

Hoa Phat Group (HPG:HSX)



FULL REPORT
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INVESTMENT HIGHLIGHTS

Hoa Phat is a construction steel and steel pipe manufacturer with the largest market share in Vietnam.

When the Dung Quat Hoa Phat Project is completed, Hoa Phat's steel production will be tripled

Large production scale and BOF technology help HPG save production costs

Investment risks

In the first two quarter of 2019, revenue of steel trading accounted for 79% revenue of Hoa Phat, market shares of construction steel and steel pipe were 27% and 33% respectively, leading the market.

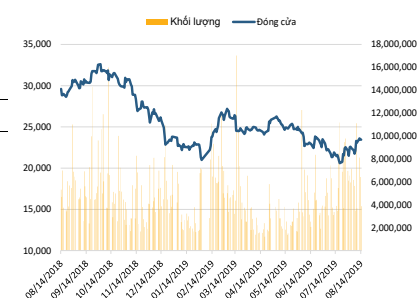
Hoa Phat Group is implementing a large project - Dung Quat Hoa Phat with a scale of USD 3 billion. By the day the project is completed, Dung Quat Hoa Phat Steel Integrated Complex will have a capacity of 4 million tons of steel. The project has 2 phases: Phase 1 with a capacity of 2 million tons of construction steel, started from February 2017; Phase 2 with a capacity of 2 million tons of HRC steel, started from August 2017.

At the moment, there are 2 main technologies of steel production - BOF and EAF. The use of BOF with a larger production scale and the main input materials of Iron ore and coking coal will bring HPG an advantage of production costs over other steel producers that use EAF technology with the main input materials of steel scrap and electricity.

(1) Risks from real estate market; (2) Risks from output steel prices and input materials strongly affect business performance of the company; (3) Risks from Dung Quat Hoa Phat Project's running behind schedule and operation.

Buy

		Trading data			% price change				
					(%)	1M	3M	6M	12M
Target price	29.835 VND	Number of outstanding shares	2,761,074,115	HPG	9.3%	-5.9%	-1.7%	-20.8%	
Up/down	27.3 %	Average trading volume (3M)	6,428,300	VN-INDEX	-0.7%	0.4%	1.7%	-1.0%	
Current price (14/08/2019)	23.450 VND	% foreign ownership	38.29%						
Target price	29.835 VND								
Market cap	64.747 Bil VND (2.80 Bil USD)								
Exchange rate on 14/08/2019: 1USD= 23,120 VND									
Forecast revenue & valuation									
	2018A	2019F	2020F	2021F					
Net revenue (Bil VND)	55,836	64,825	84,485	97,565					
Net revenue growth rate (%)	21%	16%	30%	15%					
Gross profit (Bil VND)	11,671	10,278	13,782	16,281					
GPM (%)	21%	16%	16%	17%					
Net profit (Bil VND)	8,601	7,192	9,315	10,145					
Net profit growth rate (%)	15%	11%	11%	10%					
EPS (VND)	3,115	2,605	3,374	3,674					
P/E (x)	7.53	9.00	6.95	6.38					



Source: Fiinpro, KBSV Research

I. OVERVIEW

History of development

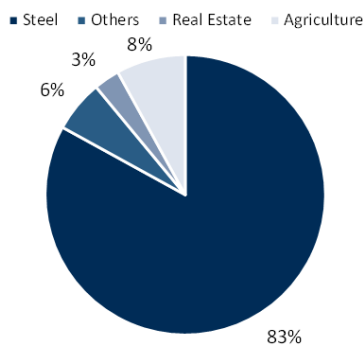


Business scope and Shareholder structure

Hoa Phat is the steel producer that has No.1 market share in Vietnam

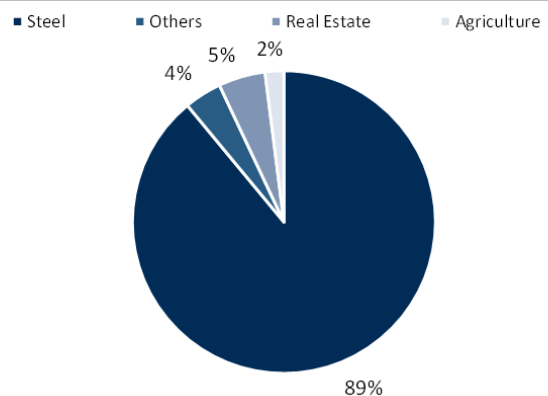
Hoa Phat Group was founded in 1992, but its first business field was equipment trading. Until 1996, Hoa Phat started to produce steel pipe and in 2001, it started to produce construction steel. After nearly 20 years of development, Hoa Phat has become the leading company in terms of construction steel and steel pipe market shares in Vietnam. By the end of 2018, revenue and profit from steel trading accounted for 83% and 89% respectively. As a result, we only focus on steel segment of HPG in this report.

Figure 1: Revenue structure of HPG in 2018



Source: HPG, KBSV Research

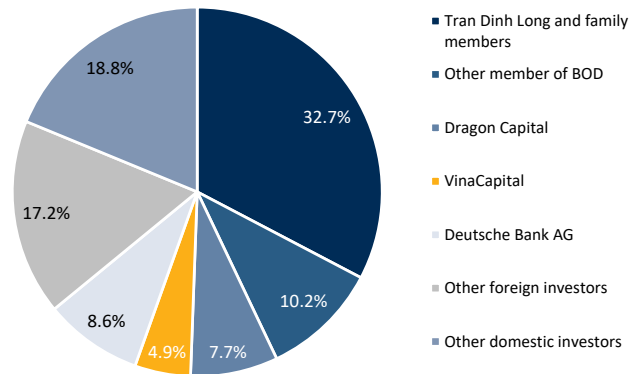
Figure 2: GPM structure of HPG in 2018



Source: HPG, KBSV Research

Currently, according to the shareholder structure of HPG, Mr Tran Dinh Long, Chairman of the BOM, and his family members hold roughly 32.7% of total share; shareholders who are key staff in HPG hold about 10.2%; Foreign investors hold about 38.2%, and maximum foreign room of HPG is 49%; other investors hold 18.8%.

Figure 3: Ownership structure of HPG



Source: HPG, KBSV Research

II. BUSINESS ACTIVITIES

Producing technology, process and some popular types of steel

Steel products are currently classified into 2 main types in the world: long and flat steel products.

- **Long steel products:** include construction steel such as rebar, wire rod... most of which are produced from square billet.
- **Flat steel products:** including galvanized iron, welded steel pipe, steel used to produce cars and machinery... This type of steel is mainly made from Hot rolled coil (HRC).

