

### Indian companies valuation

Indian companies valuation					
	Price  (INR)	EV/ EBITDA (x)		P/B (x)	
		FY23	FY24E	FY23	FY24E
Steel					
Tata	129	7.0	9.7	1.6	1.7
JSW	839	14.1	8.4	3.1	2.7
JSP	686	7.6	7.9	1.8	1.6
SAIL	98	8.8	7.7	0.7	0.7
Non-ferrous					
Vedanta	245	4.9	7.4	2.3	3.4
Hindalco	520	6.3	5.9	1.5	1.4
Nalco	97	6.3	6.6	1.4	1.3
Mining					
Coal	351	4.1	4.5	3.8	3.1
HZL	323	7.8	9.3	10.6	8.1
NMDC	184	7.8	6.8	2.4	2.1

### Global companies valuation

Company	M.Cap USD b	EV/EBITDA (x)		P/B (x)
		CY22/ FY23	CY23/ FY24	CY22/ FY23
Steel				
AM	22	3.7	3.9	0.4
SSAB	8	3.0	4.5	1.1
Nucor	40	5.6	7.7	1.9
POSCO	30	6.0	5.5	0.7
JFE	9	6.9	5.7	0.6
Aluminum				
Norsk Hydro	12	5.9	5.1	1.2
Alcoa	4	13.0	6.6	1.0
Zinc				
Teck	19	5.1	4.3	1.0
Korea Zinc	8	10.2	8.9	1.1
Iron ore				
Vale	66	4.4	4.2	1.6
Diversified				
BHP	160	6.2	5.9	3.7
Rio	119	5.2	5.0	2.1

## Record monthly imports keep ferrous prices in check

**Record monthly imports, negligible exports, high inventory at mills, a higher rebate by Tier-I mills, and limited construction activities in North India have weighed on ferrous prices.**

- Monthly steel imports surged to record levels, reaching a four-year high of 0.8mt in Nov'23. India has been a net importer YTD.
- While domestic flat steel prices are linked to global ferrous markets, the surge in imports have exerted pressure on the domestic prices, which are relatively higher than other international peers such as China (USD570-610/t) and Japan (USD615-630/t).
- Higher imports and subdued exports hurt domestic prices, which declined INR200/t WoW to INR55,100/t.
- Though domestic long steel prices are not hit by international price movement, restrictions in construction activities in North and East India along with higher inventory with mills impacted the prices adversely, which decreased INR400/t WoW to INR54,600/t.
- However, the IF-BF long steel spread have been reduced to ~INR6,000/t from INR6,600-7,1000/t, which would provide some relief to primary manufacturers.
- Monthly imports that peaked in Nov'23, have been on hold amid a gradual increase in export prices by international participants; hence, one can expect a significant influx of consignments in Dec'23 until mid-Jan'24 after which the impact of higher imports is expected to fade away.

## Domestic steel industry performance – Nov '23

- Crude steel production improved 16% YoY and 1% MoM to 12.3mt.
- Finished steel production improved 21% YoY and 3% MoM to 11.5mt.
- India continued to remain a net importer for the fifth consecutive month, and imports stood at record levels in the last four years at 0.8mt.
- Domestic consumption was up 18% YoY and down 2% MoM at 11.4mt.
- For FYTD, share of PSU in finished steel production was down by 25bp to 14.9%.
- For FYTD, share of the top six producers contracted 196bp to 56.7%.
- Except RINL, all the major steel manufacturers witnessed improvements in their finished steel production for Nov'23.

**Commodities and forex tracker**

	UoM	Spot	WoW (%)	MoM (%)
India HRC (ex-Mum)	INR/t	55,100	0	0
India TMT Prime (ex-Mum)	INR/t	54,600	-1	-3
India TMT Secondary (ex-Mum)	INR/t	48,500	1	-1
Korea HRC - FoB	USD/t	620	5	5
China HRC Dom.	USD/t	572	2	7
China HRC - FoB	USD/t	575	0	6
India Prem HCC CNF	USD/t	354	2	5
India 64 Mid Vols CNF	USD/t	298	4	12
India Low Vols PCI CNF	USD/t	195	1	-3
Iron Ore Fines (Odisha Index) Fe 62%	INR/t	5,000	0	3
Iron Ore Fines (China - CNF) Fe 62%	USD/t	136	2	8
Europe Scrap HMS 1&2(80:20)	USD/t	402	3	4
C-DRI (ex-Raipur)	INR/t	28,600	2	-1
RB1 (6000 NAR) SA FoB	USD/t	121	-2	-6
RB2 (5500 NAR), SA FoB	USD/t	110	0	-12
Indonesia (4200 GAR) Futures	USD/t	58	0	2
Copper	USD/t	8,221	-3	2
Aluminum	USD/t	2,099	-2	-6
Zinc	USD/t	2,412	-2	-5
Lead	USD/t	1,998	-5	-8
Nickel	USD/t	16,306	-3	-8
Alumina	USD/t	332	-1	-1
Ali UBC Scrap	USD/t	1,543	-1	-3
Ali UBC Scrap Spread	USD/t	556	-5	-15
INR:USD	x	83.4	0	0
USD:EUR	"	1.08	-1	1
USD:GBP	"	1.26	-1	2
CNY:USD	"	7.16	0	-2
JPY:USD	"	144	-2	-4

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Source: SteelMint, JPC, Bloomberg, Company, investing.com and MOFSL estimates

## FERROUS: India – prices

Exhibit 1: HRC - Mumbai (INR/t)

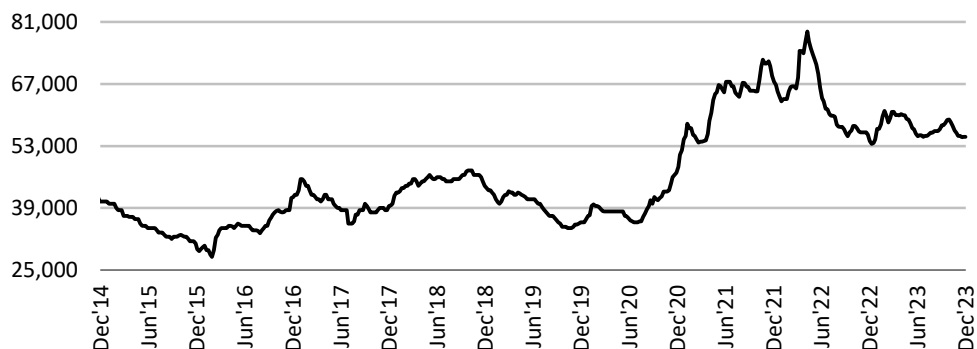


Exhibit 2: TMT Primary – Mumbai (INR/t)

