China Glass Holdings Limited

Initial Issuer Report

Summary	
Issuer Rating	A
Outlook	Stable
Location	China
Industry	Building Materials - Glass
Date	24 January 2024

Analysts
Sigmund Jiang, CFA，CESGA
(852) 3462 9587
sigmund.jiang@lhratingsglobal.com

Roy Luo, FRM，CESGA
(852) 3462 9582
roy.luo@lhratingsglobal.com

Applicable Criteria
General Corporate Rating Criteria (31 December 2021)
General Corporate Rating Criteria: Addendum (30 August 2022)

Lianhe Ratings Global Limited ("Lianhe Global") has assigned 'A' global scale Long-term Issuer Credit Rating to China Glass Holdings Limited ("CNG"). The Outlook is Stable.

Summary

The Issuer Rating reflects CNG's sizeable operating scale with nationwide and overseas production lines in glass industry, relatively diversified revenue underpinned by overseas expansion, and the strong support received from the major shareholders which mitigates CNG's weak standalone financial profile with weakened profitability, high financial leverage and tight liquidity.

The Stable Outlook reflects our expectation that CNG would maintain its established market position and continue to receive strong support from its major shareholders.

Key Rating Rationales

Sizable Glass Producer in China with Nationwide and Overseas Production Bases: CNG (3300.hk) is a sizable glass producer in China, which is ranked among top ten glass producers in China in terms of production capacity. It has relatively diversified product lines on clear glass, painted glass, coated glass, and energy-saving & new energy products. The company currently has eleven production bases and one R&D center. In China, CNG's industrial layout covers Jiangsu, Shandong, Shaanxi, Inner Mongolia, Fujian, Gansu and other provinces or autonomous regions. Its overseas industrial layout covers countries such as Italy, Nigeria and Kazakhstan, etc.

Strong Shareholder Background and Strategy Alignment: Triumph Science & Technology Group Co., Ltd. ("Triumph Group") totally holds a stake of 22.68% in CNG and is the largest shareholder of the company. Focusing on the manufacturing of glass materials, Triumph Group is a direct wholly owned subsidiary of China National Building Material Group Co., Ltd. ("CNBM"), the world's largest comprehensive building materials industry group directly under the State-owned Assets Supervision and Administration Commission of the State Council ("SASAC"). Triumph Group has deeply engaged in CNG's business strategy formulation and implementation. CNG's chairman, a non-executive director and CFO are recommended by Triumph Group and officially appointed by CNG's board.

CNG has significant synergies with Triumph Group in glass products. With plenty of core intellectual property rights in the glass industry, Triumph Group is able to provide strong technical support to CNG. The company also carries out "going global" strategy by investing and developing production capacity along the "Belt and Road" areas. In addition, Triumph Group provides low cost fundings to CNG by allowing CNG to share its bank facilities.

Overseas Expansion Underpins Revenue Diversification: CNG's "going global" strategy has achieved remarkable results in the past few years. The production base in Nigeria maintained stable operational performance and achieved outstanding operating results in the past few years, with profitability significantly ahead of the level of domestic peers. The production base in

Kazakhstan stabilized its operations and has built its own mineral raw materials processing plant and other ancillary facilities, which have been put into operation successively and effectively reduced production costs. Besides, CNG has a neutral pharmaceutical glass engineering equipment and technical services company in Italy. These overseas production bases diversified CNG's capacity layout globally and significantly increased the company's overseas revenue contribution.

Weakened Profitability due to Deteriorating Market Demand: CNG's revenue and profitability was heavily impacted by the challenging market condition of China's property sector, the core downstream user of glass productions, in the past two years. CNG's revenue reached the peak of recent years in 2021, amounting to RMB5.07 billion, then dropped to RMB4.33 billion in 2022. The company's overall gross margin decreased to 14.7% in 2022 and 5.0% in the first half of 2023, from 34.2% in 2021.

Despite the company's efforts to further increase its revenue from the energy saving and new energy glass segment, which is expected to profit from the surging market demand in the photovoltaic industry and electric vehicle industry, we believe that CNG's gross margin is most likely to maintain at a very low level in the whole year of 2023. Nevertheless, given the marginal recovery in China's real estate sector and overall domestic economy, along with two photovoltaic rolled glass production lines expected to be put into production in 2024 to 2025, we expect that CNG's gross margin might sightly rebound in the next two years.

High Financial Leverage and Tight Liquidity: In the past three years, CNG's total debt doubled to RMB7.9 billion at end-2022 from RMB3.5 billion at end-2020, owing to the company's heavy capital expenditures in expanding its production capacity. Its financial leverage, as measured by gross debt/capitalization ratio, bumped up to 70.7% at end-2022 from 61.5% at end-2020.

