EUR million	**2020**	**2019**
Salaries and fees	184	189
Statutory employer costs		
Pensions	27	33
Other personnel costs	6	6
Total	**217**	**229**

Remuneration for the CEO and the members of the Board of Directors
Remuneration for the CEO and the members of the Board of Directors is presented in Note 7 to the Consolidated financial statements.

Pension liabilities for the CEO
Pension liabilities for the CEO are presented in Note 7 to the Consolidated financial statements.

Receivables from management
There were no loan receivables from the company's management.

Average number of employees	**2020**	**2019**
Number of employees during the financial period	2 827	3 021

Note 6 Depreciation and impairment

	Year ended 31 December	
EUR million	**2020**	**2019**
Depreciation according to plan	118	115
Impairment of fixed assets	9	3
Total	**127**	**118**

Depreciation and amortisation on each item in the statement of financial position is included under intangible and tangible assets.

Note 7 Other operating expenses

	Year ended 31 December	
EUR million	**2020**	**2019**
Product freight	135	149
Sales commissions	34	41
Rental costs	15	13
Administration and office services	202	209
Insurance premiums	8	7
Other personnel expenses	10	20
Public and other relations	3	3
Emission rights expenses	16	18
Other operating expenses	12	15
Merger loss	5	
Total	**442**	**478**

Financials

Note 8 Auditors' fees

	Year ended 31 December	
EUR million	**2020**	**2019**
Audit fees	1	1
Total	**1**	**1**

Note 9 Financial income and expenses

	Year ended 31 December	
EUR million	**2020**	**2019**
Dividend income		
From Group companies	358	253
From equity accounted investments	12	14
Total	**370**	**267**
Interest income from non-current investments		
From Group companies	37	35
Total	**37**	**35**
Other interest and financial income		
From Group companies	6	1
From others	12	13
Total	18	15
Total financial income	**426**	**317**
Interest and other financial expenses		
To Group companies	0	-1
Other financial expenses	-71	-111
Total	**-71**	**-112**
Impairment on investments		
Impairment on investments in non-current assets	1	-17
Total financial expenses	**-70**	**-129**
Total financial income and expenses	**356**	**189**
The item "Financial Income and Expenses" includes exchange rate gains/losses (net)	24	-27

Note 10 Appropriations

	Year ended 31 December	
EUR million	**2020**	**2019**
Difference between depreciation according to plan and depreciation recognised in taxation	87	-54
Group contributions received	59	1
Total appropriations	**146**	**-53**

Note 11 Income tax expense

	Year ended 31 December	
EUR million	**2020**	**2019**
Income taxes from primary operations for the period	-1	0
Total income tax	**-1**	**0**

Note 12 Environmental expenses

	Year ended 31 December	
EUR million	**2020**	**2019**
Materials and services	33	35
Personnel expenses	2	2
Depreciation and impairment	11	10
Total	**46**	**48**
Air quality protection	11	12
Wastewater treatment	20	22
Waste management	9	10
Soil and groundwater protection	1	0
Other environmental protection measures	4	3
Total	**46**	**48**

Note 13 Intangible and tangible assets

Intangible assets

EUR million	**Intellectual property rights**	**Other non-current expenditure**	**Advance payments and acquisitions in progress**	**Total**
Acquisition cost 1 Jan	176	11	18	**206**
Increases	1	0	5	**6**
Decreases	-18	-2	0	**-19**
Reclassification	14	2	-16	**0**
Acquisition cost 31 Dec	174	12	7	**193**
Accumulated depreciation and impairment 1 Jan	-118	-9	0	**-127**
Accumulated depreciation on decreases and reclassifications	18	2	0	**19**
Depreciation for the period	-15	-2	0	**-16**
Impairments	-9	0	0	**-9**
Accumulated depreciation 31 Dec	-125	-8	0	**-133**
Book value on 31 December 2020	**49**	**3**	**7**	**60**
Book value on 31 December 2019	58	3	18	**79**

Tangible assets

EUR million	Land and water areas	Buildings and structures	Plant and equipment	Other tangible assets	Advance payments and acquisitions in progress	Total
Acquisition cost 1 Jan	18	524	2 455	177	49	**3 223**
Increases	0	8	37	1	49	**95**
Decreases	0	-10	-41	-15	0	**-66**
Reclassification	0	9	25	1	-34	**0**
Acquisition cost 31 Dec	18	530	2 476	163	63	**3 251**
Accumulated depreciation and impairment 1 Jan	0	-368	-1 811	-162	0	**-2 341**
Accumulated depreciation on decreases and reclassifications	0	10	41	15	0	**66**
Depreciation for the period	0	-13	-86	-3	0	**-102**
Impairment for the period	0	0	0	0	0	**0**
Accumulated depreciation 31 Dec	0	-372	-1 856	-150	0	**-2 377**
Increase in value 1 Jan	2	0	0	0	0	**2**
Increase in value 31 Dec	2	0	0	0	0	**2**
Book value on 31 December 2020	**20**	**159**	**620**	**13**	**63**	**876**
Book value on 31 December 2019	20	156	644	15	49	**883**

Production plant and equipment						
Book value on 31 December 2020			601			
Book value on 31 December 2019			623			

Tangible assets includes capitalized interest costs EUR 2 million (EUR 2 million in 2019).

Advance payments and acquisitions in progress

EUR million	Intangible assets	Buildings and structures	Plant and equipment	Other tangible assets	Total
Acquisition cost 1 Jan	18	0	48	1	**67**
Increases	5	0	49	0	**54**
Reclassification	-16	0	-33	-1	**-51**
Acquisition cost 31 Dec	7	0	63	0	**71**

Tangible assets

Capitalised environmental expenditure

2020

EUR million	Land and water areas	Buildings and structures	Plant and equipment	Other tangible assets	Advance payments and acquisitions in progress	Total
Acquisition cost 1 Jan	4	21	57	6	0	**87**
Increases	0	7	2	0	3	**13**
Depreciations for the period	0	-2	-8	-1	0	**-11**
Book value on 31 December 2020	4	26	51	5	3	**89**
Air quality protection	1	10	36	0	3	**49**
Wastewater treatment	3	2	13	1	1	**20**
Waste management	0	1	1	2	0	**4**
Soil and groundwater protection	0	14	0	1	0	**15**
Noise and vibration prevention	0	0	0	1	0	**1**
	4	26	51	5	3	**89**

2019

EUR million	Land and water areas	Buildings and structures	Plant and equipment	Other tangible assets	Advance payments and acquisitions in progress	Total
Acquisition cost 1 Jan	4	14	58	6	0	**83**
Increases	0	9	6	1	0	**15**
Depreciations for the period	0	-1	-7	-2	0	**-10**
Book value on 31 December 2019	4	21	57	6	0	**87**
Air quality protection	0	9	40	1	0	**50**
Wastewater treatment	4	2	15	1	0	**22**
Waste management	0	2	1	3	0	**5**
Soil and groundwater protection	0	8	0	1	0	**8**
Noise and vibration prevention	0	0	0	1	0	**1**
	4	21	57	6	0	**87**

In 2020 and 2019, no environmentally based fines, charges or compensation were paid, and no subsidies or grants were received for environmental protection.

Note 14 Non-current investments in shares and loan receivables

EUR million	Shares in Group companies	Loan receivables from Group companies	Shares in associated companies	Loan receivables from associated companies	Other shares	Other receivables	Total investments
Acquisition cost 1 Jan	6 231	1 455	37	2	180	68	**7 973**
Increases	272	891	0	0	0	51	**1 215**
Decreases	-31	-826	0	0	0	-17	**-874**
Acquisition cost 31 Dec	6 473	1 520	37	2	180	103	**8 314**
Impairments 1 Jan	-38	0	0	0	-1	0	**-39**
Impairments 31 Dec	-38	0	0	0	-1	0	**-39**
Book value on 31 December 2020	6 435	1 520	37	2	178	103	**8 275**
Book value on 31 December 2019	6 193	1 455	37	2	178	68	**7 934**

Note 15 Inventories

	As at 31 December	
EUR million	**2020**	**2019**
Materials and supplies	145	154
Work in progress	6	7
Finished goods	123	121
Other inventories	35	13
Total	**310**	**295**

Note 16 Short-term receivables

	As at 31 December	
EUR million	**2020**	**2019**
Short-term loan receivables		
Receivables from Group companies		
Loan receivables	240	583
Commodity derivative receivables	4	5
Interest receivables	20	28
Total	**263**	**615**
Receivables from others		
Loan receivables	0	3
Commodity derivative receivables	6	1
Other receivables	52	15
Interest receivables	6	4
Total	**64**	**22**
Total current interest-bearing receivables	**327**	**637**
Current non-interest-bearing receivables		
Receivables from Group companies		
Trade receivables	100	103
Other receivables	60	1
Commodity derivative receivables	2	1
Total	**162**	**104**
Receivables from others		
Trade receivables	119	142
Deferred tax assets	3	2
Other receivables	24	21
Accrued income	32	28
Total	**178**	**194**

Stora Enso may enter into factoring agreements to sell trade receivables in order to accelerate cash conversion. Nominally, such agreements led to the nominal derecognition of EUR 32.4 million (EUR 51.4 million in 2019) by the end of the financial period. The continuing involvement of Stora Enso in the sold receivables was estimated as being insignificant due to the non-recourse nature of the factoring arrangements involved.

	As at 31 December	
EUR million	**2020**	**2019**
Total current non-interest-bearing receivables	**341**	**298**
Total current receivables	**668**	**935**
Significant accruals		
Tax-equivalent receivables	14	15
Advances paid	7	5
Other accruals	11	9
Total	**33**	**28**

Note 17 Financial securities

	As at 31 December	
EUR million	**2020**	**2019**
From Group companies	442	86
From others	833	190
Total	**1 275**	**276**

Note 18 Shareholders' equity

	As at 31 December	
EUR million	**2020**	**2019**
Restricted shareholders' equity		
Share capital 1 Jan	1 342	1 342
Share capital 31 Dec	1 342	1 342
Share premium fund 1 Jan	3 639	3 639
Share premium fund 31 Dec	3 639	3 639
Fair value reserve 1 Jan	-10	-10
Increase (-) / Decrease (+)	4	0
Fair value reserve 31 Dec	-6	-10
Total restricted equity	**4 975**	**4 971**

Change in share capital and number of shares are presented in Note 18 to the Consolidated financial statements.