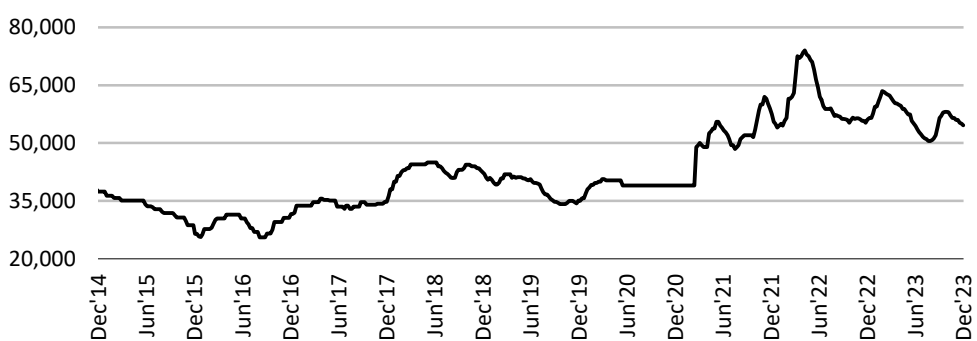
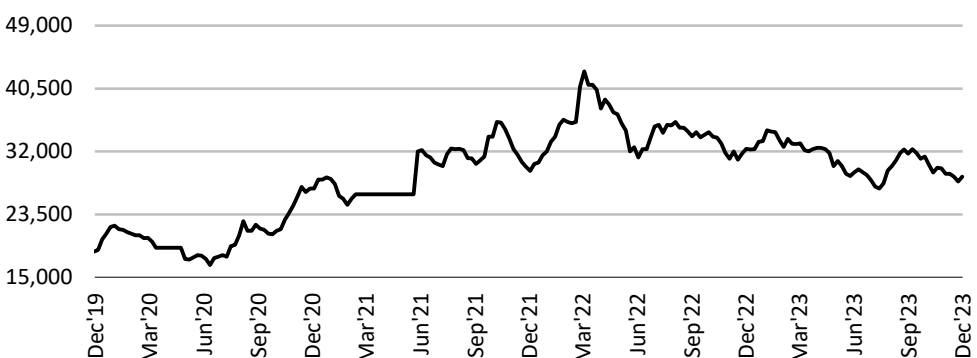
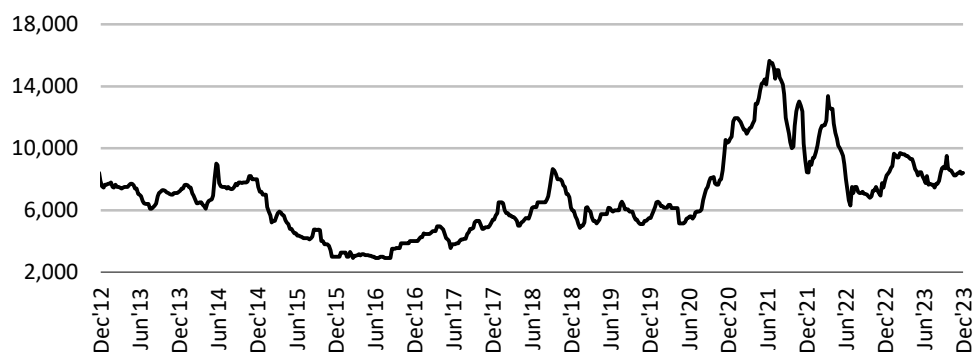


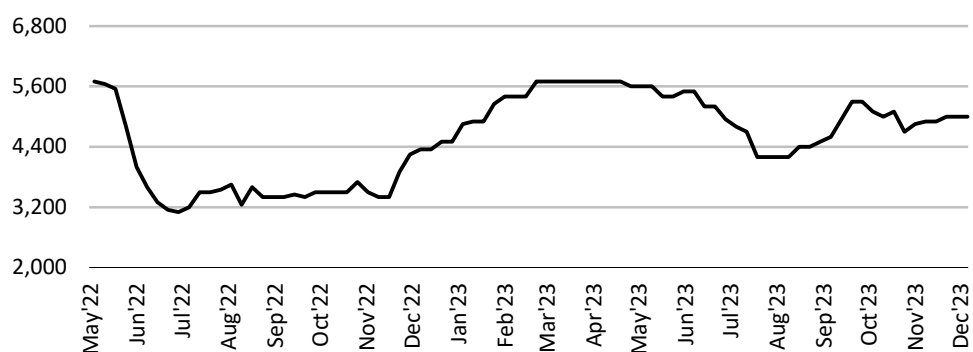
Exhibit 3: C-DRI (sponge iron), ExW-Raipur (INR/t)



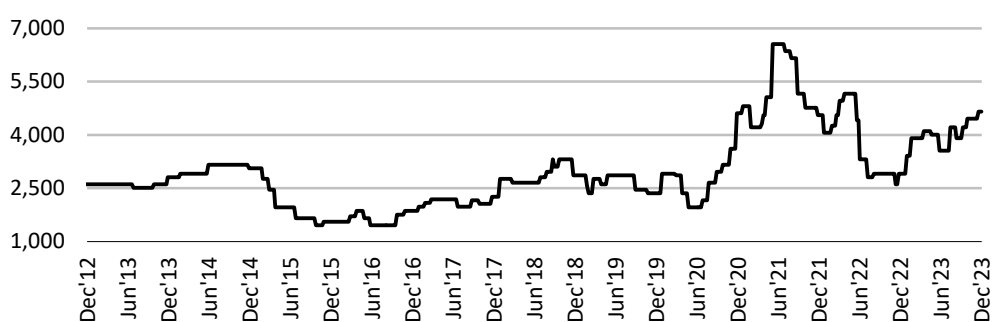
**Exhibit 4: Domestic Pellet – Barbil – 63% Fe (INR/t)**