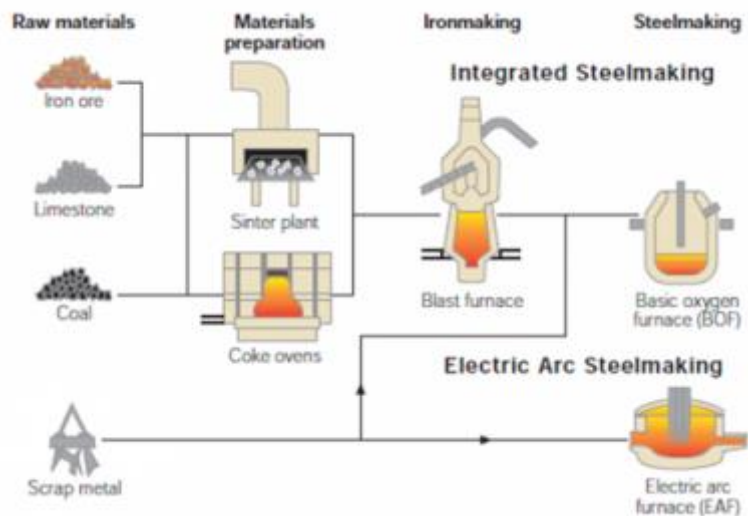


In 2018, the whole world consumed 1.7 billion tons of steel, in which 51% was long steel products, 49% was flat steel products. The proportions of long steel products and flat steel products consumption also varied among countries. In developing countries, long steel products are consumed in a larger volume compared to flat steel to build infrastructure in Vietnam, China, and Bangladesh..., while in developed countries where infrastructure has been nearly finished, flat steel products are consumed more to meet the demand of automobile production and manufacturing.

There are two technologies for making crude steel: BOF and EAF

There are 2 popular steel manufacturing technologies in the world:

- Basic oxygen furnace (BOF): This technology refines steel by removing impurities from iron ore by heat to obtain liquid iron and further remove carbon from the liquid iron to produce molten steel. The molten steel is then poured into a continuous casting machine to obtain the billet. Main materials of this steelmaking technology are Iron ore, Coking coal, Coagulant, and Dolomite...
- Electric arc furnace (EAF): This technology trains steel by melting scrap steel by electricity and removing impurities to obtain molten steel. Therefore, the main materials of this technology are scrap steel and electricity.

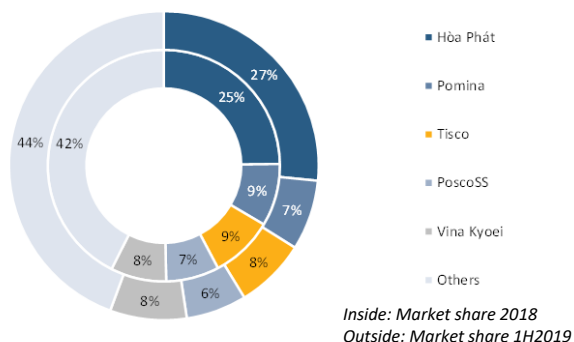


HPG mills and steel projects

Hoa Phat Steel ranks first in terms of domestic construction steel and steel pipe consumption market share

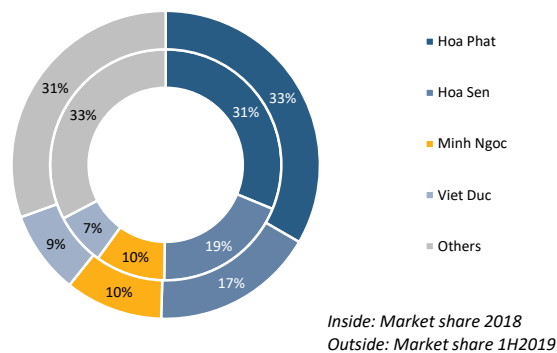
Hoa Phat has currently traded most of steel types, including: rebar, wire rod, prestressed steel, steel pipe, and galvanized steel... In the first 6M of the year, Hoa Phat is the company that has the biggest market share of domestic construction steel and steel pipe consumption in Vietnam, reaching 27% and 33% respectively. With this result, Hoa Phat continued to gain 2% market share in terms of market construction steel and steel pipe over 2018.

Figure 4: Market share in domestic construction steel consumption of Hoa Phat



Source: HPG; KBSV Research

Figure 5: Market share in steel pipe consumption of Hoa Phat



Source: HPG; KBSV Research

Hoa Phat is now operating 3 Integrated Complexes making construction steel, 3 mills making steel pipe and 1 factory making galvanized steel, which is currently on trial, and is about to come into official operation.

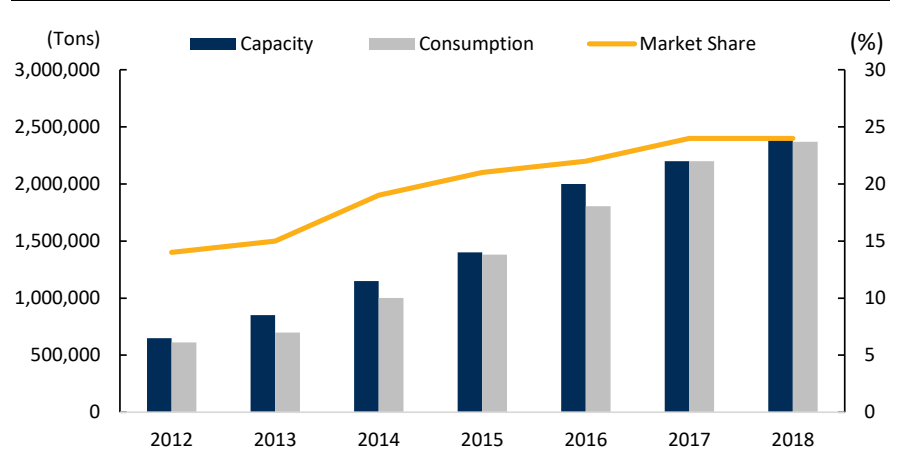
Table 1: Hoa Phat mills and steel projects

Factories	Product	Capacity	Production Technology	Status
Hung Yen steel integrated complex	Long Steel Products	400.000 tons/year	EAF	The factory is moved to Pho Noi A Industrial Park to optimize the process of casting - casting billet - rolling steel seamlessly. It is expected to be completed by September 2019
Hai Duong steel integrated complex	Long Steel Products	2.000.000 tons/year	BOF	Full capacity
Dung Quat Hoa Phat steel integrated complex	Long Steel Products	2.000.000 tons/year	BOF	Completed the first steel rolling mill - phase 1 with a capacity of 600.000 tons/year, blast furnace No. 1 - phase 1 has begun to run the test. It is expected that by the end of 2019, it will complete the No. 2 steel mill - phase 1 with a capacity of 1,2 million tons / year.
	HRC	2.000.000 tons/year	BOF	
Steel Pipe Factory Hung Yen	Steel Pipe	250.000 tons/year		Full capacity
Steel Pipe Factory Da Nang	Steel Pipe	200.000 tons/year		Full capacity
Steel Pipe Factory Binh Duong	Steel Pipe	200.000 tons/year		Full capacity
Coated Steel Sheet Factory Hung Yen	Coated Steel Sheet	400.000 tons/year		Trial run, expected to end in 2019 officially

Source: HPG; KBSV Research

Since Hai Duong Steel Integrated Complex completed Phase 1 from the beginning of 2010, Hoa Phat has continuously increased its capacity, sales volume and gained more market share. For nearly 10 years, businesses almost always run out of capacity and consume all the products they produce.

