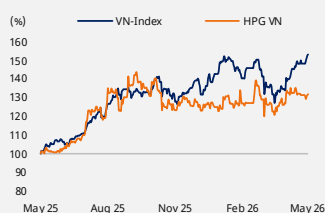


(Maintain)	Buy
Target Price (VND)	35,000
Share Price (5/8/26, VND)	27,850
Expected Return	25.6%

OP (26F, VNDbn)	28,366
Consensus OP (26F, VNDbn)	-
EPS Growth (26F, %)	41.6%
Market EPS Growth (26F, %)	-
P/E (26F, x)	12.5
Market P/E (x)	1,909
VNIndex	213,762
Market Cap (VNDbn)	7,675
Shares Outstanding (mn)	82.0
Free Float (%)	22.6
Foreign Ownership (%)	0.9
Beta (12M)	20,625
52-Week Low	30,850
52-Week High	1,909

(%)	1M	6M	12M
Absolute	3.5	6.5	31.1
Relative	-10.3	-12.9	-21.6



Mirae Asset Securities (Vietnam) JSC

Nguyen Nguyen
nguyen.nhb@miraeasset.com.vn

HPG • Steel

Hoa Phat Group

The long-awaited price revival is here

Better-than-expected 1Q26

HPG reported 1Q26 net profit of VND8,994bn (+141% QoQ/+169% YoY) on revenue of VND52,901bn (+15% QoQ/+41% YoY). While top-line was broadly in line, earnings beat expectations and Bloomberg consensus. Stronger net earnings were driven by: **1) an Extraordinary gain** from the stake sale at Pho Noi residential project (VND4,916bn financial income booked; made up 46% of pre-tax profit); and **2) Stronger steel operating profit (OP)** growth to VND5,152bn (+41% QoQ/+60% YoY), made up 48% of consolidated OP. This resulted from recovery in steel prices and spread, in detail:

- **Volume:** Compared to the peak in 4Q25, sales in the first quarter were flat but grew 44% YoY despite the Tet holiday. Growth was driven by construction steel (8.3% QoQ, 41% of total volume), offsetting moderation in HRC (-10.5% QoQ, 43% of total). There was some recovery in downstream segments, with steel pipe/galvanized sheet growing 13.4%/2.9% QoQ. Of note, export revenue rose 84% QoQ/38% YoY to VND12,011bn, making up 23% of steel sales versus 14% in 4Q25.
- **Realised prices:** Implied steel ASP reached VND14.7mn/ton (+17.5% QoQ/+11.0% YoY), broadly in line with the upturn in steel price. However, the magnitude of the reported ASP increase appears somewhat above what observed market prices would imply. Given that price increases only became meaningful (versus 4Q25) toward March and the volume distribution across the quarter was relatively even, the realised price likely reflects additional factors.
- **Unit cost:** Unit cost stood at VND11.8mn/ton (+14.7% QoQ/+5.3% YoY), lower than the pace of ASP growth, leading to substantial 41.2% QoQ/+23.7% YoY expansion in cash spread. This drove EBIT/EBITDA margin expansion of 1.7ppts/1.9ppts QoQ.

2Q-3Q26 to see full impact of price hike in ASP

Recent pricing indications suggest HPG has raised June-2026 HRC contract prices to US\$597/ton, up by 20.6% from US\$495/ton in January. As mentioned in the previous section, 1Q26 realized ASP is relatively higher and there was a 1-2 month lagged adjustment. We therefore expect ASP to continue trending higher into 2Q-3Q26, though at a more measured pace. Construction activity has been heating up since April, evident in rising prices across building materials and some tightening in labour supply. This should support near-term volume momentum. As of 1Q, sales volumes implied that construction steel/HRC run-rate of 99%/68%.

FY (31/12)	2024	2025F	2026F	2027F	2028F
Revenue (VNDbn)	138,855	156,116	203,747	223,719	257,277
OP (VNDbn)	14,615	20,428	28,366	31,652	37,905
OP Margin (%)	10.5	13.1	13.9	14.1	14.7
NP (VNDbn)	12,020	15,450	21,881	25,462	31,444
EPS (VND)	1,879	2,013	2,851	3,317	4,097
ROE (%)	11.1	12.6	15.6	16.1	17.6
P/E (x)	19.0	17.8	12.5	10.8	8.7
P/B (x)	2.0	2.1	1.8	1.6	1.4
Dividend Yield (%)	0	0	1.4	2.9	2.9

Note: NP refers to net profit attributable to controlling interests

Source: Company data, Mirae Asset Securities Research estimates

Please see analyst certifications and important disclosures & disclaimers in Appendix 1 at the end of the report.

