

Duc Giang Chemicals (DGC)

Expecting a recovery on increased sales volume

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Analyst Nguyen Duong Nguyen
nguyennd1@kbsec.com.vn

NP after MI for 3Q2024 reached VND706 billion, down 18% QoQ and 7% YoY

Key segments should grow by 13%–18% in 2025 on recovering demand across major markets

The gross profit margin for phosphorus-based chemicals is expected to remain stable

The Dai Viet Ethanol Plant may start generating revenue in 2025

We reaffirm our NEUTRAL stance, the target price is VND113,600

In 3Q2024, DGC experienced a decline in NPAT due to: (i) a 480bps QoQ fall in the gross profit margin, given disruptions in the extraction of apatite ore at mining site 19B caused by Typhoon Yagi and (ii) higher delivery costs.

We project DGC's revenue from phosphorus-based chemicals to increase by 16% YoY in 2025, driven by recovering demand from the semiconductor market (WSTS forecasts semiconductor sales in APAC and Japan to rise by 12.3% and 9.3% in 2025, respectively) and the agriculture sector (fertilizer consumption in India is expected to be boosted by government subsidies for domestic producers). KBSV believes that DGC's export volume of yellow phosphorus (P₄) will grow by 12% YoY in 2025, with an average selling price (ASP) of VND100 million/ton (+4% YoY).

KBSV estimates the gross profit margin for phosphorus-based chemicals at 36.5%/37% in 2025/2026, despite a 2–3% annual rise in electricity prices thanks to (i) transferring the cost burden to buyers amid limited P₄ supply and (ii) mid-term cost optimization through the use of apatite ore from mining sites 19B and 25.

KBSV expect revenue from the Dai Viet Ethanol Plant to hit VND1,000 billion/VND1,200 billion in 2025/2026. Assuming a net profit margin of 8–10%, DGC is anticipated to recoup its investment in the ethanol segment within 2.5–3.2 years.

We reaffirm our NEUTRAL stance on DGC with a target price of VND113,600 per share, equaling a 6.2% return from the closing price on November 21, 2024.

Neutral maintain

Target price VND113,600

Upside	6.2%
Current price (, 2024)	VND107,000
Consensus target price	VND130,100
Market cap (VNDtn/USDbn)	40.6/1.6

Forecast earnings & valuation

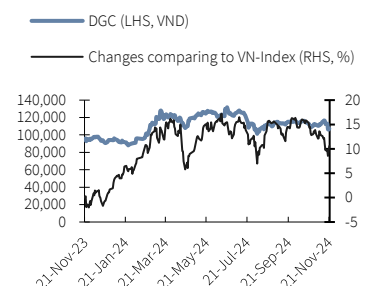
FY-end	2022	2023	2024F	2025F
Net revenue (VNDbn)	14,444	9,748	10,471	13,142
Operating income/loss (VNDbn)	6,382	3,487	3,612	4,499
NPAT-MI (VNDbn)	5,565	3,100	3,188	3,891
EPS (VND)	14,653	8,163	8,394	10,244
EPS growth (%)	5%	-44%	3%	22%
P/E (x)	4.0	11.6	12.7	10.4
P/B (x)	2.1	3.1	2.9	2.4
ROE (%)	65%	27%	24%	25%
Dividend yield (%)	1.8%	4.9%	2.8%	2.8%

Trading data

Free float	61.7%
3M avg trading value (VNDbn/USDmn)	186.8/7.5
Foreign ownership	31.1%
Major shareholder	Dao Huu Huyen (33.4%)

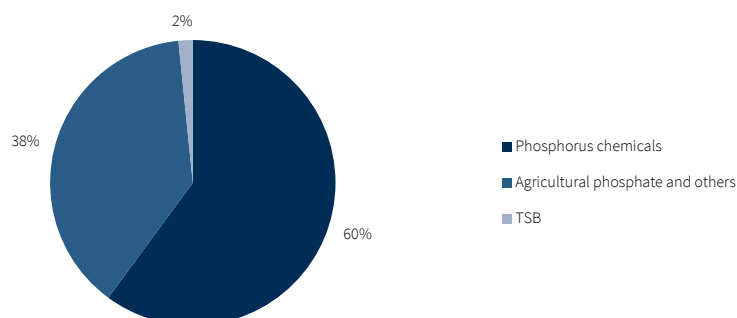
Share price performance

(%)	1M	3M	6M	12M
Absolute	-4	-5	-15	11
Relative	0	-1	-12	1



Source: Bloomberg, KB Securities Vietnam

Revenue composition (2023)



