25 July 2023

LANXESS AG Germany, Specialty Chemicals

Key metrics

| | | | Scope estimates | |
|--|-------|------|-----------------|-------|
| Scope credit ratios | 2021 | 2022 | 2023E | 2024E |
| Scope-adjusted EBITDA/interest cover | 10.3x | 9.1x | 6.6x | 9.5x |
| Scope-adjusted debt/EBITDA | 3.0x | 4.7x | 4.4x | 3.3x |
| Scope-adjusted funds from operations/debt | 29% | 18% | 19% | 25% |
| Scope-adjusted free operating cash flow/debt | -6% | -9% | 15% | 7% |

Rating rationale

The rating is driven by Lanxess' strong business risk profile of BBB+. This is supported by the company's positioning in medium-sized segments of the specialty chemicals market, characterised by high barriers to entry and a diversified presence across various end-markets. Despite the weakness in lower operating profitability indicated by the Scope-adjusted EBITDA margin, we understand that this situation is temporary and due to i) the current inflationary environment, partly managed by a price pass-through to final customers; and ii) longer-than-expected customer destocking.

The financial risk profile remains at BBB and is mainly constrained by increased leverage. Despite the company's utilisation of most of the proceeds from the high performance materials division (HPM) to repay debt (EUR 1.1bn out of the total EUR 1.3bn received), the company's deleveraging process will occur at a slower than expected pace, requiring strategic resource reallocation during this period.

Outlook and rating-change drivers

The Negative Outlook reflects the planned deleveraging (Scope-adjusted debt/EBITDA) which is now expected to be more gradual than previously anticipated – mainly due to destocking across the market, not specific to LANXESS – and is expected to affect the issuer's operating cash flow in the short to medium term. The company has shown a clear commitment to deleverage, by using most of the EUR 1.3bn proceeds from the divestment of HPM to pay down debt. We will continue to monitor the company's strategy to reduce costs and their willingness to reduce dividends, in order to reduce leverage to a level appropriate for the current rating.

A positive rating, i.e. a return of the Outlook to Stable, could be warranted if the company showed a clear path to deleveraging to below 2.5x (Scope-adjusted debt/EBITDA) in the short-to-medium term, as evidenced by a significant year-on-year improvement in this ratio. This could be triggered by higher visibility on when destocking issues will recede and which specific measures LANXESS will implement to offset its temporary effect on leverage.

A downgrade could occur if Scope-adjusted debt/EBITDA were above 2.5x for a longer period than currently expected, for example due to a lagging recovery of the market or a less conservative financial policy reflected in less importance being attached to debt reduction, as evidenced by Scope-adjusted debt/EBITDA not declining significantly year-on-year.

Rating history

| Date | Rating action/monitoring review | Issuer rating & Outlook |
|----------------|---------------------------------|-------------------------|
| 27 June 2023 | Outlook change | BBB+/Negative |
| 27 June 2022 | Affirmation | BBB+/Stable |
| 04 August 2021 | Affirmation | BBB+/Stable |



BBB+

| Issuer | BBB+/Negative |
|----------------------|---------------|
| Short-term debt | S-2 |
| Senior unsecured deb | t BBB+ |

Analyst

SCOPE

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Related Methodologies

General Corporate Rating Methodology; July 2022

Chemicals Rating Methodology; April 2023

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Bloomberg: RESP SCOP

NEGATIVE



Rating and rating-change drivers

| Positive rating drivers | Negative rating drivers |
|--|---|
| Industry risk profile – specialty chemicals (assessed at A) Powerful position in medium-sized markets with considerable barriers to entry Increased, more resilient end-market mix due to portfolio clean-up and acquisitions Ongoing efforts to upgrade the portfolio switching from volatile to resilient business Improved innovation through the recent acquisitions of Emerald Kalama Chemical and the Microbial Control business from International Flavors & Fragrances (IFF) Strong awareness of sustainable and environmental topics Conservative financial policy, including balancing shareholder and debt holder interests and maintaining an investment grade rating in the BBB range | Highly cyclical end-markets generating around 40% of sales (own calculations) Weak profitability in terms of thresholds for operating profitability set out in our Chemicals methodology; increasing profitability but still weak compared to that of key competitors. Temporarily weak financial risk profile following longer-than-expected customer destocking and weak demand |
| Positive rating-change drivers | Negative rating-change drivers |