Key data points

Figure 1. Steel segment: quarterly performance and key metrics

Volume ('000 ton)		1Q24	2Q24	3Q24	4Q24	1Q25	2Q25	3Q25	4Q25	1Q26	QoQ	YoY
Crude steel	Total	1,848	2,196	2,050	2,017	2,394	2,667	2,364	3,155	3,113	-1.4%	30.0%
	Cons. steel	956	1,271	1,096	1,159	1,246	1,277	1,062	1,322	1,431	8.3%	14.8%
	HRC	805	724	738	657	1,009	1,253	1,265	1,643	1,471	-10.5%	45.7%
	Billet	88	201	217	201	138	137	129	191	211		
Downstream	Total	229	312	308	306	281	327	327	316	348	10.0%	23.6%
	Steel pipe	131	188	185	205	184	217	217	213	241	13.4%	31.3%
	Galvanized sheet	98	124	123	102	97	111	111	103	106	2.9%	9.0%
Run-rate	Aggregate	84%	100%	93%	92%	83%	92%	82%	88%	86%		
	HRC	107%	96%	98%	88%	70%	86%	87%	76%	68%		
	Construction steel	79%	107%	95%	94%	95%	88%	73%	91%	99%		
Total volume		2,077	2,508	2,359	2,323	2,675	2,994	2,692	3,471	3,460	-0.3%	29.3%
P&L (VNDbn)												
Sales (adj.)		28,623	37,868	31,346	31,996	35,412	33,531	33,912	43,441	50,859	17.1%	43.6%
OP (adj.)		2,339	3,368	2,693	2,643	3,220	4,024	3,720	3,660	5,152	40.7%	60.0%
EBIT		3,628	4,943	4,265	3,599	4,825	5,463	5,470	6,498	9,079	39.7%	88.2%
EBITDA		3,936	5,363	4,569	3,913	5,357	5,945	5,831	7,645	9,925	29.8%	85.3%
Per ton (VNDmn)												
ASP		13.8	15.1	13.3	13.8	13.2	11.2	12.6	12.5	14.7	17.5%	11.0%
Cast cost		11.9	13.0	11.4	12.1	11.2	9.2	10.4	10.3	11.8	14.7%	5.3%
Spread		1.1	1.3	1.1	1.1	1.2	1.3	1.4	1.1	1.5	41.2%	23.7%
EBIT		1.3	1.5	1.3	1.3	1.4	1.5	1.5	1.4	1.7	25.2%	23.6%
EBITDA		1.9	2.1	1.9	1.7	2.0	2.0	2.2	2.2	2.9	30.2%	43.2%
Margin (%)												
EBIT margin		8.2%	8.9%	8.6%	8.3%	9.1%	12.0%	11.0%	8.4%	10.1%	+1.7%p	+1.0%p
EBITDA margin		13.8%	14.2%	14.6%	12.2%	15.1%	17.7%	17.2%	17.6%	19.5%	+1.9%p	+4.4%p
Contribution (%)												
% of total sales		92.8%	95.7%	92.3%	92.8%	94.1%	93.45	93.1%	94.1%	96.1%		
% of total OP		81.0%	91.2%	79.6%	80.0%	84.6%	81.1%	81.4%	84.0%	48.1%		

Source: Mirae Asset Research estimates

Figure 2. Consolidated earnings summary

Volume ('000 ton)		1Q24	2Q24	3Q24	4Q24	1Q25	2Q25	3Q25	4Q25	1Q26	QoQ	YoY
Revenue	Total	30,852	39,556	33,956	34,491	37,622	35,911	36,407	46,176	52,901	14.6%	53.4%
	Steel	28,623	37,868	31,346	31,996	35,412	33,531	33,912	43,441	50,859	17.1%	59.0%
	Agri.	1,517	1,542	1,834	2,014	1,988	2,240	2,031	1,857	1,763	-5.0%	-12.4%
	Property	712	146	776	481	222	139	464	879	278	-68.3%	-42.1%
OP	Total	2,888	3,692	3,385	3,303	3,807	4,961	4,571	4,357	10,704	145.7%	224.1%
	Steel	2,339	3,368	2,693	2,643	3,220	4,024	3,720	3,660	5,152	40.7%	94.9%
	Agri.	201	245	313	392	446	578	386	192	372	94.0%	-5.2%
	Property	348	79	379	268	141	359	465	505	5,181	926.2%	1,834.5%
Pretax		3,261	3,733	3,412	3,287	3,840	4,972	4,550	4,357	10,762	147.0%	227.4%
Net profit		2,871	3,319	3,023	2,807	3,350	4,265	3,988	3,739	8,994	140.5%	220.4%
OP margin		9.4%	9.3%	10.0%	9.6%	10.1%	13.8%	12.6%	9.4%	20.2%	9.4%	20.2%
Net margin		9.3%	8.4%	8.9%	8.1%	8.9%	11.9%	11.0%	8.1%	17.0%	8.1%	17.0%

