Pannonia Bio Zrt.
Hungary, Chemicals

SCOPE BB+ NEGATIVE

Key metrics

			Scope estimates	
Scope credit ratios	**2021**	**2022**	**2023E**	**2024E**
Scope-adjusted EBITDA/interest cover	>20x	>20x	8x	10x
Scope-adjusted debt/EBITDA	1.3x	2.1x	3.5x	2.9x
Scope-adjusted funds from operations/debt	73%	43%	24%	30%
Scope-adjusted free operating cash flow/debt	29%	-16%	30%	10%

Rating rationale

Pannonia Bio's issuer rating continues to reflect solid credit metrics and the highly efficient plant (ESG: credit-positive environmental risk factor) whose large scale and favourable location lead to competitive operating costs and solid overall profitability. Challenges include a strong exposure to the very volatile commodities markets, very weak asset and product diversification, the lack of exposure to low-cyclicality speciality products and the risk of weak ethanol margins for a prolonged period.

Outlook and rating-change drivers

The Negative Outlook reflects the high likelihood that the continued pressure on ethanol margins will affect the company's profitability and credit metrics, with Scope-adjusted debt/EBITDA exceeding 2.5x in the next 12-18 months. Our rating case does not assume any prolonged interruptions of gas supplies.

A downgrade could be triggered by i) deteriorated credit metrics, e.g. if the Scope-adjusted debt/EBITDA increased above 2.5x for a prolonged period driven by low ethanol margins or excessive dividend payments; ii) weaker profitability, e.g. if the EBITDA margin fell below 15% for a prolonged period; iii) persistent risk of weak margins and plant underutilisation.

The Outlook could be revised back to Stable if the risk of weak margins and plant underutilisation was mitigated and the company could maintain solid credit metrics with a Scope-adjusted debt/EBITDA of below 2.5x. A further upside is unlikely under the current business setup but could be triggered by significant improvements in diversification, outreach and credit metrics.

Rating history

Date	Rating action/monitoring review	Issuer rating & Outlook
19 May 2023	Outlook change	BB+/Negative
27 May 2022	Affirmation	BB+/Stable
2 July 2021	Affirmation	BB+/Stable

Ratings & Outlook

Issuer	BB+/Negative
Senior secured debt	BBB
Senior unsecured debt	BB+

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Related Methodologies

Corporate Rating Methodology; July 2022

Rating Methodology: Chemical Corporates; April 2023

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Positive rating drivers	Negative rating drivers
• Ethanol plant among Europe's largest and most efficient (ESG: credit-positive environmental risk factor) as measured by production capacity and EBITDA margin, respectively • Proximity to low-price corn-producing areas and good logistical infrastructure • Operating costs among the lowest in the industry • Strong financial risk profile relative to business risk profile	• Very high asset concentration, with a single plant as the core asset • Weak product diversification, with commodities as output and ethanol representing four-fifths of revenues • Strong exposure to very volatile commodities markets (corn and ethanol), though partly offset by correlation in DDGS/corn prices • Increased import volumes and state support for ethanol producers in several Western European countries • No exposure to speciality products with low cyclicality, but the company is investing in the development of such products

Positive rating-change drivers	Negative rating-change drivers
• Outlook back to Stable: if the risk of weak margins and plant underutilisation was mitigated and Scope-adjusted debt/EBITDA could remain below 2.5x • Further upside: unlikely under current business setup but could be triggered by significant improvements in diversification, outreach and credit metrics.	• Scope-adjusted debt/EBITDA increasing above 2.5x for a prolonged period • EBITDA margin sustained below 15% • Persistent risk of weak margins and plant underutilisation

Corporate profile

Pannonia Bio Zrt. owns and operates a biorefinery in Dunaföldvár, Hungary, which mainly produces ethanol and animal feed. The plant has the capacity to process over 1.2m tonnes of corn annually, producing over 500m litres of ethanol, which is primarily blended into gasoline. The plant also produces dried distillers grains with solubles (DDGS), corn protein concentrate, biomethane, corn oil, and organic fertilisers. In addition to corn, the company is commissioning the capacities to process 0.3m tonnes of barley annually. Pannonia Bio has over 400 employees.

