

**CREDIT OPINION**

1 August 2024

Update

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**RATINGS**

**Turkiye Sise ve Cam Fabrikalari A.S.**

Domicile	Turkiye
Long Term Rating	B1
Type	LT Corporate Family Ratings
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.

**Contacts**

Iker Ballestero +971.4.237.9521  
Barrutia, CFA  
Analyst  
iker.barrutia@moodys.com

Ahmed Al-hubaishi +971.4.237.9508  
Sr Ratings Associate  
ahmed.al-hubaishi@moodys.com

Rehan Akbar, CFA +971.4.237.9565  
Senior Vice President  
rehan.akbar@moodys.com

**Turkiye Sise ve Cam Fabrikalari A.S.**

Update following upgrade to B1 stable

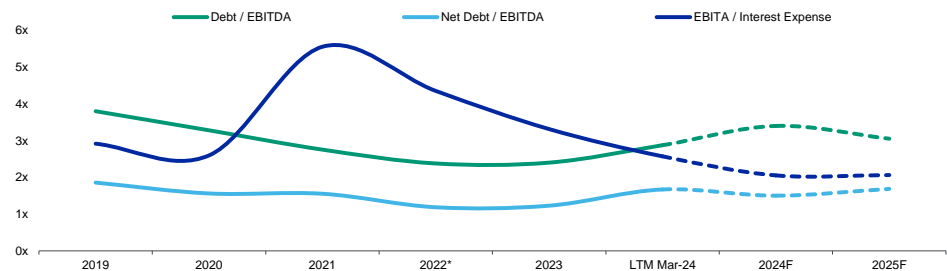
**Summary**

On 26 July 2024, we upgraded the ratings of [Turkiye Sise ve Cam Fabrikalari A.S.'s](#)(Sisecam) to B1 from B2 and changed the outlook to stable from positive. The rating action is a direct consequence of the upgrade on 19 July of the Government of Turkiye's rating to B1 positive from B3 positive.

Sisecam's B1 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) adequate financial profile with Moody's adjusted debt/EBITDA of 2.9x for the 12 months to 31 March 2024. 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, 10% from its US based soda ash business and an additional 21% from Turkiye exports, predominantly to Europe.

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.  
Periods are financial year-end unless indicated. LTM = Last 12 months.  
\*2022 figures and ratios are not indexed in accordance with inflation accounting (TAS 29 Financial Reporting in Hyperinflation Economies).  
Moody's forecasts are Moody's opinion and do not represent the views of the issuer.  
Sources: 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
- » Continued high reliance on short term debt

## Rating outlook

The stable outlook reflects our expectation that Sisecam will maintain a stable operating performance despite the challenging macroeconomic environment while maintaining adequate credit metrics. The stable outlook also assumes that the company will maintain an adequate liquidity position despite the significant capacity growth projects.

## Factors that could lead to an upgrade

Positive pressure on the ratings could arise if the company's liquidity profile significantly improves, the reliance on short term debt reduces and there is no deterioration in its operating and financial performance. An upgrade would also require the company to generate positive free cash flow, maintain a Moody's adjusted debt to EBITDA ratio below 4x and EBITA interest coverage comfortably above 3.5x, both on a sustained basis.

## Factors that could lead to a downgrade

The ratings of Sisecam could be downgraded in case of a continued deterioration in the company's operating performance leading to a Moody's adjusted debt to EBITDA ratio above 4.5x, EBITA interest coverage ratio below 2.5x and sustained negative free cash flow over time. 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	LTM Mar-24	2024F	2025F
Revenue	3.2	3.1	3.7	5.8	5.6	5.5	5.0	5.3
EBITDA Margin %	23.9%	25.5%	33.3%	22.2%	24.7%	24.1%	21.2%	22.5%
EBITA Margin %	16.5%	18.2%	27.3%	17.5%	18.7%	17.6%	15.1%	16.4%
EBITA / Interest Expense	3.0x	2.6x	5.6x	4.4x	3.3x	2.6x	2.1x	2.1x
Debt / EBITDA	3.8x	3.3x	2.8x	2.4x	2.4x	2.9x	3.4x	3.1x
RCF / Net Debt	29.5%	32.2%	27.7%	77.3%	35.6%	26.6%	25.4%	22.4%
FCF / Debt	-4.9%	3.4%	7.8%	1.0%	6.0%	6.2%	-6.1%	-10.5%