Source: Company data, Mirae Asset Research estimates

Figure 3. 1Q sales rose 17% QoQ

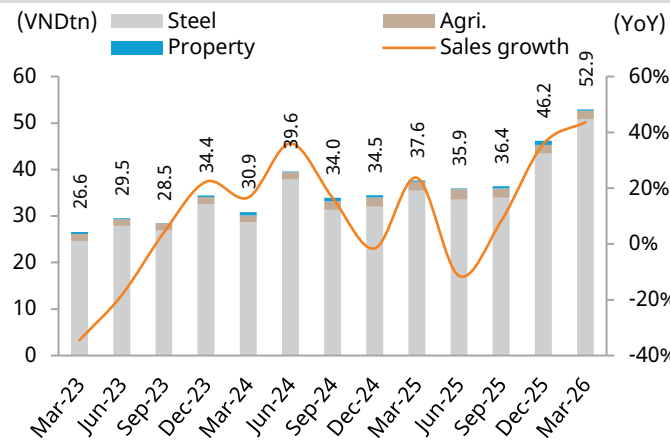
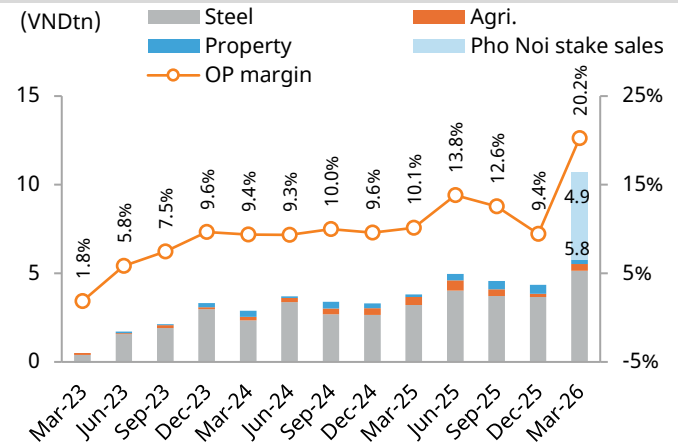


Figure 4. Profit was also boosted by an extraordinary gain



Source: Company data, Mirae Asset Research estimates

Figure 5. 1Q volumes held broadly flat vs prior peak quarter; Sharp ASP recovery driving sales growth

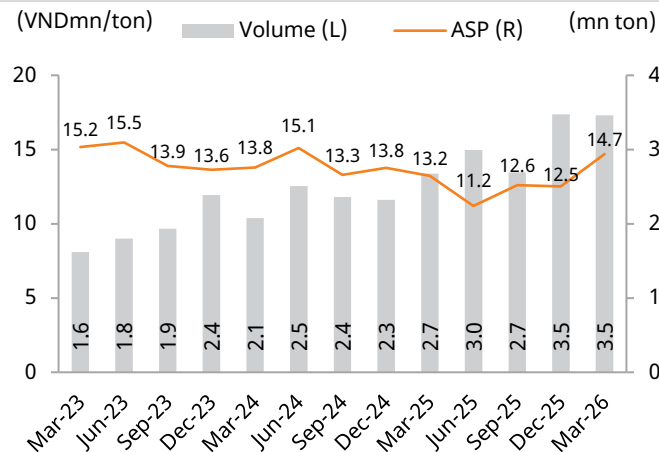
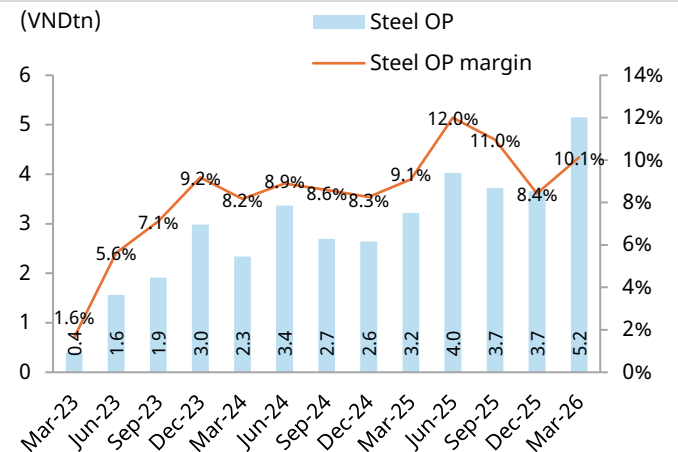


Figure 36. Spreads widened on favorable lagged inventory costs, leading to sharp margin expansion



Source: Company data, Mirae Asset Research estimates

Figure 7. Per estimates, realized spreads and steel margins recovered sharply from the 4Q trough...

