

CREDIT OPINION

29 April 2024

Update



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RATINGS

Turkiye Sise ve Cam Fabrikalari A.S.

Domicile	Turkiye
Long Term Rating	B2
Type	LT Corporate Family Ratings
Outlook	Positive

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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Turkiye Sise ve Cam Fabrikalari A.S.

Update following upgrade to B2 positive

Summary

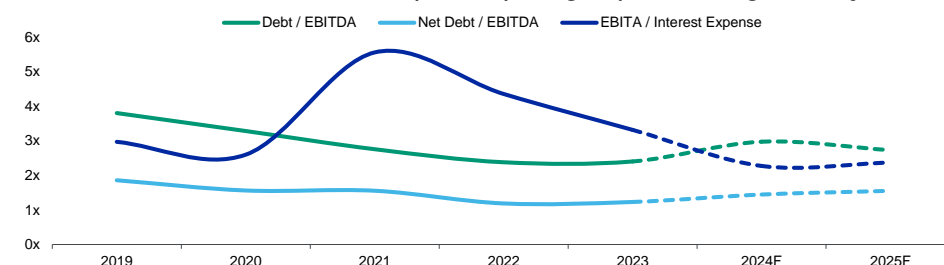
On 22 April 2024, we upgraded [Turkiye Sise ve Cam Fabrikalari A.S.'s](#) (Sisecam) corporate family rating (CFR) to B2 from B3 and maintained the positive outlook. We also assigned a B2 instrument rating to the \$1.1 billion backed senior unsecured notes with a five and eight year tenor to be issued by Sisecam UK Plc. The bond issuance will lead to an increase of cash on balance sheet of \$350 million and a reduction of short term debt of \$250 million and at least a \$400 million part tender of Sisecam's existing \$700 million bond due March 2026.

Sisecam's B2 CFR reflects the company's strong credit fundamentals and benefits from (1) a leading market position in Turkiye; (2) a balanced revenue and product mix derived from its architectural glass, automotive glass, glassware, glass packaging and chemicals businesses which mitigates single product line exposure; and (3) good financial profile with Moody's adjusted debt/EBITDA of 2.4x for the 12 months to 31 December 2023. Sisecam also benefits from its access to foreign currency revenues from international operations and exports. The company generated 19% of its revenue from its EU based operations, 12% from its US based soda ash business and an additional 20% from Turkiye exports, predominantly to Europe during 2023.

Conversely, the rating is constrained by (1) its geographic concentration, with 60% of revenues generated from Turkiye operations; (2) high capital expenditure requirements and capital intensive plans to increase its production capacity; (3) a limited track record of meaningful positive free cash flow generation; and (4) high levels of short term borrowings.

Exhibit 1

Sisecam's credit metrics will remain adequate despite high capex and foreign currency volatility



All figures and ratios are based on adjusted financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.

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Source: Moody's Financial Metrics™ and Moody's Ratings forecasts

Credit strengths

- » Leading market position in Turkiye
- » Significant geographic diversification outside Turkiye
- » Balanced revenue and product mix
- » Moderate leverage and adequate financial metrics

Credit challenges

- » Exposure to Turkiye and Turkiye-based financial institutions
- » High maintenance capital requirements and high raw material costs
- » Low historical free cash flow generation and expected cash outflows during 2024 and 2025
- » High reliance on short term debt

Rating outlook

The positive rating outlook mirrors that of the Government of Turkiye, reflecting Sisecam's exposure to the country's political, legal, fiscal and regulatory environment.

Factors that could lead to an upgrade

The ratings of Sisecam are constrained at one notch above the rating of the Government of Turkiye and also by the foreign currency ceiling. We would consider an upgrade if both the rating of the Government of Turkiye and the foreign currency ceiling are raised. This would also require no material deterioration in the company's operating and financial performance and liquidity.

Factors that could lead to a downgrade

Sisecam's ratings are likely to be downgraded in case of a downgrade of the Government of Turkiye's rating or of the foreign currency bond ceiling. In addition, downward rating pressure could arise if there are signs of a deterioration in liquidity.

