Stora Enso
Half-year financial report

Q2

January–June 2023

Our purpose:

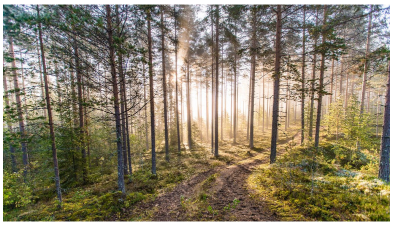
Do good for people and the planet. Replace non-renewable materials with renewable products.

List of contents

President and CEO Annica Bresky:

"The weak market demand further worsened in the second quarter. We continue to focus on investing and restructuring to improve our future business profitability."

Highlights



Restructuring plans to improve long-term competitiveness and profitability

Stora Enso plans to close down units with low long-term competitiveness and empower divisions further by decentralising and creating lean Group functions.

Investing in growth in renewable and circular packaging solutions

A new, high-tech corrugated packaging unit started operations at the De Lier site in the Netherlands.

Accelerating sustainability actions through new financing

Stora Enso launched a new framework for green and sustainability-linked financing and issued EUR 1 billion of green bonds.

Accelerating restructuring in challenging markets

Quarterly financial highlights

- Sales decreased by 22% to EUR 2,374 (3,054) million.
- Operational EBIT decreased by 93% to EUR 37 (505) million.
- Operational EBIT margin decreased to 1.6% (16.5%).
- Operating result (IFRS) was EUR -253 (399) million, including significant items affecting comparability related to restructurings and disposals.
- Earnings per share (EPS) were EUR -0.29 (0.38) and EPS excl. fair valuations (FV) was EUR -0.27 (0.42).
- The value of the forest assets decreased to EUR 8.1 (8.2) billion, equivalent to EUR 10.23 per share.
- Cash flow from operations amounted to EUR 146 (404) million. Cash flow after investing activities was EUR -70 (247) million.
- Net debt increased by EUR 597 million to EUR 3,030 (2,434) million, due to the acquisition of De Jong Packaging Group, the board investment at the Oulu site, and dividend payment.
- The net debt to operational EBITDA (LTM[1]) ratio was 1.7 (1.0). The target is to keep the ratio below 2.0.
- Operational ROCE excluding the Forest division (LTM[1]) decreased to 10.7% (21.7%), the target being above 13%.

January–June result

- Sales were EUR 5,095 (5,852) million.
- Operational EBIT was EUR 271 (1,008) million.
- Operating result (IFRS) was EUR 5 (793) million.
- Earnings per share (EPS) were EUR -0.05 (0.75) and EPS excl. fair valuations (FV) was EUR -0.04 (0.77).
- Cash flow from operations amounted to EUR 400 (806) million. Cash flow after investing activities was EUR -69 (471) million.
- Operational ROCE excluding the Forest division (LTM[1]) decreased to 10.7% (21.7%).

Key highlights

- Stora Enso plans to permanently close down its Sunila pulp production unit in Finland, the De Hoop containerboard site in the Netherlands, one containerboard line at its Ostrołęka site in Poland, and the Näpi sawmill in Estonia.
- Stora Enso has taken the next step in driving a decentralised operating model and increased independency of the divisions by initiating change negotiations regarding the planned decentralisation and leaner Group functions.
- The above-mentioned planned restructuring actions are expected to improve operational EBIT by approximately EUR 110 million annually.
- One of the two paper machines at the Anjala site in Finland will be permanently closed down in Q4/2023.
- A new, high-tech corrugated packaging unit started operations at Stora Enso's De Lier site in the Netherlands.
- The consumer board investment at the Oulu site in Finland is moving ahead according to schedule. Production is expected to start during 2025.
- Stora Enso launched a new framework for green and sustainability-linked financing to further integrate sustainability into its funding, and issued EUR 1 billion of green bonds. In addition, EUR 550 million bilateral loans were arranged to strengthen liquidity.
- Stora Enso's ISS Corporate ESG rating improved from B- to B, the highest in the industry.

Guidance

Stora Enso reiterates its full-year 2023 operational EBIT to be significantly lower than for the full-year 2022 (EUR 1,891 million).

Sales	Operational EBIT margin	Operational ROCE excl. the Forest division (LTM)
EUR 2,374 million	1.6%	10.7%
(Q2/2022: 3,054)	(Q2/2022: 16.5%)	(Q2/2022: 21.7%)

Net debt to operational EBITDA (LTM)	EPS (basic)	Cash flow from operations
1.7	EUR -0.29	EUR 146 million
(Q2/2022: 1.0)	(Q2/2022: 0.38)	(Q2/2022: 404)

LTM = Last 12 months

Outlook for the full year 2023

On 20 April this year, Stora Enso lowered its guidance for the full-year 2023 due to rapidly worsening market outlook and, as a consequence, materially lower earnings forecasts. The market outlook for 2023 remains uncertain with low short-term visibility, persisting high inflation, higher interest rates and low consumer confidence. Q3 will be another challenging quarter due to sequentially deteriorating market conditions for many segments.

The tight wood market continues due to increasing energy wood consumption and the lack of wood imports from Russia. This impacts margins and contributes to the deterioration of the competitiveness of, especially, Stora Enso's Finnish sites. Other variable costs are coming down from peak levels but are still higher compared to historic levels.

The headwinds in the first quarter of weak demand across most of the Group's segments and customer destocking, continue. Based on the current macroeconomic and market specific challenges, Stora Enso assumes continued weakness in demand and volumes especially in its Packaging Materials, Wood Products and Biomaterials divisions, with no obvious signs of recovery yet.

Packaging Materials: Weak market conditions and destocking in the value chain continues. The containerboard market has stabilised at a low level, but the demand for consumer board market is weakening. For Paper, the pace of the decline in demand is estimated to be slower as destocking is coming to an end.

Packaging Solutions: The demand for corrugated packaging is expected to have bottomed out. The potential slight improvement is not expected to reach the normal seasonal peak during the latter part of the year; the market remains unpredictable.

Wood Products: The activity in the construction sector has not improved and the expectation is that it will continue to remain challenging with a low number of issued building permits and new housing starts. This is expected to impact the demand for both sawn wood and building solutions.

Biomaterials: The market is expected to remain weak; demand is expected to decrease further due to high inventory levels which will take time to normalise. Customer destocking and new capacity entering the market during the year will add to the market imbalance.

Forest: The wood market in the Baltics and Nordics is expected to remain tight despite increasing market curtailments in the pulp and sawmill sector that have temporarily reduced demand for wood. During the autumn, the tight wood market will be mainly driven by demand from the energy sector.

To protect margins and cash flow, restructuring actions such as closures of sites and production lines, divestments, and a more de-centralised operating model with empowered divisions, and leaner Group functions are being implemented. These initiatives are expected to improve competitiveness, reduce costs, and support focused capital allocation into strategic growth markets. The bulk of them are expected to be concluded during the second half of 2023 and would support 2024 financial performance.

On the back of these initiatives, Stora Enso will be in a financially, operationally and strategically better shape to handle market fluctuations while investing for growth in renewable packaging, sustainable building solutions and biomaterials innovations.

Market demand development by division quarter-on-quarter, Q2/2023 to Q3/2023

	Q3/2023 market demand outlook
Packaging Materials	Demand for consumer board is expected to be weaker. Demand for containerboard is expected to stabilise at low levels. Destocking continues.
Packaging Solutions	Demand for corrugated packaging is expected to be stronger, but lower than the normal seasonal peak.
Biomaterials	Pulp demand is expected to be weaker. High inventory levels expected to continue. New capacity entering the market.
Wood Products	Weaker demand for both sawn wood and building solutions. The building activity in the construction industry continues to be slow.
Forest	Sawlog demand expected to remain stable due to tight wood market. Pulpwood demand expected to decline. Demand for pulpwood for energy use remains strong.

Key figures

EUR million	Q2/23	Q2/22	Change % Q2/23–Q2/22	Q1/23	Change % Q2/23–Q1/23	Q1-Q2/23	Q1-Q2/22	Change % Q1-Q2/23–Q1-Q2/22	2022
Sales	2,374	3,054	-22.3%	2,721	-12.8%	5,095	5,852	-12.9%	11,680
Operational EBITDA	198	663	-70.1%	399	-50.3%	597	1,325	-54.9%	2,529
Operational EBITDA margin	8.4%	21.7%		14.7%		11.7%	22.6%		21.7%
Operational EBIT	37	505	-92.7%	234	-84.3%	271	1,008	-73.1%	1,891
Operational EBIT margin	1.6%	16.5%		8.6%		5.3%	17.2%		16.2%
Operating result (IFRS)	-253	399	-163.3%	258	-198.2%	5	793	-99.4%	2,009
Result before tax (IFRS)	-304	370	-182.2%	228	-233.4%	-76	745	-110.2%	1,858
Net result for the period (IFRS)	-257	299	-186.0%	185	-238.7%	-72	586	-112.2%	1,536
Cash flow from operations	146	404	-63.8%	254	-42.5%	400	806	-50.4%	1,873
Cash flow after investing activities	-70	247	-128.2%	1	n/m	-69	471	-114.6%	1,162
Capital expenditure	232	161	44.3%	229	1.4%	462	246	87.4%	778
Capital expenditure excluding investments in biological assets	213	139	53.3%	214	-0.4%	427	210	103.1%	701
Depreciation and impairment charges excl. IAC	135	131	2.4%	136	-1.1%	271	266	1.7%	527
Net debt	3,030	2,434	24.5%	2,917	3.9%	3,030	2,434	24.5%	1,853
Forest assets[1]	8,065	8,161	-1.2%	8,269	-2.5%	8,065	8,161	-1.2%	8,338
Operational return on capital employed (ROCE), LTM[2]	8.1%	14.3%		11.5%		8.1%	14.3%		13.7%
Operational ROCE excl. Forest division, LTM[2]	10.7%	21.7%		16.5%		10.7%	21.7%		20.4%
Earnings per share (EPS) excl. FV, EUR	-0.27	0.42	-164.5%	0.23	-219.2%	-0.04	0.77	-105.7%	1.55
EPS (basic), EUR	-0.29	0.38	-174.8%	0.24	-219.5%	-0.05	0.75	-106.3%	1.97
Return on equity (ROE), LTM[2]	7.5%	14.5%		12.2%		7.5%	14.5%		13.3%
Net debt/equity ratio	0.27	0.21		0.25		0.27	0.21		0.15
Net debt to LTM[2] operational EBITDA ratio	1.7	1.0		1.3		1.7	1.0		0.7
Equity per share, EUR	14.03	14.39	-2.5%	14.82	-5.3%	14.03	14.39	-2.5%	15.89
Average number of employees (FTE)	21,171	22,327	-5.2%	21,144	0.1%	21,182	22,248	-4.8%	21,790

Operational key figures, items affecting comparability and other non-IFRS measures: The list of Stora Enso's non-IFRS measures, and the calculation and definitions of the key figures are presented at the end of this report. See also the section *Non-IFRS measures* at the beginning of the Financials section.

IAC = Items affecting comparability, FV = Fair valuations and non-operational items

[1] Total forest assets value, including leased land and Stora Enso's share of Tornator.
[2] LTM = Last 12 months – change in the calculation method explained in the section *Non-IFRS measures*

Production and external deliveries

	Q2/23	Q2/22	Change % Q2/23–Q2/22	Q1/23	Change % Q2/23–Q1/23	Q1-Q2/23	Q1-Q2/22	Change % Q1-Q2/23–Q1-Q2/22	2022
Board deliveries[1], 1,000 tonnes	1,038	1,113	-6.8%	1,026	1.2%	2,064	2,195	-6.0%	4,294
Board production[1], 1,000 tonnes	1,055	1,204	-12.4%	1,127	-6.4%	2,181	2,448	-10.9%	4,682
Corrugated packaging European deliveries, million m^2	299	194	54.0%	285	4.7%	584	418	39.8%	741
Corrugated packaging European production, million m^2	273	203	34.3%	290	-5.8%	562	439	28.2%	771
Market pulp deliveries, 1,000 tonnes	551	592	-7.0%	564	-2.4%	1,115	1,172	-4.8%	2,374
Wood products deliveries, 1,000 m^3	1,033	1,163	-11.1%	1,044	-1.0%	2,077	2,382	-12.8%	4,397
Wood deliveries, 1,000 m^3	3,451	3,978	-13.2%	3,779	-8.7%	7,229	7,068	2.3%	13,304
Paper deliveries, 1,000 tonnes	148	517	-71.4%	266	-44.5%	414	1,052	-60.6%	1,924
Paper production, 1,000 tonnes	144	526	-72.6%	258	-44.1%	402	1,058	-62.0%	1,926

[1] Includes consumer board and containerboard volumes

Total maintenance impact

Expected and historical impact as lost value of sales and maintenance costs

EUR million	Q3/2023[1]	Q2/2023[2]	Q1/2023	Q4/2022	Q3/2022	Q2/2022
Total maintenance impact	101	146	119	180	150	120

[1] Estimated
[2] The estimate for Q2/2023 was EUR 143 million.

CEO comment

The weak market demand further worsened in the second quarter. Our businesses are directly impacted by inflation and the consumers' cost-of-living crisis, the drop in construction activity and customers continuing to reduce their inventories. Unfortunately, we see no imminent signs of improved market demand and we expect destocking to persist for most of our segments also in the second half of 2023. In this turbulent market we must adapt. We continue to focus on what we can impact and control: investing and restructuring to improve our future business profitability, cost-competitiveness and asset footprint, controlling our costs, and curtailing production to manage our own and customer inventories.

Weak financial performance in difficult market conditions

The demand slowdown continued for all our businesses except for Packaging Solutions and Forest division. For our largest divisions Packaging Materials, Biomaterials and Wood Products, we continue to experience destocking in the supply chain and weakening demand, in combination with margin pressure due to high input costs.

Some raw material costs have come down from their peak, however most of them, such as wood and chemicals, were still elevated compared to historic levels. For our Biomaterials division especially, we faced the fastest ever decline in global market pulp prices. A significant amount of new capacity is entering the market at a time when demand is low and the global market pulp inventories are on very high levels.

