

11 March 2024 – Neuss, Germany

Rating Action / Update:

Creditreform Rating has affirmed the unsolicited corporate issuer rating of Stora Enso Oyj at **BBB. The outlook has been revised from positive to **stable**.**

Creditreform Rating (CRA) has affirmed the ratings of the unsolicited, public corporate issuer rating of Stora Enso Oyj – hereinafter referred as “Stora Enso” or “the Group”, as well as the unsolicited corporate issue rating of long-term local currency senior unsecured notes issued by Stora Enso Oyj at **BBB**. The outlook has been revised from positive to **stable**. Additionally, CRA has set the initial short-term rating of Stora Enso Oyj at **L3**. For more information regarding the structural, business and financial risks of the unsolicited ratings of Stora Enso, we refer to our full rating update and report of 30-05-2023 and 04-03-2022, which can be found on our website.

Current relevant factors for the rating

The following considerations were of specific relevance for the rating assessment:

- + Conversion of a paper machine into a high-volume consumer board line at the Oulu site is progressing according to plan
- Challenging market conditions led to a significant reduction in demand and sales prices
- Revenues and (operating) results substantially lower than in the prior year
- Higher capital expenditure increase pressure on cash flow; Also over EUR 1 billion capex expected in business year 2024
- Deterioration of credit metrics in comparison to prior year; mainly due to decreased profitability
- Market conditions expected to remain challenging in 2024

ESG-criteria:

CRA generally considers ESG factors (environment, social and governance) within its rating decisions. In the case of Stora Enso Oyj we have identified ESG factors with significant influence on the following categories, which is described in the sections below.

(E) Environment

(S) Social

(G) Governance

(E): Stora Enso has a well-defined sustainability framework and clearly defined science based targets with regard to its sustainability strategy. In terms of the environment, the Group has an overall positive net CO² removal from the atmosphere. This is achieved through sustainable management of its forest assets, as well as its products portfolio, which focuses on the substitution of fossil based products, and on carbon storage. The Group's forest assets annually remove 4.3 million tons of CO² from the atmosphere. The aim of the Group is to offer 100% regenerative solutions by 2050

In 2021, Stora Enso launched a new sustainability agenda. The Group aims to achieve a 50% reduction of CO² (Scope 1, 2, 3) emissions by the end of 2030 against the base year of 2019, and strives for a product portfolio of 100% technically recyclable products, while maintaining a level of at least 96% of owned and leased lands in wood production and harvesting covered by forest certification schemes. At the end of 2023, the reduction of CO² emissions against 2019 (Scope 1

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ESG factors are factors related to environment, social issues, and, governance. For more information, please see the section "Regulatory requirements". CRA generally takes ESG relevant factors into account, when assessing the rating object and discloses them when they have a significant influence on the creditworthiness of the rating object, leading to a change in the rating result or the outlook.

and 2) reached 41% and 34% (Scope 3) respectively. This was, however, largely attributable to the lower production volumes and site closures.

During the 2023 business year, the Group published a new Green and Sustainability-Linked Financing Framework, which integrates its sustainability agenda with the Group's financial services and funding requirements and sets out the terms under which Stora Enso may raise financing through both green and sustainability linked financial instruments and replaces the earlier Green Bond Framework. In the course of the 2023 business year the Group issued 8 green bonds.

The EU Taxonomy is still under development and the forest industry and its main products currently remain beyond the scope of the EU Taxonomy, which accounts for why the categories reported on for Stora Enso Oyj with regard to the Taxonomy remain limited.

A general valid description of Creditreform Rating AG, as well as a valid description of corporate ratings for understanding and assessing ESG factors in the context of the credit rating process, can be found [here](#).

Rating result

The current rating of **BBB** attests Stora Enso Oyj a highly satisfactory level of creditworthiness, representing a low-to-medium default risk. The main positive factors contributing to the rating result are the Group's leading market position, its high degree of diversification and its strong financial profile with generally healthy cash flow generation and high deleveraging capabilities. Additionally, the Group has successfully changed its strategic growth focus from the paper market, shifting its emphasis to growth markets in renewable packaging, sustainable wood-based solutions and bio-based solutions to replace fossil-based and hazardous materials.

