

India
Underweight (no change)

Highlighted Companies
Steel Authority of India
REDUCE, TP Rs58, Rs83 close

Higher fixed cost makes it the most loved stock in a steel bull market as EPS growth is stupendous. However, it bites the P&L hard during a downcycle. We expect SAIL to suffer losses in FY23F. Retain REDUCE rating on SAIL with a target price of Rs58.

Tata Steel
REDUCE, TP Rs71, Rs111 close

With high inflation and rising interest rates, the Western world will see steel demand destruction, leading to a massive destocking-led fall in prices. We have valued Tata Steel at 0.7x FY23F P/BV to arrive at our target price of Rs71. Retain REDUCE rating on the stock.

JSW Steel
REDUCE, TP Rs330, Rs743 close

JSW Steel remains one of the costliest steel stocks in the world, but we struggle to find fundamental reasons for the same. The consensus earnings of JSW Steel are highly elevated and there may be even more negative surprises in the coming quarters. We retain REDUCE rating on the stock with a target price of Rs330.

Summary Valuation Metrics

P/E (x)	Mar22-A	Mar23-F	Mar24-F
Steel Authority of India	2.84	-38.41	12.9
Tata Steel	3.25	3.21	2.7
JSW Steel	10.71	62.72	-25.31

P/BV (x)	Mar22-A	Mar23-F	Mar24-F
Steel Authority of India	0.66	0.71	0.67
Tata Steel	1.19	1.08	0.93
JSW Steel	3.34	3.3	4

Dividend Yield	Mar22-A	Mar23-F	Mar24-F
Steel Authority of India	0%	0%	0%
Tata Steel	22.51%	22.51%	22.51%
JSW Steel	0.87%	0.87%	0.87%

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Steel

Rise in raw material cost & fall in steel price

- Indian iron ore prices will remain elevated in the coming days as production growth to be tepid. Please note that mines won at 100%+ premium to IBM or Indian Bureau of Mines' prices and far away from users' plants are unviable.
- Coking coal prices have tailwinds of lower production growth and the shift to blast furnaces in Europe as EAF (electric arc furnaces) are unviable because of high power prices.
- We feel it's too early to become constructive on the Indian steel sector. Raw material cost pressure and dwindling global demand to hit profitability. Consensus earnings are just too high. Tata Steel is our top REDUCE idea.

Iron ore & scrap prices to go up while coking coal prices to stay high

It's always confusing as to how winning a mine in Odisha at a 120% premium to IBM's prices is viable for captive usage (if the plant is far off, one cannot save on freight cost). Merchant bids at 100%+ premiums were even more perplexing as unless one sells iron ore only in export markets (assuming the prices remain higher than US\$120/t), they are unviable to operate. Hence, some of the bidders have started to surrender their mines and we feel many others will do so in the coming years ([JSW Steel surrenders iron ore mine lease in Odisha - The Hindu Business Line](#)). The usable mine head inventory is already low in India and allowing exports will further exacerbate the inventory position. High international pellet prices open a window for exporters. All-encompassing Indian iron ore has bottomed out and we expect its prices to go up in the coming quarters. Sponge iron companies may struggle to make positive EBITDA (owing to high fuel and ore prices) and hence, scrap imports can rise in India, leading to higher global scrap prices (please note that global scrap trade is only 100-105mt and hence, even a 2-3 mt increase in India's imports can lead to higher prices). In our view, lack of supply will keep coking prices elevated. All in all, quite negative for all Indian steel-makers.

Steel super cycle myth busted, prices to remain subdued

Please note that we had pointed out in our earlier reports that supply chain-related issues are leading to high prices and there is no super cycle phenomenon, although without any concrete data (as the data is not available in real time) multiple times during 2021. Please see some of our reports: 1) [IN: Steel - Irrational enthusiasm](#) 2) [IN: Steel - Recent market exuberance close to its end](#). However, the data is available now which indicates that international trade in steel collapsed in 2020 and recovered marginally in 2021. The lack of inventory in supply chain led to scarcity and overstocking which will get negated only over several quarters. Steel prices are unlikely to bounce back sharply, and the best of steel spreads are behind us. We may be having sentimental trades of China's economy opening/European stimulus/US infrastructure, etc. but steel profitability will trend downwards and hence, the traditional buy-and-hold strategy will not work. We feel it's a trading sector now, and one must be nimble in getting in and out of stocks to make money.

Figure 1: Steel index trades at a historical average P/BV, which is not cheap


SOURCE: INCRED RESEARCH, STEEL INDEX IS EQUAL WEIGHTED INDEX OF SAIL, TATA STEEL, JSPL & JSW STEEL

Rise in raw material cost & fall in steel price

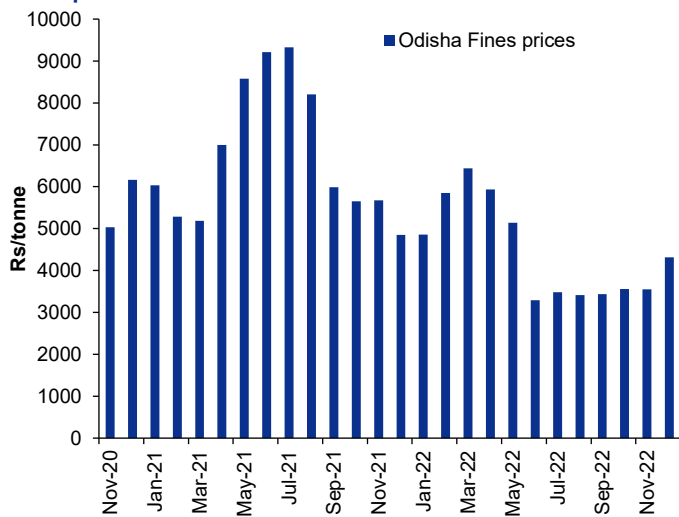
Steel is witnessing a unique situation wherein its price is falling, and raw material cost is rising. This phenomenon is in India as well as globally. Iron ore and coking coal prices are going up. Scrap has also joined the party as India has removed export duty on iron ore. Supply constraints are across the board, whether it is coking coal, steel or power for electric arc furnaces (EAFs). We expect steel margins to get squeezed in the coming quarters. We feel it's too early to call the bottom for Indian steel stocks.

Indian iron ore prices are recovering fast

Rising domestic prices led to the imposition of export duty on iron ore, steel, and pellets in 2022. However, the subsequent collapse in global prices led to the removal of export duty. Because of export duty, Indian market prices of iron ore had collapsed but they recovered later.