This has resulted in a very weak financial performance for the quarter and naturally we are disappointed. Group sales were 2,374 million euro, a year-on-year a decrease of 22%. The Operational EBIT decreased by 93% to 37 million euro with an EBIT margin of 1.6%.

Strategic initiatives to improve resilience, competitiveness and profitability

We stay committed to continue strengthening and building resilience into Stora Enso. Our strategic choices are supported by long-term drivers and megatrends such as demand for circular and bio-based packaging, the need to decarbonise construction, and the electrification of society. We aim for growth in both the segments where we have leading market positions as well as in our innovation efforts. Our solutions help the move away from a fossil-based economy, and Stora Enso has an important role to play for a greener economy.

Our focus short term, is on delivering on our committed investment projects and improving our profitability: our cost leading consumer board production line at our site in Oulu, the integration of our De Jong Packaging acquisition including the ramp up of one of Europe's largest and most modern corrugating sites in Netherlands, and the development and commercialisation of the innovative anode battery material Lignode.

We are also taking the next step in simplifying our organisation and increasingly empowering our divisions. The recently announced restructuring actions will strengthen the Group's long-term competitiveness, reduce complexity and deliver tailor-made services for the benefit of our customers. We will be reducing costs, improving efficiency, and focusing capital allocation in strategic growth markets. These are my key priorities. The planned actions would result in an annual profitability improvement of approximately 110 million euros. The Group functions headcount would be leaner by 20%.

Restructuring and closing or divesting production is never an easy decision, especially considering the impact it has on our people. But, it is necessary to optimise our asset base to protect margins, now and for the future and I am very grateful for the commitment of our teams in these challenging times.

Advancing our leading position in sustainability

Sustainability is a natural part of everything we do and integrated also in our funding and financing activities. Recently, Stora Enso launched a combined Green and Sustainability-Linked Financing Framework, issuing 1 billion euro of green bonds to further accelerate our sustainability commitments and strategy. In addition, we have raised 550 million euros of bilateral loan agreements to secure liquidity and financing in the current business environment. I'm very happy that we are progressing very well with our sustainability targets, living up to our climate, circularity, and biodiversity commitments.

Our values enable adaptation

Market dynamics have changed dramatically in the last year, with enduring uncertainties. This means that we also need to continue adapting to be better equipped to support the long-term growing demand for Stora Enso's renewable products. With our values to "lead" and "do what is right", we will future proof our business and create an even stronger platform for long-term sustainable and profitable growth.

The renewable future grows in the forest.

Annica Bresky
President and CEO

Market dynamics

Global megatrends such as urbanisation, digitalisation, global warming, the replacement of plastics to fiber-based packaging, and eco and brand awareness all underpin Stora Enso's growth opportunities. Regulation promoting a circular economy further supports growth. Stora Enso creates renewable, sustainable and circular products which respond to its customers' need to substitute fossil-based materials, helping combat climate change. The global increased focus on sustainability provides us with several long-term growth opportunities and enables us to lead the green materials transition. There is strong drive to maximise the efficient use of raw materials and to make the value chains circular. This is supported by lifecycle thinking, hand in hand with rising consumer demand for eco-friendly products that enable a reduced carbon footprint. Stora Enso foresees strong, long-term, and accelerating demand for renewable, recyclable and carbon net positive products. The Company sees significant prospects to expand its total addressable market and aim to grow by >5% per year over the cycle.

Stora Enso's strategy

Sustainability is driving Stora Enso's strategy and is a natural part of its business conduct. The Company's forest holding is a real asset which both initiates the integrated value chain and sustainability credentials throughout the whole product line. Stora Enso's products store CO_2, and substitute, replace and displace fossil-based products. The Company creates value by focusing on growing its leading positions in: renewable packaging, sustainable building solutions and biomaterials innovations. It also ensures maximising value creation in the foundation businesses: forest, biomaterials and wood products. Stora Enso helps drive the green revolution by investing in innovation, helping its customers reach their sustainability targets regarding climate impact and circular solutions. Stora Enso drives a performance culture through its business-specific processes to grow profitability long term. Responsible leadership based on a diverse and inclusive culture is a top priority and the strongest driver for performance, company culture and personal well-being.

Events and product update

Restructuring plans to improve long-term competitiveness and profitability

The planned restructuring actions are expected to further strengthen the Group's long-term competitiveness, improve profitability and focus capital allocation in strategic growth markets.

The plans are to permanently close down the Sunila pulp production unit in Finland, the De Hoop containerboard site in the Netherlands, one containerboard line at the Ostrołęka site in Poland, and the Näpi sawmill in Estonia. The Group also intends to divest its wood products DIY (Do It Yourself) unit in the Netherlands. These plans would affect approximately 600 employees.

In addition, Stora Enso has initiated change negotiations regarding a planned reduction of office employees within its Group functions. The plan is a to reduce approximately 300 employees out of approximately 1,300 employees within this scope. The restructuring actions across the Group would result in total reductions of approximately 1,150 employees, including 250 employees in the Packaging Materials division's management and support functions. The independency of the divisions is further enhanced through the increasingly decentralised operating model with leaner Group functions.

The planned restructuring actions would improve operational EBIT by approximately EUR 110 million, while annual sales would decrease by approximately EUR 380 million, based on the 2022 numbers. The conclusion of the planned actions is expected during the second half of 2023.

The pilot plant for Lignode continues operations at Sunila

Stora Enso's strategy for developing biomaterial innovations remains unchanged. The pilot facility for hard carbon-based battery material continues to operate at the Sunila site. The Group also continues to develop other sourcing alternatives, including partnering, for long-term lignin supply, and to investigate competitive locations for the commercial scale up of hard carbon, Lignode, production.

Restructuring of paper assets

The divestment of the Hylte paper production site to Sweden Timber was completed in April.

Stora Enso will permanently close down one of the two paper machines at the Anjala site in Finland during the fourth quarter of 2023.

Growing market share in renewable and circular packaging solutions

The ramp-up of the new, high-tech corrugated packaging second unit at the De Lier site in the Netherlands is proceeding well. The site is the largest and most modern corrugated packaging facility in Europe, producing boxes and trays for fresh produce, horticultural and industrial applications, e-commerce and transport.

Integrating sustainability into funding and financing

The new combined Green and Sustainability-Linked Financing Framework, launched in May, further integrates sustainability into Stora Enso's funding and financing activities. The framework is based on Stora Enso's sustainability agenda and goals, driving the transformation towards a circular bioeconomy.

Fluff pulp investment at Skutskär site

The first step in the investment to enhance operational performance and carbon footprint of fluff pulp production at the Skutskär site was installed during the site's maintenance shutdown.

Increased energy self-sufficiency

The Olkiluoto 3 nuclear power plant started regular electricity production on 16 April 2023, and has been generating electricity as planned. The capacity addition within Stora Enso's part-owned Finnish energy company Pohjolan Voima increases the Group's energy self-sufficiency to 75% from 72% for 2023.

Pulp wood investigation by the EU commission closed

The European Commission announced in June that it had closed its investigation on the wood pulp sector, including Stora Enso.

Events after the quarter

No major events after the quarter to date.

Key sustainability targets and performance

Stora Enso contributes to the circular bioeconomy transition in the three areas in which it has the biggest impact and opportunities: climate change, biodiversity and circularity. The foundation for these is the conduct of everyday business in a responsible manner.

Climate change

Stora Enso's science-based target is to reduce absolute scope 1, 2 and 3 greenhouse gas (CO_2e) emissions by 50% by 2030 from the 2019 base year, in line with the 1.5-degree scenario.

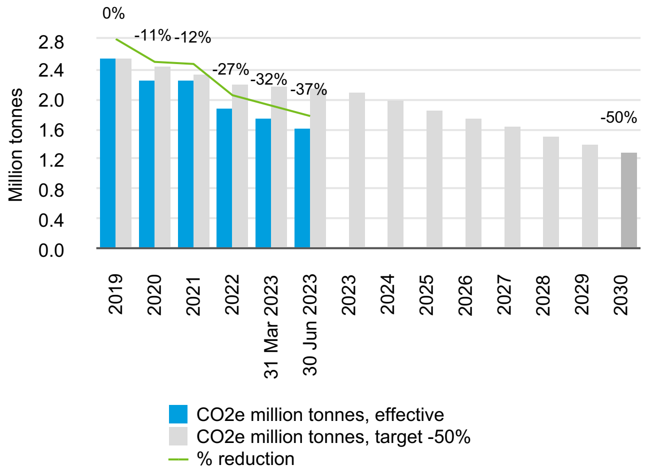
By the end of Q2/2023, the scope 1 and 2 CO_2e emissions were 1.62 million tonnes or 37% less than in the base year. During the quarter, the emissions decreased mainly due to two maintenance shutdowns as well as lower production volumes.

Stora Enso continues to further reduce scope 1 and 2 emissions from operations by investing in energy efficiency, and by increasing the share of clean energy sources. A recent example is the expansion of the De Lier site in the Netherlands where the newly opened unit utilises a variety of sustainable solutions, such as 3.8 MWp of solar panels, covering approximately 25% of the site's total energy use. Residual heat generated by two new corrugators will be used to heat the site's office buildings, further reducing their carbon footprint.

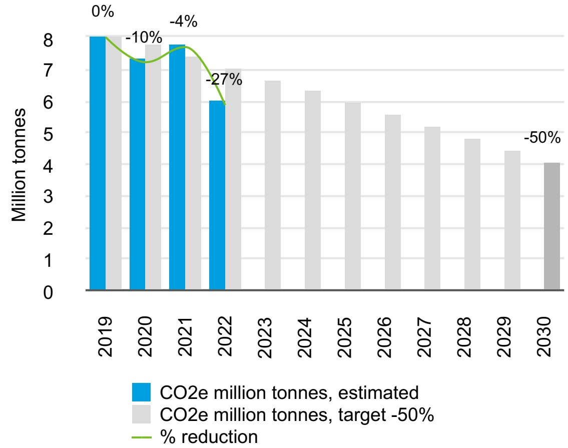
In 2022, Stora Enso's estimated scope 3 CO_2e emissions along the value chain were 6.01 million tonnes or 27% less than in the base year (2021: 7.83 million tonnes or 4% less). The emissions decreased year-on-year due to mill closures and dissolving pulp production.

During 2023, Stora Enso will continue to identify areas where scope 3 emissions could be further reduced. The focus is on supplier engagement and improving the accounting for scope 3 emissions.

Direct and indirect CO_2e emissions (scope 1+2, rolling four quarters)[1 2]



CO_2e emissions along the value chain (scope 3)[1]



[1] Calculated as rolling four quarters. For more on definitions, see *Calculation of key figures*.
[2] Comparative figures recalculated due to structural changes or additional data after previous Interim Reports.

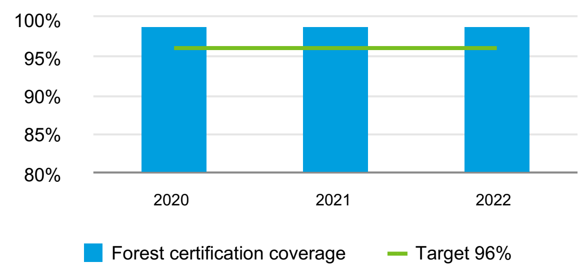
Biodiversity

Stora Enso is committed to achieving a net-positive impact on biodiversity in its own forests and plantations by 2050 through active biodiversity management. The Group steers its biodiversity actions through a Biodiversity Leadership Programme to improve biodiversity on the species, habitat and landscape levels. The actions are guided by science-based targets, and progress is monitored with impact indicators reported on the Group's website.

Stora Enso's new Green and Sustainability-linked Financing Framework is one of the first to include a biodiversity-linked target. The key performance indicator is calculated by measuring birch seedlings planted on the Group's own forest lands in Sweden between 2025 and 2030. Birch is the most ecologically important native broadleaved species in Swedish forests, which are mainly dominated by conifers. The increase in the share of pure birch forest or mixed species forest enhances biodiversity, adapts forests to climate change and ensures long-term forest resilience.

Biodiversity is an integral part of forest certifications including protection of valuable ecosystems. Stora Enso's target is to maintain a forest certification coverage level of at least 96% for the Group's own and leased forest lands. The forest certification coverage has remained stable and amounted to 99% in 2022 (2021: 99%).

Biodiversity: forest certification coverage[1]



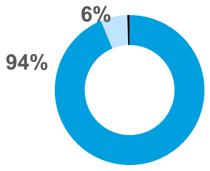
[1] For definitions, see the section *Calculation of key figures*.

Circularity

Stora Enso's target is to reach 100% recyclable products by 2030. By the end of 2022, 94% (2021: 94%) of products, such as paper and packaging products, were recyclable. Stora Enso aims to ensure the recyclability of products through an increased focus on circularity in innovation processes. Stora Enso also collaborates actively with customers and partners to set up infrastructure to improve the actual recycling of its products.

Stora Enso, in collaboration with Blue Ocean Closures and AISA, have developed the first ever paperboard tube with a fiber-based closure. The tube, intended for cosmetics and personal care applications, is composed of Stora Enso's barrier-coated board material. It contains over 85% fiber content, which is the highest proportion available in a tube design. All components of the tube are designed for recycling. The solution is expected to be commercially available in 2024.

Circularity: share of technically recyclable products[1 2]



[1] As of 31 December 2022
[2] For definitions, see the section *Calculation of key figures*.

Responsible business practices

Stora Enso reports on the sustainability indicators below on a quarterly basis. For full annual overview of Stora Enso's sustainability targets and 2022 performance, see storaenso.com.

Key performance indicators (KPIs)	30 Jun 2023	31 Mar 2023	31 Dec 2022	30 Jun 2022	Target
Occupational safety: TRI rate, year-to-date[1]	4.3	5.2	5.9	5.6	4.9 by the end of 2023
Gender balance: % of female managers among all	24%	24%	23%	24%	25% by the end of 2024
Water: total water withdrawal per saleable tonne (m^3/tonne)[2]	60	58	56	54	Decreasing trend from 2016 baseline (60m^3/tonne)
Water: process water discharges per saleable tonne, (m^3/tonne)[1,2]	35	34	34	33	17% reduction by 2030 from 2019 baseline (36m^3/tonne)
Sustainable sourcing: % of supplier spend covered by the Supplier Code of Conduct (SCoC)[1]	96%	96%	96%	96%	95% or above

[1] The figures exclude De Jong Packaging Group. [2] Comparative figures recalculated due to structural changes or additional data after the previous Interim Reports. For definitions, see *Calculation of key figures*.

