mkay

Well-entrenched glass leader; onward to next growth phase

CMP (Rs): 840 | TP (Rs): 1,520

Others > Initiating Coverage > September 22, 2025

We initiate coverage on AGI Greenpac (AGI) with BUY and Sep-26E TP of Rs1,520 based on DCF method, implying 19x Sep-27E EPS. AGI is a leader in the Indian container glass (CG) industry with >20% market share. The CG sector has, in the last 15 years, seen multiple ebbs and flows-demand volatility, overcapacity, and input-fuel cost spikes—with several players including erstwhile market leader HNGIL being left bankrupt; however, AGI with its innovative products and processes, cost efficiencies, and disciplined capital allocation clocked 13% revenue/15% EBITDA CAGR with a current return profile of ~15%. The Indian CG sector outlook is steady, with 4-5% volume/8-9% value CAGR amid key user industries like AlcoBev, Food & Beverage (F&B), and pharma growing healthily while the input cost environment is benign, with soda ash and energy costs well-contained. AGI is expanding glass capacity by 30% to ~2,600tpd by FY27-end with a new Rs7bn plant in Madhya Pradesh, while also diversifying into the aluminium can segment (1.6bn capacity by CY30; Rs10bn capex), which is a fast-growing (15% CAGR), 2-player market in India currently. AGI also has smaller caps & closures and PET bottle businesses, which should grow in double digits on a low base. We estimate 17% revenue/29% APAT CAGR during FY25-28E with RoE/RoCE improving to 19% by FY28E. FY26-27 would be the capex phase, followed by healthy FCF

Proven track record navigating challenging cycles; glass outlook healthy

generation, with 2% yield in FY28E and growth thereafter.

Despite its under-penetration, the CG sector in India is cyclical wrt to supply-demand outlook and input/fuel (energy) cost volatility. The last 15Y saw HNGIL moving toward bankruptcy due to overcapacity, low utilization, and high leverage. AGI, with 17% market share in FY10, has outperformed the industry and expanded its market share to >20% currently, despite intense competition and adverse cycles. The outlook is healthy, with not-too-aggressive industry capex plans, and user industries steadily growing in India.

Input and fuel cost environment benign; margins should be steady

Among raw materials, soda ash is a major cost item with 15-20% share in total expenditure, while power and fuel have ~25% share. Historically, price spikes have affected margin, with pass-on being inefficient. However, input prices are expected to remain benign in the medium term due to the over-supply scenario in these markets. Minor price changes are passed on with a quarter's lag. With the specialty glass segment ramping up, we estimate EBITDAM rising to 26% in FY28E from 24.3% in FY25.

Targeted capex plans to meet growth as well as diversification objectives

Glass, PET, and aluminium are competitors in the packaging industry. AGI's investment in glass and aluminium strengthens its core while supporting diversification. We estimate CFO/capex of Rs36bn/21bn in FY26-30E; hence, the balance sheet would also improve.

AGI Greenpac: Finar	AGI Greenpac: Financial Snapshot (Standalone)									
Y/E March (Rs mn)	FY24	FY25	FY26E	FY27E	FY28E					
Revenue	24,176	25,288	27,231	29,629	40,981					
EBITDA	5,608	6,139	6,824	7,613	10,647					
Adj. PAT	2,513	2,923	3,425	4,126	6,234					
Adj. EPS (Rs)	38.8	45.2	52.9	63.8	96.4					
EBITDA margin (%)	23.2	24.3	25.1	25.7	26.0					
EBITDA growth (%)	21.5	9.5	11.2	11.6	39.9					
Adj. EPS growth (%)	(3.9)	16.3	17.2	20.5	51.1					
RoE (%)	14.7	16.5	15.9	15.9	20.4					
RoIC (%)	13.9	14.3	15.8	18.8	24.4					
P/E (x)	21.6	16.8	15.2	13.2	8.7					
EV/EBITDA (x)	10.1	This report	8.0	for Toom 7.7	/hito Margue					
P/B (x)	3.0	This report	is intended	for Team VV	hite Marque					
FCFF yield (%)	5.7	3.2	3.4	(5.6)	1.8					

Source: Company, Emkay Research

Target Price – 12M	Sep-26
Change in TP (%)	NA
Current Reco.	BUY
Previous Reco.	NA
Upside/(Downside) (%)	81.0

Stock Data	AGIG IN
52-week High (Rs)	1,308
52-week Low (Rs)	599
Shares outstanding (mn)	64.7
Market-cap (Rs bn)	54
Market-cap (USD mn)	617
Net-debt, FY26E (Rs mn)	301.4
ADTV-3M (mn shares)	0
ADTV-3M (Rs mn)	331.2
ADTV-3M (USD mn)	3.8
Free float (%)	39.2
Nifty-50	25,327.1
INR/USD	88.1
Shareholding,Jun-25	
Promoters (%)	60.2
FPIs/MFs (%)	7.6/1.5

Price Performance								
(%)	1M	3M	12M					
Absolute	(10.4)	4.7	(4.7)					
Rel. to Nifty	(11.7)	2.5	(4.4)					



Sabri Hazarika

sabri.hazarika@emkayglobal.com

+91-22-66121282

Arya Patel arya.patel@emkayglobal.com +91-22-66121285

Table of Contents

Contents	Page No.
Financials and Valuation	3
Financials – A 20% EBITDA CAGR story	3
Valuation attractive at under 9x FY28E EPS	5
Key Investment Thesis	7
Proven track record navigating challenging cycles; glass outlook healthy	7
Targeted capex plans to meet growth as well as diversification objectives	15
Industry Overview	17
Premiumization and shift toward sustainability fuel container-glass demand	17
Indian Container Glass industry – From a fragmented past to a stable, growth-o	
Specialty Glass: Capturing premium growth through innovation and customizat	ion25
From raw silica sand to finished glass bottles: Glass manufacturing	27
Furnace – Core of container glass manufacturing	29
Indian closures and caps market: Rising demand for security and premium pac	kaging30
Indian PET bottle market: Rapid growth bolstered by FMCG, beverages, and initiatives	
Company Background and Key Risks	31
History	32
ESG	34
Key Risks	35
AGI Greenpac: Standalone Financials and Valuations	36

his report is intended for Team White Marque Solutions (team emkay@whitemarquesolution

Financials and Valuation

Financials - A 20% EBITDA CAGR story

Exhibit 1: Financials snapshot

Standalone (Rs mn)	FY23	FY24	FY25	FY26E	FY27E	FY28E	FY29E	FY30E
Revenue (Rs mn)	22,815	24,176	25,288	27,231	29,629	40,981	47,799	50,538
EBITDA (Rs mn)	4,616	5,608	6,139	6,824	7,613	10,647	12,215	13,148
EBITDAM	20%	23%	24.3%	25.1%	25.7%	26.0%	25.6%	26.0%
Reported PAT (Rs mn)	2,616	2,513	3,224	3,578	4,126	6,234	7,092	7,722
Adjusted PAT (Rs mn)	2,616	2,513	2,923	3,425	4,126	6,234	7,092	7,722
Growth	35%	-4%	16%	17%	20%	51%	14%	9%
Reported EPS (Rs)	40.4	38.8	49.8	55.3	63.8	96.4	109.6	119.4
Adjusted EPS (Rs)	40.4	38.8	45.2	52.9	63.8	96.4	109.6	119.4
Adjusted PE (x)	20.8	21.6	18.6	15.9	13.2	8.7	7.7	7.0
P/B (x)	3.4	3.0	2.6	2.3	2.0	1.6	1.4	1.2
EV/EBITDA (x)	12.8	10.1	9.1	8.0	7.7	5.5	4.4	3.5
RoE	16%	14%	15%	15%	15%	19%	18%	17%
RoCE	13%	15%	15%	16%	15%	19%	22%	21%
RoIC	12%	13%	13%	15%	18%	20%	18%	20%
Net Debt:Equity (x)	0.3	0.1	0.1	0.0	0.2	0.1	-0.0	-0.2
Dividend Yield	1%	1%	1%	1%	1%	2%	2%	4%

Source: Company, Emkay Research

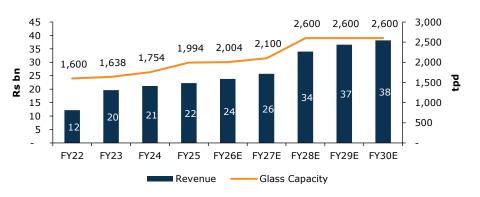
We estimate that AGI Greenpac Ltd (AGI) would record CAGR of 17% in standalone revenue, of 20% in EBITDA, and of 29% in APAT during FY25-28E. It would log 8-9% CAGR in revenue and 11-12% CAGR in EBITDA during FY26E-27E, supported by higher volume from capacity debottlenecking (50tpd capacity addition in CG and 46tpd capacity addition in specialty glass, in FY27) and better utilization, while specialty glass ramp-up and general optimization, coupled with a benign raw material and energy cost environment, would help expand EBITDA margin to 25.1%/25.7% in FY26E/27E from 24.3% in FY25.

Exhibit 2: AGI's growth profile

Particulars	FY23	FY24	FY25	FY26E	FY27E	FY28E	FY29E	FY30E	FY22-25 CAGR	FY25-28E CAGR	FY25-30E CAGR
Revenue growth	60%	6%	5%	8%	9%	38%	17%	6%	21%	17%	15%
EBITDA growth	75%	22%	9%	11%	12%	40%	15%	8%	33%	20%	16%
APAT growth	35%	-4%	16%	17%	20%	51%	14%	9%	15%	29%	21%

Source: Company, Emkay Research

Exhibit 3: Capacity addition to support revenue growth

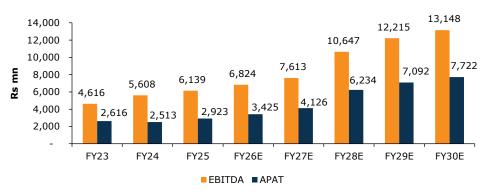


Source: Company, Emkay Research

The new container glass capacity coming up in Madhya Pradesh would be commissioned by FY27-end which should lead to a YoY jump of 38% in revenue, 40% in EBITDA, and 51% in PAT in FY28E, assuming 75% average utilization of new capacity for the full year. Our explicit

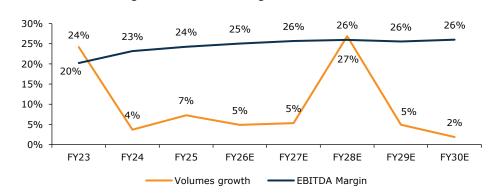
period forecasts do not cover the aluminium beverage-can upside, which we have built in from FY30-31E, though it is included in the DCF-based valuation.

Exhibit 4: AGI's EBITDA and APAT profile



Source: Company, Emkay Research

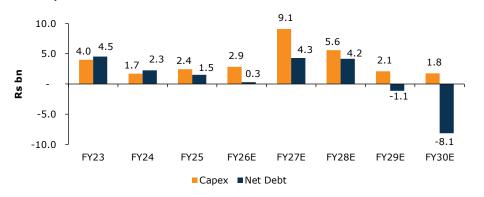
Exhibit 5: AGI's volume growth and EBITDA margin



Source: Company, Emkay Research; Note: Volume growth is in tons wherein FY29-30E growth is impacted by aluminium cans, but EBITDA/t of same is much higher

AGI's return ratios would improve, from 15% in FY25 to 19% by FY28E, while RoIC is set to improve from 13% to 20%. We build in cumulative capex of Rs18bn in the next 3 years, to be spent on 25% container glass capacity (CG) expansion in Gwalior (Rs7bn for 500tpd capacity) and a new aluminium can unit in Uttar Pradesh (Rs10bn for capacities of 950mn+650mn cans annually). The 96tpd debottlenecking-based capacity addition by FY27 announced recently would entail Rs470mn capex. During this period, net cumulative OCF should be Rs17bn, with FY28E likely to see positive FCF generation with 2% yield.

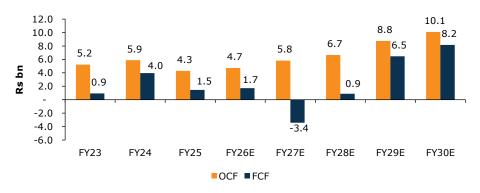
Exhibit 6: Capex and net debt outlook



Source: Company, Emkay Research

This report is intended for Team White Marque Solutions(team.emkay@whitemarquesolutior

Exhibit 7: OCF to improve, while elevated capex turns FCF negative only in FY27E



Source: Company, Emkay Research

Standalone net debt is expected to increase from Rs1.5bn as of FY25-end to a peak of Rs4.3bn as of FY27E-end, albeit decline thereafter. Net debt-to-equity would increase from <0.1x in FY25 to the 0.2x peak level in FY27E. We assume net working capital days at 55 versus 47 in FY25.

Valuation attractive at under 9x FY28E EPS

We value AGI using DCF methodology and arrive at Sep-26E TP of Rs1,520, which provides 81% upside on the CMP. We build in a 10-year explicit forecast period, from FY26E to FY35E, and assign 10.5% WACC and 4% terminal growth. The ongoing capex cycle should support earnings and business growth for the next 6-8 years.

