HOA PHAT GROUP JSC (HOSE: HPG)

The Steel Titan Stirs

We have made an initial valuation for HPG stock. In our conservative view, the current share price does not fully reflect the long-term growth prospects and business position. We estimate the fair value at **VND 33,800**, equivalent to a projected P/B of 1.6x in 2025.

- ***Vietnam's largest steel manufacturer:***
  - *Scale advantage: HPG is one of the pioneering enterprises in Vietnam to invest in steel production plants (using BOF technology). This enables HPG to promptly meet large orders from construction contractors at competitive prices, capturing market share from domestic producers from 2016 to the present.*
  - *Strategic investment timing: The commissioning of HPG's industrial complexes coincided with the steel industry's recovery cycle, allowing the company to boost sales and operate at over 80% capacity in the first two years.*
- ***Dung Quat Complex – Timely and Strategic Investment:***
  - *From 2025, the company is expected to commence operation of the Dung Quat 2 steel complex (5.6 million tons/year, primarily producing hot-rolled coil – HRC). Leveraging by: 1/ HPG's leading position in the industry, 2/ the imposition of anti-dumping duties (AD) on HRC imported from China, and 3/ long-term advantages in export markets due to the trend of reducing carbon emissions, we expect the production output of DQ02 from 2025- 2028 to achieve a CAGR of 42%.*
  - *The DQ02 plant has made significant strides in product scale and manufacturing technology, not only to optimize production costs (maintaining short-term competitive advantages) but also to reduce carbon emissions in the production process (establishing long-term competitive advantages).*

Risks

- *HPG operates in a manufacturing industry that is highly sensitive to input material prices (iron ore, coking coal,…), negative fluctuations in raw material prices will have a significant impact on the company's profit margin and business results.*
- *Operational risks (due to increased production scale) if the steel market faces short-term difficulties – driven by the cyclical nature of the industry and greater-than-expected fluctuations in steel prices.*

Key financial ratios

Y/E Dec (VND billions)	FY2021	FY2022	FY2023	FY2024	FY2025F	FY2026F
Net revenue	149,680	141,409	118,953	138,855	180,667	218,673
Growth (%)	*66%*	*-6%*	*-16%*	*17%*	*30%*	*21%*
EBITDA	*43,741*	*19,893*	*16,443*	*21,588*	*32,738*	*38,695*
NPAT	34,478	8,484	6,835	12,019	18,699	24,574
Growth (%)	*157%*	*-75%*	*-19%*	*76%*	*56%*	*31%*
Net margin (%)	23%	6%	6%	9%	10%	11%
ROA (%)	22%	5%	4%	6%	8%	9%
ROE (%)	38%	9%	7%	10%	14%	16%
Basic EPS (VND)	7,246	1,371	1,105	1,766	2,748	3,611
Book Value (VND)	20,296	16,529	17,685	17,924	20,627	23,739
Cash dividend (VND)	500	500	0	0	500	500
P/E (x)	6.5	12.3	23.7	13.5	10.2	7.8
P/BV (x)	2.3	1.1	1.6	1.6	1.4	1.2

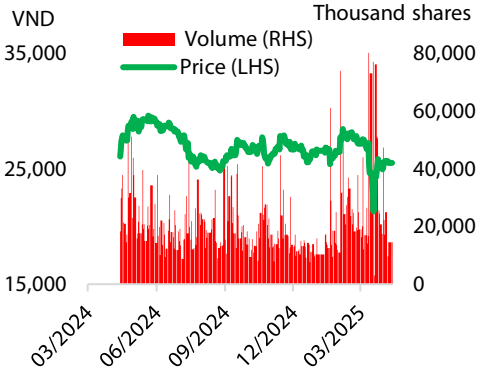
Source: HPG, RongViet Securities. Based on the closing price on April 29th, 2025.

BUY +33%

Market price (VND)	25,500
Target price (VND)	33,800

Stock Info

Sector	Materials
Market Cap (VND Bn)	162,785
Share O/S (Mn)	6,396
Beta	1.2
Free Float (%)	34.6
52 weeks high	29,950
52 weeks low	21,300
Average trading volume (20 sessions)	23,289,190



Performance (%)

	3M	1Y	2Y
HPG	-3.4	-1.2	29.6
VN30 Index	-3.0	1.8	16.9
VN-Index	-1.9	6.4	24.8

Major shareholders (%)

Tran Dinh Long (and realted parties)	35.0
Members of BOD and BOM	9.0
Foreign investors	21.5
Others	34.6
Remaining Foreign Room (%)	*27.5*

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VALUATION

LONG-TERM VALUATION USING FCFF METHOD

DCF Assumptions	Value	Valuation Summary	Unit: VND billion
WACC 2024	12.3%	DCF forecast time	5 years
Effective tax rate	11.7%	Discounted free cash flow	297,772
Cost of equity	15.1%	+ Cash & Equity at valuation date	6,888
Risk-free rate	3.1%	- In debt	82,963
Equity risk premium	10.0%	Equity value	221,697
Beta	1.2	Number of outstanding shares (million shares)	6,396
Exit EV/EBITDA	6.5	Equity value per share (VND)	34,660

Table 1: Sensitivity scenario for HPG's Equity Value per Share (VND)

		Exit EV/EBITDA				
		4.50	**5.50**	**6.50**	**7.50**	**8.50**
WACC	**10.28%**	27,734	33,069	38,404	43,740	49,075
	11.28%	26,267	31,376	36,486	41,595	46,704
	12.28%	24,870	29,765	**34,660**	39,555	44,450
	13.28%	23,540	28,232	32,923	37,614	42,306
	14.28%	22,273	26,771	31,268	35,766	40,264

SHORT-TERM VALUATION USING P/B METHOD

Company	Capitalization	Net Revenue 2023	EBITDA 2023	Gross margin	Net margin	P/E 2023	PB 2023
China Steel (China)	9,161	2,675.9	287.2	5.0	0.1	159.0	1.0
Jiangsu Shagang (China)	1,181	4,013.4	279.4	4.8	(0.3)	N/A	0.1
Huyndai Steel (Korea)	1,873	4,013.4	279.4	4.8	(0.3)	N/A	0.1
JFE Steel (Japan)	7,193	8,037.8	961.6	10.4	4.7	8.2	0.4
Nippon Steel (Japan)	21,134	14,260.2	1,697.7	16.1	5.5	6.4	0.6
Average of large-scale steel producers (2018-2023)						**55.2**	**0.9**

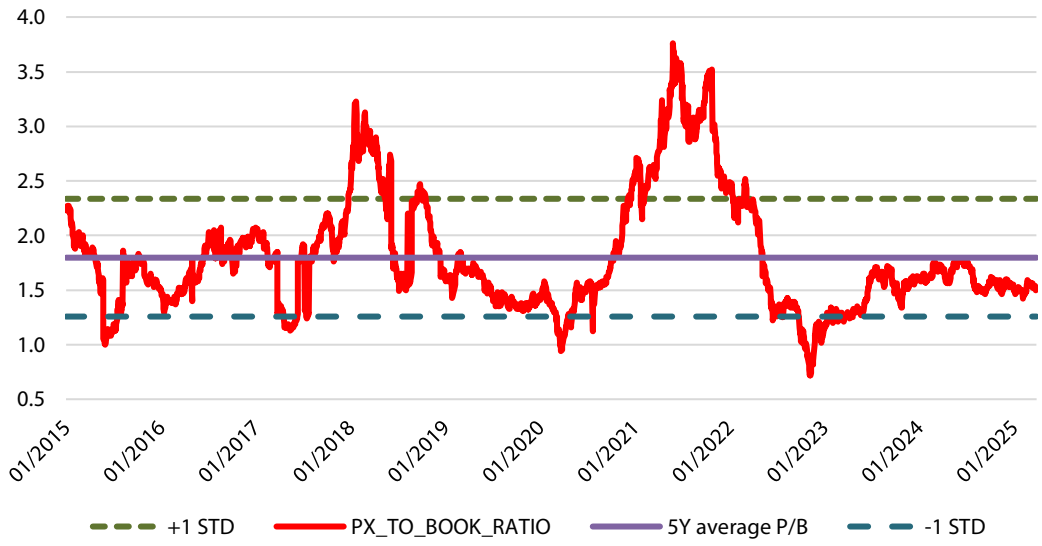
We prefer to use the P/B method to value short-term cyclical companies (including steel companies) as 1/ The earnings and P/E ratios of cyclical companies are highly volatile, 2/ The P/B ratio more accurately reflects the market's bid - when expecting a recovery period for the industry. Comparing the average P/B ratio of HPG stock for the period 2015–2024 (at 1.8x), we believe a P/B ratio of 1.6x is appropriate, considering: 1/ The company's leading position in the steel industry, 2/ Expectations of maintaining a long-term ROE of 18% (after DQ02 operates stably), and 3/ A partial discount for short-term risks from the export market.

Table 2: Sensitivity Table for HPG Equity Value per Share (VND)

		P/B							
		BVPS	1	1.2	1.4	**1.6**	1.8	2	2.2
BVPS (VND)	**2024**	17,924	17,924	21,509	25,094	**28,679**	32,264	35,848	39,433
	2025	20,627	20,627	24,753	28,878	**33,003**	37,129	41,254	45,380

Source: RongViet Securities

Figure 1: Historical P/B of HPG stock



Source: Bloomberg, RongViet Securities

Using the combination of two valuation methods, the fair value for each HPG share is **VND 33,800**, with projected 2025 PE and PB of 13x and 1.7x, respectively. Based on the closing price as of Apr 29th, 2025, we believe that the current market price of HPG does not fully reflect the company's asset value or its current and future position. Investors can use our sensitivity analysis (Table 2) to make investment decisions that in line with their risk appetite for this stock.

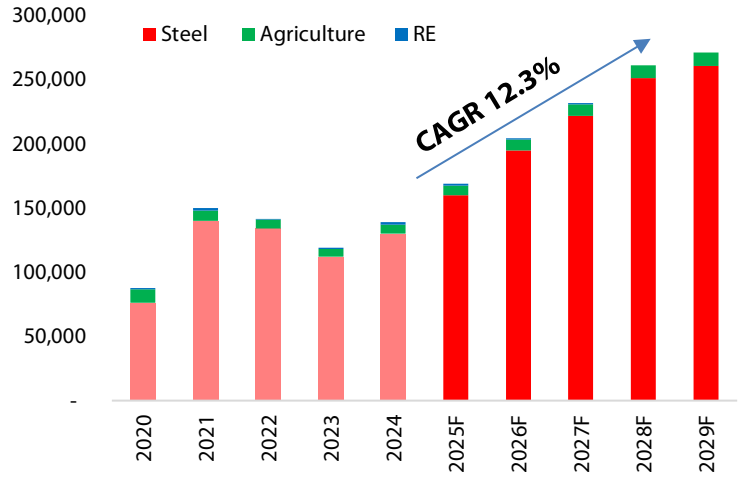
Table 3: Summary of HPG valuation

Method	Weight	Price	Contribute
FCFF	50%	34,600	17,300
P/B (1.1)	50%	33,100	16,500
Target price			**33,800**

FINANCIAL ANALYSIS & FORECAST FOR THE PERIOD 2024-2029

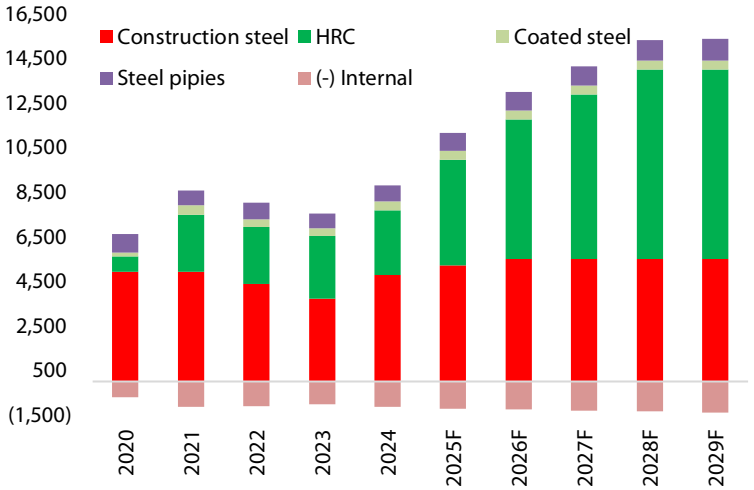
Revenue: *Given HPG's current position in both the domestic and export markets, and its plan to invest in Dung Quat 02 complex (DQ02 set to begin operations in 2025 and reach 100% capacity by 2029), we expect HPG to meet approximately 55% of domestic HRC consumption demand. Revenue in the period 2025-2029 is expected to achieve a compound annual growth rate (CAGR) of 10.2%.*

Figure 2: HPG's net revenue (VND billion)



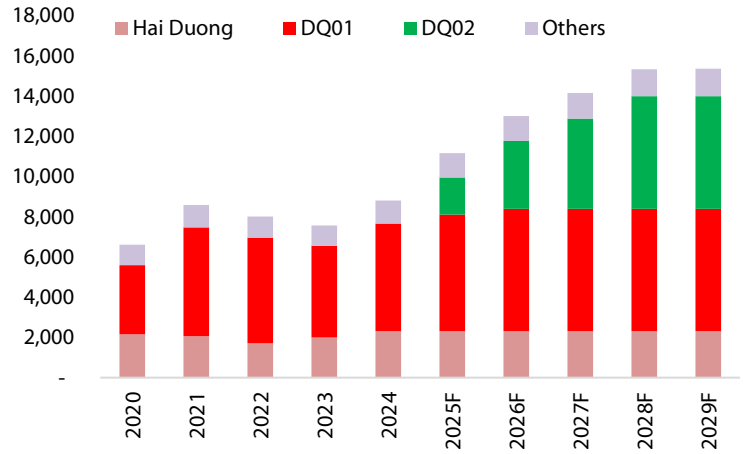
Source: HPG, RongViet Securities forecast

Figure 3: HPG sales volume by market (thousand tons)



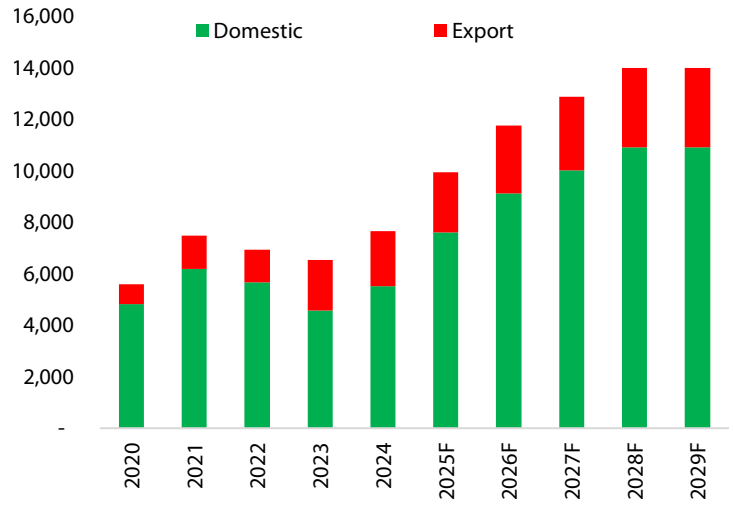
Source: VSA, RongViet Securities forecast

Figure 4: HPG sales volume by Plants (thousand tons)



Source: HPG, RongViet Securities forecast

Figure 5: HPG sales volume by market (thousand tons)



Source: VSA, RongViet Securities forecast

Note: We also visualize these data in tables. See the Appendix for more information *(Refers to Page 30)*

For our 2024-29 sales forecast, we make the following assumptions:

Construction steel: With the existing industrial complexes (Hai Duong and DQ01, with a total capacity of 5.6 million tons/year), we believe the plants will operate at approximately 100% capacity during the 2025–2026 period, maintaining HPG's position as the enterprise with the largest market share in construction steel in Vietnam. The expected consumption growth of the steel industry (specifically construction steel products) is projected to maintain a CAGR of 8% during 2025–2026 (refer to page 16), allowing HPG to maintain a 35% market share in construction steel.

Hot-rolled coil (HRC) – DQ02 plant commences operations and reaches maximum capacity during 2025–2028: Currently, the DQ01 industrial complex (HRC production line) is operating at 100% capacity (2.9 million tons/year). Therefore, HPG's long-term production growth potential will largely depend on the operational efficiency of DQ02 (which began operations in Q1/2025). Leveraging by: 1/ HPG's leading

position in the industry, with its HRC products having been consumed by coated steel companies in the past, 2/ the imposition of anti-dumping duties (AD) on HRC imported from China (refer to page 19), and 3/ long-term advantages in export markets due to the trend towards reducing carbon emissions (refer to page 20), we expect the plant to improve its operational efficiency to around 100% by 2028. This corresponds to an expected CAGR of 42% for DQ02's production output during the 2025–2028 period.