Given the estimated capital expenditure (RMB1.1 billion to RMB1.4 billion annually) for the several glass production lines to be constructed in 2024 and 2025, we expect CNG's financial leverage to increase slightly to around 74.0% in the next two years. We also expect CNG's debt-serving capacity, as measured by the total debt/EBITDA ratio, to remain at a weak level, given its weakened profitability. Nonetheless, the company's EBITDA/Interest ratio might continue to maintain at a moderate level, underpinned by the company's relatively low funding costs supported by Triumph Group.

CNG's liquidity was tight. The company had total cash on hand of RMB1.17 billion at end-June 2023, compared with its short-term debts of RMB4.93 billion. Yet considering RMB2.23 billion of its short-term debts were supported by Triumph Group, we believe that CNG's short-term debt servicing pressure is manageable. In addition, CNG has access to multiple financing sources, including bank borrowings (unused bank facilities of RMB372 million at end-June 2023), and equity placements.

Rating Sensitivities

We would consider downgrading CNG's rating if (1) its operating performance in terms of revenue, margin or cash flow from operations experience a material decline, or (2) its liquidity is materially worsened, or (3) there is perceived weakening in support from Triumph Group, particularly due to its reduced strategic importance in Triumph Group, or (4) significant reduction of Triumph Group's ownership of CNG, or (5) there is a downgrade in our internal credit assessment on Triumph Group.

We would consider upgrading CNG's rating if (1) there is strengthened support from Triumph Group, or (2) there is an upgrade in our internal credit assessment on Triumph Group.

Company Profile

CNG is a sizeable manufacturer of high-end flat glass in China and a major domestic producer of coated glass. The company was formerly known as Jiangsu Glass Company, a state-owned enterprise established in 1958 in Jiangsu Province. After being acquired by Hony Capital Group Limited ("Hony Capital"), a subsidiary of Lenovo Group Limited, in 2003, CNG was successfully listed on the Main Board of the Hong Kong Stock Exchange in 2005.

Later in 2006, through the acquisition of Weihai Blue Star Glass Holdings and related enterprises, CNG integrated relevant technical resources and successfully developed low-emission ("Low-E") products and other product series. In 2014, Triumph Group (a wholly owned subsidiary of CNBM) was introduced as a strategic shareholder and became the largest shareholder of CNG in 2016.

At end-June 2023, Triumph Group totally held a stake of 22.68% in CNG and was the largest shareholder of the company. At the same time, New Glory Fund L.P., a subsidiary of Hony Capital, held a stake of 14.86% in CNG.

Business Profile

Sizable Glass Producer in China

CNG is a sizable glass producer in China, with relatively diversified product lines on clear glass, painted glass, coated glass, and energy-saving & new energy products. CNG is ranked among top ten glass producers in China in terms of production capacity. The company currently has eleven production bases and one R&D center in China, covering areas including Jiangsu, Shandong, Shaanxi, Inner Mongolia, Fujian, Gansu and other provinces or autonomous regions. Its overseas industrial layout covers countries such as Italy, Nigeria and Kazakhstan, etc.

At end-June 2023, CNG had fifteen float glass production lines (twelve float glass production lines in actual operation), with a daily melting capacity of 8,000 tonnes. The unoperated production lines included one float glass production line under construction in China and two other float glass production lines undergoing cold repair technical renovation. In addition, CNG also had one photovoltaic rolled glass production line with a daily melting capacity of 1,000 tonnes, two offline Low-E glass production lines, and an Italian company specialized in engineering equipment and technical services for neutral pharmaceutical glass production lines.

In October 2023, CNG acquired Gansu Kaisheng Daming Solar Energy Technology Co., Ltd., which is expected to bring an existing photothermal ultra-white float glass production line with a melting capacity of 600 tonnes per day and an additional photovoltaic rolled glass production line under construction with a melting capacity of 800 tonnes per day. We believe this acquisition, along with other glass production lines under construction, is likely to mitigate the effect of the cold repair technical renovation on the company's overall production capacity in the next two years.

Overseas Expansion Underpins Revenue Diversification

As one of the most important development strategies in "organic growth, M&A growth and going global", CNG's "going global" strategy has achieved remarkable results in the past few years. Apart from the aforementioned production bases in China, CNG has overseas float glass production bases, namely, in Nigeria and Kazakhstan.

The production base in Nigeria maintained stable operational performance and achieved outstanding operating results in the past few years, with profitability significantly ahead of the level of domestic peers. The production base in Kazakhstan stabilized its operations and has built its own mineral raw materials processing plant and other ancillary facilities, which have been put into operation successively and effectively reduced production costs. Besides, CNG has a neutral pharmaceutical glass engineering equipment and technical services company in Italy. These overseas production bases further diversified CNG's production globally and significantly increased the company's overseas revenue contribution.