Non-restricted shareholders' equity		
Invested unrestricted equity reserve 1 Jan	633	633
Invested unrestricted equity reserve 31 Dec	633	633
Retained earnings 1 Jan	686	850
Dividend distribution	-237	-394
Retained earnings 31 Dec	449	456
Profit for the period	506	230
Total non-restricted equity	**1 588**	**1 319**
Total shareholders' equity	**6 563**	**6 291**
Calculation of distributable equity 31 Dec		
Fair value reserve 31 Dec	-6	-10
Invested unrestricted equity reserve 31 Dec	633	633
Retained earnings 31 Dec	449	456
Profit for the period	506	230
Total	**1 582**	**1 310**

Note 19 Accumulated appropriations

	As at 31 December	
EUR million	**2020**	**2019**
Depreciation difference		
Intellectual property rights	2	2
Other non-current expenditure	-1	-1
Buildings and structures	26	25
Plant and equipment	141	227
Other tangible assets	0	1
Total	**167**	**254**

Note 20 Obligatory provisions

	As at 31 December	
EUR million	**2020**	**2019**
Restructuring provisions	3	3
Environmental provisions	14	21
Other provisions	4	4
Total	**22**	**28**

Note 21 Deferred tax liabilities and receivables

	As at 31 December	
EUR million	**2020**	**2019**
Deferred tax liability due to depreciation difference	-18	-35
Deferred tax receivable due to derivatives	3	2
Deferred tax receivable due to loss	32	61
Deferred tax receivable due to provisions	4	5
Deferred tax receivables and liabilities due to other temporary differences	-9	-9
Total deferred tax receivable	**12**	**24**

Deferred tax liabilities and receivables excluding derivatives have not been recognised on the balance sheet.

Note 22 Non-current liabilities

	As at 31 December	
EUR million	**2020**	**2019**
Non-current liabilities		
Bonds	2 497	1 983
Loans from credit institutions	416	212
Other non-current liabilities to group companies	2	0
Total	**2 915**	**2 195**
Liabilities with maturities later than five years		
Bonds	1 462	1 109
Total	**1 462**	**1 109**

Specifications of Bond loans are presented in Note 26 Interest-bearing liabilities in Consolidated financial statements.

Note 23 Current liabilities

	As at 31 December	
EUR million	**2020**	**2019**
Current interest-bearing liabilities		
Liabilities to Group companies		
Other loans	1 491	1 329
Commodity derivative liabilities	6	1
Total	**1 497**	**1 330**
Liabilities to others		
Other loans	180	255
Commodity derivative liabilities	4	5
Interest due	28	22
Bonds	299	0
Loans from credit institutions	3	99
Total	**514**	**381**
Total current interest-bearing liabilities	**2 011**	**1 712**
Current non-interest-bearing liabilities		
Liabilities to Group companies		
Trade payables	71	89
Commodity derivative liabilities	1	1
Accrued liabilities and deferred income	1	1
Total	**73**	**92**
Liabilities to equity accounted investments		
Trade payables	40	37
Total	**40**	**37**
Liabilities to others		
Advances received	3	1
Trade payables	244	208
Other loans	30	14
Accrued liabilities and deferred income	72	77
Total	**349**	**301**
Total current non-interest-bearing liabilities	**462**	**429**
Total current liabilities	**2 473**	**2 141**
Substantial accrued liabilities and deferred income		
Payroll payments accrued	41	46
Annual discounts	17	17
Other accrued liabilities and deferred income	14	15
Total	**73**	**79**

Note 24 Commitments and contingencies

	As at 31 December	
EUR million	**2020**	**2019**
For Group debt		
Guarantees	1 096	1 291
For joint venture debt		
Guarantees	123	212
On behalf of Associated companies		
Guarantees	2	4
On behalf of others		
Other commitments	36	0
Other commitments, own		
Leasing commitments, in next 12 months	8	7
Leasing commitments, after next 12 months	7	10
Mortgages	0	2
Lease commitments	6	6
Other commitments	12	1
Total	**1 289**	**1 533**
Mortgages	0	2
Guarantees	1 221	1 507
Leasing commitments	15	17
Lease commitments	6	6
Other commitments	47	1
Total	**1 289**	**1 533**

Contingent liabilities

Stora Enso Oyj has implemented significant restructuring measures in recent years. These measures have included divestments of business operations and production units, as well as mill closures. These transactions include a risk of possible environmental or other obligations, the existence of which would be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Group. A provision has been recognised for obligations for which the related amount can be estimated reliably and the occurrence of which is considered likely.

Stora Enso Oyj is party to legal proceedings that arise in the ordinary course of business and primarily involve claims arising out of commercial law. The company management does not believe that such processes as a whole, before any insurance compensation, would have significant impacts on the company's financial position or profit from operations. Some of the most significant legal proceedings are described in Note 29 to the consolidated financial statements.

Note 25 Financial instruments

Valuation of derivatives

The fair value is defined as the amount at which a derivative instrument could be exchanged in an orderly transaction between market participants at the measurement date. The fair values of such instruments are determined on the following basis:

- Currency forward contract fair values are calculated using forward exchange rates on the reporting date.
- Currency option contract fair values are calculated using reporting date market rates together with common option pricing models.
- Commodity contract fair values are computed with reference to quoted market prices on futures exchanges or other reliable market sources.
- Interest rate swaps fair values are calculated using a discounted cash flow method.

Fair value hierarchy

Stora Enso uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique:

- Level 1: quoted (unadjusted) prices in active markets for identical assets or liabilities;
- Level 2: other techniques, for which all inputs that have a significant effect on the recorded fair value are observable, either directly or indirectly;
- Level 3: techniques which use inputs that have a significant effect on the recorded fair values that are not based on observable market data.

The parent company's derivatives are classified as Level 2 in the fair value hierarchy.

Nominal and fair values of derivative instruments

	As at 31 December 2020			
EUR million	**Nominal values**	**Positive fair values**	**Negative fair values**	**Fair values, Net**
Cash flow hedges entered on behalf of the parent company and its subsidiaries, for which hedge accounting is applied in target companies				
Currency forwards	1 861	40	-34	5
Currency options	1 200	15	-12	2
Commodity contracts	84	12	-12	0
Interest rate swaps	673	0	-17	-17
Non-hedge accounted derivatives				
Currency forwards	570	6	-3	4
Total	**4 387**	**72**	**-78**	**-5**
of which against subsidiaries	1 638	7	-53	-46
of which against external parties	2 749	65	-24	40

	As at 31 December 2019			
EUR million	**Nominal values**	**Positive fair values**	**Negative fair values**	**Fair values, Net**
Cash flow hedges entered on behalf of the parent company and its subsidiaries, for which hedge accounting is applied in target companies				
Currency forwards	1 401	13	-14	-1
Currency options	2 697	16	-17	-1
Commodity contracts	133	6	-6	0
Interest rate swaps	533	0	-12	-11
Non-hedge accounted derivatives				
Currency forwards	364	3	-1	2
Total	**5 127**	**38**	**-49**	**-11**
of which against subsidiaries	1 968	19	-15	4
of which against external parties	3 159	19	-34	-15

Fair value reserve

The net amount of the parent company's unrealised cash flow hedge losses in the fair value reserve was EUR 5.8 million, which was related to currency and interest rate derivatives. Currency and interest rate derivatives also include a gain of EUR 0.1 million related to the time value of options. These unrealised losses are recognised in the income statement upon the maturity of the hedging contracts. The longest hedging contract will mature in 2027. However, the majority of the contracts are expected to mature during 2021. The ineffective portions of hedges are recognised as adjustments to revenue or materials and services according to the hedged item. During 2020, there were no ineffective hedges recognised in the income statement. Derivatives used in currency cash flow hedges are mainly forward contracts and options. Swaps are mainly used in commodity hedges and interest rate cash flow hedges.

Hedge gains and losses in operating profit

	Year ended 31 December	
EUR million	**2020**	**2019**
Cash flow hedge accounted derivatives		
Currency hedges	-1	-13
Commodity hedges	-1	-1
Total	**-3**	**-14**
As adjustments to sales	-1	-13
As adjustments to materials and services	-1	-1
Items realised from the fair value reserve that are recognised in the income statement	**-3**	**-14**
Net losses from cash flow hedges	**-3**	**-14**
Non-hedge accounted derivatives		
Currency derivatives	3	0
Net gains on non-hedge accounted derivatives	**3**	**0**
Net hedge gains/losses in operating profit	**1**	**-14**

Hedge gains and losses in financial items

	Year ended 31 December	
EUR million	**2020**	**2019**
Non-hedge accounted derivatives		
Currency derivatives	8	-14
Net gains/losses in financial items	**8**	**-14**

Sensitivity of currency derivatives to strengthening of EUR

	31 December 2020		
EUR million	**SEK**	**USD**	**GBP**
Currency change against EUR	-5.0%	-5.0%	-5.0%
Currency derivatives hedging cash flow next 12 months in EUR	0	171	11
Estimated effect on fair value reserve in EUR	0	7	0

Sensitivity of commodity derivatives to price risk

There were no outstanding commodity derivatives related to parent company's cash flows at the end of reporting period.

More detailed information about financial instruments are presented in Note 24 Financial risk management, Note 25 Fair values and Note 27 Derivatives to the Consolidated financial statements.

Note 26 Related party transactions

	31 December	
EUR million	**2020**	**2019**
Related party transactions with associated companies and joint ventures:		
Purchase of materials and supplies during the year	9	10
Non-current loan receivables at year end	2	2
Trade payables at year end	40	37

The Group's principles for related party transactions are presented in Note 31 to the Consolidated financial statements.