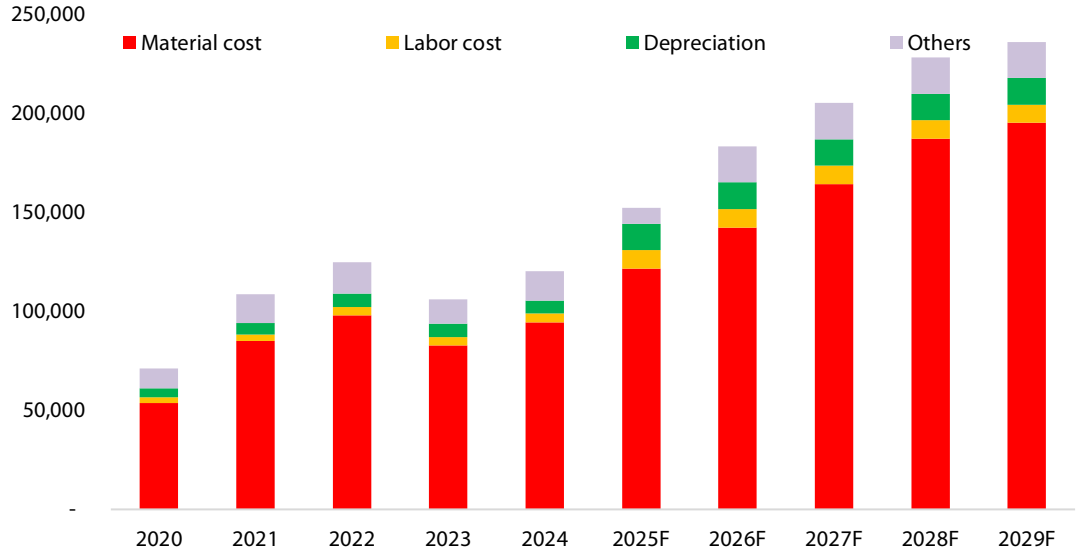
- **Domestic Market**: We expect 80% of the production output to be consumed in the domestic market, driven by 1/ the imposition of anti-dumping duties (CBPG), which will lead to a shortage of HRC supply for domestic flat steel manufacturers, and 2/ reduced risks related to trade defence measures (in export markets). Coupled with the expectation that the domestic market will maintain a consumption level of 13 million tons/year (refer to page 17), we anticipate that the DQ02 plant, together with DQ01, will be able to meet roughly 55% of domestic demand (with domestic HRC production reaching 6.6 million tons in 2028).
- ***Export market***: Given the ongoing anti-dumping investigations and trade protection measures in key export markets (US, EU, etc.), we believe the export market will not see growth during the 2025–2026 period, equivalent to HPG allocating about 20% of DQ02's output to exports. We expect trade protection policies to ease from 2026 onwards, as demand clearly recovers, pressure from the Chinese steel market diminishes, and measures to encourage reduced carbon emissions in steel products are implemented. At that point, HPG – with its strategic investment in suitable technology at the DQ02 plant – will be able to achieve production growth in the export market (Refers to Page 18).
- ***Internal consumption***: We estimate that internal consumption will be equivalent to the sales volume of downstream flat steel products (coated steel, steel pipes), as HPG will use HRC from the DQ01 plant to supply these facilities. Steel pipe consumption is expected to grow at an average rate of 5%/year (benefiting from construction demand), while coated steel production is projected to remain stable at 400,000 tons per year (with the coated steel plant operating at 100% capacity, and HPG having no plans to expand the business).

Since the cost of production depends on the price of the main raw material, hot-rolled coil (iron ore, coking coal), which accounts for roughly 60% of production costs, we note that the prices of raw materials and finished products will experience divergent fluctuations, which are discussed in the section on the recovery cycle of steel prices (Refers to Page 25).

Net profit: *During the steel market recovery period (2025-2028), With the company's strong industry position, prudent inventory policies, and the recovery of finished product prices, we expect the gross profit margin to improve from 15.8% in 2025 to 18.4% in 2028.*

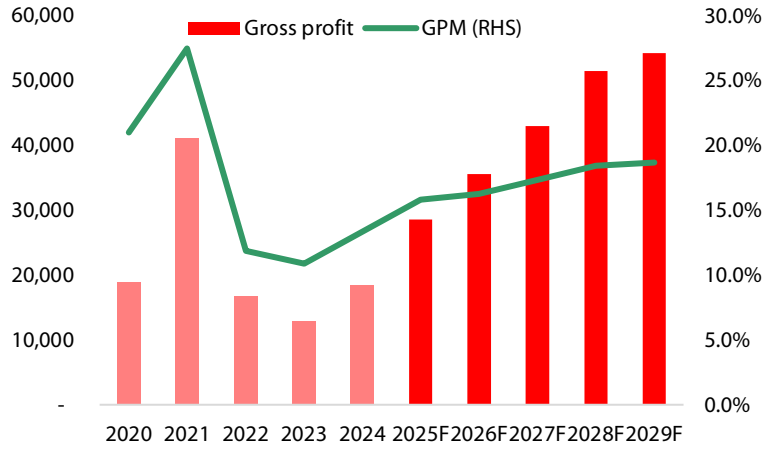
Gross profit: Due to the nature of galvanized steel production, the main raw material (iron ore, coking coal, scrap,…), which accounts for 75-80% of the cost of production, making them the primary factor in estimating HPG's cost of goods sold over the years (assumptions on raw material and finished product prices – refer to page 25). Under the scenario of: 1/ a steel price recovery cycle during 2025–2028, 2/ the company maintaining a prudent inventory policy (average raw material inventory of ~3 months, equivalent to one quarter of production), and 3/ cost advantages of the DQ02 plant (refer to page 22), we believe HPG's gross profit margin (GPM) will improve from 15.7% in 2025 to 18.3% in 2028–2029 (aligned with large-scale steel enterprises using BOF technology in Vietnam).

Figure 6: Cost of Goods Sold (COGS) Structure of HPG – Period 2020–2029 (VND billion)



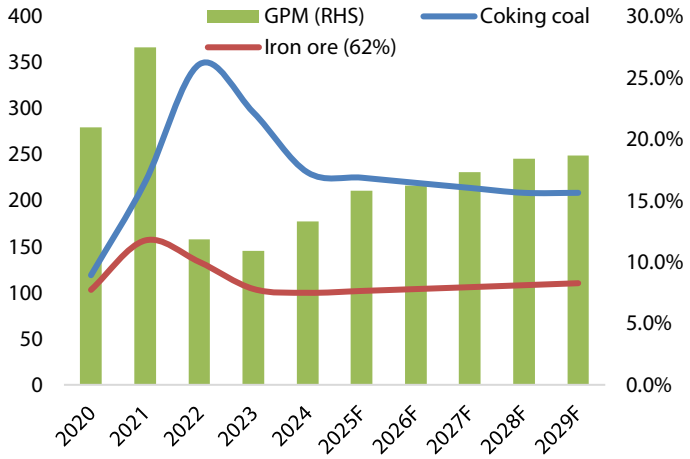
Source: HPG, RongViet Securities forecast

Figure 7: HPG's gross profit (VND billion)



Source: HPG, RongViet Securities forecast

Figure 8: HPG's gross profit margin compared to average material price (USD/ton, base case) (%)



Source: HPG, RongViet Securities

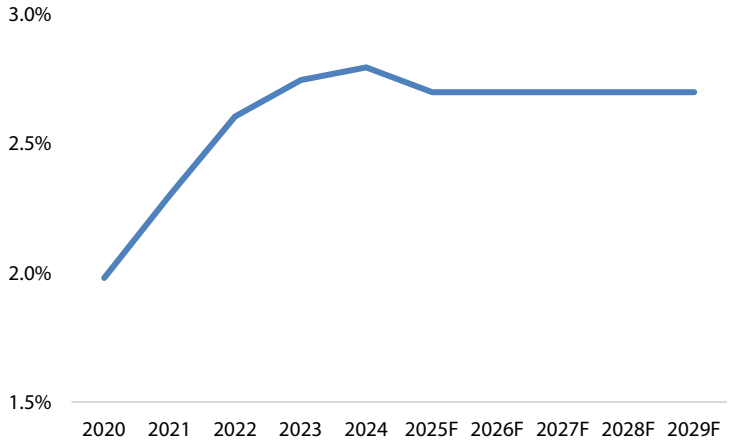
Note: We also visualize these data as tables. More details are available in the Appendix. (Refers to Page 30).

Selling and business management expenses: accounting for 1.7% and 1.1% of total revenue in 2025, respectively. We expect HPG to be able to manage its selling expenses/net revenue ratio at 2.7% throughout the 2025-2029 period; given HPG's position in the industry, the company can maintain its discount policy (with agents, importers, etc.) without increasing the sales discount rate, even when the new factory comes on stream.

Net profit: The company's NPBT comes from 1/ Profit from core business activities (steel production, as analyzed in the previous section), and 2/ Net profit/loss from financial activities. In which, we observe that net financial losses will increase significantly during the 2025–2029 period due to interest expenses from long-term loans (used to finance the DQ02 plant investment, as interest costs are no longer capitalized once the plant is operational). Foreign exchange losses rate differences are expected to be relatively low, as the company no longer has any outstanding USD-denominated loans. The DQ02 plant is projected to receive corporate income tax incentives (0% for the first two years and 10% for the following four years). *As a result, HPG's net profit after tax (NPAT) during the 2025–2029 period is expected to grow at a CAGR of 23%.*

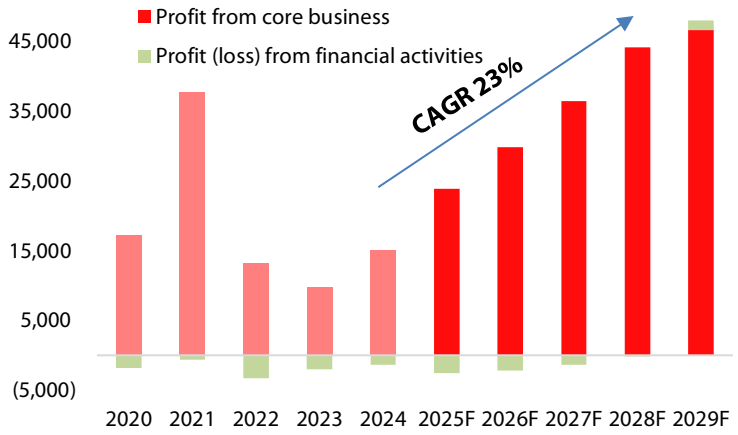
Efficiency of capital use: We expect the Company's return on equity (ROE) to improve and reach 18% in 2028-2029 when DQ02 operates stably. This comes from 1/ enhanced asset turnover (up to 0.8x) due to revenue growth from the operation of DQ02, and 2/ The net profit margin is expected to improve to 14.6% (as the GPM rises to 18.7% during the 2028–2029 period).

Figure 9: Selling and business management Expenses/Net Revenue of HPG (%)



Source: HPG, RongViet Securities

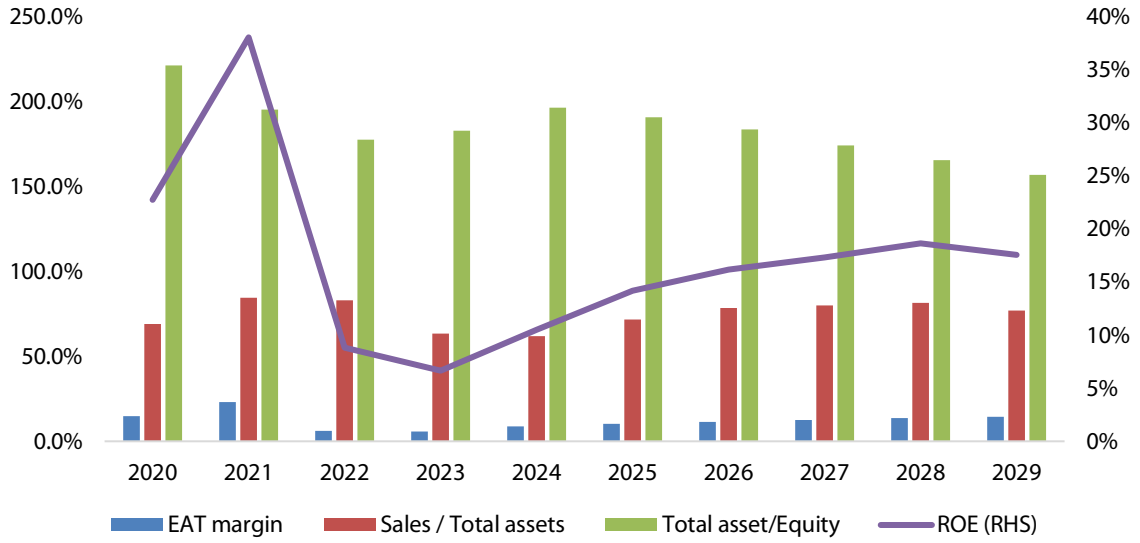
Figure 10: NPBT of HPG, by business activities (billion VND)



Source: HPG, RongViet Securities

Note: We also visualize these data as tables. More details are available in the Appendix. (Refers to Page 30)

Figure 11: ROE analysis using the Dupont method



Source: HPG, RongViet Securities

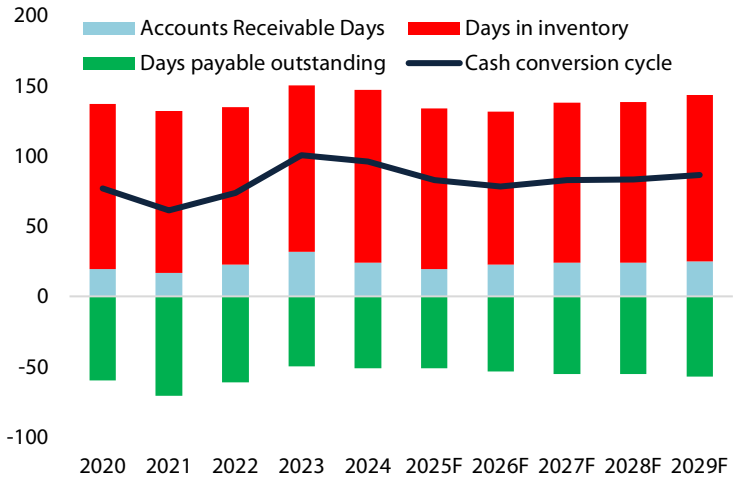
Asset Highlights

Fixed Asset Investment: HPG has been carrying out the DQ02 plant project during the 2022-2024 period (details about the plant can be found on page 22), with a balance of VND 60 trillion in work-in-progress assets (by the end of 2024). We believe that the remaining investment (~VND 15 trillion) will be disbursed in 2025 (focusing on equipment installation), ensuring that the DQ02 plant can operate (in both phases) in 2026. As for the plan to build the railway track plant, we believe the project's progress depends on: 1) The progress of the North-South high-speed railway project (especially related to the land clearance progress – one of the most critical steps), and 2) Government policies supporting the project to ensure its output. Therefore, we have not included the project in our valuation model, nor in the company's asset investment.

Debt: With the DQ02 investment plan, we observe that HPG is raising 50% of the funding through loans to finance the plant, with long-term debt outstanding reaching 30.379 trillion VND (by the end of 2024). Notably, HPG has converted all loans into VND (to reduce foreign exchange risk), and the interest rates on these loans are between 2.6%-7.2% per year (which is relatively low compared to the average long-term loan interest rate of 9-10%), with the principal repayments scheduled between 2029 and 2030 (aligning with the time when the DQ02 plant will operate at 100% capacity). Short-term debt is expected to rise to VND75 trillion in the 2027-2028 period and beyond (to finance working capital needs, primarily in terms of inventory). The quick liquidity ratio is maintained at 0.8x (equivalent to that of other steel companies), indicating that the company keeps short-term debt at a manageable level, avoiding the risk of short-term liquidity issues.

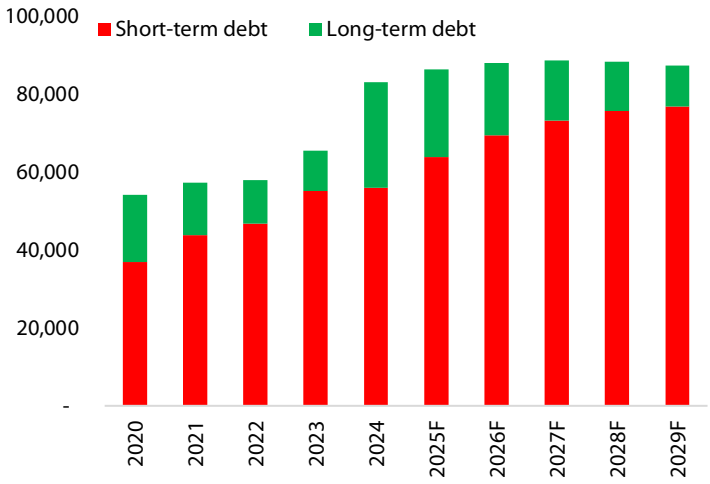
Working capital: We assume that working capital turnover (inventory, receivables, etc.) will remain stable from 2025 to 2029, supported by the company's prudent management policy, which aims to mitigate the risk of raw material price fluctuations, similar to those experienced in 2021-2022. (especially as the company's scale increases significantly with the commissioning of DQ02). In addition, with the advantage of its position in the industry and a large cash deposit balance (VND19 trillion at the end of 2024), the company has the advantage of fully financing its working capital needs through short-term debt with competitive interest rates (averaging 4% per year).