Business operation

Duc Giang Chemicals Group (DGC) operates in the chemical manufacturing industry, with key products including yellow phosphorus (P_4), phosphoric acid (H_3PO_4) (for food, electronics, and agriculture), fertilizers, detergents, and cleaning agents. DGC holds a strong competitive advantage as one of Southeast Asia's leading exporters of yellow phosphorus, serving major customers in the United States, Japan, and South Korea. Looking ahead, DGC plans to expand into the production and trade of caustic soda and chlorine chemicals through the Duc Giang – Nghi Son chemical complex project.

Source: Duc Giang Chemicals, KB Securities Vietnam

Investment Catalysts

Notes

Revenue from the industrial chemicals segment is estimated to grow by 18% YoY in 2025.

Please find more details below

Semiconductor sales in APAC and Japan are forecasted to increase by 12.3% and 9.3%, respectively, in 2025. KBSV expects yellow phosphorus sales volume to rise by 12% YoY, with the prices of yellow phosphorus and phosphoric acid (for food and electronics) expanding by 4% and 8% YoY, respectively.

The gross profit margin for phosphorus-based chemicals is expected to achieve 36.5% in 2025. We anticipate that DGC will maintain a stable gross profit margin in the medium term, despite electricity prices (accounting for 25% of cost of goods sold) increasing by an average of 2–3% per year. This is attributed to (1) transferring the cost burden to buyers and (2) the use of apatite ore from mining sites 19B and 25, which costs 20–30% less than market rates.

Please find more details below

The Dai Viet Ethanol Plant is set to commence operations in 2025. KBSV estimates that Ethanol Dai Viet will contribute VND1,000 billion in revenue to DGC in 2025.

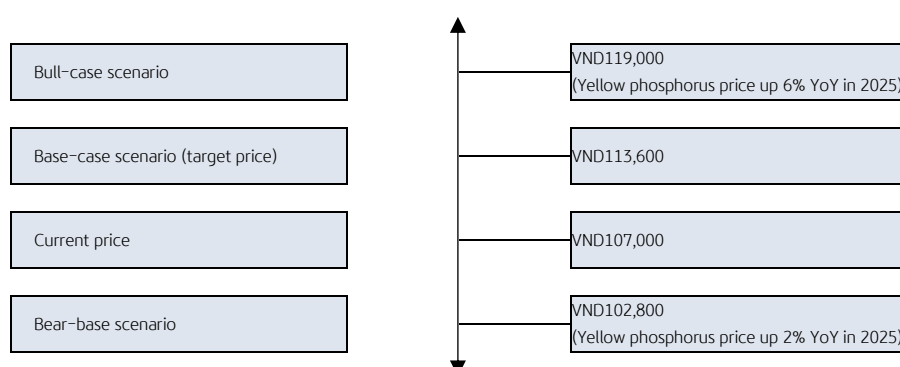
Please find more details below

Revised earnings estimates

(VNDbn)	KBSV estimates		Change vs previous estimates		Consensus*		Difference	
	2024E	2025E	2024E	2025E	2024E	2025E	2024E	2025E
Revenue	10,471	13,142	-4.1%	6.8%	10,337	13,310	1.3%	-1.3%
EBIT	3,016	3,685	-6.1%	1.4%	2,927	3,841	3.1%	-4.1%
NP after MI	3,188	3,891	-8.3%	0.9%	3,090	4,117	3.2%	-5.5%

Source: Bloomberg, KB Securities Vietnam

Investment opinion & risks



Base-case scenario: catalysts

- 1) P_4 price up 4% YoY in 2025
- 2) TPA* price up 8% YoY in 2025
- 3) P_4 sales volume up 12% YoY in 2025

Bull-case scenario: upside risk

- 1) P_4 price up 6% YoY in 2025
- 2) TPA* price up 10% YoY in 2025
- 3) P_4 sales volume up 14% YoY in 2025

Bear-case scenario: downside risk

- 1) P_4 price up 2% YoY in 2025
- 2) TPA* price up 6% YoY in 2025
- 3) P_4 sales volume up 10% YoY in 2025

TPA* or thermal tungstophosphoric acid is a compound derived from H_3PO_4 .