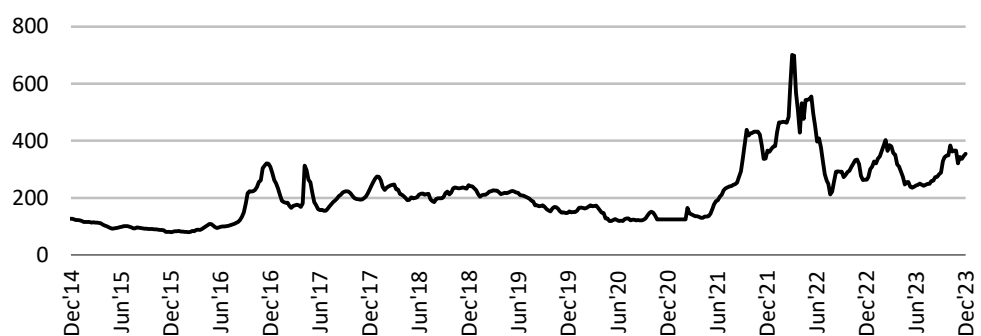
**Exhibit 5: Iron Ore Fines Odisha – Fe 62% (INR/t)**



**Exhibit 6: NMDC Fines – Fe 64% (INR/t)**

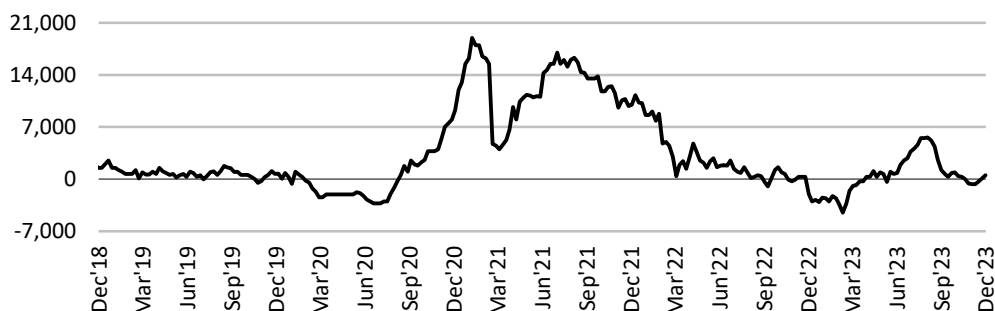


**Exhibit 7: Premium HCC CNF Paradip (USD/t)**

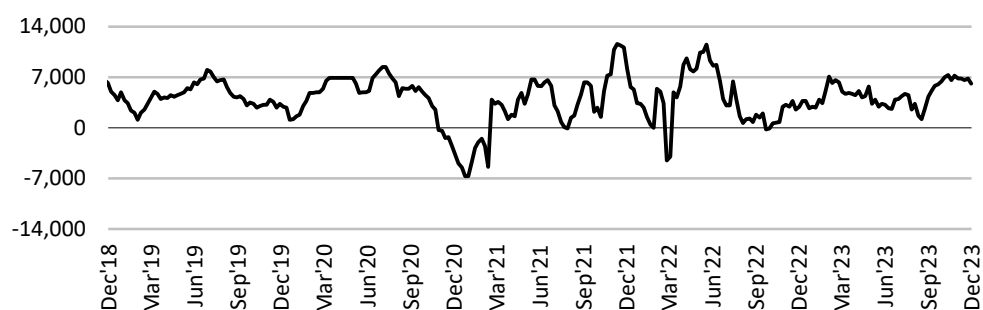


## Domestic spreads

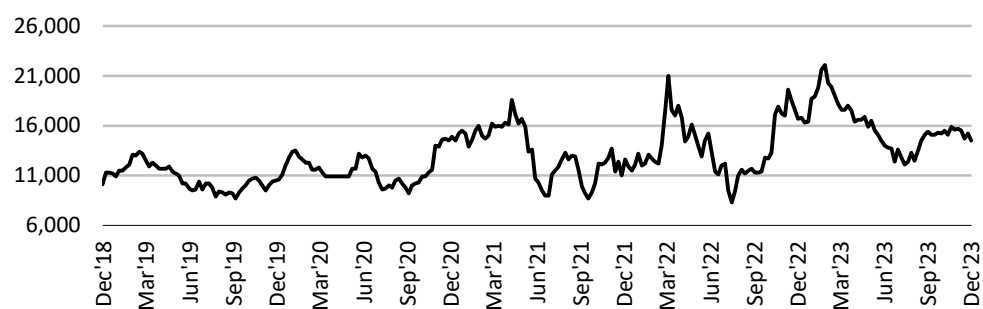
**Exhibit 8: Prime HRC v/s primary TMT (INR/t)**



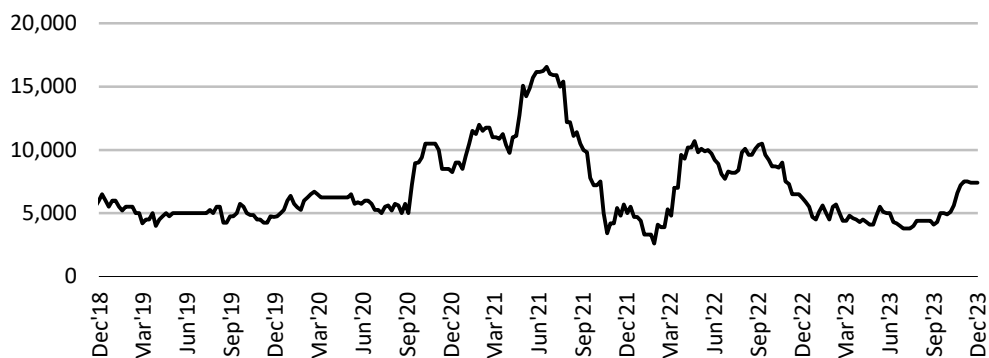
**Exhibit 9: Primary TMT v/s secondary TMT (INR/t)**