Figure 12: Projected efficiency ratios



Source: HPG, Bloomberg, RongViet Securities forecast.

Figure 13: Total debt forecast (billion VND)

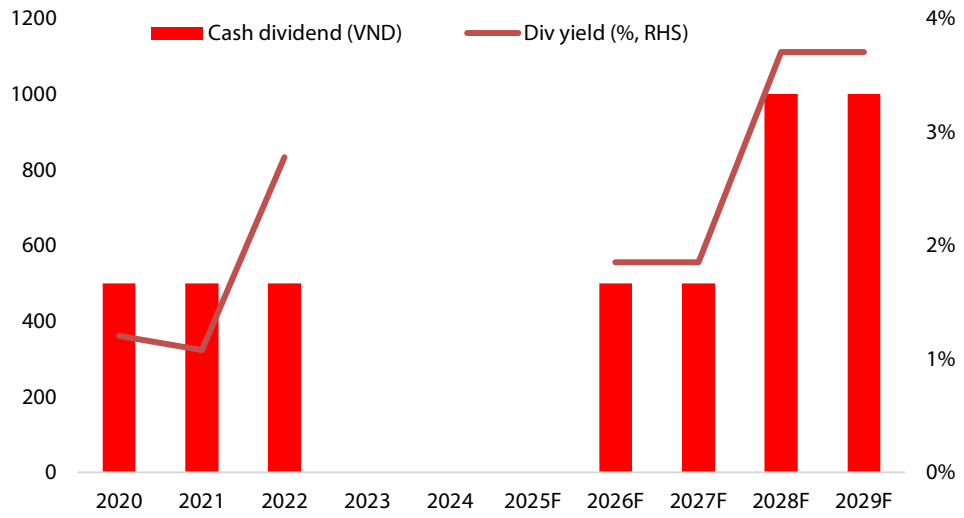


Source: HPG, RongViet Securities forecast.

Note: We also visualize these data as tables. The Appendix provides more details (Refers to Page 31)

Cash dividend policy: For the period 2026-2027, after completing the DQ02 complex, we expect that HPG will maintain an annual cash dividend policy of 500 VND per share, equivalent to a dividend yield of 2% per year, which is not attractive compared to the average bank deposit interest rate (4-5% per year). For the period from 2028 onwards, with the stable operation of DQ02 (phase 01), we expect that HPG will increase the dividend payout to 1,000 VND per share. However, due to the potential fluctuations in HPG's profits, largely driven by changes in raw material prices, we believe that HPG may not be suitable for a dividend-focused investment strategy.

Figure 14: HPG's cash dividend (VND)



Source: HPG, RongViet Securities forecast.
In 2023-2025, the company did not pay dividends in cash.

Note: We also visualize these data in tables. More details are available in the Appendix (Refers to Page 31).

Table 4: Forecast for HPG's business results during the period 2025-2026, along with related assumptions

Unit: bn VND	2025F	YoY %	2026F	YoY %	Assumptions
Output (thousand ton)	**11,147**	**26.8%**	**12,988**	**16.5%**	
In which: Construction	5,200	9.1%	5,490	5.6%	
HRC	4,748	*63.7%*	*6,260*	*31.8%*	*"The DQ02 plant will operate at 30% capacity in 2025 and 60% in 2026*
Revenue	**180,667**	***30.1%***	***218,673***	***21.0%***	
Steel	159,622	*23.7%*	*194,507*	*21.9%*	*Revenue growth will primarily come from increased sales volume, and the selling price is expected to recover at an average rate of 3% per year.*
Agriculture	7,844	*13.5%*	*8,436*	*7.6%*	
RE	1,259	*-40.7%*	*1,276*	*1.4%*	
Gross porfit	**28,527**	**54.2%**	**35,514**	**24.5%**	*The GPM is expected to recover to 15.8% (2025) and 16.2% (2026), thanks to the recovery in selling prices and a slight reduction in coke prices.*
SG&A cost	(4,878)	25.6%	(5,904)	21.0%	*SG&A expenses/revenue are expected to remain at 2.7%*
EBIT	**23,649**	**61.8%**	29,609	**25.2%**	
Financial revenue	2,690	2.7%	3,240	20.4%	*Primarily consists of: 1) Revenue from deposits with an average interest rate of 4% per year; 2) Revenue from foreign exchange gains (as HPG has approximately 20% of its revenue from export activities).*
Financial costs	(5,216)	31.5%	(5,406)	3.7%	*Mainly consist of long-term interest expenses (to finance the investment in the DQ02 plant).*
Profit (loss) from joint ventures	-		-		
EBT	**21,265**	**55.3%**	27,585	**29.7%**	
Tax expense	(2,566)	53.3%	(3,010)	17.3%	
NPAT - MI	**18,699**	**55.6%**	**24,574**	**31.4%**	
EPS (VND)	*2,748*	*55.6%*	*3,611*	*31.4%*	

Source: RongViet Securities forecast

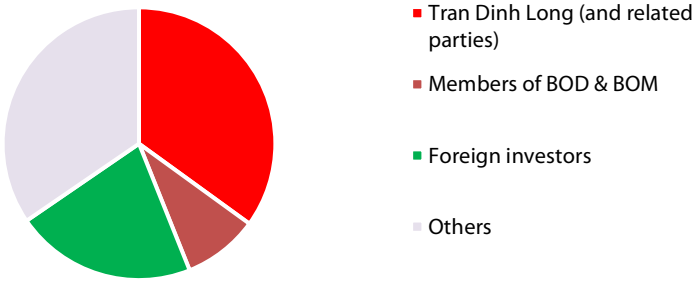
BUSINESS VALUE CHAIN ANALYSIS

Company overview

Hoa Phat Group Joint Stock Company (HPG) was established in 1992, founded by Mr. Tran Dinh Long (Chairman of the Board of Directors) along with most of the current members of the Board of Directors. Its primary business activity is the production of steel household goods. Since 2000, the company has ventured into the production of finished steel, starting with the investment in the Hung Yen steel plant (using Electric Arc Furnace technology - EAF, with a capacity of 300,000 tons/year). Recognizing the efficiency of using Blast Furnace (BOF) technology to produce finished steel (due to its scale advantages over EAF technology), HPG became the first Vietnamese company to invest in a plant using BOF technology, with the following milestones: 1) Hai Duong Integrated Steel Complex (2.2 million tons/year, 3 phases, 2010-2017), and 2) Dung Quat 01 Integrated Steel Complex (6 million tons/year, 2 phases, 2019-2021). The Dung Quat 01 Complex (DQ01) also marked HPG's transition into the production of hot-rolled coils (HRC) – the raw material for flat steel products (which are used not only in construction but also in industrial manufacturing). As of 2024, HPG is the largest crude steel producer in Vietnam, holding a 40% share of the total production market.

Currently, HPG is dominated by major shareholders (internal stakeholders and foreign institutional investors), holding 65% of the outstanding shares, including: 1) Chairman of the Board – Mr. Tran Dinh Long – and related parties (35%), 2) Foreign shareholders (mostly institutional investors, holding 21.5%), and 3) Board members and the Executive Board (9%).

Figure 15: HPG's major shareholders



Source: HPG, RongViet Securities

Figure 16: Steel bars for construction

Source: HPG, RongViet Securities

Figure 17: Hot-rolled steel (HRC) before being sent to the pickling line (in the galvanized steel plant).

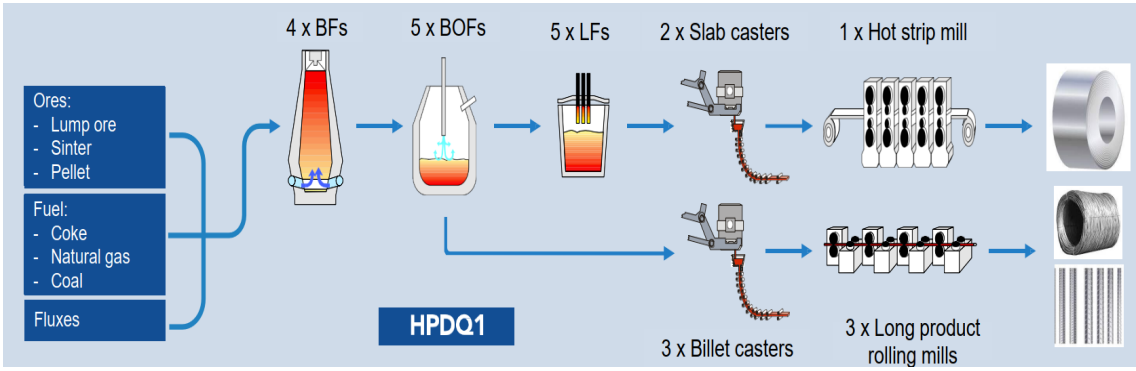
Source: GDA, RongViet Securities

Table 5: HPG's steel plants

Plant	Year of operation	Products	Capacity (thousand ton/year)	Investmant phase
Hung Yen	2001	Construction steel	300	- 01 Phase (2001): 300 thousand ton/year
Hai Duong complex	2010-2017	Construction steel	2,200	- Phase 1 (2010): 400 thousand ton/year - Phase 2 (2014): 500 thousand ton/year - Phase 3 (2016-2017): 1,300 thousand ton/year
Dung Quat 01 complex	2020-2021	Construction steel, HRC	5,600	- Phase 1 (2020): 3,200 thousand ton/year (including HRC of 1,600 thousand ton /year) - Phase 2 (2021): 2,400 thousand ton/year (including HRC of 1,200 thousand ton /year)
Dung Quat 02 complex	2025-2026	HRC	5,600	- Phase 1 (2025): 2,800 thousand ton/year - Phase 2 (2026): 2,800 thousand ton/year
Hoa Phat Coated Steel	2019	Coated steel	400	
Hoa Phat Steel Pipes plants	1996-2020	Steel pipes	1,000	- 04 factories (Hung Yen, Da Nang, Binh Duong, Long An)

Source: HPG, RongViet Securities

Figure 18: The production process follows the BOF model, with finished products being rebar and HRC, at the Dung Quat 01 plant.



Source: HPG, RongViet Securities

Core business operations

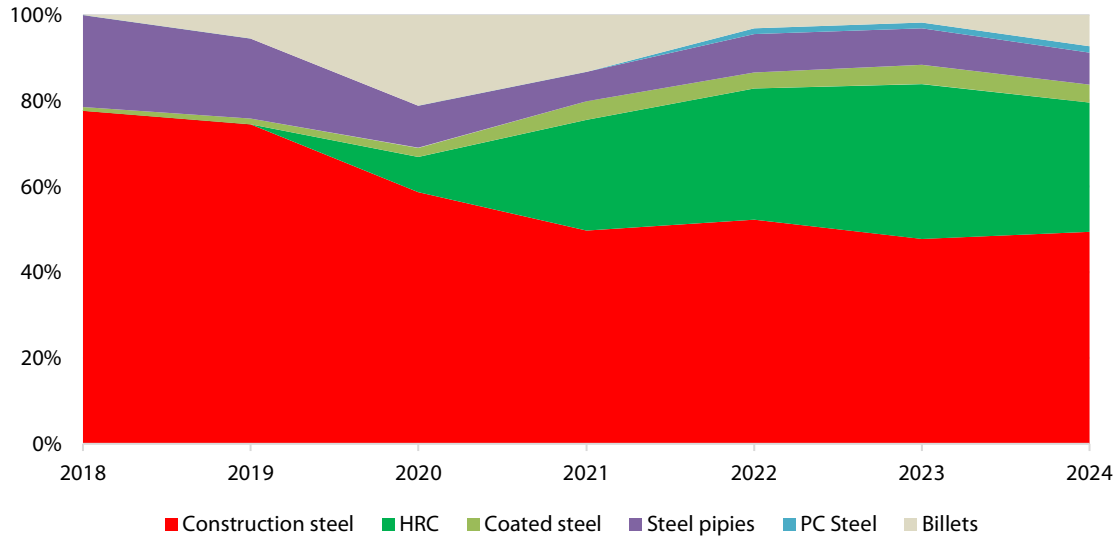
Product structure: The company's main products are steel and steel-related products, formed during the iron ore smelting process through the Blast Furnace (BOF). In 2024, HPG produced 8.7 million tons of crude steel, which includes:

- Billets (billets, slabs, etc.): Intermediate products in the steel production process, created from the smelting of pig iron, and used as raw materials to produce finished steel products (long steel, flat steel, etc.). These are semi-finished products and can be converted into commercially consumable products (depending on customer demand). In general, the consumption of billets accounts for a small proportion of total steel production (representing 8% of production in 2024). An exception was in 2021, when DQ01 was brought into operation, and HPG increased the proportion of billet sales to 16% (exported to China, when this market faced a temporary supply shortage).
- Construction steel (wire rod, rebar): This is HPG's main product from the beginning of the steel plant investment (2001) until the DQ01 Phase 1 operation in 2019. The main products of construction steel can be divided into wire rods (33% of production) and rebar (67% of production), which are commonly used in civil construction and infrastructure development. The most common application of construction steel is for structural support in construction projects (building frames, concrete columns, etc.), so the consumption of construction steel products will depend on the cycle of the real estate market (as most of the construction steel production is used in civil construction activities).
- Hot-rolled coil (HRC): This is a type of steel produced through the hot-rolling process, where steel is melted at high temperatures (typically above 1000°C) and then passed through rollers to form large sheets or coils. HRC has various applications, including: 1/ Civil construction, where HRC serves as a

raw material for producing galvanized steel and steel pipes; 2/ Industrial manufacturing, where HRC is the basic material for producing machinery structures, ship hulls, vehicle frames, truck bodies, etc. The official operation of DQ01 in 2020 marked a milestone, making HPG the first Vietnamese manufacturer capable of supplying HRC to the domestic market.

- Other flat steel products (galvanized steel, steel pipes): These are downstream products of HRC, primarily used in civil construction activities. Among these, HPG is currently the leading steel pipe manufacturer in the Vietnamese market (with a market share of 27.7%). These products are used as outputs to consume the company's hot-rolled steel products.
- Pre-stressed steel (PC bar, PC strand): Pre-stressed steel is a special type of steel used in construction, specifically in prestressed concrete structures to enhance load-bearing capacity and reduce deformation over time. It plays a crucial role in the construction of bridges, high-rise buildings, and projects requiring high durability. The selling price of prestressed steel is typically 40-50% higher than that of construction steel, but its contribution to HPG's total sales volume remains low (135,000 tons in 2024, accounting for 1.5% of total output) due to its limited application in civil construction in Vietnam.

Figure 19: HPG's output structure by product type



Source: HPG, RongViet Securities

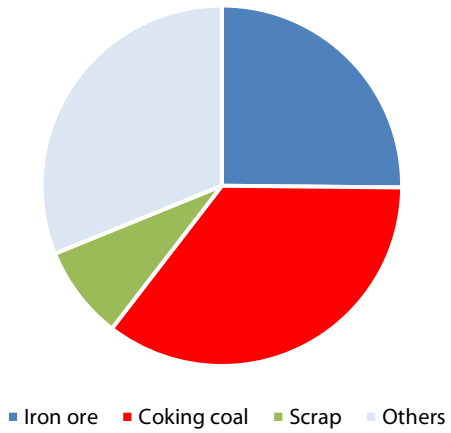
Raw materials: the company employs blast furnace technology (Blast Furnace – BOF), in which iron ore (or iron ore pellets) is melted in a blast furnace to produce molten pig iron, which is then refined and converted into steel. This process uses coke as fuel and other additives to reduce iron oxides in the ore, resulting in pig iron. The molten pig iron is further processed in other furnaces (such as electric furnaces or converters) to produce finished steel. In the cost structure of the BOF process (Cost of Goods Sold, excluding selling and administrative expenses), production raw materials (iron ore, coke, and scrap steel) account for approximately 70% of the total cost. Fluctuations in the prices of these raw materials have significant impact on the company's selling prices.

- Iron Ore (25% of production cost): HPG primarily imports 62%-65% iron ore (one of the highest-grade ores available on the market) to ensure the quality of its steel products. As Vietnam cannot yet mine iron ore that meets these requirements, HPG mainly imports from major suppliers (such as Brazil and Australia), utilizing futures contracts (3-6 months) to hedge against raw material price volatility. The company is also proposing to resume iron ore mining in Ha Giang and Ha Tinh. Regarding the Roper Valley mine in Australia (acquired by HPG in 2021), the company has no plans for investment or exploitation in 2025-2026.
- Coke (35% of production cost): Coke remains the primary fuel (for heat generation) in the blast furnaces, and HPG imports it mainly from Australia, the world's leading supplier of coke. Russia is also

a significant coke supplier, but due to sanctions related to the Russia-Ukraine conflict, HPG avoids importing from Russia. This has contributed to elevated coke prices since 2022 (remaining high, above USD 200/ton). The use of coke as a raw material also raises concerns about greenhouse gas emissions, a long-term issue that needs to be addressed (especially in the context of the growing trend towards green steel in export markets, discussed in the following parts).