Figure 6: HPG’s capacity and consumed production of construction steel over the years



Source: HPG; KBSV Research

Currently, Hoa Phat is implementing the Dung Quat Hoa Phat Integrated Complex project with a capacity of 2 million tons of construction steel and 2 million tons of HRC.

Hoa Phat is implementing Dung Quat Hoa Phat Integrated Complex with a total investment capital of nearly USD3 billion, and this project has 2 phases. Phase 1 started from February 2017 with a capacity of 2 million tons construction steel made with BOF technology. Phase 2 started from October 2017 with a capacity of 2 million tons HRC made with BOF.

Up to now, Phase 1 of the project has completed 75%; steel rolling mill No.1 with a capacity of 600,000 tons/year has come into operation in August 2018; BOF No.1 has been in trial running; steel rolling mill No.2 with a capacity of 1.2 million tons/year is expected to come into effect by the end of 2019. We expect the rest of Phase 1 will be completed in the middle of 2020 and the total Phase 2 of the project will be finished in the 2H of 2021. By the end of 2021, the capacity of steel making of Hoa Phat is expected to reach 6.5 million tons, which nearly triples the capacity before Dung Quat Hoa Phat Project was started.

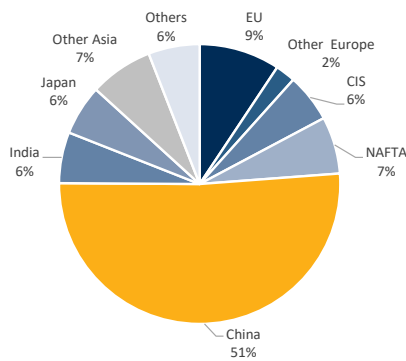


Impacts of China steel on Vietnam steel

China is the world's largest steel producer and Chinese steel also has a major impact on Vietnam's steel industry

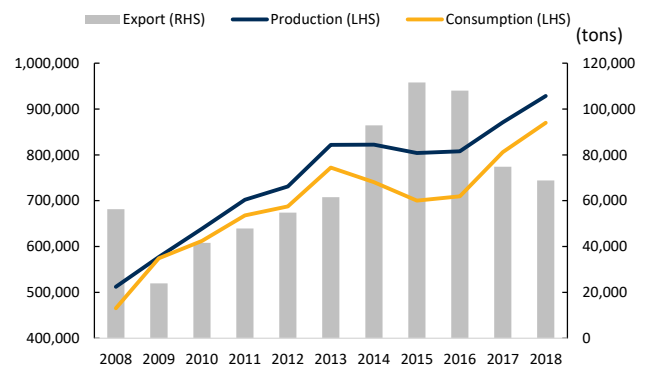
China is the country of largest steel production in the world, accounting for nearly 50%, with a total capacity of over 1 billion tons/year. Every year, China exports tens of million tons of steel to foreign countries, especially to surrounding countries. Particularly, in 2015 and 2016, China exported more than 100 million tons of steel. With the advantage of scale, China steel has put great competitive pressure on the steel market in surrounding countries, causing heavy damage to domestic steel manufacturers and Vietnam is one of the countries under the strongest influence.

Figure 7: Market share of crude steel in the world in 2018



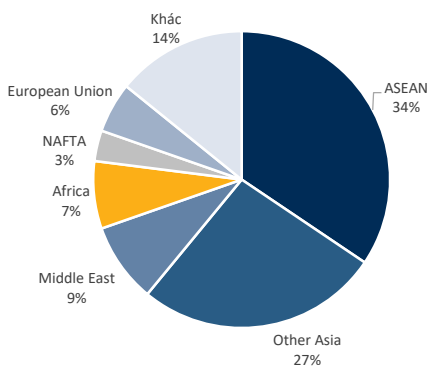
Source: WorldSteel Association; KBSV Research

Figure 8: China's steel production, consumption and export



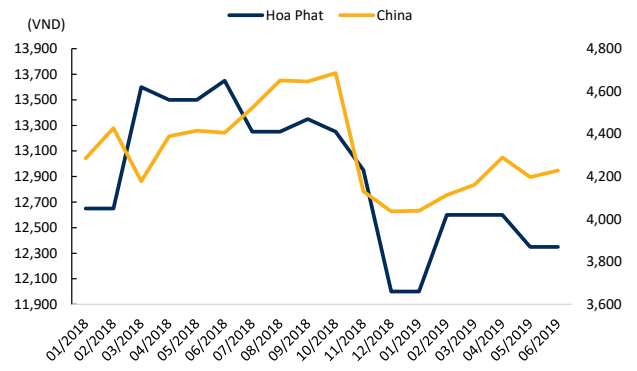
Source: WorldSteel Association; KBSV Research

Figure 9: China steel export structure in 2017



Source: WorldSteel Association; KBSV Research

Figure 10: A comparison between Hoa Phat and China steel prices

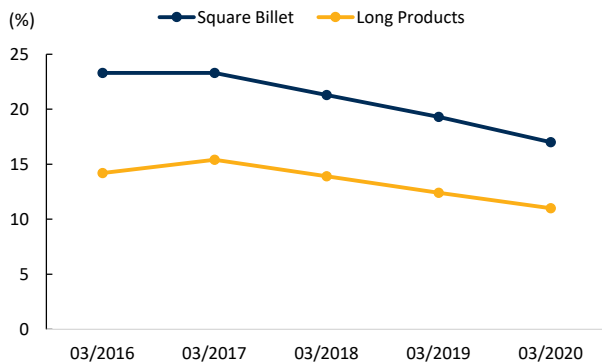


Source: FiinPro; Custeel, KBSV Research

From 2016, Vietnam started to apply anti-dumping duties on long steel products and billets.

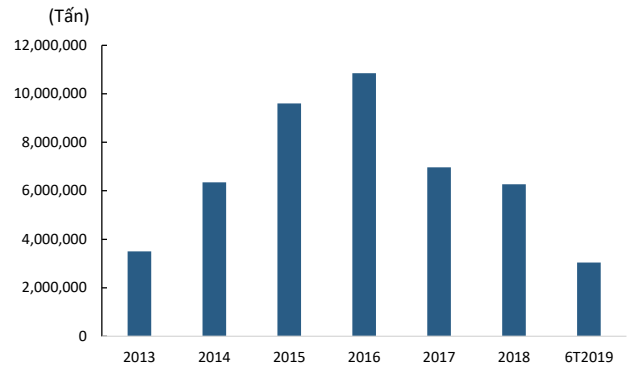
Since 2016, Vietnam has applied anti-dumping duties at 14.2% for long steel products, 23.3% for steel billets, gradually decreasing by 1% -2% over the years and to 0% by March 2020. However, this tax policy is likely to be renewed later. The imposition of anti-dumping duties has limited the amount of Chinese steel imported, but Vietnam still has to import some types of input steel such as billet, and HRC... Vietnam steel price movements are still affected by China steel prices.