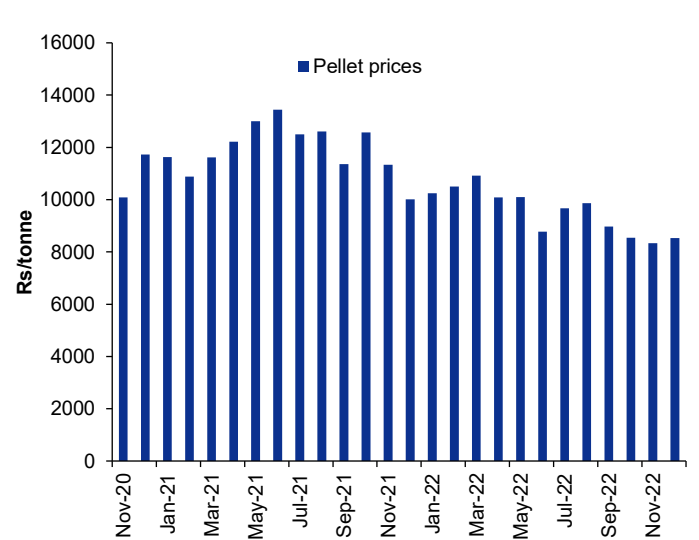
Export duty led to collapse in Indian iron ore & pellet prices ➤

Figure 2: After the removal of export tax on iron ore, Indian fines' prices recovered



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 3: However, pellet prices are still depressed



SOURCE: INCRED RESEARCH, COMPANY REPORTS

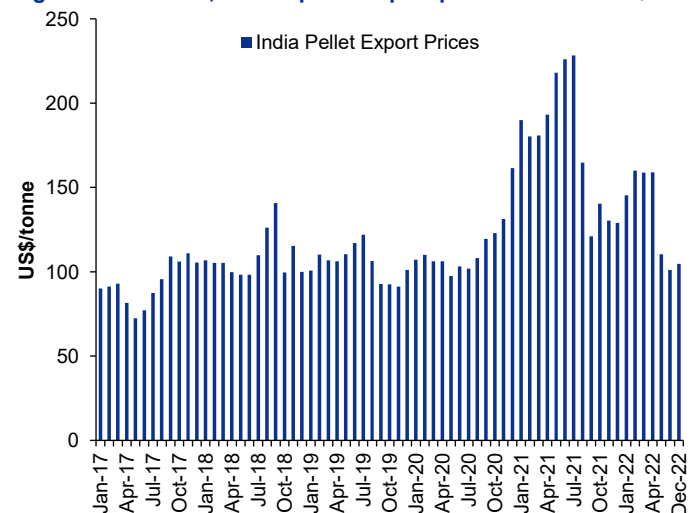
We expect pellet prices to recover as importers will come back to pick up Indian cargo ➤

Figure 4: China's pellet import prices are at US\$140/t



SOURCE: COMPANY REPORTS, INCRED RESEARCH

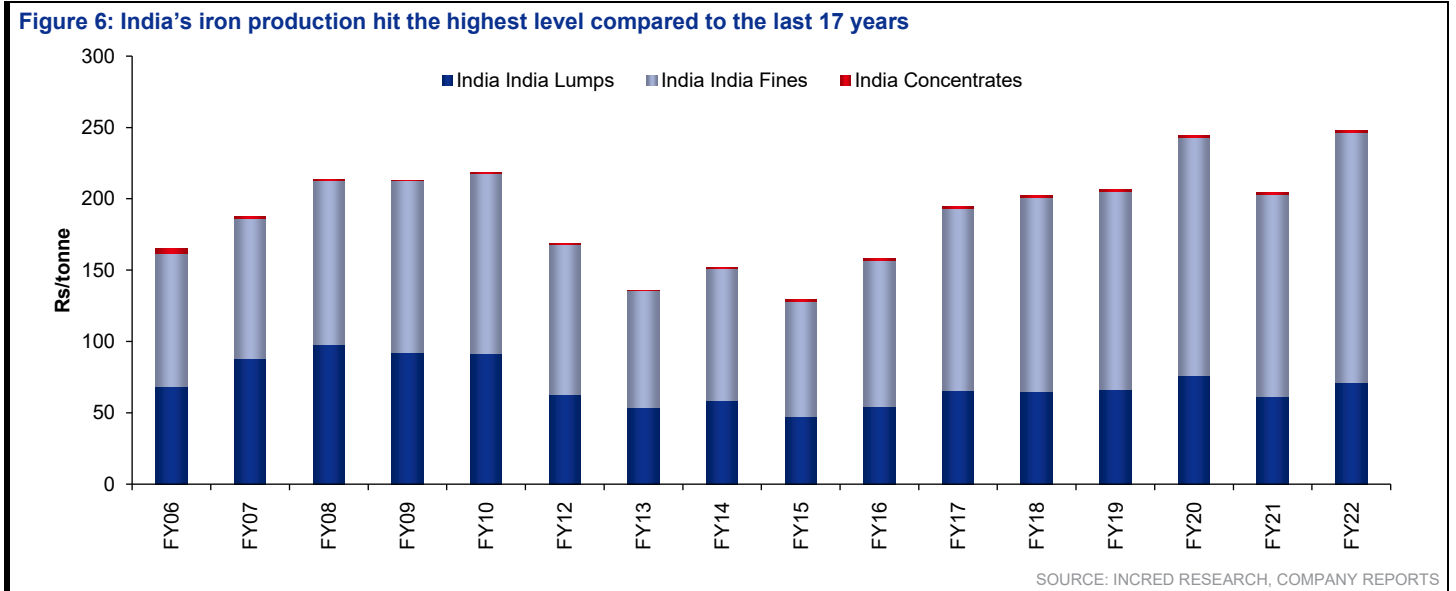
Figure 5: However, India's pellet export prices stand at US\$105/t



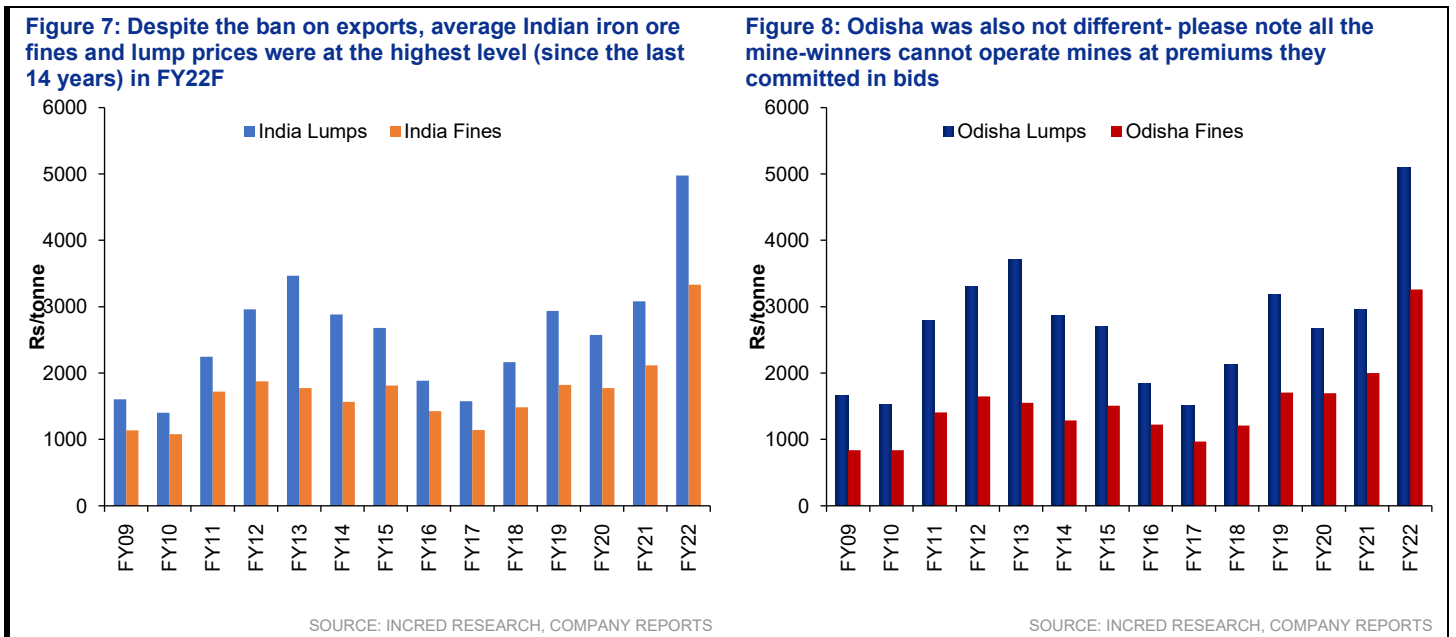
SOURCE: COMPANY REPORTS, INCRED RESEARCH