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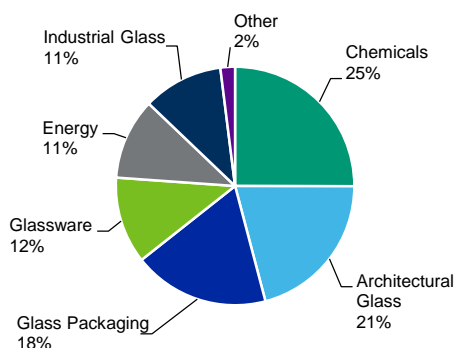
This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on <https://ratings.moody's.com> for the most updated credit rating action information and rating history.

## 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, B1 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 TRY144 billion and a Moody's adjusted EBITDA of TRY34.7 billion in LTM March 2024.

Exhibit 3

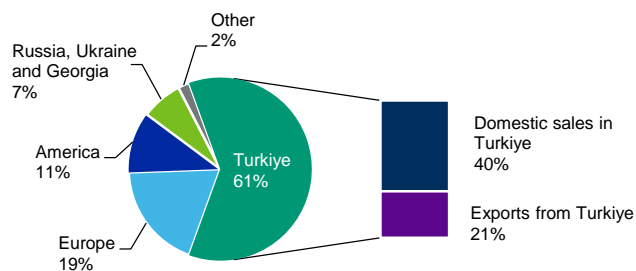
### Revenue breakdown by product (LTM Mar-24)



LTM = Last 12 months.  
Source: Company data

Exhibit 4

### Revenue breakdown by geography (LTM Mar-24)



LTM = Last 12 months.  
Source: Company data

## 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.

Operating performance in 2023 and Q1 2024 has been weaker than expected due to lower volumes as a result of a weaker macroeconomic environment and de-stocking down the value chain. During 2023 volumes in the architectural glass business dropped by 12% and pricing on a like-for-like basis reduced 18%. During the same period, Glass packaging also experienced a 3% volume reduction and a 11% pricing reduction. Chemicals' volumes and pricing deteriorated 1% and 8% respectively while the Energy segment experienced an 88% increase in volume despite a 69% reduction in prices. Industrial glass and glassware performed positively with volume and price growth of 7% each for Industrial glass and a 2% volume drop and 3% price increase for Glassware. During Q1 2024, pricing pressures remained but volumes improved compared to the same period a year before. 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 Turkiye, Western and Eastern Europe, the CIS and the United States with 60% of total revenue of 2023 generated outside Turkiye (including 20% of Turkiye based exports). More than 50% of the company's exports from Turkiye are sold to the European Union.

The geographic diversity reduces Sisecam's exposure to Turkiye, 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 1.5% in 2024 and 1.6% in 2025 versus 2.7% in 2022 and 1.8% in 2023. 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.

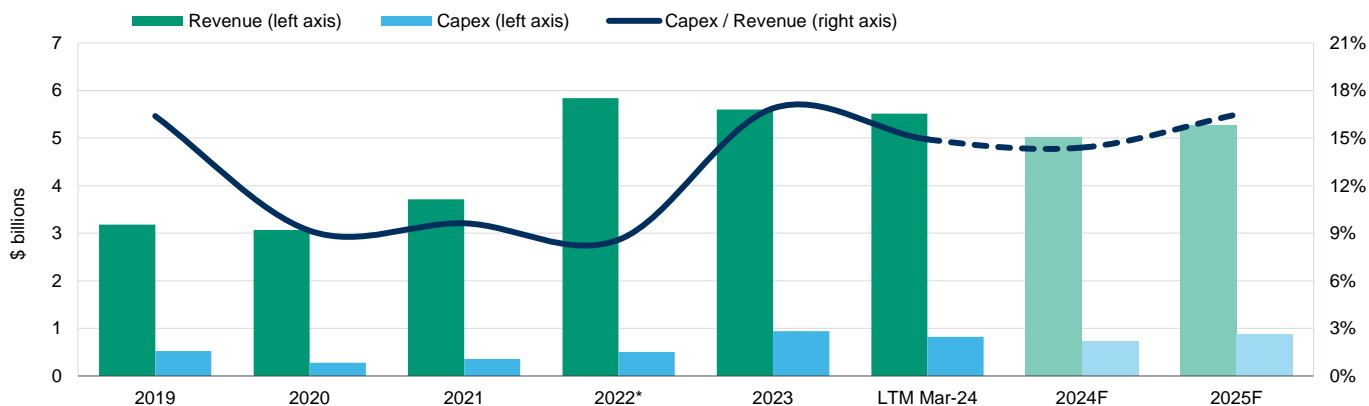
The glass manufacturing industry requires substantial and recurring maintenance capital spending. In 2021, Sisecam announced the construction of a €255 million glass packaging greenfield project in Hungary with two furnaces with 396K tons of gross annual production capacity to be fully operational by 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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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.