Signatures for the financial statements

There have been no material changes in the Parent Company's financial position since 31 December 2020. The liquidity of the Parent Company remains good and the proposed dividend does not risk the solvency of the Company.

28 January 2021

Jorma Eloranta Chair	**Hans Stråberg** Vice Chair
Håkan Buskhe	**Elisabeth Fleuriot**
Hock Goh	**Mikko Helander**
Christiane Kuehne	**Antti Mäkinen**
Richard Nilsson	

Annica Bresky
President and CEO

Financials

Auditor's report

(Translation of the Finnish Original)

To the Annual General Meeting of Stora Enso Oyj

Report on the Audit of 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 Stora Enso Oyj (business identity code 1039050-8) 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, statement of cash flows and notes, including a summary of significant accounting policies
- the parent company's balance sheet, income statement, statement of cash flows 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 5 to the Financial Statements.

Our Audit Approach

Overview

- We have applied an overall group materiality of EUR 52 million.
- We performed audit procedures at 28 reporting components in 11 countries that are considered significant based on our overall risk assessment and materiality.
- Valuation of forest assets
- Provisions and contingent liabilities

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	EUR 52 million
How we determined it	Based on operating profit and total assets
Rationale for the materiality benchmark applied	We chose operating profit and total assets as the benchmarks because, in our view, they are relevant benchmarks against which the performance of the group is commonly measured by users of the financial statements.

How we tailored our group audit scope

We tailored the scope of our audit, taking into account the structure of the group, the accounting processes and controls, and the industry in which the group operates.

The Group operates in a significant number of legal entities or "reporting components" globally. We determined the nature, timing and extent of audit work that needed to be performed at reporting components by us, as the group engagement team, or component auditors operating under our instruction. Where the work was performed by component auditors, we issued specific instructions to those auditors which included our risk analysis, materiality and global audit approach. We performed audit procedures at 28 reporting components in 11 countries that are considered significant based on our overall risk assessment and materiality. We have considered that the remaining reporting components do not present a reasonable risk of material misstatement for consolidated financial statements and thus our procedures related to these reporting components have been limited to targeted audit procedures over significant balances and to analytical procedures performed at group level.

By performing the procedures above at reporting components, combined with additional procedures at the group level, we have obtained sufficient and appropriate evidence regarding the financial information of the group as a whole to provide a basis for our opinion on the consolidated financial statements.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

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 1, Note 2 and Note 12 in the consolidated financial statements for the related disclosures Forest assets comprise of forest land and biological assets excluding leased forest land assets. As of December 31, 2020 the fair value of the Group's forest assets owned through subsidiaries, joint operations and associated companies was EUR 7 093 million, of which EUR 5 028 million was related to biological assets and EUR 2 065 million was related to forest land. Forests assets in Sweden are valued by using a market approach method based on forest market transactions and volume of standing trees in those areas where the Group's forests are located. Market prices between areas varies significantly and judgement is applied to define relevant areas for market transactions used in the valuation. In addition, market transaction data is adjusted to consider characteristics and nature of the Group's forest assets and to exclude certain non-forest assets and transactions considered as outliers compared to other transactions. Biological asset valuation is computed based on a discounted cash flow (DCF) method in accordance with IAS 41 Agriculture. For forest land the revaluation method is applied as defined in IAS 16 Property, plant and equipment. Forest land is revalued using a DCF method based on estimated future net cash flow streams related to trees to-be planted in the future as well as other income, such as hunting rights, wind power leases and soil material sales. Total value of biological assets and forest land agrees to the market transaction based value of forest assets as a discount rate implied by the market transactions is used in DCF method to value these assets. The value of biological assets outside Sweden is determined using discounted cash flows based on sustainable forest management plans taking into account the growth potential of one cycle. The one cycle varies depending on the geographic location and species. Determining the discounted cash flows require estimates of growth, harvest, sales price and costs. The other Nordic forest land, previously accounted at cost, is revalued by using a DCF method based on its estimated future net cash flow streams related to trees to-be-planted in the future as well as other non-forest related income. The forest land for the plantations is continued to be accounted at cost. Due to the level of judgment involved in the valuation of forest assets as well as the significance of forest assets to the Group's financial position, this is considered to be a key audit matter.	The Group's decision to change the accounting principles and valuation method for Nordic forests assets at the end of 2020 has been evaluated against the requirements set by IFRS standards. We obtained an understanding of management's forest assets valuation process, evaluated the design and tested the operating effectiveness of internal controls related to directly and indirectly owned forest assets. Our audit procedures over valuation of directly owned forest asset included: • Evaluation of the methodology adopted by management for the valuation; • Testing the mathematical accuracy of the model used for valuation; • Assessment of the discount rates applied in the valuation; • Assessment of the other key valuation assumptions; and • Validation of key inputs and data used in the valuation model including sales price assumptions, growth assumptions and cost assumptions. In addition, specific to the market transaction based valuation in Sweden our audit procedures included: • Assessment of the definition of relevant areas for market transactions used in the valuation; • Assessment of the adjustments made to the market transaction data; and • Validation of key inputs and data used in the valuation model including market transaction data and volume of standing trees. We involved valuation specialists in the audit work over valuation of directly owned forest assets. Related to indirectly owned forest assets we have communicated with the auditors of the three largest associates and joint operations. As part of the communication, among other things, we have evaluated the key audit procedures performed related to valuation of forest assets. Lastly, we assessed the appropriateness of disclosures related to forest assets.
Provisions and contingent liabilities Refer to Note 2, Note 22 and Note 29 in the consolidated financial statements for the related disclosures As of 31 December 2020, the Group had environmental, restructuring and other provisions totaling EUR 149 million. In addition, the Group has disclosed significant open legal cases and other contingent liabilities in Note 29. The assessment of the existence of the present legal or constructive obligation, the analysis of the probability of the outflow of future economic benefits, and the analysis of a reliable estimate, require management's judgement to ensure appropriate accounting or disclosures. Due to the level of judgement relating to recognition, valuation and presentation of provisions and contingent liabilities, this is considered to be a key audit matter.	We obtained an understanding of management's process to identify new obligations and changes in existing obligations. We analysed significant changes in material provisions from prior periods and obtained a detailed understanding of these changes and assumptions applied. Our audit procedures related to material provisions recognized included: • Assessment of the recognition criteria for the liability; • Evaluation of the methodology adopted by management for the measurement of the liability; • Testing of the mathematical accuracy of the measurement calculation; • Assessment of the discount rates applied in the measurement; and • Assessment of the other key measurement assumptions and inputs. We obtained legal letters on the main outstanding legal cases. We reviewed minutes of the board meetings including sub committees. We assessed the appropriateness of the presentation of the most significant contingent liabilities in the consolidated financial statements.

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 were first appointed as auditors by the annual general meeting on 28 March 2018.

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.

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, we conclude that there is a material misstatement of the report of the Board of Directors, 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 Board of Directors and the Managing Director of the parent company should be discharged from liability for the financial period audited by us.

Helsinki 9 February 2021

PricewaterhouseCoopers Oy
Authorised Public Accountants

Samuli Perälä
Authorised Public Accountant (KHT)

Financials

Unaudited

Stora Enso in capital markets

Stora Enso ensures that all material information that has an impact on Stora Enso's share price is simultaneously available to the general public and financial community in order to ensure the right share price level in relation to the company's history, assets and future prospects. In its engagement with the capital markets, Stora Enso's Investor Relations aims to support the brand with accurate, consistent and credible financial communications.

Shares and shareholders

Shares and voting rights

The shares of Stora Enso Oyj (hereafter the "Company" or "Stora Enso") are divided into A and R shares, which entitle holders to the same dividend but different voting rights. Each A share and each ten R shares carry one vote at a shareholders' meeting. However, each shareholder has at least one vote.

On 31 December 2020, Stora Enso had 176 254 415 A shares and 612 365 572 R shares in issue, of which the Company held no A shares or R shares. The total number of Stora Enso shares in issue was 788 619 987 and the total number of votes was 237 490 972.

Share listings

Stora Enso shares are listed on the Nasdaq Helsinki and the Nasdaq Stockholm. Stora Enso shares are quoted in Helsinki in euros (EUR) and in Stockholm in Swedish crowns (SEK).

American Depositary Receipts (ADRs)

Stora Enso has a sponsored Level I American Depositary Receipts (ADR) facility. Stora Enso ADRs are traded over-the-counter (OTC) in the USA. The ratio between Stora Enso ADRs and R shares is 1:1, i.e. one ADR represents one Stora Enso R share. Citibank, N.A. acts as the depositary bank for the Stora Enso ADR programme. The trading symbol is SEOAY and the CUSIP number is 86210M106.

Share registers

The Company's shares are entered in the Book-Entry Securities System maintained by Euroclear Finland Oy, which also maintains the official share register of Stora Enso Oyj.

On 31 December 2020, 661 986 729 of the Company's shares were registered in Euroclear Finland, 111 151 042 in Euroclear Sweden AB and 15 482 216 of the Company's R shares were registered in ADR form in Citibank, N.A.

Distribution by book-entry system, 31 December 2020

Number of shares	Total	A shares	R shares
Euroclear Finland Oy	661 986 729	164 737 636	497 249 093
Euroclear Sweden AB[1]	111 151 042	11 516 779	99 634 263
Citi administered ADRs[1]	15 482 216	-	15 482 216
Total	**788 619 987**	**176 254 415**	**612 365 572**

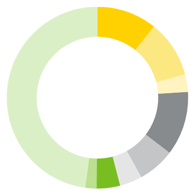
[1] Shares registered in Euroclear Sweden and ADRs are both nominee registered in Euroclear Finland.