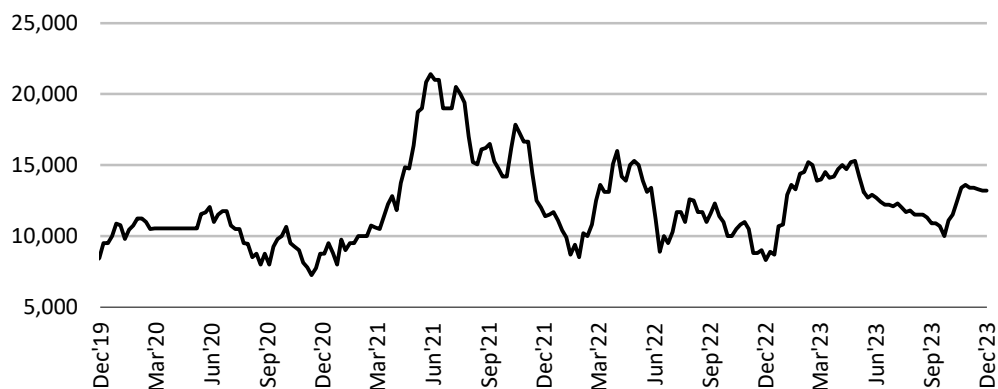
**Exhibit 10: Secondary TMT v/s domestic scrap (INR/t)**



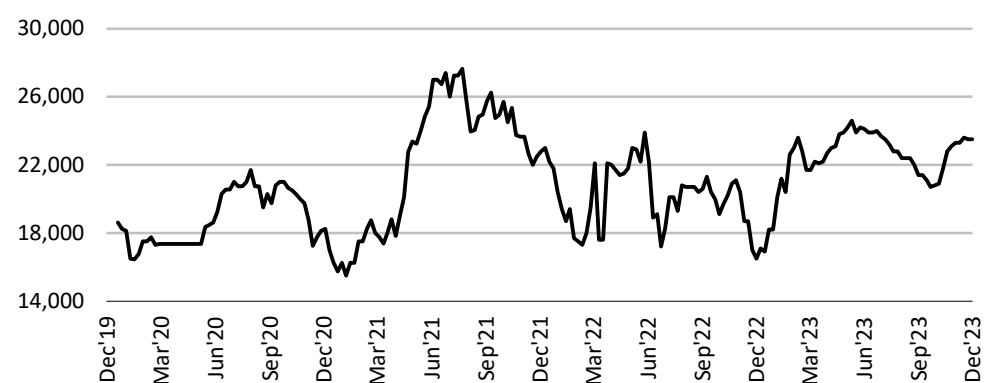
**Exhibit 11: HRC v/s CRC (INR/t)**



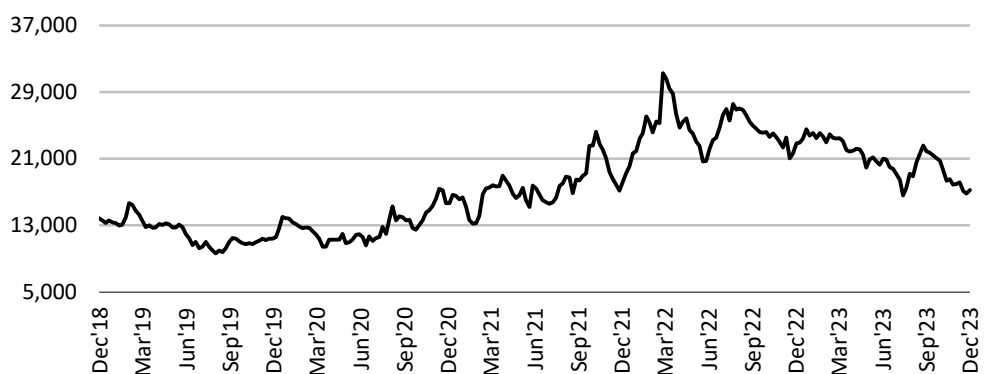
**Exhibit 12: HRC – galvanized (INR/t)**



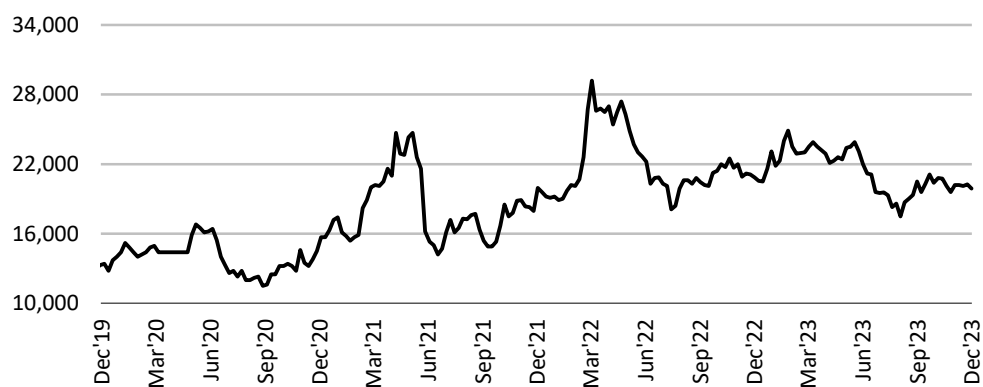
**Exhibit 13: HRC – color coated (INR/t)**



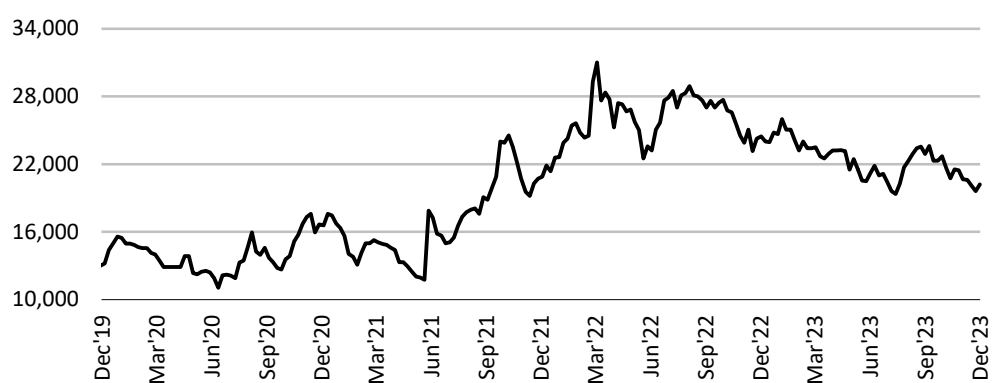
**Exhibit 14: DRI v/s NMDC lumps (INR/t)**