Exhibit 8: DCF-based valuation (Sep-26E)

DCF assumptions		Sep-27E	(Rs mn)
Risk Free Rate	6.5%	NPV Of FCF	33,763
Risk Premium	5.5%	Terminal Value	148,560
Beta	1.1	PV Of TV	66,903
Cost Of Equity	12.6%	Total Value	100,666
Cost Of Debt	8.5%	Less: Adjusted Net Debt (Y/E)	2,303
Post Tax Cost Of Debt	6.4%	Equity Value	98,363
Average Debt:Equity Ratio	50%	No Of Shares O/S (mn)	65
WACC	10.5%	Target Price (Rs)	1,520
Terminal Growth Rate	4%		

Source: Company, Emkay Research

The stock is trading at an attractive PER of 8.7x FY28E standalone EPS, given the 29% AEPS CAGR to Rs96.4 by FY28E. The cycle remains conducive with benign raw material and energy costs, while the CG outlook is stable, and new capacities and diversification strategies would support the longer-term growth. Our TP implies a target multiple of 19x Sep-27E annualized EPS. However, acceleration in growth, especially from FY28 onward, could lead to a material rerating in the multiples and further drive stock value. We initiate coverage on AGI Greenpac with BUY.

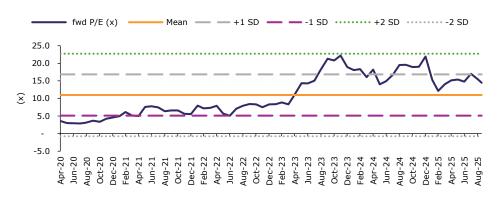
Exhibit 9: PER-based valuation (Sep-27E EPS)

	FY23	FY24	FY25	FY26E	FY27E	FY28E
AGI's adjusted standalone EPS (Rs)	40.4	38.8	45.2	52.9	63.8	96.4
Target multiple (x)						19.0
DCF-based target price (Rs)						1,520

Source: Company, Emkay Research

This report is intended for Team White Marque Solutions(team.emkay@whitemarquesolutior

Exhibit 10: AGI's 1-year forward P/E band



Source: Company, Bloomberg, Emkay Research

Exhibit 11: Relative valuation

C		P/E (x)			P/B (x)		EV/	EBITDA (x)		RoE	
Company	FY26	FY27	FY28	FY26	FY27	FY28	FY26	FY27	FY28	FY26	FY27	FY28
Indian												
AGI Greenpac	16.4	13.6	9.0	2.3	2.0	1.7	8.3	8.0	5.7	14.8%	14.9%	18.7%
Mold-Tek Packaging	34.1	25.6	20.7	3.9	3.5	3.1	16.4	13.5	11.6	11.9%	14.2%	15.4%
EPL	16.7	14.2	12.6	2.7	2.5	2.2	8.0	7.2	6.6	17.1%	18.3%	18.7%
TCPL Packaging	19.9	15.7	14.8	4.1	3.3	2.9	11.0	9.3	8.5	22.1%	23.6%	21.0%
Global		P/E (x)			P/B (x)		EV/I	EBITDA (x)		RoE	
Global	CY25	CY26	CY27	CY25	CY26	CY27	CY25	CY26	CY27	CY25	CY26	CY27
Verallia	12.6	9.9	8.6	2.7	2.5	2.3	6.3	5.7	5.3	22.0%	26.9%	28.3%
Vidrala SA	13.0	12.4	11.8	2.0	1.8	1.6	7.4	7.2	6.9	16.6%	15.5%	14.7%
Vetropack Holdings AG	13.5	8.9	8.4	0.6	0.6	0.6	5.1	4.4	4.0	4.6%	6.4%	13.4%
Gerresheimer AG*		10.2	8.6	1.0	0.9		7.8			5.5%	7.6%	9.0%

Source: Bloomberg, Emkay Research; *Note: Gerresheimer AG's reporting cycle is from 1-Dec to 30-Nov

his report is intended for Team White Marque Solutions(team.emkay@whitemarquesolution'

Key Investment Thesis

Proven track record navigating challenging cycles; glass outlook healthy

Market leader in glass with integrated packaging solution for user industries

AGI Greenpac is part of the Somany Impressa Group and was formed with the acquisition of Associated Glass Industries (AGI) by erstwhile Hindustan Sanitaryware & Industries (HSIL). AGI had a container glass plant in Sanathnagar in Hyderabad. Over time, the glass packaging business grew, on the back of expansions of the Sanathnagar facility and a new modern factory in Bhongir (also near Hyderabad) in FY10, which also expanded further. Further, a specialty glass unit was established in FY23 at Bhongir. It also has a state-of-the-art R&D center. Apart from glass, HSIL also acquired Garden Polymers, a PET bottle and products company in CY13, with plants in Karnataka, Uttarakhand, and Telenagana, as the rigid plastics space saw rapid growth post-CY10. It also established a security caps and closure manufacturing unit in Sangareddy, Telengana, thereby becoming an integrated packaging provider to the AlcoBev, F&B, and pharma industries – its key customer segments. Currently, it has a container glass capacity of 1,840 tonne per day (tpd), specialty glass capacity of 154tpd, security caps and closure capacity of 1.15bnpa, and PET capacity of 11.9ktpa, with 7 plants across India. AGI is the market leader in container glass with >20% share.

Exhibit 12: AGI's manufacturing footprint

Segment	Current capacity	FY30-end capacity	Capacity addition details
Container glass	1,840-tpd	2400-tpd	500tpd greenfield expansion and 50tpd through debottlenecking
Specialty glass	154-tpd	200-tpd	46tpd through de-bottlenecking
Security caps and closures	1,154mnpa pieces (1 plant in Sangareddy, Telangana)	1,154mnpa pieces	-
PET bottles and products	11.89ktpa (Dharwad: 6.3ktpa; Selaqui: 3.1ktpa; Sangareddy: 2.5ktpa)	11.89ktpa	-
Aluminium beverage cans	-	1,600mn cans p.a	New 950+650mn cans p.a plant in Uttar Pradesh

Source: Company, Emkay Research

The company's plans include 30% expansion of glass capacity and diversification into aluminium beverage-can making, which would make it a more integrated packaging solution provider. The Group has taken transformative restructuring steps to focus on specific businesses.

Exhibit 13: AGI's glass capacity build-up history

Year	Capacity (tpd)	Remarks
1981	180	Hyderabad (Sanathnagar); 1 furnace, acquired from Associated Glass Industries and upgraded
2000	450	Second furnace in Sanathnagar added
2009	1,075	New plant in Bhongir with third furnace for the company; Rs2.8bn capex; Sanathnagar further expanded
2012	1,600	Fourth furnace in Bhongir was added for Rs3.5bn, with some debottlenecking also in existing capacities
2022	1,754	Specialty glass furnace started in Bhongir for Rs2.7bn capex
2025	2,000	Debottlenecking-led capacity expansion of ~15% in container glass and 3% in specialty glass for Rs2.3bn capex

Source: Company, Emkay Research

Indian container glass industry – A competitive and fragmented space; AGI has navigated it well despite tough challenges

The container glass (CG) sector in India has low penetration at ~2kg per capita versus 8-9kg for countries like China and Brazil, and >30kg for advanced economies like USA. Besides this, there are natural tailwinds like preference for sustainable and healthier packaging for the broader F&B segment, appeal of glass as premiumware, the unorganized to organized shift, and usage of plastic (which is being coordinated by authorities with emphasis on recycling), where meeting the recycling regulations can be difficult due to supply-chain challenges.

However, the CG market is competitive and fragmented with multiple players, and subject to supply cycles and periodic consumption pattern volatility, including regulatory actions on the AlcoBev (alcoholic beverage) sector in particular. Per our checks and market intelligence reports like Mordor, the running capacity currently is 11,000tpd (CG: 9,000tpd; specialty glass: 2,000tpd), of which AGI boasts of ~2,000tpd and is hence the leader. Other top-4 CG players are Hindusthan National Glass Industries (HNGIL), Can-Pack India, Sunrise Glass, and Haldyn Glass, with the top-5 capturing 50-55% of the market. PGP Glass is also a major player, although it focuses only on specialty glass, with 60% being sold outside the country. HNGIL is the erstwhile market leader, though it has been left bankrupt with only 4 of the 13 furnaces still running (peak capacity of 4,300tpd) and with 1,000-1,100tpd effective capacity. The Firozabad unorganized cluster in western UP is also a major player as a group at 3,000tpd of capacity, although it has shrunk, as marquee consumer companies aim for reputed players with premium products. Combined capacity of other organized players is >1,000tpd, with individual capacities ranging between 100-200tpd.

Exhibit 14: Indian CG supply scenario

tpd	Running capacity	Container Glass	Specialty Glass	Details
Total	11,000	9,000	2,000	Per Mordor, the container glass market is 11,700tpd, as of CY25
AGI	2,000	1,850	150	3 plants and 5 furnaces in the Hyderabad area
PGP	1,420	0	1,420	2 plants in India in South Gujarat with 12 furnaces, albeit mostly focused on specialty glass, ${\sim}60\%$ exported
HNGIL	1,100	1,100		7 plants across India with 13 furnaces, though only 4 furnaces in 4 plants are operational
Can-Pack	800	800		1 plant in Aurangabad catering to the Maharashtra AlcoBev industry
Sunrise	650	650		3 furnaces in Surat area
Haldyn	450	450		2 furnaces in Vadodara
SNJ India	230	230		1 furnace in Chennai, group into the distillery business
Emerge	210	210		1 furnace in Behror, Rajasthan
Vitrum	180	180		1 plant (furnace) in Vikhroli, Mumbai
Pragati	170	170		1 plant in the Surat area
Firozabad Cluster	3,000	3,000		Located in Western UP near Agra (TTZ), it is an unorganized market with 15-20 plants/furnaces
Imports	300		300	USD66mn of imports in CY24 from US, China, Sri Lanka, etc, though mostly high-end glass
Others	490	360	130	

Source: Company, Industry, Emkay Research

The actual average CG utilization is likely to be $\sim 90\%$, with $\sim 8,000$ tpd of volumes being sold at an average price of $\sim Rs30,000$ /ton currently. In the last 15 years, the Indian CG market is estimated to have seen 5% CAGR in volume terms and 11-12% CAGR in value terms. The main user industries of CG are AlcoBev, comprising liquor and beer ($\sim 60\%$ share); F&B (20% share)—which includes soft drinks, jams, sauces, pickles, and water; and pharmaceuticals ($\sim 15\%$)—which include bottles, vials, etc. Specialty glass is, in turn, used in perfumery, cosmetics (nail polish) and premium spirits (AlcoBev). In the last 15 years, the AlcoBev/F&B/pharma sectors saw CAGR of 8-9%/10%/10% in value terms; however, growth in the beer bottle segment is partially affected by the reuse of bottles, which are usually reused 8-9 times.

his report is intended for Team White Marque Solutions(team.emkay@whitemarquesolution'

Exhibit 15: User industry share of CG - Industry

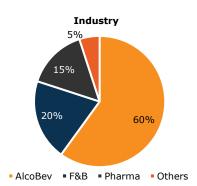
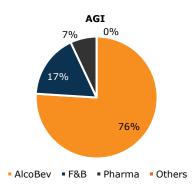


Exhibit 16: User industry share of CG - AGI



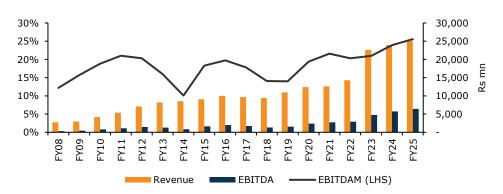
Source: Company, Industry, Emkay Research

Source: Company, Industry, Emkay Research

In the last 15 years, the CG industry has witnessed multiple challenges, and the CY12-15 period saw a perfect storm due to overcapacity from previous capex made worse by subdued demand and bottle reuse, stiff competition from PET/metals/tetra-packs, and sharp rise in input (soda ash, sand) and fuel (hydrocarbon) costs. There were also specific events like Court-mandated bans on alcohol and national demonetization. HNGIL, which was the erstwhile leader, fell into a debt trap amid heavy capex during CY11-12 and lower utilization. Subsequently in CY21, a lender initiated proceedings against HNGIL before the NCLT, under the Insolvency and Bankruptcy Code (IBC). The market started improving FY20 onward on the back of reduced costs, demand revival, and HNGIL capacities going offline.

AGI, with 17% market share in FY10, was able to grow over the years, with current share at >20%, and is now the market leader. The company recorded 5.2% volume CAGR in the packaging business during this period, outperforming the industry. However, it saw weakness during FY13-14 as well as in FY17-19 owing to the muted demand amid demonetization and Supreme Court's highway alcohol sale ban, besides currency volatility and rise in fuel costs from higher oil prices. While EBITDA margin witnessed fluctuations, it saw structural improvement, from 19-20% to 25-26%.

Exhibit 17: AGI's revenue and EBITDA – Historical trend



Source: Company, Industry, Emkay Research

AGI, with its innovative products and processes, cost efficiencies, and disciplined capital allocation, was able to clock 13% revenue/15% EBITDA CAGR. It introduced innovative products and processes with robust project management and O&M. Key steps taken by the company over the years to support profitability, other than capacity expansion and debottlenecking, are:

- Entering long-term contracts with raw material suppliers (up to 50% share), and acquisition of sand mines (the company has one in Telengana itself).
- AGI is the only glass company with a multi-fuel approach, with plants now able to use natural gas, furnace oil (FO), coal gas, and LPG; thereby, it is able to pursue the cheapest source. Over the years, the company has lowered its energy intensity through periodic upgradation and maintenance of furnace.

- Enhanced operational efficiency through improving production efficiency in plants (lower quality rejections of bottles), higher plant utilization, technology improvement (end-fired furnaces), and automation, besides using state-of-the-art machines to cater to the needs of high-value customers. It also expanded its offerings to printing lines, moulds, and other services.
- Waste management and recycling: High cullet use reduces raw-material requirement and lowers energy usage by 2-3% for every 10% in the mix. AGL's current cullet share is >40%, which it aims to sustainably improve to 50% within the next few years. In Europe, cullet share is as high as 80%.
- Launch of new product lines like colored and light-weight glass containers (using Narrow Neck Press and Blow or NNPB technology), and small and large bottles that are more value-accretive. AGI has the capability to produce any colored bottle in small and large quantities, thereby ensuring a better margin. It has expanded into value-added products (customized and specialties) and has tapped export markets wrt VAP.