Ownership distribution, 31 December 2020

	% of shares	% of votes	% of shareholders
Solidium Oy[1]	10.7%	27.3%	0.0%
FAM AB[2]	10.2%	27.3%	0.0%
Social Insurance Institution of Finland (KELA)	3.1%	10.1%	0.0%
Finnish institutions (excl. Solidium and KELA)	11.4%	8.3%	2.4%
Swedish institutions (excl. FAM)	6.6%	5.2%	1.7%
Finnish private shareholders	4.0%	2.4%	42.0%
Swedish private shareholders	4.2%	2.7%	52.2%
ADR holders	2.0%	0.7%	1.0%
Under nominee names (non-Finnish/non-Swedish shareholders)	47.9%	16.1%	0.7%

[1] Entirely owned by the Finnish state.
[2] As confirmed to Stora Enso.

Ownership distribution, % of shares held



- Solidium Oy[1] 10.7%
- FAM AB[2] 10.2%
- Social Insurance Institution of Finland (KELA) 3.1%
- Finnish institutions (excl. Solidium and KELA) 11.4%
- Swedish institutions (excl. FAM) 6.6%
- Finnish private shareholders 4.0%
- Swedish private shareholders 4.2%
- ADR holders 2.0%
- Under nominee names (non-Finnish/non-Swedish shareholders) 47.9%

[1] Entirely owned by Finnish state.
[2] As confirmed to Stora Enso.

Share capital

On 31 December 2020, the Company's fully paid-up share capital entered in the Finnish Trade Register was EUR 1 342 million. The current accountable par of each issued share is EUR 1.70.

Conversion

According to the Articles of Association, holders of Stora Enso A shares may convert these into R shares at any time. The conversion of shares is voluntary. The conversions of a total of 2 419 A shares into R shares were recorded in the Finnish Trade Register during the year 2020.

Financials

Changes in share capital 2012–2020

	No. of A shares issued	No. of R shares issued	Total no. of shares	Share capital (EUR million)
Stora Enso Oyj, 1 Jan 2012	**177 148 772**	**612 389 727**	**789 538 499**	**1 342**
Conversion of A shares into R shares, Dec 2011–Nov 2012	-1 000	1 000	-	-
Stora Enso Oyj, 31 Dec 2012	**177 147 772**	**612 390 727**	**789 538 499**	**1 342**
Cancellation of shares owned by the Company, 15 May 2013		-918 512	788 619 987	-
Conversion of A shares into R shares, Dec 2012–Nov 2013	-51 568	51 568	-	-
Stora Enso Oyj, 31 Dec 2013	**177 096 204**	**611 523 783**	**788 619 987**	**1 342**
Conversion of A shares into R shares, Dec 2013–Nov 2014	-40 000	40 000	-	-
Stora Enso Oyj, 31 Dec 2014	**177 056 204**	**611 563 783**	**788 619 987**	**1 342**
Conversion of A shares into R shares, Dec 2014–Nov 2015	-524 114	524 114	-	-
Stora Enso Oyj, 31 Dec 2015	**176 532 090**	**612 087 897**	**788 619 987**	**1 342**
Conversion of A shares into R shares, Dec 2015–Nov 2016	-25 000	25 000	-	-
Stora Enso Oyj, 31 Dec 2016	**176 507 090**	**612 112 897**	**788 619 987**	**1 342**
Conversion of A shares into R shares, Dec 2016–Nov 2017	-114 770	114 770	-	-
Stora Enso Oyj, 31 Dec 2017	**176 392 320**	**612 227 667**	**788 619 987**	**1 342**
Conversion of A shares into R shares, Dec 2017–Nov 2018	-79 648	79 648	-	-
Stora Enso Oyj, 31 Dec 2018	**176 312 672**	**612 307 315**	**788 619 987**	**1 342**
Conversion of A shares into R shares, Dec 2018–Nov 2019	-55 838	55 838	-	-
Stora Enso Oyj, 31 Dec 2019	**176 256 834**	**612 363 153**	**788 619 987**	**1 342**
Conversion of A shares into R shares, Dec 2019–Nov 2020	-2 419	2 419	-	-
Stora Enso Oyj, 31 Dec 2020	**176 254 415**	**612 365 572**	**788 619 987**	**1 342**

For more historical data about the share capital, please visit storaenso.com/investors/shares

Stora Enso's activities in capital markets during 2020

Stora Enso's Investor Relations activities cover equity and fixed-income markets to ensure full and fair valuation of the Company, continual access to funding sources, and stable bond pricing. Investors and analysts are met physically and virtually on a regular basis in Europe and North America. In 2020, the Investor Relations (IR) team conducted several individual and group meetings with equity investors, whilst maintaining regular contact with equity research analysts at investment banks and brokerage firms. Due to Covid-19, all investor meetings were held virtually between March and December. All in all, the IR team met alone or with top management 625 (450) investors and arranged 285 (340) meetings including virtual, one-on-one, group meetings, conference calls and site visits. Despite the Covid-19 pandemic, Stora Enso was able to meet more investors and analysts compared to the previous year. There were also meetings with fixed-income analysts and investors. Senior management and the IR personnel also gave presentations at virtual equity and fixed-income investor conferences in Scandinavia, Continental Europe, the United Kingdom, and North America.

More than 400 investors and analysts joined Stora Enso's virtual Capital Markets Day (CMD) on 11 November 2020. At the CMD, Stora Enso published its updated strategy and financial targets to support the Group's focus on growth and value creation. The presentations of President and CEO Annica Bresky and CFO Seppo Parvi covered Stora Enso's three focus areas for growth (Packaging Materials and Packaging Solutions, Building Solutions, and Biomaterials innovations), market growth drivers, the recent forest fair valuation method change and a review of all divisions. Stora Enso organises Capital Markets Days regularly to provide investors and analysts with information about the Group strategy, performance and businesses.

Disclosure of financially material ESG topics for investors

Investors' interest in Stora Enso's environmental, social and governmental (ESG) performance has increased further during the past few years. Due to this development, Stora Enso started to report in 2020 against the Standards by the Sustainability Accounting Standards Board (SASB) which aims to improve sustainability reporting for investors. SASB is an independent non-profit organisation that develops its standards based on extensive feedback from companies, investors, and other market participants as part of a transparent, publicly-documented process. Reporting according to the industry specific standards aims to improves comparability between companies on financially material ESG topics.

Stora Enso's reporting has been prepared according to the SASB's Sustainability Accounting Standards for Forest Management and Pulp & Paper Products, located within SASB's Renewable Resources & Alternative energy section. Specific indicators in these two Standards relate to financially material topics in the industry, such as sustainable forest management and certification, GHG emissions, air quality, energy management, water management, and supply chain management.

In Stora Enso's online SASB Content Index, the specific standard indicators are listed with references to the locations of these disclosures (supported by URL links) in Stora Enso's annual reporting. These references are complemented in the index with additional information, such as explanations on reasons for omissions as necessary.

During 2020, Stora Enso also provided feedback to SASB in order to participate in the development of their standard setting for renewables industry. Stora Enso participated in SASB's Pulp & Paper industry consultation project, Human capital research project, and Plastic risks and opportunities in Pulp & Paper and Chemicals consultation. Stora Enso's Head of Investor Relations is a member of SASB's Standard Advisory Group (SAG). Stora Enso aims to continuously improve its' sustainability reporting to inform investors about the progress, ambitions and future direction of the company.

Guidance policy

In connection with Financial statement release for 2020, Stora Enso resumed its annual outlook even though the uncertainties due to the ongoing pandemic in the global economy are expected to remain in 2021.

Closed period

Stora Enso closed period starts when the reporting period ends or 30 days prior to the announcement of the results, whichever is earlier, and lasts until the results are announced. The dates are published in the financial calendar at storaenso.com/investors. During closed periods, Stora Enso PDMR's or persons entered into the Company's Closed Period List are not allowed to trade in Company securities. In addition, there will be no discussions regarding financial issues with the capital markets or the financial media during the closed period. This applies to meetings, telephone conversations or other means of communication.

Shareholdings of other Group-related bodies at 31 December 2020

E.J. Ljungberg's Education Foundation owned 1 780 540 A shares and 2 336 224 R shares, E.J. Ljungberg's Foundation owned 39 534 A shares and 101 579 R shares, Mr. and Mrs. Ljungberg's Testamentary Foundation owned 5 093 A shares and 13 085 R shares and Bergslaget's Healthcare Foundation owned 626 269 A shares and 1 609 483 R shares.

Shareholders

At the end of 2020 the Company had approximately 112 232 registered shareholders, including about 61 196 Swedish shareholders and about 1 078 ADR holders. Each nominee register is entered in the share register as one shareholder.

The free float of shares excluding shareholders with holdings of more than 5% of shares or votes is approximately 624 million shares, which is 79% of the total number of shares issued. The largest shareholder in the Company is Solidium Oy based in Finland.

Major shareholders as at 31 December 2020

By voting power	A shares	R shares	% of shares	% of votes
1 Solidium Oy[1]	62 655 036	21 792 540	10.7%	27.3%
2 FAM AB[2]	63 123 386	17 000 000	10.2%	27.3%
3 Social Insurance Institution of Finland (KELA)	23 825 086	973 982	3.1%	10.1%
4 Ilmarinen Mutual Pension Insurance Company	4 312 762	16 593 924	2.7%	2.5%
5 Varma Mutual Pension Insurance Company	5 163 018	1 140 874	0.8%	2.2%
6 MP-Bolagen i Vetlanda AB	4 828 000	1 000 000	0.7%	2.1%
7 Elo Mutual Pension Insurance Company	2 000 000	8 111 225	1.3%	1.2%
8 Erik Johan Ljungberg's Education Foundation	1 780 540	2 336 224	0.5%	0.8%
9 SEB Investment Management	-	12 162 195	1.5%	0.5%
10 Bergslaget's Healthcare Foundation	626 269	1 609 483	0.3%	0.3%
11 The State Pension Fund	-	5 713 755	0.7%	0.2%
12 Unionen (Swedish trade union)	-	3 782 750	0.5%	0.2%
13 Lannebo Funds	-	3 690 000	0.5%	0.2%
14 The Society of Swedish Literature in Finland	-	3 000 000	0.4%	0.1%
15 OP-Suomi Investment Fund	-	2 914 494	0.4%	0.1%
Total	**168 314 097**	**101 821 446**	**34.3%**	**75.2%**
Nominee-registered shares[3 4]	74 882 644	480 357 046	70.4 %	51.8 %

[1] Entirely owned by the Finnish State. [2] As confirmed to Stora Enso. [3] As some of the shareholdings on the list are nominee registered, the percentage figures do not add up to 100%. [4] According to Euroclear Finland.