- Scrap Steel (8% of production cost): Scrap steel is primarily used for recycling and producing new steel. When fed into the blast furnace, scrap steel is melted and combined with other raw materials like iron ore and coke to remove impurities and produce high quality steel. To ensure product quality, HPG mainly imports scrap steel from countries such as Japan and Australia.

Figure 20: BOF's cost structure

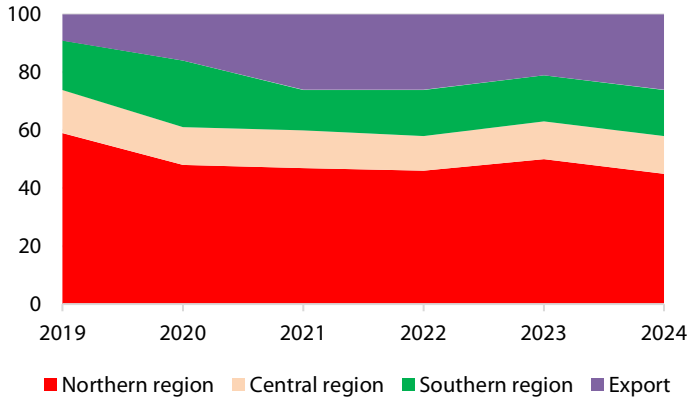


Source: Steelonthenet, RongViet Securities

Market strategy: Before the commissioning of the DQ01 plant in 2020, HPG primarily focused on the domestic market, with its main product—construction steel—being consumed within Vietnam. Leveraging its cost advantage (steel products from the BOF process are 10-20% lower than those from the EAF process), HPG gradually increased its share of the domestic construction steel market, from 21% (2015-2016) to 35% (2022 to present). The export market gained more attention from the company after the DQ01 plant began operations (2021 to present), with HRC products attracting interest in Southeast Asian markets (due to geographic advantages) and Europe (due to cost advantages).

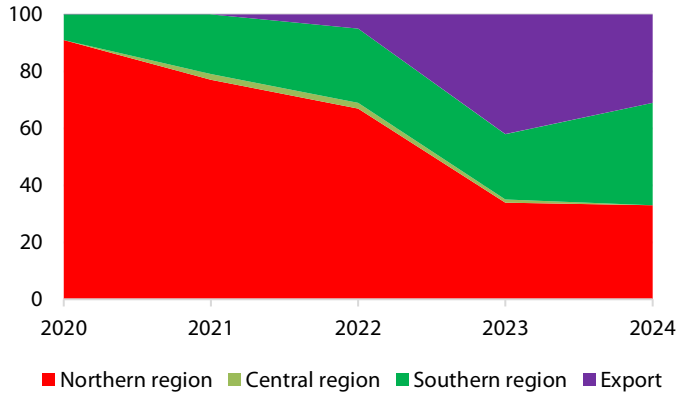
- *Construction steel*: Before the DQ01 plant became operational, Northern Vietnam was HPG's primary market (accounting for 59% of sales volume in 2019), driven by the geographic advantage of the Hai Duong industrial complex. In 2021-2022, with the commissioning of DQ02, the company increased its export share (in total output) to approximately 26%, with construction steel being consumed in Southeast Asian countries (which have significant potential for urbanization and infrastructure development).
- *HRC*: In the 2021-2022 period, HPG primarily supplied HRC to the Northern Vietnam market, taking advantage of the demand from HPG's galvanized steel and pipe manufacturing plants in the region. From 2023-2024, as the company's products established their quality and with growing demand in Southern Vietnam (a hub for galvanized steel plants) and export markets (Southeast Asia and Europe), HPG increased the proportion of HRC sales to Southern Vietnam and export markets to 36% and 33%, respectively, in 2024.

Figure 21: Share of construction steel sales volume, for period 2019-2024, by market



Source: VSA, RongViet Securities

Figure 22: Share of HRC sales volume, period 2019-2024, by market



Source: VSA, RongViet Securities

Company position: Based on our assessment, HPG's competitive advantages in terms of scale and well-timed investment strategies (launching plants during the steel industry's recovery cycles) are as follows:

- *Scale Advantage:* HPG is among the pioneering companies in Vietnam to invest in steel production plants using BOF technology. While most steel companies in Vietnam rely on electric arc furnace (EAF) technology, HPG benefits from the scale of BOF production, enabling large-scale output (capacity exceeding 500,000 tons per phase) (*). This allows HPG to promptly fulfill large-scale orders from construction contractors at competitive prices (equal to or around 200 VND/kg lower than peers), capturing domestic market share from 2016 to the present.
- *Strategic Investment Timing*: HPG's commissioning of its industrial complexes in line with the steel industry's recovery cycles (Hai Duonng Complex from 2010-2017, Dung Quat Complex from 2019-2021). This allowed the company to aggressively boost sales and operate at over 80% capacity in the first two years. High operational efficiency allowed HPG to maintain superior profit margins compared to industry peers, providing sufficient financial resources to continue investing in subsequent phases.

(*) BOF technology uses molten pig iron in the steelmaking process, capable of producing 100-350 tons per cycle in 30-40 minutes, enabling it to meet large-scale orders with consistent quality. In contrast, EAF technology relies on scrap or recycled steel, processing 50-150 tons per cycle (lower than BOF), with quality that may vary depending on the input material.

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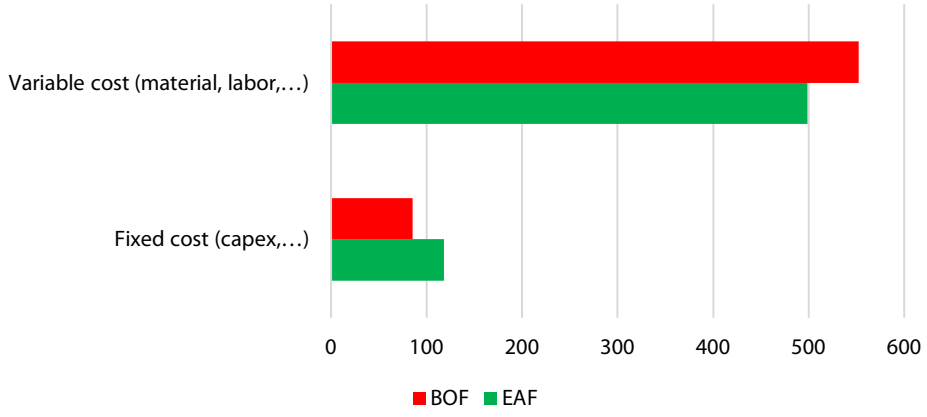
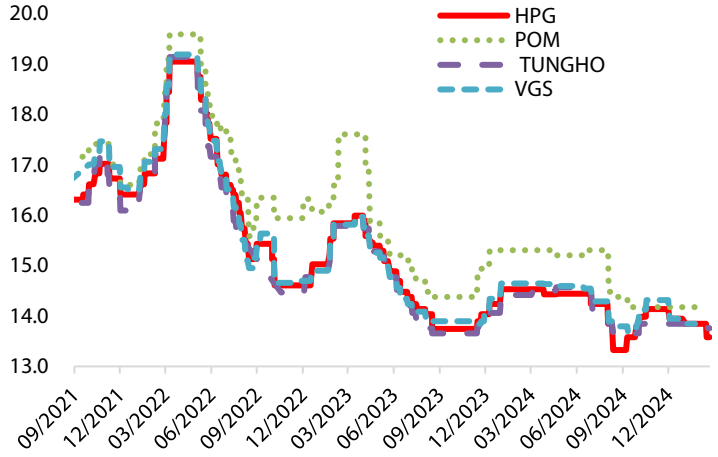
Figure 23: Comparison of investment costs for steel production using BOF and EAF technology (USD/ton of product)



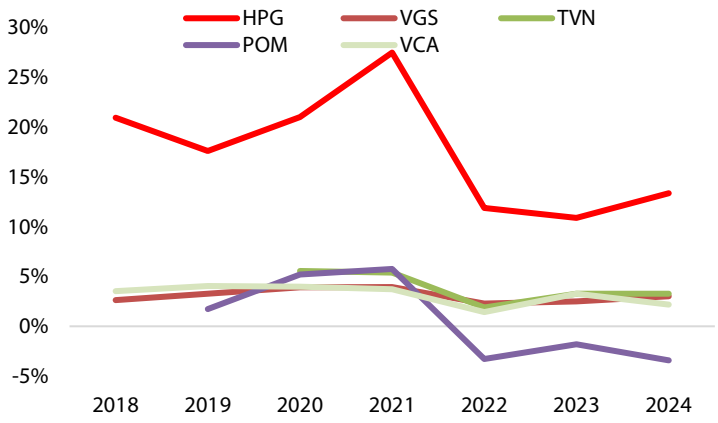
Source: Steelonthenet, RongViet Securities

Figure 24: Dealers price of construction steel companies (thousand VND/kg, with the same product CB300 – D10)



Source: Wigroup, VSA, RongViet Securities

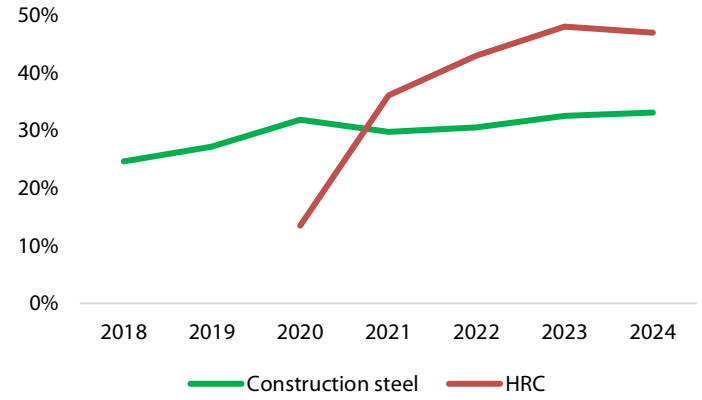
Figure 25: GPM of construction steel companies in Vietnam, period 2018-2024



Source: Finnpro, RongViet Securities

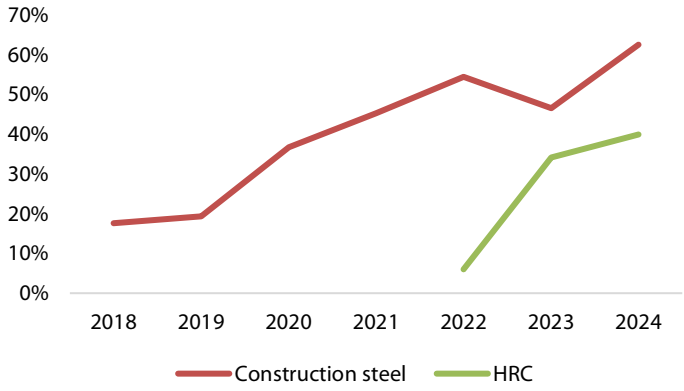
Figure 26: HPG maintains its position in domestic and export markets

Market share in domestic market – construction steel & HRC (*) (%)



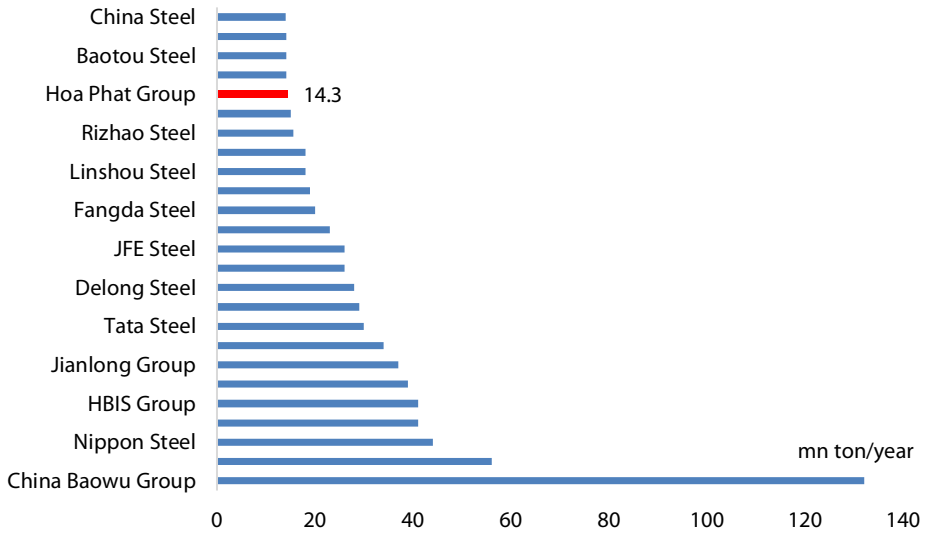
Source: VSA, RongViet Securities
(*)HRC's market share includes only domestic producers

Market share in export market – construction steel & HRC (*) (%)



Source: VSA, RongViet Securities

Figure 27: Comparison of HPG's crude steel production capacity with Asian steel producers



Source: RongViet Securities.

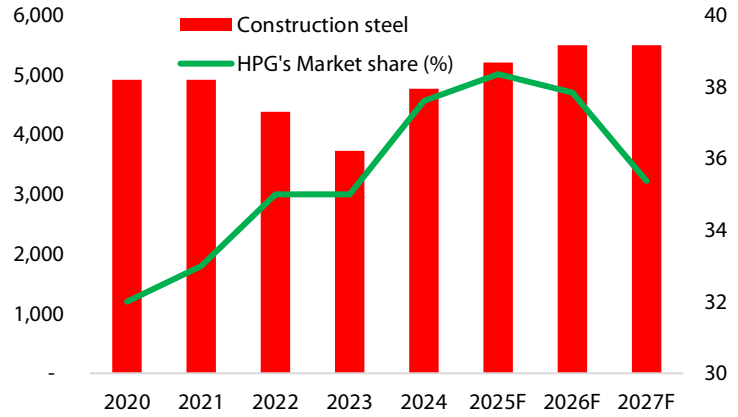
INDUSTRY OUTLOOK – DOMESTIC DEMAND LEADS GROWTH

Domestic Market: We see strong growth potential in the domestic steel market, driven by the demand for construction materials, with an expected clearer recovery in both the residential and industrial real estate (RE) sectors starting in 2025. (Back to page 4)

- Following a challenging period for the residential RE market (2023-2024), the government is implementing reforms aimed at stabilizing the residential RE market and boosting industrial RE growth. Key measures include: 1) Three revised laws (the Land Law, the Real Estate Business Law, and the Housing Law, along with related decrees) took effect in August 2024, which are expected to gradually resolve legal challenges for ongoing projects and accelerate construction activities once permits are granted; 2) Maintaining interest rates at low levels; and 3) Maintain a policy to promote public investment and infrastructure development (highways, etc.) to ensure Vietnam's long-term growth.
- Looking further ahead, Vietnam's urbanization rate remains relatively low compared to other developing Asian countries, leaving ample room for the development of urban clusters. This represents a key long-term growth driver for construction steel products.

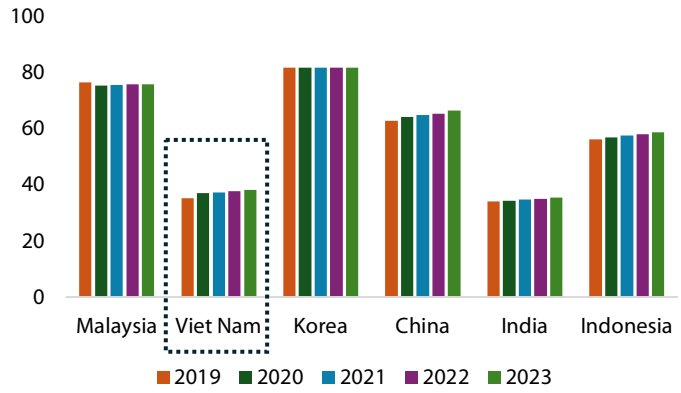
In our base case, we expect domestic coated construction steel output to grow at a CAGR of 8% from 2025 to 2029, in line with projected growth rates in India by Worldsteel (8.5% per year). However, due to capacity constraints (HPG's construction steel production capacity is 5.6 million tons/year, expected to operate at 100% capacity during 2025-2026), the company will not be able to achieve corresponding growth. Instead, the company plans to expand its steel grades to higher-value products, such as steel for high-speed railway production (mentioned in the *Dung Quat 02 Complex*).