Figure 11: Anti-dumping duties for Long steel products and Billets



Source: Ministry of Finance, KBSV Research

Figure 12: Imported steel of all types from China



Source: Vietnam Customs; KBSV Research

In 2018, revenue of Hoa Phat was VND55,836 billion, NPAT was VND8,601 billion

In 1H 2019, revenue of Hoa Phat reached VND30,061 billion, NPAT reached VND3,836 billion

Total assets on June 30, 2019 of Hoa Phat gained 19% over the beginning of the year as the proportion of construction in progress of Dung Quat Hoa Phat Project is surging

Financial indicators related to debt of Hoa Phat on June 30, 2019 increased sharply as the company has to use loans to finance the new project

III. BUSINESS PERFORMANCE AND FINANCIAL STATUS

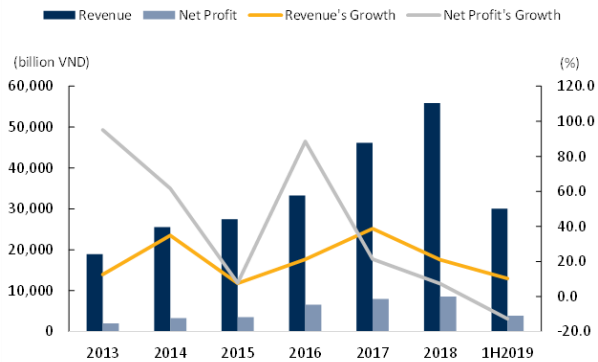
Net revenue of Hoa Phat in 2018 hit VND55,836 billion, increasing 21% over 2017. This is the 6th consecutive year that Hoa Phat revenue achieved a high growth rate. CAGR in 2012-2018 was 22.1%. GPM hit 20.9%, losing 2% compared to that in 2018. SG&A stayed around 2%-2.5%. NPAT in 2018 was VND8,601 billion, gaining 7.3% compared to that in 2017, CAGR in 2012-2018 reached 42%.

Considering business performance of HPG in 1H 2019, revenue hit VND30,061 billion, gaining 10% YoY. GPM reached 18.8%, down by 2.7% YoY due to the impact of the fall in steel prices and the sharp increase in iron ore prices. SG&A was 2.3%. NPAT reached VND3,836 billion, down 13% over the same period last year.

Total assets as of June 30, 2019, reached VND93,019 billion, increasing 19% compared to the figure in December 31, 2018, and 75% over the number in December 31, 2017 because of the construction in progress of Dung Quat Hoa Phat Project. The proportion of work in progress of fixed assets and fixed assets accounted for the biggest component of 66% of total assets. Receivables and inventory properties remained fairly stable.

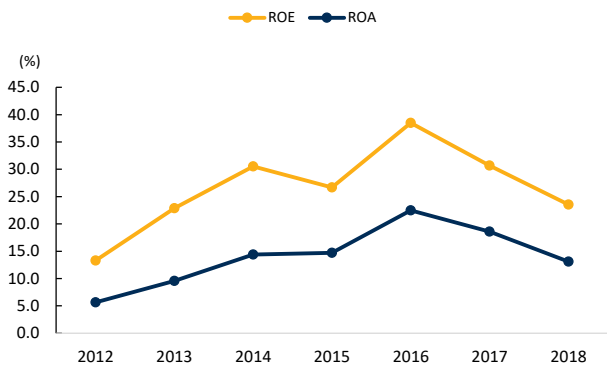
As HPG had to use loans to finance the Dung Quat - Quang Ngai project, on June 30, 2019, the group of indicators related to debt such as Liabilities/Total assets and Long-term loans/ Total assets increased sharply and reached 52.4% and 21.8% respectively, up from 48.1% and 16.4% on December 31, 2018.

Figure 13: Revenue and NPAT of HPG



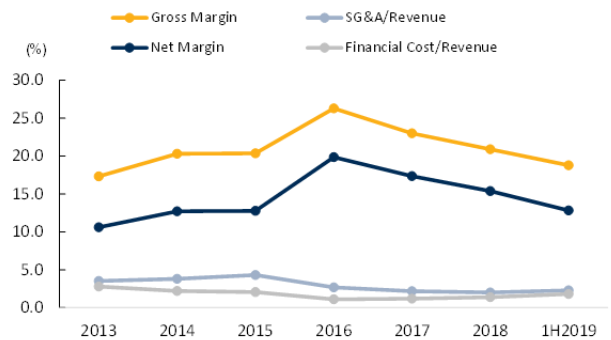
Source: HPG; KBSV Research

Figure 15: ROE and ROA of HPG



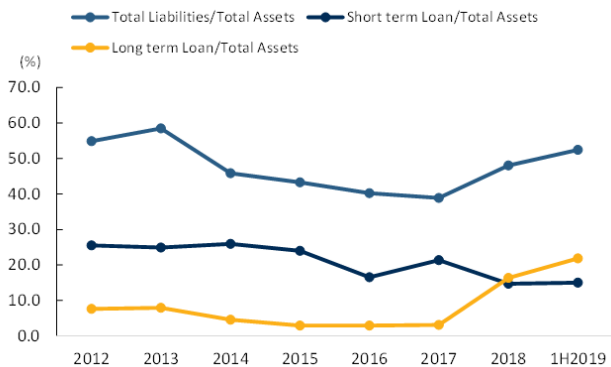
Source: HPG; KBSV Research

Figure 14: HPG financial indicators



Source: HPG; KBSV Research

Figure 16: Some financial indicators of HPG



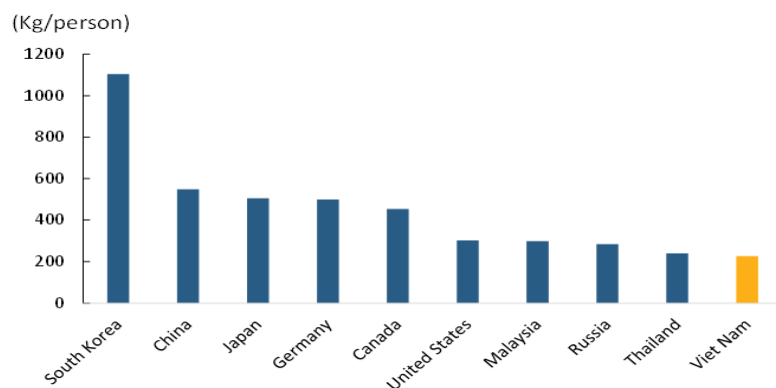
Source: HPG; KBSV Research

IV. INVESTMENT HIGHLIGHTS

The average steel consumption per capita of Vietnam is low, the potential growth is still large

Vietnam's average steel consumption per capita in 2017 reached 226 kg/person, which is still quite low compared to developed countries in the world such as 1,105 kg/person in Korea, 549 kg/person in China, or 500 kg/person in Germany. Although Vietnam is a developing country and the steel demand is still very large for further improvement of infrastructure, however, there are not many large scale corporations in heavy industries such as shipbuilding, automobile manufacturing in Vietnam, so steel consumption per capita stays low.