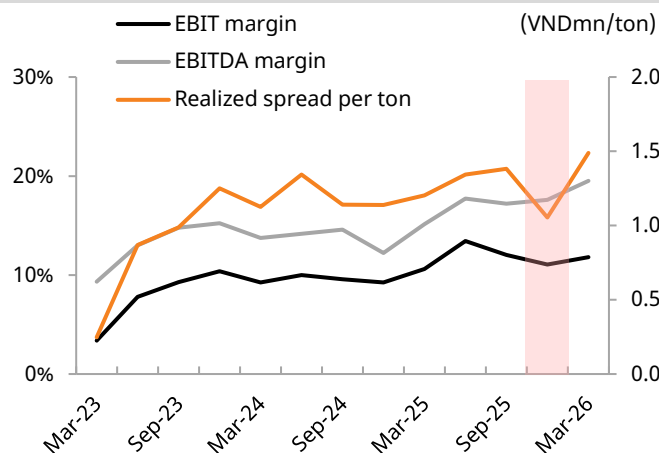
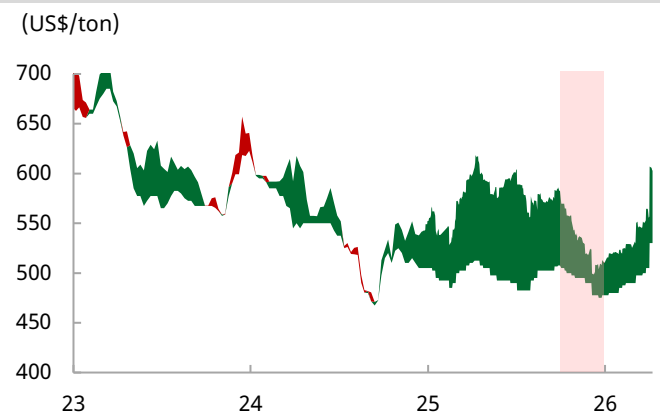
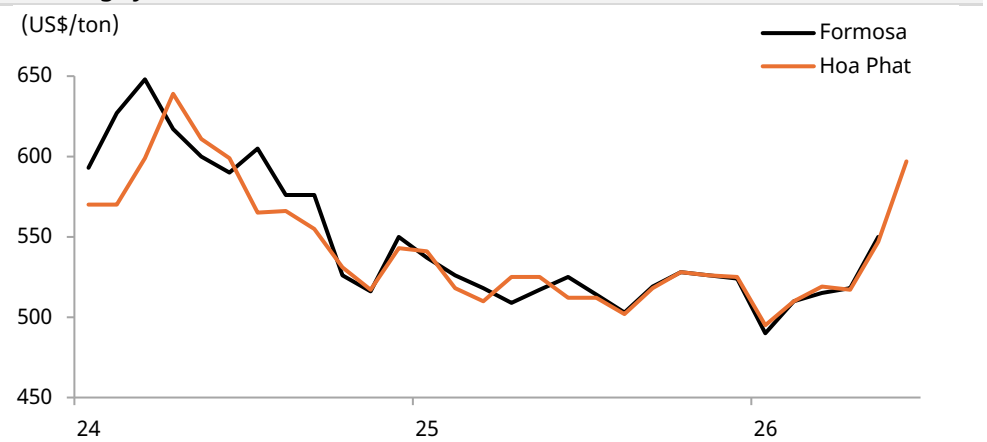


Figure 8. ... A similar trend is observed in spot spread, albeit narrower



Source: Company data, Bloomberg, Mirae Asset Research estimates

Figure 9. HRC prices are up 20.6% YTD, to a 2-year high. Market participants expect the uptrend to extend into 3Q26, as low-priced Chinese imports from the previous period have largely been absorbed



Source: Bigmint, Mirae Asset Research

AGM updates

Railway and specialty steel project

The specialised steel project is progressing broadly on track. Designed capacity stands at 700ktpa, including 200kt of railway steel and 500kt of other high-grade products, with total CAPEX of ~VND10tn. As of end-1Q26, construction was ~35% complete and entering peak execution, with equipment installation scheduled from June 2026.

Beyond rail supply, HPG is positioning to capture a broader share of the value chain, including infrastructure steel, accessories for the North-South railway, and inputs for rolling stock manufacturers. Management highlighted a sizeable national pipeline, with more than 3,000km of urban rail and 1,800-2,000km of high-speed rail under development. The company is also expanding its product range to higher-grade steel, targeting downstream customers such as Vietnam Railways, Alstom, and other equipment suppliers.

Phu Yen plant project

The Phu Yen project marks HPG's next leg of capacity expansion, with designed capacity of 6mtpa, split evenly between HRC and rebar. Total capex is estimated at VND86tn, with a targeted funding mix of 50% debt and 50% equity. The project has been initiated and is currently in the early construction phase, with an extended development timeline given permitting and infrastructure requirements (including breakwater works). Commercial operations are expected from around 2030.

HPG's current HRC and construction steel capacities stand at 8.6mtpa and 5.8mtpa, respectively. Upon completion, Phu Yen would increase segment capacities by 35% and 52% respectively.