Stora Enso's safety work comprises proactive safety initiatives and engagement of employees, preventive risk management, investigation of incidents and sharing of findings across divisions. To further reinforce accountability on improving safety performance, the responsibility was transferred to divisions in 2022, aligned with the decentralised operating model.

Stora Enso recognises the importance of a diverse and inclusive working environment to improve performance, collaboration and innovation. In addition to the KPI for gender balance among managers, the Group tracks the share of female representation among all employees quarterly (25% at the end of the second quarter) and within the Group Leadership Team (50% at the end of the second quarter).

Stora Enso applies the WRI Water Aqueduct Tool to assess water-related risks at production sites. The Group does not operate any large industrial assets in water stressed areas. Approximately 96% of water is recycled back into the environment while only approximately 4% is consumed in production processes. The aim is to improve water performance and reduce the intensity of process water discharges through targeted investments combined with continuous improvements. Lower production volumes are currently negatively impacting the performance against set targets.

Stora Enso continuously works to maintain a high coverage rate for the Supplier Code of Conduct, outlining common requirements for all suppliers. The Group adopts sustainable sourcing practices and requires suppliers and business partners to adhere to equal standards.

ESG ratings and recognitions

Stora Enso actively participates in the following ESG assessment schemes:

ESG rating	Stora Enso score	Change vs previous score	Rating compared to peers	Last update
CDP	Climate A- Forest B Water B	Climate and Water unchanged, declined in Forest from A- to B	Clearly above the industry average level	Q4/2022
FTSE Russell	4.4 out of 5.0	Declined from 4.5 to 4.4	Among highest rank in the industry	Q2/2023
ISS Corporate Rating	B / A+	Improved from B- to B	Among highest rank in the industry	Q2/2023
ISS QualityScore	Governance 2* Social 1 Environment 1	Declined in Governance from 1 to 2*	Among highest rank in the industry	Q2/2023
MSCI	AAA / AAA	Unchanged	Among highest rank in the industry	Q3/2022
Sustainalytics	14.7 out of 100**	Improved from 15.8 to 14.7	Among highest rank in the industry	Q2/2023
VigeoEiris* **	73 out of 100	Improved from 68 to 73	Among highest rank in the industry	Q3/2021

* 1 indicating the lowest risk ** 0 indicating the lowest risk *** V.E. part of Moody's ESG solutions

Other

Stora Enso was awarded a platinum level rating by the global sustainability rating organisation EcoVadis for the seventh consecutive year. The Group's total score improved from 79/100 to 82/100.

Second quarter 2023 results (compared with Q2/2022)

Sales YoY	Operational EBIT YoY	Earnings per share
-22%	**-93%**	**EUR -0.29** (Q2/2022: 0.38)

Group sales decreased by 22%, or EUR 681 million, to EUR 2,374 (3,054) million. Lower demand decreased deliveries in all divisions. This was also visible in lower sales prices, especially in Wood Products, Biomaterials and containerboard. The sales contribution from the acquired De Jong Packaging Group was more than offset by the negative impact of other structural changes. These related to the paper site divestments at Nymölla and Hylte in Sweden, and Maxau in Germany, as well as the exit from the Russian operations.

Group operational EBIT decreased by 93%, or EUR 469 million to EUR 37 (505) million and the operational EBIT margin decreased to 1.6% (16.5%). Lower sales prices and mix impact in all divisions except for Forest decreased profitability by EUR 169 million. Lower volumes in all divisions reduced operational profitability by EUR 126 million. Increased variable costs had a negative EUR 206 million impact, mainly due to higher wood costs. Fixed costs decreased by EUR 5 million, despite higher maintenance activity and inflation. Net foreign exchange rates had a positive EUR 26 million impact on operational EBIT. The impact from the structural changes, depreciations, equity accounted investments and other was positive EUR 1 million on operational EBIT.

Fair valuations and non-operational items had a negative net impact on the operating result of EUR 14 (45) million. The impact came mainly from valuation of emission rights.

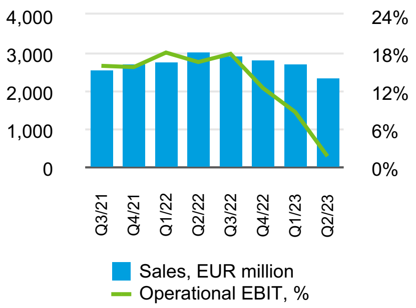
The Group recorded items affecting comparability (IAC) with a negative impact of EUR 276 (61) million on its operating result. The related tax impact was positive EUR 43 (1) million. The IACs relate mainly to the disposal of the Hylte paper site in Sweden and the planned restructuring actions at the Sunila pulp site in Finland, the De Hoop containerboard site in the Netherlands, and planned reduction of employees in Group functions and the Packaging Materials division.

Net financial expenses of EUR 51 million were EUR 22 million higher than a year ago. Net interest expenses of EUR 28 million increased by EUR 1 million. Other net financial expenses were EUR 1 million. 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 22 (0) million.

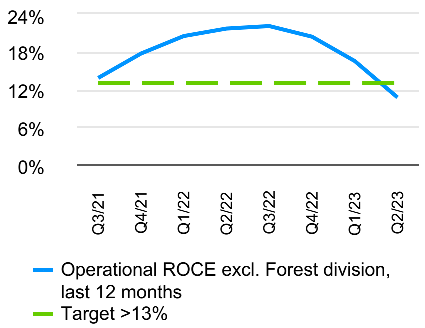
Earnings per share decreased to EUR -0.29 (0.38), and earnings per share excluding fair valuations were EUR -0.27 (0.42).

The operational return on capital employed LTM (ROCE) was 8.1% (14.3%). Operational ROCE excluding the Forest division LTM was 10.7% (21.7%).

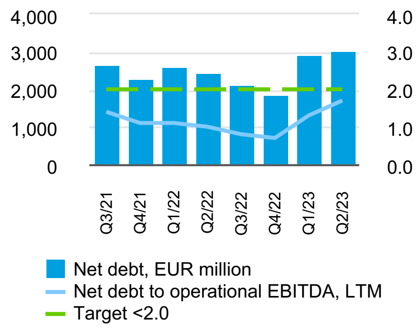
Sales and operational EBIT



Operational ROCE excl. Forest (LTM)



Net debt to operational EBITDA (LTM)



LTM = Last 12 months, the calculation method is explained in the section *Non-IFRS measures*

Breakdown of change in sales

Sales Q2/2022, EUR million	**3,054**
Price and mix	-8%
Currency	0%
Volume	-9%
Other sales[1]	-1%
Total before structural changes	-18%
Structural changes[2]	-4%
Total	-22%
Sales Q2/2023, EUR million	**2,374**

[1] Energy, paper for recycling (PfR), by-products etc.
[2] Asset closures, major investments, divestments and acquisitions

Breakdown of change in capital employed

Capital employed 30 June 2022, EUR million	**13,759**
Capital expenditure excl. investments in biological assets less depreciation	385
Investments in biological assets less depletion of capitalised silviculture costs	4
Impairments and reversal of impairments	-192
Fair valuation of forest assets	215
Unlisted securities (mainly PVO)	-168
Equity accounted investments	244
Net liabilities in defined benefit plans	1
Operative working capital and other interest-free items, net	-23
Emission rights	-93
Net tax liabilities	36
Acquisition of subsidiaries	816
Disposal of subsidiaries	-221
Translation difference	-703
Other changes	-22
Capital employed 30 June 2023	**14,039**

Results January–June 2023 (compared with H1/2022)

Group sales decreased by 13%, or EUR 757 million to EUR 5,095 (5,852) million, mainly due to weaker deliveries. Lower sales prices and negative mix impact decreased the topline further. The sales contribution from the acquired De Jong Packaging Group was more than offset by the negative impact of other structural changes. These related to the paper site divestments at Nymölla and Hylte in Sweden and Maxau in Germany, as well as the exit from the Russian operations.

Operational EBIT decreased by 73% or EUR 737 million to EUR 271 (1,008) million and the operational EBIT margin decreased to 5.3% (17.2%). Clearly higher variable costs, especially for wood, decreased operational EBIT by EUR 485 million. Volumes were EUR 232 million lower due to weaker market demand. Lower sales prices, especially in Wood Products, decreased profitability by EUR 52 million. Fixed costs were EUR 21 million higher mainly due to higher maintenance activity. Net foreign exchange rates increased profitability by EUR 43 million. The impact from the structural changes, equity accounted investments and other, was a positive EUR 11 million on operational EBIT.

Sales

EUR 5,095 million

(H1/2022: 5,852)

Operational EBIT

5.3%

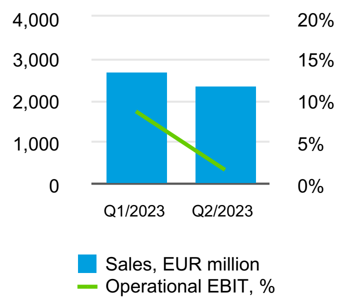
(H1/2022: 17.2%)

Second quarter 2023 results (compared with Q1/2023)

Group sales decreased by 13%, or EUR 348 million, to EUR 2,374 (2,721) million. Sales were negatively impacted by the paper site divestments at Maxau in Germany and Hylte in Sweden. Lower sales prices, especially in Biomaterials and Packaging Materials reduced the topline further.

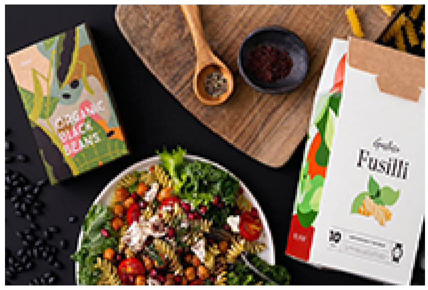
Operational EBIT decreased by EUR 197 million to EUR 37 (234) million and the margin to 1.6% (8.6%). The sales prices were EUR 124 million lower mainly due to lower prices for pulp and packaging materials. Variable costs increased by EUR 31 million, especially due to pulpwood. Lower volumes reduced operational EBIT by EUR 31 million and negative net foreign exchange rates by EUR 9 million. Fixed costs were EUR 6 million lower despite higher maintenance activity. The negative financial impact from structural changes, depreciations, equity accounted investments and other was EUR 8 million.

Sales and operational EBIT



Packaging Materials

- The consumer board market softened further
- The containerboard market stabilised at a low level, inventories were still at a high level. Price erosion continued
- Total variable costs increased due to wood prices, other variable costs decreased from their peak
- Production curtailments to adjust to lower demand



Operational ROOC (LTM)

7.3%

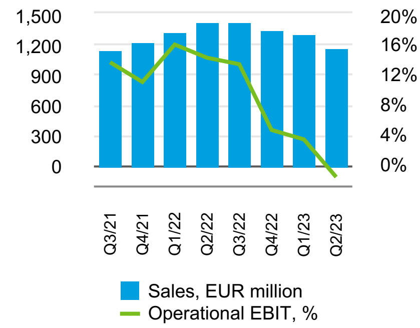
(Target: >20%)

Maintenance shutdowns

	2022	2023
Q1	—	—
Q2	Beihai, Ostrołęka	Beihai, Ostrołęka, Langerbrugge
Q3	Skoghall, Ingerois, Heinola, Oulu, Anjala, Nymölla	Anjala, Heinola, Ingerois, Ostrołęka, Oulu, Varkaus
Q4	Fors, Imatra, Skoghall, Varkaus	Fors, De Hoop, Imatra, Skoghall

- Sales decreased by 19%, or EUR 269 million, to EUR 1,155 million, due to lower containerboard prices and lower volumes for consumer board, partly offset by higher consumer board prices.
- Operational EBIT decreased by EUR 222 million to EUR -22 million. Higher consumer board prices were offset by mainly lower containerboard prices, and also lower volumes and higher wood costs. Total variable costs increased due to wood prices while other variable costs decreased from their peak levels.
- Operational ROOC (LTM) was 7.3% (20.3%), below the long-term target of >20%.

Sales and operational EBIT



EUR million	Q2/23	Q2/22	Change % Q2/23–Q2/22	Q1/23	Change % Q2/23–Q1/23	Q1-Q2/23	Q1-Q2/22	Change % Q1-Q2/23–Q1-Q2/22	2022
Sales	1,155	1,424	-18.9%	1,300	-11.2%	2,455	2,740	-10.4%	5,496
Operational EBITDA	58	285	-79.8%	128	-55.2%	186	579	-67.9%	993
Operational EBITDA margin	5.0%	20.0%		9.9%		7.6%	21.1%		18.1%
Operational EBIT	-22	200	-110.8%	41	-152.4%	20	408	-95.2%	655
Operational EBIT margin	-1.9%	14.1%		3.2%		0.8%	14.9%		11.9%
Operational ROOC, LTM[1]	7.3%	20.3%		13.5%		7.3%	13.5%		18.6%
Cash flow from operations	80	187	-57.4%	-5	n/m	75	352	-78.7%	823
Cash flow after investing activities	-39	116	-133.2%	-157	75.5%	-196	197	-199.4%	488
Board and paper deliveries, 1,000 tonnes	1,286	1,407	-8.6%	1,286	0.0%	2,572	2,787	-7.7%	5,425
Board and paper production, 1,000 tonnes	1,199	1,421	-15.6%	1,290	-7.1%	2,489	2,884	-13.7%	5,502

[1] LTM = Last 12 months

Comparative figures have been restated as described in our release from 29 March 2023

Market development during Q2/2023

Product	Market	Demand Q2/23 compared with Q2/22	Demand Q2/23 compared with Q1/23	Price Q2/23 compared with Q2/22	Price Q2/23 compared with Q1/23
Consumer board	Europe	Significantly weaker	Slightly stronger	Slightly lower	Slightly lower
Kraftliner	Global	Weaker	Stronger	Significantly lower	Significantly lower
Testliner	Europe	Weaker	Stronger	Significantly lower	Significantly lower
Paper	Europe	Significantly weaker	Stable	Higher	Significantly lower

Source: Fastmarket RISI, Fastmarket FOEX, CEPI, Numera Analytics, Stora Enso. Consumer board prices include only FBB.