Figure 17: Steel consumption per capita in 2017



Source: World Steel Association, KBSV Research

Big obstacle to enter the sector

The steelmaking market has a big obstacle to enter the sector due to stricter environmental criteria according to the Government regulations. Furthermore, it requires a large investment into fix assets, so it is difficult for investors whose weak financial status to join the competition, while even small steel producers are losing their market share.

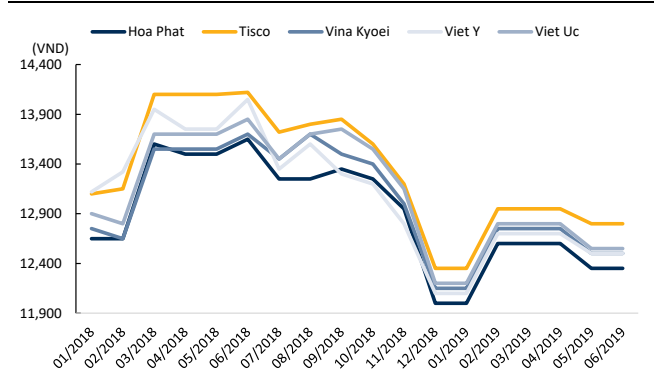
Hoa Phat has a very strong competitive advantage compared to most of domestic competitors thank to its BOF technology and large business scale

Hoa Phat Steel has much lower production costs than the costs of most of other domestic steelmakers, and equal to the costs of a middle-end Chinese steelmaker. This is a very strong competitive advantage in commodity manufacturing. The reason why Hoa Phat has got this advantage are:

- **The use of BOF:** with the main input materials of iron ore and coking coal, the manufacturing costs of the company are much lower than those using EAF with the main materials of steel scrap and electricity. Currently in Vietnam, there are only Hoa Phat and Tisco that use BOF to make construction steel. However, Tisco's chain and machinery systems are obsolete and outdated, so Tisco's performance is not as good as Hoa Phat's.
- **The advantage of operational scale:** HPG's scale is much larger than other steelmakers', which helps Hoa Phat save material transportation costs and reduce the fixed cost proportion of each product. In particular, when Dung Quat Hoa Phat Project is completed, this advantage will be strongly promoted.

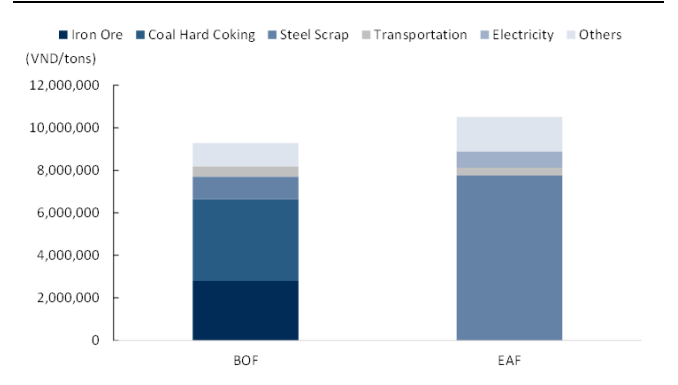
In fact, Hoa Phat steel prices are always among the lowest on the market, which will help Hoa Phat gain market share more easily.

Figure 18: D10 steel prices of some steel producers in Northern region



Source: HPG; Fiinpro; KBSV Research

Figure 19: Structure of steelmaking costs with BOF & EAF



Source: HPG, KBSV Research

The completion of Dung Quat Hoa Phat Project will help Hoa Phat occupy the Southern market, which consumes 1/3 of the construction steel nationwide.

Construction steel of Dung Quat Hoa Phat Project is determined to be consumed in the Southern market, and a part of the production will be exported to Southeast Asia countries, especially Cambodia, where infrastructure construction is being stimulated.

At the moment, Hoa Phat only focuses on construction steel consumption in the Northern market as revenue on market in the North accounted for roughly 70% revenue from steel of the company, and had a market share of 34%. On the consumption market of construction steel in the South, in 2018, Hoa Phat steel only had a market share of about 9%. Steel producers with the highest

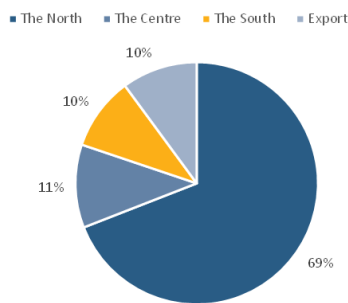
market shares include Vina Kyoei with a market share of 24%, Pomina, Posco SS Vina, and VN Steel with a market share of about 20%. Although Hoa Phat's steel prices are always lower than the prices of most other steel producers (Figure 22), due to the transportation distance from the North to the South is too long and costly, the consumption of steel faces many difficulties. As reflected by some Southern steel distributors, Hoa Phat steel supply is sometimes interrupted, so they have no goods to consume.

When Dung Quat Hoa Phat mills comes into operation, the above issue will be solved. The locations of mills are very convenient as they are all in central coast and have a deep water port that allows 200,000-ton ships to dock. This will help Hoa Phat easily transport steel to consumption markets in the North, the South and export markets. In addition, transportation costs are also reduced at the import stage of input materials such as iron ore, and coking coal.

Currently, Hoa Phat has taken the first steps in this plan such as importing steel billets for Dung Quat Mill No. 1 to make finished products, supplying to the Southern market; purchasing river ports in Dong Nai and Can Tho to serve Logistics; organizing conferences, meetings with major construction material distributors in the South; Advertising on VTV, HTV...

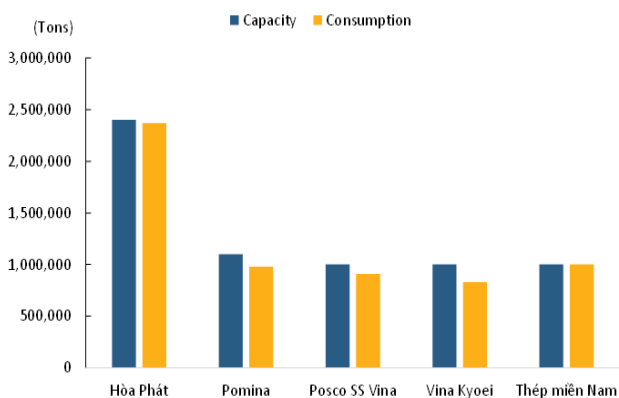
With the competitive advantages as mentioned above, we think that Hoa Phat will gradually dominate the steel market share in the South, especially, with its competitive price strategy. In a recent speech by Chairman Hoa Phat, Mr. Tran Dinh Long, also affirmed "Will consume all steel at any costs".