Business performance

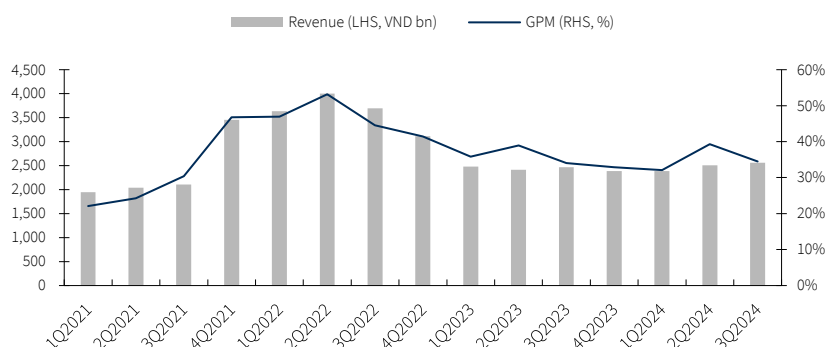
Table 1. DGC – 9M2024 business performance

(VNDbn)	3Q2023	3Q2024	+/-%YoY	9M2023	9M2024	+/-%YoY	Notes
Revenue	2,464	2,558	4%	7,360	7,447	1%	
Industrial phosphorus chemicals	1,494	1,581	6%	4,589	4,340	-5%	The average prices of yellow phosphorus and phosphoric acid (for food and electronics) in 3Q2024 were VND93.2 million/ton and VND25 million/ton, respectively (-5%/+3% YoY), while sales volumes increased by 47% and decreased by 47% YoY, respectively, amidst declining demand. DGC prioritized the use of agricultural-grade phosphoric acid for fertilizer production to optimize revenue in 3Q2024, as the average fertilizer price rose by 21% QoQ and 33% YoY.
Agricultural phosphate, others	936	934	0%	2,650	2,967	12%	
Tia Sang Battery (HNX: TSB)	34	43	26%	121	140	16%	
Gross profit	840	881	5%	2,670	2,631	-1%	
Gross profit margin	34.1%	34.5%	37bps	36.3%	35.3%	-95bps	The gross profit margin in 3Q2024 decreased by 480bps due to Typhoon Yagi, which disrupted the extraction and use of apatite ore from mining site 19B, leading to higher input costs.
Financial income	203	151	-26%	549	481	-12%	
Financial expenses	-22	-22	1%	-67	-56	-16%	
Profits from affiliates	0	0		0	0		
SG&A	-157	-208	33%	-452	-511	13%	Transportation costs increased by 30%, causing SG&A expenses for 9M2024 to rise by 13% YoY.
Operating income/loss	864	802	-7%	2,700	2,545	-6%	
Other income	-1	-2	86%	-2	-10	533%	
Profit before taxes (PBT)	864	800	-7%	2,698	2,535	-6%	
Profit after taxes (NPAT)	803	738	-8%	2,505	2,322	-7%	
NP after MI	761	706	-7%	2,389	2,239	-6%	
NPAT margin	30.9%	27.6%	-331bps	32.5%	30.1%	-239bps	

Source: Duc Giang Chemicals, KB Securities Vietnam

Fig 2. DGC – Revenue, gross profit margin (VNDbn, %)

In the medium term, the gross profit margin of the industrial phosphorus chemical segment will be impacted by electricity costs, which account for 25% of DGC's cost of goods sold and are estimated to increase by an average of 3% per year. However, KBSV expects DGC to maintain the gross profit margin for this segment at 36.5%/37% in 2024/2025, supported by (i) recovering demand amid a global shortage of yellow phosphorus, enabling DGC to pass part of the increased costs onto buyers and (ii) the commencement of operations at mining site 25, enhancing the supply of apatite ore and helping to stabilize gross profit margins in the future.