These factors are in part offset by the Group's high exposure to macro-economic factors and fluctuations in variable operating costs. This was made apparent by the sudden significant drop in demand and sales prices during the 2023 business year. Additionally, the increased variable costs, of particularly wood, have put further pressure on the Group's (operating) performance. The Group's own forest assets, which provide a solid base of fiber supply, as well as the electricity needs, which are largely covered by their own production, provide a stabilizing base for the rating, but could not offset the sudden decrease in operating results.

Outlook

The one-year outlook for the unsolicited corporate issuer rating has been revised from positive to **stable**. With the steep decrease in operating results during the 2023 business year and the uncertain outlook for the coming year, in combination with relatively high expected cash outflows in relation to capital expenditure we believe an upgrade within the time-span of one year to be unlikely. Nevertheless, we believe that the financial profile of Stora Enso is currently sufficient to retain its rating but do stress that operating results will have to improve significantly over the coming years and that its financial profile should not deteriorate further.

Please note:

The scenarios are based on information available at the time of the rating. Within the forecast horizon, circumstances may occur that could lead to a change of the rating out of the indicated range.

Best-case scenario: BBB

In our best-case scenario for one year, we assume a rating of BBB. We do not believe an upgrade within the timeframe of one year to be likely. Therefore, retaining the rating would be more likely and such a scenario would be possible if the market environment would stabilize, with demand and sales price increasing against the prior year and variable costs continuing to ease throughout the year with operating cash flow and profit rising against the current year.

Worst-case scenario: BBB-

In our worst-case scenario for one year, we assume a rating of BBB-. Such a scenario could materialize if market demand continues to drop and variable operating costs continue to exert further pressure on the Group's operating margins. At the same time, the ongoing planned capital expenditure will exacerbate the need for additional capital leading to a significant deterioration in leverage.

Business development and outlook

After experiencing several years of robust development and growth, the Group faced significant economic and operational challenges throughout the business year 2023. Key markets encountered weakened retail demand and a downturn in the European manufacturing sector, exacerbated by a prolonged destocking cycle and broader demanding macro-economic factors, all contributing to a substantial reduction in demand and sales prices. Consequently, revenues saw a sharp decline to EUR 9,396 million (2022: EUR 11,680 million). The adverse market conditions also heavily impacted operating profit, with relatively high variable costs, particularly in wood, leading to a significant decrease in gross profit margin to 32.50% (2022: 42.46%), which had consistently remained above 40% in recent years. The lower revenues and the relatively higher costs for materials and services resulted in a substantial decrease in the Group's EBITDA and EBIT to EUR 823 million (2022: EUR 2,322 million) and EUR -480 million (2022: EUR 1,788 million) respectively. Particularly the Packaging Materials, Biomaterials and Wood Products divisions strongly affected the decline of both revenues and overall results. The after tax results were with EUR -431 million (2022: EUR 1,537 million) significantly lower than the prior year driven by the lower operating results, and exacerbated by comparably lower income from at-equity participations, as well as a slightly higher net financial expense, which mostly rose due to the increase in outstanding borrowings and was partially offset by a positive income tax, driven by deferred tax income.

Table 1: Overview of segmental revenues and reported EBIT | Source: Stora Enso Oyj annual report 2023

In Mio. EUR	Revenues		Reported EBIT	
	2022	2023	2022	2023
Dezember 31				
Packaging Materials	5,496	4,557	653	-642
Packaging Solutions	727	1,077	-81	17
Biomaterials	2,180	1,587	668	-81
Wood Products	2,195	1,580	253	-86
Forest	2,519	2,490	523	461
Other	2,150	964	36	-41
Eliminations	-3589	-2,859	-42	49
Total	11.680	9,396	2,009	-322