The company's project management capabilities have also been satisfactory. The Bhongir expansion took place within the planned timeline of 2 years. The Rs2.2bn FY21 announced capex for a specialty glass unit was also completed in FY23, although with actual capex of Rs2.7bn. Relining activities were also done efficiently, with not much impact on utilization. The company also had shut down one 300tpd furnace in Sanathnagar from FY14 to FY18, owing to weak demand conditions amid lower sales realizations.

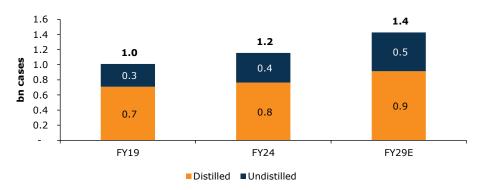
Key moats in the glass packaging industry are:

- Customer relationships built over decades of partnership.
- High lead time and switching cost to acquire customers, by new entrant.
- High capital-intensive business requiring one cycle before generating profitable results. For a new player, it may take 4 years to set up a CG plant vs 2-3 years for an established incumbent (2 years for AGI).
- Skill and expertise, along with a deep understanding of the packaging market. AGI, with its associated closure and PET businesses, provides integrated packaging services.

Medium-term outlook steady, with excess capacity unlikely; demand growth stable

The Indian CG market is expected to see \sim 5% CAGR during FY25-30E in volume terms and 8-9% in value terms. The broader packaging industry could grow 11-12%, though growth of the glass business should be a tad lower, due to competition from other rigid as well as non-rigid options. Among key user industries, AlcoBev should see 4.3% CAGR in volume terms and over 9.2% CAGR in value terms. Within this, distilled/undistilled spirits should grow 8.4%/12.6% in value terms and 3.7%/5.5% in volume terms. Premium and luxury spirits, for the packaging of which specialty glass is used, is expected to grow 16.7% and 11.5%, respectively.





This Source: Industry report, Technopak Analysis, Emkay Research is team emkay whitemarques olution

The F&B/pharma sectors are expected to see CAGR of 9-10%/8% during this period. The cosmetic sector should see 5-6% CAGR. Recycled PET is a threat to container glass demand,

with government setting a target of 30-60% during FY26-30, though there could be supply-chain challenges in implementing it effectively.

Exhibit 19: CG supply and market outlook

(tpd)	Current	FY30E	5Y CAGR
Effective sales volume	8,100	9,975	4.3%
Capacity	9,000	10,500	3.1%
Utilization	90%	95%	

Source: Company, Industry, Emkay Research

The demand-supply outlook seems stable, as capacity additions could be limited. AGI has 500tpd new capacity coming in FY28, while HNGIL revival could add \sim 1,000tpd in an optimistic scenario. Even if one furnace with 300tpd capacity is added every year by the remaining companies and average utilization sees some improvement, the growth in supply should be lower than the projected volume growth of 5% in CG demand. Further, the share of the Firozabad cluster is expected to decline as organized players increase availability, with marquee customers favoring organized players.

HNGIL's resolution plan approved, with INSCO unveiling the revival plan, though a sizable recovery seems difficult

HNGIL's CIRP (Corporate Insolvency Resolution Process), where AGI was also an aggressive bidder, was eventually approved for INSCO—an entity under the Madhvani-Turner Group of Uganda/East Africa. Besides the Rs21.7bn payment to creditors, INSCO has unveiled a Rs10bn revival plan for HNGIL, while Rs3.8bn of additional immediate payments would also need to be made. The Madhvani Group operates East and Central Africa's largest CG plant with 400tpd capacity in Tanzania which is being expanded to 700tpd. Madhvani Group is an experienced player in the CG space, with expertise in reviving sick units. However, the HNGIL revival plan is modest.

HNGIL's running capacity is currently 1,490tpd, though due to low operating rates, actual sales are expected at $\sim 1,100$ tpd from four furnaces—one each in Bahadurgarh, Naidupeta, Rishra, and Rishikesh, of the 13 in total. The revival plan aims to bring three more furnaces online, namely Bahadurgarh, Neemrana (being shifted to Bahadurgarh and commissioned there), and Puducherry. This could take 2-3 years at least and, if average utilization is also raised to 85%, 900-1,000tpd can be added at most.

AGI expanding CG capacity by 30% with a greenfield plant in Madhya Pradesh by Mar-27 end

AGI's core capex includes Rs7bn on a 500tpd CG facility in Gwalior, MP which should commission from the start of FY28 and serve the northern market while expanding its geographical presence. The ATO of this unit would be 0.8-0.9x, though likely to improve with debottlenecking, etc. Besides this, the company would carry out a Rs320mn debottlenecking in existing capacities (50tpd increase) too by FY26-end, which should provide automatic growth. Furnace relining scheduled in 2-3 years can also improve volume. We estimate core volume CAGR of 4-5% in the CG business during FY26-27E, while FY28E should see a 28% jump from this new capacity, assuming 75% capacity utilization is achieved in the new plant in the first year itself. We assume \sim 30% EBITDA margin from the CG segment in FY26-27, though there is room for improvement from efficiencies and optimization and FY28 should see it expand to 31%.

Specialty glass volumes and margins to pick up

AGI's Bhongir specialty glass unit was commissioned in Q4FY23, with 154tpd capacity. It operated at ~70% utilization on 154tpd capacity in FY25, though output was not fully commercial and EBITDA margins were in the lower double-digits due to product testing and long trials. However, specialty glass realization is almost 2x container glass realization, and EBITDA margin could rise by 3x current rate. Current utilization is already up, at 78%, and AGI has announced capacity increase to 200tpd by FY26-end from a Rs150mn debottlenecking. We expect this unit to achieve 77% utilization by FY28E and margins to improve to 25%; however, we have factored in margins of 35% for the long term. Specialty glass caters to the cosmetics and perfumery segments (nail polish, perfumes, foundation, etc), premium spirits, and pharma, with export markets also a key segment, wherein AGI

targets 14-15% share vs 7-8% currently (some CG being exported to EU, Canada, Africa, Asia, etc). In the long term, the margin of the specialty segment can offset the lower margin of the aluminium cans business.

Closure and PET businesses to grow on a low base

The security caps and closure business is also a natural extension of the bottles business, as customers are the same and there is good demand for counterfeit-resistant and tamper-proof caps. AGI embarked on the closure business with construction of a plant in Sangareddy commencing in FY16, and completing and commissioning it in Q4FY18 at capex of Rs1.12bn; this had initial capacity of 275mn caps (pieces) pa, which was scaled up to 700/912mn in FY19/20. This capacity comprised both large and small caps as against the estimated Indian market demand of ~4bn caps over FY19-20, primarily catering to the highly organized customer segment. By FY24/25, capacity was increased to 1.06/1.15bn. The company also developed a new laser printing machine for T-Cork and modified the existing laser printing machine to accommodate wood and plastic applications. It implemented new technologies like UTC laser marking and coding. The size of the Indian closures and cap business is potentially 80bn pieces currently, and is expected to see 5.1% CAGR during CY23-32, though demand for innovative patented products should lead to AGI capturing a good share in this market going ahead and ultimate potential for AGI is 6-7x of current sales volume. AGI also exports caps and closures to Africa.

The Sangareddy plant utilization has gradually improved to $\sim\!65\%$ as of FY25, while FY21-25 volume/revenue/EBITDA CAGR stands at 27%/26%/22%, respectively, with FY25 EBITDA margin at $\sim\!30\%$. We believe the double-digit growth momentum will continue. Competitors in this space include MNCs like Guala Closures, with headquarters in Italy; Guala appears to be the market leader, given its annual capacity of 25-30bn pieces in India. Guala India's EBITDA margin is 30-35% including royalties paid to the global parent; hence AGI's 30% margin in India seems sustainable.

On the back of rapid penetration of PET bottles from CY12 (at 20% CAGR), AGI (erstwhile HSIL) acquired Garden Polymers, which had a total capacity of 9,500tpa across two plants – in Dharwad, Karnataka and Selaqui, Uttarakhand. In FY18, their capacities were expanded and a new unit was set up in Sangareddy as well, while FY23 saw further expansion to the current capacity of 11,892ktpa. PET was a natural diversification, although current share in EBITDA is only 2% and average plant utilization in FY25 was \sim 60%. The Indian rigid-plastic market is 2-3mmtpa, of which the PET bottles market comprises of \sim 1.5mmtpa. The PET bottle segment is expected to see 4-5% volume CAGR during CY24-32. AGI remains a relatively small player in the market, where leaders like Manjushree command container capacities of \sim 0.15mmtpa. However, the company aims to grow the business, and we expect double-digit growth herein, on a low base.

Not much of a threat from imports

Per our channel checks, container glass is imported, though such imports are not significant, as freight cost dynamics make such imports sub-economical. Imports of specialty glass are still viable, though the market for this product is global in nature, with demand from advanced economies being particularly important for specialty glass manufacturers to cater. Specialty glass products are imported from USA, China, and Sri Lanka, among others.

This report is intended for Team White Marque Solutions (team emkay@whitemarquesolution

Exhibit 20: The customer base...

500+ Diversified Institutional Clients across Industries



Source: Company, Emkay Research

Exhibit 21: ...of AGI

Our Customers' Brands



Source: Company, Emkay Research

Input and fuel cost environment benign; margins likely to be steady

Key raw materials for the manufacture of glass including CG are sand (silica-quartz), soda ash, limestone, other minerals (magnesium, dolomite, feldspar, etc), and other chemicals. Cullet or recycled broken glass is also mixed and, being cheaper, lowers the blended RM cost and reduces the energy costs too, as its melting point is lower. For specialty glass, the grade of each item may need to be higher. Power and fuel (P&F), especially hydrocarbon-based, used to fire furnaces, are also a major cost element. We include P&F in our gross profit and GPM calculations, given that these are an integral part of the manufacturing process for the company. Among these, soda ash and fuel costs are volatile components and severe fluctuations can impact a glass player's margins materially, as seen in past cycles.

Glass pricing mechanism is a mix of long-term and bid-based short-term contracts

The cost changes in AGI's glass and other segments are largely passed-on; however, supply-demand dynamics and wide cost fluctuation can impact pricing power, especially during contract renewals. Long-term contracts based on customer relationships and co-innovation products have a tenure of 2-3 years, with the pass-through observed after a Quarter's lag (this forms 65-70% of AGI's mix), while short-term sales are based on bids by customers for a term of 3-12 months. Rates for short-term contracts are usually higher than those for long-term contract, though significant fluctuations in input costs may impact margins. A stable raw-material and fuel-cost environment is conducive for margins and profitability, as implied in our market analysis, given that pricing is likely to be stable with natural inflation.

Input-Output dynamics

For AGI's CG business, 1ton of glass requires 0.33/0.12ton of sand/soda ash, with cullet share of 0.42ton and of other minerals and chemicals being 0.28ton. According to this mix, energy consumption cost is ~5GJ. Soda ash and fuel, based on normalized prices, make up for 15-20% and 25% of total operating expenditure, including COGS; their pricing being volatile. Cullet cost as a whole is 10-15% of the total operating cost. For every 10% rise in soda ash/fuel cost, a CG player's EBITDA margin would reduce by 1.3/2.1% and vice versa, while for every 10% increase in cullet share in the batch, the EBITDA margin would improve by 0.9% ceteris paribus. In case of closures and PET, the main RM input is PE-PP and PET resins-PE-PP, respectively, comprising 50-55% of revenue.

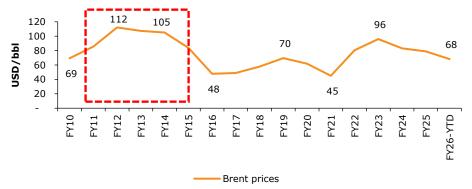
Input and fuel cost environment benign; margins likely to be steady

Historically, price spikes have affected margins of CG players when pass-through was not effective. However, prices of both soda ash and energy (FO, gas, LPG, coal gas) are expected to remain benign in the medium term due to the over-supply scenario in these markets out of the coording to our specialty chemicals team, operating rates have peaked, based on current global soda-ash demand of ~64mmt and supply of ~80mmt. Due to slower demand growth in Europe, Turkey dumping material capacities globally has been a cause of worry. We expect

demand/supply at ~82mmt/88mmt by FY30E which is likely to result in mismatch of ~4mmt, hence keeping prices benign.

Oil prices have also been tracking within the USD65-70/bbl range; we have built in USD70/bbl Brent for the medium term vs the last 5Y average of USD77/bbl. Despite a weaker currency (Rs/USD at >88 currently), the lower rupee-denominated oil cost is stable. Spot LNG price outlook for the medium term is bearish, with sizable global liquefaction capacities expected to come onstream. In any case, AGI's fuel flexibility allows it to use the cheapest option, and we expect energy cost not to be a margin issue for the next couple of years at least.