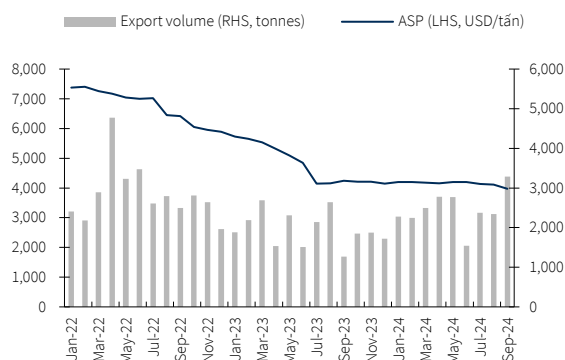
Source: Duc Giang Chemicals, KB Securities Vietnam

Yellow phosphorus consumption is estimated to increase by 12% in 2025

From our observations, the average export price of DGC's yellow phosphorus has remained stable at low levels (VND93–98 million/ton) over the past year to stimulate demand and maintain stable revenue. Specifically, sales volume and revenue from Mitsubishi (accounting for 67% of DGC's yellow phosphorus export revenue) in 9M2024 recorded -1% and 20% YoY, respectively.

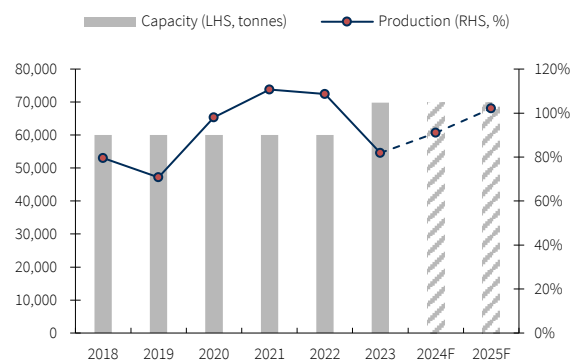
In its latest report, the World Semiconductor Trade Statistics (WSTS) forecasts semiconductor market growth in Japan at -1.1%/9.3% for 2024/2025, while growth in the APAC region is projected at 17.5%/12.3%. This growth is driven by expectations of revenue increases for two key products, including logic circuits and memory circuits, projected to grow by 10.4% and 25.2% YoY, respectively, in 2025. We expect DGC's yellow phosphorus sales volume to rise by 12% YoY in 2025, driving average selling prices to recover to VND100 million/ton in 2025 (up 4% YoY) after bottoming out in 2024.

Fig 3. DGC – Export volume & average selling price of P₄ (tons, USD/ton)



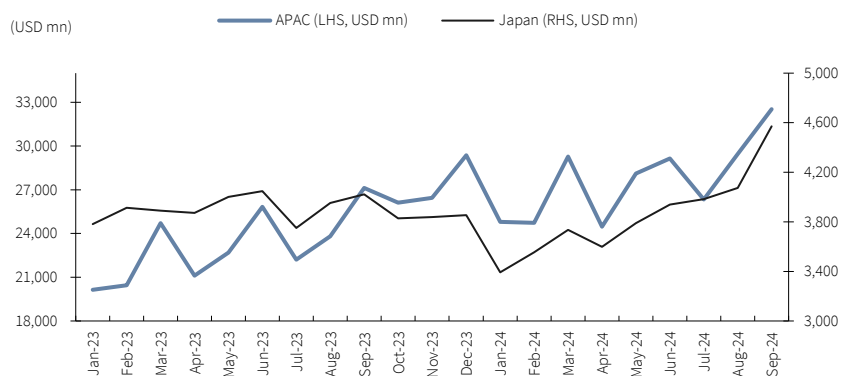
Source: KB Securities Vietnam

Fig 4. DGC – Designed capacity and production of P₄ (including exports and in-house consumption) (tons, %)



Source: KB Securities Vietnam

Fig 5. APAC, Japan – 2025F semiconductor sales forecast by WSTS (USDmn)