**Exhibit 15: Secondary TMT v/s DRI (INR/t)**



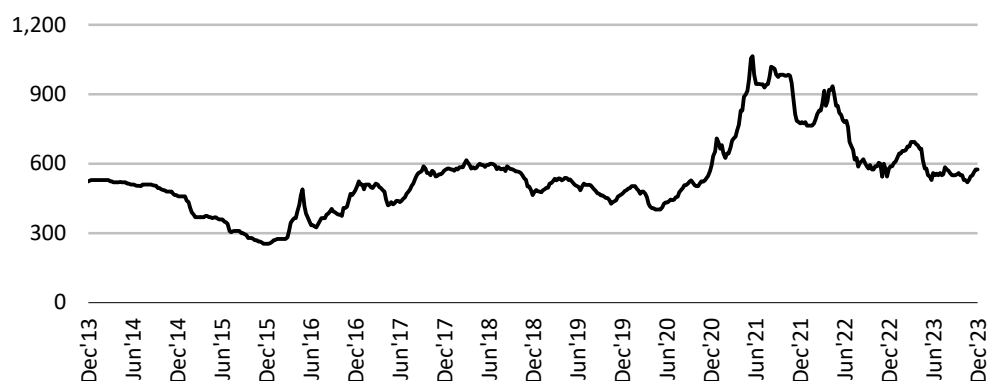
**Exhibit 16: DRI v/s pellet (INR/t)**



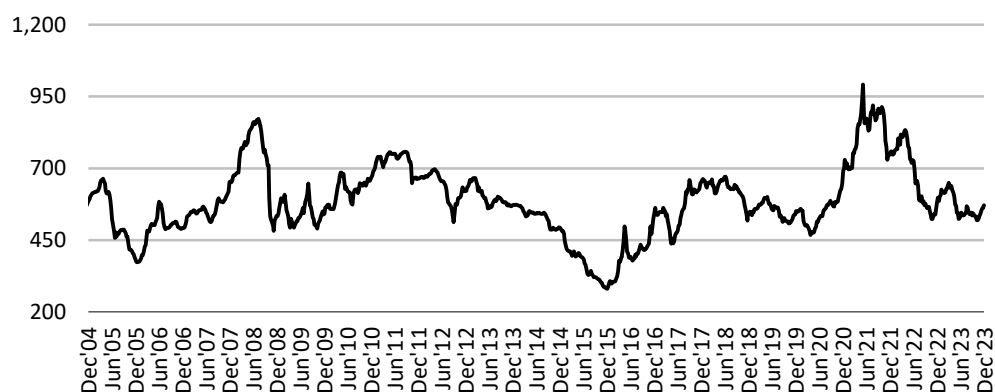


## China prices/spreads

**Exhibit 17: China HRC FoB (USD/t)**



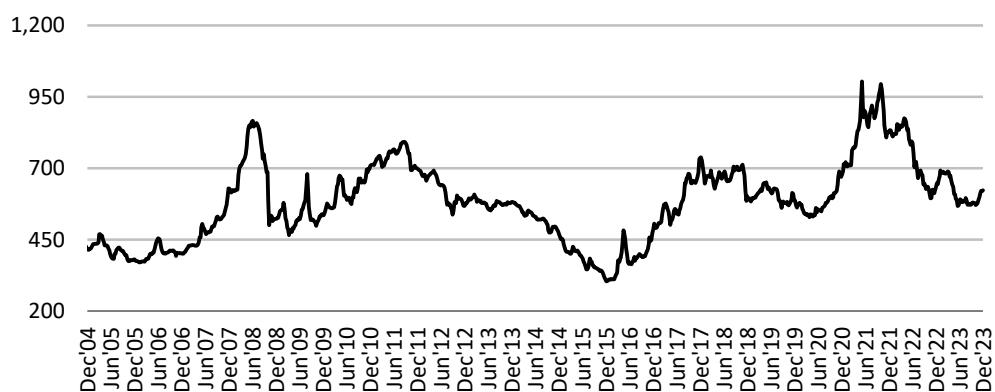
**Exhibit 18: China HRC domestic (USD/t)**



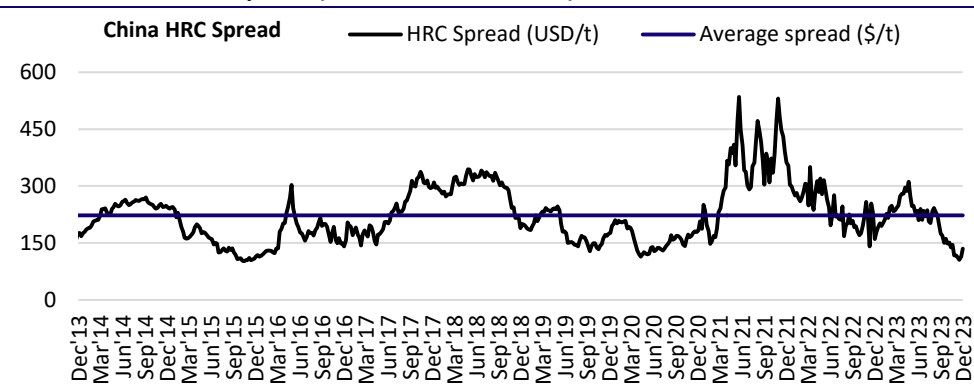
**Exhibit 19: China domestic TMT (USD/t)**