The list has been compiled by the Company on the basis of shareholder information obtained from Euroclear Finland, Euroclear Sweden and a database managed by Citibank, N.A (Citi). This information includes only directly registered holdings, thus certain holdings (which may be substantial) of shares held in nominee or brokerage accounts cannot be included. The list is therefore incomplete.

Financials

Share price performance and volumes

Helsinki
The Stora Enso R (STERV) share price increased by 21% during 2020 (29% increase in 2019). Over the same period, the OMX Helsinki Index increased by 10% (13% increase in 2019) and the OMX Helsinki Basic Materials Index by 9% (29% increase in 2019).

Stockholm
The Stora Enso R (STE R) share price increased by 16% during 2020 (31% increase in 2019). Over the same period, the OMX Stockholm 30 Index increased by 6% (26% increase in 2019) and the OMX Stockholm Basic Materials Index increased by 23% (29% increase in 2019).

OTC
Stora Enso ADR (SEOAY) share price increased by 32% during 2020 (25% increase in 2019). Over the same period, the Standard & Poor's Global Timber and Forestry Index increased by 18% (16% increase in 2020).

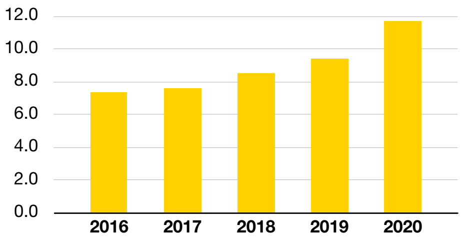
Share prices and volumes 2020

		Helsinki, EUR	Stockholm, SEK	OTC, USD
	A share	16.20	161.40	
High	R share	15.85	159.95	19.27
	A share	9.26	101.00	
Low	R share	7.25	80.70	7.92
	A share	15.90	159.20	
Closing, 31 Dec 2019	R share	15.65	157.3	19.14
	A share	17%	12%	
Change from previous year	R share	21%	16%	32%
	A share	4 661 921	3 158 007	
Cumulative trading volume, no. of shares	R share	605 233 285	187 148 487	9 456 802

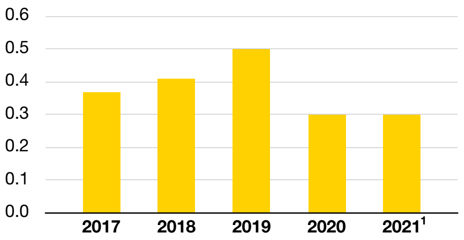
The volume-weighted average price of R shares over the year was EUR 11.52 in Helsinki (EUR 11.05 in 2019), SEK 120.94 in Stockholm (SEK 116.91 in 2019) and USD 12.56 on the OTC in the USA (USD 12.36 in 2019). The percentage of R shares traded was 60.7% (57.9% in 2019) in alternative trading venues, 29.6% (31.1% in 2019) in Helsinki, 9.2% (10.5% in 2019) in Stockholm and 0.5% (0.5% in 2019) on the OTC in the USA. Total market capitalisation on the OMX Helsinki at year-end was EUR 12.4 billion (EUR 10.3 billion).

Alternative trading venues
Stora Enso shares can be also traded outside Nasdaq Helsinki and Nasdaq Stockholm, where the shares are listed. During 2020, the three largest alternative trading venues included Cboe APA SI, Cboe BXE OTC and Cboe APA OTC. The alternative trading venues' market share of monthly volume in Stora Enso shares varied between 53% and 70%. Of the alternative trading venues, Cboe APA SI had the biggest share of the volume with 22% on an annual basis (Cboe BXE had the biggest share of the volume in 2019 with 30%).

Equity per share
EUR

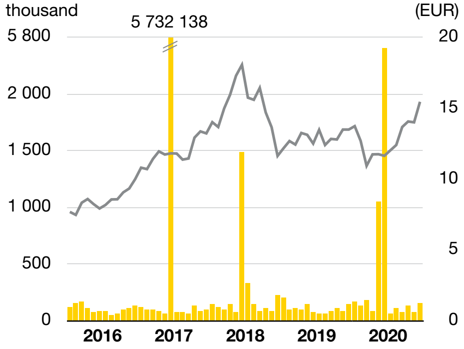


Dividend per share
EUR



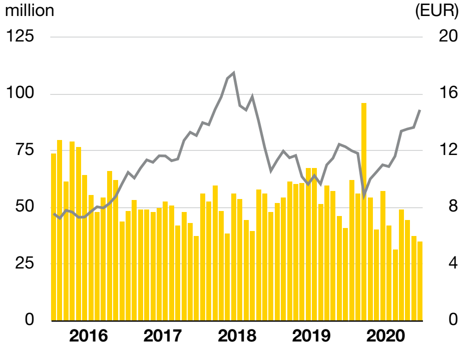
[1] Board of Directors' proposal to the AGM for distribution of dividend.

Helsinki, Stora Enso A
Number of shares, thousand — Share price (EUR)



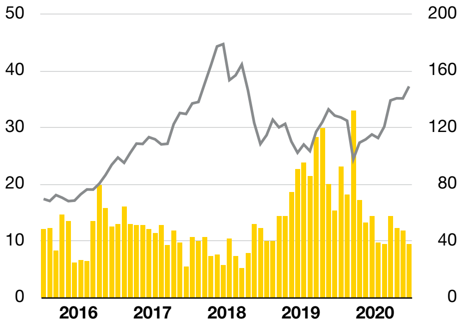
Volume
Monthly average share price

Helsinki, Stora Enso R
Number of shares, million — Share price (EUR)



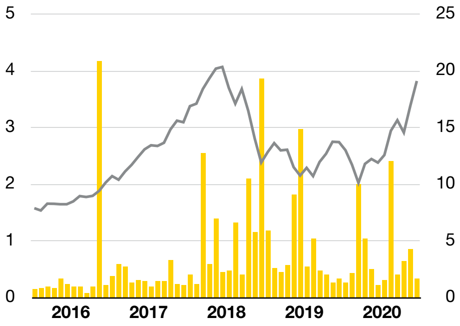
Volume
Monthly average share price

Stockholm, Stora Enso R
Number of shares, million — Share price (SEK)



Volume
Monthly average share price

New York, Stora Enso ADR
Number of shares, million — Share price (USD)



Volume
Monthly average share price

Strategy
Sustainability
Financials
Governance
Remuneration

Financials

Stora Enso is included in at least the following indices

OMX INDICES	STOXX INDICES	FTSE INDICES	MSCI INDICES	SUSTAINABILITY INDICES
OMX Helsinki	STOXX Global 1800	FTSE RAFI All-World 3000	MSCI Finland	CDP's Climate A- list
OMX Helsinki 25	STOXX Europe 600	FTSE RAFI Developed 1000	MSCI Nordic countries	FTSE4 Good Index
OMX Helsinki Large Cap	STOXX Europe Mid 200	FTSE RAFI Europe	MSCI Europe	STOXX® Global ESG Leaders Indicies
OMX Helsinki Benchmark	STOXX Nordic	FTSE Finland 25 Index	MSCI Europe Materials	ECPI EMU Ethical Equity index
OMX Helsinki Basic Materials	EURO STOXX	FTSE4Good Global	MSCI World	ECPI World ESG Equity Index
OMX Helsinki Basic Resources	EURO STOXX Basic Materials		MSCI World Mid Cap	OMX GES Sustainability Finland
OMX Helsinki Forestry & Paper	EURO STOXX Basic Resources			Solactive Europe Corporate Social Responsibility Index
OMX Stockholm				Euronext Vigeo World, Europe and Eurozone 120
OMX Stockholm Benchmark				MSCI ESG indices
OMX Stockholm Large Cap				
OMX Stockholm Basic Materials				
OMX Stockholm Basic Resources				
OMX Stockholm Forestry & Paper				
OMX Nordic				
OMX Nordic Large Cap				
Nasdaq OMX Nordic Materials				
VINX Basic Materials				
VINX Basic Resources				

Read more about sustainability indeces in the **Sustainability Report 2020**.

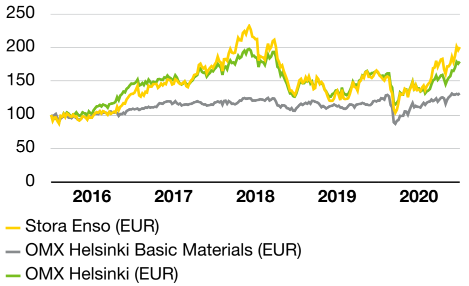
Sustainability is central to Stora Enso's strategy. The emphasis is to keep sustainability information widely available on the Group website to benefit and serve different stakeholders in equal manner. As a consequence, Stora Enso simultaneously reduces the number of sustainability index survey questionnaires in which it participates. The Group is targeting its participation in those questionnaires and enquiries that it has assessed to be the most material.

