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CREDIT OPINION
8 December 2023

Update

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RATINGS

Metsa Board Corporation

Domicile	ESPOO, Finland
Long Term Rating	Baa2
Type	LT Issuer Rating - Dom Curr
Outlook	Stable

Please see the ratings section at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

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Metsa Board Corporation

Update following the rating affirmation

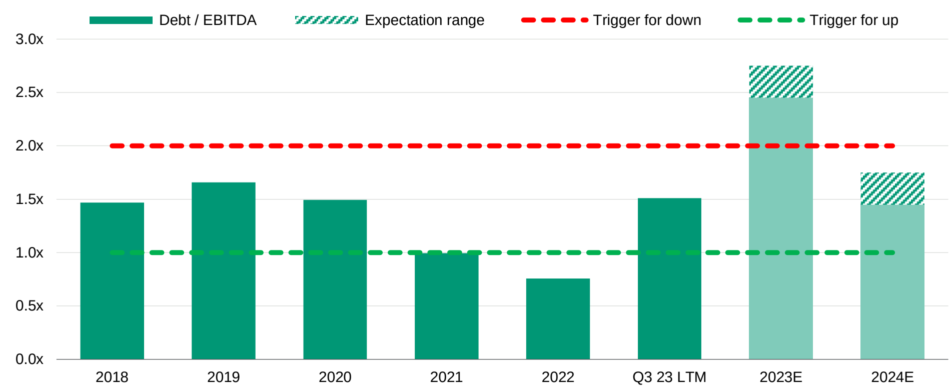
Summary

On 7 December 2023, we affirmed Metsa Board Corporation's (Metsä Board) Baa2 long term issuer rating with a stable outlook as the level of financial leverage remains fairly modest despite a substantial drop in earnings this year. While the degree of profitability decline and the duration of the consumption downturn exceeded our expectations, we anticipate that Metsä Board's profitability will eventually rebound due to its strong market position and its competitive cost structure.

Metsä Board's Baa2 rating is mainly supported by (1) the company's market leadership in high-quality, fresh fibre paperboard packaging in Europe; (2) its good level of vertical integration into energy and pulp; (3) structurally growing demand from largely non-cyclical end-markets; (4) a track record of improving credit metrics and its still fairly modest level of leverage more recently; and (5) its integration into the wider and more diversified Metsä Group, including the direct 25% ownership stake in Metsä Fibre.

However, the rating is primarily constrained by (1) its modest size and lower product diversification compared to most Investment Grade rated peers in paper packaging; (2) financial policy allowing net leverage to increase up to 2.5x from 0.7x in Q3 2023; (3) significant investment programme for the coming years, which can potentially include the construction of a new large FBB mill in Kaskinen; and (4) lack of rating commitment.

Exhibit 1
After the spike in 2023, we expect leverage ratio to revert swiftly into the appropriate range for the Baa2 rating category
Moody's adjusted gross debt/ EBITDA



All figures and ratios are calculated using Moody's estimates and standard adjustments.
Moody's Forecasts or Projections are Moody's opinion and do not represent the views of the issuer.
Source: Moody's Investors Service

Credit strengths

» Market leadership in Europe

» High self-sufficiency in energy and pulp

» Stability of underlying demand with mostly non-cyclical exposure, supported by plastic substitution

Credit challenges

» Narrow product focus and exposure to periodic supply and demand imbalances

» Financial policy allowing significant re-leveraging

» Large investment plans over the coming years

Rating outlook

The stable outlook reflects Moody's expectation that Metsä Board will maintain a relatively low level of financial leverage over the next 12-18 months. We also anticipate an improvement in the company's profitability, with Moody's adjusted EBITDA margin expected to rise to 15-20%, as the market recovers from the low levels experienced in 2023.

Factors that could lead to an upgrade

Positive rating pressure could arise if:

» Metsä Board achieves further significant improvements in its business profile, scale and diversification;

» Moody's adjusted EBITDA margin sustainably above 20% (including contributions from Metsä Fibre);

» Moody's adjusted retained cash flow (RCF)/ debt sustainably above 40%;

» Moody's adjusted gross debt/ EBITDA sustainably below 1.0x.