**Exhibit 20: China domestic wire rod (USD/t)**

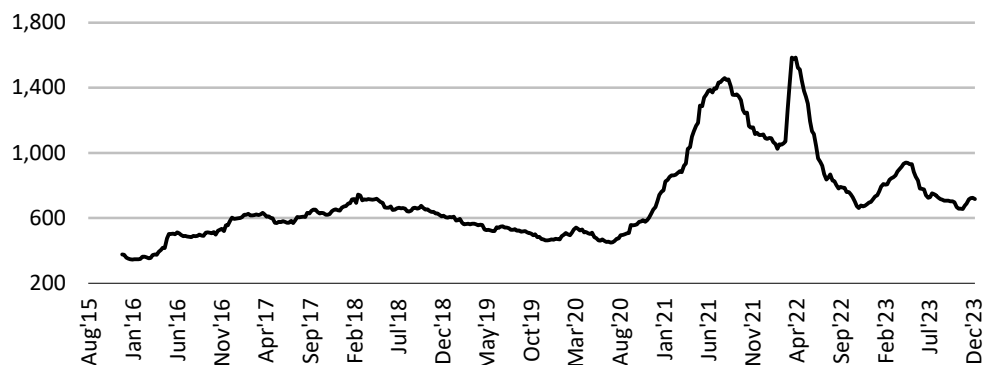


**Exhibit 21: China HRC spread (1.6x IO and 0.85x HCC)**

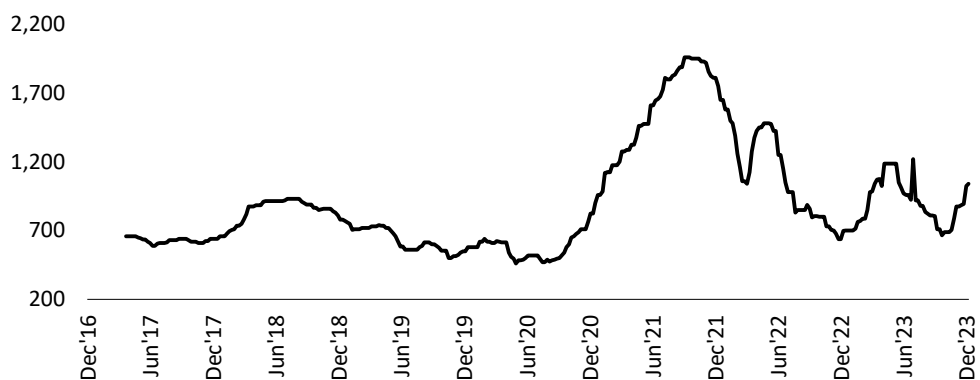


## Global prices

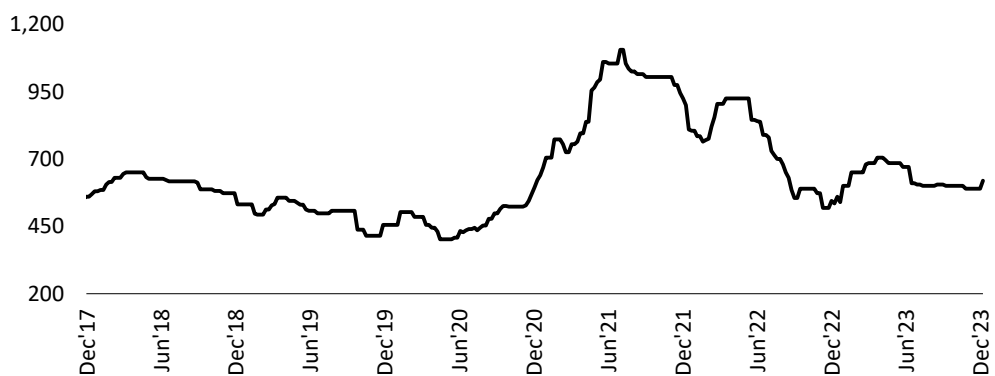
**Exhibit 22: Northern Europe HRC domestic (USD/t)**



**Exhibit 23: North America HRC domestic (USD/short ton)**



**Exhibit 24: Korea HRC FOB (USD/t)**



## Inventories

Exhibit 25: India steel inventory (mt)

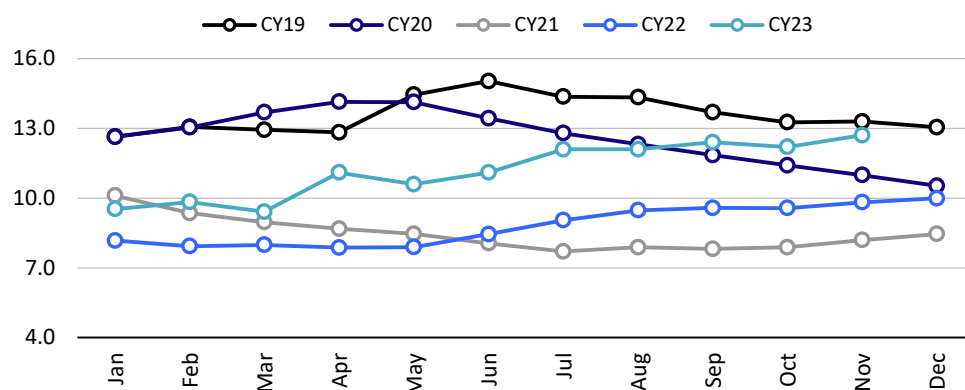


Exhibit 26: China wire rod and TMT inventory (mt)