The operating loss of EUR -480 million reflects various non-operating and non-recurring events that further negatively impacted the results by EUR -664 million in total. When adjusted for these events, the Group's operating profit would have amounted to EUR 184 million. These events encompass impairments totaling EUR -770 million resulting from business restructuring, disposals and predictions of a weaker outlook. This was partially offset by positive fair value changes in biological assets amounting to EUR +231 million. Additionally, the Group incurred expenses related to a restructuring program announced in June 2023. The restructuring program entailed the closure of several facilities, including the Sunila pulp production unit in Finland, the De Hoop container-board site in the Netherlands, one containerboard line at the Ostroleka site in Poland, and the Näpi sawmill in Estonia, resulting in the reduction of approximately 600 employees. Overall, the plan led to a reduction in headcount of 1,150, as group functions were also affected. This initiative, aimed at streamlining operations, is expected to reduce annual revenues by approximately EUR 380 million while bolstering annual operational EBIT by approximately EUR 110 million. Furthermore, the Group incurred minor losses from the disposal of several sites. After concluding its 2023 restructuring program, Stora Enso initiated a new profit improvement program in February 2024. The Group has not disclosed the estimated cost, but estimates that this will improve operational EBIT by approximately EUR 80 million annually, of which the majority will be incurred from 2025 onwards.

Table 2: Overview of non-operating and non-recurring items per division | Source: Stora Enso Oyj annual report 2023

Non-operating and non-recurring items per division		
in Mio. EUR	2022	2023
Packaging Materials	-2	-585
Packaging Solutions	-98	-27
Biomaterials	-19	-199
Wood Products	-56	-22
Forest	319	208
Other	-27	-42
Total	118	-664

Credit metrics in 2023 have deteriorated, particularly those related to profitability and internal financing power following weakened results and cash flows. Additional capital was released by working capital measures and disposals, but this was not sufficient to offset the lower operating cash flow and the ramp up in capital expenditure of EUR 1,125 million, which ultimately led to a cash flow after investments of EUR -561 million (2022: EUR 840 million). The increase in capital expenditure is widely attributed to the acquisition of de Jong Packaging Group and the investment to convert the remaining idle paper machine into a high-volume consumer board line at the Oulu site in Finland. The negative cash flow after investments, as well as the distributed dividends, drove the need to expand outstanding debt to EUR 5,209 million (2022: EUR 3,972 million). At the same time, due to the significantly negative after tax results, the negative OCI and the distributed dividends the Group's equity ratio fell substantially to 52.85% (2022: 59.17%). Credit metrics relating to profitability dropped following the worsened operating results, leading to a Net Total Debt / EBITDA adj. of 15.54 (2022: 2.47).

The Group's liquidity position remained strong with cash and cash equivalents of EUR 2,464 million, and undrawn credit facilities of EUR 800 million. Additionally, Stora Enso has access to various additional long-term sources of funding up to EUR 1,100 million and mainly relate to available funding sources from Finnish pension funds. The current available liquidity is sufficient to cover all of the Group's current liabilities, without considering operating cash flow. It remains the Group's financial risk policy that its cash and cash equivalents plus undrawn committed credit facilities should cover all of the Group's maturing debt over the next 12 months.

Table 3: Financials of Stora Enso Oyj | Source: Stora Enso Oyj Annual report 2023, standardized by CRA

Stora Enso Oyj Selected key figures of the financial statement analysis Basis: Annual accounts and report of 31.12. (IAS, Group)	CRA standardized figures ¹	
	2022	2023
Sales (million EUR)	11,680	9,396
EBITDA (million EUR)	2,322	823
EBIT (million EUR)	1,788	-480
EAT (million EUR)	1,537	-431
EAT after transfer (million EUR)	1,550	-357
Total assets (million EUR)	17,090	17,884
Equity ratio (%)	59.17	52.85
Capital lock-up period (days)	57.22	61.45
Short-term capital lock-up (%)	14.27	13.97
Net total debt / EBITDA adj. (factor)	2.47	15.54
Ratio of interest expenses to total debt (%)	2.72	2.87
Return on Investment (%)	9.87	-1.57

The deterioration in credit metrics is significant. However, we see that the Group's leverage of 1.79 (2022: 1.73) is sufficient to hold its current rating. We do stress the need for operating profitability to increase considerably over the coming years in order for Stora Enso to retain its current rating. Especially when considering the anticipated capital expenditure in 2024, which is also expected to range between EUR 1 and EUR 1.1 billion. From 2025 onwards, the Group expects to fall back to annual capital expenditure between EUR 600 and EUR 800 million. As the business environment for 2024 is expected to remain challenging throughout the year, characterized by sustained pressures on demand, pricing and margins in comparison to prior years, we believe that it is plausible that operating results and cash flows will continue to remain under the operating results of the prior years.