Packaging Solutions

- Solid result development despite a weak market
- Market conditions stabilised at a low level

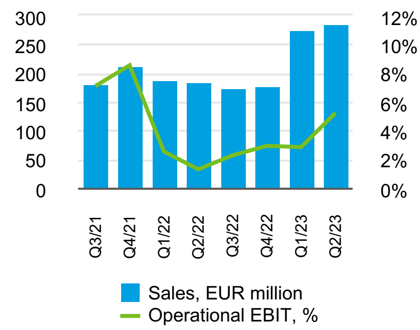
- The acquisition of De Jong Packaging Group and continued business improvement more than offset the weakened market

Operational ROOC (LTM)	Sales YoY	Operational EBIT margin
5.9%	**+55%**	**5.2%**
(Target: >15%)		(Q2/2022: 1.3%)

- Sales increased by 55% or EUR 102 million to EUR 288 million. The acquired De Jong Packaging Group more than offset the impact of the divestment of the Russian operations in Q2/2022. Sales from the Northern and Central-Eastern European businesses decreased slightly due to the soft market. Sales prices in corrugated packaging were lower as a consequence of lower raw material prices in containerboard.

- Operational EBIT increased by EUR 13 million to EUR 15 million, including amortisation of acquired intangibles of EUR 4 million. The acquired De Jong Packaging Group and actions to reduce costs and improve businesses performance, mitigated the impact of the soft market and the divestment of the Russian operations (Q2/2022).
- Operational ROOC (LTM) was 5.9%, below the long-term target of >15%.

Sales and operational EBIT



EUR million	Q2/23	Q2/22	Change % Q2/23–Q2/22	Q1/23	Change % Q2/23–Q1/23	Q1-Q2/23	Q1-Q2/22	Change % Q1-Q2/23–Q1-Q2/22	2022
Sales	288	186	54.8%	276	4.2%	564	374	50.5%	727
Operational EBITDA	32	9	243.3%	24	34.0%	56	21	170.8%	42
Operational EBITDA margin	11.1%	5.0%		8.6%		9.9%	5.5%		5.7%
Operational EBIT	15	2	n/m	8	91.7%	23	7	219.4%	16
Operational EBIT margin	5.2%	1.3%		2.8%		4.0%	1.9%		2.2%
Operational ROOC, LTM[1]	5.9%	18.0%		5.2%		5.9%	5.2%		7.9%
Cash flow from operations	39	3	n/m	19	104.1%	58	(1)	n/m	11
Cash flow after investing activities	22	-2	n/m	-7	n/m	15	(12)	226.3%	-14
Corrugated packaging European deliveries, million m^2	344	202	69.9%	307	11.8%	651	434	50.0%	772
Corrugated packaging European production, million m^2	273	203	34.3%	290	-5.8%	562	439	28.2%	771

[1] LTM = Last 12 months
Comparative figures have been restated as described in our release from 29 March 2023

Market development during Q2/2023

Product	Market	Demand Q2/23 compared with Q2/22	Demand Q2/23 compared with Q1/23	Price Q2/23 compared with Q2/22	Price Q2/23 compared with Q1/23
Corrugated packaging	Europe	Weaker	Stronger	Slightly lower	Lower

Source: Fastmarket RISI

Biomaterials

- Challenging conditions with continued low demand and new capacity entering the global pulp markets
- Global pulp inventories continued at a level above the 5-year average
- The record speed of decline in market pulp prices and lower deliveries pressured sales and margins
- Market-related curtailments, annual maintenance shutdowns and high wood costs significantly impacted the result

Operational ROOC (LTM)

19.1%

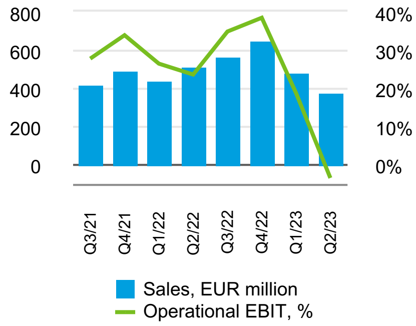
(Target: >15%)

Maintenance shutdowns

	2022	2023
Q1	Montes del Plata	Veracel
Q2	Enocell	Montes del Plata, Skutskär
Q3	Sunila	Sunila
Q4	—	Enocell

- Sales decreased by 27%, or EUR 143 million to EUR 379 million. The record decline in market pulp prices and lower deliveries due to softening market, impacted sales negatively. Curtailments and production losses due to maintenance negatively impacted sales volumes.
- Operational EBIT decreased by 111%, or EUR 136 million, to EUR -13 million, due to lower sales prices and volumes as well as higher maintenance and wood costs.
- The Montes del Plata site in Uruguay and the Skutskär site in Sweden had planned major annual maintenance shutdowns followed by challenging start increasing the maintenance impact.
- Operational ROOC (LTM) was 19.1%, above the long-term target of >15%.

Sales and operational EBIT



EUR million	Q2/23	Q2/22	Change % Q2/23–Q2/22	Q1/23	Change % Q2/23–Q1/23	Q1-Q2/23	Q1-Q2/22	Change % Q1-Q2/23–Q1-Q2/22	2022
Sales	379	522	-27.4%	488	-22.3%	868	964	-10.0%	2,180
Operational EBITDA	22	155	-85.6%	125	-82.2%	148	304	-51.5%	822
Operational EBITDA margin	5.9%	29.8%		25.7%		17.0%	31.6%		37.7%
Operational EBIT	-13	123	-110.6%	91	-114.3%	78	240	-67.3%	687
Operational EBIT margin	-3.4%	23.6%		18.7%		9.0%	24.9%		31.5%
Operational ROOC, LTM[1]	19.1%	20.7%		24.0%		19.1%	20.7%		25.3%
Cash flow from operations	96	145	-34.0%	192	-50.0%	288	281	2.3%	682
Cash flow after investing activities	42	114	-63.2%	140	-69.9%	182	212	-14.0%	536
Pulp deliveries, 1,000 tonnes	550	639	-13.9%	580	-5.3%	1,130	1,250	-9.6%	2,554

[1] LTM = Last 12 months

Market development during Q2/2023

Product	Market	Demand Q2/23 compared with Q2/22	Demand Q2/23 compared with Q1/23	Price Q2/23 compared with Q2/22	Price Q2/23 compared with Q1/23
Softwood pulp	Europe	Significantly weaker	Stable	Lower	Lower
Hardwood pulp	Europe	Weaker	Stable	Significantly lower	Significantly lower
Hardwood pulp	China	Slightly weaker	Slightly stronger	Significantly lower	Significantly lower

Source: PPPC, Fastmarket FOEX, Fastmarket RISI, Stora Enso

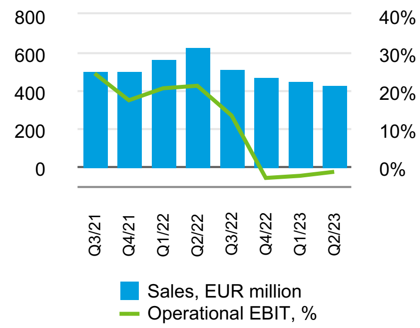
Wood Products

- After last year's record strong market, demand for sawn wood was significantly weaker
- The results were impacted by lower sawn wood prices, lower volumes and continued high raw material costs
- Construction activity in the division's main markets remains low and is negatively impacted by fewer building permits and projects

Operational ROOC (LTM)	Sales YoY	Operational EBIT margin
5.6%	**-31%**	**-1.3%**
(Target: >20%)		(Q2/2022: 21.3%)

- Sales decreased by 31%, or EUR 195 million, to EUR 436 million, mainly impacted by lower sales prices and volumes, especially for sawn wood.
- Operational EBIT decreased by EUR 140 million to EUR -6 million, affected by lower prices and volumes.
- Operational ROOC (LTM) was below the long-term target of >20% at 5.6% (68.3%).

Sales and operational EBIT



EUR million	Q2/23	Q2/22	Change % Q2/23–Q2/22	Q1/23	Change % Q2/23–Q1/23	Q1-Q2/23	Q1-Q2/22	Change % Q1-Q2/23–Q1-Q2/22	2022
Sales	436	631	-30.9%	454	-4.0%	890	1,204	-26.1%	2,195
Operational EBITDA	7	146	-95.5%	2	n/m	8	275	-97.0%	356
Operational EBITDA margin	1.5%	23.1%		0.3%		0.9%	22.9%		16.2%
Operational EBIT	-6	134	-104.2%	-11	47.3%	-16	252	-106.4%	309
Operational EBIT margin	-1.3%	21.3%		-2.3%		-1.8%	21.0%		14.1%
Operational ROOC, LTM[1]	5.6%	68.3%		24.9%		5.6%	68.3%		43.2%
Cash flow from operations	-13	141	-109.2%	3	n/m	-10	219	-104.5%	346
Cash flow after investing activities	-19	124	-115.4%	-8	-143.4%	-27	179	-115.0%	264
Wood products deliveries, 1,000 m^3	989	1,123	-11.9%	1,001	-1.2%	1,990	2,300	-13.5%	4,235

[1] LTM = Last 12 months

Market development during Q2/2023

Product	Market	Demand Q2/23 compared with Q2/22	Demand Q2/23 compared with Q1/23	Price Q2/23 compared with Q2/22	Price Q2/23 compared with Q1/23
Wood products	Europe	Significantly weaker	Weaker	Significantly lower	Slightly higher
Wood products	Overseas	Slightly weaker	Slightly stronger	Significantly lower	Significantly higher

Source: Stora Enso

Forest

- Record-high operational EBIT for a second quarter
- Stable strong performance continues, market wood prices remained high
- Stable forest valuation of EUR 8.1 billion, equivalent to EUR 10.23 per share, impacted by changes in currency exchange rates
- The wood market in the Baltics and Nordics remained tight due to high industrial and energy wood demand and lack of Russian wood imports
- Flexible use of the Group's own forests and efficient wood sourcing continued to secure reliable wood availability

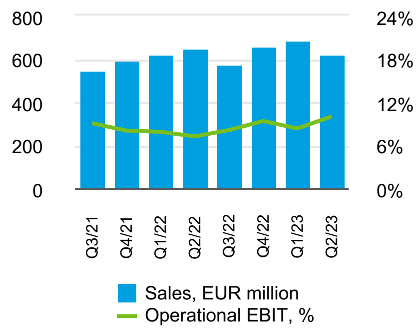
Operational ROCE (LTM)
4.1%
(Target: >3.5%)

Total value of forest assets
EUR 8.1 billion
(Q2/2022: EUR 8.2 billion)

Sales YoY
-4%

- Sales decreased by 4%, or EUR 29 million, to EUR 620 million, caused by lower demand. Wood prices remained high due to tight wood markets.
- A record-high second quarter operational EBIT of EUR 62 million was driven by a stable and strong operational performance in the Group's own forest assets and in the wood supply operations.
- Operational ROCE (LTM), at 4.1% (3.6%), was above the 3.5% long-term target.

Sales and operational EBIT



EUR million	Q2/23	Q2/22	Change % Q2/23–Q2/22	Q1/23	Change % Q2/23–Q1/23	Q1-Q2/23	Q1-Q2/22	Change % Q1-Q2/23–Q1-Q2/22	2022
Sales[1]	620	649	-4.5%	687	-9.6%	1,307	1,275	2.5%	2,519
Operational EBITDA	75	59	27.7%	68	10.9%	143	117	22.0%	256
Operational EBITDA margin	12.1%	9.1%		9.9%		10.9%	9.2%		10.2%
Operational EBIT	62	47	32.5%	57	8.5%	119	96	24.3%	204
Operational EBIT margin	10.0%	7.2%		8.3%		9.1%	7.5%		8.1%
Operational ROCE, LTM[2]	4.1%	3.6%		3.8%		4.1%	3.6%		3.7%
Cash flow from operations	8	23	-63.5%	20	-59.0%	28	67	-57.9%	146
Cash flow after investing activities	-5	11	-146.3%	9	-154.0%	4	45	-90.7%	91
Wood deliveries, 1,000 m^3	8,256	10,491	-21.3%	9,227	-10.5%	17,483	20,715	-15.6%	38,217
Operational fair value change of biological assets	29	20	46.2%	29	-0.7%	59	42	38.7%	87

[1] In Q2/2023, internal wood sales to Stora Enso's divisions represented 58% of net sales and external sales to other forest companies represented 42%.
[2] LTM = Last 12 months

Segment Other

The segment Other includes the divested paper sites until the completion of the divestments, the reporting of the emerging businesses (including Formed Fiber, Circular Solutions (biocomposites), and Selfly Stores), as well as Stora Enso's shareholding in the energy company Pohjolan Voima (PVO), and the Group's shared services and administration.

EUR million	Q2/23	Q2/22	Change % Q2/23–Q2/22	Q1/23	Change % Q2/23–Q1/23	Q1-Q2/23	Q1-Q2/22	Change % Q1-Q2/23–Q1-Q2/22	2022
Sales	213	568	-62.4%	364	-41.5%	578	1,048	-44.9%	2,150
Operational EBITDA	-5	23	-119.7%	31	-114.7%	27	44	-39.6%	102
Operational EBITDA margin	-2.2%	4.1%		8.6%		4.6%	4.2%		4.7%
Operational EBIT	-9	14	-166.3%	27	-134.7%	17	20	-14.4%	63
Operational EBIT margin	-4.3%	2.4%		7.3%		3.0%	1.9%		2.9%
Cash flow from operations	-64	-95	33.4%	25	n/m	-38	-113	66.0%	-136
Cash flow after investing activities	-71	-116	38.7%	23	n/m	-48	-150	68.3%	-203

Comparative figures have been restated as described in our release from 29 March 2023

- Sales decreased by EUR 355 million to EUR 213 million caused by the paper site divestments at Nymölla and Hylte in Sweden, and Maxau in Germany.
- Operational EBIT decreased by EUR 23 million to EUR -9 million, negatively impacted by paper site divestments.
- The divisions are charged for electricity at market prices. Through its 15.7% shareholding in the Finnish energy company Pohjolan Voima (PVO), Stora Enso is entitled to receive, at cost, 8.9% of the electricity produced by the Olkiluoto nuclear reactors, and 20.6% of the electricity from the hydropower plants. The new nuclear power reactor Olkiluoto 3 started regular electricity production on 16 April 2023.