CNG's Revenue Breakdown by Region (RMB Million)

	2020		2021	
Region	**Revenue**	**%**	**Revenue**	**%**
Mainland China and Hong Kong	2,561.3	81.1%	3,967.2	78.3%
Nigeria	211.3	6.7%	378.9	7.5%
Middle East	105.4	3.3%	199.2	3.9%
Italy	26.3	0.8%	5.5	0.1%
Kazakhstan	-	-	-	-
Other countries	254.4	8.1%	514.3	10.2%
Total Revenue	**3,158.6**	**100.0%**	**5,065.0**	**100.0%**

	2022		1H2023	
Region	**Revenue**	**%**	**Revenue**	**%**
Mainland China and Hong Kong	2,940.9	68.0%	1,484.0	70.4%
Nigeria	561.8	13.0%	189.7	9.0%
Middle East	250.6	5.8%	88.4	4.2%
Italy	-	-	-	-
Kazakhstan	6.5	0.1%	-	-
Other countries	567.5	13.1%	345.0	16.4%
Total Revenue	**4,327.2**	**100.0%**	**2,107.1**	**100.0%**

Source: CNG's annual reports, interim reports and Lianhe Global's Calculations

Strong Shareholder Support and Strategy Alignment

Triumph Group totally holds a stake of 22.68% in CNG and is the largest shareholder of the company. Focusing on the manufacturing of glass materials, Triumph Group is a direct wholly owned subsidiary of CNBM, the world's largest comprehensive building materials industry group directly under SASAC.

Triumph Group has deeply engaged in CNG's business strategy formulation and implementation. CNG's chairman, a non-executive director and CFO are recommended by Triumph Group and officially appointed by CNG's board. CNG's development strategy has been with Triumph Group. The company also carries out "going global" strategy by investing and developing production capacity along the "Belt and Road" areas.

Triumph Group also provides strong support including, financial support, technical support and human resource support to CNG. With plenty of independent intellectual property rights in the glass industry in China, Triumph Group is able to provides great technical support in improving CNG's technology and equipment level. Moreover, Triumph Group provides borrowings with low funding costs to CNG by allowing CNG to use Triumph Group's bank facilities indirectly.

Given CNG's strategic importance and alignment with Triumph Group's glass Industry layout, we expect CNG to continue to receive all kinds of support from Triumph Group and even CNBM. Besides, Hony Capital, the original acquirer and the current second-largest shareholder of CNG, has committed to maintaining the current shareholding and providing long-term support to CNG in the capital market.

Financial Profile

Weakened Profitability

CNG's profitability has been volatile in the past three years. With a high proportion of clear glass products' revenue contribution to the company's total revenue, CNG's gross margin was heavily impacted by the challenging market condition of China's property market in the past two years. The decrease in gross margin derived from the company's clear glass, painted glass and coated glass segments in the first half of 2023 was mainly due to the significantly lower product unit prices, as a result of the continued downturn in China's real estate sector, which is the core downstream applications of such products.

Despite the company's efforts to further increase its revenue from the energy saving and new energy glass segment, which is expected to profit from the surging market demand in the photovoltaic industry and electric vehicle industry, we believe that CNG's gross margin is most likely to maintain at a very low level in the whole year of 2023. Nevertheless, given the marginal recovery in China's real estate sector and overall domestic economy, along with two photovoltaic rolled glass production lines expected to be put into production in 2024 to 2025, we expect that CNG's gross margin might sightly rebound in the next two years.

CNG's Glass Product Revenue Breakdown (RMB Million)

	2020			2021		
Product Type	**Revenue**	**%**	**Gross Margin**	**Revenue**	**%**	**Gross Margin**
Clear glass products	1,430	46.3	21.7%	2,741	55.9	30.1%
Painted glass products	444	14.4	23.7%	640	13.0	41.7%
Coated glass products	811	26.3	26.0%	1,050	21.4	43.6%
Energy saving and new energy glass products	402	13.0	19.8%	472	9.6	28.4%
Total	**3,088**	**100**	**22.9%**	**4,903**	**100**	**34.3%**

(RMB Million)	2022			1H2023		
Product Type	**Revenue**	**%**	**Gross Margin (%)**	**Revenue**	**%**	**Gross Margin (%)**
Clear glass products	2,003	50.5	1.3%	1029	53.1	-0.9%
Painted glass products	567	14.3	19.4%	216	11.1	4.9%
Coated glass products	1,131	28.5	33.8%	436	22.5	25.6%
Energy saving and new energy glass products	263	6.6	8.4%	257	13.3	-16.7%
Total	**3,964**	**100**	**13.6%**	**1,938**	**100**	**3.6%**