Key indicators

Exhibit 2

Turkiye Sise ve Cam Fabrikalari A.S.

(in \$ billions)	2019	2020	2021	2022	2023	2024F	2025F
Revenue	3.2	3.1	3.7	5.8	6.6	5.4	5.7
EBITDA Margin	23.9%	25.5%	33.3%	22.2%	24.7%	21.0%	21.5%
EBITA Margin	16.5%	18.2%	27.3%	17.5%	18.7%	15.7%	16.1%
EBITA / Interest Expense	3.0x	2.6x	5.6x	4.4x	3.3x	2.3x	2.4x
Debt / EBITDA	3.8x	3.3x	2.8x	2.4x	2.4x	3.0x	2.7x
RCF / Net Debt	29.5%	32.2%	27.7%	77.3%	35.6%	28.7%	28.3%
FCF / Debt	-4.9%	3.4%	7.8%	1.0%	6.0%	-6.3%	-9.1%

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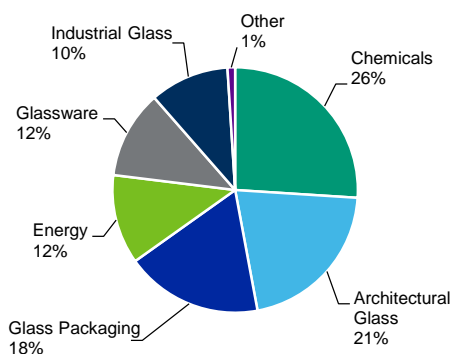
This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on <https://ratings.moody.com> for the most updated credit rating action information and rating history.

Profile

Founded in 1935, Turkiye Sise ve Cam Fabrikalari A.S. is a Turkish industrial manufacturer of glass products including flat glass (architectural glass and auto glass), glassware and packaging, as well as soda ash and chromium-based chemicals. The company operates in Eastern Europe, Western Europe, CIS and the United States. Sisecam is 51% owned by [Turkiye Is Bankasi A.S.](#) (Isbank, B3 positive), 7% by Efes Holding A.S., 2% of shares are held by Sisecam itself and 40% listed on Borsa Istanbul. Sisecam reported consolidated revenues of TRY152 billion (\$6.6 billion) and a Moody's adjusted EBITDA of TRY37.6 billion (\$1.6 billion) in 2023.

Exhibit 3

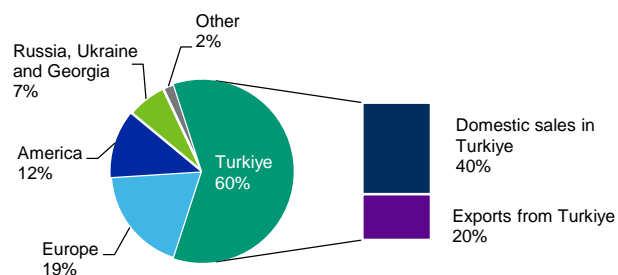
Revenue breakdown by product (2023)



Source: Company data

Exhibit 4

Revenue breakdown by geography (2023)



Source: Company data

Recent Developments

On 22 April 2024, Sisecam announced the launch of a \$1 billion backed senior unsecured notes with a five and eight year tenor to be issued by Sisecam UK Plc. The company's rationale of the establishment of the entity in the UK is to have a foreign subsidiary through which international sales and purchases would be conducted, reducing the group's working capital financing by using financial products for trade financing. Sisecam UK PLC will pursue a range of finance and trade activities including managing Şişecam Group offshore treasury activities.

The transaction closed on 25 April with the issuance of \$500 million backed senior unsecured notes due in 2029 and \$600 million backed senior unsecured notes due in 2032. The proceeds of the bond issuance will be used to increase cash on balance sheet and fund capital expenditures as well as to early redeem at least \$400 million of the existing \$700 million senior unsecured bond due in 2026 and refinance \$250 million of short term debt. The transaction strengthens the company's liquidity profile although the company will continue to have a high reliance in short term debt which will reduce towards 30% of total reported borrowings pro forma for the transaction from 46% as of 31 December 2023.