As depicted in the chart above, Indian export prices have the potential to go up by US\$15-20/t. Please note that because of policy flip-flop, importers are still wary of imports from India and hence, don't expect an immediate revival in Indian exports.

India's iron production was at the highest level in FY22 compared to the last 15 years➤



Interestingly, IBM iron ore prices were also at the highest level since the last 17 years➤



This means the winners at mining auctions will lose huge sums of money if they operate their mines ➤

Figure 9: Details of mine auction winners

Captive			Merchant		
Name	Premium (%)	EC Limit (mt)	Name	Premium (%)	EC Limit (mt)
JSW Steel	98.55	6.00	JSW Steel	95.20	5.62
ArcelorMittal	107.55	5.50	Serajuddin	118.05	15.15
JSW Steel	132.00	1.20	Shyam	135.00	6.28
Narbheram Power & Steel	90.90	3.50	JSW Steel	110.00	16.50
Kashvi International	150.00	1.00	Patnaik Minerals	92.70	0.04
			Formento	141.25	5.30
			Ghanshyam Mishra & Sons	115.00	0.75
			Vishal LPG	142.35	7.45
			Yazdani Steel	100.00	0.04
			Tarama	93.06	2.50
			Debabrata Behera	154.00	0.14

SOURCE: INCRED RESEARCH, COMPANY REPORTS

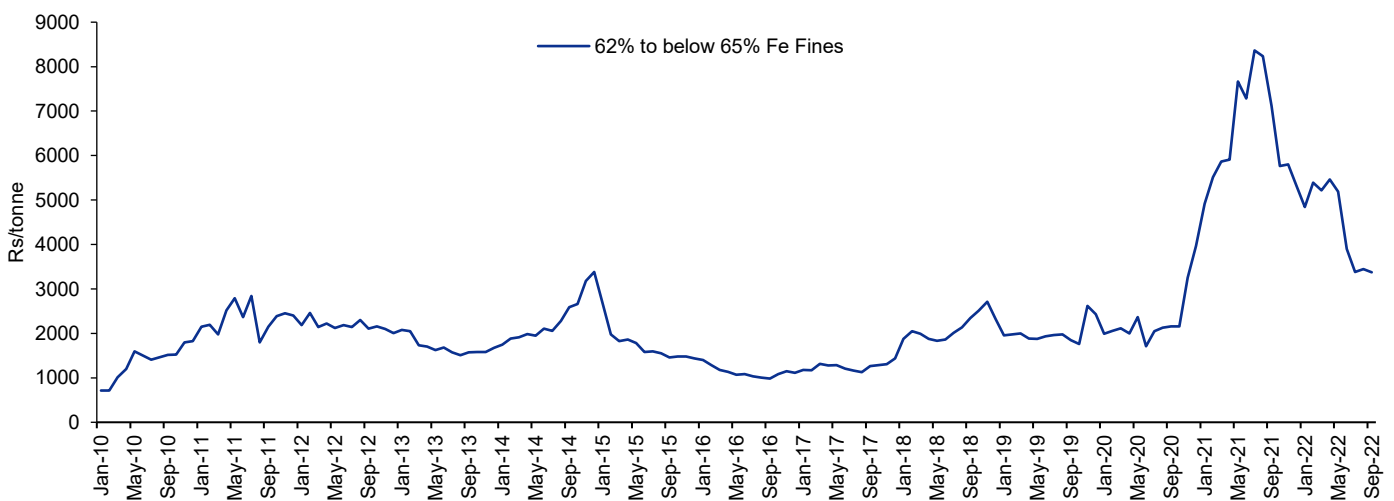
Hence, all mine auction winners are surrendering their mines ➤

JSW Steel is one of the major steel producers surrendering its mines and we feel other bid-winners may also follow suit in the coming quarters ([JSW Steel surrenders iron ore mine lease in Odisha - The Hindu Business Line](#)).

Indian iron ore prices to remain elevated ➤

Rising mining cost and state levies will keep iron ore prices elevated. It's surprising that Indian iron ore prices didn't collapse during the export ban. This indicates cost support for Indian iron ore.

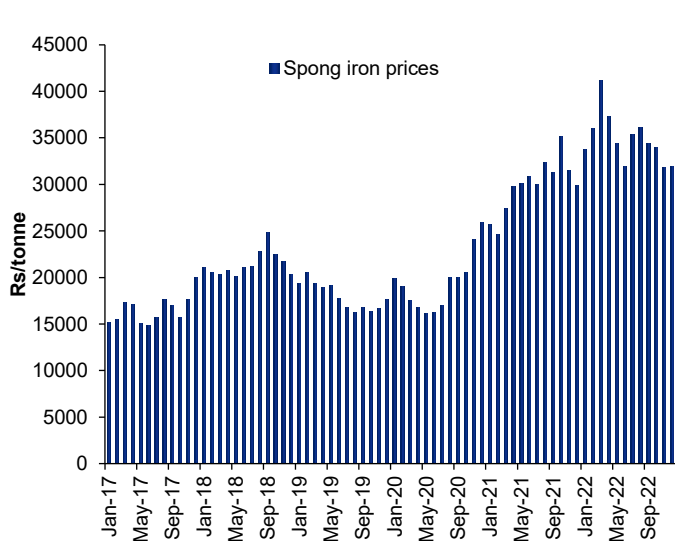
Figure 10: The chart below indicates the bottom made in Sep 2022 was higher than the peak of Jan 2015; below Rs1,000/t iron ore prices remain a dream now



SOURCE: INCRED RESEARCH, COMPANY REPORTS

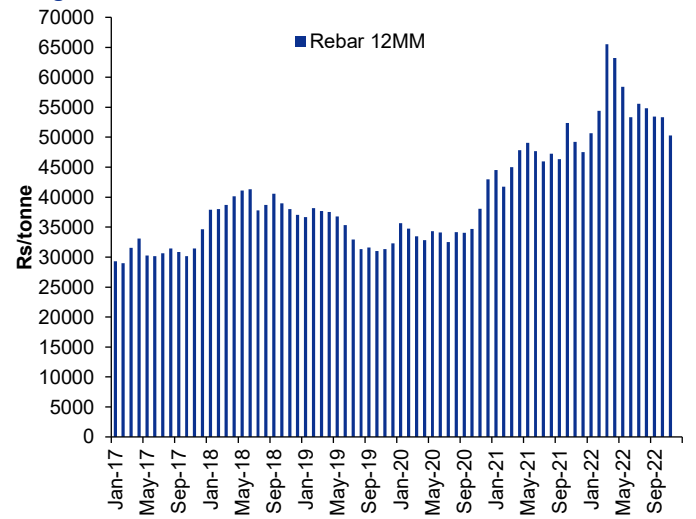
Rising power and fuel cost is also leading to higher sponge iron prices ➤

Figure 11: Indian sponge iron prices have corrected by only Rs 3,000/t...