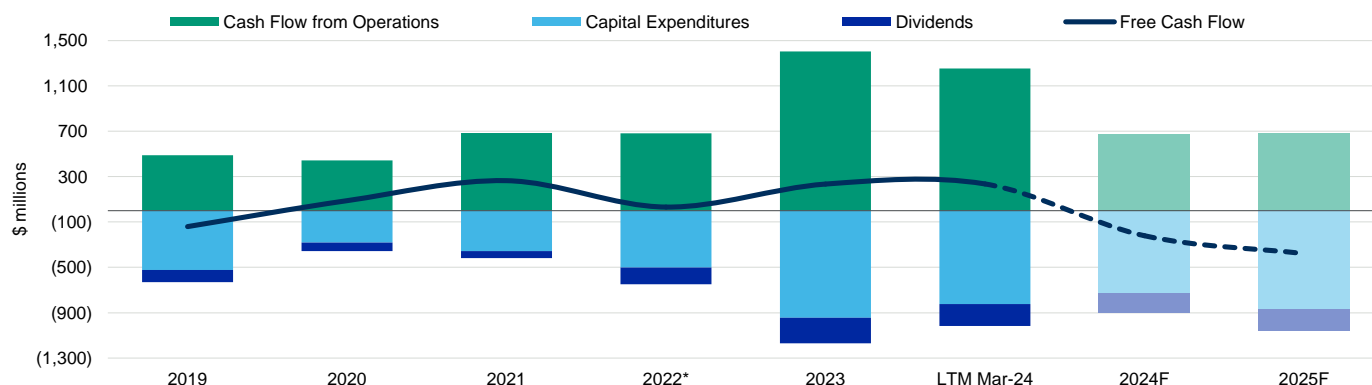
### Adequate financial metrics despite weakening end markets

Sisecam continues to display an adequate 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 and weakened operating performance due to pricing and volume pressures over the last 12 months.

The \$1.5 billion notes issuance from April 2024 has increased Sisecam's debt levels to over \$3.2 billion as of April 2024 pro forma and Moody's adjusted leverage will increase to over 3x from 2.4x as of December 2023. We expect the company's Moody's-adjusted debt/EBITDA to be around 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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Sources: Moody's Financial Metrics™ and Moody's Ratings forecasts

Sisecam is managing its foreign-currency exposure prudently. The company had around 75% of its debt denominated in US dollar and Euro as of 31 March 2024. 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 economic environment. 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. This makes Sisecam vulnerable to any developments in the domestic macroeconomic and operating environment.