Financial overview

				Scope estimates		
Scope credit ratios	**2020**	**2021**	**2022**	**2023E**	**2024E**	**2025E**
Scope-adjusted EBITDA/interest cover	>20x	>20x	>20x	8x	10x	12x
Scope-adjusted debt/EBITDA	1.8x	1.3x	2.1x	3.5x	2.9x	2.2x
Scope-adjusted funds from operations/debt	53%	73%	43%	24%	30%	40%
Scope-adjusted free operating cash flow/debt	19%	29%	-16%	30%	10%	28%
Scope-adjusted EBITDA in EUR m						
EBITDA	117.5	139.2	142.9	65.0	75.9	87.2
Other items (mainly unrealised gains/losses and one-off items)	0.1	-3.5	0.8	-	-	-
Scope-adjusted EBITDA	**117.6**	**135.6**	**143.7**	**65.0**	**75.9**	**87.2**
Funds from operations in EUR m						
Scope-adjusted EBITDA	117.6	135.6	143.7	65.0	75.9	87.2
less: (net) cash interest paid	-3.1	-3.4	-3.5	-8.3	-7.8	-7.4
less: cash tax paid per cash flow statement	-0.8	-2.0	-12.8	-1.6	-2.5	-3.5
Funds from operations	**113.6**	**130.2**	**127.3**	**55.2**	**65.6**	**76.3**
Free operating cash flow in EUR m						
Funds from operations	113.6	130.2	127.3	55.2	65.6	76.3
Change in working capital	-4.9	22.1	-74.5	46.8	-2.6	-4.9
Non-operating cash flow	-2.7	-4.9	5.1	-	-	-
less: capital expenditure (net)	-42.9	-86.8	-96.5	-45.0	-45.0	-45.0
Other items (mainly loans to subsidiaries and proceeds from disposal of subsidiaries)	-21.4	-9.2	-8.8	12.0	5.0	28.0
Free operating cash flow	**41.6**	**51.4**	**-47.3**	**68.9**	**23.0**	**54.4**
Net cash interest paid in EUR m						
Net cash interest per cash flow statement	3.1	3.4	3.5	8.3	7.8	7.4
Net cash interest paid	**3.1**	**3.4**	**3.5**	**8.3**	**7.8**	**7.4**
Scope-adjusted debt in EUR m						
Reported gross financial debt	260.6	230.2	340.2	296.2	258.1	220.1
less: equity credit for subordinated (hybrid) debt	-12.8	-	-	-	-	-
less: available cash and cash equivalents	-34.2	-53.0	-42.9	-67.8	-36.8	-27.4
Scope-adjusted debt	**213.6**	**177.2**	**297.2**	**228.4**	**221.3**	**192.7**

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Environmental, social and governance (ESG) profile[1]

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)

Plant's high efficiency is credit-positive ESG factor

Pannonia Bio has no dedicated ESG strategy. However, it operates in an industry whose requirements include sustainability certifications covering grain supply and biofuels as well as carbon accounting. The plant's high efficiency is a credit-positive environmental risk factor.

[1] 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.

Business risk profile: BB-

The business risk profile reflects our assessment of the industry in which a company operates and its competitive position within that industry.

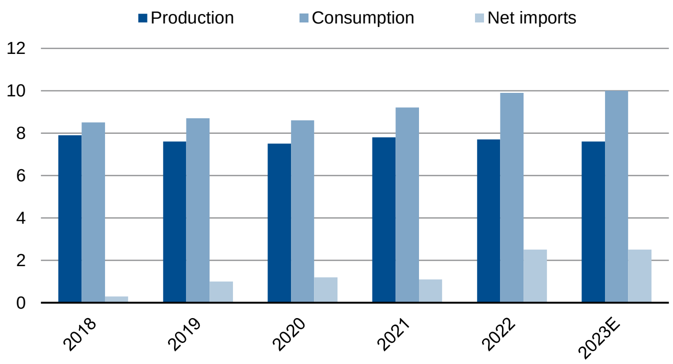
Semi-protected EU market for ethanol

Ethanol is Pannonia Bio's main output product, accounting for four-fifths of its revenues. Our analysis focuses on the European rather than the global ethanol market. This is because import tariffs and significant shipping costs are partly protecting the market in the EU, limiting imports to less than 20% of total consumption before 2022.