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 12: ...whereas the correction in Indian rebar prices has been ~Rs6,000/t, thereby making sponge iron too costly for usage in small furnaces



SOURCE: INCRED RESEARCH, COMPANY REPORTS

However, even at higher prices sponge iron-makers barely achieve breakeven ➤

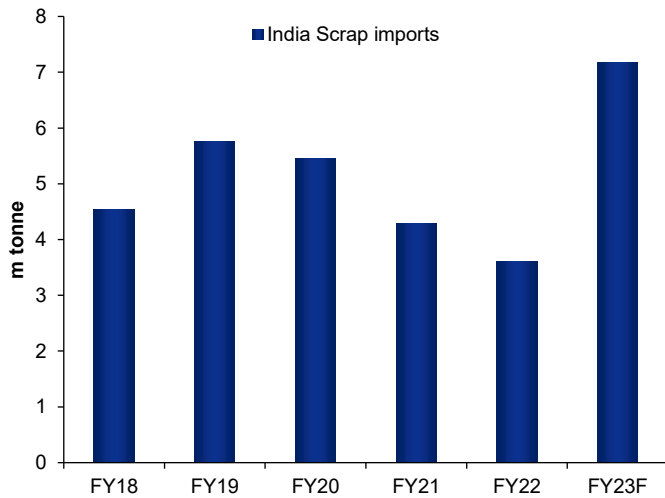
Figure 13: Higher power and fuel cost (because of higher coal cost) means that even at higher product prices, sponge iron-makers are barely making any money

Cost of production of sponge iron through lumps			Cost of production of sponge iron through pellets		
Yield of process	0.87		Yield of process	0.94	
Metallic required	1.1	Tonne	Metallic required	1.06	Tonne
65% iron ore requirement	1.77	Tonne	Cost of iron ore pellets	9,000	
NMDC cost of lumps	4,500	Rs/t	Metallic cost per tonne of sponge iron	15,443	
-Royalty on NMDC	450		Costing including wastage of 1%	15,599	
-Freight cost on iron ore	1,500	Rs/t	Coal requirement per tonne	1.1	Tonne
-Wastage of iron ore lumps in transportation	25%		Coal cost per tonne	16,000	
-Realization from selling powder fines	1,000.00	Rs/t	Cost of coal (Rs/t of sponge iron)	17,600	Rs/t
Overall cost of iron ore	7,267		Electricity requirement	90	Units/t
Metallic cost/t of sponge iron	12,850		Electricity cost	495	Rs/t
Coal requirement/t	1.1	Tonne	Manpower cost	150	Rs/t
Coal cost per tonne	16,000		Dolomite requirement	0.1	Tonne
Cost of coal (Rs/t of sponge iron)	17,600	Rs/t	Dolomite cost per tonne of sponge iron	200	Rs/t
Electricity requirement	90	Units/t	Environmental cost	100	Rs/t
Electricity cost	540	Rs/t	Overall operational cost	34,144	Rs/t
Manpower cost	150	Rs/t			
Dolomite requirement	0.1	Tonne			
Dolomite cost per tonne of sponge iron	200	Rs/t			
Environmental costs	100	Rs/t			
Overall operational cost	31,440	Rs/t			

SOURCE: INCRED RESEARCH, COMPANY REPORTS

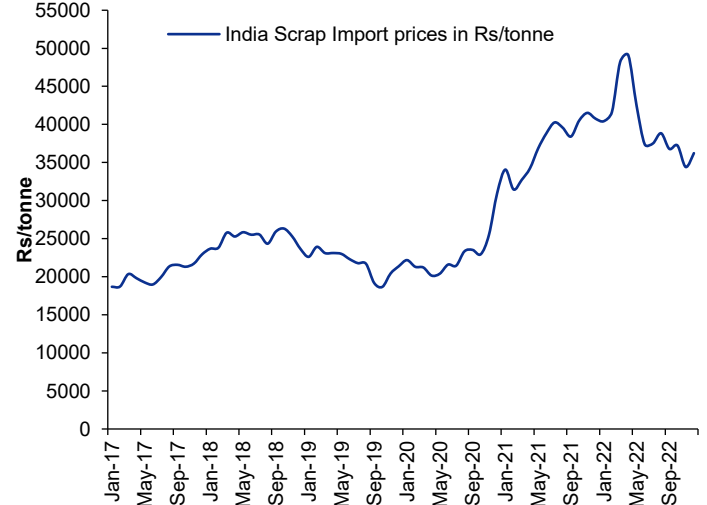
That's why Indian companies are using more scrap in their electric arc furnaces and India's scrap imports are rising ➤

Figure 14: India's ferrous scrap imports are likely to remain around 7.5mt in FY23F, highest since the last five years



SOURCE: INCRED RESEARCH, COMPANY REPORTS

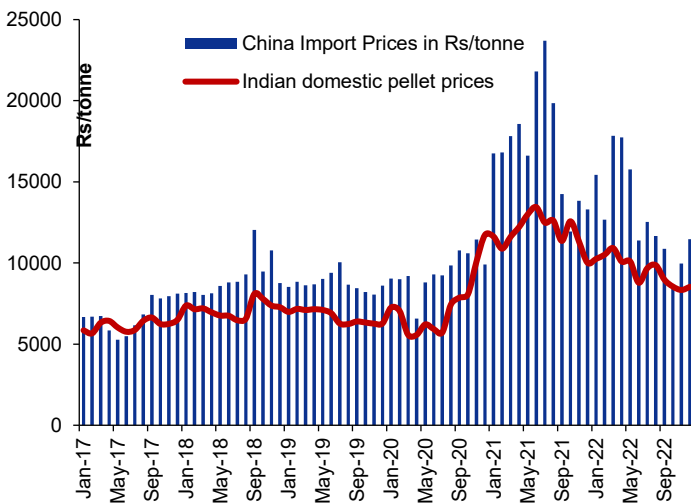
Figure 15: While Indian imports are pushing global scrap prices upwards, still using imported scrap is much better than using sponge iron