Real estate

In the 2026 AGM discussion, HPG management signals a push into residential real estate over the next five years, but positioning remains clearly non-core. HPG intends to participate through minority stakes, most notably in the Red River Landscape Boulevard Project, a large-scale PPP (11,000ha; VND855tn capex) partner with Thaco - Dai Quang Minh.

Hoa Phat Group Joint Stock Company (HPG VN)

Income statement (summarized)

(VNDbn)	2025F	2026F	2027F	2028F
Revenue	156,116	203,747	223,719	257,277
Cost of revenue	-131,618	-170,019	-186,167	-212,574
GP	24,498	33,729	37,552	44,702
SG&A expenses	-4,070	-5,363	-5,900	-6,798
OP (adj.)	20,428	28,366	31,652	37,905
OP	17,906	25,503	29,687	36,658
Non-operating expense	-2,522	-2,862	-1,965	-1,246
Net financial expense	-2,522	-2,862	-1,965	-1,246
Net income from associates	0	0	0	0
Other profit/loss	135	0	0	0
Pretax profit	18,041	25,503	29,687	36,658
Income tax	-2,526	-3,570	-4,156	-5,132
NP	15,515	21,933	25,531	31,526
Attributable to owners	15,450	21,881	25,462	31,444
Attributable to minority interests	65	52	69	82
EBITDA	28,896	40,105	43,985	50,063
FCF	-6,659	22,553	29,323	25,870
GP margin (%)	15.7	16.6	16.8	17.4
EBITDA margin (%)	18.5	19.7	19.7	19.5
OP margin (%)	13.1	12.0	14.1	14.7
Net margin (%)	9.9	10.7	11.4	12.2

Balance sheet (summarized)

(VNDbn)	2025F	2026F	2027F	2028F
Current assets	103,682	114,143	129,585	156,421
Cash & equivalents	8,301	13,864	23,161	35,999
AR & other receivables	15,065	11,657	13,754	17,860
Inventory	52,828	58,691	61,716	69,887
Other current assets	27,488	29,930	30,954	32,675
Non-current assets	154,240	148,413	142,765	138,288
PP&E	145,006	139,180	133,532	129,055
Investment in associates	2,300	2,300	2,300	2,300
Other LT assets	6,934	6,934	6,934	6,934
Total assets	257,922	262,556	272,350	294,709
Current liabilities	94,209	84,101	80,202	80,568
AP & other payables	27,334	23,839	25,482	28,327
Short-term financial liabilities	64,695	57,446	51,636	48,721
Other current liabilities	2,180	2,816	3,083	3,520
Non-current liabilities	32,493	29,140	24,978	23,120
Long-term financial liabilities	27,479	24,038	19,187	17,818
Other non-current liabilities	5,014	5,102	5,791	5,302
Total liabilities	126,702	113,241	105,179	103,688
Equity attributable to owners	129,178	147,221	165,007	188,776
Capital stock	76,755	76,755	76,755	76,755
Retained earnings	51,035	69,078	86,864	110,633
Other equity account	1,388	1,388	1,388	1,388
Minority interests	2,042	2,094	2,163	2,245
Shareholders' equity	131,220	149,315	167,170	191,021

Cash flow statement (summarized)

(VNDbn)	2025F	2026F	2027F	2028F
Operating cash flow	15,694	25,952	34,249	32,397
NP	15,450	21,881	25,462	31,444
Non-cash adjustment	7,714	11,739	12,332	12,158
Depreciation & amortization	8,468	11,739	12,332	12,158
Others	-754	0	0	0
Chg. in working capital	-8,066	-7,668	-3,546	-11,205
Chg. in AR & ther Receivables	-7,542	3,351	-2,327	-3,934
Chg. in inventories	-7,245	-5,863	-3,024	-8,172
Chg. in AP & other payables	8,947	-2,184	1,397	2,486
Other changes in WC	-2,227	-2,973	408	-1,585
Others	596	0	0	0
Cash flow from investing activities	-25,172	-5,913	-6,684	-7,681
Chg. in PP&E	-25,692	-5,913	-6,684	-7,681
Chg. In ST financial assets	-2,534	0	0	0
Chg. In LT investments	1,818	0	0	0
Others	1,237	0	0	0
Cash flow from financing activities	10,891	-14,476	-18,268	-11,878
Chg. In financial liabilities	9,211	-10,690	-10,661	-4,284
Chg. In equity	1,680	-3,838	-7,675	-7,675
Dividends	0	-3,838	-7,675	-7,675
Others	-27	-3,838	-7,675	-7,675
Chg. In cash	1,413	5,563	9,296	12,838
Beginning balance	6,888	8,301	13,864	23,161
Ending balance	8,301	13,864	23,161	35,999