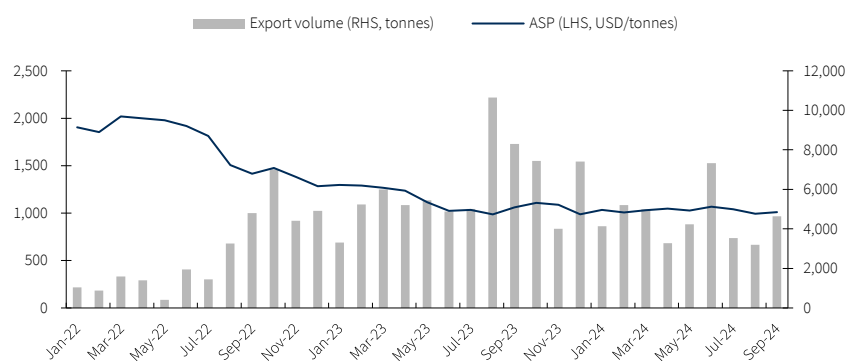
Source: WSTS, Bloomberg, KB Securities Vietnam

Revenue from agricultural phosphate products is expected to increase by 13% in 2025 on the recovery in fertilizer demand across major markets

Fertilizer demand in India (a key market for DGC's agricultural phosphate products) has shown more promising signs in 2024. Although consumption volume in 9M2024 decreased by 5% YoY, production in August–September 2024 increased by 17% and 15% YoY, respectively. We believe that agricultural phosphate consumption in India will continue to improve in the coming period due to (1) favorable weather conditions supporting production activities and (2) the government's policy to increase fertilizer subsidies (effective from 4Q2024 through the end of 1Q2025), which is expected to stabilize fertilizer prices and boost demand in 2025, thereby stimulating the need for agricultural-grade phosphoric acid imports, benefiting DGC. KBSV estimates that revenue from agricultural phosphate will reach VND4,187 billion/VND4,747 billion in 2024/2025, implying a 12%/13% increase YoY.

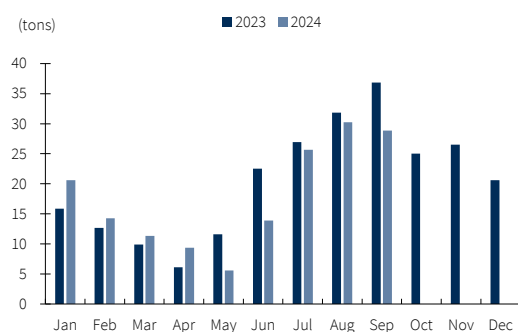
Fig 6. DGC – Export volume & average selling price of phosphoric acid (tons, volume/ton)

Phosphoric acid prices in 9M2024 remained at low levels due to weakened demand from both the semiconductor and agriculture sectors.



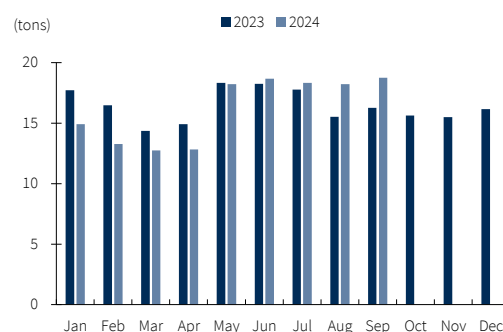
Source: KB Securities Vietnam

Fig 7. India – Fertilizer consumption (tons)



Source: India's Ministry of Chemicals and Fertilizers, KB Securities Vietnam

Fig 8. India – Fertilizer production (tons)



Source: India's Ministry of Chemicals and Fertilizers, KB Securities Vietnam

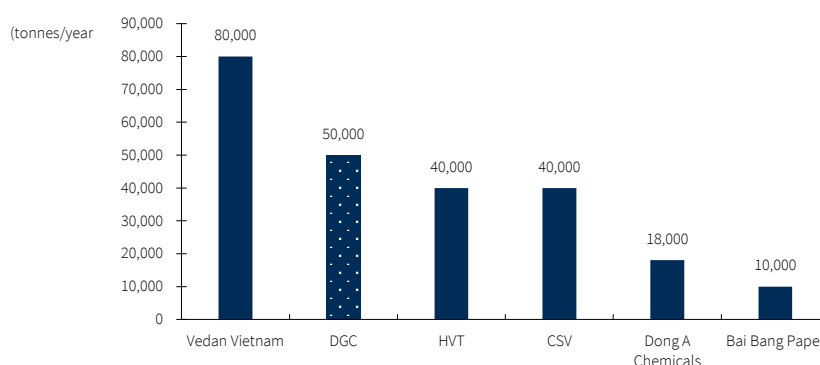
Duc Giang – Nghi Son and Ethanol Dai Viet serve as mid-term growth drivers