Trading codes and currencies

	Helsinki	Stockholm	OTC
A share	STEAV	STE A	-
R share	STERV	STE R	-
ADRs	-	-	SEOAY
Segment	Large Cap	Large Cap	-
Sector	Materials	Materials	-
Currency	EUR	SEK	USD
ISIN, A share	FI0009005953	FI0009007603	
ISIN, R share	FI0009005961	FI0009007611	
CUSIP	-	-	86210M106
Reuters			STERV.HE
Bloomberg			STERV FH Equity

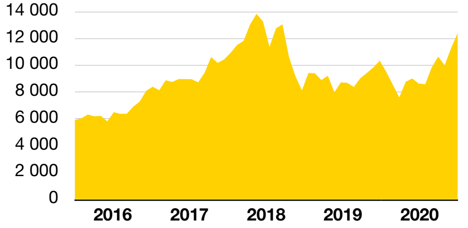
Stora Enso R Share vs Nasdaq Helsinki indices

1.1.2016 = 100



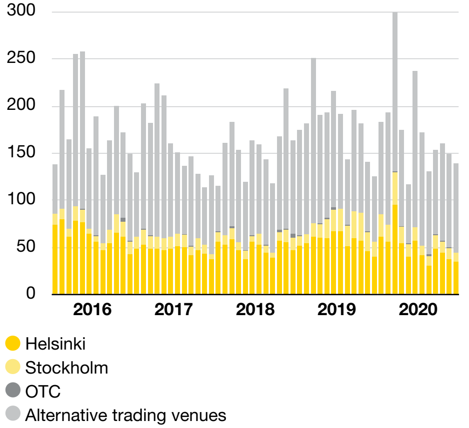
Market capitalisation on Nasdaq Helsinki

EUR million



Monthly R shares trading volumes

Number of shares, million



Key share data 2011–2020, total operations (for calculations see Calculation of Key figures)

According to Nasdaq Helsinki	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Earnings per share, EUR	0.79	1.12	1.28	0.79	0.59	1.02	0.13	-0.07	0.61	0.43
– diluted, EUR	0.79	1.12	1.28	0.79	0.59	1.02	0.13	-0.07	0.61	0.43
– excl. FV, EUR [1]	0.45	0.61	1.26	0.89	0.65	1.24	0.40	0.40	0.33	0.63
Equity/share, EUR	11.17	9.42	8.51	7.62	7.36	6.83	6.43	6.61	7.32	7.45
Dividend and distribution/share, EUR	0.30[2]	0.30	0.50	0.41	0.37	0.33	0.30	0.30	0.30	0.30
Payout ratio, %	38	27	39	52	63	32	231	-429	49	70
Dividend and distribution yield, %										
A share	1.9	2.2	4.5	3.1	3.56	3.9	4.0	4.1	5.3	5.9
R share	1.9	2.3	5.0	3.1	3.62	3.9	4.0	4.1	5.7	6.5
Price/earnings ratio (P/E), excl. FV [1]										
A share	35.3	22.2	8.8	14.8	16.0	6.8	18.7	18.3	17.3	8.0
R share	34.8	21.2	8.0	14.9	15.7	6.8	18.6	18.3	15.9	7.3
Share prices for the period, EUR										
A share										
– closing price	15.90	13.55	11.05	13.20	10.40	8.40	7.48	7.31	5.70	5.03
– average price	12.06	12.88	16.36	11.93	8.50	8.87	7.29	6.82	6.15	7.73
– high	16.20	14.45	18.45	13.79	10.45	11.01	8.35	7.49	7.15	9.80
– low	9.26	10.85	10.75	10.26	6.56	6.70	5.73	5.42	5.10	4.70
R share										
– closing price	15.65	12.97	10.09	13.22	10.21	8.39	7.44	7.30	5.25	4.63
– average price	11.52	11.05	14.61	11.54	7.88	8.70	7.16	5.79	5.08	6.28
– high	15.85	13.05	18.29	13.75	10.28	10.95	8.38	7.54	5.95	8.99
– low	7.25	9.10	9.92	9.70	6.50	6.58	5.71	4.76	4.14	3.73
Market capitalisation at year-end, EUR million										
A share	2 802	2 388	1 948	2 328	1 836	1 483	1 324	1 295	1 010	891
R share	9 580	7 939	6 175	8 094	6 250	5 135	4 547	4 464	3 212	2 835
Total	12 383	10 328	8 123	10 422	8 085	6 618	5 871	5 756	4 222	3 726
Number of shares at the end of period, (thousands)										
A share	176 254	176 257	176 313	176 392	176 507	176 532	177 056	177 096	177 148	177 149
R share	612 366	612 363	612 307	612 228	612 113	612 088	611 564	611 524	612 391	612 389
Total	788 620	788 620	788 620	788 620	788 620	788 620	788 620	788 620	789 538	789 538
Trading volume, (thousands)										
A share	4 662	1 299	3 068	6 768	1 254	1 641	1 553	1 656	831	1 402
% of total number of A shares	2.6	0.7	1.7	3.8	0.7	0.9	0.9	0.9	0.5	0.8
R share	605 233	679 475	610 300	571 717	765 122	798 507	731 067	828 401	977 746	1 237 898
% of total number of R shares	98.8	111.0	99.7	93.4	125	130.5	119.5	135.5	159.7	202.1
Average number of shares (thousands)										
basic	788 620	788 620	788 620	788 620	788 620	788 620	788 620	788 620	788 620	788 620
diluted	789 182	789 533	789 883	790 024	789 888	789 809	789 210	788 620	788 620	788 620

[1] Earnings per share (EPS) excl. FV was added to the list of non-IFRS measures in 2020 replacing the key figure of EPS excl. IAC. Comparatives are recalculated for 2018–2019. For 2011–2017 table includes EPS excl. IAC figures.
[2] Board of Directors' proposal to the AGM for distribution of dividend.
IAC = Items affecting comparability

Read more about incentive programmes in Note 21 and Management interests in Note 7.

Strategy
Sustainability
Financials
Governance
Remuneration

Debt investors

Funding strategy

Stora Enso's funding strategy is based on the Group's financial targets. Stora Enso should have access to sufficient and competitively priced funding at any time to be able to pursue its strategy and achieve its financial targets. Stora Enso's debt structure is focused on the capital markets and commercial banks. Stora Enso maintains consistent dialogue with fixed-income community with informative and transparent communication and meetings in conferences and roadshows.

Funding is obtained in the currencies of the Group's investments and assets (primarily CNY, EUR, SEK and USD). Commercial paper markets are used for short-term funding and liquidity management.

In 2020, Stora Enso strengthened significantly its liquidity and funding position due to the uncertainty in the global economy caused mainly by the Covid-19 pandemic. Stora Enso has EUR 1 655 million cash and cash equivalents at 31 December 2020. The company has EUR 600 million Committed Revolving Credit Facility fully undrawn, committed bilateral credit facility arrangements with commercial banks up to EUR 250 million and an undrawn committed EUR 150 million loan with European Investment Bank that can be drawn latest in 2022 for five-year maturity. Additionally, the company has access to EUR 950 million statutory pension premium loans in Finland. Stora Enso has a good access to various funding sources.

Public debt structure as at 31 December 2020

	EUR	USD	SEK
Public issues	EUR 300 million 2023	USD 300 million 2036	SEK 3000 million 2021
	EUR 300 million 2027		SEK 3000 million 2024
	EUR 300 million 2028		SEK 3100 million 2025
	EUR 500 million 2030		
Private placements	EUR 125 million 2025		SEK 1000 million 2026
	EUR 25 million 2027		

Debt programmes and credit facilities as at 31 December 2020

	EUR	SEK
Commercial paper programmes	Finnish Commercial Paper Programme EUR 750 million	Swedish Commercial Paper Programme SEK 10 000 million
EMTN (Euro Medium-Term Note programme)	EUR 4 000 million	
Back-up facility	EUR 600 million sustainability linked revolving credit facility 2023[1]	
	EUR 150 million Bilateral Committed Credit Facility 2021	
	EUR 100 million Bilateral Committed Credit Facility 2022	
	EUR 150 million committed undrawn EIB loan. To be drawn latest 2022, five-year maturity	

[1] Undrawn committed credit facility EUR 600 million. Part of the pricing for the facility agreement is based on Stora Enso's Science Based Targets to combat global warming by reducing greenhouse gases, including CO_2.

Stora Enso has integrated sustainability agenda to its funding and financial services. The Group has the long-term aim to secure funding partners that have sustainability as a fundamental part of their agenda. We aim to influence and develop the financial markets to ensure that sustainability becomes an integral part of decisions and credit evaluation. For more information, please see **Stora Enso's Sustainability 2020**, section Investors or visit our website storaenso.com/investors.

Green Bonds

In 2020, Stora Enso issued two green bonds in 2020: SEK 3 100 million in April and EUR 500 million in November. There are no financial covenants connected to these bonds. The bonds are listed on the Luxembourg Stock Exchange. In accordance with the Green Bond Framework, proceeds from Green Bonds will be used solely to finance or refinance projects (going back up to two years) and activities defined under the Eligible Categories presented below.

1. Sustainable Forest Management
2. Renewable, Low-Carbon, and Eco-Efficient Products, Product Technologies, and Processes
3. Energy Efficiency
4. Renewable Energy and Waste to Energy
5. Sustainable Water Management
6. Waste Management and Pollution Control

Please find additional information here: Green bond impact report

Rating strategy

Stora Enso Group's target is to have at least one public credit rating with the ambition to remain investment grade and sustain such metrics throughout business cycles. The present rating and outlook from Moody's and Fitch Ratings are shown below.

Ratings as at 31 December 2020

Rating agency	Long/short-term rating	Valid from
Fitch Ratings	BBB- (stable)	8 August 2018
Moody's	Baa3 (stable) / P-3	1 November 2018

Stora Enso's current credit ratings are: Baa3 with stable outlook from Moody's and BBB- with stable outlook from Fitch Ratings. Both ratings correspond to an Investment Grade rating, and there were no changes in the ratings during 2020.

Stora Enso's goal is to ensure that rating agencies continue to be comfortable with Stora Enso's strategy and performance. The Company's strategy is to achieve liquidity well in line with the comfort level of the agencies. Review meetings are arranged with the Stora Enso management annually, and regular contact is maintained with the rating analysts.

Read more about debt and loans in Note 26.

Financials

Limited Assurance

Stora Enso as a taxpayer

Stora Enso's operations generate value through taxes for governments around the world. In 2020, Stora Enso paid again approximately EUR 1 billion into public sectors, including EUR 611 million in collected taxes.