SOURCE: INCRED RESEARCH, COMPANY REPORTS

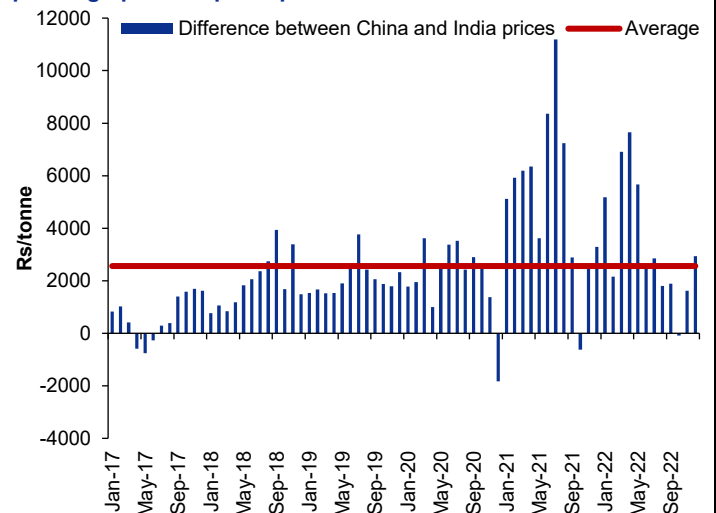
Removal of export duty will lead to a rise in domestic pellet prices, which will push up sponge iron prices further ➤

Figure 16: China's pellet prices are again moving up



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 17: As the winter season accentuates in China, there will be higher demand for pellets which will raise its prices, thereby pushing up Indian pellet prices



SOURCE: INCRED RESEARCH, COMPANY REPORTS

India's domestic iron ore prices are unlikely to go down ➤

- The auction of multiple iron ore mines had raised hopes of increased iron ore production.
- However, the exorbitant premium paid by miners made the mines unviable to operate.
- At the same time, we don't see any respite in international prices as investment in mining has been miniscule over the years.
- India has removed export duty, which exposes Indian iron ore to the vagaries of the global market and hence, don't expect any respite in domestic iron ore prices.
- Please note that after huge FY19 exports, India-relevant iron ore inventory (62% and above grade) will be extremely low.

Figure 18: Major global iron ore producers' exports are likely to go up by only 90mt over CY21

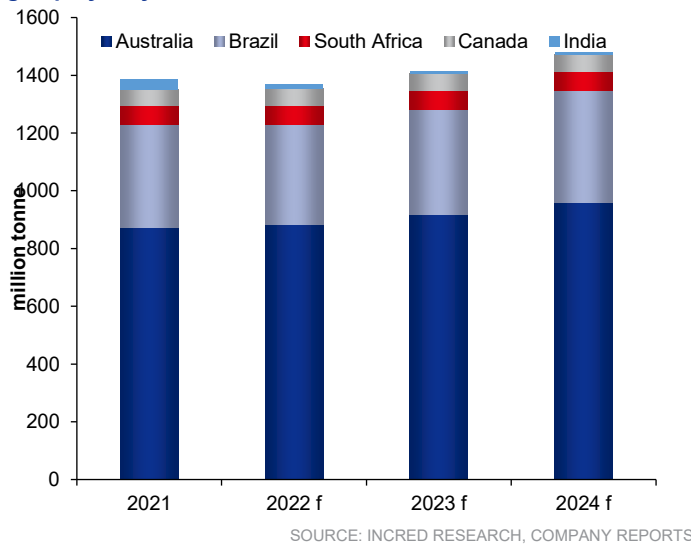


Figure 19: However, global steel production is likely to go up by ~40mt, making the demand-supply situation extremely tight for iron ore

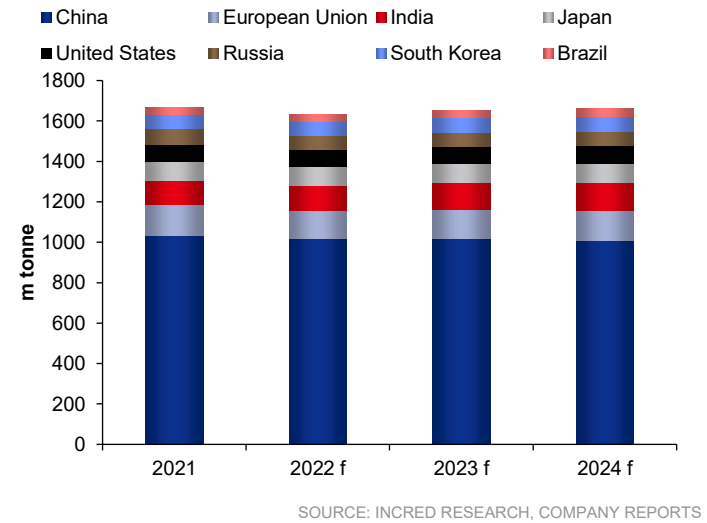


Figure 20: Given the monthly production trend in 2022, FY23F Indian iron ore production is likely to be 240mt