In its latest announcement, following the acquisition of Ethanol Dai Viet and subsequent investments in machinery upgrades and production line enhancements, DGC plans to bring the plant online in November 2024, with an annual capacity of 50,000 tons. The plant's primary product will be 96%-pure ethanol, catering to the food, beverage, and healthcare sectors. KBSV expects ethanol products to generate VND1,000 billion and VND1,200 billion in revenue to DGC in 2024 and 2025, respectively. Assuming stable operations with average annual revenue of VND1,200 billion and a net profit margin of 8–10%, DGC is estimated to recoup its investment in the ethanol segment within 2.5–3.2 years.

Additionally, construction of the Duc Giang – Nghi Son Plant is slated to begin in December 2024, with a Phase 1 investment of VND2,400 billion (financed through 45% debt and 55% equity). The plant is expected to commence operations in 1Q2026. KBSV forecasts that the Duc Giang – Nghi Son project, once operational, will contribute VND2,000 billion in revenue, representing 12% of DGC's total revenue in 2026.

DGC's caustic soda production is projected to rank second in the industry after the Duc Giang – Nghi Son plant begins operations in 1Q2026

Fig 9. Vietnam – Caustic soda production forecast of some plants in 2026 (tons/year)



Source: KB Securities Vietnam

Forecast

Table 10. DGC – 2023A–2025F business performance

(VNDbn)	2023A	2024F	+/-%YoY	2025F	+/-%YoY	Notes
Revenue	9,748	10,471	7%	13,142	26%	
Industrial phosphorus chemicals	5,858	6,094	4%	7,195	18%	It is expected that the prices of yellow phosphorus and phosphoric acid will increase by 4% and 8% YoY in 2025, respectively, with consumption volumes rising by 12% and 13% YoY, driven by semiconductor sales in APAC and Japan, which are forecasted to increase by 12.3% and 9.3% YoY. The demand for agricultural-grade phosphoric acid and fertilizers in India is also expected to rise in 2025.
Agricultural phosphate, others	3,732	4,187	12%	4,747	13%	
Tia Sang Battery (HNX: TSB)	158	190	21%	200	5%	
Ethanol Dai Viet	0	0		1,000		Ethanol Dai Viet will begin operations in November 2024 and start commercial production in early 2025.
Cost of goods sold (COGS)	-6,308	-6,733	7%	-8,603	28%	
Gross profit	3,440	3,739	9%	4,539	21%	
Gross profit margin	35.3%	35.7%	42bps	34.5%	-117bps	The gross profit margin for industrial phosphorus chemicals and agricultural phosphate is forecasted to recover, reaching 36.5% in 2025. However, as the Ethanol Plant begins operations and contributes 7.6% of DGC's revenue (with an estimated gross profit margin of 15%), the overall gross margin is expected to decrease by 117bps compared to the previous year.
Deposit interest	627	614	-2%	778	27%	
Borrowing costs	-32	-21	-35%	-30	43%	
Exchange rate gain/loss	46	52	13%	66	26%	
Profits from affiliates	0	0		0		
SG&A	-594	-713	20%	-854	20%	
SG&A margin	6.1%	6.8%	72bps	6.5%	-31bps	It is also expected that transportation costs will gradually decrease in 2025, leading to a 31bps reduction in SG&A margin compared to 2024.
Operating income/loss	3,487	3,612	4%	4,499	25%	
Net other income	-1	-10	591%	0	-100%	
Profit before taxes (PBT)	3,485	3,602	3%	4,499	25%	
Profit after taxes (NPAT)	3,242	3,304	2%	4,139	25%	
NPAT margin	33.3%	31.5%	-171bps	31.5%	-6bps	
NP after MI (NPAT-MI)	3,100	3,188	3%	3,891	22%	
NPAT-MI margin	31.8%	30.4%	-136bps	29.6%	-84bps	