Detailed credit considerations

Leading market position in Turkiye and geographic diversification, a credit strength

Sisecam's ratings reflect the competitive advantages of being the market leader in Turkiye across its core product lines. The group benefits from a diversified revenue base through sales of products such as architectural glass, automotive glass, food and beverage glass packaging, retail and glassware, and soda ash and chromium-based chemicals. The individual products have different demand drivers and varying sensitivities to the economic cycle, with the glass packaging and chemicals segment historically being relatively stable and resilient to economic downturns, while flat glass and glassware are more cyclical in nature. 2023 performance has been weaker than expected due to a weaker macroeconomic environment and de-stocking down the value chain. Volumes dropped in the architectural glass business by 12% and remained relatively flat in the glassware, glass packaging and chemicals business while industrial glass volumes increased by 7% during the year. At the same time, the glass manufacturing sector is a very capital intensive industry requiring substantial and recurring maintenance capital spending.

Sisecam's rating takes into consideration the scale and geographic footprint of its operations. The company's operations span Türkiye, Western and Eastern Europe, the CIS and the United States with 60% of total revenue of 2023 generated outside Türkiye (including 20% of Türkiye based exports). More than 50% of the company's exports from Türkiye are sold to the European Union.

The geographic diversity reduces Sisecam's exposure to Türkiye, but it also exposes the company to additional geopolitical risks and potential changes in regulations and policies. The company's exposure to Russia, Ukraine and Georgia has reduced to less than 10% of revenue generated in 2023 compared to 15% during 2021. The operations in the CIS region continue to be managed independently with local labor and debt raised in local currencies limiting Sisecam's exposure to the Russia-Ukraine conflict.

Global economic uncertainties persist and we forecast G-20 advanced economies real GDP growth of 1.8% in 2023, 1.5% in 2024 and 1.6% in 2025 versus 2.7% in 2022. Nevertheless, the Moody's [Global Manufacturing Outlook](#) is now stable as supply chains and inflation ease although we expect that manufacturing companies' earnings will grow but at a slower pace. Additionally, a sustained deterioration in the macroeconomic environment in Türkiye would lead to a more challenging business and operating environment for Sisecam, particularly in the flat glass and glassware segments.

Market overcapacity driven by large scale investments will pressure pricing

Sisecam's growth ambitions of being among the top three glass producers in its operating fields globally has positive credit implications but raise short term investment and execution risks as well as liquidity pressures. Sisecam has a track record of managing its investments and new capacity to avoid creating material excess capacity in the market. However there are risks associated with the large scale of the projects and time required to complete them. To avoid material increase in overcapacity, the company manages the cold repair schedules of its furnaces to mitigate the risk. Internal demand in Türkiye during 2023 was not as expected and due to high capacity, Sisecam materially reduced production volumes, through cold repairs and planned maintenance.

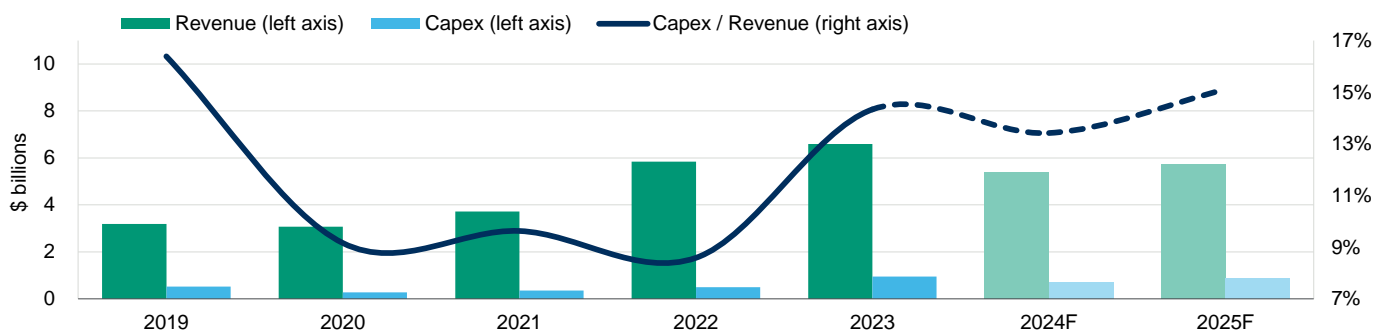
The glass manufacturing industry requires substantial and recurring maintenance capital spending. In 2021, Sisecam announced the construction of a €255 million glass packaging greenfield project in Hungary with two furnaces with 396K tons of gross annual production capacity to be fully operational by 2025 and growth plans in Türkiye which include a new flat glass plant in Mersin with a 432K tons gross annual production capacity, expected to reach full capacity by 2025 and a new patterned glass furnace which will add 288k tons gross annual production capacity to the company's flat glass line, as well as an energy glass processing line. The company has also announced an investment in the mining field to ensure the raw material supply in its new flat glass and frosted glass investments in Mersin. During 2024, Sisecam has also announced a \$114 million investment in three new coated glass lines in Türkiye, Italy and Bulgaria.