No uplift from industry risk profile for commodity-focused chemical companies

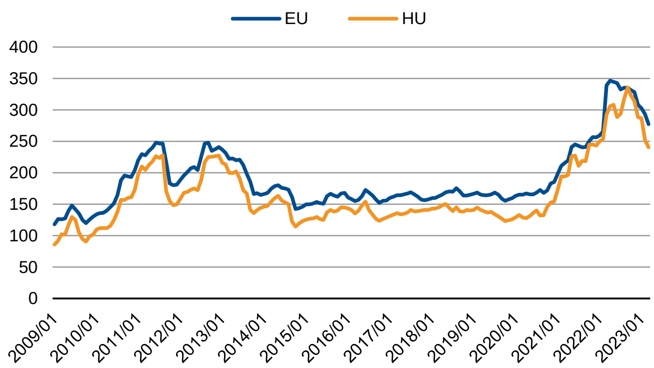
Import tariffs constitute the sole financial incentive for bioethanol producers – which clearly differentiates them from other renewable energy producers such as those operating wind or photovoltaic parks. We have therefore treated Pannonia Bio as a commodity chemicals producer and applied our rating methodology for chemicals corporates. We classify the company as a commodity-focused chemicals producer based on its plans to expand into speciality products. However, we will not incorporate any uplift to the ratings based on the BBB industry risk assessment for commodity-focused chemicals companies until Pannonia Bio's speciality products reach a critical share of revenues.

Figure 1: EU and UK ethanol market (million cbm)



Sources: IHS Markit, Scope

Figure 2: Feed corn price (EUR/t)



Sources: Eurostat, Scope

European energy crisis made local ethanol producers less competitive…

The increase in prices in 2021 for main commodities inputs (corn, natural gas and electricity) and outputs (ethanol and animal feed) was amplified in 2022 by the war in Ukraine, reaching unprecedented levels. While the tight European bioethanol market supported crush margins (i.e. the spread between input and output prices) for most of the year, high ethanol prices in Europe attracted record import volumes, primarily from the US and Brazil, where increases in input costs were less significant. Despite high import tariffs and shipping costs, net imports reached around 25% of total European (EU and UK) consumption. As a result, European ethanol prices fell sharply in Q4 2022, pushing crush margins into negative territory and indicating the weaker protective effect of tariffs.

…with burden not evenly spread across the region

Some ethanol producers could still generate positive results and maintain output, supported by measures in several Western European countries to protect industries and households from the rocketing energy prices or by hedges concluded before the war in Ukraine. Other ethanol producers, however, primarily in Central and Eastern Europe, including Pannonia Bio, did not receive state support and were forced to reduce or halt production. The shortage of corn in Hungary and the region also resulted in the local corn price surpassing benchmarks, weakening Pannonia Bio's profitability, which remained low into Q1 2023. The company stated that it has returned to full utilisation in Q2 2023 following some recovery in its margins.

Significant import volumes likely to continue

We expect relatively stable bioethanol demand and production in Europe, implying that the significant import volumes will be sustained. Corn and energy prices have receded from their 2022 highs and supported the recent recovery in ethanol margins. Nevertheless, commodity prices remain volatile and we expect crush margins to gradually stabilise below multi-year averages.

Growing pressure on business risk profile

The combination of much higher import volumes and state support for energy-intensive industries (including ethanol production) in several Western European countries has intensified competitive pressure on Pannonia Bio and hampered its profitability, offsetting the positive impact of recent investments. A persistent risk of weak margins and plant underutilisation could result in a lower business risk profile assessment.

Limited policy predictability supressing risk appetite

In 2022, the Hungarian government introduced measures aimed at tightening the fiscal balance, including windfall taxes on specific sectors such as energy and banks (Government Decree no. 197/2022). In September 2022, Pannonia Bio paid the advance windfall tax of EUR 36m based on a preliminary calculation methodology and on estimated profits for 2022. Following clarifications by the tax authority and a significant worsening in Pannonia Bio's profitability in Q4 2022, the company revalued the amount of windfall tax due for 2022 and is now claiming back the majority of the advance tax payment. Discussions with the tax authority are ongoing. The limited policy predictability is supressing Pannonia Bio's risk appetite and the company is likely to significantly reduce capex going forward compared with the previously expected level of around EUR 100m a year. The company is also likely to focus on dividend distribution and consider the interests of senior lenders.