Factors that could lead to a downgrade

Negative rating pressure could arise if:

» Moody's adjusted EBITDA margin below 15% on a sustained basis;

» Moody's adjusted retained cash flow (RCF)/ debt sustainably below 30%;

» Moody's adjusted gross debt/ EBITDA sustainably above 2.0x;

Key indicators

Exhibit 2
Key Indicators for Metsä Board Corporation [1][2][3]

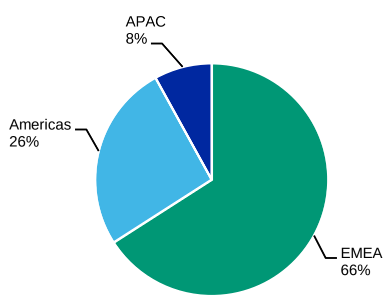
EUR millions	Dec-19	Dec-20	Dec-21	Dec-22	LTM (Sep-23)	Moody's 12-18 months forward view
Revenue	1,932	1,890	2,084	2,480	2,119	2,300 - 2,500
EBITDA Margin %	14.3%	16.5%	22.2%	24.7%	14.2%	10% - 17%
RCF / Debt	31.2%	40.4%	36.4%	53.4%	5.9%	30% - 40%
(RCF - CAPEX) / Debt	9.1%	5.6%	-10.7%	-9.4%	-49.1%	6% - 11%
Debt / EBITDA	1.7x	1.5x	1.0x	0.8x	1.5x	1.2x - 2.0x
EBITDA / Interest Expense	17.6x	26.9x	41.1x	47.8x	23.2x	20x - 25x

[1] All figures and ratios are calculated using Moody's estimates and standard adjustments.
[2]Periods are Financial Year-End unless indicated. LTM = Last Twelve Months.
[3] Moody's Forecasts (f) or Projections (proj.) are Moody's opinion and do not represent the views of the issuer.
Source: Moody's Investors Service

Profile

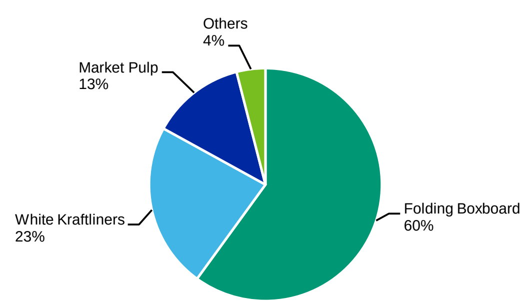
Headquartered in Espoo, Finland, Metsa Board Corporation (Metsä Board) is one of the leading European fresh fibre paperboard producers for consumer and retail packaging, focusing on folding boxboard and white kraftliners, including its own pulp production. In the last 12 months ended September 2023, the company generated €2.1 billion of revenue. Metsä Board has around 2,400 employees worldwide and while its production is located in Finland and Sweden, the company delivers paperboard to approximately 100 countries around the world. Metsä Board's shares are listed on Nasdaq Helsinki, with a current market capitalisation of around €2.6 billion.

Exhibit 3
Sales by geography in the first nine months 2023



Source: Metsä Board

Exhibit 4
Sales by product in the first nine months 2023



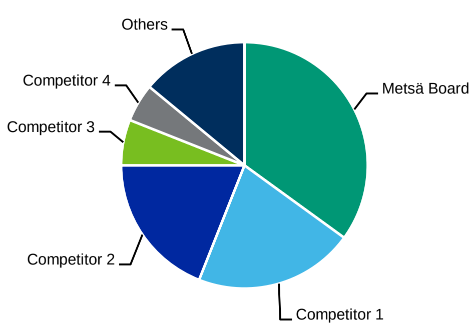
Source: Metsä Board

Detailed credit considerations

Narrow product focus compared to larger peers, but market leadership and integrated business model support the rating