Capital structure in the second quarter of 2023 (compared with Q1/2023)

EUR million	30 Jun 2023	31 Mar 2023	31 Dec 2022	30 Jun 2022
Operative fixed assets[1]	13,803	14,503	14,368	13,891
Equity accounted investments	850	820	832	608
Operative working capital, net	893	949	862	936
Non-current interest-free items, net	-198	-211	-255	-243
Operating Capital Total	**15,348**	**16,061**	**15,806**	**15,192**
Net tax liabilities	-1,309	-1,488	-1,451	-1,433
Capital Employed[2]	**14,039**	**14,573**	**14,356**	**13,759**
Equity attributable to owners of the Parent	11,066	11,688	12,532	11,350
Non-controlling interests	-58	-31	-30	-25
Net debt	3,030	2,917	1,853	2,434
Financing Total[2]	**14,039**	**14,573**	**14,356**	**13,759**

[1] Operative fixed assets include goodwill, other intangible assets, property, plant and equipment, right-of-use assets, forest assets, emission rights, and unlisted securities.
[2] Including assets held for sale and related liabilities.

Cash and cash equivalents net of overdrafts increased by EUR 709 million to EUR 1,947 million.

Net debt increased by EUR 114 million to EUR 3,030 (2,917) million during the second quarter. The ratio of net debt to the last 12 months' operational EBITDA was at 1.7 (1.3). The net debt/equity ratio on 30 June 2023 increased to 0.27 (0.25). The average interest expense rate on borrowings at the reporting date was 3.5% (3.5%).

During the second quarter Stora Enso issued two EUR 500 million green bonds with 3 and 6.25-year maturities. The Company also re-financed a total of EUR 450 million of its bilateral loans and committed credit facility, with original maturity in the fourth quarter of 2023. Existing loans were extended by one to two years and new terms also include extension options. A new EUR 100 million bilateral loan was signed with 1.5-year maturity and 1-year extension option. The loan was undrawn at the end of the second quarter.

Stora Enso had in total EUR 800 million committed fully undrawn credit facilities as per 30 June 2023. Additionally, the Company has access to EUR 1,100 million statutory pension premium loans in Finland.

Valuation of forest assets

The value of total forest assets, including leased land and Stora Enso's share of Tornator's forest assets, decreased by EUR 204 million to EUR 8,065 (8,269) million. The decrease is mainly caused by foreign exchange impact, whereas acquisitions and forest valuation updates increased the forest asset value. The fair value of biological assets, including Stora Enso's share of Tornator, decreased by EUR 122 million to EUR 5,507 (5,629) million. The value of forest land, including leased land and Stora Enso's share of Tornator, decreased by EUR 82 million to EUR 2,558 (2,640) million.

Credit ratings

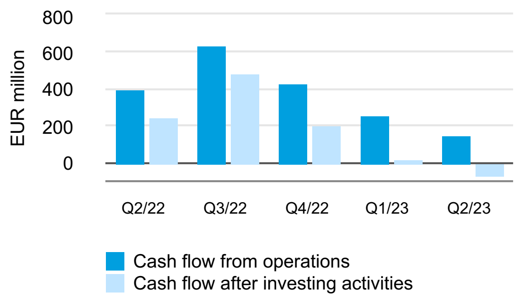
Rating agency	Long/short-term rating	Valid from
Fitch Ratings	BBB- (positive)	9 March 2023
Moody's	Baa3 (positive) / P-3	10 February 2023

Cash flow in the second quarter of 2023 (compared with Q1/2023)

Operative cash flow

EUR million	Q2/23	Q2/22	Change % Q2/23–Q2/22	Q1/23	Change % Q2/23–Q1/23	Q1-Q2/23	Q1-Q2/22	Change % Q1-Q2/23–Q1-Q2/22	2022
Operational EBITDA	198	663	-70.1%	399	-50.3%	597	1,325	-54.9%	2,529
IAC on operational EBITDA	-141	-60	-134.8%	32	n/m	-109	-121	10.3%	-133
Other adjustments	-25	27	-191.3%	-57	56.2%	-82	40	n/m	-62
Change in working capital	113	-227	150.0%	-120	194.5%	-7	-438	98.5%	-461
Cash flow from operations	**146**	**404**	**-63.8%**	**254**	**-42.5%**	**400**	**806**	**-50.4%**	**1,873**
Cash spent on fixed and biological assets	-214	-153	-39.7%	-253	15.5%	-468	-330	-41.7%	-705
Acquisitions of equity accounted investments	-2	-3	52.0%	0	-100.0%	-2	-5	69.7%	-7
Cash flow after investing activities	**-70**	**247**	**-128.2%**	**1**	**n/m**	**-69**	**471**	**-114.6%**	**1,162**

Cash flow after investing activities was EUR -70 (1) million. Working capital decreased by EUR 113 million, mainly due to lower trade receivables and inventories, and was partly offset by lower trade payables. Cash spent on fixed and biological assets was EUR 214 million. Payments related to the previously announced provisions amounted to EUR 12 million.



Capital expenditure in the second quarter of 2023 (compared with Q2/2022)

Additions to fixed and biological assets totalled EUR 232 (161) million, of which EUR 213 (139) million were fixed assets and EUR 19 (22) million biological assets.

Depreciations and impairment charges excluding IACs totalled EUR 135 (131) million. Additions in fixed and biological assets had a cash outflow impact of EUR 214 (153) million.

Capital expenditure by division

EUR million	Q2/23	Q1-Q2/23		Investment to be finalised
Packaging Materials	144	227	Oulu consumer board investment in Finland Board machine 8 capacity increase at Skoghall in Sweden	2025 2024
Packaging Solutions	16	104	De Jong Packaging Group's De Lier site expansion in the Netherlands	2023
Biomaterials	58	100	Skutskär bleach plant upgrade in Sweden Enocell unbleached kraft pulp (UKP) and energy investment in Finland	2024 2023
Wood Products	7	14		n/a
Forest	5	10		n/a
Other	2	7		n/a
Total	**232**	**462**		

Capital expenditure and depreciation forecast 2023

EUR million	Forecast 2023
Capital expenditure	1,100–1,200
Depreciation and depletion of capitalised silviculture costs	610–650

Stora Enso's capital expenditure forecast includes approximately EUR 75 million for the Group's forest assets.

The depletion of capitalised silviculture costs is forecast to be EUR 70–80 million.

Short-term risks

Risk 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.

The sanctions on Russia, retaliatory measures as well as conflict-related risks to people, operations, trade credit, cyber security, supply, and demand, could all have an adverse impact on the Group.

The risk of a prolonged global economic downturn and recession, as well as sudden interest rate increases, currency fluctuations, and trade unions strike action could all adversely affect the Group's profits, cash flow and financial position, as well as access to material and transport.

The challenging and rapidly changing macroeconomics and geopolitical disruption may increase cost, complexity and lowering short-term visibility. A slow market recovery might further impact market demand, prices and volumes of the Company's products. A long lasting low consumer confidence can impact negatively on demand for the Company's products and affect earnings negatively. New capacity and volume entering the market might distort volumes, inventories and pricing with the risk of deepening margin squeeze. Forced capacity cuts might further impact on profitability.

There is a risk of continued high cost inflation and high interest rates along with increased price volatility for raw materials such as wood, chemicals, other components and energy in Europe, and continued logistical disruptions across the markets. The continued tight wood market could cause increased costs, limit harvesting and cause disruptions such as delays and/or lack of wood supply to the Group's production sites.

Regulatory or similar initiatives might challenge the Group's strategy, growth and operations.

Other risks and uncertainties include, but are not limited to; general industry conditions, unanticipated expenditures related to the cost of compliance with existing and new environmental and other governmental regulations, and related to actual or potential litigation; material process disruption at one of Stora Enso's manufacturing facilities with operational or environmental impacts; risks inherent in conducting business through joint ventures; and other factors that can be found in Stora Enso's press releases and disclosures.

Stora Enso has been granted various investment subsidies and has given certain investment commitments in several countries e.g. Finland, China and Sweden. If commitments to 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 adverse financial impact on Stora Enso.

A more detailed description of risks is included in Stora Enso's Annual Report 2022, available at storaenso.com/annualreport.

Sensitivity analysis

Energy sensitivity analysis: the direct effect of a 10% change in electricity and fossil fuel market prices would have an impact of approximately EUR 15 million on operational EBIT for the next 12 months.

Wood sensitivity analysis: the direct effect of a 10% change in wood prices would have an impact of approximately EUR 203 million on operational EBIT for the next 12 months.

Pulp sensitivity analysis: the direct effect of a 10% change in pulp market prices would have an impact of approximately EUR 120 million on operational EBIT for the next 12 months.

Chemical and filler sensitivity analysis: the direct effect of a 10% change in chemical and filler prices would have an impact of approximately EUR 53 million on operational EBIT for the next 12 months.

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 90 million, negative EUR 6 million and positive EUR 14 million annual impact, respectively. Weakening of the currencies would have the opposite impact. These numbers are net 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 164 million expense exposure in Brazilian real (BRL) and approximately EUR 77 million income exposure in Chinese Renminbi (CNY). These exposures arise 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 16 million and a positive EUR 8 million impact on operational EBIT, respectively.

Changes in Group management

Micaela Thorström was appointed EVP Legal and General Counsel and a member of the Group Leadership Team as of 1 April 2023.

René Hansen left his position as EVP Brand and Communications in May 2023. Katariina Kravi, Executive Vice President, People and Culture is taking on the role as acting Head of Brand and Communications.

Legal proceedings

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 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.

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 4) 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.

Decisions by the Annual General Meeting

Stora Enso Oyj's Annual General Meeting was held on 16 March 2023 in Helsinki, Finland. The AGM adopted the accounts for 2022, reviewed the Remuneration Report 2022 and granted the Company's Board of Directors and Chief Executive Officer discharge from liability for the period.

The AGM approved the proposal by the Board of Directors that the Company distribute a dividend of EUR 0.60 per share for the year 2022. The dividend was paid on 27 March 2023.

The AGM approved the proposal by the Shareholders' Nomination Board that the current members of the Board of Directors – Håkan Buskhe, Elisabeth Fleuriot, Helena Hedblom, Kari Jordan, Christiane Kuehne, Antti Mäkinen, Richard Nilsson and Hans Sohlström – were re-elected members of the Board of Directors until the end of the following AGM and that Astrid Hermann was elected new member of the Board of Directors for the same term of office. The AGM elected Kari Jordan as Chair of the Board of Directors and Håkan Buskhe as Vice Chair of the Board of Directors.

The AGM approved the proposal that PricewaterhouseCoopers Oy be elected as auditor until the end of the following AGM. PricewaterhouseCoopers Oy has notified the company that Samuli Perälä, APA, will act as the responsible auditor.

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

The AGM approved the annual remuneration for the Board of Directors as follows:

Chair	EUR 209,000 (2022: 203,000)
Vice Chair	EUR 118,000 (2022: 115,000)
Members	EUR 81,000 (2022: 79,000)

The AGM approved the proposal by the Shareholders' Nomination Board that the annual remuneration for the members of the Board of Directors, be paid in Company shares and cash so that 40% will be paid in Stora Enso R shares to be purchased on the Board members' behalf from the market at a price determined in public trading, and the rest in cash.

The AGM approved the proposed annual remuneration for the Board committees.

The AGM approved the amendment of Stora Enso's Articles of Association to enable arranging a General Meeting of Shareholders as a virtual meeting without a meeting venue as an alternative for a physical meeting or a hybrid meeting.

Decisions by the Board of Directors

At its meeting held after the AGM, Stora Enso's Board of Directors elected Richard Nilsson (Chair), Elisabeth Fleuriot and Astrid Hermann as members of the Financial and Audit Committee.

Kari Jordan (Chair), Håkan Buskhe and Antti Mäkinen were elected members of the People and Culture Committee.

Christiane Kuehne (Chair), Helena Hedblom and Hans Sohlström were elected members of the Sustainability and Ethics Committee.

This report has been prepared in English, Finnish, and Swedish. If there are any variations in the content between the versions, the English version shall govern. This report is unaudited.

Helsinki, 21 July 2023
Stora Enso Oyj
Board of Directors

Financials

Basis of Preparation

This unaudited interim financial report has been prepared in accordance with the accounting policies set out in International Accounting Standard 34 on Interim Financial Reporting and in the Group's Financial Report for 2022 with the exception of new and amended standards applied to the annual periods beginning on 1 January 2023 and changes in accounting principles described below.

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

Changes in segment reporting

Due to the divestments and reorganisation of retained Paper division operations, Stora Enso's segment reporting was changed as of 1 January 2023. The Paper division was discontinued and not reported as a separate segment from 1 January 2023 onwards. The Maxau, Nymölla and Hylte sites together with all previously sold and closed sites are reported as part of segment Other. The retained sites Langerbrugge and Anjala are reported as part of the Packaging Materials division.

As of 1 January 2023, emerging business related units in the Packaging Solutions division were moved to segment Other. These units include Formed Fiber, Circular Solutions (biocomposites) and Selfly Stores.

Comparative figures have been restated accordingly. As of 1 January 2023, the reportable segments are Packaging Materials, Packaging Solutions, Biomaterials, Wood Products, Forest, and segment Other.

Acquisition of Group companies – De Jong Packaging Group

In September 2022, Stora Enso signed an agreement to acquire De Jong Packaging Group and the transaction was completed at the beginning of January 2023. De Jong Packaging Group is based in the Netherlands and is one of the largest corrugated packaging producers in the Benelux countries. De Jong Packaging Group is also active in containerboard production through the acquisition of the De Hoop mill in the Netherlands in 2021. De Jong Packaging Group has 16 sites in the Netherlands, Belgium, Germany and the UK and employs approximately 1,300 people. The acquisition will advance Stora Enso's strategic direction, increase its corrugated packaging capacity, accelerate revenue growth and build market share in renewable packaging in Europe. De Jong Packaging Group's product portfolio and geographic presence will complement and enhance Stora Enso's offering. The acquisition is expected to generate synergies over the cycle, mainly through sourcing, containerboard integration optimisation and commercial opportunities.