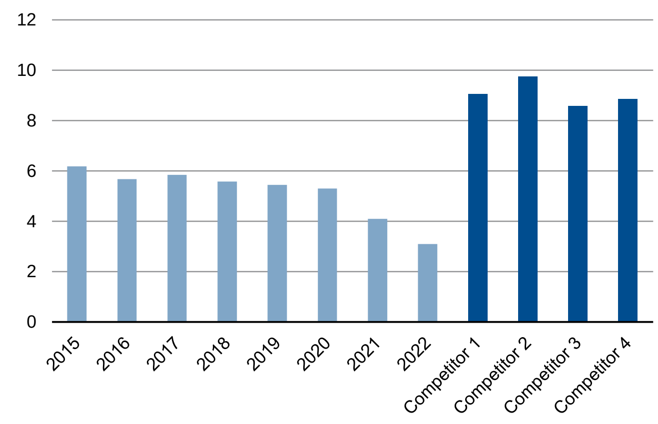
Large plant size enables significant economies of scale and market relevance

Pannonia Bio's competitive position continues to benefit from its plant's large size, which enables significant economies of scale and market relevance. With an ethanol production capacity of over 500m litres per year, the plant is one of the largest in the EU and accounts for 6%-7% of the region's production. In addition, the company works with selected industry players to optimise the production and distribution of its products.

Proximity to low-price corn-producing areas and good logistical infrastructure

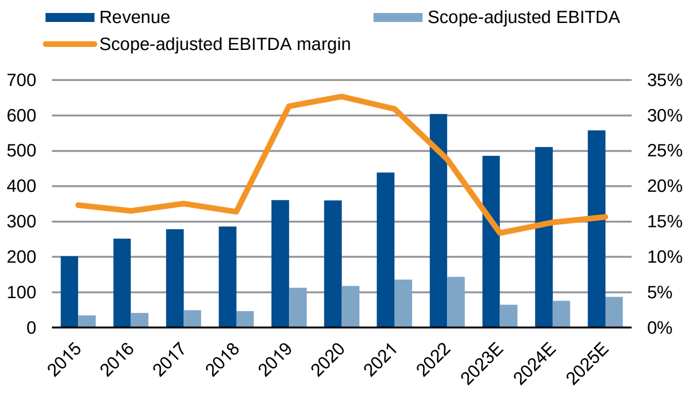
The plant further benefits from its proximity to low-price corn-producing areas in Hungary, Slovakia, Croatia, Serbia and Romania. It is located on the bank of the Danube River and has a good logistical infrastructure including direct access for trucks, trains and barges.

Figure 3: Gas consumption (MJ/litre)



Source: Pannonia Bio

Figure 4: Revenue (LHS, EUR m), Scope-adjusted EBITDA (LHS, EUR m) and Scope-adjusted EBITDA margin (RHS)



Sources: Pannonia Bio, Scope estimates

Operating costs among the lowest in the industry

The abovementioned factors together with continuous investment in efficiency initiatives make operating costs for the plant among the lowest in the European industry (ESG: credit-positive environmental risk factor). According to management, except during the current European energy crisis, the plant has always aimed to maximise output since operations started in 2012. This was even amid the challenging prices of 2014 and 2018 as well as during the Covid-19 lockdowns in 2020, when several producers had to (temporarily) suspend operations. In 2020, lower ethanol sales for fuel were offset by sales for the purpose of hand sanitisers and other disinfectants.

Still good profitability

As a result, Pannonia Bio continues to have good profitability with historical EBITDA margins of between 16% and 33% – a key positive rating driver. Nevertheless, profitability has fallen recently and is projected at around 15% in the next few years.

Very high asset concentration

Pannonia Bio's business risk profile assessment is restricted by the very high asset concentration, with a single plant as the core asset. This is despite investments in biogas plants in Slovenia and Serbia, due to the small size of the plants. The company has mainly addressed this risk through extensive insurance coverage against severe damage, which would allow it to preserve asset values and service at least one year of debt payments.

Disposal of solar projects in 2023

In May 2023, Pannonia Bio signed an agreement to dispose of its solar projects. The total consideration includes transferred shareholder loans, with a major part being due in 2025. The disposals are expected to be complete in June 2023.