Source: Company data, Mirae Asset Securities Research estimates

Key valuation metrics/ratios

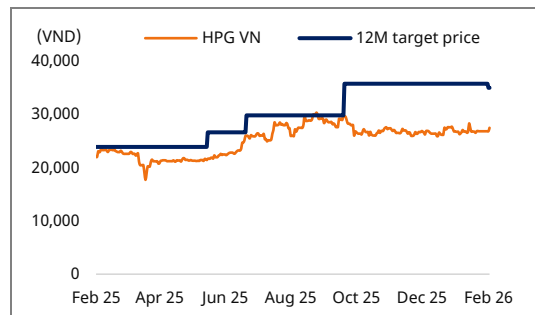
	2025F	2026F	2027F	2028F
P/E (x)	17.4	12.3	10.6	8.5
P/CF (x)	-40.3	11.9	9.2	10.4
P/B (x)	2.0	1.8	1.6	1.4
EV/EBITDA (x)	9.3	6.7	6.1	5.4
EPS (W)	2,013	2,851	3,317	4,097
CFPS (W)	-868	2,938	3,820	3,370
BPS (W)	17,096	19,454	21,780	24,887
DPS (W)	0	-500	-1,000	-1,000
Dividend payout ratio (%)	0.0	17.5	30.1	24.4
Dividend yield (%)	0.0	1.4	2.9	2.9
Revenue growth (%)	12.4	30.5	9.8	15.0
EBITDA growth (%)	34.2	38.8	9.7	13.8
OP growth (%)	39.8	38.9	11.6	19.8
EPS growth (%)	7.1	41.6	16.4	23.5
AR turnover (x)	30.1	25.3	21.3	17.7
Inventory turnover (x)	2.6	2.9	3.0	3.0
AP turnover (x)	8.5	8.9	9.1	9.3
ROE (%)	12.7	15.8	16.3	17.8
ROA (%)	6.4	8.4	9.5	11.1
ROIC (%)	8.4	11.1	12.4	14.4
Net debt-to-equity ratio (%)	49.1	32.2	16.9	5.8
Cash-to-ST debt (%)	42.9	58.1	82.6	113.9
Current ratio (x)	1.1	1.4	1.6	1.9
Quick ratio (x)	0.4	0.5	0.7	0.9

Appendix 1

Important disclosures and disclaimers

Two-year rating and TP history

Company	Date	Rating	TP (VND)
Hoa Phat Group	2/23/2026	Buy	35,000
Hoa Phat Group	10/10/2025	Buy	35,750
Hoa Phat Group	7/10/2025	Buy	29,850
Hoa Phat Group	5/6/2025	Buy	26,667
Hoa Phat Group	12/2/2024	Trading Buy	23,917
Hoa Phat Group	8/30/2024	Trading Buy	27,083
Hoa Phat Group	8/9/2024	Buy	27,083
Hoa Phat Group	6/3/2024	Trading Buy	27,576



Stock ratings

Buy	Expected 12-month performance: +20% or greater
Trading Buy	Expected 12-month performance: +10% to +20%
Hold	Expected 12-month performance: -10% to +10%
Sell	Expected 12-month performance: -10% or worse

Sector ratings

Overweight	Expected to outperform the market over 12 months
Neutral	Expected to perform in line with the market over 12 months
Underweight	Expected to underperform the market over 12 months

Rating and TP history: Share price (—), TP (—), Not Rated (■), Buy (▲), Trading Buy (■), Hold (●), Sell (◆)

* Our investment rating is a guide to the expected return of the stock over the next 12 months.

* Outside of the official ratings of Mirae Asset Securities Co., Ltd., analysts may call trading opportunities should technical or short-term material developments arise.

* The TP was determined by the research analyst through valuation methods discussed in this report, in part based on estimates of future earnings.

* TP achievement may be impeded by risks related to the subject securities and companies, as well as general market and economic conditions.

Ratings distribution and investment banking services

	Buy	Trading Buy	Hold	Sell
Ratings distribution	74.13%	15.92%	9.95%	0.00%
Investment banking services	75.00%	11.11%	13.89%	0.00%

* Based on recommendations in the last 12 months (as of December 31, 2020)

Disclosures

As of the publication date, Mirae Asset Securities Co., Ltd. and/or its affiliates do not have any special interest in the subject company and do not own 1% or more of the subject company's shares outstanding.

Analyst certification

The research analysts who prepared this report (the "Analysts") are registered with the Korea Financial Investment Association and are subject to Korean securities regulations. They are neither registered as research analysts in any other jurisdiction nor subject to the laws or regulations thereof. Each Analyst responsible for the preparation of this report certifies that (i) all views expressed in this report accurately reflect the personal views of the Analyst about any and all of the issuers and securities named in this report and (ii) no part of the compensation of the Analyst was, is, or will be directly or indirectly related to the specific recommendations or views contained in this report. Mirae Asset Securities Co., Ltd. ("Mirae Asset Securities") policy prohibits its Analysts and members of their households from owning securities of any company in the Analyst's area of coverage, and the Analysts do not serve as an officer, director, or advisory board member of the subject companies. Except as otherwise specified herein, the Analysts have not received any compensation or any other benefits from the subject companies in the past 12 months and have not been promised the same in connection with this report. Like all employees of Mirae Asset Securities, the Analysts receive compensation that is determined by overall firm profitability, which includes revenues from, among other business units, the institutional equities, investment banking, proprietary trading, and private client divisions. At the time of publication of this report, the Analysts do not know or have reason to know of any actual, material conflict of interest of the Analyst or Mirae Asset Securities except as otherwise stated herein.