Exhibit 22: Crude oil price trend



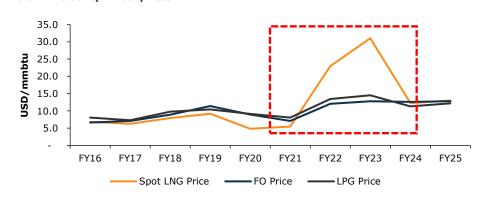
Source: Industry, Bloomberg, Emkay Research

Exhibit 23: Soda-ash prices



Source: CEIC, Industry, Commerce Ministry, Emkay Research

Exhibit 24: Volatility in fuel prices

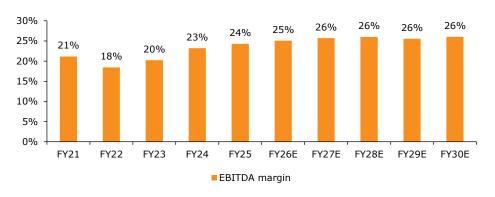


Source: Industry, Bloomberg, Emkay Research

The management expects core EBITDA margin to improve owing to economies of scale oution optimization, product mix and cost efficiencies; specialty glass and closure segments should also ramp up. Margins should find support from RM and energy costs being largely stable, as

lower international prices would offset a weak rupee. We hence expect EBITDA margin to rise, from 24% in FY25 to >26% in FY28E.

Exhibit 25: EBITDA margin outlook



Source: Company, Emkay Research

Targeted capex plans to meet growth as well as diversification objectives

Apart from the 500tpd Rs7bn CG plant in MP, AGI's planned new capex includes a major Rs10bn initiative to start diversifying into aluminium beverage cans from CY28 onward, given the adjacencies of this business wrt to user industries, similar to closures. The next 3-4-year capex cycle would take care of growth for 6-8 years.

Aluminium beverage-can business to further diversify and make AGI a more integrated packaging provider

The aluminium beverage-can business can take care of substitute risk in key sectors like beer, spirits, soft drinks, juices, soda, sparkling water, and health and sports drinks. As the customer profile of this business is similar to that of the glass business, AGI is in a good position to forge relationships and start business with its existing marquee AlcoBev and F&B customers. The can business would also enhance AGI's position as an integrated packaging solutions provider to its user industries.

Exhibit 26: AGI's capex plans

Plants	Capex	Capacity	Completion
	(Rs mn)		
Gwalior, Madhya Pradesh - Container Glass	7,000	500tpd	Mar-27
Uttar Pradesh - Aluminium Beverage Can Phase 1	8,500	950mnpa cans p.a	Dec-27
Uttar Pradesh - Aluminium Beverage Can Phase 2	1,500	650mnpa cans p.a	Mar-30

Source: Company, Emkay Research

AGI aims to incur Rs8.5bn capex to start Phase 1 of an aluminium can facility in Uttar Pradesh by CY27-end, with annual capacity of 950 cans, while another Rs1.5bn would be spent on improving this capacity to 1.6bnpa by FY30-end. ATO in this business is 1.2x; hence, Rs10bn of capex would yield Rs12bn in revenue annually, at steady state. The management's EBITDA margin guidance stands at 17-18%, while working capital requirement should be lower than glass which is at 25% of capex. The Indian aluminium can market is currently a duopoly, with American-Polish player Can-Pack (also in CG) and American Ball Corporation being the main players; also, there is a small portion of some imports as well. Per our checks, Can-Pack supplies 2.0bn cans pa on total Indian demand of 4.0bn, while Ball's output is 1.5bn, with others/imports at 0.5bn. With the market estimated to see 15% CAGR by CY30 (same growth rate post Covid too), annual demand would escalate to 8bn cans. Given capacity expansion at these two players expected at 30-60% and AGI's 1.6bn capacity (1.4bn volumes), there would still be room for others to increase their share. India's per-capita aluminium can consumption is 1 versus 70 for Vietnam, and 1 versus 100 for Brazil, per industry checks.

bn cans	Now	CY30E
Total	4.0	8.0
Can-Pack	2.0	3.2
Ball Corp	1.5	2.0
AGI		1.4
Others/ Imports	0.5	1.5

Source: Industry, Emkay Research

Can-Pack is a global container giant with operations in 16 countries; it covers various verticals, including CG and closures, though beverage cans form bulk of its business (90% share). Ball Corporation has presence in 15 countries and aluminium cans seem to be its mainstay. Both Can-Pack and Ball Corporation have an EBITDA margin of \sim 15% across global operations; hence, AGI's guidance of 17-18% EBITDA margin for its India aluminium business is achievable. Gross margin typically stands at 35-36%.

Aluminium cans require coils-sheets, which can be sourced domestically from manufacturers like Novelis as well as from outside the country, from countries such as USA, South Korea, and Thailand.

his report is intended for Team White Marque Solutions(team.emkay@whitemarquesolution'

Industry Overview

Premiumization and shift toward sustainability fuel container-glass demand

The global container glass market is witnessing steady expansion, fueled by the rising preference for sustainable and recyclable packaging solutions across food, beverage, pharmaceutical, and personal care industries. Valued at USD78.6bn in CY25, the market is expected to reach ~USD120.9bn by CY35, at CAGR of ~4.5-5%. Such growth is largely driven by heightened environmental awareness among consumers and regulatory pressure on single-use plastics. Glass continues to stand out as a preferred packaging material due to its chemical inertness, premium look and feel, and superior ability to preserve flavor, aroma, and active ingredients without leaching harmful substances.

Exhibit 28: The global container glass market is poised for 4.4% CAGR over the next decade

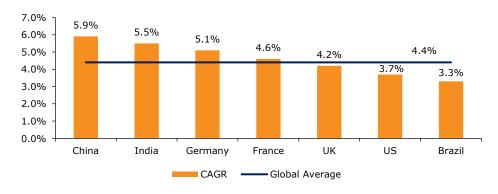


Source: Company, Industry, Emkay Research

Technological advancements in lightweight glass production and energy-efficient manufacturing are further propelling market growth. Several beverage producers are increasingly adopting lightweight bottles, which require fewer raw materials and less energy; this is beneficial for the environment and leads to cost efficiency by lowering production and transportation expenses. The integration of AI and automation in manufacturing has also enhanced throughput and minimized rejection rates, thus supporting margin expansion.

At the same time, rising demand for premium packaging, especially in AlcoBev, cosmetics, and the F&B sector has accelerated the adoption of glass containers. Growing health consciousness and a preference for non-reactive packaging continue to reinforce glass as a trusted material. Glass remains highly valued for its inertness, clarity, and recyclability.

Exhibit 29: China and India set to drive container glass market growth



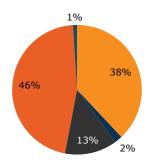
Source: FMI, Industry, Emkay Research

Globally, China and India dominate the container glass market. China's market is expected to see CAGR of 5.9%, driven by rising beverage production and strong demand for recyclable packaging. India, expected to see ~5% volume CAGR in CG, is benefitting from powerful demographic tailwinds, including a growing population, expanding middle class, and rising disposable incomes, which are fueling demand for packaged goods, premium beverages, and branded products. While China continues to be one of the largest producers and exporters of

glass containers, India has scaled up capacity, and improving utilization and efficiency are expected to position it as a larger exporter catering to global demand.

In contrast, developed markets are likely to witness slower growth than the global average. High market penetration, declining alcohol consumption, and regulatory measures encouraging reuse and recycling are expected to temper demand growth in these regions.

Exhibit 30: End-user mix of the global container glass market

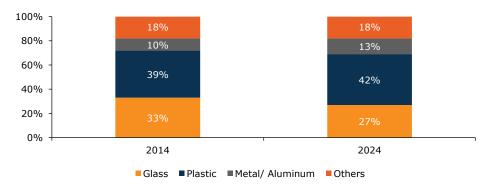


■ Food Products ■ Pharmaceuticals ■ Non-alcoholic beverage ■ Alcoholic beverage ■ Others

Source: Industry, Emkay Research

Globally, the glass container market is primarily driven by alcoholic and non-alcoholic beverages, which account for $\sim 59\%$ of total glass usage, followed by food products at 38% and pharmaceuticals at about 2%. However, glass containers face inherent challenges such as higher weight, risk of breakage, and volumetric inefficiencies in transportation. The growing demand for sustainable packaging has accelerated the adoption of lightweight aluminium, bio-based plastics, and paperboard/pouch formats, which are gradually encroaching on the addressable market for glass packaging, especially in the beverage segment. The non-alcoholic beverage segment has increasingly shifted toward alternative packaging materials, particularly plastics.

Exhibit 31: Growing adoption of plastic and other materials encroaches on glass packaging in beverages



Source: Industry, Emkay Research

Γhis report is intended for Team White Marque Solutions (team.emkay@whitemarquesolutioι

Indian Container Glass industry – From a fragmented past to a stable, growth-oriented future

India's glass industry is quite old and well-established, having long operated as a cottage industry before transitioning into a modern, technology-driven sector. Over time, the industry has evolved from rudimentary mouth-blown and hand-crafted processes to adopting advanced machinery and automation. However, India's per-capita container glass consumption stands at only 2kg, well below $\sim 8-9$ kg/person average in other developing nations like China, Brazil, and Malaysia, and > 30kg for developed nations, thereby highlighting substantial growth potential. The Indian container glass market is projected to grow volumes at $\sim 5\%$ CAGR, to increase from $\sim 8,800$ tpd in FY25 to $\sim 11,250$ tdp by FY30E, thereby outpacing global averages. Revenue growth is expected to be stronger, at 8-9% CAGR, supported by better realizations and an increasing share of specialty glass in the product mix.

50.0 45.0 40.0 31.9 30.0 20.0 11.6 8.8 7.9 8.1 10.0 2.0 0.0 India US UK China Malaysia Brazil Japan ■Per capita consumption

Exhibit 32: India lags in per-capita consumption of container glass

Source: Industry, Emkay Research

Growth in India's container glass market will be underpinned by strong demographic tailwinds, with a rising population, an expanding middle class, and increasing disposable income driving demand for packaged goods as well as premium and branded products. Increasing per-capita consumption of alcoholic beverages, coupled with rapid growth in FMCG and rising pharmaceutical exports, is set to further strengthen demand. Currently, the AlcoBev segment contributes $\sim\!60\%$ of container glass revenues, followed by food & beverages at $\sim\!20\%$ and pharmaceuticals at 15%.

In addition, regulatory shifts are creating new opportunities. The Plastic Waste Management Amendment Rules, effective Jul-25, mandate Producers, Importers, and Brand Owners (PIBOs) to print barcodes or QR codes on plastic packaging for traceability, significantly raising compliance costs and exposing companies to penalties for non-compliance. This regulatory burden could accelerate the shift toward infinitely recyclable container glass as a more sustainable and cost-efficient alternative.

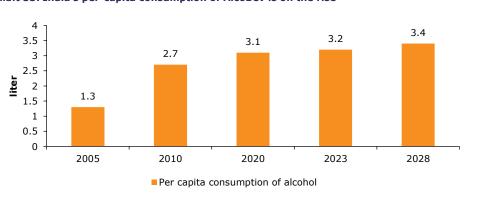
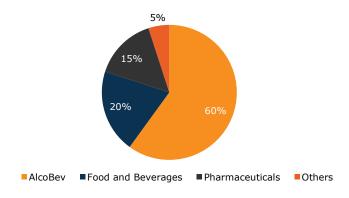


Exhibit 33: India's per-capita consumption of AlcoBev is on the rise

Thi Source: Company, Technopak, Emkay Research rque Solutions (team.emkay@whitemarquesolution

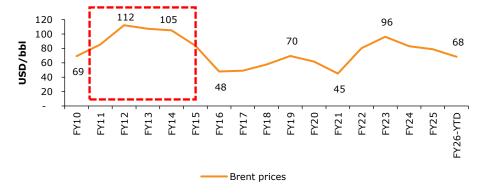
Exhibit 34: End-user mix of the Indian container glass market



Source: Company, Emkay Research

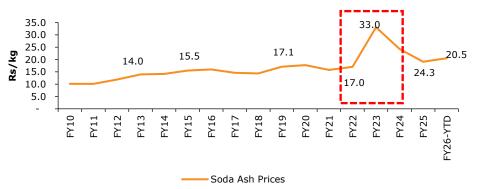
The Indian container glass market has historically experienced cycles of volatility, shaped by factors such as regulatory measures (including demonetisation and liquor sale restrictions near highways), industry overcapacity from aggressive expansions, and sharp spikes in input and fuel costs. These pressures ultimately led to the bankruptcy of HNGIL, the former market leader that once held over 60% market share. However, going ahead, the outlook is more stable, with key end-use industries such as AlcoBev, food & beverages, and pharmaceuticals witnessing healthy growth, and the input cost environment remaining favourable, supported by stable soda ash and energy prices, the sector is expected to chart a path of steady and sustainable expansion.

Exhibit 35: Spike in crude oil prices weighs on container glass margins



Source: Industry, Bloomberg, Emkay Research

Exhibit 36: Spike in soda-ash prices erodes margins



Source: CEIC, Industry, Emkay Research

The Indian glass industry has traditionally been fragmented, with the unorganized sector Thiaccounting for 40-45% of the market comprising numerous micro and small+scale players olution. The organized space, by contrast, is dominated by a few prominent manufacturers. The introduction of GST has gradually shifted some share from unorganized to organized players, though the unorganized segment remains significant.

Firozabad, often referred to as India's 'Glass City', is the heart of the unorganized glass industry. Home to hundreds of small furnaces and workshops producing liquor bottles, bangles, and decorative glassware, the cluster contributes ~25-30% of India's total capacity and represents a sizable portion of the unorganized glass output. However, it has reduced in size over the years, as marquee consumer companies prefer reputable players offering premium products and ESG compliance, while the sector grappled with inconsistent rawmaterial supply, and increasing competitive pressure from organized players. In addition, outdated technologies and growing environmental compliance requirements have placed further strain on small units.

Indian AlcoBev market: Demographic tailwinds, rising consumption, and premiumization driving glass demand.