Industrial accident in October 2020

In October 2020, a human error caused the release of chlorine gas at the plant. 28 people were hospitalised, but they were quickly discharged as their injuries were not serious. The incident had no impact on the nearby residential area or on the environment. Production continued uninterrupted. Six authorities launched investigations, all of them have been closed with no action against Pannonia Bio.

Weak product diversification and high volatility in commodity prices…

Performance volatility may also arise from weak product diversification. All of Pannonia Bio's main products are commodities, mainly ethanol. Commodity prices, such as for corn or ethanol, are highly volatile and Pannonia Bio is a pure price-taker. If crush spreads become extremely low or negative, the company may have to suspend operations, but this is unlikely to last for long under normal conditions (e.g. no severe geopolitical tensions or significant state intervention) thanks to the company's low costs. In such an environment, those with less favourable cost structures tend to cease operations first, which reduces the overall supply of ethanol, pushing up its price. This occurred in 2018, when two plants halted production in Europe while Pannonia Bio was still able to generate positive margins.

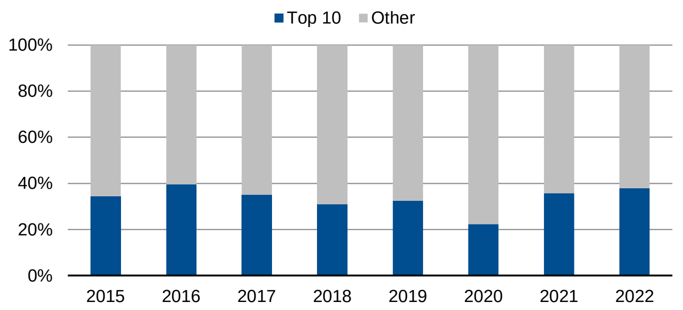
…are partly offset by correlation between DDGS/corn prices and ongoing investments

The high volatility in commodity prices is partly offset by the strong correlation between DDGS and corn prices, which creates a natural hedge. The company is also addressing this issue by continuing to optimise production and develop higher-value products, which should boost margins while reducing the volatility of overall performance.

High customer concentration mainly mitigated by solid credit quality of counterparties

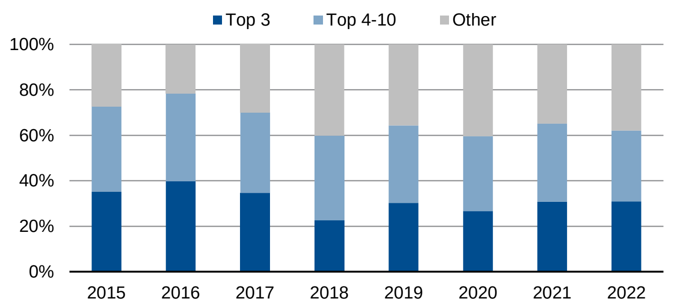
The company has low supplier concentration with the top 10 accounting for 20%-40% of total purchases over the past few years. A recent increase in concentration was primarily due to high energy costs related to the two main suppliers. In contrast, customer concentration is high, with the top 10 representing around 60% of total revenues. However, the associated credit risk is mainly mitigated by the solid credit quality of counterparties. Ethanol and animal feed are sold across Europe, mainly to Germany, Hungary, Romania, Italy and Poland.

Figure 5: Supplier concentration



Sources: Pannonia Bio, Scope

Figure 6: Customer concentration



Sources: Pannonia Bio, Scope

Risk of supply cuts of Russian natural gas

We note that the company is still vulnerable to potential supply cuts of Russian natural gas. Most of Hungary's gas is imported from Russia. The Russia-Ukraine war has increased the risk of supply disruptions, including from damage to infrastructure or Russian retaliation against sanctions. To mitigate this, Pannonia Bio is retrofitting certain boilers to use diesel, with the work expected to be complete by YE 2023.

Financial risk profile: BBB

Main assumptions

Our financial projections are mainly based on the following assumptions:

1. Growth in ethanol production from around 500m litres p.a. in 2023 to around 600m litres p.a. in 2025
2. Gradual stabilisation of crush margins below multi-year averages
3. Total investments including maintenance capex of around EUR 30m-60m per year
4. Maximisation of dividend payments subject to operating performance; covenants set by the bank loan agreement and approval by bank lenders

Key adjustments

In line with our conservative approach, our Scope-adjusted debt calculation includes restricted cash of EUR 1m.