- Return to Stable Outlook if the company shows a clear path to deleveraging to below 2.5x (Scope-adjusted debt/EBITDA) in the short-to-medium term
- Scope-adjusted debt/EBITDA of above 2.5x for a longer period than currently expected will result in a downgrade

Corporate profile

LANXESS AG, based in Cologne, Germany, is a producer of specialty chemicals. In 2022, it recorded sales of approximately EUR 8.0bn and an EBITDA of EUR 826m. The transfer of its HPM business unit (previously consolidated under the engineering materials segment) into the joint venture with Advent occurred in H1 2023. LANXESS received a payment of EUR 1.3bn, which has already been largely utilised to reduce leverage in accordance with the deleveraging goals of the company. This divestment is part of LANXESS' strategy of shifting away from volatile businesses and acquiring more resilient ones, such as IFF's microbial control activities. Going forward, the company will be organised into three divisions: advanced intermediates, specialty additives, and consumer protection. Its product portfolio encompasses chemical intermediates, additives, and specialty chemicals used in various industries, such as automotive, construction, agriculture, nutrition and industrial manufacturing.

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Financial overview

SCOPE

| | | | | Scope es | timates |
|--|--------|--------|-------|----------|---------|
| Scope credit ratios | 2020 | 2021 | 2022 | 2023E | 2024E |
| Scope-adjusted EBITDA/interest cover | 6.6x | 10.3x | 9.1x | 6.6x | 9.5x |
| Scope-adjusted debt/EBITDA | 1.8x | 3.0x | 4.7x | 4.4x | 3.3x |
| Scope-adjusted funds from operations/debt | 47% | 29% | 18% | 19% | 25% |
| Scope-adjusted free operating cash flow/debt | 5% | -6% | -9% | 15% | 7% |
| Scope-adjusted EBITDA in EUR m | | | | | |
| EBITDA | 757 | 863 | 826 | 614 | 757 |
| Operating lease payments | - | - | - | - | - |
| Other items | 1 | 1 | -3 | - | - |
| Scope-adjusted EBITDA | 758 | 864 | 823 | 614 | 757 |
| Funds from operations in EUR m | | | | | |
| EBITDA | 758 | 864 | 823 | 614 | 757 |
| less: (net) cash interest paid | -115 | -84 | -91 | -93 | -79 |
| less: cash tax paid per cash flow statement | -131 | -10 | 4 | -6 | -49 |
| add: dividends from associates | 150 | 0 | 0 | 0 | 0 |
| Change in provisions and other items | -32 | -29 | -25 | - | - |
| Funds from operations (FFO) | 626 | 737 | 707 | 514 | 628 |
| Free operating cash flow in EUR m | | | | | |
| Funds from operations | 626 | 737 | 707 | 514 | 628 |
| Change in working capital | 106 | -413 | -471 | 280 | -33 |
| Non-operating cash flow | -163 | 60 | -104 | 42 | 42 |
| less: capital expenditure (net) | -452 | -476 | -402 | -368 | -400 |
| less: operating lease payments | -52 | -54 | -58 | -58 | -58 |
| Free operating cash flow (FOCF) | 65 | -146 | -328 | 410 | 179 |
| Net cash interest paid in EUR m | | | | | |
| Net cash interest per cash flow statement | 74 | 55 | 53 | 44 | 30 |
| add: interest component, operating leases | - | - | - | - | - |
| Other items. ¹ | 41 | 29 | 38 | 49 | 49 |
| Net cash interest paid | 115 | 84 | 91 | 93 | 79 |
| Scope-adjusted debt in EUR m | | | | | |
| Reported gross financial debt | 2,331 | 3,004 | 3,747 | 2,997 | 2,997 |
| add: subordinated (hybrid) debt | 250 | 250 | 250 | - | - |
| less: cash and cash equivalents | -1,794 | -1,134 | -403 | -571 | -752 |
| add: non-accessible cash | 0 | 0 | 0 | 0 | 0 |
| add: pension adjustment | 407 | 286 | 122 | 122 | 122 |
| add: operating lease obligations | - | - | - | - | - |
| Other items. ² | 143 | 149 | 139 | 139 | 139 |
| Scope-adjusted debt | 1,337 | 2,554 | 3,855 | 2,687 | 2,505 |