While western nations such as the US, UK, and Germany, along with Asian majors like Japan and China, are witnessing a gradual decline in alcohol consumption, India is emerging as a market of growing potential. This is underpinned by its relatively low per-capita consumption, favorable demographic trends, and an expanding drinking-age population. India's per-capita pure alcohol consumption, though still below the global average of ~5 liters, has risen steadily from 1.3 liters in 2005 to 3.2 liters in 2023. Coupled with the country's vast population base, this steady growth positions India as one of the largest spirits markets globally (in volume terms), despite its relatively low consumption per head.

12.0 10.9 9.9 10.0 9.2 10.0 8.0 5.0 6.0 3.2

Exhibit 37: India records the lowest per-capita consumption of AlcoBev (as of CY23)

Source: Technopak, Industry, Emkay Research

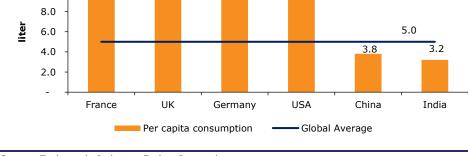


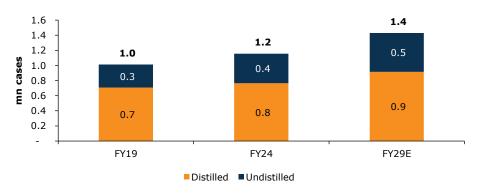
Exhibit 38: India's spirits market is among the largest, despite low per-capita consumption, driven by population scale



Source: Industry, Emkay Research

The Indian AlcoBev market has witnessed steady value CAGR 8% over FY19-24. In terms of volume, the market saw 2.7% CAGR, increasing from ~1bn cases in FY19 to 1.2bn cases in FY24. This growth trajectory is expected to accelerate, with the market projected to see 4.3% CAGR, reaching ~1.4bn cases by FY29. In value terms, the industry is expected to grow faster, at ~9-10% CAGR, supported by the rising share of premium products. The premium and luxury spirits markets are expected to see 16.7% and 11.5% value CAGR, respectively, through to CY29, with the 'bottled in India' segment expected to see 10% CAGR from CY24 to CY29. This growth will directly fuel the demand for glass bottles, with premiumization further driving uptake of specialty glass that enhances branding, shelf appeal, and consumer experience.

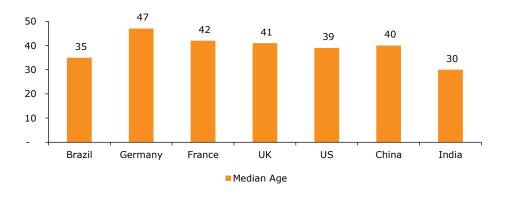
Exhibit 39: Rising volumes in the Indian AlcoBev market



Source: Industry report, Technopak Analysis, Emkay Research

The industry's expansion is underpinned by multiple structural drivers, such as rising legal drinking age population, increasing disposable spendings, evolving social acceptance, increasing female workforce participation, urbanization, and innovation in product formats such as ready-to-drink (RTD). India has the lowest median alcohol drinking age and adds nearly 13-15mn new drinking-age adults every year, with alcohol adoption at \sim 20%. This growing base, led by digitally native, aspirational millennials and Gen Z consumers, is shaping demand through a preference for quality over quantity, accelerating the premium and luxury AlcoBev segment.

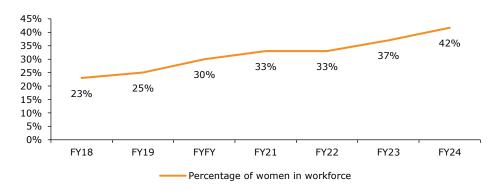
Exhibit 40: India has the youngest median-age of drinkers



Source: World Bank, Industry, Emkay Research

Rising female workforce participation and greater social acceptance of alcohol consumption are reshaping spending habits, with convenience and premium experiences becoming central to purchase behavior.

Exhibit 41: Rising female workforce participation in India



Source: Industry, Emkay Research

The distilled segment has historically dominated the Indian AlcoBev industry, and accounted ution for 66% of total AlcoBev consumption in FY24. However, in recent years, its growth has been relatively moderate, seeing 1.5% CAGR during FY19-24. Over the next 5 years, it is anticipated that the segment will see an improved CAGR of 3.7%. Conversely, the undistilled

segment (including beer and wine) has outpaced the growth of distilled beverages, recording a 5.3% CAGR over FY19-24. This trend is expected to continue, with the undistilled segment projected to see 5.5% CAGR through FY29. The shift is largely demographics-driven, with India housing the world's youngest drinking-age population that prefers lower-alcohol-content beverages (ABV). The rise of craft breweries, wider availability of international beer brands, and increasing accessibility of formats such as cans, draught, and smaller SKUs have further added to the appeal of beer. Of the total ~1.2bn cases sold in FY24, ~3.9-4bn cases were undistilled, ~4-4.5bn cases were spirits, with the remainder being country liquor.

Such demand trends are expected to support sustained demand for glass bottles; however, the pace of growth in glass bottle demand will lag the overall AlcoBev volume growth due to the widespread reuse of beer bottles. On average, a beer bottle can be reused around eight to nine times before reaching the end of its lifecycle, which significantly reduces the need for new production. Assuming a 15-20% non-reuse gap (ie bottles lost, damaged, or otherwise not returned), the demand for new bottles typically translates to only about one-fourth of the underlying beer volume growth.

Indian Food and Beverages market: Urbanization, convenience, and digitalization driving glass packaging demand

The F&B sector is among the fastest-growing industries in India, projected to see a ~9-10% CAGR between CY24 and CY30. Parallelly, the packaged food market has seen significant momentum and is expected to see 6.5% CAGR from CY25 to CY33. This growth is driven by shifting consumer lifestyles, rapid urbanization, and rising demand for convenience, besides higher disposable incomes, evolving dietary preferences, and the increase in dual-income households, all of which are steering consumers toward ready-to-eat and easy-to-cook products. Additionally, the number of households in India is rising faster than the population, reflecting greater nuclearization, which further fuels demand for packaged foods.

6 Person per household 4.9 4.9 4 7 5 4.2 4.1 39 3.7 3.5 4 3 2 1 2011 2024 2030E ■Rural ■Urban ■Overall

Exhibit 42: Shrinking average household size in India

Source: Industry, Emkay Research

Packaging in the packaged food segment must serve the dual role of preserving food quality and protecting it from contamination. Accordingly, glass remains a preferred material, valued for its chemical inertness, premium look and feel, and superior ability to preserve flavor, aroma, and active ingredients.

The rise of online retail and rapid grocery delivery is further amplifying demand for packaged goods. India's e-commerce industry is projected to see 15% CAGR between FY24 and FY30, supported by increasing internet and smartphone penetration. Online platforms provide wider access to premium and branded SKUs, such as craft beverages, specialty sauces, and gourmet pickles, where glass is the preferred packaging material owing to its premium perception, product protection, and sustainability appeal.

Quick-commerce and instant grocery delivery channels have captured a significant share of e-grocery order volumes, accelerating the rollout of glass-packaged SKUs in urban centers. To address this shift, brand owners are increasingly investing in glass formats, designed with enhanced durability, break resistance, and consumer convenience for direct-to-consumer Thishipping. Is intended for Team White Marque Solutions (team.emkay@whitemarquesolution)

At the same time, glass container manufacturers are collaborating with online retailers and D2C brands to create packaging that delivers personalized experiences while aligning with

sustainability goals. As consumer shopping continues to pivot toward digital platforms, e-commerce is set to become a key driver of both, innovation and volume growth, in the glass container industry.

Indian Pharmaceuticals market: Injectables and exports fuel specialty glass growth

Chronic diseases, policy support, and steady export demand would give the Indian pharmaceuticals market a balanced twin-engine of domestic consumption and international sales. The sector is expected to see $\sim\!6\%$ CAGR over CY24 to CY30. However, the Indian glass pharmaceutical packaging material market is expected to see a faster $\sim\!8\%$ CAGR, largely owing to rising drug production, stricter regulatory requirements, increasing exports, and the growing importance of injectable drugs, biologics, and vaccines.

35.0 30.5 27.9 30.0 25.4 24.6 24.4 25.0 20.7 þ 20.0 15.0 10.0 5.0 FY20 FY21 FY22 FY23 FY24 FY25 ■ Pharmaceutical exports

Exhibit 43: Indian pharma exports continue to grow consistently

Source: Industry, Emkay Research

The shift toward biologics and injectables is particularly notable – of the 62 drugs approved by the US FDA in CY24, 26 were biologics. This trend is expected to significantly boost demand for high-quality vials and specialty-treated glass, which are critical for ensuring the safety, stability, and efficacy of such advanced formulations.

As India consolidates its position as a leading supplier of generic injectables, manufacturers are increasingly adopting Type I borosilicate glass for packaging, given its superior chemical resistance, thermal stability, and minimal extractables. This transition is critical to safeguarding sensitive formulations against drug interactions, contamination risks, and pH variations.

Pharmaceutical companies are also upgrading packaging standards to comply with stricter regulatory requirements from global agencies, such as the USFDA and EMA, ensuring safety and efficacy across both domestic and export markets. Additionally, the Indian glass packaging industry stands to benefit from the US Biosecure Act, which is redirecting contract manufacturing from Chinese suppliers to Indian CDMOs, thereby strengthening export-linked demand.

This report is intended for Team White Marque Solutions (team emkay@whitemarquesolution

Specialty Glass: Capturing premium growth through innovation and customization

Specialty glass refers to high-value, customized packaging tailored for premium segments such as liquor, wine, cosmetics, perfumery, and niche pharmaceuticals. Unlike standard flint (clear) bottles, specialty glass is typically heavier, uniquely shaped, and enhanced with features such as embossing, frosting, coloring, or printing to strengthen brand identity and shelf appeal.

In India, demand for specialty glass is rising steadily, supported by the growth of premium alcoholic beverages, increasing exports of spirits and cosmetics, and the growing need for product differentiation in competitive consumer markets, besides export opportunities. Leading container-glass manufacturers are strategically prioritizing this segment, investing in value-added products, advanced decoration capabilities, and lightweighting innovations to expand margins and reduce dependence on commoditized mass glass. Manufacturers are also extending into design and customization services, aiming to lock in customers and deepen brand partnerships.

Exhibit 44: Specialty glass products



Source: Industry, Emkay Research

Glass containers and bottles are manufactured in a range of colors, each serving both functional and aesthetic purposes. Flint (clear) glass is widely used where product visibility is key, such as in water, juices, and cosmetics. Amber glass provides strong UV protection, making it ideal for beer, pharmaceuticals, and certain food items. Green glass, often used for wine, beer, and select spirits, offers a balance between light protection and visual appeal.

Beyond these, manufacturers are increasingly producing specialty colors, such as blue, antique green, and sapphire, that extend beyond functionality to act as branding tools. These vibrant color choices not only help products stand out on crowded retail shelves but also create a premium, differentiated appearance and strengthen brand identity. This trend is particularly prominent in premium beverages and cosmetics, where packaging plays a decisive role in influencing consumer perception and enhancing brand recall.

Exhibit 45: Amber glass bottles



Source: Industry, Emkay Research

Leading container-glass manufacturers are moving beyond standard bottle production to offer a suite of value-added services that enhance both functionality and aesthetics. These include Applied Ceramic Labelling (ACL), where permanent, high-quality designs are fused onto the glass surface, thereby eliminating the need for paper labels while delivering durability and premium shelf appeal. Coating technologies are applied to improve scratch resistance, create glossy or matte finishes, and even enable lightweighting without compromising strength. Through forehearth coloring technology, manufacturers can introduce customized tints directly during production, allowing flexible runs of colored glass without requiring dedicated furnaces. Such advanced services help brands stand out on retail shelves, strengthen product protection, and tap into the rising trend of premiumization across beverages, cosmetics, and specialty foods.

Exhibit 46: Applied Ceramic Labelling



Source: Company, Industry, Emkay Research

Γhis report is intended for Team White Marque Solutions (team.emkay@whitemarquesolutioι

From raw silica sand to finished glass bottles: Glass manufacturing

- Raw material and batch preparation: Glass bottle production begins with a precise blend of raw materials. Silica sand, the primary component, constitutes ~30-33% of the batch. Soda ash (~12-14%) is added to reduce the melting point, while limestone (~10-12%) ensures chemical stability. Minor amounts of other additives, including feldspar, dolomite, and colorants, are incorporated to achieve specific glass properties. Emphasizing sustainability, manufacturers incorporate cullets (recycled glass), which make up around 40% of the furnace feed. Cullet not only melts at a lower temperature, reducing energy consumption and CO₂ emissions, but it is also more cost-effective than virgin raw materials, lowering overall production costs.
- **Melting and refining:** The prepared batch is loaded into the furnaces and heated to ~1,400-1,600°C, ensuring complete fusion of silica with fluxes and stabilizers. The molten glass is then refined and homogenized to eliminate bubbles, streaks, and impurities, resulting in a uniform glass melt. To ensure all material is fully melted, the batch is held at peak temperature for 3-8 hours, depending on the composition.
- **Cooling and forming:** The molten glass is cooled to achieve a viscous state and the temperature is brought down to a controlled forming range of 1,050-1,200°C. It is then sheared into precise 'garbs/drops' of molten glass, which are fed to the forming machines. These machines shape the gobs into containers, with the molten glass setting in the mould to form the bottle's neck.
- **Blowing:** IS (individual section) machines shape the garbs into bottles using either the blow-and-blow or the press-and-blow method. In blow-and-blow, air is blown through the forming machine into the garb placed in the mould to form the shape of the mould. Hot air is used to avoid sudden cooling or sudden thermal shock to the glass. In the press-and-blow method, a plunger first forms the parison, after which compressed air completes the bottle shaping. Once formed, the bottle is released from the mould and the bottle cap sealer lines are marked or joined to the body.
- Annealing and hot-end coating: After 'forming', the bottles pass through an annealing lehr for controlled cooling, which relieves internal stresses. They are then coated to enhance strength and durability, with a thin layer of tin applied at ~350°C. This coating improves the overall mechanical strength of the glass bottles.