Weaker credit metrics despite record EBITDA in 2022

Despite weak margins in Q4, Pannonia Bio generated a record Scope-adjusted EBITDA of EUR 144m in FY 2022. Nevertheless, credit metrics have weakened: leverage as measured by Scope-adjusted debt/EBITDA reached 2.1x and cash flow cover as measured by Scope-adjusted free operating cash flow/debt turned negative. This was mainly driven by large working capital outflows, investment spending and dividend distribution.

Weaker credit metrics going forward

We expect Scope-adjusted debt/EBITDA to increase above 3.0x in 2023 before recovering to 2.0x-3.0x in the next few years. Our view is mainly driven by conservative commodity price assumptions, the downsized investment programme, the commissioning of new capacities, proceeds from the disposal of solar projects and dividend payments. Despite recent investments in efficiency and the development of new products, we expect EBITDA of around EUR 60m-90m annually in the next few years compared with well above EUR 100m annually in 2019-2022.

New debt raised in 2022

In August 2022 the company agreed additional financing facilities with existing lenders amounting to EUR 110m and utilised them by YE 2022. The EUR 45m working capital facility (EUR 60m in April 2023) was also utilised at YE 2022 and in Q1 2023. The additional debt and higher interest rates coupled with conservative EBITDA projections will lead to a lower but still strong Scope-adjusted EBITDA/interest cover of around 10x going forward.

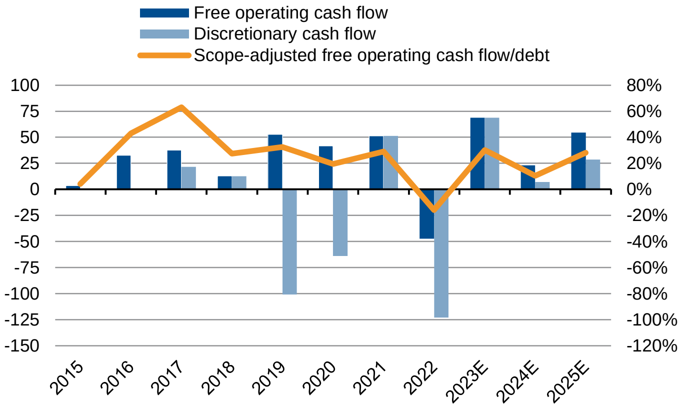
Rating case assumes no use of European Investment Bank loans

In December 2022 the company signed a finance contract with the European Investment Bank for EUR 50m. The company is yet to utilise the facility and our rating case has not incorporated any drawdown given the likely downsizing of the company's investment programme.

Further increase in leverage limited by covenants

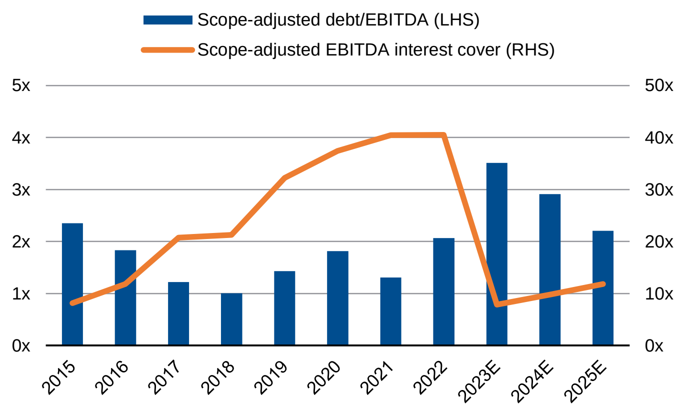
We understand that the dividends and investments are subject to both financial performance and covenants under the bank loan agreement. The company must obtain approval from bank lenders to (temporarily) exceed predefined thresholds. Additionally, according to management, all shareholders are ready to fund the business as and when needed.