The shares of the acquired companies are mainly 100% owned, with certain units having minor non-controlling interests. The non-controlling interest is measured on basis of the proportionate share of the identifiable net assets.

The preliminary cash purchase consideration was EUR 612 million, excluding a contingent earn-out component. The maximum amount of the earn-out component is EUR 45 million. It will be settled in cash in 2024 and it is subject to De Jong Packaging Group achieving certain earnings thresholds. The contingent consideration is measured at its fair value and estimated at EUR 0 million on the date of acquisition. The final purchase price is subject to customary purchase price adjustments.

The fair values of the identifiable assets and liabilities as of the acquisition date are presented in the table below.

EUR million	Q2/2023
Net assets acquired	
Cash and cash equivalents	27
Property, plant and equipment	200
Intangible assets	222
Right-of-use assets	99
Working capital	14
Tax assets and liabilities	-63
Interest-bearing assets and liabilities	-232
Fair value of net assets acquired	**266**
Purchase consideration, cash part	612
Purchase consideration, contingent	0
Total purchase consideration	**612**
Fair value of net assets acquired	-266
Non-controlling interest	2
Goodwill	**348**
Cash outflow on acquisitions	-612
Cash and cash equivalents of acquired subsidiaries	27
Cash flow on acquisition, net of acquired cash	**-584**

The fair values of the acquired assets, liabilities and goodwill as on the acquisition date have been determined on a provisional basis pending finalisation of the post-combination review of the fair values. If new information obtained within one year of the date of acquisition about facts and circumstances that existed at the date of acquisition, or any other adjustment items, are identified, the above amounts and the accounting for the acquisition will be adjusted. Measurement period adjustments in Q2 2023 include decrease of EUR 24 million in property, plant and equipment, an increase of EUR 3 million in intangible assets, a decrease of EUR 5 million in right-of-use assets, a decrease of EUR 7 million in tax liabilities, and an increase of EUR 20 million in goodwill. The provisional goodwill represents the expected synergies, mainly through sourcing, containerboard integration optimisation and commercial opportunities. The goodwill is allocated to the divisions benefiting from the acquisition, Packaging Solutions and Packaging Materials. None of the goodwill recognised is expected to be deductible for tax purposes.

For Q1–Q2/2023, De Jong Packaging Group contributed sales of EUR 330 million and an IFRS net loss of EUR 73 million to the Group's results, which includes restructuring related impairment and provision charges with approximately EUR -57 million net result impact. The acquired units are included in Stora Enso Group's consolidated sales and net result from the beginning of 2023. The related transaction costs amounted to EUR 6 million and are presented in other operating expenses. The acquired units are reported in the Packaging Solutions and Packaging Materials divisions.

Disposal of Group companies

In Q2/2023 Stora Enso completed the transaction for the Hylte paper site in Sweden. The following table reflects the net assets of the companies sold in 2023, including disposal consideration.

EUR million	Q1-Q2/23	Q1-Q2/22
Net assets sold		
Cash and cash equivalents	26	38
Property, plant and equipment	258	3
Intangible assets	60	0
Working capital	-11	5
Tax assets and liabilities	-26	1
Interest-bearing assets and liabilities	-82	0
Net assets in disposed companies	**225**	**47**
Total disposal consideration	**256**	**33**

Assets held for sale

Assets are classified as held for sale, if their carrying amounts will be recovered mainly through a sale transaction rather than through continuing use. The assets must be available for immediate sale in their present condition subject only to terms that are usual and customary for the sale of such assets. In addition, the sale must be highly probable and expected to be completed within one year after the date of classification.

These assets and related liabilities are presented separately in the consolidated statement of financial position and are measured at the lower of the carrying amount and fair value less costs to sell. Comparative information is not restated. Assets classified as held for sale are not depreciated.

There were no assets held for sale at the end of Q2/2023.

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 result excluding items affecting comparability (IAC) and fair valuations from the segments and Stora Enso's share of the operating result 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 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. Non-operational fair value changes of biological assets reflect changes made to valuation assumptions and parameters. Operational fair value changes of biological assets contain all other fair value changes, mainly due to inflation and differences in actual harvesting levels compared to the harvesting plan. The adjustments for differences between fair value and acquisition cost of forest assets upon disposal are a result of the fact that the cumulative non-operational fair valuation changes of disposed forest assets were included in previous periods in IFRS operating result (biological assets) and other comprehensive income (forest land) and are included in operational EBIT only at the disposal date.

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.

Capital expenditure on fixed assets includes investments in and acquisitions of tangible and intangible assets as well as internally generated assets and capitalised borrowing costs, net of any related subsidies. Capital expenditure on leased assets includes new capitalised leasing contracts. Capital expenditure on biological assets consists of acquisitions of biological assets and capitalisation of costs directly linked to growing trees in plantation forests. The cash flow impact of capital expenditure is presented in cash flow from investing activities, excluding lease capex, where the cash flow impact is based on paid lease liabilities and presented in cash flow from financing and operating activities.

Changes in the calculation of operational ROCE and ROOC

Presenting return measures based on the last 12 months is an effective way to analyse the most recent financial data on an annualised basis and is considered more suitable for tracking the development of long-term targets.

From Q1/2023 onwards, Stora Enso will present the operational return on capital employed (operational ROCE) based on the last 12 months prior to the end of the reporting period. This is calculated by dividing the operational EBIT of the last 12 months with the average capital employed. The average capital employed for the last 12 months is determined as the average of the published capital employed of the last five quarter-ends.

Similarly, the return on operating capital (operational ROOC) for the divisions and the return on equity (ROE) for the Group will be based on the last 12 months prior to the end of the reporting period.

The presentation of operational ROCE, operational ROOC and ROE based on quarter or year-to-date figures will be discontinued.

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

The following new and amended standards are applied to the annual periods beginning on 1 January 2023

- Amended standards and interpretations did not have material effect on the Group.

Future standard changes endorsed by the EU but not yet effective in 2023

- No future standard changes endorsed by the EU which would have material effect on the Group.

Condensed consolidated income statement

EUR million	Q2/23	Q2/22	Q1/23	Q1-Q2/23	Q1-Q2/22	2022
Sales	**2,374**	**3,054**	**2,721**	**5,095**	**5,852**	**11,680**
Other operating income	87	80	147	234	168	326
Change in inventories of finished goods and WIP	-74	92	22	-51	181	258
Materials and services	-1,569	-1,831	-1,739	-3,308	-3,514	-6,979
Freight and sales commissions	-230	-298	-259	-490	-543	-1,148
Personnel expenses	-344	-355	-328	-672	-679	-1,315
Other operating expenses	-260	-174	-161	-421	-309	-594
Share of results of equity accounted investments	28	28	11	39	48	221
Change in net value of biological assets	5	-64	0	4	-76	195
Depreciation, amortisation and impairment charges	-270	-132	-156	-425	-336	-635
Operating result	**-253**	**399**	**258**	**5**	**793**	**2,009**
Net financial items	-51	-29	-29	-81	-48	-151
Result before tax	**-304**	**370**	**228**	**-76**	**745**	**1,858**
Income tax	47	-71	-43	4	-159	-322
Net result for the period	**-257**	**299**	**185**	**-72**	**586**	**1,536**
Attributable to						
Owners of the Parent	-226	303	189	-37	592	1,550
Non-controlling interests	-31	-4	-4	-35	-6	-13
Net result for the period	**-257**	**299**	**185**	**-72**	**586**	**1,536**
Earnings per share						
Basic earnings per share, EUR	-0.29	0.38	0.24	-0.05	0.75	1.97
Diluted earnings per share, EUR	-0.29	0.38	0.24	-0.05	0.75	1.96

Consolidated statement of comprehensive income

EUR million	Q2/23	Q2/22	Q1/23	Q1-Q2/23	Q1-Q2/22	2022
Net result for the period	**-257**	**299**	**185**	**-72**	**586**	**1,536**
Other comprehensive income (OCI)						
Items that will not be reclassified to profit and loss						
Equity instruments at fair value through OCI	-262	-98	-469	-731	-30	519
Actuarial gains and losses on defined benefit plans	14	107	3	17	184	147
Revaluation of forest land	18	414	0	17	414	259
Share of OCI of Equity accounted investments (EAI)	1	0	0	1	-1	58
Income tax relating to items that will not be reclassified	5	-98	-8	-3	-108	-77
	-225	**325**	**-474**	**-699**	**460**	**906**
Items that may be reclassified subsequently to profit and loss						
Cumulative translation adjustment (CTA)	-128	15	-66	-194	40	-197
Net investment hedges and loans	-23	-14	-1	-25	-12	-27
Cash flow hedges and cost of hedging	-25	-12	-9	-35	20	52
Share of OCI of Non-controlling Interests (NCI)	4	-1	0	4	-2	0
Income tax relating to items that may be reclassified	6	5	1	8	0	-6
	-166	**-7**	**-75**	**-241**	**46**	**-177**
Total comprehensive income	**-648**	**617**	**-364**	**-1,012**	**1,091**	**2,265**
Attributable to						
Owners of the parent	-621	623	-360	-982	1,099	2,278
Non-controlling interests	-27	-5	-4	-30	-8	-13
Total comprehensive income	**-648**	**617**	**-364**	**-1,012**	**1,091**	**2,265**

CTA = Cumulative translation adjustment
OCI = Other comprehensive income
EAI = Equity accounted investments

Condensed consolidated statement of financial position

EUR million		30 Jun 2023	31 Dec 2022	30 Jun 2022
Assets				
Goodwill	O	575	244	283
Other intangible assets	O	318	121	124
Property, plant and equipment	O	4,961	4,860	5,038
Right-of-use assets	O	536	418	438
		6,390	**5,643**	**5,883**
Forest assets	O	6,550	6,846	6,925
Biological assets	O	4,341	4,531	4,381
Forest land	O	2,209	2,315	2,544
Emission rights	O	155	123	206
Equity accounted investments	O	850	832	608
Listed securities	I	7	8	10
Unlisted securities	O	708	1,437	876
Non-current interest-bearing receivables	I	109	120	124
Deferred tax assets	T	104	74	95
Other non-current assets	O	72	38	80
Non-current assets		**14,944**	**15,120**	**14,808**
Inventories	O	1,761	1,810	1,719
Tax receivables	T	44	11	29
Operative receivables	O	1,304	1,473	1,662
Interest-bearing receivables	I	52	77	100
Cash and cash equivalents	I	1,973	1,917	1,358
Current assets		**5,134**	**5,287**	**4,867**
Assets held for sale		0	514	0
Total assets		**20,078**	**20,922**	**19,675**
Equity and liabilities				
Owners of the Parent		11,066	12,532	11,350
Non-controlling Interests		-58	-30	-25
Total equity		**11,009**	**12,502**	**11,325**
Post-employment benefit obligations	O	178	159	218
Provisions	O	81	81	92
Deferred tax liabilities	T	1,430	1,443	1,450
Non-current interest-bearing liabilities	I	4,088	2,792	3,039
Non-current operative liabilities	O	10	11	13
Non-current liabilities		**5,788**	**4,486**	**4,813**
Current portion of non-current debt	I	450	667	488
Interest-bearing liabilities	I	606	513	470
Bank overdrafts	I	26	0	29
Provisions	O	98	43	103
Operative liabilities	O	2,073	2,410	2,342
Tax liabilities	T	28	64	106
Current liabilities		**3,281**	**3,697**	**3,537**
Liabilities related to assets held for sale		0	237	0
Total liabilities		**9,069**	**8,419**	**8,350**
Total equity and liabilities		**20,078**	**20,922**	**19,675**

Items designated with “O” comprise Operating Capital
Items designated with “I” comprise Net debt
Items designated with “T” comprise Net Tax Liabilities

Condensed consolidated statement of cash flows

EUR million	Q1-Q2/23	Q1-Q2/22
Cash flow from operating activities		
Operating result	5	793
Adjustments for non-cash items	402	451
Change in net working capital	-7	-438
Cash flow from operations	**400**	**806**
Net financial items paid	-63	-66
Income taxes paid, net	-89	-100
Net cash provided by operating activities	**249**	**640**
Cash flow from investing activities		
Acquisition of subsidiary shares and business operations, net of acquired cash	-584	0
Acquisitions of equity accounted investments	-2	-5
Acquisitions of unlisted securities	-2	0
Cash flow on disposal of subsidiary shares and business operations, net of disposed cash	231	-20
Cash flow on disposal of forest and intangible assets and property, plant and equipment	41	7
Capital expenditure	-468	-330
Proceeds from/payment of non-current receivables, net	8	-5
Net cash used in investing activities	**-776**	**-354**
Cash flow from financing activities		
Proceeds from issue of new long-term debt	1,327	259
Repayment of long-term debt and lease liabilities	-526	-278
Change in short-term interest-bearing liabilities	220	-17
Dividends paid	-473	-434
Purchase of own shares[1]	-6	-1
Net cash provided by financing activities	**542**	**-471**
Net change in cash and cash equivalents	**15**	**-185**
Translation adjustment	15	34
Net cash and cash equivalents at the beginning of period	1,917	1,480
Net cash and cash equivalents at period end	**1,947**	**1,329**
Cash and cash equivalents at period end	**1,973**	**1,358**
Bank overdrafts at period end	**-26**	**-29**
Net cash and cash equivalents at period end	**1,947**	**1,329**

[1] Own shares purchased for the Group's share award programme. The Group did not hold any of its own shares on 30 June 2023.