Sisecam's capital spending, which includes maintenance and projects, has averaged 11% of revenue between 2017 and 2022 with a peak of 16% in 2019. We expect these levels to remain above 10% during the next 3 years, increasing pressure in the company's cash flows as it delivers on its capacity expansion projects. We understand that around 25% of the company's annual capex program is focused on cold repairs and maintenance capex which we expect will continue to play a key part on the overcapacity management.

Investment in US will weaken credit metrics and bear execution risks

In 2021 Sisecam announced the acquisition of a 60% stake in Ciner Resources, a natural soda ash mining facility in Wyoming and two natural soda ash solution mining projects. The company plans to develop a large scale soda ash mining facility project with production running at full capacity estimated by 2028. These investments will increase Sisecam's controlled annual soda ash production capacity to more than 10 million tons (mt) once the project is completed, from 5mt today. However, the investments are capital intensive, carry a degree of execution risk through construction and development of the mines and will weaken Sisecam's credit metrics until 2026 as debt is incurred to partly finance the project.

Exhibit 5

Capital expenditure needs will remain high until at least 2025

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Source: Moody's Financial Metrics™ and Moody's Ratings forecasts

The acquisition and increased production of natural soda ash will improve Sisecam's profitability in the long term because natural soda is significantly cheaper to produce than its synthetic equivalent and benefits from better environmental credentials due to its significantly less energy and water-intensive production process. The investments will also allow Sisecam to gain a foothold in the United States and are a step towards a larger expansion into glass manufacturing in the country, which is one of the long-term strategic objectives of the company.

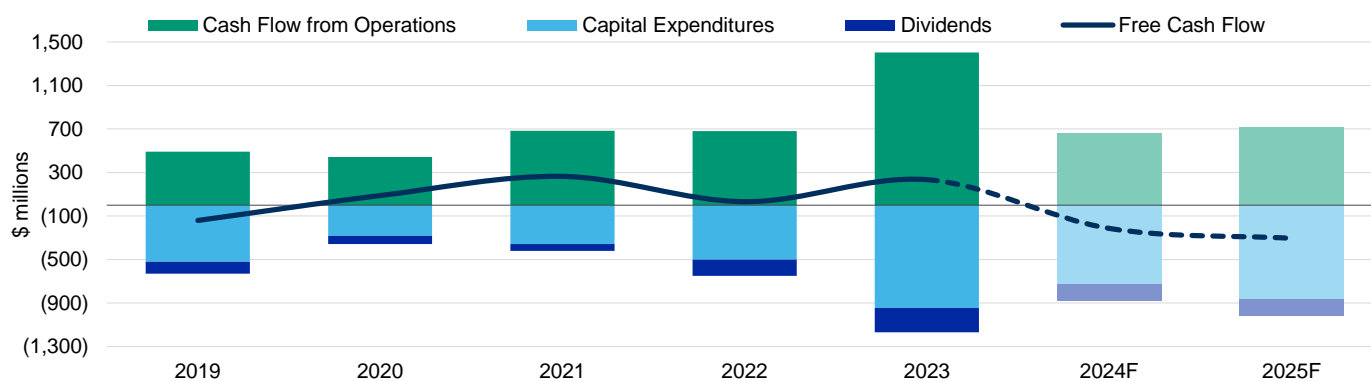
During 2023, the company also announced an additional investment in a US West Coast based port operation which will benefit the company with the export operations of the ongoing soda ash investment.