¹ For analytical purposes, CRA adjusted the original values in the financial statements in the context of its financial ratio analysis. For example, when calculating the analytical equity ratio, deferred tax assets, goodwill (entirely or partly), and internally-generated intangible assets are subtracted from the original equity, whilst deferred tax liabilities are added. Net total debt takes all balance sheet liabilities into account. Therefore, the key financial figures shown often deviate from the original values of the company.

Further ratings

Based on the long-term issuer rating and taking into account our liquidity analysis, the initial short-term rating of Stora Enso Oyj was set at **L3** (standard mapping), which corresponds to a adequate liquidity profile for one year.

The rating objects of the issue rating are exclusively long-term senior unsecured notes, denominated in Euro, issued by Stora Enso Oyj, which are included in the list of ECB-eligible marketable assets. We have provided these notes an unsolicited rating of **BBB / stable**.

All long-term local currency senior unsecured notes issued by Stora Enso Oyj, which have similar conditions to the current EMTN Program, denominated in Euro and included in the list of ECB-eligible marketable assets, generally receive the same ratings as the current LT LC senior unsecured notes issued under the EMTN Program. Notes issued in any currency other than euro, or other types of debt instruments, have not yet been rated by CRA. For a list of all currently valid ratings and additional information, please consult the website of Creditreform Rating AG.

Table 4 : Overview of CRA Ratings | Source: CRA

Rating Category	Details	
	Date of rating committee	Rating
Stora Enso Oyj	11.03.2024	BBB / stable / L3
Long-term Local Currency (LC) Senior Unsecured Issues issued by Stora Enso Oyj	11.03.2024	BBB / stable
Other	-	-

Appendix

Rating history

The rating history is available under the following [link](#).

Table 5: Corporate Issuer Rating of Stora Enso Oyj

Event	Rating created	Publication date	Result
Initial rating	04.03.2022	10.03.2022	BBB / stable

Table 6: LT LC Senior Unsecured Issues issued by Stora Enso Oyj

Event	Rating created	Publication date	Result
Initial rating	04.03.2022	10.03.2022	BBB / stable

Table 7: Short-term issuer rating of Stora Enso Oyj

Event	Rating created	Publication date	Result
Initial rating	11.03.2024	14.04.2024	L3

Regulatory requirements

The rating² was not endorsed by Creditreform Rating AG (Article 4 (3) of the CRA-Regulation).

The present rating is, in the regulatory sense, an unsolicited rating that is public. The analysis was carried out on a voluntary basis by Creditreform Rating AG, which was not commissioned by the Issuer or any other third party to prepare the present rating.

The rating is based on the analysis of published information and on internal evaluation methods for the assessment of companies and issues. The rating object was informed of the intention of creating or updating an unsolicited rating before the rating was determined.

The rating object participated in the creation of the rating as follows:

With Rated Entity or Related Third Party Participation	No
With access to Internal Documents	No
With Access to Management	No

A management meeting did not take place within the framework of the rating process.

The documents and information gathered were sufficient to meet the requirements of Creditreform Rating AG's rating methodologies.

The rating was conducted based on the following rating methodologies and the basic document.

Rating methodology	Version number	Date
Corporate Ratings	2.4	July 2022
Corporate Short-Term Ratings	1.0	June 2023
Non-financial Corporate Issue Ratings	2.0	March 2024
Rating Criteria and Definitions	1.3	January 2018

The documents contain a description of the rating categories and a definition of default.

The rating was carried out by the following analysts:

Name	Function	Mail-Address
Rudger van Mook	Lead-analyst	R.vanMook@creditreform-rating.de
Artur Kapica	Analyst	A.Kapica@creditreform-rating.de

The rating was approved by the following person (person approving credit ratings, PAC):

Name	Function	Mail-Address
Philip Michaelis	PAC	P.Michaelis@creditreform-rating.de

On 11 March 2024, the analysts presented the rating to the rating committee and the rating was determined. The rating result was communicated to the company on 11 March 2024. There has not been a subsequent change to the rating.