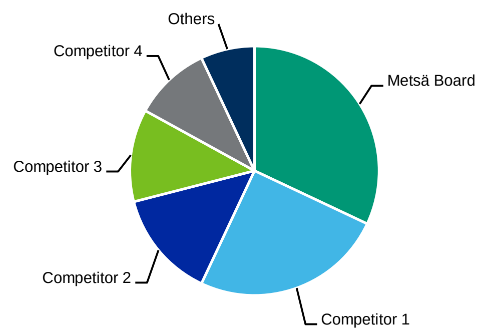
Metsä Board's rating is constrained by its modest size, with revenue of around €2.1 billion, and its lower diversification compared to larger Investment Grade rated peers in the paper packaging sector, such as Smurfit Kappa Group Plc (Baa3 Ratings Under Review), Stora Enso Oyj (Baa3 stable) and Mondi Plc (Baa1 stable). However, the company has a strong market position as the European market leader in fresh fibre folding boxboard and white kraftliner. Metsä Board estimates to have approximately 35% market share based on reported capacity in folding boxboard (FBB), where it competes notably with Stora Enso, and 32% market share in white kraftliner (WKL), where its main competitors are Smurfit Kappa, Billerud and Stora Enso, in fairly consolidated markets (Exhibit 5 & 6). The company's recent capacity expansions - 200k t/a of FBB in Husum (start-up in Q4 2023) and 40k t/a of WKL in Kemi (started up in Q3 2023) - are expected to further enhance its market lead.

Exhibit 5
Metsä Board is the market leader in the European folding boxboard
Market share based on capacity



Source: Metsä Board's estimates

Exhibit 6
Metsä Board is also the market leader in the European white kraftliner
Market share based on capacity



Source: Metsä Board's estimates

The demand for fresh fibre paperboard generally demonstrates resilience largely due to its extensive use in the non-cyclical food & beverage sector, even though the restocking/ destocking pattern observed in 2022/23 shows that the sector can still experience periods of significant volatility. We expect an annual growth rate of approximately 3-4% through 2030, driven by the substitution of plastic and the rise of e-commerce. Metsä Board's paperboard, characterized by its superior brightness and smoothness, facilitates excellent printability, enhancing the brand experience for e-commerce customers.

Metsä Board's vertical integration into energy and pulp is beneficial. The company is largely self-sufficient in electricity, with its own generation and purchases through PVO, a non-listed public limited company supplying electricity to its shareholders at cost price, as well as from the associated company Metsä Fibre. Only 36% of electricity and 10% of heat fuels are externally sourced.

Wood, accounting for 25% of Metsä Board's total costs, including the wood used in pulp production purchased from Metsä Fibre, is primarily sourced from the members of Metsäliitto Cooperative in Finland, Metsä Board's main shareholder. In Sweden, the company has a long-term supply agreement with Norra Skog, which acquired a 30% stake in Metsä Board's Husum pulp mill for €260 million in January 2021. At Husum, the company produces around 730 thousand t/a of pulp, a vital raw material for its 1,360 thousand t/a of folding boxboard and 675 thousand t/a white kraftliner production. Metsä Board's 25% shareholding in the associated company Metsä Fibre, with a pulp capacity of around 3.3 million t/a, places it in a net long position in pulp. This balance will further increase with Metsä Fibre's renewal of its pulp mill in Kemi, where capacity will rise from 610 thousand t/a to 1.5 million t/a, a result of an over €2 billion investment that started up in Q3 2023. However, capacity expansions in FBB and WKL will also increase pulp consumption, but the group will maintain a large net long position in pulp in the coming years.

Metsä Board's strategy primarily aims to maintain its market leadership in Europe through efficient production in Northern Europe and exports to the rest of Europe and increasingly outside of Europe, with a particular focus on North America. In 2022, approximately

26% of group sales were generated in the Americas and another 8% in APAC (Exhibit 3). Despite the higher transport costs that put Metsä Board at a competitive disadvantage compared to local producers, the company asserts its ability to manufacture fresh fibre paperboard that is up to 30% lighter than rival grades, while maintaining equivalent stiffness, as a significant competitive edge.