Stora Enso aims to be transparent with respect to economic value generation. For this purpose, Stora Enso makes a voluntary commitment to openly provide details of the taxes paid by the group to governments in its main countries of operation. This commitment to our stakeholders is fully in line with Stora Enso's values to 'Do what's right' and 'Lead'.

Stora Enso's tax policy

Stora Enso's tax policy is approved by the CEO and is reviewed annually, with updates as necessary. As a responsible and prudent taxpayer, Stora Enso is committed to ensure that the group observes all applicable tax laws, rules and regulations in all jurisdictions where it conducts its business activities. Stora Enso follows international transfer pricing guidelines and local legislation. In addition to our legal and regulatory requirements, our tax principles comply with our values. Furthermore, we seek to ensure that our tax strategy is aligned with our business and commercial strategy. We only undertake tax planning that is duly aligned to economic activity. This means that all tax decisions are made in response to commercial activity, and tax is only one of many factors that are taken into account when making business decisions.

As with any other business expense, however, we have an obligation to manage our tax costs as part of our financial responsibility to societies and shareholders. We are therefore willing to respond to tax incentives and exemptions granted by governments on reasonable grounds, and we currently have operations in countries that offer favourable tax treatments, where their location is also justified by sound commercial considerations.

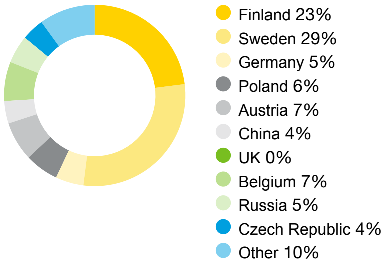
Stora Enso has operations in the following locations that offer favourable tax treatments:

- The joint operation Montes del Plata operates a pulp mill in a Special Economic Zone in Uruguay.
- Stora Enso's two forestry companies in Guangxi, China are entitled to exemption from corporate income tax and value added tax on their sales, and our related industrial company is entitled to reduced tax rates until 2025.
- Stora Enso conducts business, mainly consisting of sales services, in the United Arab Emirates, Singapore and Hong Kong.
- For logistical and operational reasons, pulp from the group's joint operations in Brazil and Uruguay is traded via a pulp sourcing and marketing company based in the Netherlands.
- AS Stora Enso Latvija has been granted a corporate income tax credit relating to an investment project. The credit is available for utilization against tax arising on profit distribution in future years.

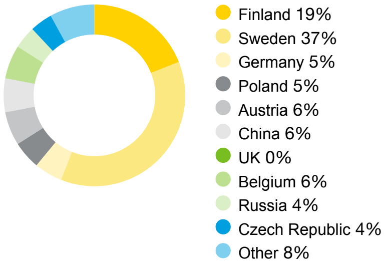
Our commitment to tax transparency is also reflected in our relationships with tax authorities and governments. We seek to work positively, proactively and openly with tax authorities on a global basis, aiming to minimise disputes and to build confidence wherever possible. We also work with government representatives, mainly through associations, by providing corporate views and impacts at request to aid law-making and implementation.

The Stora Enso tax team, reporting to the group CFO, works closely with the businesses and other internal stakeholders to identify and manage business and compliance tax risks to ensure a sustainable yet business feasible platform for operations. Internal stakeholders are continuously trained on tax related matters in order to enhance capabilities and improve overall tax compliance and tax reporting position of Stora Enso group. The tax team is involved in business changes already in the planning phase to ensure

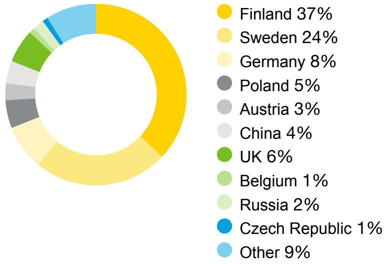
Total taxes borne 2020



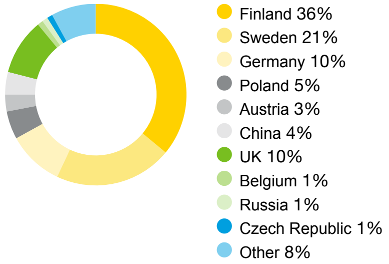
Total taxes borne 2019



Total taxes collected 2020



Total taxes collected 2019



the alignment and appropriate compliance of tax rules and regulations.Tax team monitors changes in tax legislation and regularly reviews tax affairs and risk management procedures to ensure that Stora Enso can identify, assess and mitigate tax risk. As part of protecting shareholder value, we act with integrity in all tax matters and accurately report the Group's tax position to our shareholders and other stakeholders.

Stora Enso's tax footprint

In 2020, Stora Enso paid EUR 980 million (1 265 million) in taxes to governments in countries where the group has operations. A total of EUR 369 million (498 million) was paid directly by the group (taxes borne) while EUR 611 million (767 million) was collected on behalf of governments (taxes collected).

Stora Enso did not pay any corporate income tax in Finland in 2020 because of tax losses carried forwards from previous years. The tax losses of EUR 329 million (328 million) carried forward in Finland are the result of several factors including high closure and restructuring costs incurred in the past.

Taxes paid in major countries of operation

		Year Ended 31 December							
		Taxes borne							
		Corporate income tax		Employment taxes		Operational taxes		Total	
EUR million	**Primary activity**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Finland	Production and sales	0	0	76	76	10	20	86	96
Sweden	Production and sales	13	84	88	93	5	7	106	184
Germany	Production and sales	3	10	11	11	3	4	17	25
Poland	Production and sales	11	13	6	7	5	5	22	25
Austria	Production and sales	12	14	13	13	1	1	26	28
China	Production and sales	2	7	8	15	7	7	16	29
United Kingdom	Sales	0	0	1	1	0	0	1	1
Belgium	Production and sales	12	17	10	10	4	4	26	31
Russian Federation	Production and sales	9	10	3	3	5	7	17	20
Czech Republic	Production and sales	8	12	7	7	0	0	15	19
Other		12	11	16	16	9	13	37	40
Total		**82**	**178**	**239**	**252**	**48**	**68**	**369**	**498**

		Year Ended 31 December									
		Taxes collected								Total taxes paid	
		VAT & similar[1]		Payroll taxes		Other taxes		Total			
EUR million	**Primary activity**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Finland	Production and sales	35	37	144	143	47	96	226	276	312	372
Sweden	Production and sales	63	77	83	85	0	0	146	162	252	346
Germany	Production and sales	32	51	20	25	0	0	52	76	68	101
Poland	Production and sales	18	25	11	10	0	0	29	35	52	60
Austria	Production and sales	5	11	15	16	0	0	20	27	47	55
China	Production and sales	14	20	10	10	0	0	24	30	40	59
United Kingdom	Sales	35	73	2	2	0	0	37	75	38	76
Belgium	Production and sales	1	3	9	8	0	0	9	11	35	42
Russian Federation	Production and sales	9	10	2	2	0	0	11	12	28	32
Czech Republic	Production and sales	0	0	5	5	0	0	5	5	20	24
Other		27	31	19	19	5	8	52	58	88	98
Total		**239**	**338**	**318**	**325**	**53**	**104**	**611**	**767**	**980**	**1265**

[1] VAT, goods and services taxes and similar turnover related taxes

Stora Enso did not pay any corporate income tax in Finland in 2020 because of tax losses carried forwards from previous years. The tax losses of EUR 329 million (328 million) carried forward in Finland are the result of several factors including high closure and restructuring costs incurred in the past.

All companies within the scope of Stora Enso's tax footprint are consolidated or joint operations, which have been consolidated proportionally with Stora Enso's share amounting to at least 50%. Consolidation includes all companies that have either at least 10 employees or a turnover of EUR 5 million or above.

If a Stora Enso company was in a recovery position regarding VAT or energy taxation in a specific country, tax payments for this company have been reported at NIL.

Taxes borne include all tax and tax-like payments that Stora Enso has paid as own taxes. Tax-like payments include other forms of government revenue raised outside of the tax regime, such as payments for emission rights or social security payments.

Taxes collected include all tax and tax-like payments that Stora Enso has collected on behalf of the government, including e.g. payroll taxes as well as VAT and similar sales-related taxes paid by Stora Enso. The economic burden for such taxes ends up with the buyer or final consumer.

Stora Enso's tax footprint figures also reflect governmental incentives granted in the form of reduced tax rates or tax exemption, by reporting lower tax payments. However, governmental support is often granted in the form of subsidies, particularly in relation to energy consumption or favoured investments, which are not considered in our tax footprint calculations.

Unaudited

Capacities by mill in 2021

Packaging Materials

Consumer board	Location	Grade	Capacity 1 000 t
Beihai	CHN	LPB, CKB, FSB, FBB	510
Fors	SWE	FBB	455
Imatra	FIN	SBS, FBB, LPB	1 195
Ingerois	FIN	FBB	295
Skoghall	SWE	LPB, CUK	925
Total			**3 380**

Containerboards	Location	Grade	Capacity 1 000 t
Heinola	FIN	SC fluting	300
Ostrołęka	POL	Testliner, PfR fluting, sack paper, wrapping paper, RCF-based liner and fluting	760
Oulu[1]	FIN	Kraftliner, white-top kraftliner	450
Varkaus	FIN	Kraftliner, white-top kraftliner	405
Total			**1 915**

[1] Oulu kraftliner line ramping up

Barrier coating	Location	Grade	Capacity 1 000 t
Beihai	CHN	Barrier coating	80
Skoghall (Forshaga)	SWE	Barrier coating	120
Imatra	FIN	Barrier coating	455
Total			**655**

Packaging Solutions

Biocomposites

Mill	Location	Product	Division	Capacity 1 000 t
Hylte	SWE	Biocomposite	Packaging Solutions	15
Total Biocomposite				**15**