Figure 28: Sales volume of HPG's construction steel, 2020-2027 (thousand tons)



Source: VSA, RongViet Securities forecasted

Figure 29: Urbanization rate in Asian countries, 2019-2023 (%)

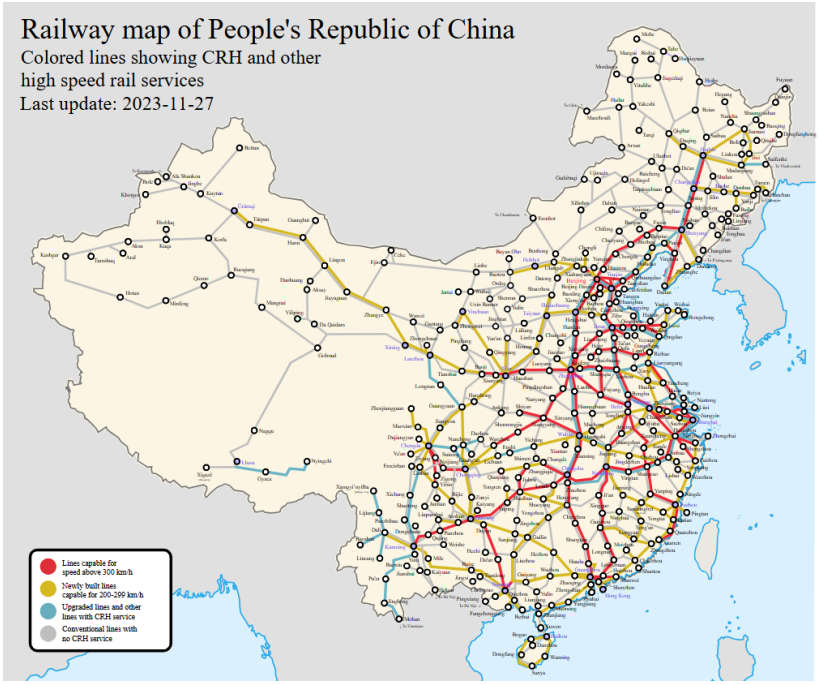


Source: RongViet Securities summarized

Additionally, infrastructure development—particularly high-speed railway systems—is a medium-term development trend and a key factor in driving demand for construction steel in Vietnam, as the government aims to enhance regional connectivity (especially between the Red River Delta and the Southeast Region, the two economic hubs of the country). The development of the North-South high-speed railway (1,541 km long, with a designed speed of 350 km/h, expected to commence construction in 2026) is, in our view, a strategic move, comparable to China's high-speed railway system, a pioneer in high-speed rail networks. However, the development of this railway system raises challenges regarding the demand for raw materials—particularly the type of steel used for rail construction (*)—and we expect HPG to benefit from this demand due to: 1/ The Dung Quat 02 Plant's capability to produce high-strength steel grades (HC and HSLA); 2/ The company's financial capacity to meet the initial investment needs of the project (investment scale of ~10 trillion VND, with an expected output of 500,000 tons/year).

(*) The steel used for high-speed railways is typically high-strength steel (carbon content above 0.7%), heat-treated to achieve optimal durability and wear resistance.

Figure 30: China's high-speed rail system by 2023 - Tier I cities (Beijing, Shanghai, ...) are all connected by the rail system with a speed of over 300km/h



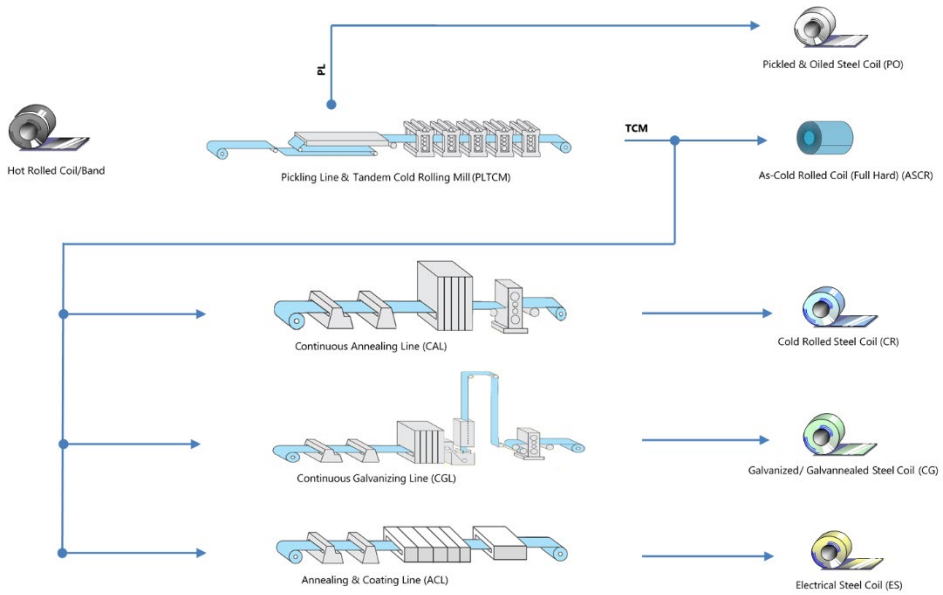
Source: RongViet Securities.

Hot-rolled coil (HRC): This is the input material for producing flat steel—a type of steel with a flat surface and thin thickness, typically manufactured in the form of sheets, coils, or strips. Globally, this type of steel is used in various industries, including automotive manufacturing, construction, shipbuilding, and electronics production. Industrialization trends, widespread use of mechanical equipment, automotive, and construction (both civil and industrial) are the main drivers of long-term growth in Vietnam's flat steel market:

- In Vietnam, the primary application of flat steel is galvanized steel (HRC undergoes cold rolling, pickling, and galvanizing/color coating processes) and steel pipes (HRC undergoes slitting, cold rolling, forming, welding, etc.). These are the main finished products that Vietnamese steel companies are currently capable of producing, accounting for 60% of the annual HRC demand. For higher-quality flat steel products, the market is currently dominated by FDI enterprises such as POSCO and CVSC (a China Steel–Nippon Steel joint venture)—major global steel companies—whose main output is cold-rolled coil (CRC) used in industrial equipment and automotive back panels (steel grades with high requirements, requiring both high strength and good formability to absorb impact forces).
- Before 2020, Formosa was the only steel company in Vietnam capable of producing HRC (with a capacity of 4 million tons/year), but it met only ~30% of domestic demand; the remaining 70% was imported (from Japan, China,…). Recognizing the potential of this segment, HPG invested in the Dung Quat Complex (DQ01 with a capacity of 3 million tons/year and DQ02 with a capacity of 5.6 million tons/year) to: 1/ Fully meet domestic market demand and 2/ Expand export activities (leveraging cost advantages).
- In the long term, with expectations of: 1/ The galvanized steel and steel pipe market maintaining an average output growth rate of 5%/year (driven by domestic construction demand), and 2/ Potential demand for CRC steel grades for industrial production (as FDI enterprises seek to increase localization in Vietnam), we anticipate that domestic HRC demand from 2024–2029 could stabilize at 13 million

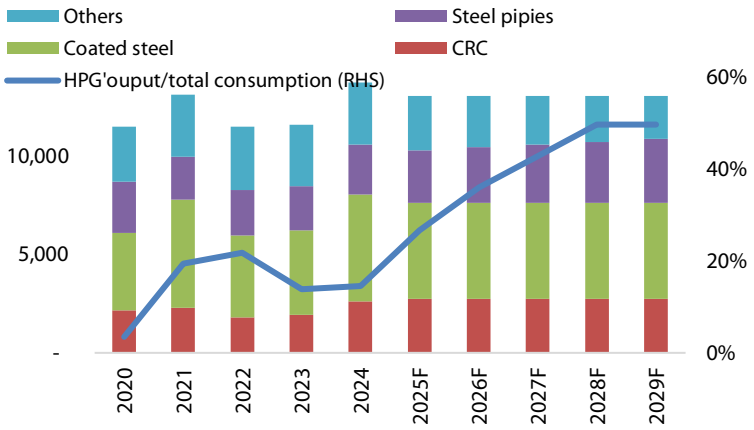
tons/year. The market size is sufficient for the DQ02 plant to operate at ~100% capacity during 2027–2028 (equivalent to meeting 55% of domestic HRC consumption).

Figure 31: Flat steel production process, from hot rolled steel (HRC) to finished products (CRC, CG, ES,…)



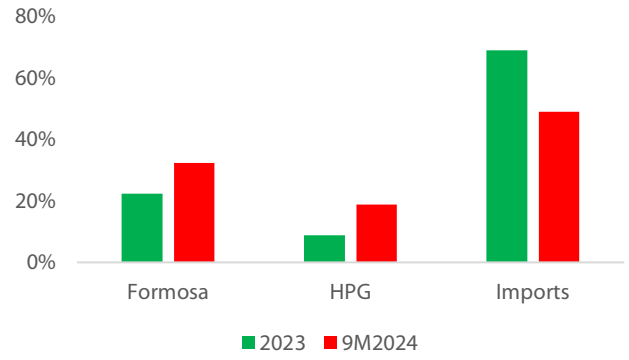
Source: CVSC, RongViet Securities..

Figure 32: Estimated demand for HRC in Vietnam – by purpose (thousand tons)



Source: RongViet Securities estimated (converted: 1 ton of HRC into 1 ton of finished product with a wastage rate of less than 5%)
(*) Other purposes include speculation, temporary import for re-export, industrial production,…

Figure 33: NKG's HRC raw material sources, by supplier, period 2023-9M2024



Source: NKG, RongViet Securities

Export Market: Thanks to cost advantages (as evidenced by the price gap between Vietnamese HRC and HRC from North America and Europe), Vietnamese coated steel manufacturers continue to hold a competitive advantage in key export markets (North America, EU, etc.). However, these markets carry risks related to trade defense policies, particularly as many developed countries have yet to classify Vietnam as a market economy, raising concerns about potential government subsidies. Steel products originating in China could be imported into these countries via Vietnam, triggering investigations into the origin of raw materials and the imposition of anti-dumping duties. For 2023-2024, we have observed tighter trade defense measures in these markets against HRC and downstream products (including coated steel).

With HPG, we highly value the company due to its advantages in: 1/ Technology (referencing *the DQ02 Complex*, which reduces carbon emissions); 2/ Experience in cooperating with EU investigations, making HPG the only company in Vietnam not subject to anti-dumping duties on hot-rolled steel; 3/ HPG avoids

importing raw materials from countries under investigation (China, etc.). Therefore, in the period of 2026–2029 and beyond, as competitive pressure from imported steel—particularly from China—eases, and countries gradually relax steel import policies from Asian nations (including Vietnam), replacing them with carbon border adjustment mechanisms (CBAM, discussed in *The Green Steel – A Trend to Watch section*), HPG will be the first company to benefit from expectations of the export market to loosen; and HRC export volume could reach 2 million tons (during 2028–2029).

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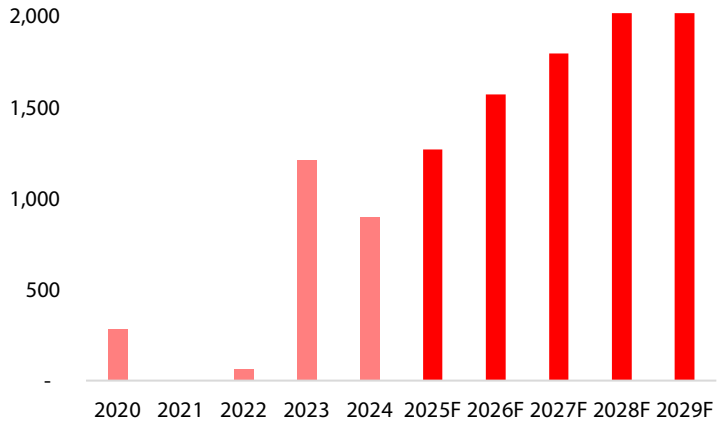
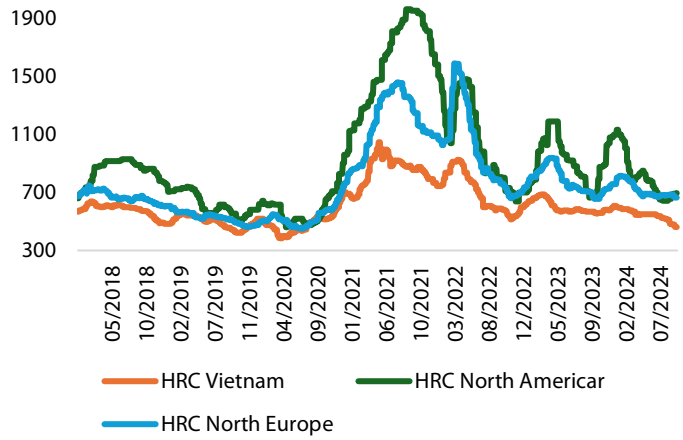
Figure 34: Sales volume of HRC in export markets, 2021-2029 (thousand tons)



Source: VSA, RongViet Securities forecasted

Figure 35: HRC prices in EU, North American, and Vietnamese markets (USD/ton)



Source: Bloomberg, RongViet Securities forecasted

Table 6: Trade defense measures (by importing countries) against HRC products originating from the Vietnamese market, 2023-2024

Market	Year	Details
EU	2024-2026	Import quota of 110 thousand tons/quarter – belongs to the group of "other countries" Imposing anti-dumping tax on HRC imported from Vietnam (except HRC from DQ01 complex – HPG)
India	2024	Anti-dumping investigation initiated on HRC imported from Vietnam
Mexico	2024	Anti-dumping investigation initiated on HRC imported from Vietnam

Source: RongViet Securities

Protective measures and long-term trends

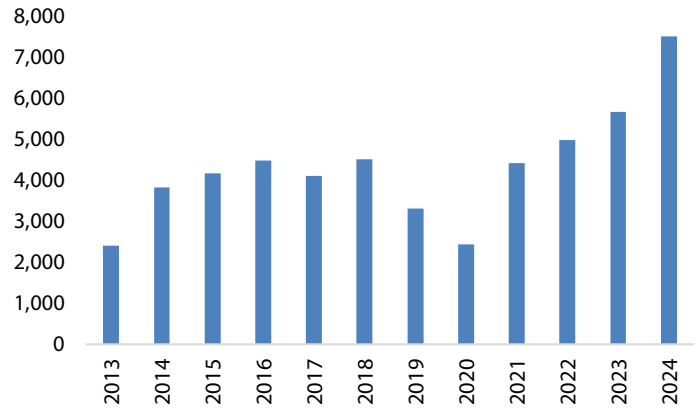
In Vietnam, the Ministry of Industry and Trade (MoIT) has implemented protective measures to reduce the risk of increased steel exports from China during the 2023-2024 period. In June 2024, MoIT issued Decision No. 1535/QD-BCT to initiate an AD investigation on coated steel products from China and South Korea. In February 2025, MoIT concluded its investigation and imposed preliminary anti-dumping duties on hot-rolled steel products (AD20) originating from China, with a temporary duty rate of 27.83% for manufacturers, ensuring the competitiveness of domestic hot-rolled steel producers. We believe that after the temporary application period (120 days), the BCT will officially impose an anti-dumping duty at the temporary rate, with an enforcement period of approximately 4 years (pursuant to Article 12 of the Law on Export and Import Duties, similar to the AD02 case—anti-dumping duties on galvanized steel for 2016–2020). This is a prerequisite for HPG to commence operations at the DQ02 plant (in 2025) and dominate the domestic HRC market (where the primary supply comes from China, with the cost advantage).

For export markets, beyond protective measures like quotas, the Carbon Border Adjustment Mechanism (CBAM) (*)—with its transition phase set to end in December 2025—will be a key concern for Vietnamese steel exporters to the EU. For HPG, the company has completed the implementation of necessary ISO processes (**), providing a basis for calculating reductions in greenhouse gas emissions in its production lines and lowering costs for purchasing carbon credits. We believe that, with advantages from its production lines and new manufacturing technology (detailed in *the DQ02 Complex*), the company will be able to optimize costs while complying with the CBAM mechanism. The US is also a potential market for HPG, but we do not believe it will be a key export market in the near future, given their protectionist trends in the steel industry..

(*) EU will impose a carbon tax on imported goods based on the greenhouse gas emission intensity of the production process in the country of origin. Importers will be responsible for purchasing CBAM certificates and carbon credits based on their emission levels. (Back to page 4)

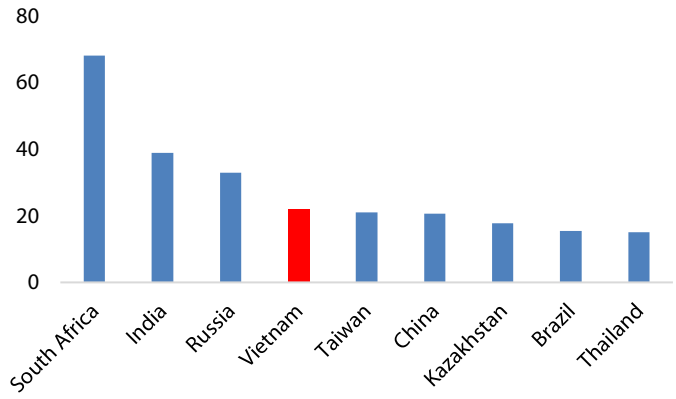
(**) ISO 14064-1:2018 is being implemented to report greenhouse gas emission sources, and ISO 14067:2018 is being used to report the carbon footprint of products during the production process.