Metrics are weakening in 2023 and potential large investment plans present a risk for the credit profile, though leverage is still fairly low

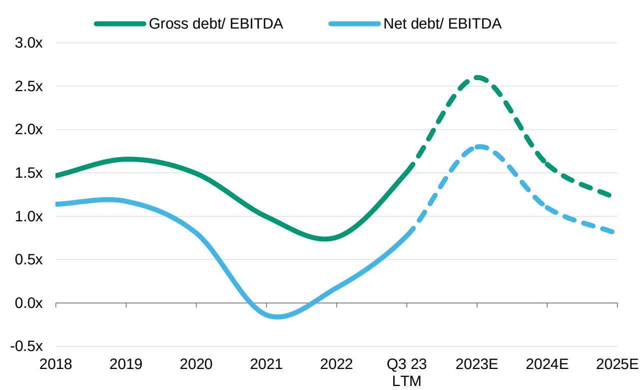
Following a period of robust earnings growth in recent years (Moody's adjusted EBITDA increased by 121% in 2019-2022), Metsä Board encountered a substantial drop in 2023. This downturn, while anticipated, was more severe and prolonged than what we have expected. In the first nine months of 2023, Moody's adjusted EBITDA fell by 69% due to a combination of customer destocking, weak consumer spending, heightened competition (partly against Chinese producers), increased costs, and a reduced earnings contribution from the associated company Metsä Fibre.

However, the exceptionally large deterioration of earnings had a relatively modest impact on Moody's adjusted gross leverage, increasing to 1.5x in Q3 2023 from 0.8x at the year-end 2022, which reflects the relatively low absolute level of debt. Additionally, effective working capital management largely compensated for the earnings decline, resulting in a 28% increase in cash flow from operations (Moody's adjusted) in the first nine months of 2023 compared to the same period last year.

Given the substantial ongoing investments and the high dividend distribution for the record year 2022, we still expect this year's free cash flow (as defined by Moody's) to be significantly negative, ranging between €250-€270 million. However, the group's liquidity position remains robust and we expect a considerably lower dividend distribution in 2024 due to the weak earnings performance this year and the company's dividend policy to pay out 50% of net income. We also foresee a roughly 50% reduction in investments next year as the current investment phase concludes in 2023, and the decision on the construction of a new FBB mill in Kaskinen is still pending.

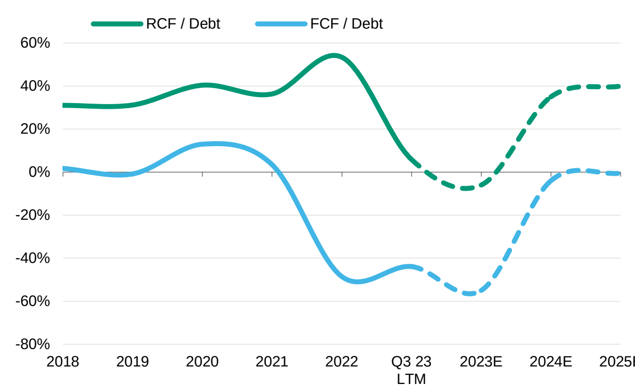
We expect that Metsä Board will continue to manage its balance sheet conservatively, taking into account the volatility of its earnings and carefully planning capacity expansions, considering their potential effects on market equilibriums. However, the rating could face negative rating pressure if the company opts for a more aggressive growth strategy, with largely debt-funded investments increasing gross leverage beyond our quantitative downgrade trigger for longer than 24 months.

Exhibit 7
Leverage is expected to peak in the next 1-2 quarters with a swift reduction thereafter
Moody's adjusted gross and net leverage



Source: Moody's Investors Service

Exhibit 8
Large investments and high dividends depressed the cash generation lately
Moody's adjusted cash flow based credit metrics



Source: Moody's Investors Service

We think that Metsä Board's strong market position and competitive cost structure will ultimately bolster its profitability recovery. However, the proposed construction of a folding boxboard (FBB) mill in Kaskinen could significantly increase the company's leverage. The new mill, projected to boost the company's existing FBB capacity by 60% with an additional 800,000 tonnes annually, would necessitate an investment exceeding €1 billion over a 2-3 year construction period. The decision, expected in 2024 at the earliest, is far from certain due to a weak market environment characterized by depressed volumes and pricing.

Metsä Board could opt for a conservative financial approach by utilizing a portion of its 25% stake in Metsä Fibre (the balance sheet value of investments in associated companies as of September 2023 was €550 million) to fund the construction. It could also reduce other investments to maintenance level (€50-60 million) and use its current liquidity to minimize additional debt. The company has demonstrated financial prudence in the past, and we acknowledge its flexibility regarding the timing and scale of the new FBB mill. While the new mill's construction could significantly increase Metsä Board's leverage, it also offers strategic benefits such as increased size and scale. It would likely cement the company's market leadership with the creation of a technologically advanced, 100% fossil fuel free plant.