Healthy financial profile despite currency volatility

Sisecam continues to display a healthy financial profile. The company has maintained an average Moody's-adjusted debt/EBITDA below 3.0x over the past five year, despite the large currency depreciation over the period which substantially increased the value of its foreign currency-denominated debt in Turkish lira terms. The \$1.1 billion notes issuance will increase Sisecam's debt levels to over \$3.2 billion as of December 2023 pro forma and Moody's adjusted leverage will increase to 2.7x from 2.4x. We expect the company's Moody's-adjusted debt/EBITDA to be sustained below 3.0x in the 2024-2026 period but free cash flow generation will remain negative in 2024 and 2025 because of the announced investment plans.

Inflation levels continue to remain high globally and with a greater effect in the Turkish economy driven by a depreciating lira and elevated raw material and energy costs. The production of glass is energy intensive, and Sisecam is a large consumer of natural gas. During 2022, natural gas tariffs in Turkiye increased by more than 500% year over year adding pressure to Sisecam's Moody's adjusted EBITA margin which dropped to 17.5% in 2022 from 27.3% in 2021. We expect profitability levels to remain under pressure in 2024 and 2025 despite natural gas price discounts in 2023 due to lower production levels and continued high inflation, particularly in Turkiye. Pressure on Sisecam's profitability levels will continue while Turkiye's domestic demand recovers although historically profitability has been supported by product pricing management across all business lines.

Exhibit 6

FCF will turn negative in 2024 and decline further in 2025 due to ongoing capital intensive projects

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Source: Moody's Financial Metrics™ and Moody's Ratings forecasts

Sisecam is managing its foreign-currency exposure prudently. The company had around 80% of its debt denominated in US dollar and Euro as of 31 December 2023. This is partly offset by large US dollar and euro-denominated cash reserves that provide a currency hedge against depreciation in the Turkish lira.

Exposure to Turkiye is a key credit constraint

Sisecam is domiciled in Turkiye and generated 40% of its revenues in Turkiye in 2023, with another 20% exported from the country. As such, it is materially exposed to Turkiye's political, legal, fiscal and regulatory environment. We consider the track record of unpredictable policy shifts, fueled by unorthodox measures of the government in an attempt to stabilize the currency and restore foreign-currency buffers as a risk for Turkiye's corporates. These risks constrain Sisecam's rating at Turkiye's foreign currency ceiling of B2. While not anticipated, any amendment in Turkiye's regulatory framework that causes a financial burden on Sisecam is likely to weigh on the current rating.

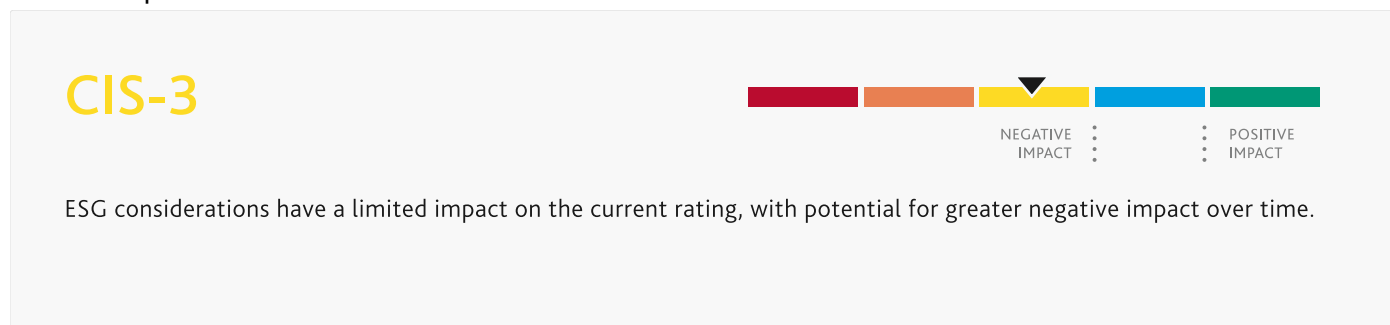
While Sisecam's operations are deeply embedded in Turkiye's economy, the company generates 60% of its 2023 revenues internationally, including 7% from operations in Russia which are completely autonomous and export revenue. This provides access to foreign currencies and reduces the company's exposure to the Turkish lira. However, the volatility in foreign exchange rates and the Turkish lira depreciation suffered since the second half of 2021 and in particular in 2023 following the general elections held in May, continues to be a risk for companies in Turkiye that have liabilities denominated in hard currencies. Sisecam has more than 80% of its debt instruments denominated in USD or Euro. For the 2023 financial year, the lira depreciated about 57% (2022:40%) against the dollar with periods of high volatility increasing asset and liability management risks.