Figure 20: Revenue structure of Hoa Phat by regions



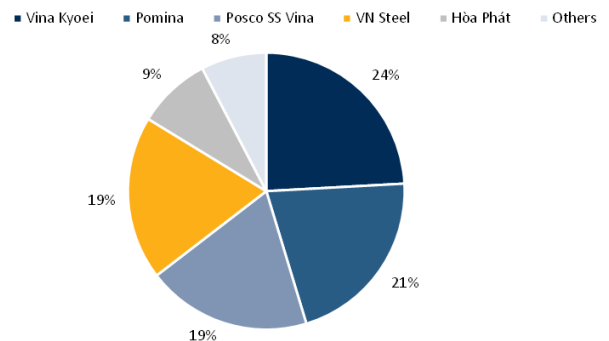
Source: HPG, FiinPro; KBSV Research

Figure 22: The scale of some steel mills in the South



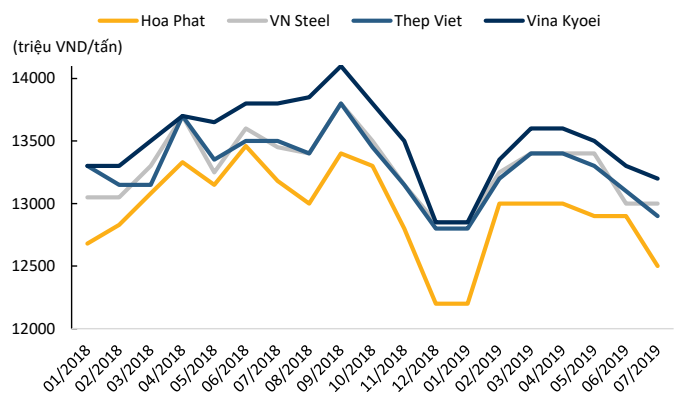
Source: Steel Producer; KBSV Research

Figure 21: Construction steel market share on Southern market



Source: FiinPro; KBSV Research

Figure 23: Construction steel prices of some Southern steelmakers

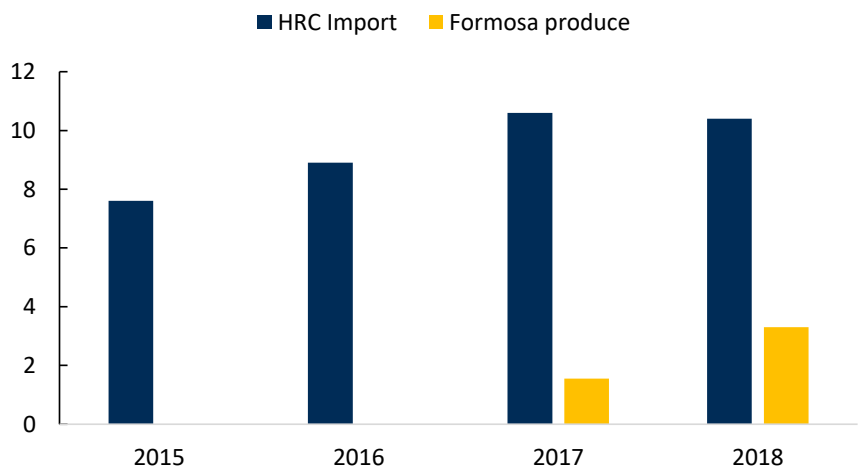


Source: FiinPro; KBSV Research

New HRC products of Hoa Phat have a special competitive advantage of low investment capital and the ability to replace imported goods

From 2017 and earlier, Vietnam had to import all of HRC steel to serve mills to produce galvanized steel, steel pipe or machinery manufacturing, mostly from China, because HRC steel cannot be produced domestically. According to our estimates, when the Dung Quat - Hoa Phat project HRC product is launched, and with the supply source from Formosa, the HRC steel production made domestically will meet 70% of domestic demand. Of the 2 million tons of the HRC of the Dung Quat project, only 1 million tons will be used to the market, the remaining 1 million tons will be sold internally by Hoa Phat to serve galvanized steel mills and steel pipe mills. Hoa Phat's HRC will have an advantage over Formosa due to the lower investment capital: USD 750/ton of Hoa Phat compared to USD1700/ton of Formosa. To achieve this result, according to the BOM, Hoa Phat invested in the Dung Quat project right at the time when the world steel industry's cycle was saturated, making the prices of production machinery more attractive.

Figure 24: The importation and production of HRC steel in Vietnam



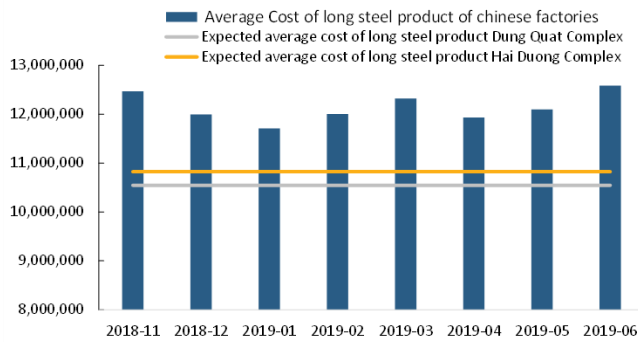
Source: FiinPro, KBSV Research

Hoa Phat's production cost is currently 12% lower than the average production cost of Chinese enterprises.

According to our estimates, the construction steel manufacturing cost of Hoa Phat in Hai Duong Steel Integrated Complex is VND10,824 million/ton of steel; and the equivalent costs in Dung Quat Integrated Complex, with the current input material prices, will be VND10,545 million/ton of steel at its maximum capacity. Meanwhile, the average construction steel manufacturing cost in the last 8 months of China is VND12,138 million/ton of steel. As a result, construction steel production cost of Hoa Phat is currently 12% lower than that of China steel, and when Dung Quat Project reaches its maximum capacity, the cost may be 15% lower than that of China.