Source: CNG's annual reports, interim reports and Lianhe Global's Calculation

High Financial Leverage with Tight Liquidity

CNG's historical financial leverage was relatively high, mainly because the company used financial leverage to acquire a series of high-quality float glass companies in China in order to achieve economies of scale, especially during the period from 2005 to 2014. In the past three years, CNG's total debt doubled to RMB7.9 billion at end-2022 from RMB3.5 billion at end-2020, owing to the company's heavy capital expenditures in expanding its production capacity. Its financial leverage, as measured by gross debt/capitalization ratio, bumped up to 70.7% at end-2022 from 61.5% at end-2020.

Given the estimated capital expenditure (RMB1.1 billion to RMB1.4 billion annually) for the several glass production lines to be constructed in 2024 and 2025, we expect CNG's financial leverage to increase slightly to around 74.0% in the next two years. We also expect CNG's debt-serving capacity, as measured by the total debt/EBITDA ratio, to remain at a weak level, given its weakened profitability. Nonetheless, the company's EBITDA/Interest ratio might continue to maintain at a moderate level, underpinned by the company's relatively low funding costs supported by Triumph Group.

CNG's liquidity was tight. The company had total cash on hand of RMB1.17 billion (including restricted cash of approx. RMB0.30 billion) at end-June 2023, compared with its short-term debts of RMB4.93 billion. In addition, CNG has access to multiple financing sources, including bank borrowings (unused bank facilities of RMB372 million at end-June 2023), and equity placements. Considering that among the short-term debts of RMB4.93 billion at end-June 2023, RMB2.23 billion of them were loans from Triumph Group, we believe that CNG's liquidity was tight but still manageable.

Key Assumptions

- Annual revenue growth rate: 8%-38% for 2023-2025
- Annual capital expenditure: RMB1.1-1.4 billion for 2023-2025
- Cash dividend payout ratio: 0%-30% for 2023-2025

Key Financial Metrics

2021A-2025F	Debt/EBITDA	EBITDA/Interest	Debt/Capitalisation	Quick Ratio
Weighted Average	9.8x	3.1x	73.2%	0.2x

Source: CNG and Lianhe Global's adjustments and forecasts

External Support

Strong External Support from Triumph Group

CNG would likely receive strong support from its largest shareholder, Triumph Group, to ensure its viability, considering CNG's strategic role as the group's important oversea listing platform carrying out the group's oversea expansion strategy, as well as strong integration and linkage between CNG and Triumph Group.

Triumph Group's Ownership and Governance

Triumph Group totally holds of 22.68% in CNG and is the largest shareholder of the company. CNG's chairman, a non-executive director and CFO are recommended by Triumph Group and officially appointed by CNG's board. Triumph Group wields decision-making authority and oversight over CNG, playing a pivotal role in critical aspects like management appointments, strategic development decisions, investment plans, and the supervision of major funding choices.

Triumph Group's Ability to Provide Support

Triumph Group is wholly owned by CNBM, the world's largest comprehensive building materials industry group directly under the SASAC. Holding majority shares in several glass design and production companies including China Luoyang float Glass Group, China Yaohua Glass Group, Henan Zhonglian Glass, Triumph Group is the core operating and investing platform in CNBM's glass sector.

Triumph Group recorded revenue of RMB38.2 billion in 2022. its total asset reached RMB98.0 billion. Given Triumph Group's strong shareholder background, it has access to various financing channels, including bank borrowing, bond issuances and equity financing, etc. At end-September 2023, Triumph Group had total bank facilities amounting to RMB110 billion, of which RMB53.3 were unused.

Appendix I: CNG's Rating Factors

Rating Factors	Weight	Initial Rating
I. Market Demand Analysis	**15.0%**	**bb+**
II. Business Analysis[1]	**45.0%**	**bbb-**
III. Financial Analysis[2]	**40.0%**	**b-**
IV. Base Score	**100.0%**	**bb-**
V. Industry Risk		**bbb**
VI. Qualifiers		
Liquidity		-1
Corporate Governance		Neutral
Debt Structure and Financial Policy		Neutral
Idiosyncratic Analysis		Neutral
Stand-Alone Creditworthiness		**b+**
VII. External Support		**Strong**
Issuer Credit Rating		**A**

Source: Lianhe Global

[1] Business Analysis contains sub-factors of market position, diversification, competitive position, operating efficiency and profitability.
[2] Financial Analysis contains sub-factors of debt/EBITDA, EBITDA interest coverage, debt/capitalisation and quick ratio.

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