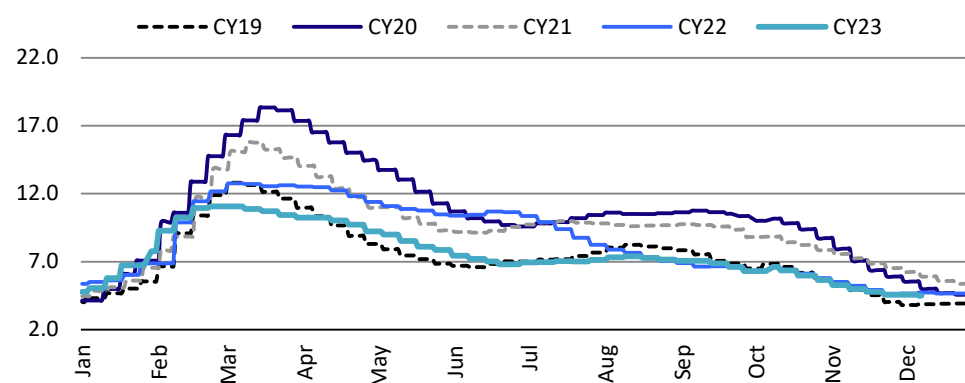
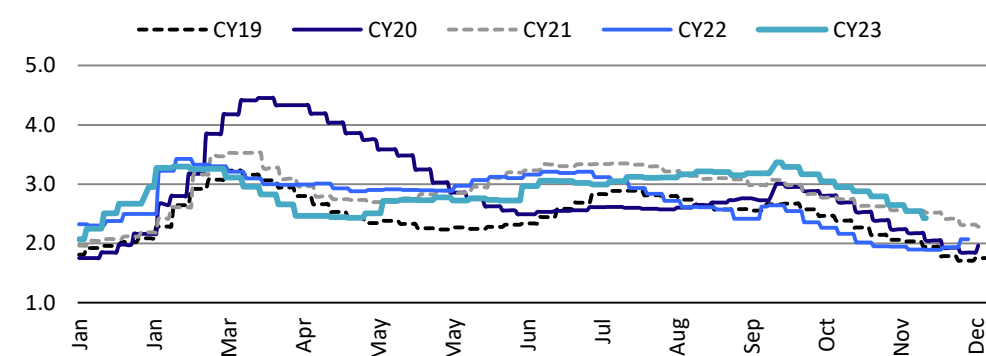


Exhibit 27: China HRC inventory (mt)



## NON-FERROUS: Aluminum

Exhibit 28: LME spot (USD/t)



Exhibit 29: Alumina FoB Australia (USD/t)

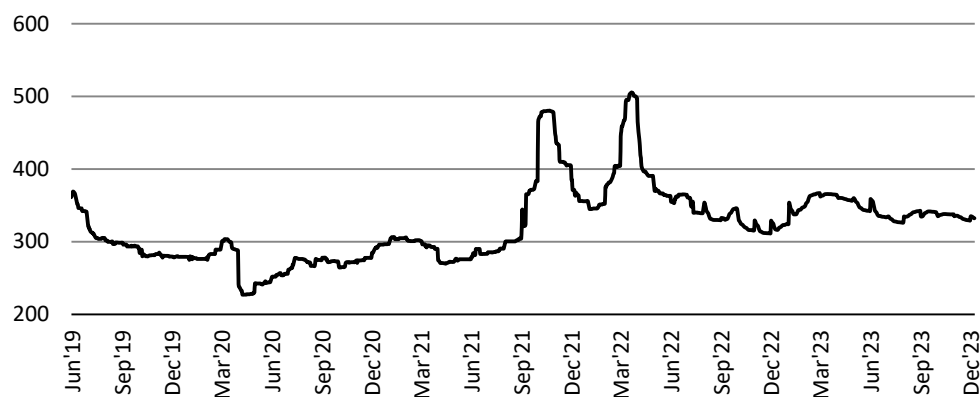
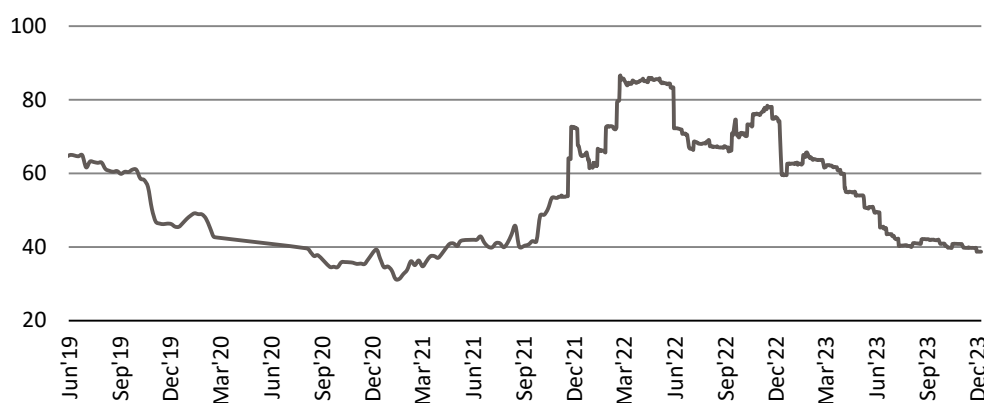
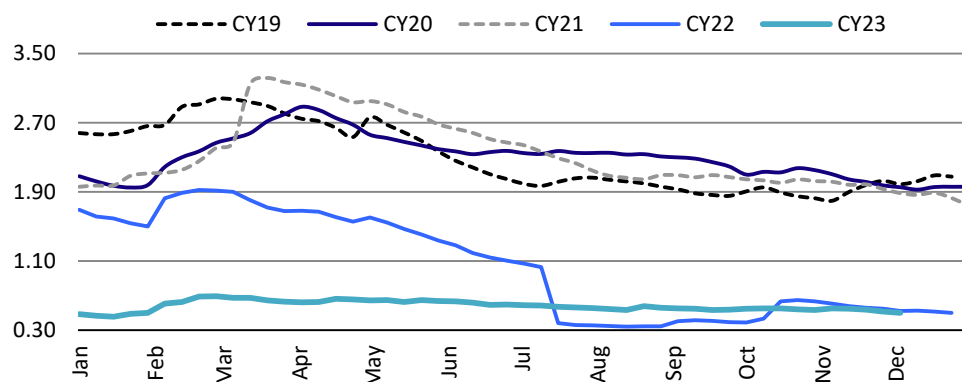


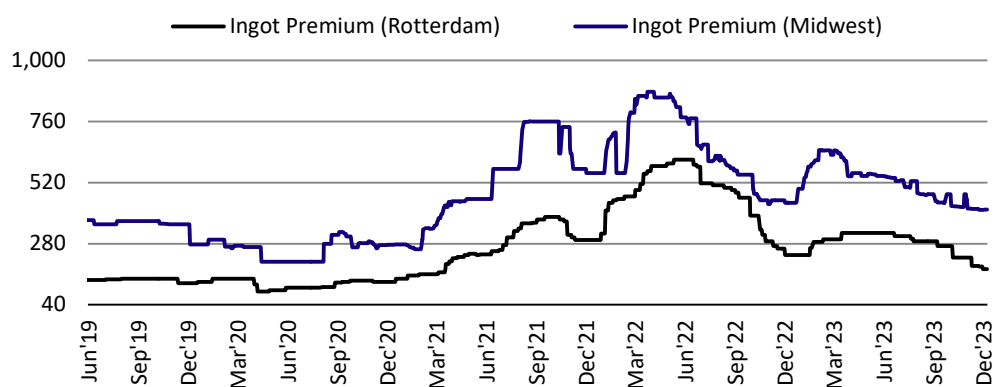
Exhibit 30: Caustic soda (USD/t)