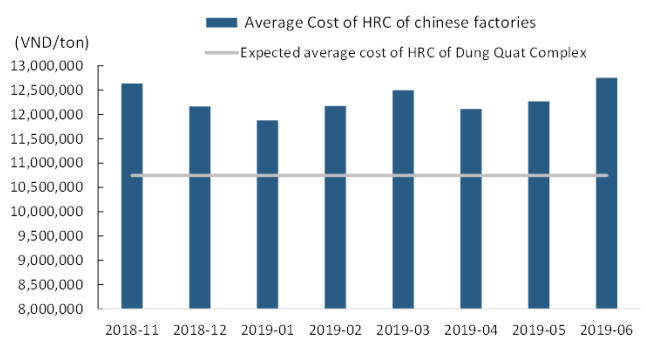
Similarly, the production cost of HRC in Dung Quat Project at full capacity will be VND10,745 million/ton while the average HRC production cost of China in the last 8 months is about VND12,310 million/ton. Thus, it is likely that Dung Quat's HRC will be able to compete with HRC imported from China.

Figure 25: Construction steel production cost



Source: HPG, Custeel, KBSV Research

Figure 26: HRC production cost



Source: HPG, Custeel; KBSV Research

V. INVESTMENT RISKS

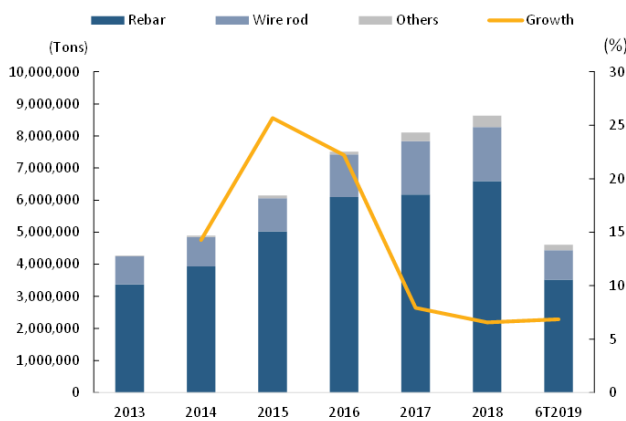
Domestic steel consumption market is growing slowly due to the influence of real estate market

In the first 6M of 2019, domestic consumption of construction steel reached 4.61 million tons, increasing 7% YoY.

Regarding steel pipe market, in 1H 2019, Vietnam market consumed about 1.06 million tons, only gaining 1.4% compared to the same period in 2018.

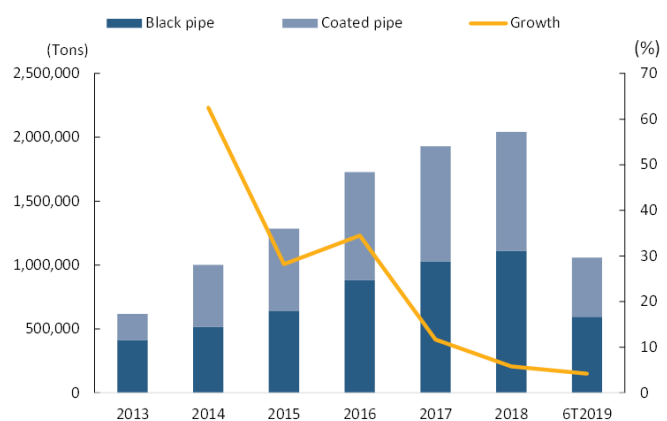
The slower growth in both construction steel and steel pipe segments mainly stemmed from the slowdown of the real estate market.

Figure 27: The scale of construction steel market



Source: HPG; FiinPro, KBSV Research

Figure 28: The scale of steel pipe market



Source: HPG; FiinPro, KBSV Research

Volatile prices of input materials

Recently, the prices of input materials for steel production have fluctuated strongly, especially the prices of iron ore. Sometimes, the prices of 62% Fe ore have increased to USD120/ton, up 66% compared to the beginning of the year. The reasons are: 1) affected by the Brazil dam failure of the world's largest ore producer Vale; 2) a tornado in Veronica, Australia affecting the nation's ore producers; 3) Increasing demand for iron ore comes from China steel mills.

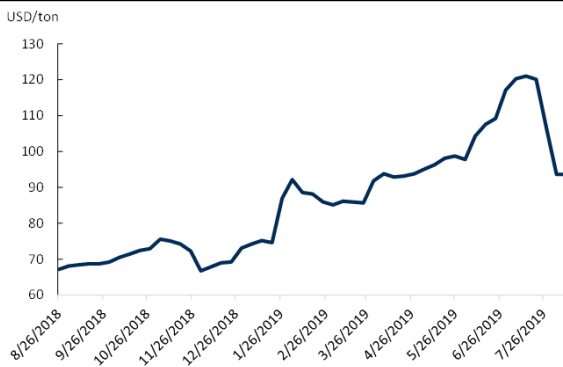
By August 2019, the prices of iron ore dropped to USD90/ton after the mining operations in Brazil and Australia partly recovered. However, iron ore prices are expected to remain high at USD90-95 in the near future as Brazil's mining

activity cannot fully recover in the short term.

Hoa Phat was able to partially control the source of iron ore in the country via its subsidiary, An Thong Mineral Investment JSC. However, this supply only meets about 20% of current demand, Hoa Phat also has to import the rest of required iron ore continuously monthly from major suppliers in the world in Brazil, Australia, and South Africa... Hoa Phat purchased partially in the form of futures previously, and partly in the form of spot trading, so the biggest impact from the recent increase in ore prices to the company's business performance is likely to come in the next quarters of 2019.

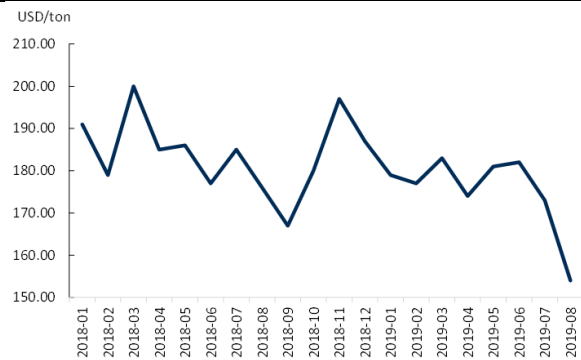
Another raw material that also strongly affects the cost of steelmaking is coking coal. Recently, coking coal prices have tended to decrease. Hoa Phat also has to import this kind of material from big foreign suppliers.

Figure 29: 62% Fe iron ore prices



Source: VSA; KBSV Research

Figure 30: Coking coal prices



Source: VSA; KBSV Research

Dung Quat Hoa Phat Project is behind schedule, or not smoothly operated at the first stage

Dung Quat Hoa Phat Project is a super large project with a total scale of nearly USD3 billion. The project workload is very large. As Chairman Tran Dinh Long said, "There are many tasks we have never done such as seaports, and transportation systems in the project." Currently, the project is also behind schedule (completing Phase 1 in February 2019 and Phase 2 in October 2019). In addition, the project also increased capital compared to the original plan because Hoa Phat wanted to invest more in the environment system and seaport system of the project.

The slow progress of Dung Quat Hoa Phat Project will affect the cash flow of the company as Hoa Phat still has to pay principal loans and interests while the cash flow from operating activities are delayed. In addition, when the delay period is long, the interest expense will be recorded into the fixed asset item and increase the depreciation expense when the fixed asset is completed.