Statement of changes in equity

					Fair value reserve								
EUR million	Share capital	Share premium and reserve fund	Invested non-restricted equity fund	Treasury shares	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 2022	**1,342**	**77**	**633**	**—**	**778**	**-4**	**1,373**	**29**	**-195**	**6,650**	**10,683**	**-16**	**10,666**
Net result for the period	—	—	—	—	—	—	—	—	—	592	592	-6	586
OCI before tax	—	—	—	—	-30	20	414	-1	28	184	615	-2	613
Income tax relating to OCI	—	—	—	—	1	-3	-85	—	4	-23	-108	—	-108
Total comprehensive income	**—**	**—**	**—**	**—**	**-30**	**17**	**329**	**-1**	**31**	**753**	**1,099**	**-8**	**1,091**
Dividend	—	—	—	—	—	—	—	—	—	-434	-434	—	-434
Acquisitions and disposals	—	—	—	—	—	—	—	—	—	—	—	—	—
Purchase of treasury shares	—	—	—	-1	—	—	—	—	—	—	-1	—	-1
Share-based payments	—	—	—	1	—	—	—	—	—	2	3	—	3
Balance at 30 June 2022	**1,342**	**77**	**633**	**—**	**748**	**12**	**1,702**	**28**	**-164**	**6,971**	**11,350**	**-25**	**11,325**
Net result for the period	—	—	—	—	—	—	—	—	—	958	958	-7	951
OCI before tax	—	—	—	—	549	33	-155	59	-252	-37	196	3	199
Income tax relating to OCI	—	—	—	—	—	-6	32	—	—	-2	24	—	24
Total Comprehensive Income	**—**	**—**	**—**	**—**	**550**	**27**	**-123**	**59**	**-252**	**919**	**1,179**	**-5**	**1,174**
Dividend	—	—	—	—	—	—	—	—	—	**—**	**—**	—	—
Acquisitions and disposals	—	—	—	—	—	—	—	—	—	—	—	—	—
Purchase of treasury shares	—	—	—	—	—	—	—	—	—	—	—	—	—
Share-based payments	—	—	—	—	—	—	—	—	—	3	3	—	3
Balance at 31 December 2022	**1,342**	**77**	**633**	**—**	**1,298**	**39**	**1,579**	**87**	**-415**	**7,893**	**12,532**	**-30**	**12,502**
Net result for the period	—	—	—	—	—	—	—	—	—	-37	-37	-35	-72
OCI before tax	—	—	—	—	-731	-35	17	1	-218	17	-949	4	-945
Income tax relating to OCI	—	—	—	—	—	7	-4	—	—	—	4	—	4
Total comprehensive income	**—**	**—**	**—**	**—**	**-731**	**-27**	**14**	**1**	**-218**	**-20**	**-982**	-30	**-1,012**
Dividend	—	—	—	—	—	—	—	—	—	-473	-473	—	-473
Acquisitions and disposals	—	—	—	—	—	—	—	—	—	—	—	2	2
Purchase of treasury shares	—	—	—	-6	—	—	—	—	—	—	-6	—	-6
Share-based payments	—	—	—	6	—	—	—	—	—	-11	-5	—	-5
Balance at 30 June 2023	**1,342**	**77**	**633**	**—**	**567**	**12**	**1,592**	**88**	**-634**	**7,389**	**11,066**	**-58**	**11,009**

CTA = Cumulative Translation Adjustment OCI = Other Comprehensive Income NCI = Non-controlling Interests

Goodwill, other intangible assets, property, plant and equipment, right-of-use assets and forest assets

EUR million	Q1-Q2/23	Q1-Q2/22	2022
Carrying value at 1 January	**12,489**	**12,654**	**12,654**
Additions in tangible and intangible assets	347	199	656
Additions in right-of-use assets	80	11	45
Additions in biological assets	35	36	77
Depletion of capitalised silviculture costs	-40	-36	-75
Acquisition of subsidiaries	857	0	0
Disposals and classification as held for sale[1]	-9	-5	-312
Depreciation and impairment	-425	-341	-640
Fair valuation of forest assets	62	375	529
Translation difference and other	-454	-85	-445
Statement of Financial Position Total	**12,940**	**12,808**	**12,489**

[1] Including company disposals

Borrowings

EUR million	30 Jun 2023	30 Jun 2022	31 Dec 2022
Bond loans	3,114	2,490	2,460
Loans from credit institutions	909	615	623
Lease liabilities	512	392	375
Long-term derivative financial liabilities	1	27	0
Other non-current liabilities	3	3	2
Non-current interest-bearing liabilities including current portion	**4,538**	**3,527**	**3,459**
Short-term borrowings	535	370	429
Interest payable	29	21	35
Short-term derivative financial liabilities	42	79	49
Bank overdrafts	26	29	0
Total Interest-bearing Liabilities	**5,170**	**4,026**	**3,972**

EUR million	Q1-Q2/23	Q1-Q2/22	2022
Carrying value at 1 January[1]	**3,972**	**3,938**	**3,938**
Additions in long-term debt, companies acquired	133	0	0
Proceeds of new long-term debt	1,327	259	366
Repayment of long-term debt	-469	-278	-351
Additions in lease liabilities, companies acquired	99	0	0
Additions in lease liabilities	80	11	45
Repayment of lease liabilities and interest	-37	-31	-73
Change in short-term borrowings	121	-16	75
Change in interest payable	5	-4	19
Change in derivative financial liabilities	-6	39	-19
Disposals and classification as held for sale	1	0	-5
Other	25	34	8
Translation differences	-81	74	-32
Total Interest-bearing Liabilities	**5,170**	**4,026**	**3,972**

[1] The table format has been updated during last quarter of 2022 to better present changes in liabilities arising from cash flow activities and non-cash activities. The comparison figures have been restated for Q2/2022 accordingly.

Commitments and contingencies

EUR million	30 Jun 2023	31 Dec 2022	30 Jun 2022
On Own Behalf			
Guarantees	18	14	15
Other commitments	4	0	0
On Behalf of Equity Accounted Investments			
Guarantees	5	5	5
On Behalf of Others			
Guarantees	15	5	6
Other commitments	36	36	36
Total	**77**	**60**	**61**
Guarantees[1]	38	24	25
Other commitments[1]	40	36	36
Total	**77**	**60**	**61**

[1] The comparative figures as at 30 June 2022 have been restated due to a reclassification from other commitments to guarantees.

The Group announced its intention in December 2022 to divest its consumer board production and forest operations sites in Beihai, China. As previously disclosed, Stora Enso has been granted investment subsidies and has given certain investment commitments in China. There is a risk that the majority owned local Chinese company may be subject to a claim based on alleged costs resulting from certain uncompleted investment commitments. Given the specific mitigating circumstances surrounding the investment case as a whole, Stora Enso does not consider it to be probable that this situation would result in an outflow of economic benefits that would be material to the Group. The Company continues to monitor the situation as the divestment process proceeds.

Capital commitments

EUR million	30 Jun 2023	31 Dec 2022	30 Jun 2022
Total	**812**	**593**	**247**

The Group's direct capital expenditure contracts include the Group's share of direct capital expenditure contracts in joint operations.

Reconciliation of operational profitability

EUR million	Q2/23	Q2/22	Change % Q2/23–Q2/22	Q1/23	Change % Q2/23–Q1/23	Q1-Q2/23	Q1-Q2/22	Change % Q1-Q2/23–Q1-Q2/22	2022
Operational EBITDA	**198**	**663**	**-70.1%**	**399**	**-50.3%**	**597**	**1,325**	**-54.9%**	**2,529**
Depreciation and silviculture costs of EAI	-3	-2	-16.5%	-2	-32.8%	-5	-4	-11.2%	-11
Silviculture costs[1]	-24	-24	-2.3%	-27	8.5%	-51	-46	-9.8%	-100
Depreciation and impairment excl. IAC	-135	-131	-2.4%	-136	1.1%	-271	-266	-1.7%	-527
Operational EBIT	**37**	**505**	**-92.7%**	**234**	**-84.3%**	**271**	**1,008**	**-73.1%**	**1,891**
Fair valuations and non-operational items[2]	-14	-45	69.0%	11	-223.5%	-3	-24	89.0%	363
Items affecting comparability (IAC)[2]	-276	-61	n/m	12	n/m	-264	-191	-37.8%	-245
Operating result (IFRS)	**-253**	**399**	**-163.3%**	**258**	**-198.2%**	**5**	**793**	**-99.4%**	**2,009**

[1] Including damages to forests
[2] See section Non-IFRS measures for IAC and fair valuations and non-operational items definitions.

Sales by segment – total

EUR million	Q2/23	Q1/23	2022	Q4/22	Q3/22	Q2/22	Q1/22
Packaging Materials	1,155	1,300	5,496	1,335	1,421	1,424	1,317
Packaging Solutions	288	276	727	177	176	186	189
Biomaterials	379	488	2,180	649	567	522	442
Wood Products	436	454	2,195	471	520	631	573
Forest	620	687	2,519	664	581	649	626
Other	213	364	2,150	528	575	568	481
Inter-segment sales	-717	-848	-3,589	-959	-876	-925	-828
Total	**2,374**	**2,721**	**11,680**	**2,864**	**2,963**	**3,054**	**2,798**

Comparative figures have been restated as described in our release from 29 March 2023.

Sales by segment – external

EUR million	Q2/23	Q1/23	2022	Q4/22	Q3/22	Q2/22	Q1/22
Packaging Materials	1,103	1,242	5,257	1,277	1,362	1,359	1,258
Packaging Solutions	285	273	704	171	170	179	184
Biomaterials	321	423	1,798	522	471	435	370
Wood Products	400	416	2,058	436	487	595	540
Forest	246	258	848	223	195	219	211
Other	18	108	1,014	234	279	267	234
Total	**2,374**	**2,721**	**11,680**	**2,864**	**2,963**	**3,054**	**2,798**

Comparative figures have been restated as described in our release from 29 March 2023.

Disaggregation of revenue

EUR million	Q2/23	Q1/23	2022	Q4/22	Q3/22	Q2/22	Q1/22
Product sales	2,348	2,707	11,521	2,841	2,927	3,000	2,753
Service sales	25	15	159	23	37	54	45
Total	**2,374**	**2,721**	**11,680**	**2,864**	**2,963**	**3,054**	**2,798**

Operational EBIT by segment

EUR million	Q2/23	Q1/23	2022	Q4/22	Q3/22	Q2/22	Q1/22
Packaging Materials	-22	41	655	59	188	200	208
Packaging Solutions	15	8	16	5	4	2	5
Biomaterials	-13	91	687	249	197	123	117
Wood Products	-6	-11	309	-14	70	134	118
Forest	62	57	204	62	47	47	49
Other	-9	27	63	14	29	14	6
Inter-segment eliminations	9	21	-42	-20	-7	-15	0
Operational EBIT	**37**	**234**	**1,891**	**355**	**527**	**505**	**503**
Fair valuations and non-operational items[1]	-14	11	363	381	6	-45	21
Items affecting comparability[1]	-276	12	-245	-31	-22	-61	-130
Operating result (IFRS)	**-253**	**258**	**2,009**	**705**	**511**	**399**	**394**
Net financial items	-51	-29	-151	-39	-63	-29	-19
Result before Tax	**-304**	**228**	**1,858**	**666**	**448**	**370**	**374**
Income tax expense	47	-43	-322	-82	-81	-71	-88
Net result	**-257**	**185**	**1,536**	**584**	**367**	**299**	**287**

[1] See section Non-IFRS measures for IAC and fair valuations and non-operational items definitions.
Comparative figures have been restated as described in our release from 29 March 2023.

Items affecting comparability (IAC), fair valuations and non-operational items

EUR million	Q2/23	Q1/23	2022	Q4/22	Q3/22	Q2/22	Q1/22
Impairments and impairment reversals	-129	-19	-124	-9	-2	-2	-111
Restructuring costs excluding impairments	-91	22	-3	11	-5	-3	-6
Acquisitions	1	-16	0	0	0	0	0
Disposals	-57	20	-104	-31	-17	-56	0
Other	0	6	-15	-3	1	0	-13
Total IAC on operating result	**-276**	**12**	**-245**	**-31**	**-22**	**-61**	**-130**
Fair valuations and non-operational items	-14	11	363	381	6	-45	21
Total	**-290**	**24**	**118**	**350**	**-17**	**-106**	**-109**

Items affecting comparability had a negative impact on the operating result of EUR 276 (61) million. The IACs relate mainly to the disposal of the Hylte paper site in Sweden and the planned restructuring actions at the Sunila pulp site in Finland, the De Hoop containerboard site in the Netherlands, and planned reduction of employees in Group functions and the Packaging Materials division. Fair valuation and non-operational items had a negative impact on the operating result of EUR 14 (45) million. The impact came mainly from valuation of emission rights.

Items affecting comparability (IAC) by segment

EUR million	Q2/23	Q1/23	2022	Q4/22	Q3/22	Q2/22	Q1/22
Packaging Materials	-98	-21	-9	-2	-3	2	-6
Packaging Solutions	-5	-20	-98	0	-5	-57	-36
Biomaterials	-101	0	-2	0	0	0	-2
Wood Products	-8	0	-56	-6	-21	-2	-27
Forest	-2	-3	-48	1	-6	0	-43
Other	-61	56	-33	-23	12	-4	-17
IAC on operating result	**-276**	**12**	**-245**	**-31**	**-22**	**-61**	**-130**
IAC on tax	43	-3	9	3	1	1	4
IAC on net result	**-233**	**10**	**-236**	**-29**	**-21**	**-60**	**-126**

Comparative figures have been restated as described in our release from 29 March 2023.

Fair valuations and non-operational items by segment

EUR million	Q2/23	Q1/23	2022	Q4/22	Q3/22	Q2/22	Q1/22
Packaging Materials	0	0	7	17	1	2	-12
Packaging Solutions	0	0	0	0	0	0	0
Biomaterials	5	-1	-17	-9	0	-6	-2
Wood Products	0	0	0	0	0	0	0
Forest	0	-9	367	401	2	-47	10
Other	-19	21	6	-27	2	6	25
FV on operating result	**-14**	**11**	**363**	**381**	**6**	**-45**	**21**
FV on tax	4	-3	-38	-46	-1	13	-4
FV on net result	**-10**	**8**	**324**	**335**	**5**	**-32**	**17**

Comparative figures have been restated as described in our release from 29 March 2023.