¹ Including: Capitalised interest, pension interest, interest related to contingent liabilities and subordinated (hybrid) debt ² Contingent liabilities

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Environmental, social and governance (ESG) profile³

| Environment | Social | Governance |
|---|---|---|
| Resource management (e.g. raw materials consumption, carbon emissions, fuel efficiency) | Labour management | Management and supervision (supervisory boards and key person risk) |
| Efficiencies (e.g. in production) | Health and safety (e.g. staff and customers) | Clarity and transparency (clarity, quality and timeliness of financial disclosures, ability to communicate) |
| Product innovation (e.g. transition costs, substitution of products and services, green buildings, clean technology, renewables) | Clients and supply chain (geographical/product diversification) | Corporate structure (complexity) |
| Physical risks (e.g. business/asset vulnerability, diversification) | Regulatory and reputational risks | Stakeholder management (shareholder payouts and respect for creditor interests) |

Legend

Green leaf (ESG factor: credit positive) Red leaf (ESG factor: credit negative) Grey leaf (ESG factor: credit neutral)

ESG profile: No adjustment

No key drivers of the credit rating action are considered ESG factors at present. We consider the main chemical industry risk to be environmental, driven by the intensive productive nature of chemical companies. There is also litigation risk in the chemicals industry, given possible toxic effects on end-users. Apart from the industry risks identified above, we see no company-specific ESG factors at this stage.

³ These evaluations are not mutually exclusive or exhaustive as ESG factors may overlap and evolve over time. We only consider ESG factors that are credit-relevant, i.e. those that have a discernible, material impact on the rated entity's cash flow and, by extension, its credit quality.



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Industry risk profile: A

LANXESS' joint venture with Advent International executed according to plan

Limited impact on LANXESS' business risk profile from the transaction

Powerful position in multiple medium-sized markets...

... reinforced by the acquisition of Emerald Kalama Chemical and IFF's microbial control arm

Business risk profile: BBB+

The specialty chemicals industry is dominated by a wide range of different-sized companies, as well as factors such as production expertise and relationships with customers in aftermarkets. All of these factors serve as de-facto high entry barriers. The low substitution risk assessment is based on the high technical production requirements and a lack of alternative production methods. We believe specialty chemicals companies face medium sensitivity to changes in GDP, because aftermarkets require lower quantities of specialty chemicals in their product processes, when compared to the quantities needed of commodity chemicals, and prices tend to be negotiated individually.

In May 2022 LANXESS indicated publicly that it had transferred its HPM business unit, previously consolidated under the engineering materials segment, to a joint venture with Advent in H1 2023. The transfer received regulatory approval in all geographies. The new entity is expected to generate seannual sales and EBITDA of approximately EUR 3.0bn and EUR 500m for LANXESS and Advent respectively. Considering that purchase price allocation amortisation will initially prevent the profits from being consolidated at the parent company level, it is important to note that this amortisation is non-cash for the joint venture, in which LANXESS currently holds a 40% stake. In three years' time, LANXESS will have the possibility to sell its stake in the joint venture to Advent. The value of the joint venture will be determined using the same valuation parameters as the sale of the HPM business, which was based on a 12x EBITDA multiple and resulted in a valuation of EUR 1.3bn.

As for the Urethane Systems division, which was also previously consolidated under engineering materials and is now under the category of All other segments, it is still uncertain whether a divestiture will occur.

The transfer of HPM to the new joint venture will have a limited impact on LANXESS' business risk profile. We anticipate a decrease in the company's market share due to the segment's significant global market presence, including its top ranking in hot cast elastomer systems and the strength of brands such as TEPEX, as well as HPS'S history of product innovations. Considering the inherent cyclicality of HPM, post deconsolidation LANXESS' remaining portfolio and profitability (EBITDA margin) should become more resilient. Additionally, the highly cyclical automotive industry will account for a smaller proportion of group sales, dropping to approximately 10% in 2022 and going forward from 20% in 2021. It should be noted that LANXESS' interest in the HPM business will decrease to only 40%, resulting in a narrower scope and reduced diversity.