Another risk is that although Hoa Phat's BOM has many years of experience in operating Hai Duong Steel Integrated Complex, Dung Quat Hoa Phat Project with a capacity of 4 million tons of steel/year has a big difference. Along with that, according to our estimates, the Integrated Complex of Dung Quat Hoa Phat Steel Complex will have to recruit nearly 10,000 new employees. Getting all 10,000 employees to be proficient at work and to coordinate well together is also a big challenge for Hoa Phat's leader team.

VI. INVESTMENT VIEWPOINT AND VALUATION

We estimate Hoa Phat's revenue in 2019 to reach VND64,825 billion, up 16.1% over 2018, NPAT is estimated at VND7,344 billion, down 16.4% compared to that in 2018. When the plan for 2019 is approved by shareholders, revenue will hit 92.6% and NPAT will reach 107%. To be more specific:

Billion VND	2018A	2019F	2020F	2021F	2022F	2023F
Revenue	55,836	64,825	84,485	97,565	106,345	110,095
Growth (%)		16.1%	30.3%	15.5%	9.0%	3.5%
Cost of good sold	44,166	54,547	70,703	81,284	88,644	91,728
Gross Profit	11,671	10,278	13,782	16,281	17,701	18,367
Gross profit margin (%)	21%	16%	16%	17%	17%	17%
Financial Cost	540	927	1,787	3,210	3,516	3,124
Selling Cost	677	843	1,098	1,268	1,382	1,431
General & Admit Cost	444	519	591	683	744	771
Net Profit Margin	8,601	7,192	9,315	10,145	11,077	12,100
Growth (%)		-16.4%	29.5%	8.9%	9.2%	9.2%
Net Profit Margin (%)	15.4%	11.1%	11.0%	10.4%	10.4%	11.0%

Our main assumptions:

	2019F	2020F	2021F	2022F	2023F
Consumption of Construction Steel & HRC (million tons)	3.0	4.4	5.3	6.0	6.3
Price of Construction Steel (million VND/tons)	12.8	12.8	12.8	12.8	12.8
Price of HRC (million VND/tons)	12.5	12.5	12.5	12.5	12.5
Iron Ore (USD/tons)	80	85	82	80	80
Coal Hard Coking (USD/tons)	180	180	180	180	180
Steel Scrap (USD/tons)	320	300	300	300	300

However, Hoa Phat's business performance varies strongly based on our assumptions, most of which cannot be controlled by Hoa Phat itself. Below is a sensitivity analysis of NPAT in 2020 under the impact of changes in the output steel prices and input iron ore prices, the output steel prices and input coal prices.

Sensitive of Net Profit of Hoa Phat

		Price of Hoa Phat's Long Construction Steel								
		9,315	12.5	12.6	12.7	12.8	12.9	13.0	13.1	13.2
Price of Iron Ore	75		9,280	9,643	10,005	10,367	10,729	11,091	11,454	11,816
	77		9,070	9,432	9,794	10,157	10,519	10,881	11,243	11,605
	79		8,859	9,222	9,584	9,946	10,308	10,671	11,033	11,395
	81		8,649	9,011	9,373	9,736	10,098	10,460	10,822	11,185
	83		8,439	8,801	9,163	9,525	9,887	10,250	10,612	10,974
	85		8,228	8,590	8,952	9,315	9,677	10,039	10,401	10,764
	87		8,018	8,380	8,742	9,104	9,466	9,829	10,191	10,553
	89		7,807	8,169	8,532	8,894	9,256	9,618	9,980	10,343
	91		7,597	7,959	8,321	8,683	9,045	9,408	9,770	10,132
	93		7,386	7,748	8,111	8,473	8,835	9,197	9,559	9,922
95		7,176	7,538	7,900	8,262	8,625	8,987	9,349	9,711	

Sensitive of Net Profit of Hoa Phat

		Price of Hoa Phat's Long Construction Steel								
		9,315	12.5	12.6	12.7	12.8	12.9	13.0	13.1	13.2
Price of Coal Hard Coking	165	9,148	9,510	9,872	10,235	10,597	10,959	11,321	11,683	11,683
	168	8,964	9,326	9,688	10,051	10,413	10,775	11,137	11,499	11,499
	171	8,780	9,142	9,504	9,867	10,229	10,591	10,953	11,315	11,315
	174	8,596	8,958	9,320	9,683	10,045	10,407	10,769	11,132	11,132
	177	8,412	8,774	9,136	9,499	9,861	10,223	10,585	10,948	10,948
	180	8,228	8,590	8,952	9,315	9,677	10,039	10,401	10,764	10,764
	183	8,044	8,406	8,768	9,131	9,493	9,855	10,217	10,580	10,580
	186	7,860	8,222	8,585	8,947	9,309	9,671	10,033	10,396	10,396
	189	7,676	8,038	8,401	8,763	9,125	9,487	9,849	10,212	10,212
	192	7,492	7,854	8,217	8,579	8,941	9,303	9,665	10,028	10,028
	195	7,308	7,670	8,033	8,395	8,757	9,119	9,481	9,844	9,844

In fact, after Dung Quat Hoa Phat Project is completed, Hoa Phat will become one of the largest steel producers in the world. However, in the period when Hoa Phat was in the period of great capital construction, there were still many risks affecting the business activities of enterprises and the stock prices. When investing in Hoa Phat stock, we recommend investors to be cautious and should have a safe margin to avoid possible short-term losses.

We value Hoa Phat's stock on a P/E and DCF method:

- According to the P/E method, we value Hoa Phat at a **P/E forward of 8.5 times, corresponding to a stock price of VND22,600/share**. This price reflects the relatively difficult short-term outlook of the business.

- In the long term, we still have a positive assessment for Hoa Phat and use the DCF method. With this method, we value Hoa Phat at **VND 37,071/share**, as follows:

	2019	2020	2021	2022	2023
Cashflow from Operating Activities	3,238	8,295	12,702	15,998	18,669
Cost of debt x (1-tax rate)	807	1,555	2,792	3,059	2,718
CAPEX	14,763	9,987	5,854	6,381	6,606
FCFF	-10,718	-137	9,641	12,676	14,781

Ke	14.9%
Rf	3.5%
Beta	1.12
Growth forever	2.5%
Forecast time frame	5 Years

Equity Value (VND billion)	102,356
Number of Share (million)	2,761
Price per share (vnd/share)	37,071

Combining 2 valuation methods, Hoa Phat's target price is determined at **VND 29,835/share**. Therefore, we recommend to **BUY** HPG shares at the current price range (August 14, 2019) with an **expected profit of approximately 27%**.

Investment portfolio recommendations

Buy: +15% or more

Hold: between +15% and -15%

Sell: -15% or less

DISCLAIMER

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