² In these regulatory requirements the term "rating" is used in relation to all ratings issued by Creditreform Rating AG in connection to this report. This may concern several companies and their various issues.

The rating will be monitored until Creditreform Rating AG withdraws the rating. The rating can be adjusted as part of the monitoring, if crucial assessment parameters change.

In 2011, Creditreform Rating AG was registered within the European Union according to EU Regulation 1060/2009 (CRA-Regulation). Based on this registration, Creditreform Rating AG is allowed to issue credit ratings within the EU and is bound to comply with the provisions of the CRA-Regulation.

ESG-factors

You can find out whether ESG factors were relevant to the rating in the upper section of this rating report "Relevant rating factors".

A general valid description for Creditreform Rating AG, as well as a valid description of corporate ratings for understanding and assessing ESG factors in the context of the credit rating process, can be found [here](#).

Conflict of interests

No conflicts of interest were identified during the rating process that might influence the analyses and judgements of the rating analysts involved or any other natural person whose services are placed at the disposal or under the control of Creditreform Rating AG and who are directly involved in credit rating activities or in approving credit ratings and rating outlooks.

Creditreform Rating AG ensures that the provision of ancillary services does not present conflicts of interest with its credit rating activities and discloses in the final rating reports any ancillary services provided for the rated entity or any related third party. The following ancillary services were provided for the rating entity or for third parties associated with the rated entity:

No ancillary services in the regulatory sense were carried out for this rating object.

For the complete list of provided rating and credit service ancillaries please refer to the Creditreform Rating AG's [website](#).

Rules on the presentation of credit ratings and rating outlooks

The approval of credit ratings and rating outlooks follows our internal policies and procedures. In line with our "Rating Committee Policy", all credit ratings and rating outlooks are approved by a rating committee based on the principle of unanimity.

To prepare this credit rating, Creditreform Rating AG has used following substantially material sources:

Corporate issuer rating:

1. Annual report
2. Website
3. Internet research

Corporate issue rating:

1. Corporate issuer rating incl. information used for the corporate issuer rating
2. Documents on issues / instruments

There are no other attributes and limitations of the credit rating or rating outlook other than those displayed on the Creditreform Rating AG website. Furthermore, Creditreform Rating AG considers as satisfactory the quality and extent of information available on the rated entity. With respect to the rated entity, Creditreform Rating AG regarded available historical data as sufficient.

Between the time of disclosure of the credit rating to the rated entity and the public disclosure, no amendments were made to the credit rating.

The Basic Data Information Card indicates the principal methodology or version of methodology that was used in determining the rating, with a reference to its comprehensive description.

In cases where the credit rating is based on more than one methodology or where reference only to the principal methodology might cause investors to overlook other important aspects of the credit rating, including any significant adjustments and deviations, Creditreform Rating AG explains this fact in the credit rating report and indicates how the different methodologies or other aspects are taken into account in the credit rating. This information is integrated in the credit rating report.

The meaning of each rating category, the definition of default or recovery and any appropriate risk warning, including a sensitivity analysis of the relevant key rating assumptions such as mathematical or correlation assumptions, accompanied by worst-case scenario credit ratings and best-case scenario credit ratings are explained.

The date at which the credit rating was initially released for distribution and the date when it was last updated, including any rating outlooks, is indicated clearly and prominently in the Basic Data Information Card as a "rating action"; initial release is indicated as "initial rating", other updates are indicated as an "update", "upgrade" or "downgrade", "not rated", "confirmed", "selective default" or "default".

In the case of a rating outlook, the time horizon is provided during which a change in the credit rating is expected. This information is available within the Basic Data Information Card.

In accordance with Article 11 (2) EU-Regulation (EC) No 1060/2009, a registered or certified credit rating agency shall make available, in a central repository established by ESMA, information on its historical performance data including the rating transition frequency and information about credit ratings issued in the past and on their changes. Requested data are available at the [ESMA website](#).

An explanatory statement of the meaning of Creditreform Rating AG's default rates are available in the credit rating methodologies disclosed on the website.

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