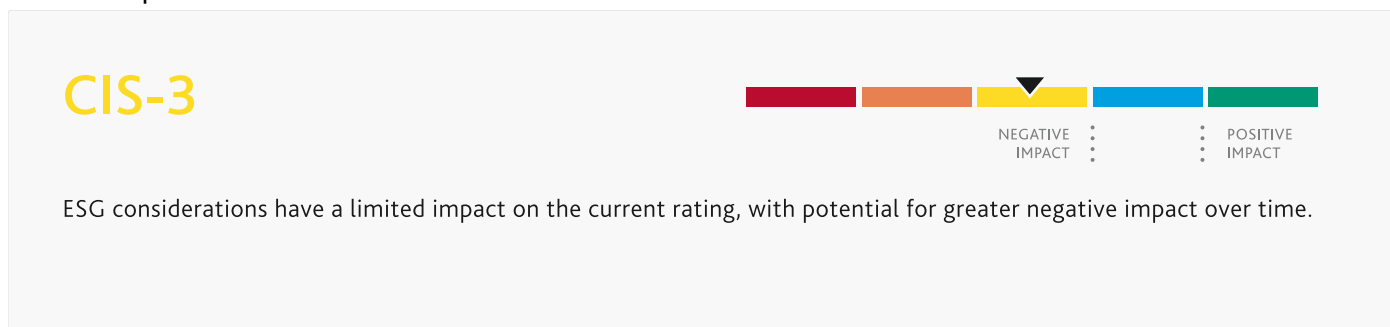
While Sisecam's operations are deeply embedded in Turkiye's economy, the company generates 60% of its 2023 revenues internationally, including 7% from operations in Russia which are completely autonomous and export revenue. This provides access to foreign currencies and reduces the company's exposure 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 75% of its debt instruments denominated in USD or Euro as of Q1 2024. 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 CIS-3 indicates that environmental, social and governance considerations have a limited impact on the current rating with potential for greater impact over time. It primarily reflects the company's exposure to environmental risks related to tightening regulations for carbon emissions, which requires incremental investments. Other ESG risks relate to governance considerations on the back of the company's high level of short term debt albeit reducing after the \$1.5 billion bond issuance. The company's large capital expenditure projects have the risk of increasing pressure on liquidity in the upcoming years.

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.

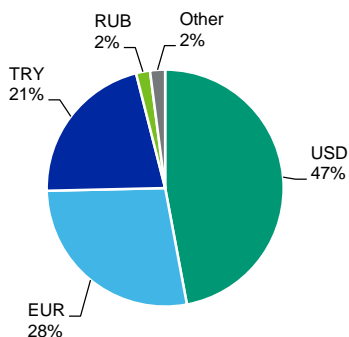
### Liquidity analysis

Sisecam's liquidity is adequate and has strengthened after the \$1.5 billion notes issuance in Q2 2024. The company's liquidity is supported by cash of TRY38.4 billion (\$1.2 billion) and to a lesser extent by a Eurobond investment portfolio and cash held with FX-protected deposits and other financial assets with an aggregate book value of TRY5.3 billion (\$0.2 billion) as of 31 March 2024. The company's large cash balance helps offset short term debt repayment needs of approximately 41% of reported borrowings as of 31 March 2024.

We expect Sisecam to generate operating cash flow of around TRY22 billion during 2024. This expected cash flow, along with its cash holdings, will help cover (1) short-term debt repayments of TRY28.5 billion and the current maturities of long term debt of TRY10.5 billion as of 31 March 2024; (2) estimated capital spending of TRY24 billion during 2024 which has some flexibility to be reduced; and (3) estimated dividend payout of TRY5.8 billion.

Exhibit 9

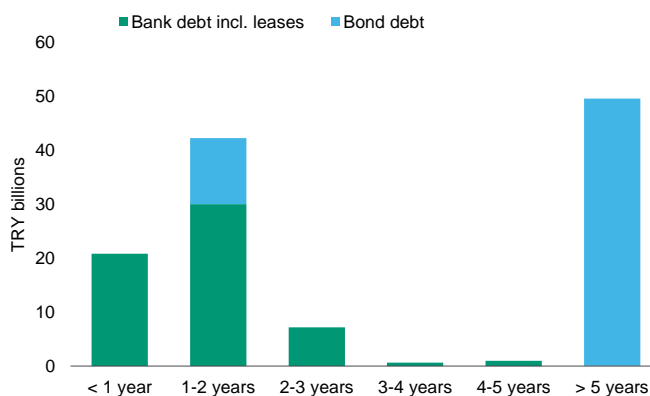
**Debt breakdown by currency**  
As of 31 March 2024



Source: Company data

Exhibit 10

**Pro-forma debt breakdown by maturity (post \$1.5 billion bond issuance)**  
As of 31 March 2024



Around \$330 million of the \$1.5 billion bond proceeds were 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 notes issued by Sisecam UK Plc. are senior unsecured obligations and 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 B1 long-term issuer rating assigned to SiseCam is three 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 Fabrikaları A.Ş.