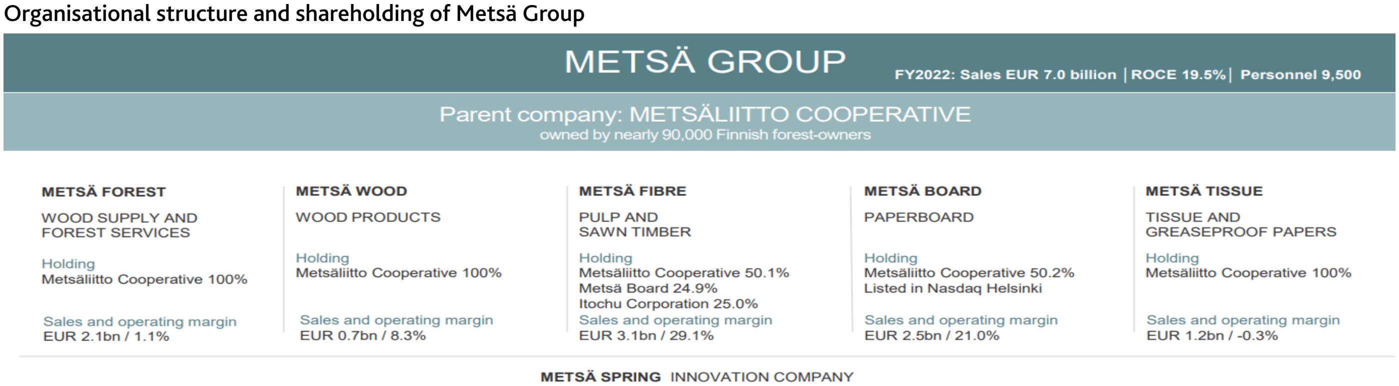
In its Capital Markets Day in November 2022, Metsä Board reiterated its financial policy of maintaining net leverage below 2.5x. Since 2017, the company has kept the ratio at less than half that level, and despite a sharp EBITDA decline, it remained at 0.7x in September 2023. We anticipate that ongoing low profitability will push the ratio towards 1.5x by the end of 2023, with a mild recovery in 2024 reducing it back towards 1x. As discussed, potential investments in the new FBB mill could increase leverage in 2025-26, but we believe the company will avoid reaching the leverage ceiling, which is a max level in any scenario.

Integration into the wider Metsä Group is beneficial

Metsä Board is a public company, but approximately 50% of its shares (69% of votes) are owned by Metsäliitto Cooperative, which is owned by more than 90,000 Finnish forest owners. Apart from its share in Metsä Board, Metsäliitto Cooperative holds majority shares in Metsä Fibre (50.1%), which primarily produces pulp and in which Metsä Board also owns a 24.9% stake. Additionally, the cooperative has a 100% ownership in Metsä Tissue, Metsä Wood and Wood Supply and Forest Services. The entire Metsä Group, with all five businesses fully consolidated, generated a consolidated turnover of around €7 billion in 2022.

We generally view Metsä Board's integration into the wider Metsä Group as credit positive. During its business transformation, Metsä Group acted as a supportive shareholder, supporting Metsä Board, for instance, through asset sales from Metsä Board to Metsä Group or through the suspension of dividend payments between 2009 and 2012. In addition, given its healthy capital structure and well-invested asset base, we do not see a major risk of Metsä Group taking excessive amounts of cash flow out of Metsä Board on top of ordinary dividends. At the end of 2022, Metsä Group's consolidated cash position was €1.3 billion and its net leverage (Moody's adjusted) was 0.2x, gross leverage at 1.0x.

Exhibit 9
Organisational structure and shareholding of Metsä Group



Source: Metsä Board

Liquidity analysis

Moody's views Metsä Board's liquidity profile as robust. As of September 2023, its liquidity consisted of €221 million of cash and cash equivalents plus the €200 million undrawn revolving credit facility (RCF) maturing in 2027. Furthermore, it had €228 million availability under the Metsä Board's pension loan facility and an internal short-term credit line of €150 million from the Metsä Group. We view the company's cash sources to be more than adequate to cover projected cash uses over the next 12-18 months. This is particularly true given the expected decrease in investments in 2024, as the current investment programmes in Husum and Kemi are largely concluding this year, and decisions regarding new investments in Kaskinen and Husum are still pending.