LANXESS' business risk profile is driven by its strong position in multiple medium-sized and niche markets. These markets are characterised by high concentration, domination by a few key players, modest competition, and stable conditions. LANXESS' consumer protection activities benefit from stringent regulatory requirements. To strengthen its position in this area, the company acquired Emerald Kalama Chemical and IFF's microbial control business unit⁴. Emerald Kalama Chemical has a strong market position in sodium benzoates, which are used in the production of soft drinks. Both acquisitions significantly enhance the market position of LANXESS' material protection business unit, a part of the Consumer protection division. In addition to an increased market share, LANXESS will possess the widest product portfolio in the industry, encompassing numerous applications in various industries and geographies. This positions the company strongly in a business characterised by technical expertise, knowledge, and strict

⁴ See LANXESS completes acquisition of IFF's microbial control business and LANXESS completes acquisition of Emerald Kalama Chemical



regulation.

Figure 1: Selected market positions

| Business line (segment) | Inorganic pigments (advanced intermediates) | Lubricant additives business (specialty additives) | Material protection products (consumer protection) |
|----------------------------|---|--|---|
| Market position | Among the leading players | No. 1 to no. 3 | No. 1 in bromine, bromine intermediates and brominated flame retardants |

Source: LANXESS, Scope

Enhanced product innovation through acquisitions

LANXESS has enhanced its product portfolio through innovation, primarily driven by the recent acquisitions of IFF and Emerald Kalama Chemical. These strategic acquisitions, coupled with the ongoing development of innovative products such as Emerald NH500, a flame retardant, and Nagardo, a natural beverage preservative that won the 2022 World Beverage Innovation Award, have enabled LANXESS to expand its portfolio within the specialty chemicals industry. Consequently, the company has successfully revitalised its product offerings, which were previously in a mature phase. It is worth noting, however, that a significant portion of LANXESS' R&D efforts are focused on optimising and improving existing products.

The partnerships and collaborations already in the pipeline with Standard Lithium Ltd. (testing to extract battery-grade lithium from tail brine) and CheMondis GmbH (an online marketplace for chemicals) made significant progress in 2022.

Recent intensive portfolio realignment has greatly improved the revenue mix by endmarket, enhancing diversification through several acquisitions, notably Emerald Kalama Chemical and IFF. The most recent divestment of HPM, now consolidated under the equity method instead of full consolidation, has reduced the company's scale but also decreased its exposure to cyclical segments. The highly cyclical automobile industry now accounts for a smaller portion of group sales, approximately 10% compared to 20% in 2021. In the short term, we do not expect LANXESS to pursue further acquisitions, but we anticipate organic growth in its consumer-protection business. The company will prioritise leverage reduction over the next two years.

LANXESS' significant exposure to highly cyclical end-markets remains a challenge. Even after the deconsolidation of HPM, the company still generates up to 40% of its revenue from industries such as automotive, chemicals, and construction, where aftermarket demand is strongly correlated with global GDP. Following the deconsolidation, LANXESS is now less reliant on demand from the automotive and tyre sectors (categorised as mobility in Figure 2) compared to previous periods. We expect that LANXESS will strive to further decrease the cyclicality of its end-markets and aim to increase its presence in more stable end-consumer focused markets.

Focus on partnerships and cooperations

Improved end-market diversification

Share of cyclical end-markets significantly reduced



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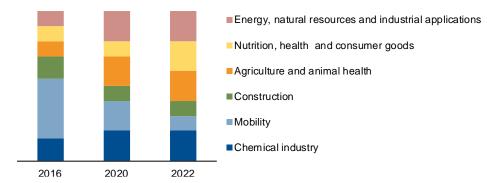