Source: Duc Giang Chemicals, KB Securities Vietnam

Valuation

We reaffirm our NEUTRAL stance on DGC with a target price of VND113,600/share

We combined two valuation methods, FCFF and EV/EBITDA, to determine DGC's fair value at VND114,100/share (down 11.8% from the previous report), corresponding to 2025 forward PER and PBR of 10x and 2.5x, respectively. While maintaining projections for DGC's recovery in business performance in 2025 (see page 2), the change in valuation methodology (switching to EV/EBITDA from P/E to exclude financial income and emphasize core operations) resulted in a lower target price.

We note that delays in executing key projects, particularly the Alumin-Bauxite project, which has led to high cash reserves, may hinder improvements in DGC's ROE. However, the current valuation at 3.1x appears reasonable and partially reflects the company's mid-term growth potential.

Table 11. DGC – FCF model assumptions

Model assumptions	Value
Beta	0.88
Risk-free rate	4.7%
Market risk premium (MRP)	7.9%
Average interest rate	10.0%
WACC	11.5%

Source: KB Securities Vietnam

Table 12. DGC – FCF model assumptions

	2024	2025	2026	2027	2028
NP after MI	3,188	3,891	4,571	4,780	4,868
Depreciation costs	447	630	678	726	779
Working capital	343	-361	-346	-338	-324
CAPEX	-436	-2,922	-801	-825	-841
FCF	3,541	1,236	4,101	4,342	4,481

Source: KB Securities Vietnam

Table 13. DGC – FCFF model assumptions

	2024F	2025F	2026F	2027F	2028F
FCF	3,541	1,236	4,101	4,342	4,481
Terminal growth rate					2%
Terminal value					48,084
Present value of FCF	3,499	1,096	3,260	3,095	30,739
Enterprise value (EV)	41,689				
Cash & equivalents	11,366				
Total debt	-792				
Non-controlling interest	-391				
Equity value	51,873				
Number of shares outstanding	380				
Fair value per share	136,500				

Source: KB Securities Vietnam

Table 14. DGC – Valuation results

Valuation method	Target multiple	Forecast price	Weighting	Target price
FCFF		136,500	50%	68,250
EV/EBITDA	8	90,800	50%	45,400
Target price				113,600

Source: KB Securities Vietnam

DGC – 2022A–2025F financials

Income Statement (bn. VND)					Balance Sheet (bn. VND)				
(Standard Report)	2021	2022	2023F	2024F	(Standard Report)	2021	2022	2023F	2024F
Net Revenue	14,444	9,748	10,471	13,142	TOTAL ASSET	13,405	15,601	16,311	20,611
Cost of Goods Sold	-7,694	-6,308	-6,733	-8,603	CURRENT ASSETS	10,985	12,467	13,202	15,209
Gross Profit	6,750	3,440	3,739	4,539	Cash and cash equivalents	1,535	1,061	304	1,910
Financial Income	315	627	555	778	Short-term investments	7,471	9,342	11,118	11,118
Financial Expenditure	-18	-32	-21	-30	Accounts receivable	919	1,130	860	980
Including: Cost of Borrowing	87	46	52	66	Inventories	1,000	855	871	1,153
SG&A	-752	-594	-713	-854	LONG-TERM ASSETS	2,420	3,134	3,110	5,402
Profit/(loss) from operating	6,382	3,487	3,612	4,499	Long-term trade receivables	29	31	32	32
Net Other Income	-6	-1	-10	0	Fixed assets	1,781	2,457	2,520	4,813
Profit/(loss) from affiliated companies	0	0	0	0	Long-term incomplete assets	234	225	151	151
Profit/(loss) before tax	6,376	3,485	3,602	4,499	Long-term investments	0	0	0	0
Tax	-339	-243	-298	-360	Good will (before 2015)	0	0	0	0
Profit/(loss) after tax	6,037	3,242	3,304	4,139	TOTAL LIABILITIES	2,572	3,563	2,049	3,349
Minority Interest	472	142	116	248	Current liabilities	2,571	3,493	1,981	2,202
NPATMI	5,565	3,100	3,188	3,891	Trade accounts payable	326	190	281	321
EBIT	5,992	2,844	3,016	3,685	Short-term borrowings	468	1,328	725	906
EBITDA	6,278	3,202	3,463	4,314	Other short-term liabilities	1,778	1,975	975	975
					Long-term liabilities	0	70	68	1,148
					Long-term trade payables	0	0	0	0
					Other long-term liabilities	0	0	0	1,080
					Long-term borrowings	0	70	68	68
					OWNER'S EQUITY	10,834	12,037	14,262	17,262
					Paid-in capital	3,798	3,798	3,798	3,798
					Share premium	1,787	1,787	1,787	1,787
					Other funds	-217	123	123	123
					Undistributed earnings	5,084	5,999	8,163	11,163
					State capital	0	0	0	0
					Interest of non-controlling shareholders	382	330	391	391