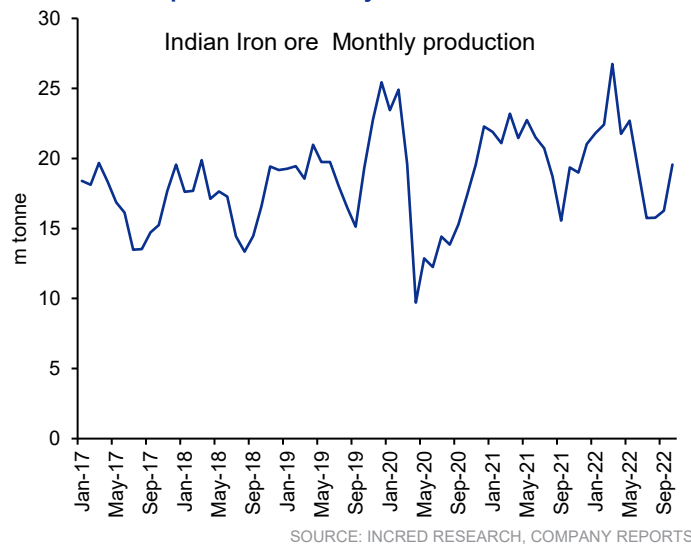


Figure 21: Hence, Indian mine head inventory won't recover much

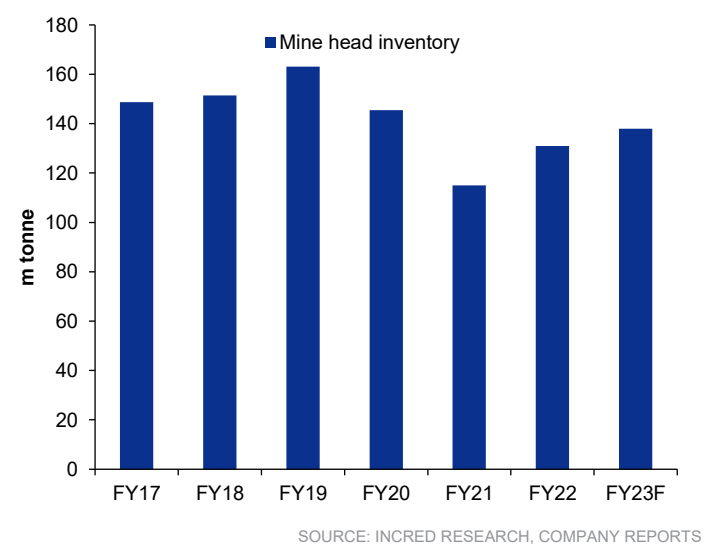


Figure 22: Usable mine head would barely touch 36-37mt at the end of FY23F

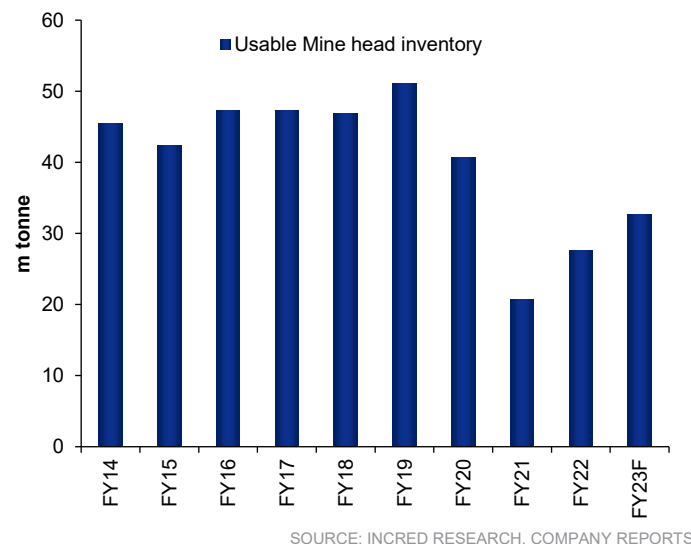
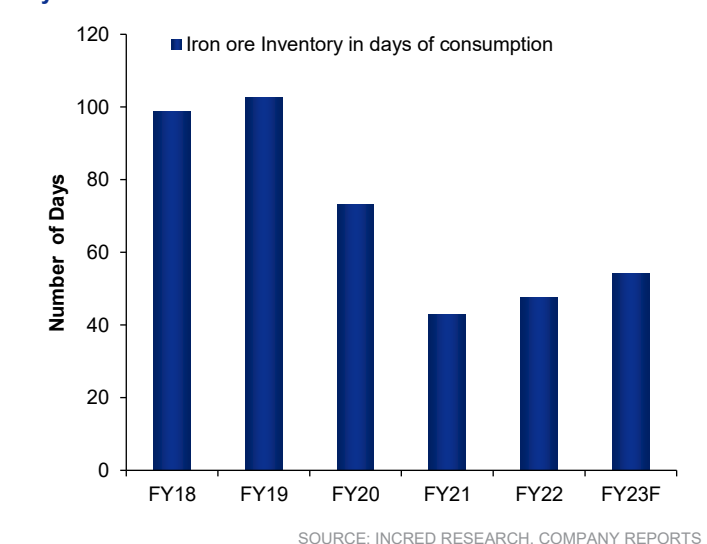


Figure 23: FY24F may start with one of the lowest inventory days since several decades

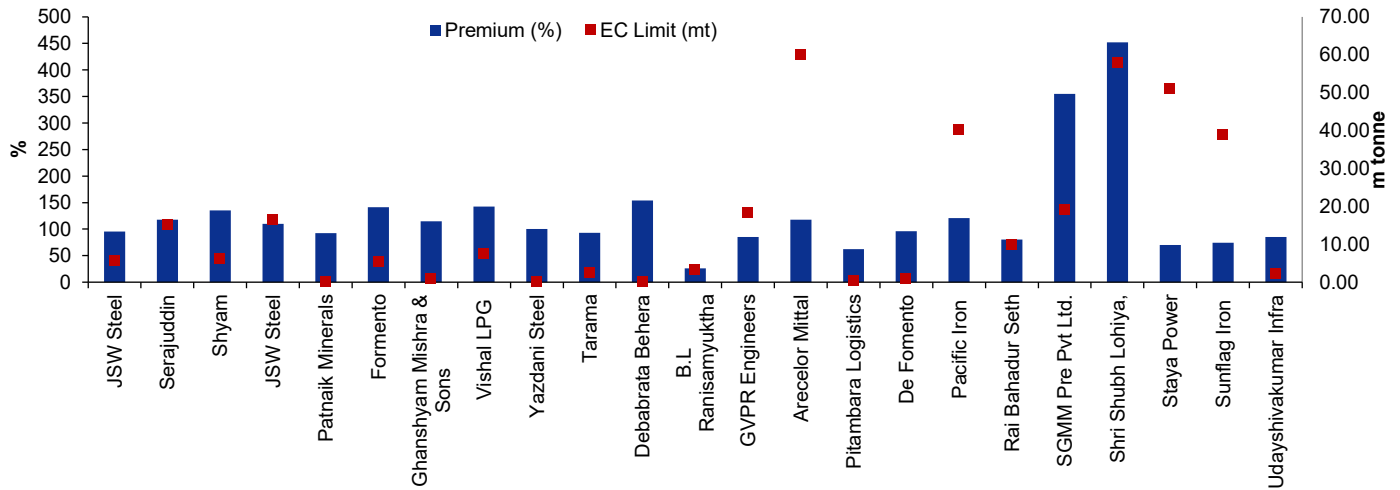


Lower inventory level is particularly worrisome because of continued high international prices and mining lease surrender by multiple mine auction-winners.

- [JSW Steel surrenders iron ore mine lease in Odisha - The Hindu BusinessLine](#)
- Other companies will also find it difficult to run the mines because of the steep premiums paid in auctions.

Companies have bid high for merchant mines and hence, they can be viable only for exports ➤

Figure 24: Merchant mine premium of 100% plus can only be viable for exports and that too, if iron ore prices in global market remain above US\$120/t



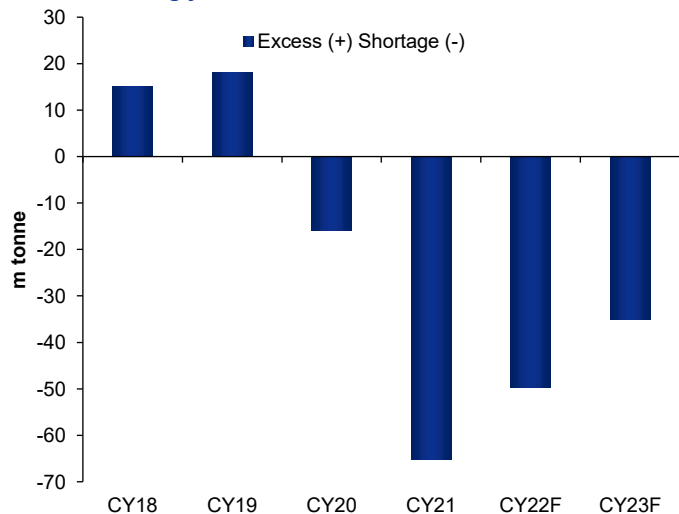
SOURCE: INCRED RESEARCH, COMPANY REPORTS

Coking coal prices are unlikely to come down

Sub-par investment in coking coal assets in Australia is leading to global shortage of coking coal. While Mongolia has raised its production level, it won't be sufficient to cover for the replacement of EAF production in Europe through the blast furnace route and hence, demand for coking coal.