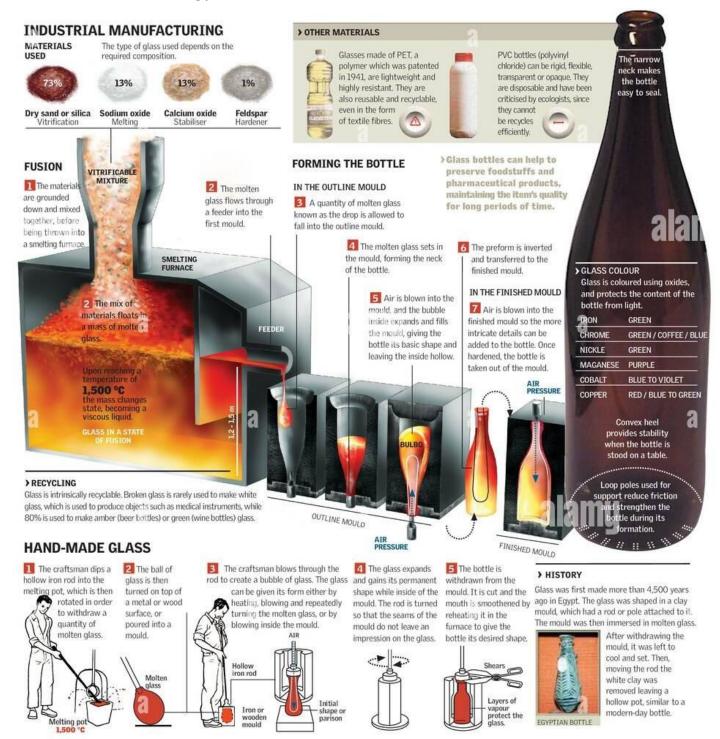
Exhibit 47: Building blocks - Equipment and infrastructure for glass bottle manufacturing

Infrastructure/Machine	Details
Furnace	The furnace melts the raw material batch, including silica sand and cullets, at high temperatures (1,400–1,600°C) to produce homogeneous molten glass ready for 'forming'. It serves as the primary stage of the glass-making process.
IS machine (Individual Section Machine)	IS machines form the molten glass into bottles using either blow-and-blow or press-and-blow techniques. Each section operates independently, shaping multiple bottles simultaneously for high-speed production.
Production lines	These are automated lines where molten glass is shaped into bottles using forming machines, annealed, coated, and prepared for finishing. They integrate multiple process steps to ensure high efficiency and consistent quality.
Product and mould design center	This center designs bottle shapes, sizes, and moulds based on client requirements. It supports innovation, customization, and optimization of bottle performance and aesthetics. Advanced tools such as 3D modelling and printing are used to design and prototype bottles.
Mould shop	The mould shop manufactures precision castings and moulds used in IS machines. These moulds determine the final shape and dimensions of the bottles and are crucial for product consistency.
Sand beneficiation	This process cleans and prepares raw silica sand by removing impurities, ensuring high-quality glass with uniform clarity and strength.
Ceramic labelling	Ceramic labelling applies durable, heat-resistant designs, or logos onto bottles. It ensures branding and decorative finishes that withstand handling and washing.
Shrink Film plant	Shrink-wrap films are used to package and protect bottles. It enhances safety during transport and provides tamper-evident sealing.

Source: Company, Industry, Emkay Research

This report is intended for Team White Marque Solutions(team.emkay@whitemarquesolutior

Exhibit 48: Glass bottle manufacturing process



Source: Industry, Alamy, Emkay Research

This report is intended for Team White Marque Solutions (team emkay@whitemarquesolution

Furnace - Core of container glass manufacturing

The furnace is the heart of glass bottle manufacturing, where a mix of silica sand, cullet, soda ash, limestone, and other minerals and chemicals is melted at ~1,400-1,600°C into homogeneous molten glass. Designed with high-performance refractory linings to withstand extreme heat and chemical reactions, the furnace typically operates continuously for years. However, over time, the lining degrades, requiring a major relining roughly every 8-10 years. Relining involves draining the furnace, removing degraded refractories, repairing the shell and regenerators, and installing fresh refractory materials. Though costly and time-intensive, relining restores efficiency, prolongs furnace life, and ensures consistent glass quality. For a well-maintained furnace (such as at AGI, which undertakes relining every 8 years), the capex incurred on relining is ~Rs12-13mn/tpd, while delayed maintenance can raise costs to Rs16-17mn/tpd. Setting up a new greenfield furnace requires a much larger investment of ~Rs110-120mn/tpd, making the furnace the single largest component of capex in a glass manufacturing plant.

To achieve greater precision in melting, modern furnaces also incorporate bubblers and electric boosting. Bubblers inject gas into the molten glass to promote mixing and uniform heat transfer, while electric boosting supplies additional heat directly inside the melt through electrodes. Together, these technologies enhance temperature stability, throughput, and energy efficiency while also improving the quality of the finished bottles.

Beyond period relining, furnaces also require regular maintenance to sustain performance. This includes hot repairs of refractory wear, inspection of burners, regenerator upkeep, and servicing of boosting and bubbler systems. Such interventions, carried out every 2-3 years, typically involve a capex of \sim Rs100mn and are essential to maintain efficiency and extend furnace life.

Glass manufacturing is highly dependent on uninterrupted furnace operations and high utilization levels, to remain cost-competitive. Any prolonged shutdowns, delays in rebuilds, or challenges in commissioning new capacity can materially impact profitability. Insufficient maintenance or deferred upgrades not only increase the risk of breakdowns but also drive up fuel consumption and operating costs due to aging technology. Unforeseen incidents such as a furnace blow-out can lead to significant capex, production losses, reduced utilization and customer losses, thereby severely straining financial performance.



Exhibit 49: Container glass furnace

Source: Industry, Emkay Research

This report is intended for Team White Marque Solutions (team.emkay@whitemarquesolution)

Indian closures and caps market: Rising demand for security and premium packaging

The Indian plastic caps and closures market is expected to see 5.1% CAGR, increasing from USD1.8bn in CY23 to ~USD2.9bn by CY32. Within this space, the security closures market is evolving rapidly from a compliance-driven niche space into a structurally larger and higher-value market.

Growth is being propelled by several factors. Rising demand for tamper-evident and anti-counterfeit packaging across food, beverages, pharmaceuticals, and premium alcoholic products has made closures an essential safeguard for product authenticity and consumer trust. The parallel challenge of counterfeit goods has further accelerated the adoption of secure closures, which protect brand integrity while ensuring consumer safety. Increasing consumer awareness of authenticity, combined with the expansion of e-commerce, has amplified the need for closures capable of withstanding complex supply chains while supporting tracking and authentication technologies.

At the premium end of the market, closures are becoming both functional and aesthetic, with embossing, metallic finishes, and customized designs increasingly used to enhance brand identity. Additionally, rising disposable incomes and rapid urbanization in emerging markets such as India, Africa, and Latin America are driving sustained growth in both, alcoholic and non-alcoholic beverages, directly translating into higher demand for plastic caps and closures.

Indian PET bottle market: Rapid growth bolstered by FMCG, beverages, and sustainability initiatives

The Indian PET bottle market is large, diversified, and steadily expanding, as PET continues to dominate packaging for bottled beverages, edible oils, personal care liquids, and a wide range of FMCG products. Its popularity stems from its lightweight and shatter-resistance nature, transparency, and logistics efficiency. The Indian PET packaging market is expected to see CAGR of 4.3%, to reach USD3.5bn by CY32 from USD2.5bn in CY24.

Beverages such as water, soft drinks, and juices have increasingly shifted from glass to PET bottles, as glass is heavier, fragile, and less convenient for on-the-go consumption. The rapid growth of e-commerce and quick-commerce has further reinforced the demand for lightweight, durable, and easily shippable formats, making PET the material of choice across several fast-moving consumer categories.

Sustainability is also becoming a key growth driver. Extended Producer Responsibility (EPR) requirements, corporate commitments on recycled content, and rising consumer preference for circular packaging are accelerating the adoption of recycled PET (rPET). However, from FY25, the government has mandated beverage makers to incorporate at least 30% rPET in their annual production, with the threshold set to increase 10% each year until FY29. This regulatory push could result in supply-chain constraints in procuring rPET, potentially posing regulatory risks.

This report is intended for Team White Marque Solutions (team emkay@whitemarquesolution

Company Background and Key Risks

AGI Greenpac is India's leading container glass manufacturer, operating three state-of-the-art plants—a 1,100tpd unit and a 740tpd unit at Bhongir (Telangana) and Sanathnagar (Hyderabad), respectively, along with a 154tpd specialty glass facility at Bhongir. Together, these plants provide an operational capacity of \sim 2,000tpd (four furnaces), capable of producing bottles ranging from 1.5ml to 5,000ml, in the Flint, Amber, and Green range.

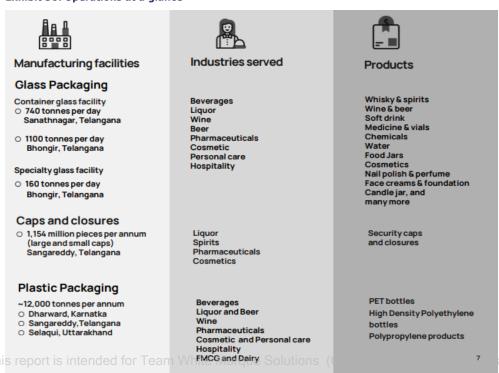
AGI's manufacturing units are strategically located near key AlcoBev hubs and raw material sources, allowing efficient supply chain integration. The company has always been market leader in the south and is also sizable in the west. The facilities are designed with fuel flexibility, allowing furnaces to operate on multiple energy sources—furnace oil, natural gas, LPG and coal gas. Currently, AGI operates its container glass capacity at ~92% utilization. To cater to rising demand from central and northern India, the company is establishing a new 500tpd greenfield container glass plant at Gwalior, Madhya Pradesh. Once operational, this facility will expand capacity by nearly 25%.

AGI develops, manufactures, and supplies glass bottles and containers across a broad range of industries, including AlcoBev, food and non-alcoholic beverages, pharmaceuticals, cosmetics and perfumery, and specialty applications. To strengthen its premium positioning, the company has invested in advanced technologies for value-added processes, such as Applied Ceramic Labelling (ACL), forehearth-based specialty coloring, and surface coating.

AGI also has a PET packaging vertical, offering polypropylene (PP) products and high-quality PET and HDPE bottles to pharmaceuticals, AlcoBev, food and soft drinks, personal care, agrochemicals, and dairy segments. The company operates three PET plants in India with a combined capacity of 11,892tpa – 6,288tpa at Dharwad (Karnataka), 3,062tpa at Selaqui (Uttarakhand), and 2,542tpa at Sangareddy (Telangana). AGI also entered the counterfeitresistant caps and closures manufacturing space, primarily catering to the AlcoBev industry.

Strategically, AGI is also expanding into the high-growth aluminium cans segment, and targets a new plant in Uttar Pradesh, with an annual capacity of 950mn cans, from Q4FY28 which should scale-up to 1.6bn cans by FY30-end. This expansion will strengthen AGI's positioning as a one-stop, multi-material packaging partner for both—domestic and global clients.

Exhibit 50: Operations at a glance



Source: Company, Emkay Research

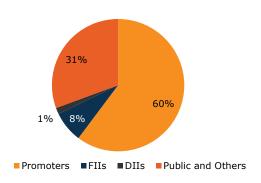
History

Hindustan Sanitaryware & Industries (HSIL), originally incorporated as Hindusthan Twyfords in 1960, was among India's first sanitaryware companies. The group entered the container glass business in 1981 through the acquisition of Associated Glass Industries (AGI), marking its diversification into packaging. Over the following decades, HSIL expanded its capabilities by investing in new furnaces, advanced technologies, and later in 2011, acquiring Garden Polymers Pvt to foray into PET bottle manufacturing. Thereafter, HSIL operated through four distinct divisions: Building Products (BPD), Consumer Products (CPD), Retail, and Packaging Products (PPD). In FY18, the company further diversified into security closures and caps.

In CY18, HSIL restructured its operations by transferring its Consumer Products and Retail divisions to Somany Home Innovation, and its building-products distribution and marketing business to Brilloca, while continuing with building-products manufacturing and the packaging-products division.

In FY22, HSIL completed a slump sale of its building-products manufacturing business to Brilloca for Rs7bn, thereby exiting sanitaryware and concentrating solely on packaging. Soon after in May-22, the company was renamed AGI Greenpac as a dedicated multi-material packaging company.

Exhibit 51: Shareholding pattern



Source: Company, Emkay Research

AGI Greenpac is part of the Somany Impressa Group, which has been into India's building materials and packaging industries. The group's journey began in 1960, when Dr Rajendra Kumar Somany (RK Somany) founded Hindustan Twyfords in collaboration with the UK's Twyfords, to introduce sanitaryware in India. HSIL diversified into packaging solutions in the 1980s. Following RK Somany's demise in CY23, his son Sandip Somany took charge as the Chairman of the company.