Figure 2: Sales by end-market, 2016, 2020 and 2022

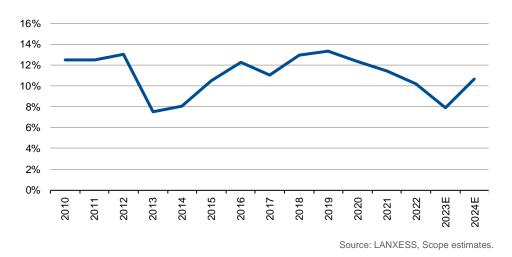
Source: LANXESS, Scope

Efforts to counter profit erosion with focus on specialized products

Advanced Intermediates 12.1% Specialty Additives 16.1% Consumer Protection 15.3% All other segments -59% In line with our Chemicals Rating Methodology, the assessment of operating profitability, based on the Scope-adjusted EBITDA margin, considers the last three years in conjunction with our forecast for the current year. From 2020 to 2023, LANXESS' Scope-adjusted EBITDA margin averaged approximately 10.6%, which is lower than that of peers. Based on our rating base case, LANXESS has the potential to enhance its EBITDA margin as it progresses through the milestones of the measures the company is currently working on. The company's specialised and high-margin products within the consumer protection segment, such as preservatives, food flavourings and disinfectants, contribute to maintain profitability. The erosion of profitability in the last 12 months was also derived from an inflated revenue driven by LANXESS' passing on of higher energy and raw material prices (up to 70% of customer contracts include price step-up clauses).

LANXESS remains committed to an EBITDA pre-margin target (before exceptional costs) of 14%-18% through the cycle, combined with a volatility objective of 2%-3% percentage points.

Figure 3: Profitability (EBITDA margin)



Financial risk profile: BBB

Key adjustments of the rating case include:

• Net present value of operating lease obligations added to Scope-adjusted debt (before 2019, as LANXESS implemented IFRS 16 from 01 January 2019)



- 80% of provisions for environmental protection (contingent liabilities) are included in Scope-adjusted debt and 5% of contingent liabilities are included in Scope-adjusted interest expense to reflect the interest proportion of these liabilities
- Half of the company's unfunded pension provisions added to Scope-adjusted debt, given the high coverage of annual pension payments through dedicated pension assets
- Interest adjusted for the (estimated) interest component of pension provisions, operating leases (before 2019) and contingent liabilities
- No adjustment for restricted cash
- For 2022 and before, the issued hybrid bond (ISIN: XS1405763019, EUR 500m) rated BBB-, treated as 50% equity credit according to our General Corporate Rating Methodology. For 2023 and beyond, there is no adjustment necessary as the repayment took place in H1 2023.

LANXESS' financial risk profile assessment remains at BBB. Leverage ratios, Scopeadjusted debt/EBITDA and Scope-adjusted FFO/debt do temporarily not meet our thresholds for the BBB assessment in 2022. Following the June 2023 profit warning, its return to a level commensurate with the assigned rating is not expected before 2024. We understand that: i) the temporary increase in leverage was partially driven by the acquisitions of IFF's microbial control business unit and Emerald Kalama Chemical together with significant investments in working capital and related costs for portfolio reconfiguration; ii) the profit warning is driven by a general market situation and is not expected to have a negative effect on market share or long-term profitability; and iii) robust liquidity and extended maturities are supportive of an adequate liquidity profile. Furthermore, as most of the funds from the HPM transaction have been utilised for deleveraging, we place greater emphasis on the normalised metrics trend observed in 2023, 2024 and 2025 and anticipate an improvement in key credit ratios onwards.

We have updated LANXESS' rating scenario for 2023 to 2024 to reflect the completed transaction. Scope-adjusted debt/EBITDA is now expected to be above 4.4x in 2023 (4.7x in 2022), with further decreases to 3.3x in 2024 and 2.7x in 2025. Additionally, we anticipate LANXESS' financial risk profile will benefit from a resilient end-market leading to reduced volatility. The remaining 40% stake in the joint venture with Advent International represents a significant financial reserve, and we assume, LANXESS has the possibility to monetise it in 2026 using the same valuation parameters as its first valuation. This could provide further funds for deleveraging or external growth opportunities, especially for expanding its consumer-protection business.