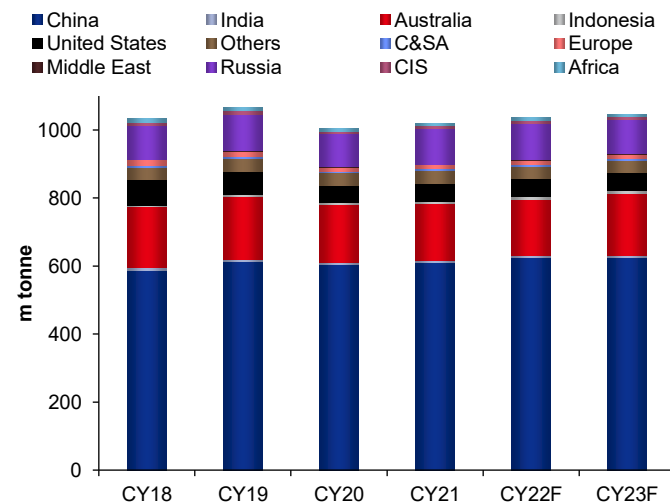
Indian domestic iron ore prices are unlikely to go down ➤

Figure 25: We expect coking coal to remain in short supply over the coming years



SOURCE: INCRED RESEARCH, COMPANY REPORTS

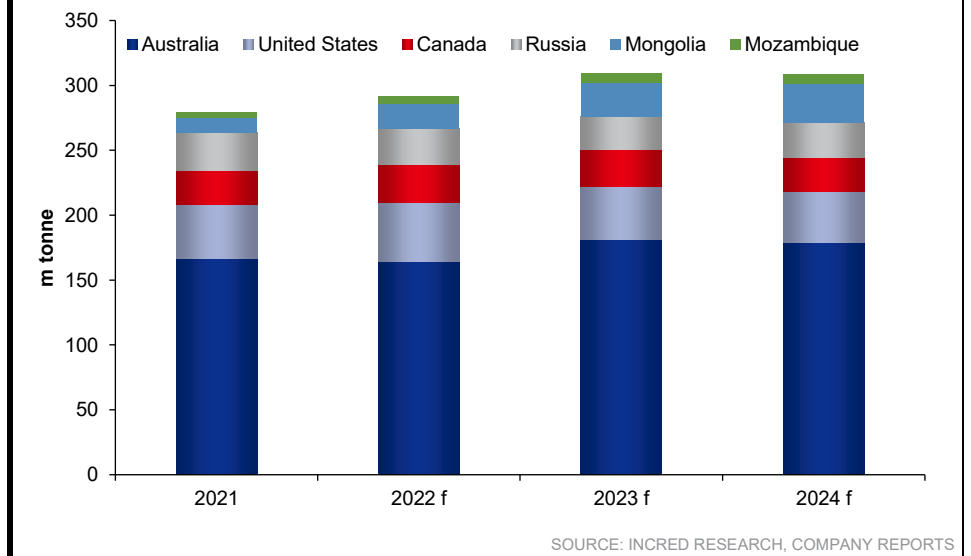
Figure 26: Australia's production is likely to disappoint in CY23F as well



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Australia is projected to export 181mt in CY23F, but it appears to be a tall task >

Figure 27: In the past few years, Australia has consistently missed its export targets; in CY23F, Australian government is projecting 181mt in exports



Europe will have to depend on blast furnaces for its steel production, thereby raising the demand for coking coal >

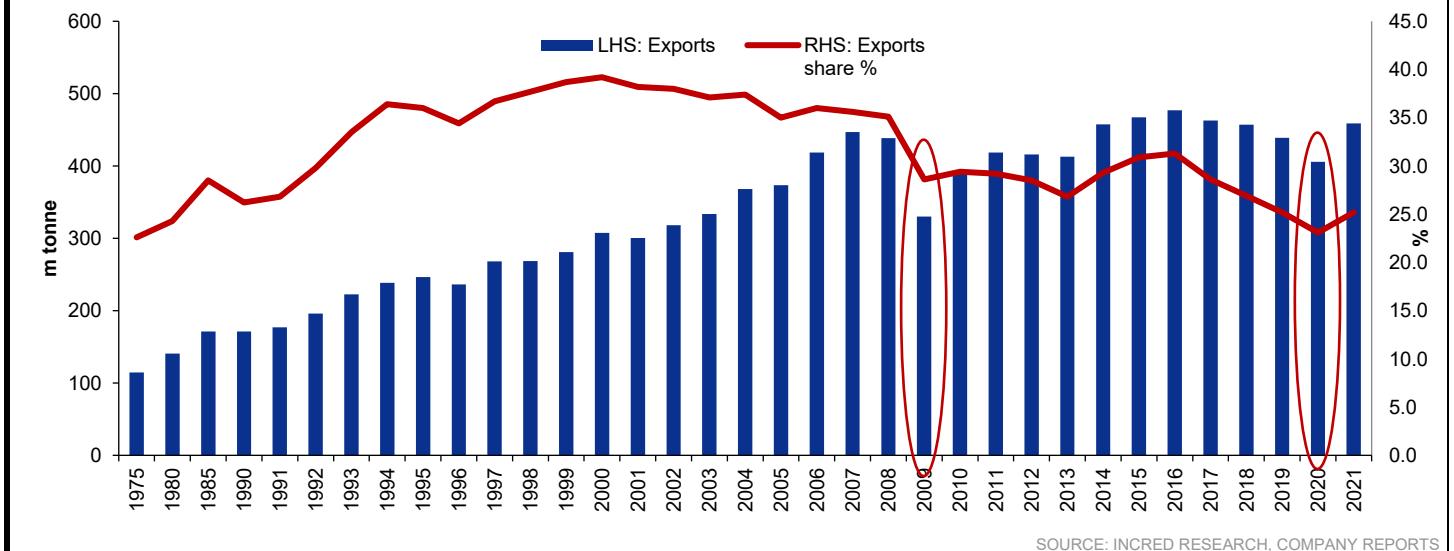
At current steel, scrap, and power prices in Europe, it will be difficult for EAFs to make any operational profit. Naturally, for steel production, these countries will have to depend on blast furnaces which need coking coal. Hence, although the demand may remain muted, because of cannibalization of steel supply from EAFs to blast furnaces coking coal demand will increase. Hence, our projection for coking coal deficit may aggravate further, pushing up coking coal prices.

Global steel prices to remain under pressure

Global steel prices will remain under pressure for some time and hence, don't expect any revival in steel spreads.