Figure 36: Value of Chinese steel imports into Vietnam, 2013-2024 (USD million)



Source: Customs, RongViet Securities

Figure 27: Estimated carbon border tax as a percentage of export value to the EU, for the base metals sector (%)



Source: ADB, Worldbank, RongViet Securities

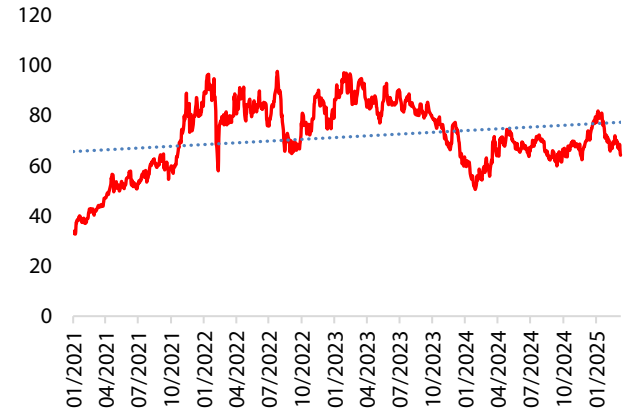
The Green Steel – A Trend to Watch

Large-scale markets like the EU (accounting for ~40-50% of Vietnam's HRC export volume in 2023–2024) are implementing a Tariff Rate Quota (TRQ) system for imported steel, with quotas allocated on a "first-come, first-served" basis or based on historical import records of countries, depending on the specific steel product, and adjusted annually. However, from Q2 2025, the EU has introduced export caps for each country to further tighten steel imports. We believe this quota system will remain in effect until 2025–2026 and be replaced by the CBAM mechanism, where importers purchasing carbon credits (based on emissions), which will reduce the cost advantage of Asian steel producers using BOF technology (including HPG) (***).

With new export market requirements, producers are shifting towards green steel trends: replacing current technologies to reduce carbon emissions (CO2) during production and aiming for net-zero emissions by 2050. Asian steel producers can optimize efficiency in production processes (coking, ironmaking, etc.) to gradually reduce emissions in their production lines before planning more specific investments in entirely new production technologies (hydrogen-based decarbonization, carbon capture and storage, direct reduced iron - DRI, etc.) to completely replace fossil fuels in steel production.

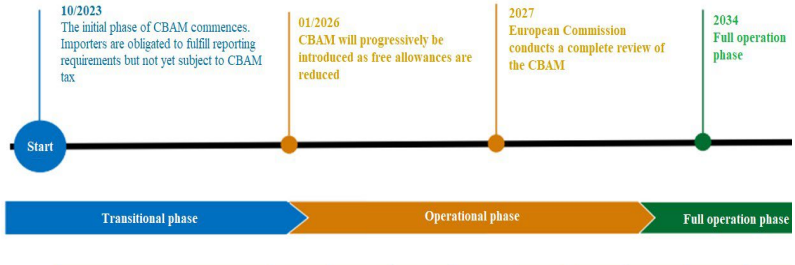
(***) Carbon credits are currently traded at an average of USD80/ton, with BOF producers emitting an average of ~2.3 tons of CO2 per product (according to Worldsteel), equivalent to a carbon credit cost of USD184/ton of product.

Figure 38: Futures contract prices based on EU Allowances (EUA) for the period 2021-2025 (USD/ton)



Source: Bloomberg, RongViet Securities

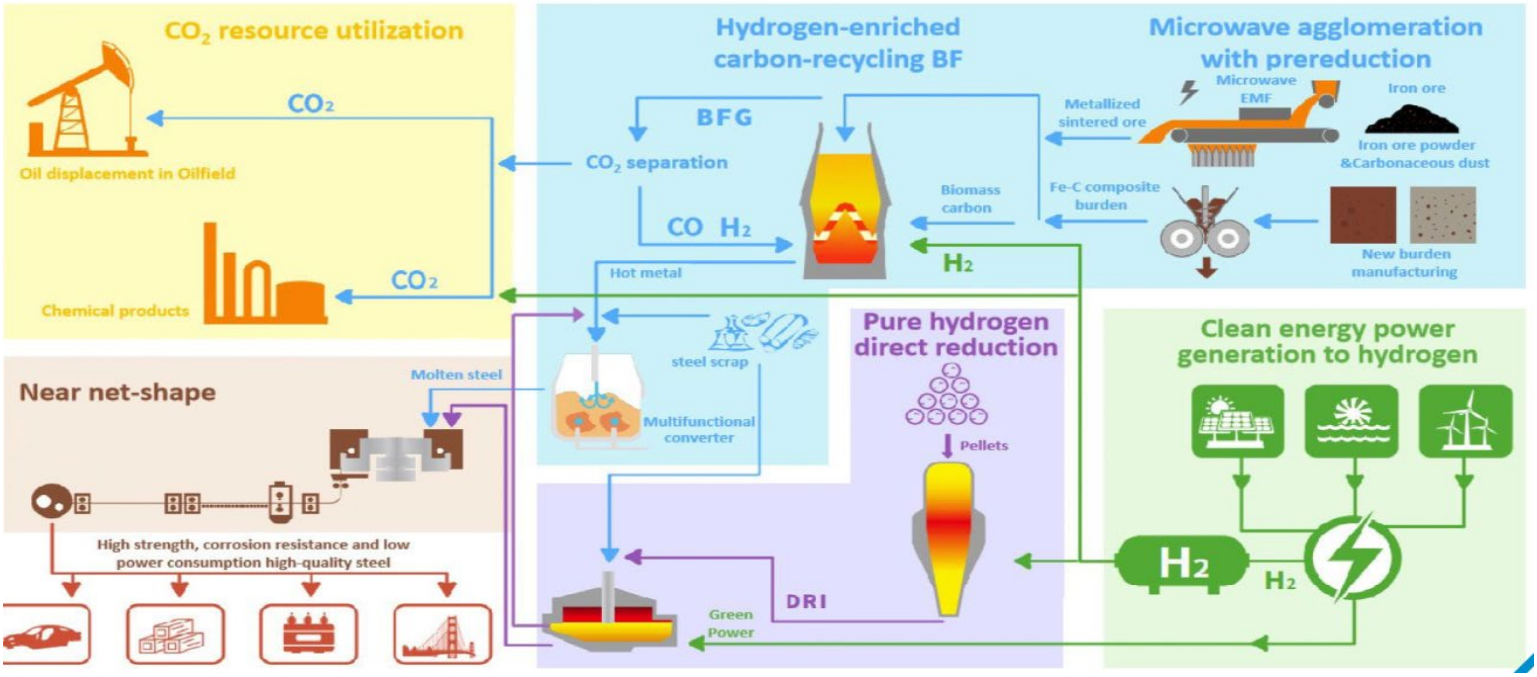
Figure 39: The implementation roadmap for CBAM



Operational phase	2026	2027	2028	2029	2030	2031	2032	2033	2034
Free ETS Allowances (%)	97.5	95	90	77.5	51.5	39	26.5	14	0
CBAM (%)	2.5	5	10	22.5	48.5	61	73.5	86	100

Source: VIOIT, RongViet Securities

Figure 40: New steel production technologies to reduce emissions



Source: RongViet Securities

DUNG QUAT 02 COMPLEX – AFFIRMING THE LEADING POSITION

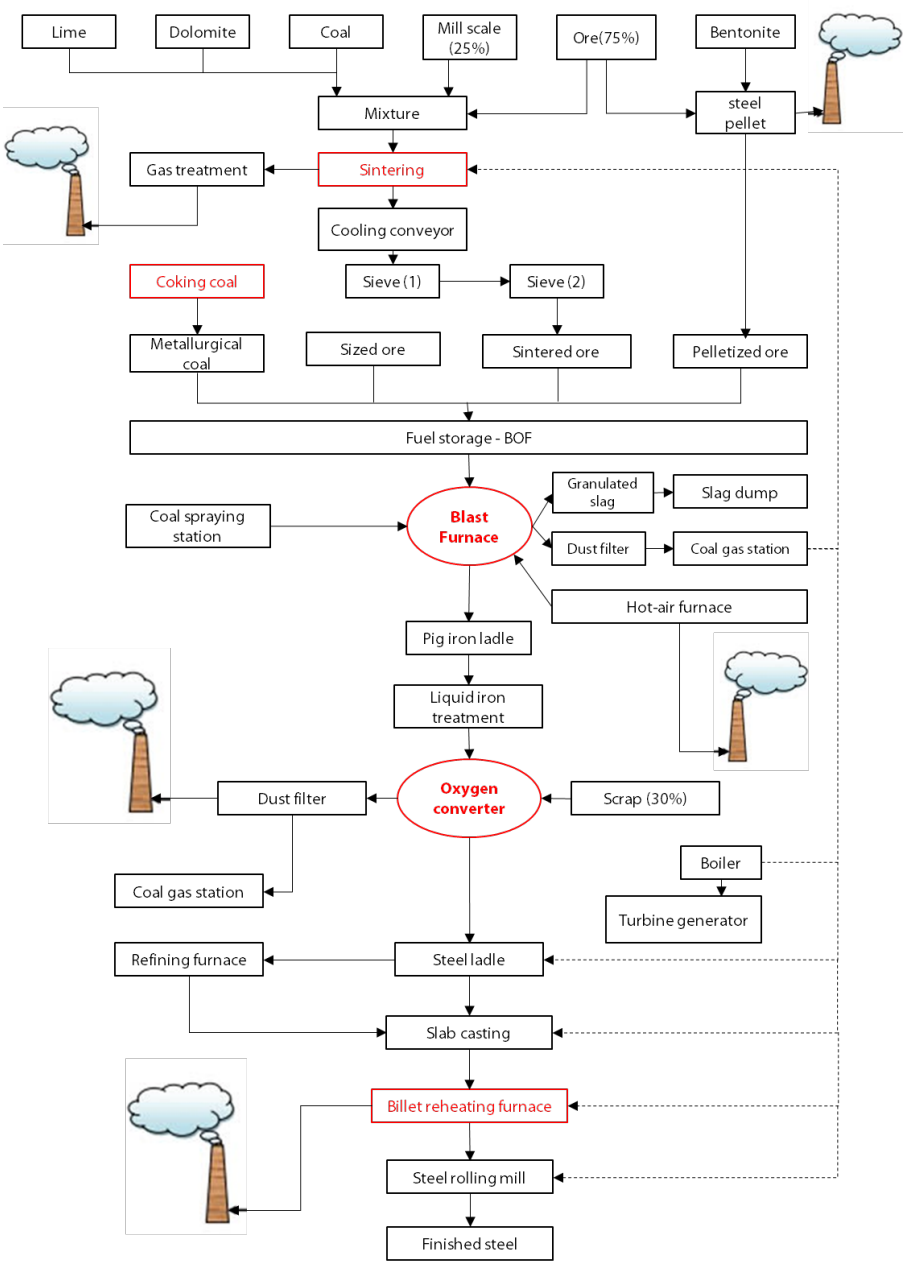
During 2022–2023, when the DQ01 plant operated at relatively high efficiency (above 80%) and HPG's HRC products were well-received in both domestic and export markets (with the southern market and exports accounting for over 70% of sales volume), the company accelerated the construction and completion of the DQ02 plant (5.6 million tons/year) to capture market share (for both domestic and export markets), with an expected domestic output ratio of 50-600% of total consumption. However, in 2024, the EU's quota control measures (capping exports for each country in the "other countries" group at ~110,000 tons/quarter) created challenges for the export channel. The imposition of AD20 (anti-dumping duties on HRC from China) has reshaped DQ02's development strategy to focus on the domestic market.

In the long term, this is a sound strategy for the company, as within the steel industry value chain, HRC is not only used in construction (for galvanized steel production) but also has extensive applications in industrial manufacturing (machinery, household appliances, automotive, shipbuilding, etc.) and is less affected by economic cycles compared to construction steel. According to data on steel consumption in China (a developing country with the world's largest steel consumption), steel used for industrial manufacturing accounts for 40% of total consumption, highlighting the importance of this sector for steel producers.

Compared to DQ01, the DQ02 plant has made significant advancements in product scale and production technology. We highly value the company's strategic vision, which not only focuses on optimizing production costs (maintaining short-term competitive advantages) but also reduces carbon emissions in its production lines (creating long-term competitive advantages):

- **Total investment:** 70 trillion VND, with Phase 1 and Phase 2 expected to commence operations in Q1 and Q4 of 2025, respectively.
- **Products:** The project produces hot-rolled coil (HRC) with a capacity of 5.6 million tons/year, including steel grades for construction (from ULC to MC; output of 4.6 million tons/year) and an expansion into high-carbon steel grades (HC and HSLA; output of 1 million tons/year).
- **Production technology:** The company continues to use integrated steelmaking technology, with: 1/ Coke Dry Quenching (CDQ) technology, using nitrogen to cool-down coke (instead of water), eliminating toxic wastewater and reducing CO2 emissions; 2/ Continuous Casting-Rolling technology, which further reduces CO2 emissions. Based on technical specifications (particularly material consumption) of DQ02 compared to DQ01, we note that DQ02 consumes fewer raw materials (production costs are 10-15% lower), aiming to reduce CO2 emissions per product (maintaining a competitive edge in export markets) and produce high-strength steel grades (starting with traditional high-strength low-alloy – HSLA).
- **Output expectations:** In 2025 (the first year of operation), we expect DQ02 (Phase 1) to operate at ~70% efficiency (equivalent to 1.9 million tons of output), with 80% of the output serving domestic demand (supported by the AD20 anti-dumping duty policy). For 2026–2029, after Phase 2 begins operations, HPG will improve plant efficiency, reaching 100% by 2029 (equivalent to a CAGR of 42% for output growth from 2025–2029), driven by: 1/ A strong position in the domestic market, 2/ Advantages in export markets (new production technology reduces carbon emissions to meet requirements in major markets).
- Long-term outlook: With its technological production advantages, HPG is well-positioned to scale up the production of high-strength steel grades, laying the foundation for a specialized steel rolling project to serve urban and high-speed railway tracks (planned to be located near DQ02 to leverage location and infrastructure advantages).

Figure 41: Production process of DQ02 Complex



Source: HPG, RongViet Securities

Risks from large-scale operations: During 2022–2023, when the steel market faced headwinds (with both finished product prices and sales volume declining due to economic cycles), HPG, for the first time, implemented abrupt production cuts (shutting down blast furnaces) to reduce fixed costs and cope with market difficulties:

- Blast furnace shutdowns (2022): By late 2022, HPG temporarily halted operations of 4 out of 7 blast furnaces to minimize financial losses and sustain production amid challenging conditions, with 3 furnaces at the Dung Quat Complex and 02 in Hai Duong, suspended from November–December 2022.
- Blast furnace restarts (2023): As the steel market began recovering from mid-2023, HPG gradually restarted the blast furnaces, specifically reopening 4 furnaces (previously shut down in 2022) between April and October 2023. By Q4 2023, all 07 blast furnaces had fully resumed operations.

With the commissioning of DQ02, increasing the total number of blast furnaces to 9, HPG has the potential to boost output but may face operational risks (due to expanded production scale) if the steel market encounters short-term difficulties—driven by the cyclical nature of the industry and higher-than-expected steel price volatility. We believe HPG will proactively implement furnace shutdowns (similar to 2022–2023) if the steel market experiences sudden fluctuations.

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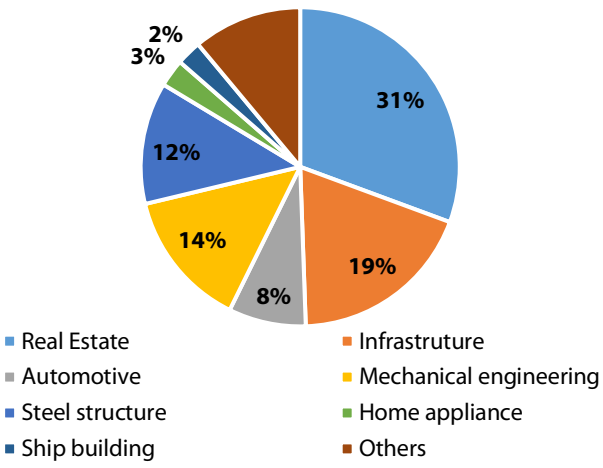
Table 7: Technical parameters comparision between Dung Quat 01 and 2 Complexes

Parameters	DQ01	DQ02	Comments
Capacity of each blast furnace (m3)	1,080	2,500	Larger blast furnace capacity increases productivity, saves energy, and reduces production costs per ton of pig iron. Emissions per ton of pig iron are typically lower due to improved energy efficiency.
Coal consumption (tons of coal/ton of product)	0.55	0.5	The production cost of the DQ02 plant (per ton of finished product) is estimated to be ~10% lower than that of the DQ01 plant. Lower coal and electricity consumption compared to DQ01, contributing to reduced emissions per ton of pig iron.
Iron ore consumption (tons of ore/ton of product)	1.2	1.04	
Scrap steel consumption (tons of steel/ton of product)	0.24	0.27	
Electricity consumption (kwh/ton of product)	0.6	0.4	

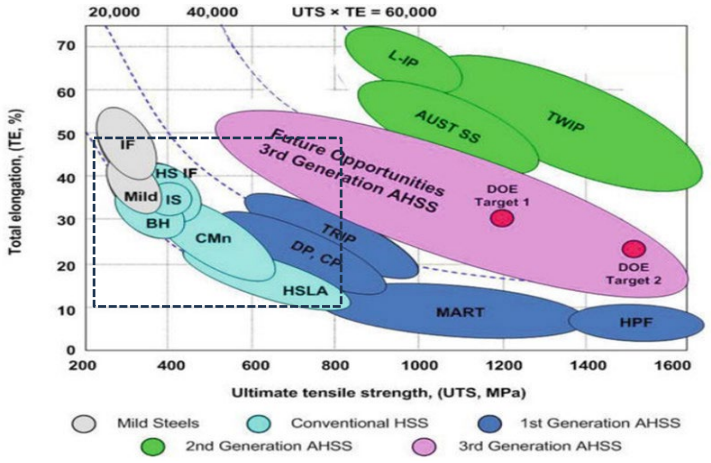
Source: RongViet Securities estimated, based on Environmental Impact Assessment Report