Temporarily weaker financial risk profile of BBB maintained

Updated rating scenario reflecting completed transaction with an improved financial profile

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Figure 4: Credit metrics

Key assumptions of the rating

base case

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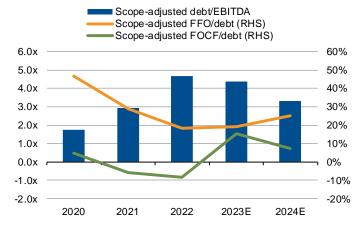
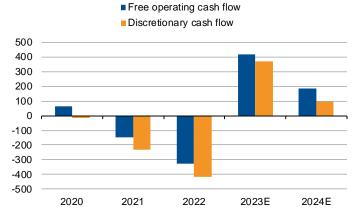


Figure 5: FOCF and discretionary cash flow



Sources: LANXESS, Scope estimates

Sources: LANXESS, Scope estimates

Further key pillars of our rating include: i) an expected easing of working capital headwinds in 2023 as the expensive inventories purchased in 2022 are gradually digested by the market; ii) lower capital expenditure following the HPM transaction and completion of most strategic investments, with anticipated capex of around EUR 370m in 2023; iii) a projected cash inflow of EUR 1.3bn in 2023 already factored into our model, offset by the cancellation of EUR 750m in bilateral lines, repayment of EUR 500m in hybrid bonds and EUR 200m loan to the joint venture; and iv) progressive dividend payments that may be reconsidered by management if necessary to maintain a good credit standing.

Expected improvement of free cash flow Low free operating cash flow remains a negative rating driver. It was weakened in 2022 primarily by weak reported EBITDA, significant one-off costs related to portfolio reallocation, and multiple voluntary payments to strengthen pension assets. However, free operating cash flow is also expected to improve after the offloading of HPM, especially as capital expenditure requirements decline. This improvement should also lead to better discretionary cash flow and enhance LANXESS' ability to reduce debt.

Adequate liquidity

Liquidity remains adequate given LANXESS' history of strong internal and external liquidity coverage, its well-structured debt maturity profile, and its access to a EUR 1.0bn credit facility, which remains undrawn. Additionally, LANXESS has access to bilateral committed credit lines amounting to EUR 750m, of which the largest portion remained undrawn after repayment of the hybrid bond. However, this is somewhat offset by historically poor free operating cash flow. Free operating cash flow could improve with the measures the company is working on.

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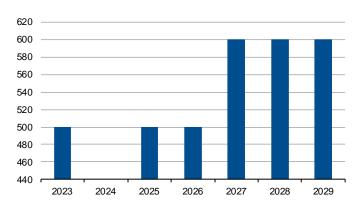
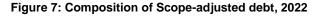
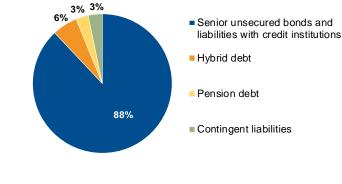


Figure 6: Maturity profile as at 31 March 2023 (EUR m)





Source: LANXESS, Scope

Source: LANXESS, Scope

Diversified maturity profile and debt composition

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No shift to an aggressive financial policy despite temporary weaker financial risk profile Our view on LANXESS' liquidity also applies to the composition of its Scope-adjusted debt. Most of the debt is in the form of bonds and green bonds, and before its repayment within the first half of 2023, the company had also access to hybrid debt. Additionally, pension assets were bolstered by multiple voluntary pension payments to offset low interest rates.

Supplementary rating drivers: +/- 0 notches

LANXESS' credit profile deteriorated in 2021 and 2022 but is expected to improve in 2023. This improvement aligns with the company's commitment to maintaining a credit rating in the BBB range and its execution of the deleveraging strategy, which started in H1 2023 as evidenced by debt repayments from HPM proceeds as well as other actions such as dividend reductions or asset disposals, including the exercise of the first exit possibility regarding the 40% stake in the joint venture with Advent International. LANXESS does not have plans for M&A activities in the foreseeable future. We continue to view LANXESS' financial policy as conservative and rating support, based on its aim of balancing the interests of shareholders and debt holders, and its focus on deleveraging to maintain a BBB category rating.

The other subcategories of the supplementary rating driver's section continue to play a marginal role.

Long-term and short-term debt ratings

We have affirmed LANXESS' short-term debt rating at S-2. This is grounded on its affirmed issuer rating, the 'better-than-adequate' internally and externally provided liquidity coverage as well as its banking relationships and standing in capital markets.

All senior unsecured debt has been affirmed at BBB+, the level of the issuer.

We have withdrawn the subordinated (hybrid) debt category rating. The outstanding hybrid bond of EUR 500m was repaid in H1 2023 (ISIN: XS1405763019).

Short-term debt rating: S-2

Senior unsecured debt rating: BBB+



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