Exhibit 52: Promoter shareholding trend over the last decade 70% 60% 60% 60% 60% 60% 60% 54% 60% 49% 48% 48% 47% 50% 40% 30% 20% 10% 0% FY21 FY22 FY16 FY17 FY18 FY19 FY20 FY23 FY24 FY25 Current

Source: Company, Emkay Research

This report is intended for Team White Marque Solutions(team.emkay@whitemarquesolutio

Promoter shareholding

Exhibit 53: Board of Directors and Management

Name of Director/ KMP	Designation	Profile
Sandip Somany	Chairman and Managing Director	He is the promoter of AGI Greenpac and has more than 39-years work experience in the ceramics and glass industry.
Sumita Somany	Non-Executive Non- Independent Director	Part of promoter group and having over a decade of experience in the retail industry.
Girdhari Lal Sultania	Non-Executive Non- Independent Director	Fellow Chartered Accountant, Fellow Company Secretary and consultant by profession.
Nand Gopal Khaitan	Non-Executive Non- Independent Director	An Attorney-At-Law, Advocate and Notary, practicing in the Hon'ble High Court Calcutta and the Hon'ble Supreme Court of India.
Himalyani Gupta	Independent Director	Advocate with over 34 years of experience. Standing Counsel for the Union of India in the Hon'ble Supreme Court of India.
Rakesh Sarin	Independent Director	47 years of experience in the field of distributed energy, policy advocacy and development of large renewable energy platform.
Dr Laveesh Bhandari	Independent Director	President and a Senior Fellow at CSEP. PhD in Economics from Boston University.
Anil Wadhwa	Independent Director	Former Member of the Indian Foreign Service. Served as Indian Ambassador to Poland, Lithuania, Sultanate of Oman, Thailand, Italy and San Marino over the course of 37 years of service in the IFS.
Shashvat Somany	Group Strategy Head	Part of the promoter group, he worked as a Consultant and Analyst at Deloitte Consulting and holds an MBA from London Business School and a BA in Economics and Psychology from UCLA
Sandeep Sikka	Group CFO	A Chartered and Cost Accountant, with over 20 years of experience in finance and corporate management with expertise in capital raising, governance, and project financing.
Rajesh Kkhosla	President and CEO	An IIM Ahmedabad alumnus with over 32 years of leadership in the metals and glass industries.
OP Pandey	CFO	Over 30 years of expertise in finance, cost control, project management, and fundraising.

Source: Company, Emkay Research

his report is intended for Team White Marque Solutions(team.emkay@whitemarquesolution'

ESG

AGI has committed to achieving net-zero emissions by CY50, supported by measurable interim goals and robust processes. In the near term, the company is focused on significantly lowering its carbon footprint and scaling renewable energy adoption by CY30.

Exhibit 54: ESG initiatives at AGI Greenpac



Source: Company, Emkay Research

Environmental

The company is pursuing renewable energy adoption and sustainable resource management. Its environmental initiatives are designed to reduce carbon intensity, optimize resources, and transition towards a circular economy.

- **Emission reduction:** In FY25, the company lowered its Scope 1 emissions to 298,651MTCO2e and Scope 2 emissions to 160,620MTCO2e. The company has implemented advanced energy-efficiency practices, including Variable Frequency Drive (VFD) panels and Electrostatic Precipitators with scrubber mechanisms to mitigate SOx and particulate emissions. Its R&D Glass Lab is actively developing low-emission glass formulations to support cleaner manufacturing.
- **Renewable Energy:** AGI is scaling up its renewable energy footprint by installing ~19.56MW of solar capacity across its facilities, which offsets 22,970 MTCO2e annually.
- Circular economy and cullet use: Recycled glass (cullet) plays a critical role in lowering furnace energy requirements and reducing emissions. Currently, the company uses ~200,000ton of cullet, accounting for ~40% of total production, with target to increase cullet utilization (internal + external) to 50% by CY27. The company's R&D Glass Lab is driving innovation in sustainable glass compositions and closed-loop manufacturing.
- Water management: The company has adopted a comprehensive water stewardship strategy with rainwater harvesting, zero liquid discharge (ZLD) systems, and advanced STPs and RO systems that enable the reuse of over 50% of water. Treated water is recycled for cooling towers, cullet washing, and raw material preparation, significantly reducing freshwater dependency.
- Waste and air quality: Hazardous and non-hazardous waste is managed in compliance with regulatory standards, while air quality is preserved through continuous investments in scrubbers and filtration technologies to actively reduce SOx, NOx, and particulate emissions.

The company emphasizes inclusive growth, employee well-being, and community development. Its CSR programs, focus on education, skill development, healthcare, livelihood opportunities, and environmental sustainability, and are designed to foster holistic community

well-being. Through strategic collaborations with NGOs and local institutions, the company invests in key areas that empower communities and create sustainable impact. The governance standards of AGI are adequate.

Auditors: M/s Lodha & Co LLP are the statutory auditors of the company.

Credit Rating: AGI's long term credit rating is 'CARE AA-' while short term facilities are rated at 'CARE A1+'.

Key Risks

- Volatility in raw material and energy costs: Container glass manufacturing is highly energy-intensive, with furnaces operating at temperatures of ~1,600°C. Power and fuel costs typically account for ~25% of the overall production cost, making profitability highly sensitive to fluctuations in fuel cost. A sharp increase in fuel costs can significantly erode margins, given the limited scope for immediate price pass-through to customers. Similarly, volatility in key raw materials such as silica sand, soda ash, and other minerals and chemicals poses a direct cost risk. Sustained cost inflation without commensurate price adjustments could materially impact the company's earnings profile.
- **Competitive pressures:** Aggressive capacity expansion by competitors may create an oversupply situation, exerting pressure on both pricing and capacity utilization. Revival of idle capacities by major players such as HNGIL could further intensify over-capacity challenges, adversely impacting utilization levels, pricing dynamics, and margins.
- **Demand slowdown in end-user segments:** A slowdown in consumption from key end-user segments such as alcoholic beverages, pharmaceuticals, food & beverages, and personal care can translate into weaker demand for packaging products. Prolonged sluggishness may lead to lower capacity utilization, resulting in temporary shutdown of furnaces or production lines. Given the capital-intensive nature of the business and the need to operate furnaces continuously for efficiency, such demand weakness can significantly strain profitability and operational flexibility.
- Execution and capacity utilization risk: Glass manufacturing is highly dependent on uninterrupted furnace operations and high utilization levels to remain cost-competitive. Any prolonged shutdowns, delays in rebuilds, or challenges in commissioning new capacity can materially impact profitability. Insufficient maintenance or deferred upgrades not only increase the risk of breakdowns but also drive up fuel consumption and operating costs due to aging technology. Unforeseen incidents such as a furnace blow-out can lead to significant capex, production losses, and reduced utilization, thereby severely straining financial performance.
- Competition from alternative packaging materials: Glass containers face inherent challenges such as higher weight, risk of breakage, and volumetric inefficiencies in transportation. Meanwhile, the growing demand for sustainable packaging has accelerated the adoption of lightweight aluminium, bio-based plastics, and paperboard/pouch formats, which are gradually encroaching on the addressable market for glass packaging. A sustained shift by brand owners towards alternative packaging could reduce glass container demand in certain segments.
- Regulatory and policy risk: A significant portion of the company's container glass demand is driven by the AlcoBev sector, which remains highly sensitive to regulatory actions. Policy changes such as higher duties and taxes, restrictions on sales, advertising bans, or outright prohibition in certain states can directly curtail AlcoBev consumption. Additionally, macro factors like declining disposable incomes or increasing personal taxation could amplify the impact, resulting in reduced demand for glass bottles.

This report is intended for Team White Marque Solutions (team emkay@whitemarquesolution

AGI Greenpac: Standalone Financials and Valuations

Profit & Loss					
Y/E March (Rs mn)	FY24	FY25	FY26E	FY27E	FY28E
Revenue	24,176	25,288	27,231	29,629	40,981
Revenue growth (%)	6.0	4.6	7.7	8.8	38.3
EBITDA	5,608	6,139	6,824	7,613	10,647
EBITDA growth (%)	21.5	9.5	11.2	11.6	39.9
Depreciation & Amortization	1,613	1,772	1,846	1,890	1,992
EBIT	3,995	4,367	4,978	5,723	8,655
EBIT growth (%)	19.1	9.3	14.0	15.0	51.2
Other operating income	181	172	177	182	188
Other income	274	349	362	388	441
Financial expense	870	847	761	595	761
PBT	3,399	3,869	4,579	5,516	8,334
Extraordinary items	0	399	205	0	0
Taxes	886	1,044	1,206	1,390	2,100
Minority interest	-	-	-	-	-
Income from JV/Associates	-	-	-	-	-
Reported PAT	2,513	3,224	3,578	4,126	6,234
PAT growth (%)	(3.9)	28.3	11.0	15.3	51.1
Adjusted PAT	2,513	2,923	3,425	4,126	6,234
Diluted EPS (Rs)	38.8	45.2	52.9	63.8	96.4
Diluted EPS growth (%)	(3.9)	16.3	17.2	20.5	51.1
DPS (Rs)	6.0	7.0	8.3	9.6	14.5
Dividend payout (%)	15.4	14.0	15.0	15.0	15.0
EBITDA margin (%)	23.2	24.3	25.1	25.7	26.0
EBIT margin (%)	16.5	17.3	18.3	19.3	21.1
Effective tax rate (%)	26.1	27.0	26.3	25.2	25.2
NOPLAT (pre-IndAS)	2,954	3,189	3,668	4,281	6,474
Shares outstanding (mn)	65	65	65	65	65

Source: Company, Emkay Research

Cash flows					
Y/E March (Rs mn)	FY24	FY25	FY26E	FY27E	FY28E
PBT (ex-other income)	3,125	3,520	4,218	5,128	7,894
Others (non-cash items)	229	659	362	388	441
Taxes paid	(867)	(1,189)	(1,124)	(1,304)	(2,010)
Change in NWC	1,059	(1,150)	(986)	(483)	(1,979)
Operating cash flow	5,884	4,286	4,715	5,826	6,658
Capital expenditure	(2,682)	(2,474)	(2,850)	(9,100)	(5,600)
Acquisition of business	(290)	(47)	(11)	(11)	(11)
Interest & dividend income	130	168	362	388	441
Investing cash flow	(3,517)	(4,425)	(2,499)	(8,723)	(5,171)
Equity raised/(repaid)	0	0	0	0	0
Debt raised/(repaid)	(1,187)	(666)	(1,338)	3,963	514
Payment of lease liabilities	-	(2)	1	1	1
Interest paid	(835)	(848)	(761)	(595)	(761)
Dividend paid (incl tax)	(324)	(387)	(453)	(537)	(619)
Others	796	2,071	0	0	0
Financing cash flow	(1,550)	167	(2,551)	2,832	(864)
Net chg in Cash	817	28	(335)	(64)	623
OCF	5,884	4,286	4,715	5,826	6,658
Adj. OCF (w/o NWC chg.)	4,824	5,435	5,701	6,309	8,637
FCFF	3,202	1,812	1,865	(3,274)	1,058
FCFE	2,462	1,133	1,466	(3,481)	737
OCF/EBITDA (%)	104.9	69.8	69.1	76.5	62.5
FCFE/PAT (%)	97.9	35.1	41.0	(84.4)	11.8
FCFF/NOPLAT (%)	108.4	56.8	50.9	(76.5)	16.3

Source: Company, Emkay Research

Balance Sheet					
Y/E March (Rs mn)	FY24	FY25	FY26E	FY27E	FY28E
Share capital	129	129	129	129	129
Reserves & Surplus	18,017	20,848	23,974	27,563	33,178
Net worth	18,146	20,977	24,103	27,692	33,308
Minority interests	-	-	-	-	-
Non-current liab. & prov.	2,487	2,563	2,645	2,731	2,822
Total debt	6,159	5,519	4,169	8,119	8,619
Total liabilities & equity	26,914	29,187	31,057	38,696	44,917
Net tangible fixed assets	19,698	20,324	19,328	18,038	24,896
Net intangible assets	0	0	0	0	0
Net ROU assets	-	-	-	-	-
Capital WIP	524	1,032	3,032	11,532	8,282
Goodwill	-	-	-	-	-
Investments [JV/Associates]	1	2	2	2	2
Cash & equivalents	3,902	3,987	3,868	3,814	4,448
Current assets (ex-cash)	8,165	8,733	10,162	11,053	15,233
Current Liab. & Prov.	6,656	5,775	6,294	6,792	9,314
NWC (ex-cash)	1,510	2,958	3,868	4,260	5,918
Total assets	26,914	29,187	31,057	38,696	44,917
Net debt	2,257	1,532	301	4,305	4,171
Capital employed	26,914	29,187	31,057	38,696	44,917
Invested capital	21,208	23,282	23,196	22,299	30,815
BVPS (Rs)	280.5	324.2	372.5	428.0	514.8
Net Debt/Equity (x)	0.1	0.1	-	0.2	0.1
Net Debt/EBITDA (x)	0.4	0.2	-	0.6	0.4
Interest coverage (x)	4.9	5.6	7.0	10.3	12.0
RoCE (%)	17.9	18.6	19.5	19.1	23.4