COVID-19 pandemic led to a decline in global steel trade and hence, steel supply was scarce >

Figure 28: 2021 witnessed lowest steel exports as a % of overall steel consumption since 1975 - this led to widespread steel scarcity and the perception of steel supercycle

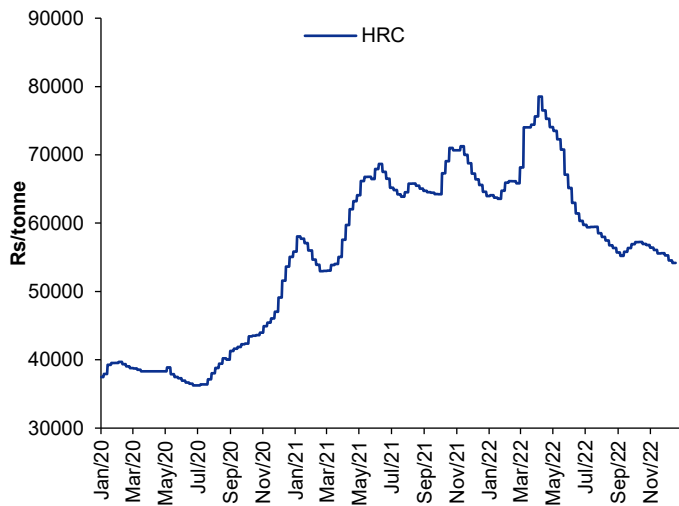


Please note we had pointed out this phenomenon, although without any concrete data (as data is not available in real time) multiple times during 2021. Please see some of our notes detailed below:

1. [IN: Steel - Irrational enthusiasm](#)
2. [IN: Steel - Recent market exuberance close to its end](#)

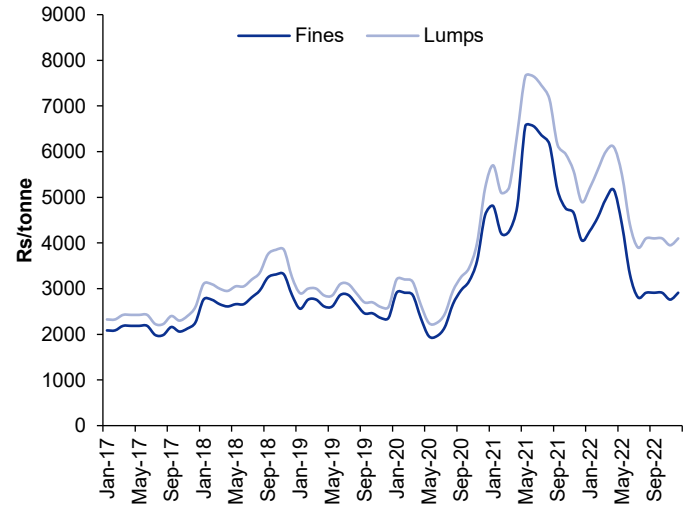
Normalization of supply chain led to a rapid decline in steel prices ➤

Figure 29: Indian hot rolled coil or HRC prices touched Rs80,000/t in 2021, but have since then corrected to Rs54,000/t



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 30: However, iron ore prices are not correcting as there are structural tailwinds

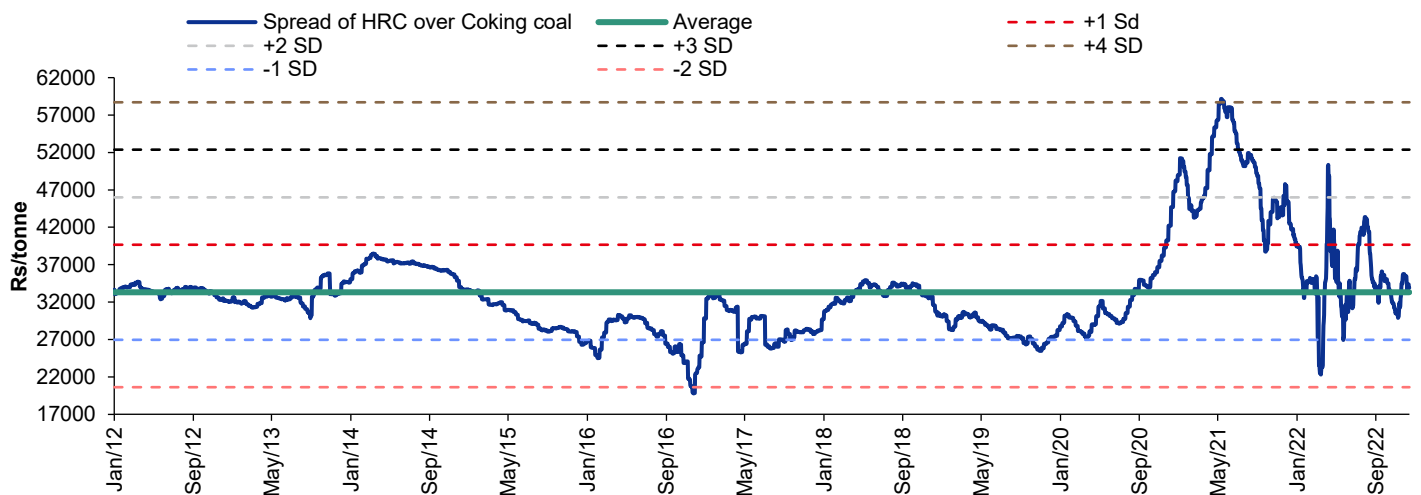


SOURCE: INCRED RESEARCH, COMPANY REPORTS

As highlighted earlier, we don't expect coking coal prices to fall in the global market.

Hence, Indian steel spreads have fallen to their historical mean level ➤

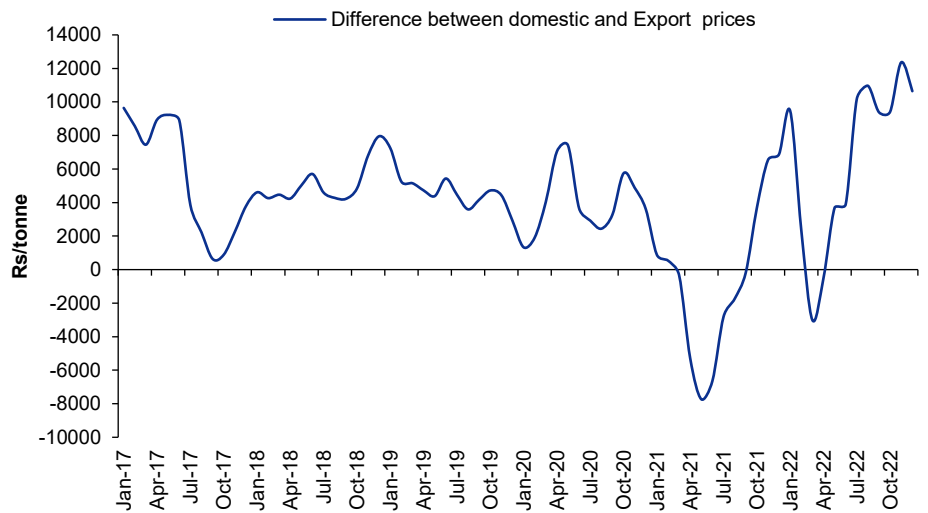
Figure 31: Indian domestic HRC spreads over coking coal have fallen to historical mean level; we believe that as coking coal prices rise they will fall to -1 SD level



SOURCE: INCRED RESEARCH, COMPANY REPORTS

However, Indian export prices are still at a significant discount to domestic prices ➤

Figure 32: Domestic steel prices are still at one of their highest levels vis-à-vis export prices



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Global steel prices are showing minor volatility, but no big revival as such ➤

Figure 33: After a steep decline, global HRC prices have shown a minor uptick



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 34: However, iron ore prices have also moved up, thereby negating all the advantages



SOURCE: INCRED RESEARCH, COMPANY REPORTS

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