ESG considerations

Metsa Board Corporation's ESG credit impact score is CIS-3

Exhibit 10
ESG credit impact score

CIS-2

ESG considerations do not have a material impact on the current rating.

Source: Moody's Investors Service

Metsä Board's **CIS-2** indicates that ESG considerations are not material to the rating. As a manufacturing company, Metsä Board is more exposed to environmental and social risks with a moderate exposure to physical climate, natural capital, pollution risks and health and safety issues. However, these risks present a limited impact on the current rating and are further mitigated by its conservative financial management.

Exhibit 11
ESG issuer profile scores

ENVIRONMENTAL
E-3

SOCIAL
S-3

GOVERNANCE
G-2

Source: Moody's Investors Service

Environmental
Metsä Board's **E-3** score reflects its exposure to environmental risks tied to manufacturing processes with potential future investments needed to reduce emissions and improve water management efficiency.

Social
Metsä Board's **S-3** score reflects health & safety risks given the use of heavy equipment and machinery in its manufacturing facilities.

Governance
Metsä Board's **G-2** score reflects its conservative financial policies and a track-record of maintaining strong balance sheet over the recent years. Metsä Board is a public company, though 67% of its voting shares are held by Metsaliitto Cooperative (an association of Finish forest owners) that also owns Metsä Tissue, Metsä Wood, Metsä Forest and the majority of shares in Metsä Fiber. We generally view Metsä Board"s integration into the wider Metsä Group as credit positive, as Metsä Group acted as a supportive shareholders in the past.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moodys.com. In order to view the latest scores, please click here to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

Rating methodology and scorecard factors

We used our Paper and Forest Products Industry rating methodology as the primary methodology for analysing Metsä Board. The scorecard-indicated outcome is volatile and changed from Baa2 based on year-end 2022 financials to Ba2 just three quarters later in September 2023. Assuming a mild recovery in profitability over the next 12-18 months, the grid outcome improves to Baa3. However, the scorecard does not capture the benefits of Metsä Board being a part of a larger and more diversified group. Also the grid outcome is negatively influenced by the low RCF-capex/ debt score while leverage/ coverage ratios remain in A - Aa.

Exhibit 12

Scorecard factors

Metsä Board

Paper and Forest Products Industry Grid [1][2]	Current LTM 9/30/2023		Moody's 12-18 Month Forward View As of 11/24/2023 [3]	
Factor 1 : Scale (10%)	**Measure**	**Score**	**Measure**	**Score**
a) Revenue (USD Billion)	$2.3	Ba	$2.3 - $2.5	Ba
Factor 2 : Business Profile (30%)				
a) Product Line Diversification	B	B	B	B
b) Geographic and Operational Diversification	B	B	B	B
c) Market Position, Cyclicality and Growth Potential	Baa	Baa	Baa	Baa
Factor 3 : Profitability and Efficiency (15%)				
a) EBITDA Margin	14.2%	B	14% - 17%	B
b) Fiber and Energy Flexibility and Cost	Baa	Baa	Baa	Baa
Factor 4 : Leverage and Coverage (30%)				
a) RCF / Debt	5.9%	B	35% - 40%	A
b) (RCF - CAPEX) / Debt	-49.1%	Ca	6% - 9%	Ba
c) Debt / EBITDA	1.5x	A	0.8x - 1.2x	A
d) EBITDA / Interest	23.2x	Aa	18x -22x	Aa
Factor 5 : Financial Policy (15%)				
a) Financial Policy	Baa	Baa	Baa	Baa
Rating:				
Indicated Outcome before Notching Adjustments		Ba2		Baa3
Notching Adjustments		0.0	0	0.0
a) Scorecard-Indicated Outcome		Ba2		Baa3
b) Actual Rating Assigned				Baa2

[1] All figures and ratios are calculated using Moody's estimates and standard adjustments.
[2] Periods are Financial Year-End unless indicated. LTM = Last Twelve Months.
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Source: Moody's Investors Service