Source: Company, Emkay Research

Valuations and key Ratios						
Y/E March	FY24	FY25	FY26E	FY27E	FY28E	
P/E (x)	21.6	16.8	15.2	13.2	8.7	
EV/CE(x)	2.3	2.1	1.9	1.6	1.4	
P/B (x)	3.0	2.6	2.3	2.0	1.6	
EV/Sales (x)	2.4	2.2	2.0	2.0	1.4	
EV/EBITDA (x)	10.1	9.1	8.0	7.7	5.5	
EV/EBIT(x)	14.2	12.8	11.0	10.2	6.8	
EV/IC (x)	2.7	2.4	2.4	2.6	1.9	
FCFF yield (%)	5.7	3.2	3.4	(5.6)	1.8	
FCFE yield (%)	4.5	2.1	2.7	(6.4)	1.4	
Dividend yield (%)	0.7	0.8	1.0	1.1	1.7	
DuPont-RoE split						
Net profit margin (%)	10.4	12.8	13.1	13.9	15.2	
Total asset turnover (x)	0.9	0.9	0.9	0.8	1.0	
Assets/Equity (x)	1.5	1.4	1.3	1.3	1.4	
RoE (%)	14.7	16.5	15.9	15.9	20.4	
DuPont-RoIC						
NOPLAT margin (%)	12.2	12.6	13.5	14.4	15.8	
IC turnover (x)	1.1	1.1	1.2	1.3	1.5	
RoIC (%)	13.9	14.3	15.8	18.8	24.4	
Operating metrics						
Core NWC days	22.8	42.7	51.8	52.5	52.7	
Total NWC days	22.8	42.7	51.8	52.5	52.7	
Fixed asset turnover	0.9	0.9	0.9	0.9	1.1	
Opex-to-revenue (%)	46.2	45.9	45.7	45.3	45.2	

Source: Company, Emkay Research

This report is intended for Team White Marque Solutions (team emkay@whitemarquesolution

GENERAL DISCLOSURE/DISCLAIMER BY EMKAY GLOBAL FINANCIAL SERVICES LIMITED (EGFSL):

Emkay Global Financial Services Limited (CIN-L67120MH1995PLC084899) and its affiliates are a full-service, brokerage, investment banking, investment management and financing group. Emkay Global Financial Services Limited (EGFSL) along with its affiliates are participants in virtually all securities trading markets in India. EGFSL was established in 1995 and is one of India's leading brokerage and distribution house. EGFSL is a corporate trading member of BSE Limited (BSE), National Stock Exchange of India Limited (NSE), MCX Stock Exchange Limited (MCX-SX), Multi Commodity Exchange of India Ltd (MCX) and National Commodity & Derivatives Exchange Limited (NCDEX) (hereinafter referred to be as "Stock Exchange(s)"). EGFSL along with its [affiliates] offers the most comprehensive avenues for investments and is engaged in the businesses including stock broking (Institutional and retail), merchant banking, commodity broking, depository participant, portfolio management and services rendered in connection with distribution of primary market issues and financial products like mutual funds, fixed deposits. Details of associates are available on our website i.e. www.emkayglobal.com.

EGFSL is registered as Research Analyst with the Securities and Exchange Board of India ("SEBI") bearing registration Number INH000000354 as per SEBI (Research Analysts) Regulations, 2014. EGFSL hereby declares that it has not defaulted with any Stock Exchange nor its activities were suspended by any Stock Exchange with whom it is registered in last five years. However, SEBI and Stock Exchanges had conducted their routine inspection and based on their observations have issued advice letters or levied minor penalty on EGFSL for certain operational deviations in ordinary/routine course of business. EGFSL has not been debarred from doing business by any Stock Exchange / SEBI or any other authorities; nor has its certificate of registration been cancelled by SEBI at any point of time.

EGFSL offers research services to its existing clients as well as prospects. The analyst for this report certifies that all of the views expressed in this report accurately reflect his or her personal views about the subject company or companies and its or their securities, and no part of his or her compensation was, is or will be, directly or indirectly related to specific recommendations or views expressed in this report.

This report is based on information obtained from public sources and sources believed to be reliable, but no independent verification has been made nor is its accuracy or completeness guaranteed. This report and information herein is solely for informational purpose and shall not be used or considered as an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments. Though disseminated to all the clients simultaneously, not all clients may receive this report at the same time. The securities discussed and opinions expressed in this report may not be suitable for all investors, who must make their own investment decisions, based on their own investment objectives, financial positions and needs of specific recipient.

EGFSL and/or its affiliates may seek investment banking or other business from the company or companies that are the subject of this material. EGFSL may have issued or may issue other reports (on technical or fundamental analysis basis) of the same subject company that are inconsistent with and reach different conclusion from the information, recommendations or information presented in this report or are contrary to those contained in this report. Users of this report may visit www.emkayglobal.com to view all Research Reports of EGFSL. The views and opinions expressed in this document may or may not match or may be contrary with the views, estimates, rating, and target price of the research published by any other analyst or by associate entities of EGFSL; our proprietary trading, investment businesses or other associate entities may make investment decisions that are inconsistent with the recommendations expressed herein. In reviewing these materials, you should be aware that any or all of the foregoing, among other things, may give rise to real or potential conflicts of interest including but not limited to those stated herein. Additionally, other important information regarding our relationships with the company or companies that are the subject of this material is provided herein. All material presented in this report, unless specifically indicated otherwise, is under copyright to Emkay. None of the material, nor its content, nor any copy of it, may be altered in any way, transmitted to, copied or distributed to any other party, without the prior express written permission of EGFSL. All trademarks, service marks and logos used in this report are trademarks or registered trademarks of EGFSL or its affiliates. The information contained herein is not intended for publication or distribution or circulation in any manner whatsoever and any unauthorized reading, dissemination, distribution or copying of this communication is prohibited unless otherwise expressly authorized. Please ensure that you have read "Risk D

This report has not been reviewed or authorized by any regulatory authority. There is no planned schedule or frequency for updating research report relating to any issuer/subject company.

Please contact the primary analyst for valuation methodologies and assumptions associated with the covered companies or price targets.

Disclaimer for U.S. persons only: Research report is a product of Emkay Global Financial Services Ltd., under Marco Polo Securities 15a6 chaperone service, which is the employer of the research analyst(s) who has prepared the research report. The research analyst(s) preparing the research report is/are resident outside the United States (U.S.) and are not associated persons of any U.S. regulated broker-dealer and therefore the analyst(s) is/are not subject to supervision by a U.S. broker-dealer, and is/are not required to satisfy the regulatory licensing requirements of Financial Institutions Regulatory Authority (FINRA) or required to otherwise comply with U.S. rules or regulations regarding, among other things, communications with a subject company, public appearances and trading securities held by a research analyst account.

This report is intended for distribution to "Major Institutional Investors" as defined by Rule 15a-6(b)(4) of the U.S. Securities and Exchange Act, 1934 (the Exchange Act) and interpretations thereof by U.S. Securities and Exchange Commission (SEC) in reliance on Rule 15a 6(a)(2). If the recipient of this report is not a Major Institutional Investor as specified above, then it should not act upon this report and return the same to the sender. Further, this report may not be copied, duplicated and/or transmitted onward to any U.S. person, which is not the Major Institutional Investor. In reliance on the exemption from registration provided by Rule 15a-6 of the Exchange Act and interpretations thereof by the SEC in order to conduct certain business with Major Institutional Investors. Emkay Global Financial Services Ltd. has entered into a chaperoning agreement with a U.S. registered broker-dealer, Marco Polo Securities Inc. ("Marco Polo"). Transactions in securities discussed in this research report should be effected through Marco Polo or another U.S. registered broker dealer.

This report is intended for Team White Marque Solutions(team.emkay@whitemarquesolution

RESTRICTIONS ON DISTRIBUTION

This report is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation. Except otherwise restricted by laws or regulations, this report is intended only for qualified, professional, institutional or sophisticated investors as defined in the laws and regulations of such jurisdictions. Specifically, this document does not constitute an offer to or solicitation to any U.S. person for the purchase or sale of any financial instrument or as an official confirmation of any transaction to any U.S. person. Unless otherwise stated, this message should not be construed as official confirmation of any transaction. No part of this document may be distributed in Canada or used by private customers in United Kingdom.

ANALYST CERTIFICATION BY EMKAY GLOBAL FINANCIAL SERVICES LIMITED (EGFSL)

The research analyst(s) primarily responsible for the content of this research report, in part or in whole, certifies that the views about the companies and their securities expressed in this report accurately reflect his/her personal views. The analyst(s) also certifies that no part of his/her compensation was, is, or will be, directly or indirectly, related to specific recommendations or views expressed in the report. The research analyst (s) primarily responsible of the content of this research report, in part or in whole, certifies that he or his associated persons1 may have served as an officer, director or employee of the issuer or the new listing applicant (which includes in the case of a real estate investment trust, an officer of the management company of the real estate investment trust; and in the case of any other entity, an officer or its equivalent counterparty of the entity who is responsible for the management of the issuer or the new listing applicant). The research analyst(s) primarily responsible for the content of this research report or his associate may have Financial Interests2 in relation to an issuer or a new listing applicant that the analyst reviews. EGFSL has procedures in place to eliminate, avoid and manage any potential conflicts of interests that may arise in connection with the production of research reports. The research analyst(s) responsible for this report operates as part of a separate and independent team to the investment banking function of the EGFSL and procedures are in place to ensure that confidential information held by either the research or investment banking function is handled appropriately. There is no direct link of EGFSL compensation to any specific investment banking function of the EGFSL.

¹ An associated person is defined as (i) who reports directly or indirectly to such a research analyst in connection with the preparation of the reports; or (ii) another person accustomed or obliged to act in accordance with the directions or instructions of the analyst.

² Financial Interest is defined as interest that are commonly known financial interest, such as investment in the securities in respect of an issuer or a new listing applicant, or financial accommodation arrangement between the issuer or the new listing applicant and the firm or analysis. This term does not include commercial lending conducted at the arm's length, or investments in any collective investment scheme other than an issuer or new listing applicant notwithstanding the fact that the scheme has investments in securities in respect of an issuer or a new listing applicant.

COMPANY-SPECIFIC / REGULATORY DISCLOSURES BY EMKAY GLOBAL FINANCIAL SERVICES LIMITED (EGFSL):

Disclosures by Emkay Global Financial Services Limited (Research Entity) and its Research Analyst under SEBI (Research Analyst) Regulations, 2014 with reference to the subject company(s) covered in this report-:

- 1. EGFSL, its subsidiaries and/or other affiliates and Research Analyst or his/her associate/relative's may have Financial Interest/proprietary positions in the securities recommended in this report as of September 22, 2025
- 2. EGFSL, and/or Research Analyst does not market make in equity securities of the issuer(s) or company(ies) mentioned in this Report

Disclosure of previous investment recommendation produced:

- 3. EGFSL may have published other investment recommendations in respect of the same securities / instruments recommended in this research report during the preceding 12 months. Please contact the primary analyst listed in the first page of this report to view previous investment recommendations published by EGFSL in the preceding 12 months.
- 4. EGFSL, its subsidiaries and/or other affiliates and Research Analyst or his/her relative's may have material conflict of interest in the securities recommended in this report as of September 22, 2025
- 5. EGFSL, its affiliates and Research Analyst or his/her associate/relative's may have actual/beneficial ownership of 1% or more securities of the subject company at the end of the month immediately preceding the September 22, 2025
- 6. EGFSL or its associates may have managed or co-managed public offering of securities for the subject company in the past twelve months.
- 7. EGFSL, its affiliates and Research Analyst or his/her associate may have received compensation in whatever form including compensation for investment banking or merchant banking or brokerage services or for products or services other than investment banking or merchant banking or brokerage services from securities recommended in this report (subject company) in the past 12 months.
- 8. EGFSL, its affiliates and/or and Research Analyst or his/her associate may have received any compensation or other benefits from the subject company or third party in connection with this research report.

Emkay Rating Distribution

Ratings	Expected Return within the next 12-18 months.
BUY	>15% upside
ADD	5-15% upside
REDUCE	5% upside to 15% downside
SELL	>15% downside

Emkay Global Financial Services Ltd.

CIN - L67120MH1995PLC084899

7th Floor, The Ruby, Senapati Bapat Marg, Dadar - West, Mumbai - 400028. India Tel: +91 22 66121212 Fax: +91 22 66121299 Web: www.emkayglobal.com

This report is intended for Team White Margue Solutions (team emkay@whitemarguesolution

OTHER DISCLAIMERS AND DISCLOSURES:

Other disclosures by Emkay Global Financial Services Limited (Research Entity) and its Research Analyst under SEBI (Research Analyst) Regulations, 2014 with reference to the subject company(s) -:

EGFSL or its associates may have financial interest in the subject company.

Research Analyst or his/her associate/relative's may have financial interest in the subject company.

EGFSL or its associates and Research Analyst or his/her associate/ relative's may have material conflict of interest in the subject company. The research Analyst or research entity (EGFSL) have not been engaged in market making activity for the subject company.

EGFSL or its associates may have actual/beneficial ownership of 1% or more securities of the subject company at the end of the month immediately preceding the date of public appearance or publication of Research Report.

Research Analyst or his/her associate/relatives may have actual/beneficial ownership of 1% or more securities of the subject company at the end of the month immediately preceding the date of public appearance or publication of Research Report.

Research Analyst may have served as an officer, director or employee of the subject company.

EGFSL or its affiliates may have received any compensation including for investment banking or merchant banking or brokerage services from the subject company in the past 12 months. Emkay may have issued or may issue other reports that are inconsistent with and reach different conclusion from the information, recommendations or information presented in this report or are contrary to those contained in this report. Emkay Investors may visit www.emkayglobal.com to view all Research Reports. The views and opinions expressed in this document may or may not match or may be contrary with the views, estimates, rating, and target price of the research published by any other analyst or by associate entities of Emkay; our proprietary trading, investment businesses or other associate entities may make investment decisions that are inconsistent with the recommendations expressed herein. EGFSL or its associates may have received compensation for products or services other than investment banking or merchant banking or brokerage services from the subject company in the past 12 months. EGFSL or its associates may have received any compensation or other benefits from the Subject Company or third party in connection with the research report. EGFSL or its associates may have received compensation from the subject company in the past twelve months. Subject Company may have been client of EGFSL or its affiliates during twelve months preceding the date of distribution of the research report and EGFSL or its affiliates may have co-managed public offering of securities for the subject company in the past twelve months.

This report is intended for Team White Marque Solutions(team.emkay@whitemarquesolution