Figure 42: Steel consumption by segment in China in 2023 (%)



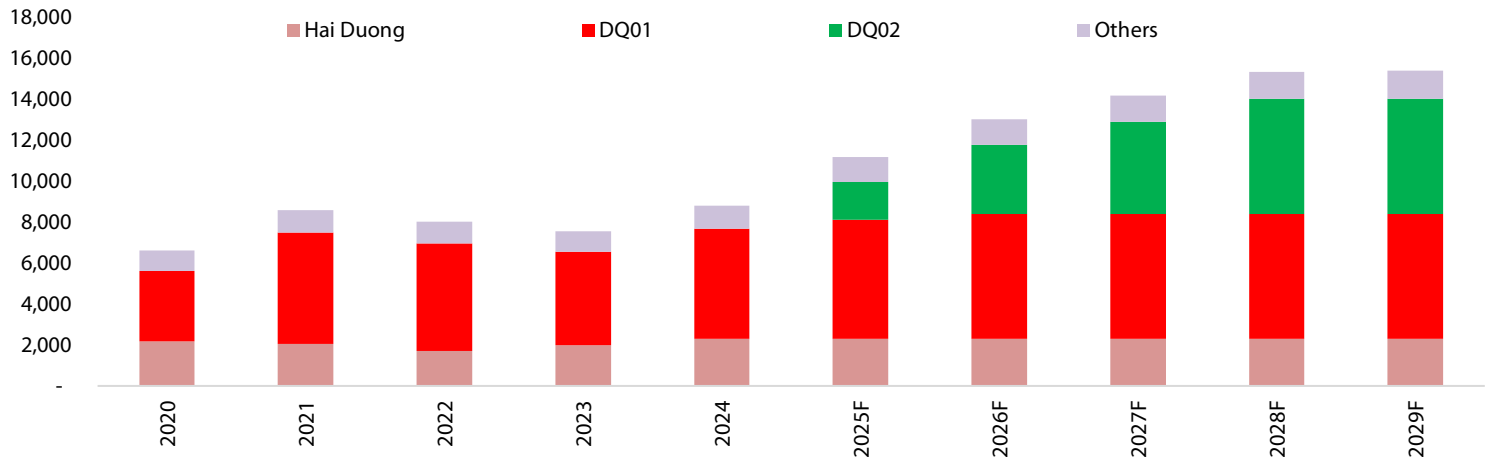
Source: Mysteel, RongViet Securities

Figure 43: Relationship between ultimate tensile strength (UTS) and total elongation (TE) of high strength steel generations (Banana diagram) – HPG produces steel grades in the conventional high strength steel region



Source: Chung JY, Kwon O. Development of high performance auto steels, RongViet Securities

Figure 44: Projected production volume of HPG by factory, 2020-2029 (thousand tons)

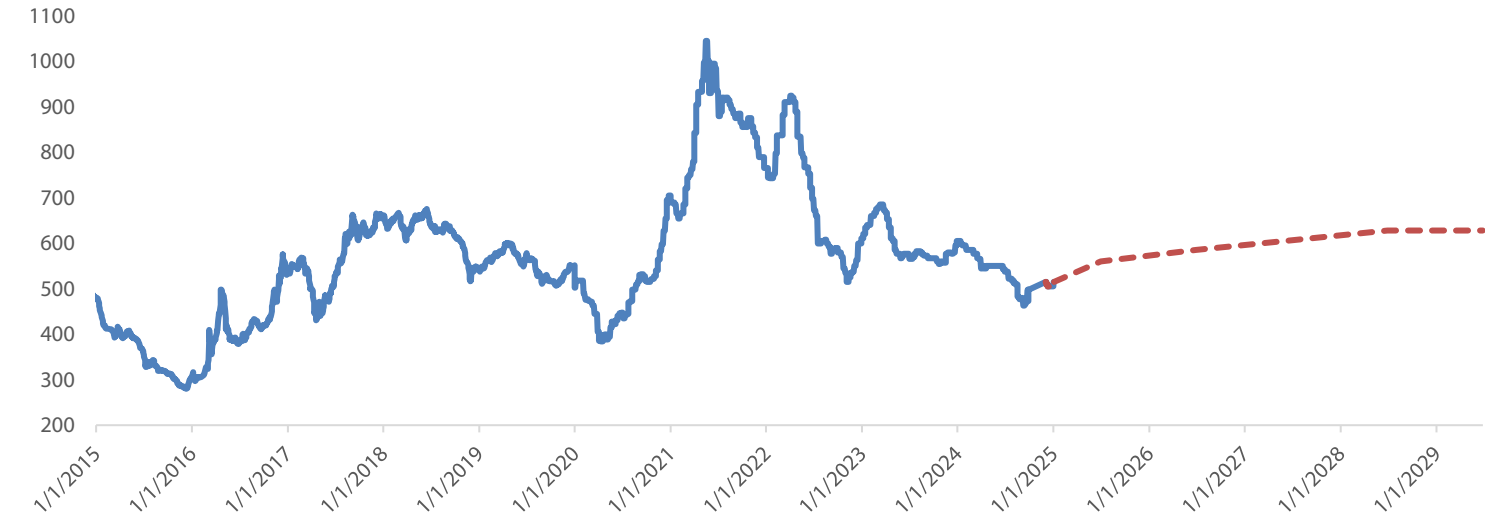


Source: HPG, RongViet Securities forecasted

STEEL PRICE RECOVERY CYCLE – A BRIGHTER PROSPECT (Back to Page 5)

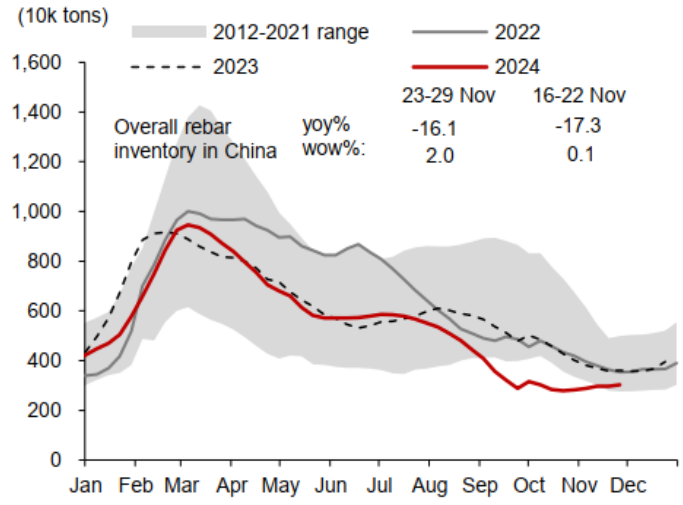
Finished product prices – expected to bottom out and recover: Currently, HRC is trading at USD500/ton, a low level within the 2020–2024 period, primarily due to: 1/ Pressure from Chinese steel exports to various markets (amid weak domestic demand), leading steel producers to sell below cost, and 2/ Increased inventory stockpiling before anti-dumping investigations (in export markets) take effect. However, we expect these bottlenecks to gradually ease from 2025 onward (similar to the 2015–2016 period) as: 1/ In China, economic recovery measures and production cuts at BOF furnaces in 2025 (to counter the impact of protectionist policies in other countries) will reduce steel exports to global markets, and 2/ Domestic steel consumption demand recovers. In our base-case scenario, we anticipate Vietnam's HRC prices to maintain an average growth rate of 3%/year, with HRC prices potentially reaching an average of USD630/ton by 2028—comparable to the price level in 2018–2019.

Figure 45: HRC prices, USD/ton, 2015-2024 (actual) and 2025-2029 (assumed)



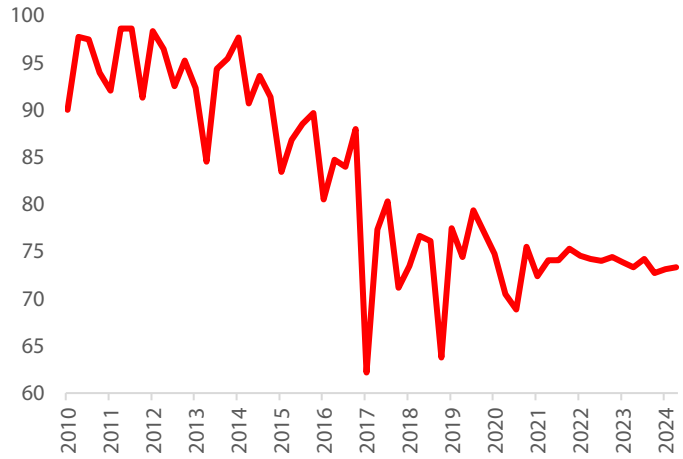
Source: Bloomberg, RongViet Securities forecasted

Figure 46: Construction steel inventory levels in China (thousand tons) – lowest levels during the period 2012-2024



Source: Huatai Research, RongViet Securities

Figure 47: Ultilization rate of steel mills in Tangshan, 2010-2024



Source: Bloomberg, RongViet Securities

Table 8: Chinese Government's Real Estate Market Support Policies for the perod 2024-2025

Policies	Details
Demand Side: Lower Mortgage Rates and Lower Minimum Payments	• Lower interest rates for new mortgages from 31/10 • Reduce minimum down payment to 15% for both first and second home purchases • Increase PBOC's financial support ratio from 60% to 100%, for RMB300 billion affordable housing re-lending program,
Demand side: Local government policies	• Issue special local government bonds to purchase unsold land and houses for affordable housing • Renovate dilapidated housing (~1 million units) • Enable 4.5 million new citizens and young people to move into public housing by the end of 2024
Supply side: Increase project funding	• Expanding the "white list" to support real estate projects to RMB 4 trillion
Demand side (indirect): Monetary policy easing	• Rate Cut: 30bps cut in medium-term lending rate (MLF), 25bps cut in 1-year and 5-year loan prime rate (LPR) • Adopt new swap facility worth RMB500 billion for capital market

Source: DBS, RongViet Securities

Raw material prices – Iron ore recovers due to demand, coking coal cools down: In an industry highly sensitive to input raw material prices (with over 60% of production costs coming from raw materials—coking coal and iron ore), HPG's selling prices and gross profit margins closely correlate with raw material price fluctuations (typically with a 2–3 month lag due to steel mills' inventory accumulation cycles). For the 2025–2029 period, we expect a divergence in the recovery outlook for raw material prices:

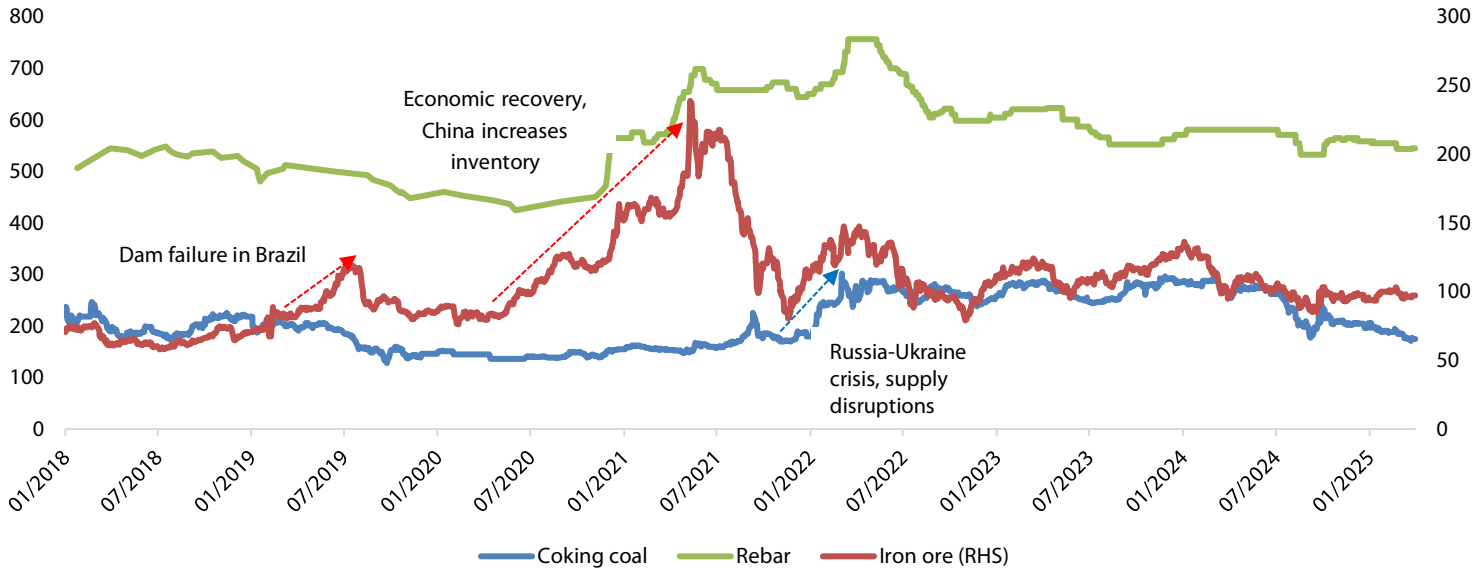
- Iron ore: In line with expectations for finished product price recovery, iron ore prices (an irreplaceable material in blast furnace steel production) are projected to recover at an average rate of 2%/year, potentially reaching an average of USD107/ton by 2028–2029—comparable to the stable iron ore price period of 2019–2020.
- Coking coal: We believe coking coal prices will not recover as strongly as iron ore due to: 1/ A trend toward reducing and replacing coking coal with alternative materials (in steelmaking technologies) to meet green steel and carbon emission reduction requirements, and 2/ Improved supply

(particularly from Russia, post the Russia-Ukraine conflict), which will meet long-term demand. In our base-case scenario, we expect coking coal prices to decline by an average of 2%/year, reaching USD200/ton by 2028–2029.

Raw material price volatility risks: As HPG does not yet control its raw material sources (coking coal and iron ore are largely imported), the company is exposed to raw material price volatility risks, which can impact its gross profit margin. However, after the 2021–2022 period—when the gross profit margin (GPM) dropped sharply to 12% in 2022 (due to a 58% YoY coking coal price surge) from a high-level of 27.5% in 2023—HPG has proactively used derivatives (buying/selling futures contracts) to hedge against raw material price fluctuations. Additionally, with HPG's dominant position in the domestic market (expected to lead in market share for both construction steel and HRC), the company has sufficient leverage to pass on raw material price volatility to selling prices, thereby maintaining its GPM. Several factors could lead to raw material price fluctuations exceeding forecasts, including:

- Iron ore: Significant price fluctuations (over 10%) are largely driven by expectations of demand from China—the world's largest steel consumer—with sharp increases in 2021 and 2023. In 2019, a sudden supply disruption due to weather events (a dam collapse in Brazil, a major iron ore exporter) occurred, but iron ore prices stabilized within two months due to supply from China and Australia. In the future, inventory stockpiling (in China) or supply disruptions (from Australia, Brazil, etc.) could cause unexpected iron ore price volatility.
- Coking coal: Coking coal prices were relatively stable before 2022 (around USD150/ton), with supply primarily from Australia, Mongolia, and Russia. However, since 2022, prices have surged (exceeding USD200/ton) due to the Russia-Ukraine conflict disrupting Russian supply, while Australia has trended toward reducing export output due to environmental concerns. In the future, supply disruptions (from Australia, Russia, etc.) could lead to unexpected coking coal price volatility.