ESG considerations

Türkiye Sise ve Cam Fabrikalari A.S.'s ESG credit impact score is CIS-3

Exhibit 7

ESG credit impact score

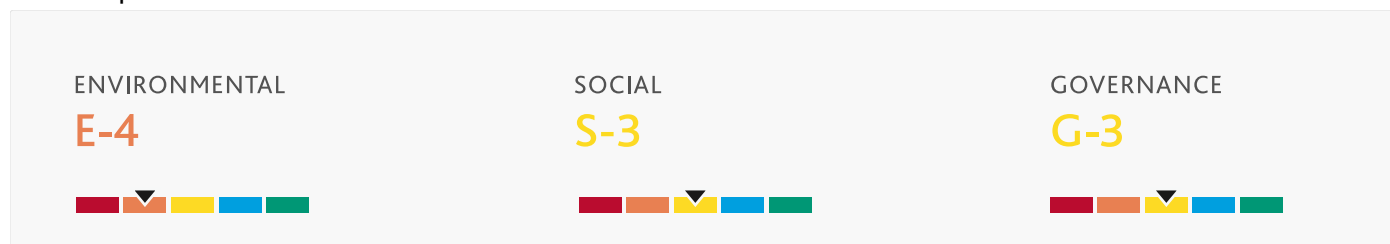


Source: Moody's Ratings

Sisecam's ESG Credit Impact Score **CIS-2** indicates that ESG considerations have limited impact on the current credit rating, which is constrained by the sovereign rating of Türkiye (B3 positive). The main ESG risks relate to governance considerations on the back of the company's high level of short term debt albeit reducing after the proposed \$1 billion bond issuance. The company's large capital expenditure projects have the risk of increasing pressure on liquidity in the upcoming years. We also consider that Sisecam has a negative exposure to ESG risks because of its significant carbon footprint, and moderately negative exposure to social risks.

Exhibit 8

ESG issuer profile scores



Source: Moody's Ratings

Environmental

Sisecam's **E-4** environmental issuer profile score reflects the company's exposure to carbon transition risks reflecting its significant use of natural gas in the glass manufacturing process. While glass manufacturing will remain an energy-intensive process, its carbon footprint can be reduced using renewable energy but requires dedicated investments. Sisecam is a large producer and consumer of synthetic soda ash, a raw material that could face increased regulations on energy and water use. The company made large investments in natural soda ash production to mitigate this exposure. The high recyclability and environmental efficiency of Sisecam's products and the increasing use of recycled raw materials reflect positively on its rating.

Social

Sisecam's **S-3** social issuer profile score reflects its exposure to human capital risks considering potential disruptions linked to the availability of highly skilled labour, labour standards, wage and legal issues associated with its workforce. The company faces health & safety risks given the use of heavy equipment and machinery in the manufacturing facilities, supply chain complexities that can disrupt production and risks associated with product failures or technical issues. Sisecam has lower demographic and societal risks than many companies in the sector due to the easy recyclability of glass and the positive public sentiment towards it.

Governance

Sisecam's **G-3** governance issuer profile score reflects the company's risks in the areas of financial strategy and risk management which are linked to the company's large scale investments with execution risk. Management credibility and track record, organizational structure and compliance and reporting are neutral-to-low. Sisecam's ownership concentration is moderately negative. Turkiye Is Bankasi A.S., a private Turkish bank and founding shareholder of Sisecam, owns a majority stake in the company. We consider the bank as a passive shareholder, with no evidence of interference with the company's business.