Disclaimers

This report was prepared by Mirae Asset Securities, a broker-dealer registered in the Republic of Korea and a member of the Korea Exchange. Information and opinions contained herein have been compiled in good faith and from sources believed to be reliable, but such information has not been independently verified and Mirae Asset Securities makes no guarantee, representation or warranty, express or implied, as to the fairness, accuracy, completeness, or correctness of the information and opinions contained herein or of any translation into English from the Korean language. In case of an English translation of a report prepared in the Korean language, the original Korean language report may have been made available to investors in advance of this report. The intended recipients of this report are sophisticated institutional investors who have substantial knowledge of the local business environment, its common practices, laws, and accounting principles, and no person whose receipt or use of this report would violate any laws or regulations or subject Mirae Asset Securities or any of its affiliates to registration or licensing requirements in any jurisdiction shall receive or make any use hereof.

This report is for general information purposes only and is not and shall not be construed as an offer or a solicitation of an offer to effect transactions in any securities or other financial instruments. The report does not constitute investment advice to any person, and such person shall not be treated as a client of Mirae Asset Securities by virtue of receiving this report. This report does not take into account the particular investment objectives, financial situations, or needs of individual clients. The report is not to be relied upon in substitution for the exercise of independent judgment. Information and opinions contained herein are as of the date hereof and are subject to change without notice. The price and value of the investments referred to in this report and the income from them may depreciate or appreciate, and investors may incur losses on investments. Past performance is not a guide to future performance. Future returns are not guaranteed, and a loss of original capital may occur. Mirae Asset Securities, its affiliates, and their directors, officers, employees, and agents do not accept any liability for any loss arising out of the use hereof.

Mirae Asset Securities may have issued other reports that are inconsistent with, and reach different conclusions from, the opinions presented in this report. The reports may reflect different assumptions, views, and analytical methods of the analysts who prepared them. Mirae Asset Securities may make investment decisions that are inconsistent with the opinions and views expressed in this research report. Mirae Asset Securities, its affiliates, and their directors, officers, employees, and agents may have long or short positions in any of the subject securities at any time and may make a purchase or sale, or offer to make a purchase or sale, of any such securities or other financial instruments from time to time in the open market or otherwise, in each case either as principals or agents. Mirae Asset Securities and its affiliates may have had, or may be expecting to enter into, business relationships with the subject companies to provide investment banking, market-making, or other financial services as are permitted under applicable laws and regulations.

No part of this document may be copied or reproduced in any manner or form or redistributed or published, in whole or in part, without the prior written consent of Mirae Asset Securities. For further information regarding company-specific information as it pertains to the representations and disclosures in this Appendix 1, please contact compliance@miraeasset.us.com or +1 (212) 407-1000.

Distribution

United Kingdom: This report is being distributed by Mirae Asset Securities (UK) Ltd. in the United Kingdom only to (i) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the "Order"), and (ii) high net worth companies and other persons to whom it may lawfully be communicated, falling within Article 49(2)(A) to (E) of the Order (all such persons together being referred to as "Relevant Persons"). This report is directed only at Relevant Persons. Any person who is not a Relevant Person should not act or rely on this report or any of its contents.

United States: Mirae Asset Securities is not a registered broker-dealer in the United States and, therefore, is not subject to U.S. rules regarding the preparation of research reports and the independence of research analysts. This report is distributed in the U.S. by Mirae Asset Securities (USA) Inc., a member of FINRA/SIPC, to "major U.S. institutional investors" in reliance on the exemption from registration provided by Rule 15a-6(b)(4) under the U.S. Securities Exchange Act of 1934, as amended. All U.S. persons that receive this document by their acceptance hereof represent and warrant that they are a major U.S. institutional investor and have not received this report under any express or implied understanding that they will direct commission income to Mirae Asset Securities or its affiliates. Any U.S. recipient of this document wishing to effect a transaction in any securities discussed herein should contact and place orders with Mirae Asset Securities (USA) Inc. Mirae Asset Securities (USA) Inc. accepts responsibility for the contents of this report in the U.S., subject to the terms hereof, to the extent that it is delivered to a U.S. person other than a major U.S. institutional investor. Under no circumstances should any recipient of this research report effect any transaction to buy or sell securities or related financial instruments through Mirae Asset Securities. The securities described in this report may not have been registered under the U.S. Securities Act of 1933, as amended, and, in such case, may not be offered or sold in the U.S. or to U.S. persons absent registration or an applicable exemption from the registration requirements.