Corrugated packaging	Grade	Capacity million m²
Baltic states	Corrugated packaging	**155**
Kaunas		
Riga		
Tallinn		
Finland	Corrugated packaging	**160**
Lahti		
Kristiinankaupunki		
Poland	Corrugated packaging	**410**
Łódz		
Mosina		
Ostrołeka		
Tychy		
Russia	Corrugated packaging	**395**
Arzamas		
Balabanovo		
Balabanovo offset		
Lukhovitsy		
Sweden	Corrugated packaging	**265**
Jönköping		
Skene		
Vikingstad		
Total	Corrugated packaging	**1 385**

China Packaging	Location	Grade	Capacity million pcs	Capacity million m²
Gaobu, Dongguan	CHN	Consumer packaging	390	30
Jiashan, Zhejiang	CHN	Consumer packaging	145	20
Qian'an, Hebei	CHN	Consumer packaging	300	25
Wu Jin, Jiangshu	CHN	Consumer packaging	75	10
Total			**910**	**85**

Formed fiber

Mill	Location	Product	Division	Capacity million pcs
Hylte	SWE	Formed Fiber	Packaging Solutions	60
Total Formed fiber				**60**

Biomaterials

Mill	Location	Grade	Division	Capacity 1 000 t
Enocell	FIN	Short, long-fiber and dissolving pulp	Biomaterials	490
Skutskär	SWE	Short, long-fiber and fluff pulp	Biomaterials	540
Sunila	FIN	Long-fiber pulp	Biomaterials	375
Montes del Plata (50% share)	URU	Short-fiber pulp	Biomaterials	740
Veracel (50% share)	BRA	Short-fiber pulp	Biomaterials	575
Total				**2 720**

Chemical Pulp

Mill	Location	Grade	Division	Capacity 1 000 t
Heinola	FIN	Neutral Sulphite Semi-Chemical Pulp	Packaging Materials	285
Kaukopää, Imatra	FIN	Short and long-fiber	Packaging Materials	825
Nymölla	SWE	Short and long-fiber	Paper	330
Ostrołęka	POL	Long-fiber	Packaging Materials	130
Oulu[1]	FIN	Long-fiber	Packaging Materials	550
Skoghall	SWE	Long-fiber	Packaging Materials	375
Tainionkoski, Imatra	FIN	Short and long-fiber	Packaging Materials	195
Varkaus	FIN	Long-fiber	Packaging Materials	310
Veitsiluoto	FIN	Short and long-fiber	Paper	375
Chemical Pulp Total (incl. Biomaterials)				**6 095***

[1] Ramping up
* Estimated market pulp volumes 2 500 000 tonnes

Deinked Pulp (DIP)

Mill	Location	Grade	Division	Capacity 1 000 t
Hylte[1]	SWE	DIP	Paper	145
Langerbrugge	BEL	DIP	Paper	680
Maxau	GER	DIP	Paper	295
Ostrołęka	POL	Recycled fiber based pulp	Packaging Materials	700
Sachsen	GER	DIP	Paper	430
Total				**2 250**

[1] Production of DIP will end latest in Q2 2021

CTMP

Mill	Location	Grade	Division	Capacity 1 000 t
Beihai	CHN	BCTMP	Packaging Materials	210
Fors	SWE	CTMP	Packaging Materials	220
Kaukopää	FIN	CTMP	Packaging Materials	220
Skoghall	SWE	CTMP	Packaging Materials	310
Total				**960**

Lignin

Mill	Location	Product	Division	Capacity 1 000 t
Sunila	FIN	Lignin	Biomaterials	50
Total Lignin				**50**

Wood Products

Mill	Location	Sawing Capacity 1 000 m³	Further Processing Capacity 1 000 m³	Pellet capacity 1 000 t	CLT capacity 1 000 m³	LVL capacity 1 000 m³
Ala	SWE	400	50	100	-	-
Alytus	LIT	210	115	-	-	-
Amsterdam	NLD	-	80	-	-	-
Bad St. Leonhard	AUT	360	105	-	80	-
Brand	AUT	440	295	-	-	-
Gruvön[1]	SWE	370	150	100	80	-
Honkalahti	FIN	310	70	-	-	-
Imavere	EST	340	160	100	-	-
Impilahti	RUS	160	10	25	-	-
Launkalne[2]	LAT	260	70	50	-	-
Murow	POL	300	210	-	-	-
Nebolchi	RUS	180	45	40	-	-
Näpi	EST	50	180	25	-	-
Planá	CZE	390	220	-	-	-
Uimaharju[3]	FIN	240	-	-	-	-
Varkaus	FIN	230	35	-	-	75
Veitsiluoto[4]	FIN	200	-	-	-	-
Ybbs	AUT	700	450	-	110	-
Zdírec	CZE	580	220	80	-	-
Total		**5 720**	**2 465**	**520**	**270**	**75**

[1] Gruvön CLT production ramping up
[2] Launkalne pellets production ramping up
[3] Uimaharju sawmill belongs to division Biomaterials
[4] Veitsiluoto sawmill belongs to division Paper

Paper

Mill	Location	Grade	Capacity 1 000 t
Anjala	FIN	Impr. news, book, LWC, wallpaper base	435
Hylte	SWE	News	245
Kvarnsveden	SWE	SC, impr. news, packaging paper	565
Langerbrugge	BEL	SC, news	555
Maxau	GER	SC	530
Nymölla	SWE	WFU	485
Sachsen	GER	News, impr. news,directory	310
Veitsiluoto	FIN	LWC, MWC, WFU, speciality paper, packaging paper	790
Total			**3 915**

Abbreviations used in the tables:

BCTMP	bleached chemi-thermo-mechanical pulp
CKB	coated kraft back board
CLT	cross-laminated timber
CTMP	chemi-thermo-mechanical pulp
CUK	coated unbleached kraftboard
DIP	deinked pulp
FBB	folding boxboard
LPB	liquid packaging board
LVL	laminated veneer lumber
LWC	light-weight coated paper
MWC	medium-weight coated paper
PfR	paper for recycling
SBS	solid bleached sulphate board
SC	supercalendered paper
WFU	wood-free uncoated paper

The formula: (Sum of net saleable production of two best consecutive months / Available time of these two consecutive months) × Available time of the year

Unaudited

Information for shareholders

Annual General Meeting (AGM)

Stora Enso Oyj's Annual General Meeting (AGM) will be held on Friday 19 March 2021 at 4.00 p.m. Finnish time.

Nominee-registered shareholders wishing to attend and vote at the AGM must have shares that would entitle to being registered in the Company shareholders' register on the record date 9 March 2021 and must be temporarily registered in the Stora Enso shareholders' register by 16 March 2021. For shares registered through Euroclear Sweden and for holders of ADRs the timetable may vary and earlier dates apply. Instructions for submitting notice of attendance is given in the invitation to the AGM, which can be consulted on Stora Enso's website at storaenso.com/agm.

AGM and dividend in 2021

9 March	Record date for AGM
19 March	Annual General Meeting (AGM)
22 March	Ex-dividend date
23 March	Record date for dividend
30 March	Dividend payment

Dividend

The Board of Directors proposes to the AGM that a dividend of EUR 0.30 per share will be paid to the shareholders for the fiscal year ending 31 December 2020. The dividend payable on shares registered with Euroclear Sweden will be forwarded by Euroclear Sweden AB and paid in Swedish crowns. The dividend payable to ADR holders will be forwarded by Citibank N.A. (Citi) and paid in US dollars.

Publications dates for 2021

29 January	Financial results for 2020
Week 6	Annual Report 2020
23 April	Interim report for January-March
21 July	Half-year report for January-June
20 October	Interim report for January-September

Distribution of financial information

Stora Enso's Annual Report 2020 consists of five sections: Strategy, Sustainability, Financials, Governance and Remuneration. You can find the highlights of the year and all reports as downloadable PDF files at storaenso.com/annualreport.

Summary, Governance and Remuneration are available in English, Finnish and Swedish. Strategy, Sustainability and Financials are available in English. The official financial statements (in Finnish) and a list of principal subsidiaries (in English) can be found on the company's website.

Interim reports and **Half-year reports** are published in English, Finnish and Swedish at storaenso.com/press.

Information for holders of American Depositary Receipts (ADRs)

The Stora Enso dividend reinvestment and direct purchase plan is administered by Citibank N.A. The plan makes it easier for existing ADR holders and first-time purchasers of Stora Enso ADRs to increase their investment by reinvesting cash distributions or by making additional cash investments. The plan is intended for US residents only. Further information on the Stora Enso ADR programme is available at citi.com/DR.

Contact information for Stora Enso ADR holders

Citibank Shareholder Services
Computershare
P.O. Box 43077
Providence, Rhode Island 02940-3077
Email: citibank@shareholders-online.com

Toll-free number: (877)-CITI-ADR
Direct dial: (781) 575-4555

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Photography: Mikko Ryhänen

It should be noted that Stora Enso and its business are exposed to various risks and uncertainties and certain statements herein which are not historical facts, including, without limitation those regarding expectations for market growth and developments; expectations for growth and profitability; and statements preceded by "believes", "expects", "anticipates", "foresees", or similar expressions, are forward-looking statements. Since these statements are based on current plans, estimates and projections, they involve risks and uncertainties, which may cause actual results to materially differ from those expressed in such forward-looking statements. Such factors include, but are not limited to: (1) operating factors such as continued success of manufacturing activities and the achievement of efficiencies therein, continued success of product development, acceptance of new products or services by the Group's targeted customers, success of the existing and future collaboration arrangements, changes in business strategy or development plans or targets, changes in the degree of protection created by the Group's patents and other intellectual property rights, the availability of capital on acceptable terms; (2) industry conditions, such as strength of product demand, intensity of competition, prevailing and future global market prices for the Group's products and the pricing pressures thereto, price fluctuations in raw materials, financial condition of the customers and the competitors of the Group, the potential introduction of competing products and technologies by competitors; and (3) general economic conditions, such as rates of economic growth in the Group's principal geographic markets or fluctuations in exchange and interest rates. All statements are based on management's best assumptions and beliefs in light of the information currently available to it and Stora Enso assumes no obligation to publicly update or revise any forward-looking statement except to the extent legally required.