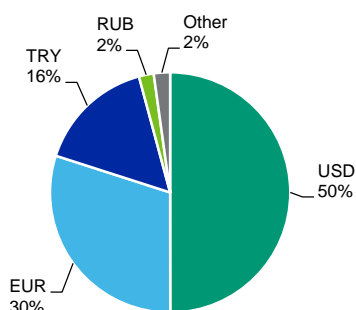
Liquidity analysis

Sisecam's liquidity is adequate and supported by cash on balance sheet of TRY44.1 billion (\$1.5 billion), including cash held with FX-protected deposits. The company's large cash balance helps offset short term debt repayment needs of approximately 46% of reported borrowings as of 31 December 2023. We expect Sisecam to generate operating cash flow of around TRY23 billion during 2024. This expected cash flow, along with its cash holdings, will help cover (1) short-term debt repayments of TRY29.0 billion and the current maturities of long term debt of TRY10.3 billion as of 31 December 2023; (2) estimated capital spending of TRY27 billion during 2024 which has some flexibility to be reduced; and (3) estimated dividend payout of TRY4.9 billion.

The \$1.1 billion senior unsecured bond issuance will strengthen Sisecam's liquidity profile since at least \$400 million will be used to early redeem part of the existing senior unsecured bond due in 2026 and \$250 million will be used to refinance short term debt as well as \$200 million for capex in Hungary and Italy, while \$550 million hard currency cash is parked at Sisecam UK Plc. In the meantime the part tender of \$700 million due March 2026 will be met with hard currency cash held by the guarantor.

Exhibit 9

Debt breakdown by currency (2023)

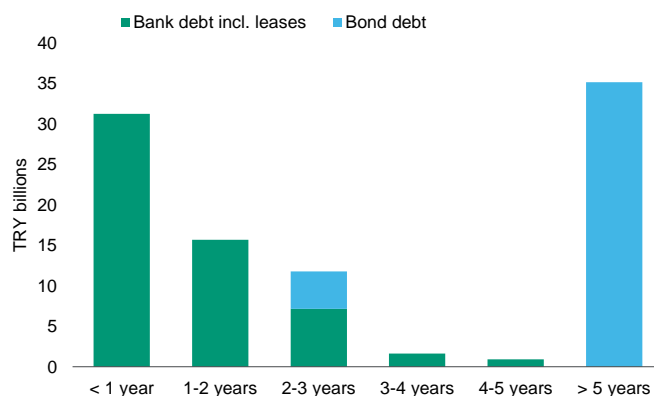


Source: Company data

Exhibit 10

Pro-forma debt breakdown by maturity (post \$1.1 billion bond issuance)

As of 31 December 2023



At least \$400 million of the \$1.1 billion bond proceeds to be allocated towards the part tender of Sisecam's existing \$700 million bond due March 2026.

Source: Company data

Structural considerations

Sisecam does not have any secured debt in its capital structure with the group utilising long-term project loans in combination with short-term debt. The senior unsecured noted due in 2026 are rated in line with the company's corporate family rating because we rank the company's senior unsecured notes pari-passu with the other senior unsecured obligations.

The proposed notes issued by Sisecam UK Plc. are senior unsecured obligations and will rank pari-passu with all other existing and future unsecured and unsubordinated debt obligations of the company. The notes benefit from downstream guarantees from the parent company which represents more than 80% of the group's EBITDA. The guarantor package has the risk of reducing below 80% of the group's EBITDA once the US operations gradually ramp up by the end of 2028 at the earliest.

Rating methodology and scorecard factors

We used our Manufacturing Industry rating methodology to assist in our assessment of Sisecam's credit quality. The B2 long-term issuer rating assigned to Sisecam is four notches below the scorecard-indicated outcome for the next 12-18 months, reflecting the company's credit links with the Turkish economy, which are not fully captured by the methodology scorecard.

Exhibit 11

Rating factors

Türkiye Sise ve Cam Fabrikalari A.S.