KB SECURITIES VIETNAM RESEARCH

Research Division

research@kbsec.com.vn

Nguyen Xuan Binh – Head of research

binhnx@kbsec.com.vn

Financials**Nguyen Anh Tung – Manager**

tungna@kbsec.com.vn

Pham Phuong Linh – Analyst

linhpp@kbsec.com.vn

Consumer**Nguyen Duc Quan – Analyst**

quannd@kbsec.com.vn

Nguyen Hoang Duy Anh – Analyst

anhnhd@kbsec.com.vn

Real Estate**Pham Hoang Bao Nga – Manager**

ngaphb@kbsec.com.vn

Nguyen Thi Trang – Analyst

trangnt6@kbsec.com.vn

Industrials & Materials**Nguyen Thi Ngoc Anh – Analyst**

anhntn@kbsec.com.vn

Nguyen Duong Nguyen – Analyst

nguyennd1@kbsec.com.vn

Macro & Strategy**Tran Duc Anh – Head of macro & strategy**

anhtd@kbsec.com.vn

Nghiem Sy Tien – Analyst

tienns@kbsec.com.vn

Nguyen Dinh Thuan – Analyst

thuannd@kbsec.com.vn

Energy, Utilities & IT**Pham Minh Hieu – Analyst**

hieupm@kbsec.com.vn

Nguyen Viet Anh – Analyst

anhnv3@kbsec.com.vn

Support Team**Nguyen Cam Tho – Assistant**

thonc@kbsec.com.vn

Nguyen Thi Huong – Assistant

huongnt3@kbsec.com.vn

KB SECURITIES VIETNAM (KBSV)

Head Office:

Levels 16&17, Tower 2, Capital Place, 29 Lieu Giai Street, Ba Dinh District, Hanoi, Vietnam

Tel: (+84) 24 7303 5333 – Fax: (+84) 24 3776 5928

Hanoi Branch:

Level 1, VP Building, 5 Dien Bien Phu, Ba Dinh District, Hanoi, Vietnam

Tel: (+84) 24 7305 3335 – Fax: (+84) 24 3822 3131

Ho Chi Minh Branch:

Level 2, TNR Tower Nguyen Cong Tru, 180–192 Nguyen Cong Tru Street, District 1, HCMC, Vietnam

Tel: (+84) 28 7303 5333 – Fax: (+84) 28 3914 1969

Saigon Branch:

Level 1, Saigon Trade Center, 37 Ton Duc Thang, Ben Nghe Ward, District 1, HCMC, Vietnam

Tel: (+84) 28 7306 3338 – Fax: (+84) 28 3910 1611

CONTACT INFORMATION

Institutional Client Center: (+84) 28 7303 5333 – Ext: 2656

Private Customer Care Center: (+84) 24 7303 5333 – Ext: 2276

Email: ccc@kbsec.com.vn

Website: www.kbsec.com.vn

Investment ratings & definitions

Investment Ratings for Stocks

(based on expectations for absolute price gains over the next 6 months)

Buy:	Neutral:	Sell:
+15% or more	+15% to -15%	-15% or more

Investment Ratings for Sectors

(based on expectations for absolute price gains over the next 6 months)

Positive:	Neutral:	Negative:
Outperform the market	Perform in line with the market	Underperform the market

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