Manufacturing Industry Scorecard	Current LTM 3/31/2024		Moody's 12-18 Month Forward View	
	Measure	Score	Measure	Score
<b>Factor 1 : Scale (20%)</b>				
a) Revenue (USD Billion)	\$5.5	Baa	\$5.0 - \$5.2	Baa
<b>Factor 2 : Business Profile (25%)</b>				
a) Business Profile	Baa	Baa	Baa	Baa
<b>Factor 3 : Profitability and Efficiency (5%)</b>				
a) EBITA Margin	17.6%	A	15% - 16%	Baa
<b>Factor 4 : Leverage and Coverage (35%)</b>				
a) Debt / EBITDA	2.9x	Baa	3.0x - 3.4x	Baa
b) Retained Cash Flow / Net Debt	26.6%	Baa	22% - 25%	Ba
c) Free Cash Flow / Debt	6.2%	Ba	-6% - -10%	Ca
d) EBITA / Interest Expense	2.6x	B	2.0x - 2.1x	B
<b>Factor 5 : Financial Policy (15%)</b>				
a) Financial Policy	Ba	Ba	Ba	Ba
<b>Rating:</b>				
a) Scorecard-Indicated Outcome		Ba1		Ba1
b) Actual Rating Assigned				B1

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## Appendix

Exhibit 12

### Peer comparison

Türkiye Sise ve Cam Fabrikaları A.S.

(in \$ billions)	Türkiye Sise ve Cam Fabrikaları A.S.			O-I Glass, Inc.			Verallia S.A.		
	B1 Stable			Ba3 Stable			Baa3 Stable		
	FY Dec-22*	FY Dec-23	LTM Mar-24	FY Dec-22	FY Dec-23	LTM Mar-24	FY Dec-21	FY Dec-22	FY Dec-23
Revenue	5.8	5.6	5.5	6.9	7.1	6.9	3.2	3.5	4.2
EBITA Margin	17.5%	18.7%	17.6%	11.9%	13.4%	11.9%	16.9%	17.9%	20.8%
Debt / EBITDA	2.4x	2.4x	2.9x	4.7x	4.3x	4.7x	3.3x	2.7x	2.3x
Retained Cash Flow / Net Debt	77.3%	35.6%	26.6%	12.6%	18.8%	14.9%	22.3%	29.4%	35.2%
Free Cash Flow / Debt	1.0%	6.0%	6.2%	2.5%	2.0%	-1.3%	8.6%	11.2%	4.0%
EBITA / Interest Expense	4.4x	3.3x	2.6x	2.9x	2.7x	2.2x	8.6x	10.1x	8.5x

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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	LTM Mar-24
<b>As reported debt</b>	<b>2,662.7</b>	<b>2,306.4</b>	<b>2,083.6</b>	<b>2,506.1</b>	<b>2,887.4</b>	<b>2,925.4</b>
Pensions	88.6	95.9	130.0	186.3	171.7	156.8
<b>Moody's-adjusted debt</b>	<b>2,751.3</b>	<b>2,402.3</b>	<b>2,213.6</b>	<b>2,692.3</b>	<b>3,059.1</b>	<b>3,082.2</b>

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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	LTM Mar-24
<b>As reported EBITDA</b>	<b>905.5</b>	<b>915.4</b>	<b>1,688.6</b>	<b>1,745.4</b>	<b>1,820.2</b>	<b>1,493.6</b>
Pensions	(9.0)	(11.8)	(20.7)	(76.6)	(51.1)	(45.1)
Unusual Items	(107.8)	(121.2)	(432.0)	(371.6)	(137.3)	(121.2)
Non-Standard Adjustments	(29.5)	-	-	-	-	-
<b>Moody's-adjusted EBITDA</b>	<b>759.2</b>	<b>782.3</b>	<b>1,236.0</b>	<b>1,297.2</b>	<b>1,631.7</b>	<b>1,327.3</b>

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Source: Moody's Financial Metrics™

## Ratings

Exhibit 15

Category	Moody's Rating
<b>TÜRKİYE SİSE VE CAM FABRİKALARI A.S.</b>	
Outlook	Stable
Corporate Family Rating	B1
<b>SISECAM UK PLC.</b>	
Outlook	Stable
Bkd Senior Unsecured	B1/LGD4

Source: Moody's Ratings

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