Operating result by segment

EUR million	Q2/23	Q1/23	2022	Q4/22	Q3/22	Q2/22	Q1/22
Packaging Materials	-120	21	653	74	185	204	190
Packaging Solutions	10	-12	-81	5	-1	-54	-31
Biomaterials	-109	90	668	240	198	117	113
Wood Products	-14	-11	253	-20	49	133	91
Forest	60	44	523	463	43	0	16
Other	-89	104	36	-37	43	16	14
Inter-segment eliminations	9	21	-42	-20	-7	-15	0
Operating result (IFRS)	**-253**	**258**	**2,009**	**705**	**511**	**399**	**394**
Net financial items	-51	-29	-151	-39	-63	-29	-19
Result before tax	**-304**	**228**	**1,858**	**666**	**448**	**370**	**374**
Income tax expense	47	-43	-322	-82	-81	-71	-88
Net result	**-257**	**185**	**1,536**	**584**	**367**	**299**	**287**

Comparative figures have been restated as described in our release from 29 March 2023.

Calculation of operational return on capital employed (ROCE) and return on equity (ROE) based on the last 12 months

EUR million	Q2/23	Q2/22	Q1/23	Q4/22
Operational EBIT, LTM	1,154	1,845	1,622	1,891
Capital employed, LTM average	14,262	12,926	14,114	13,795
Operational return on capital employed (ROCE), LTM	**8.1%**	**14.3%**	**11.5%**	**13.7%**
Operational EBIT excl. Forest division, LTM	926	1,652	1,410	1,687
Capital employed excl. Forest division, LTM average	8,671	7,605	8,552	8,276
Operational ROCE excl. Forest division, LTM	**10.7%**	**21.7%**	**16.5%**	**20.4%**
Net result for the period, LTM	879	1,501	1,435	1,536
Total equity, LTM average	11,790	10,329	11,730	11,532
Return on equity (ROE), LTM	**7.5%**	**14.5%**	**12.2%**	**13.3%**
Net debt	3,030	2,434	2,917	1,853
Operational EBITDA, LTM	1,801	2,497	2,266	2,529
Net debt to last 12 months' operational EBITDA ratio	**1.7**	**1.0**	**1.3**	**0.7**

LTM = Last 12 months. The change in the calculation method is explained in the section Non-IFRS measures

Key exchange rates for the euro

One Euro is	Closing Rate		Average Rate (Year-to-date)	
	30 Jun 2023	31 Dec 2022	30 Jun 2023	31 Dec 2022
SEK	11.8055	11.1218	11.3314	10.6274
USD	1.0866	1.0666	1.0811	1.0539
GBP	0.8583	0.8869	0.8766	0.8526

Fair Values of Financial Instruments

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 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 valuation techniques are described in more detail in the Group's Financial Report. The instruments carried at fair value in the following tables are measured at fair value on a recurring basis.

Carrying amounts of financial assets and liabilities by measurement and fair value categories: 30 June 2023

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
Financial assets								
Listed securities	—	7	—	7	7	7	—	—
Unlisted securities	—	694	15	708	708	—	—	708
Non-current interest-bearing receivables	84	24	—	109	109	—	24	—
Derivative assets	—	24	—	24	24	—	24	—
Loan receivables	84	—	—	84	84	—	—	—
Trade and other operative receivables	**963**	**34**	**—**	**997**	**997**	**—**	**34**	**—**
Current interest-bearing receivables	12	28	12	52	52	—	40	—
Derivative assets	—	28	12	40	40	—	40	—
Other short-term receivables	12	—	—	12	12	—	—	—
Cash and cash equivalents	1,973	—	—	1,973	1,973	—	—	—
Total	**3,031**	**786**	**27**	**3,845**	**3,845**	**7**	**98**	**708**

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
Financial liabilities								
Non-current interest-bearing liabilities	4,087	1	—	4,088	4,880	—	1	—
Derivative liabilities	—	1	—	1	1	—	1	—
Non-current debt	4,087	—	—	4,087	4,878	—	—	—
Current portion of non-current debt	450	—	—	450	450	—	—	—
Current interest-bearing liabilities	564	37	5	606	606	—	42	—
Derivative liabilities	—	37	5	42	42	—	42	—
Current debt	564	—	—	564	564	—	—	—
Trade and other operative payables	1,702	—	—	1,702	1,702	—	—	—
Bank overdrafts	26	—	—	26	26	—	—	—
Total	**6,829**	**39**	**5**	**6,872**	**7,664**	**—**	**44**	**—**

In accordance with IFRS, derivatives are classified as fair value through income statement. In the above tables for financial assets and liabilities the cash flow hedge accounted derivatives are however presented as fair value through OCI, in line with how they are booked for the effective portion.

Carrying amounts of financial assets and liabilities by measurement and fair value categories: 31 December 2022

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
Financial assets								
Listed securities	—	8	—	8	8	8	—	—
Unlisted securities	—	1,423	14	1,437	1,437	—	—	1,437
Non-current interest-bearing receivables	92	28	—	120	120	—	28	—
Derivative assets	—	28	—	28	28	—	28	—
Loan receivables	92	—	—	92	92	—	—	—
Trade and other operative receivables	1,138	66	—	1,204	1,204	—	66	—
Current interest-bearing receivables	10	50	16	77	77	—	67	—
Derivative assets	—	50	16	67	67	—	67	—
Other short-term receivables	10	—	—	10	10	—	—	—
Cash and cash equivalents	1,917	—	—	1,917	1,917	—	—	—
Total	**3,157**	**1,576**	**30**	**4,763**	**4,763**	**8**	**161**	**1,437**

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
Financial liabilities								
Non-current interest-bearing liabilities	2,792	—	—	2,792	2,749	—	—	—
Derivative liabilities	—	—	—	—	—	—	—	—
Non-current debt	2,792	—	—	2,792	2,748	—	—	—
Current portion of non-current debt	667	—	—	667	667	—	—	—
Current interest-bearing liabilities	462	30	20	513	513	—	50	—
Derivative liabilities	—	30	20	50	50	—	50	—
Current debt	462	—	—	462	462	—	—	—
Trade and other operative payables	2,076	—	—	2,076	2,076	—	—	—
Bank overdrafts	—	—	—	—	—	—	—	—
Total	**5,998**	**30**	**20**	**6,048**	**6,005**	**—**	**51**	**—**

In accordance with IFRS, derivatives are classified as fair value through income statement. In the above tables for financial assets and liabilities the cash flow hedge accounted derivatives are however presented as fair value through OCI, in line with how they are booked for the effective portion.

Reconciliation of level 3 fair value measurement of financial assets and liabilities: 30 June 2023

EUR million	Q1-Q2/23	2022	Q1-Q2/22
Financial assets			
Opening balance at 1 January	**1,437**	**905**	**905**
Reclassifications	-1	-1	-1
Gains/losses recognised in other comprehensive income	-730	523	-28
Additions	1	10	0
Closing balance	**708**	**1,437**	**876**

The Group did not have level 3 financial liabilities as at 30 June 2023.

Level 3 Financial Assets

At period end, Level 3 financial assets included EUR 694 million of Pohjolan Voima Oy (PVO) shares for which the valuation method is described in more detail in the Annual Report. The valuation decreased by EUR 730 million versus December 2022, mainly due to lower electricity market prices. The valuation is most sensitive to changes in electricity prices and discount rates. The discount rate of 7.73% 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 +89 million and -89 million, respectively. A +/- percentage point change in the discount rate would change the valuation by EUR -115 million and +145 million, respectively.

Stora Enso shares

During the second quarter of 2023, the conversions of 3,154 A shares into R shares were recorded in the Finnish trade register.

On 30 June 2023, Stora Enso had 176,234,297 A shares and 612,385,690 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 237,472,866.

On 17 July 2023, the conversion of 570 A shares into R shares was recorded in the Finnish trade register.

On 20 July 2023, the conversion of 310 A shares into R shares was recorded in the Finnish trade register.

Trading volume

	Helsinki		Stockholm	
	A share	**R share**	**A share**	**R share**
April	78,611	42,251,504	85,384	6,974,479
May	78,067	43,860,042	68,785	5,232,705
June	96,090	50,850,833	70,353	6,887,759
Total	**252,768**	**136,962,379**	**224,522**	**19,094,943**

Closing price

	Helsinki, EUR		Stockholm, SEK	
	A share	**R share**	**A share**	**R share**
April	12.10	11.50	132.00	130.00
May	12.95	11.85	148.00	137.40
June	11.55	10.63	137.00	125.10

Number of shares

Million	**Q2/23**	**Q2/22**	**Q1/23**	**2022**
At period end	788.6	788.6	788.6	788.6
Average	788.6	788.6	788.6	788.6
Average, diluted	789.9	789.6	789.8	789.4

Calculation of key figures

Operational return on capital employed, operational ROCE, LTM[4] (%)	100 x	Operational EBIT[4] / Capital employed[1 2]
Operational return on operating capital, operational ROOC, LTM[4] (%)	100 x	Operational EBIT[4] / Operating capital[2]
Return on equity, ROE, LTM[4] (%)	100 x	Net result for the period / Total equity[2]
Net debt		Interest-bearing liabilities – interest-bearing assets
Net debt/equity ratio		Net debt / Equity[3]
Earnings per share (EPS)		Net result for the period[3] / Average number of shares
Operating capital		Operating capital is comprised of items marked with “O” in the statement of financial position
Operational EBIT		Operating result excluding items affecting comparability (IAC) and fair valuations of the segments and Stora Enso’s share of operating result excluding IAC and fair valuations of its equity accounted investments (EAI)
Operational EBITDA		Operating result 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 debt / LTM operational EBITDA
Fixed costs		Maintenance, personnel and other administration type of costs, excluding IAC and fair valuations.
Last 12 months (LTM)		12 months prior to the end of reporting period

[1] Capital employed = Operating capital – Net tax liabilities [2] Average for the last five quarter ends [3] Attributable to the owners of the Parent
[4] Last 12 months prior to the end of reporting period

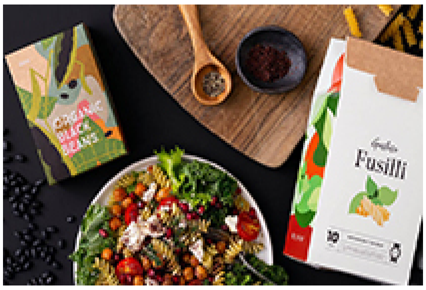
List of non-IFRS measures

Operational EBITDA	Operating capital
Operational EBITDA margin	Depreciation and impairment charges excl. IAC
Operational EBIT	Operational ROCE
Operational EBIT margin	Earnings per share (EPS), excl. FV
Capital expenditure	Net debt/last 12 months’ operational EBITDA ratio
Capital expenditure excl. investments in biological assets	Operational ROOC
Capital employed	Cash flow after investing activities

Definitions and calculation of key sustainability figures

GHG emissions, scope 1 + 2	Direct fossil CO_2e emissions from production (scope 1) and indirect fossil CO_2e emissions related to purchased electricity and heat (scope 2). Excluding joint operations. Calculated as rolling four quarters. Calculated in accordance with the Greenhouse Gas Protocol of the World Resource Institute (WRI).
GHG emissions, scope 3	Fossil CO_2e emissions from other sources along the value chain of all production units are estimated based on the most recent methodology. Joint operations included as suppliers. Currently, material emission categories for scope 3 emissions are updated annually. Accounting based on guidelines provided by the Greenhouse Gas Protocol and the World Business Council for Sustainable Development (WBCSD).
Forest certification coverage	The proportion of land in wood production and harvesting owned or leased by Stora Enso that is covered by forest certification schemes. Reporting on total land area and its forest certification coverage aligned with financial reporting on forests assets.
Share of technically recyclable products	The proportion of technically recyclable products based on production volumes as tonnes. Technical recyclability is defined by international standards and tests when available and in the absence of these, by Stora Enso’s tests that prove recyclability. The reporting scope includes Stora Enso’s packaging, pulp, paper and solid wood products as well as biochemical by-products.
TRI (Total recordable incidents) rate	Number of incidents per one million hours worked. Including joint operations.
Gender balance: % of female managers among all managers	The share of female managers is accounted for as the headcount of all permanent managers with at least one direct report. The manager must be permanent, but the subordinates can be temporary or permanent. Excluding joint operations.
Total water withdrawal and process water discharges per saleable tonne	Last four quarters for board, pulp and paper units. Excluding joint operations. Excluding mechanical wood product units and packaging converting units due to their low impact on the Group’s consolidated water use and different metrics for sales production (cubic metre and square metre) compared to board, pulp and paper units (tonnes).
Supplier Code of Conduct (SCoC) coverage	% of supplier spend (last 12 months) covered by the Supplier Code of Conduct (SCoC). Excludes joint operations, intellectual property rights, leasing fees, financial trading, government fees such as customs, and wood purchases from private individual forest owners.

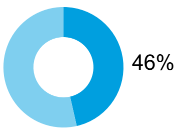
Divisions



Packaging Materials

Leading the development of circular packaging, providing premium packaging materials based on virgin and recycled fiber.

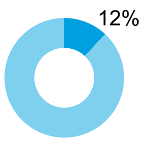
Share of Group external sales



Packaging Solutions

Developing and selling premium fiber-based packaging products and services.

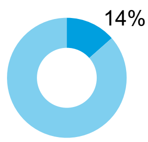
Share of Group external sales



Biomaterials

Meeting the growing demand for bio-based solutions to replace fossil-based and hazardous materials.

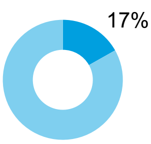
Share of Group external sales



Wood Products

One of the largest sawn wood producers in Europe and a global leading provider of renewable wood-based solutions.

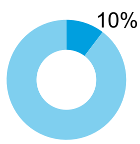
Share of Group external sales



Forest

Creating value through sustainable forest management, competitive wood supply and innovation.

Share of Group external sales



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Stora Enso's January–September 2023 results will be published on

24 October 2023

Part of the global bioeconomy, Stora Enso is a leading provider of renewable products in packaging, biomaterials, and wooden construction, and one of the largest private forest owners in the world. We believe that everything that is made from fossil-based materials today can be made from a tree tomorrow. Stora Enso has approximately 21,000 employees and our sales in 2022 were EUR 11.7 billion. 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). **storaenso.com/investors**

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.