Ratings

Exhibit 13

Category	Moody's Rating
METSA BOARD CORPORATION	
Outlook	Stable
Issuer Rating -Dom Curr	Baa2

Source: Moody's Investors Service

Appendix

Exhibit 14

Peer Comparison [1][2]

	Metsa Board Corporation Baa2 Stable			Mondi Plc Baa1 Stable			Stora Enso Oyj Baa3 Stable			Smurfit Kappa Group plc Baa3 Rating(s) Under Review			Sappi Limited Ba2 Positive		
	FYE	FYE	LTM	FYE	FYE	LTM	FYE	FYE	LTM	FYE	FYE	LTM	FYE	FYE	LTM
(in USD million)	Dec-21	Dec-22	Sep-23	Dec-21	Dec-22	Jun-23	Dec-21	Dec-22	Sep-23	Dec-21	Dec-22	Jun-23	Sep-21	Sep-22	Jun-23
Revenue	2,466	2,613	2,262	8,251	9,382	8,669	12,026	12,310	10,766	11,958	13,506	12,846	5,265	7,296	6,351
Operating Profit	309	388	154	930	1,521	1,210	1,863	1,998	609	1,265	1,753	1,643	173	956	670
EBITDA	547	644	321	1,380	1,968	1,672	2,658	2,770	1,457	1,918	2,429	2,316	513	1,269	988
Total Debt	524	494	481	2,622	2,395	2,399	5,054	4,570	5,977	4,986	4,604	4,717	2,674	2,146	1,883
Cash & Cash Equivalents	596	380	234	538	1,480	1,321	1,684	2,046	2,199	972	829	671	366	780	504
EBIT / Interest Expense	33.1x	41.3x	16.6x	9.3x	9.9x	8.4x	12.3x	14.2x	5.3x	7.6x	9.1x	8.1x	1.3x	7.4x	5.9x
Debt / EBITDA	1.0x	0.8x	1.5x	2.0x	1.2x	1.4x	2.0x	1.6x	4.1x	2.7x	1.9x	2.0x	5.2x	1.7x	1.9x
RCF / Net Debt	-262.8%	231.1%	11.4%	51.2%	158.6%	109.2%	43.2%	67.3%	7.3%	28.1%	42.4%	37.2%	16.4%	82.9%	50.0%
FCF / Debt	3.5%	-48.5%	-43.9%	9.5%	21.1%	18.1%	10.8%	8.9%	-10.8%	4.6%	4.7%	7.3%	0.5%	24.9%	22.2%

[1] All figures are calculated using Moody's estimates and standard adjustments.
[2] Periods are Financial Year-End unless indicated. LTM = Last Twelve Months.
Source: Moody's Financial Metrics TM

Exhibit 15

Moody's-Adjusted Debt Reconciliation for Metsä Board Corporation [1][2]

(in EUR million)	FYE Dec-18	FYE Dec-19	FYE Dec-20	FYE Dec-21	FYE Dec-22	LTM Sep-23
As Reported Debt	**447**	**445**	**452**	**447**	**453**	**444**
Pensions	13	14	13	13	10	10
Operating Leases	29	0	0	0	0	0
Non-Standard Adjustments	0	0	0	0	0	0
Moody's-Adjusted Debt	**490**	**458**	**466**	**461**	**463**	**454**

[1] All figures are calculated using Moody's estimates and standard adjustments.
[2] Periods are Financial Year-End unless indicated. LTM = Last Twelve Months.
Source: Moody's Financial Metrics TM

Exhibit 16

Moody's-Adjusted EBITDA Reconciliation for Metsä Board Corporation [1][2]

(in EUR million)	FYE Dec-18	FYE Dec-19	FYE Dec-20	FYE Dec-21	FYE Dec-22	LTM Sep-23
As Reported EBITDA	**334**	**295**	**318**	**463**	**612**	**302**
Pensions	0	0	0	0	-1	-1
Operating Leases	10	0	0	0	0	0
Unusual	-11	-18	-6	0	0	-1
Moody's-Adjusted EBITDA	**334**	**276**	**312**	**463**	**611**	**301**

[1] All figures are calculated using Moody's estimates and standard adjustments.
[2] Periods are Financial Year-End unless indicated. LTM = Last Twelve Months.
Source: Moody's Financial Metrics TM

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