Figure 7: Cash flow generation (LHS, EUR m) and cash flow cover (RHS)



Sources: Pannonia Bio, Scope estimates

Figure 8: Leverage (LHS) and interest cover (RHS)



Sources: Pannonia Bio, Scope estimates

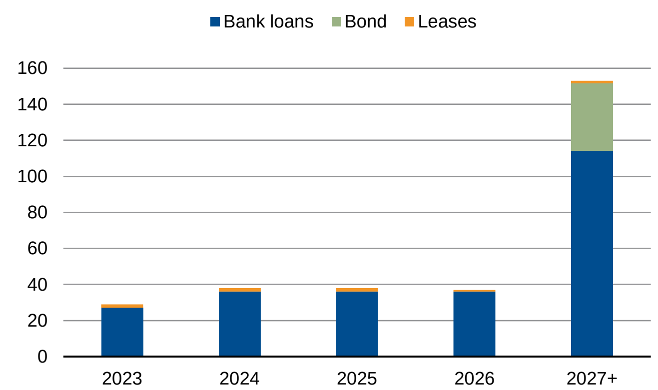
Solid internal financing capacity

Operating cash flow is sufficient to cover maintenance and large parts of development capex at the projected level, indicating a solid internal financing capacity. External financing may, however, be required for substantial development projects.

Back-end-loaded maturity profile

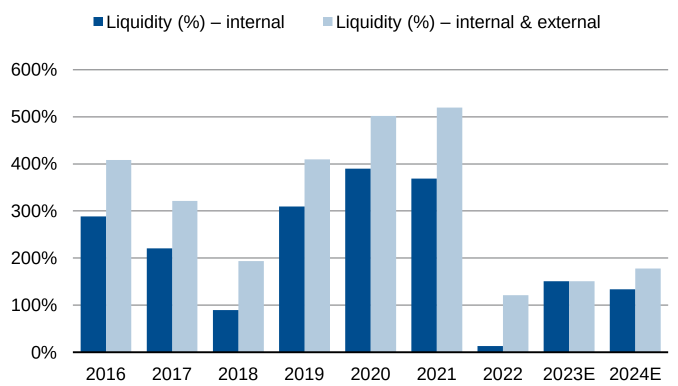
Pannonia Bio's maturity profile is largely balanced. Bank loans are amortised quarterly and the last payment is scheduled for 2031. The bond issued under the Hungarian National Bank's Bond Funding for Growth Scheme has a tenor of 10 years. The bank loans are denominated in euro, while the bond is in Hungarian forint.

Figure 9: Expected maturity profile of long-term financial liabilities (EUR m)



Sources: Pannonia Bio, Scope estimates

Figure 10: Liquidity



Sources: Pannonia Bio, Scope estimates

Adequate liquidity

While Pannonia Bio's liquidity remains adequate, we note a reduced headroom as some available options (such as the working capital facility) have been utilised. For the next 12 months, we expect coverage of short-term financial debt at more than 1x, including from available cash and cash equivalents of EUR 41m as of 31 March 2023 and positive free operating cash flow.

Balance in EUR m	2022	2023E	2024E
Unrestricted cash (t-1)	53.0	42.9	67.8
Open committed credit lines (t-1)	45.0	0.0	30.0
Free operating cash flow (t)	-47.3	68.9	23.0
Short-term debt (t-1)	41.8	74.0	68.0
Coverage	**121%**	**151%**	**178%**

Supplementary rating drivers: +/- 0 notches

Neutral financial policy

Pannonia Bio's financial policy is neutral for the issuer rating. The return on invested capital through capex and dividend payments is maximised while maintaining the sustainability of the company's business model. Substantial cash outflows are further limited by covenants under the bank loan agreement that require approval for temporary breaches of thresholds.

No impact from shareholder structure

Our assessment of the group structure indicates no impact (either negative or positive) from potential parent support.

Long-term debt ratings

Senior secured debt rating: BBB

Our recovery analysis indicates an 'excellent' recovery for senior secured debt. These expectations translate into a BBB rating for this debt category. The recovery is based on an expected distressed enterprise value as a going concern in a hypothetical default scenario in 2025.

Senior unsecured debt rating: BB+

Our recovery analysis indicates an 'average' recovery for senior unsecured debt, including the HUF 15bn bond (ISIN: HU0000359112) issued under the Hungarian National Bank's Bond Funding for Growth Scheme. The recovery is based on an expected distressed enterprise value as a going concern in a hypothetical default scenario in 2025. These expectations translate into a BB+ rating for this debt category.

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