Manufacturing Industry Scorecard			Current FY 12/31/2023		Moody's 12-18 Month Forward View	
Factor 1 : Scale (20%)	Measure	Score	Measure	Score	Measure	Score
a) Revenue (USD Billion)	\$6.6	Baa	\$5.8 - \$6.4	Baa		
Factor 2 : Business Profile (25%)						
a) Business Profile	Baa	Baa	Baa	Baa		
Factor 3 : Profitability and Efficiency (5%)						
a) EBITA Margin	19%	A	15% - 16%	Baa		
Factor 4 : Leverage and Coverage (35%)						
a) Debt / EBITDA	2.4x	Baa	2.7x - 3.0x	Baa		
b) Retained Cash Flow / Net Debt	36%	A	28% - 29%	Baa		
c) Free Cash Flow / Debt	6%	Ba	-6% - -9%	Ca		
d) EBITA / Interest Expense	3.3x	B	2.3x - 2.4x	B		
Factor 5 : Financial Policy (15%)						
a) Financial Policy	Ba	Ba	Ba	Ba		
Rating:						
a) Scorecard-Indicated Outcome		Baa3		Ba1		
b) Actual Rating Assigned				B2		

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Source: Moody's Financial Metrics™ and Moody's Ratings forecasts

Appendix

Exhibit 12

Peer comparison

Türkiye Sise ve Cam Fabrikaları A.S.

(in \$ billions)	Türkiye Sise ve Cam Fabrikaları A.S.			Owens Corning			Verallia S.A.		
	B2 Positive			Baa1 Stable			Baa3 Stable		
	FY Dec-21	FY Dec-22	FY Dec-23	FY Dec-21	FY Dec-22	FY Dec-23	FY Dec-21	FY Dec-22	FY Dec-23
Revenue	3.7	5.8	6.6	8.5	9.8	9.7	3.2	3.5	4.2
EBITA Margin	27.3%	17.5%	18.7%	16.7%	18.6%	17.9%	16.9%	17.9%	20.8%
EBITA / Interest Expense	5.6x	4.4x	3.3x	10.5x	15.1x	19.5x	8.6x	10.1x	8.5x
Debt / EBITDA	2.8x	2.4x	2.4x	1.7x	1.4x	1.4x	3.3x	2.7x	2.3x
Retained Cash Flow / Net Debt	27.7%	77.3%	35.6%	66.9%	80.3%	96.8%	22.3%	29.4%	35.2%
Free Cash Flow / Debt	7.8%	1.0%	6.0%	30.0%	34.7%	29.4%	8.6%	11.2%	4.0%

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Source: Moody's Financial Metrics™

Exhibit 13

Moody's-adjusted debt reconciliation

Türkiye Sise ve Cam Fabrikaları A.S.

(in \$ millions)	2019	2020	2021	2022	2023
As reported debt	2,662.7	2,306.4	2,083.6	2,506.1	2,887.4
Pensions	88.6	95.9	130.0	186.3	171.7
Moody's-adjusted debt	2,751.3	2,402.3	2,213.6	2,692.3	3,059.1

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Source: Moody's Financial Metrics™

Exhibit 14

Moody's-adjusted EBITDA reconciliation

Türkiye Sise ve Cam Fabrikaları A.S.

(in \$ millions)	2019	2020	2021	2022	2023
As reported EBITDA	905.5	915.4	1,688.6	1,745.4	1,820.2
Pensions	(9.0)	(11.8)	(20.7)	(76.6)	(51.1)
Unusual Items	(107.8)	(121.2)	(432.0)	(371.6)	(137.3)
Non-Standard Adjustments	(29.5)	-	-	-	-
Moody's-adjusted EBITDA	759.2	782.3	1,236.0	1,297.2	1,631.7

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Source: Moody's Financial Metrics™

Ratings

Exhibit 15

Category	Moody's Rating
TÜRKİYE SİSE VE CAM FABRIKALARI A.S.	
Outlook	Positive
Corporate Family Rating	B2
SISECAM UK PLC.	
Outlook	Positive
Bkd Senior Unsecured	B2/LGD4

Source: Moody's Ratings

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