Hong Kong: This report is distributed in Hong Kong by Mirae Asset Securities (HK) Limited, which is regulated by the Hong Kong Securities and Futures Commission. The contents of this report have not been reviewed by any regulatory authority in Hong Kong. This report is for distribution only to professional investors within the meaning of Part I of Schedule 1 to the Securities and Futures Ordinance of Hong Kong (Cap. 571, Laws of Hong Kong) and any rules made thereunder and may not be redistributed in whole or in part in Hong Kong to any person.

India: This report is being distributed by Mirae Asset Capital Markets (India) Private Limited ("MACM") in India to the customers based in India and is personal information only for those authorised recipient(s). MACM is inter alia a Securities and Exchange Board of India ("SEBI") registered Research Analyst in India and is not registered outside India. MACM and Mirae Asset, Korea are group entities. MACM makes no guarantee, representation or warranty, express or implied, as to the fairness, accuracy, completeness or correctness of the information and opinions contained herein. The user assumes the entire risk of any use made of this information. This report has been provided for assistance only and is not intended to be and must not alone be taken as the basis for an investment decision. Recipient must read the entire Appendix 1 to the report carefully for Important Disclosures & Disclaimers.

All other jurisdictions: Customers in all other countries who wish to effect a transaction in any securities referenced in this report should contact Mirae Asset Securities or its affiliates only if distribution to or use by such customer of this report would not violate applicable laws and regulations and not subject Mirae Asset Securities and its affiliates to any registration or licensing requirement within such jurisdiction.

Mirae Asset Securities International Network

Mirae Asset Securities Co., Ltd. (Seoul) One-Asia Equity Sales Team Mirae Asset Center 1 Building 26 Eulji-ro 5-gil, Jung-gu, Seoul 04539 Korea Tel: 82-2-3774-2124	Mirae Asset Securities (HK) Ltd. Units 8501, 8507-8508, 85/F International Commerce Centre 1 Austin Road West Kowloon Hong Kong Tel: 852-2845-6332	Mirae Asset Securities (UK) Ltd. 41st Floor, Tower 42 25 Old Broad Street, London EC2N 1HQ United Kingdom Tel: 44-20-7982-8000
Mirae Asset Securities (USA) Inc. 810 Seventh Avenue, 37th Floor New York, NY 10019 USA Tel: 1-212-407-1000	Mirae Asset Wealth Management (USA) Inc. 555 S. Flower Street, Suite 4410, Los Angeles, California 90071 USA Tel: 1-213-262-3807	Mirae Asset Wealth Management (Brazil) CCTVM Rua Funchal, 418, 18th Floor, E-Tower Building Vila Olimpia Sao Paulo - SP 04551-060 Brazil Tel: 55-11-2789-2100
PT. Mirae Asset Sekuritas Indonesia Equity Tower Building Lt. 50 Sudirman Central Business District Jl. Jend. Sudirman, Kav. 52-53 Jakarta Selatan 12190 Indonesia Tel: 62-21-515-3281	Mirae Asset Securities (Singapore) Pte. Ltd. 6 Battery Road, #11-01 Singapore 049909 Republic of Singapore Tel: 65-6671-9845	Mirae Asset Securities (Vietnam) JSC 7F, Le Meridien Building 3C Ton Duc Thang St. District 1, Ben Nghe Ward, Ho Chi Minh City Vietnam Tel: 84-8-3911-0633 (ext.110)
Mirae Asset Securities Mongolia UTsk LLC #406, Blue Sky Tower, Peace Avenue 17 1 Khoroo, Sukhbaatar District Ulaanbaatar 14240 Mongolia Tel: 976-7011-0806	Mirae Asset Investment Advisory (Beijing) Co., Ltd 2401B, 24th Floor, East Tower, Twin Towers B12 Jianguomenwai Avenue, Chaoyang District Beijing 100022 China Tel: 86-10-6567-9699	Beijing Representative Office 2401A, 24th Floor, East Tower, Twin Towers B12 Jianguomenwai Avenue, Chaoyang District Beijing 100022 China Tel: 86-10-6567-9699 (ext. 3300)
Shanghai Representative Office 38T31, 38F, Shanghai World Financial Center 100 Century Avenue, Pudong New Area Shanghai 200120 China Tel: 86-21-5013-6392	Ho Chi Minh Representative Office 7F, Saigon Royal Building 91 Pasteur St. District 1, Ben Nghe Ward, Ho Chi Minh City Vietnam Tel: 84-8-3910-7715	Mirae Asset Capital Markets (India) Private Limited Unit No. 506, 5th Floor, Windsor Bldg., Off CST Road, Kalina, Santacruz (East), Mumbai – 400098 India Tel: 91-22-62661336