Figure 48: Correlation between HPG's dealer price and raw material price (USD/ton), along with strong fluctuations in raw material price



Source: VSA,Bloomberg, RongViet Securities

OTHER BUSINESS ACTIVITIES – AGRICULTURE AND REAL ESTATE (Back to page 5)

Agriculture: HPG entered the agriculture sector in 2015 (establishing Hoa Phat Agriculture Development JSC) with the goal of modernizing Vietnamese agricultural production and ensuring safe, high-quality food products. By 2023–2024, HPG had scaled up its production to 600,000 tons/year (in animal feed) and 750,000 head/year (pigs and cattle), becoming one of Vietnam's largest agricultural companies. In relative terms, agriculture accounted for 5% of consolidated revenue and 9% of after-tax profit for HPG in 2024,

indicating that the company's profit and cash flow remain heavily reliant on its core business—steel production. For the 2025–2029 period, we expect agriculture revenue to maintain a CAGR of 8%/year, consistent with the company's position in the industry**.**

Table 9: HPG's agricultural operations scale

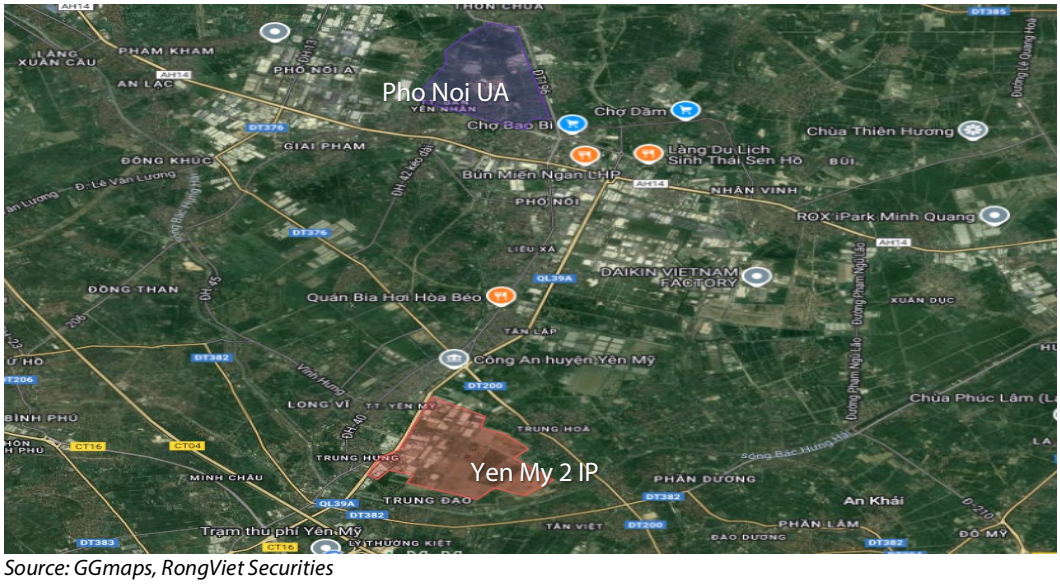
Sector	Position	Scale
Animal feed production	Factories in Hung Yen, Dong Nai	600,000 ton/year
Pig farming	9 livestock regions, concentrated in the Northern region	600,000 head/year
Cattle farming	3 livestock regions (Thai Binh, Dong Nai, Quang Binh)	150,000 head/year
Poultry farming	Farms in Phu Tho	300 mn eggs/year

Source: HPG, RongViet Securities

Real Estate: HPG has also ventured into real estate development (residential and industrial parks), with notable projects including:

- Residential Real Estate: Prior to 2024, HPG primarily developed mid-scale residential projects in Hanoi, such as the Mandarin Garden 1 & 2 projects (total area of 3.8 hectares). In the long term, HPG plans to develop the Pho Noi Urban Area (North of Highway 5 Project) with a scale of 300 hectares (including malls, apartments, villas, etc.). However, the project is currently facing legal challenges (the Government Inspectorate is reviewing the project's investment policy), and we have not yet included it in our forecast model.
- Industrial Park: HPG has experience developing mid-scale industrial parks, mainly in northern Vietnam, such as Pho Noi A Industrial Park (565 hectares) and Yen My II Industrial Park (97.5 hectares), both with occupancy rates above 90%. In the long term, HPG aims to expand its planned industrial park land bank to over 1,133 hectares, focusing on Hung Yen and Ha Nam provinces. Notably, the Yen My II Industrial Park (216 hectares) is undergoing land clearance and infrastructure development. We expect this industrial park to be fully occupied by 2027–2028, generating approximately 3,000 billion VND in revenue for the company (based on an average rental price of USD120/m^2).

Figure 49: Project location - Yen My 2 Industrial Park and Pho Noi Urban Area



Source: GGmaps, RongViet Securities

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APPENDIX - COMPARABLE COMPANIES IN THE STEEL MANUFACTURING INDUSTRY

In this report, we use five companies specializing in steel production, with similar market positions to HPG, as references for analysis and forecasting.

China Steel (2002TT) is the largest integrated steel producer in Taiwan and one of the leading steel companies in Asia. Its crude steel production capacity is approximately 10 million tons/year (as of 2023). Its primary market is Taiwan, supplying steel for construction, automotive, shipbuilding, and electronics industries. The company also exports to Vietnam (via Formosa Ha Tinh), China, Japan, South Korea, Southeast Asia, and markets in Europe and the United States**.**

Jiangsu Shagang Group (002075 CH), established in 1975 in Jiangsu, China, is one of the top three private steel producers in China. After acquiring four steel companies since 2006, Shagang has significantly expanded, with key products including rebar, wire rods, steel billets, hot-rolled coils, stainless steel, and galvanized steel. Shagang's steel is widely used in aviation, construction, infrastructure, petrochemicals, automotive, and food packaging industries**.**

Hyundai Steel (004020 KS), established in 1953, is South Korea's first and second-largest steel producer (holding 29% of the total production market share) and part of the Hyundai Group. The company is renowned for its H-Solution and H-Core offerings, providing material solutions for the automotive industry and earthquake-resistant steel. With a diverse product portfolio including H-beams, rails, rebar, hot-rolled coils, and ERW pipes, Hyundai Steel primarily serves the automotive, shipbuilding, and construction industries**.**

JFE Steel (5411 JP) is Japan's second-largest steel producer (after Nippon Steel) and ranks 14th globally in steel output. It is one of the world's leading steel manufacturers, with a crude steel production capacity of approximately 30 million tons/year.

Nippon Steel (5401 JP) is Japan's largest steel producer and the fourth-largest globally in terms of crude steel output, with a production capacity of approximately 40 million tons/year**.**

Table 10: Flat steel manufacturers in Asia – Industry average calculated from the five companies mentioned above.

Steel producers	2019	2020	2021	2022	2023	2024	Average peers
EV/EBITDA	**15%**	**15%**	**15%**	**15%**	**20%**	**20%**	**Proportion**
Mean	50.8	13.1	4.9	7.2	11.8	14.6	16.7
Median	10.0	12.9	4.7	6.0	6.3	6.7	7.6
P/E	**15%**	**15%**	**15%**	**15%**	**20%**	**20%**	**Proportion**
Mean	56.1	147.0	5.3	10.8	60.1	51.4	55.2
Median	24.4	34.6	3.4	4.9	9.8	5.9	13.2
P/B	**15%**	**15%**	**15%**	**15%**	**20%**	**20%**	**Proportion**
Mean	0.9	1.3	0.9	0.7	0.8	0.9	0.9
Median	0.5	0.3	0.4	0.4	0.6	0.6	0.5

Source: Bloomberg, RongViet Securities

APPENDIX – FINANCIAL ANALYSIS AND ASSUMPTIONS FOR THE PERIOD 2025-29

Table 11: Forecasted revenue by markets (bn VND) (Back to page 4)

Sales output (thousand ton)	2021	2022	2023	2024	2025F	2026F	2027F	2028F	2029F
Construction steel	4,920	4,377	3,722	4,765	5,200	5,490	5,490	5,490	5,490
Growth YoY	0%	-11%	-15%	28%	9%	6%	0%	0%	0%
HRC	2,552	2,564	2,813	2,900	4,748	6,260	7,380	8,500	8,500
Growth YoY	272%	0%	10%	3%	64%	32%	18%	15%	0%
Total output (thousand ton)	**8,575**	**8,014**	**7,546**	**8,791**	**11,147**	**12,988**	**14,150**	**15,314**	**15,361**
Growth YoY	29%	-7%	-6%	16%	27%	17%	9%	8%	0%
Revenue – Steel	140,036	133,965	111,796	129,824	159,622	194,507	221,608	251,175	260,474
Growth YoY	84%	-4%	-17%	16%	23%	22%	14%	13%	4%
Revenue – Agriculture	7,966	6,758	6,153	6,909	7,844	8,436	9,083	9,789	10,560
Growth YoY	-20%	-15%	-9%	12%	14%	8%	8%	8%	8%
Revenue – RE	1,677	436	1,004	2,123	1,259	1,276	923	-	-
Growth YoY	110%	-74%	130%	111%	-41%	1%	-28%		
Total Revenue	**149,680**	**141,159**	**118,953**	**138,855**	**168,725**	**204,219**	**231,614**	**260,964**	**271,034**
Growth YoY	66%	-6%	-16%	17%	22%	21%	13%	13%	4%
Output by products	**2021**	**2022**	**2023**	**2024**	**2025F**	**2026F**	**2027F**	**2028F**	**2029F**
Construction steel	57%	55%	49%	54%	47%	42%	39%	36%	36%
HRC	30%	32%	37%	33%	43%	48%	52%	56%	55%
Output by plants	**2021**	**2022**	**2023**	**2024**	**2025F**	**2026F**	**2027F**	**2028F**	**2029F**
Others	100%	100%	100%	100%	83%	74%	68%	63%	64%
DQ02	0%	0%	0%	0%	17%	26%	32%	37%	36%

Source: *HPG, RongViet Securities forecasted*

Table 12: Forecasted GPM by segments (Back to page 5)

Assumptions for selling & material price	2021	2022	2023	2024	2025F	2026F	2027F	2028F	2029F
Selling price – construction steel (VND/kg)	16,726	17,295	14,568	14,714	15,155	15,610	16,078	16,560	16,560
Growth YoY	50%	3%	-16%	1%	3%	3%	3%	3%	0%
Selling price – HRC (USD/ton)	856	775	550	530	550	589	610	631	631
Growth YoY	50.0%	-9.5%	-20.0%	-4.0%	3%	3%	3%	3%	0%
Iron ore (USD/ton)	157	133	104	100	102	104	106	108	110
Growth YoY	52%	-15%	-22%	-4%	2%	2%	2%	2%	2%
Coking coal (USD/ton)	220	348	296	231	225	219	214	208	208
Growth YoY	85%	58%	-15%	-22%	-3%	-3%	-3%	-3%	0%
Total COGS	**(108,571)**	**(124,646)**	**(106,015)**	**(120,358)**	**(152,139)**	**(183,160)**	**(205,045)**	**(228,002)**	**(235,980)**
Growth YoY	*52%*	*15%*	*-15%*	*14%*	*26%*	*20%*	*12%*	*11%*	*3%*
Total Gross Profit	**41,108**	**16,763**	**12,938**	**18,498**	**28,527**	**35,514**	**42,962**	**51,432**	**54,236**
GPM (%)	27%	12%	11%	13%	16%	16%	17%	18%	19%
Peers average - GPM	**2021**	**2022**	**2023**	**2024F**	**2025F**	**2026F**	**2027F**	**2028F**	**2029F**
Mean	15%	10%	8%	8%					
Median	15%	9%	8%	8%					

Source: *HPG, Bloomberg, RongViet Securities forecasted. Notes: projected gross margins are our assumptions, not HPG's sources.*

Table 13: SG&A cost/revenue (Back to page 6)

	2021	2022	2023	2024	2025F	2026F	2027F	2028F	2029F
SG&A cost/revenue	2.3%	2.6%	2.7%	2.8%	2.7%	2.7%	2.7%	2.7%	2.7%

Source: HPG, RongViet Securities forecasted

Table 14: Forecasted NPM (Back to page 6)

Net Profit	**2021**	**2022**	**2023**	**2024**	**2025F**	**2026F**	**2027F**	**2028F**	**2029F**
Total HPG	34,478	8,484	6,835	12,019	18,699	24,574	30,782	38,703	42,377
Growth YoY	*157%*	*-75%*	*-19%*	*76%*	*56%*	*31%*	*25%*	*26%*	*9%*
NPM	**2021**	**2022**	**2023**	**2024**	**2025F**	**2026F**	**2027F**	**2028F**	**2029F**
Total HPG	23%	6%	6%	9%	10%	11%	12%	14%	15%

Source: HPG, RongViet Securities forecasted

Table 15: Projected efficiency ratios (Back to page 7)

Working capital	**2021**	**2022**	**2023**	**2024**	**2025F**	**2026F**	**2027F**	**2028F**	**2029F**
Days sales outstanding	17	23	32	24	20	23	24	24	25
Days invetories on hand	115	112	119	123	114	109	114	114	118
Days payables outstanding	71	61	50	51	51	53	55	55	57

Source: HPG, RongViet Securities forecasted

Table16: HPG's cash dividend (Back to page 7)

	2021	2022	2023	2024	2025F	2026F	2027F	2028F	2029F
Cash dividend (VND/share)	500	500	-	-	-	500	500	1000	1000
Dividend yield	1%	3%				2%	2%	4%	4%

Source: HPG, RongViet Securities forecasted

VND Bn

INCOME STATEMENT	FY2023	FY2024	FY2025F	FY2026F
Revenue	**118,953**	**138,855**	**180,667**	**218,673**
COGS	106,015	120,358	152,139	183,160
Gross profit	**12,938**	**18,498**	**28,527**	**35,514**
Selling expense	1,961	2,337	2,891	3,499
Administrative expense	1,307	1,546	1,987	2,405
Finance income	3,173	2,619	2,690	3,240
Finance expenses	5,192	3,967	5,216	5,406
Other income	142	426	142	142
Gain from j,t ventures	*0*	*0*	*0*	*0*
PBT	**7,793**	**13,693**	**21,265**	**27,585**
Prov, of Tax	992	1,673	2,566	3,010
Minority's Interest	-35	0	0	0
PAT to Equity S/H	**6,835**	**12,019**	**18,699**	**24,574**
EBIT	9,669	14,615	23,649	29,609
EBITDA	16,443	21,588	32,738	38,695

%

FINANCIAL RATIOS	FY2023	FY2024	FY2025F	FY2026F
Growth				
Revenue	-34.2%	16.7%	30.1%	21.0%
EBITDA	-49.8%	31.3%	51.6%	18.2%
EBIT	-59.1%	51.1%	61.8%	25.2%
PAT	-63.4%	75.8%	55.6%	31.4%
Total assets	-25.4%	19.5%	12.1%	10.8%
Total equity	-22.1%	11.3%	15.4%	15.1%
Profitability				
Gross margin	10.9%	13.3%	15.8%	16.2%
EBITDA margin	13.8%	15.5%	18.1%	17.7%
EBIT margin	8.1%	10.5%	13.1%	13.5%
Net margin	5.7%	8.7%	10.4%	11.2%
ROA	3.6%	5.4%	7.4%	8.8%
ROCE	6.7%	10.5%	14.2%	16.2%
ROE	8.2%	9.7%	14.5%	16.4%
Efficiency				
Receivables turnover	11.1	18.2	15.3	14.3
Inventories turnover	3.1	2.6	3.1	3.0
Payables turnover	7.0	6.5	6.3	6.3
Liquidity				
Current	1.2	1.2	1.2	1.4
Quick	0.7	0.5	0.7	0.8
Finance Structure				
Total debt/equity	63.6%	72.5%	65.3%	57.9%
ST debt/equity	53.5%	48.9%	48.3%	45.6%
LT debt/equity	10.1%	23.7%	17.0%	12.2%

VND Bn

BALANCE SHEET	FY2023	FY2024	FY2025F	FY2026F
Cash	12,267	6,888	16,260	17,693
Short term investment	22,162	18,975	22,464	35,581
Account receivables	10,702	7,622	11,774	15,296
Inventories	34,504	46,521	48,847	60,443
Other short-term assets	3,081	7,073	7,427	7,798
Fixed tangible asset	98,434	131,458	138,743	135,685
Fixed intangible asset	287	248	228	210
Long term financial investment	40	137	137	137
Other long-term assets	6,259	5,474	5,747	6,035
Total asset	**187,736**	**224,395**	**251,626**	**278,876**
Account payables				
Customers pay in advance	15,156	18,593	24,267	29,215
Short term debt	54,982	55,883	63,700	69,303
Long term debt	10,399	27,080	22,428	18,575
Other non-current liabilities	3,034	7,258	7,404	7,552
Bonus and welfare fund	1,375	1,027	1,598	2,100
Science and technology funds	0	0	0	0
Total liabilities	**84,946**	**109,842**	**119,397**	**126,745**
Common stock and APIC	61,359	63,963	67,165	67,165
Treasury stock (enter as -)	0	0	0	0
Retained earnings	40,593	49,576	63,956	83,858
Other comprehensive income	0	0	0	0
Inv, and Dev, Fund	818	816	816	816
Total equity	**102,771**	**114,355**	**131,936**	**151,838**
Minority interests	**66**	**293**	**293**	**294**

VALUATION RATIO	FY2023	FY2024	FY2025F	FY2026F
EPS (VND/share)	1,105	1,766	2,748	3,611
P/E (x)	23.7	13.5	10.2	7.8
BV (VND/share)	16,067	17,878	20,627	23,739
P/B (x)	1.6	1.6	1.4	1.2
DPS (VND/share)	0	0	0	500

VALUATION MODEL	Weight	Price	Average
FCFF	50%	34,700	17,300
P/B	50%	33,100	16,500
Target price (VND/Share)			**33,800**

VALUATION HISTORY	Target price	Recommend	Period
05/2025	33,800	BUY	Long-term

Company Report

This report is created for the purpose of providing investors with an insight into the discussed company that may assist them in the decision-making process. The report comprises analyses and projections that are based on the most up-to-date information with the objective that is to determine the reasonable value of the stock at the time such analyses are performed. Through this report, we strive to convey the complete assessment and opinions of the analyst relevant to the discussed company. To send us feedbacks and/or receive more information, investors may contact the assigned analyst or our client support department.

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Ratings	BUY	ACCUMULATE	REDUCE	SELL
Total Return including Dividends in 12-month horizon	>20%	5% to 20%	-20% to -5%	<-20%

In some cases, we do not provide specific buy/sell recommendations but only offer some reference valuations to give investors additional information, classified under the **OBSERVE** recommendation

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