**Exhibit 31: Total inventory (LME + SHFE, mt)**



**Exhibit 32: Ingot premiums (mt)**

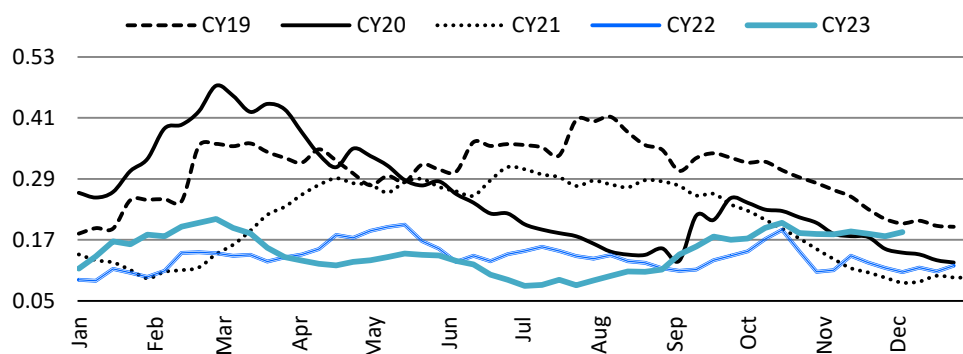


## Copper

Exhibit 33: LME spot (USD/t)



Exhibit 34: Total inventory (LME+SHFE, mt)



## Zinc

Exhibit 35: LME spot (USD/t)

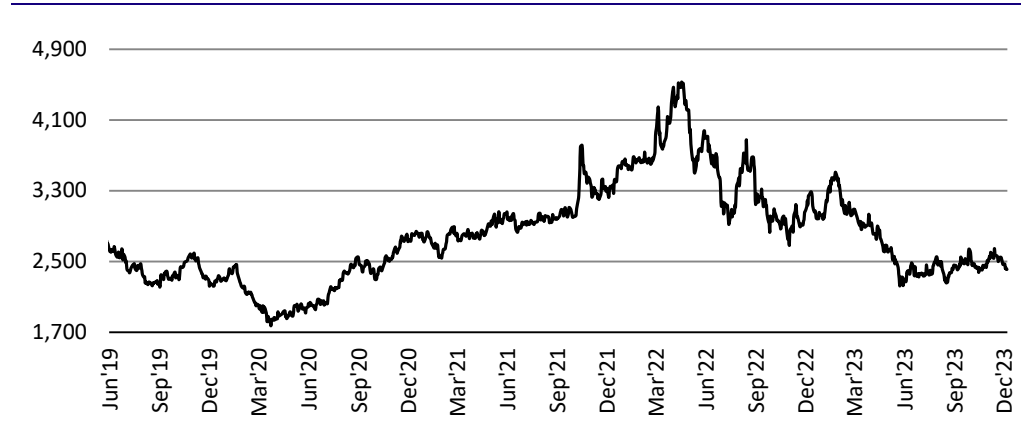
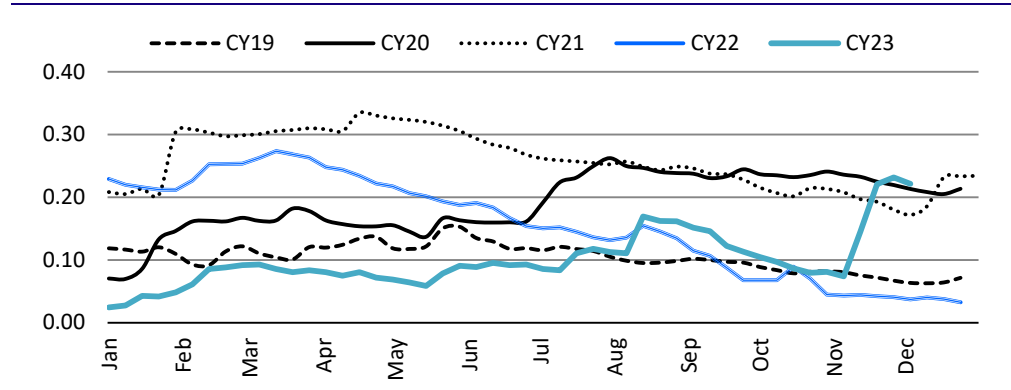


Exhibit 36: Total inventory (LME+SHFE, mt)





## Lead

Exhibit 37: LME spot (USD/t)

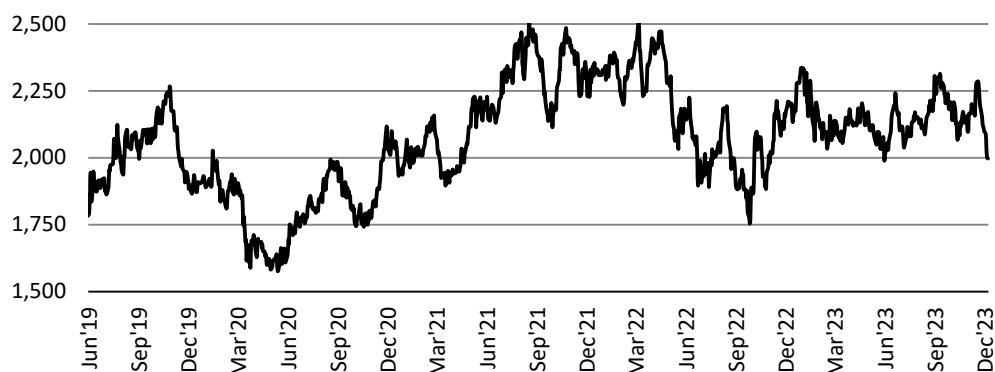
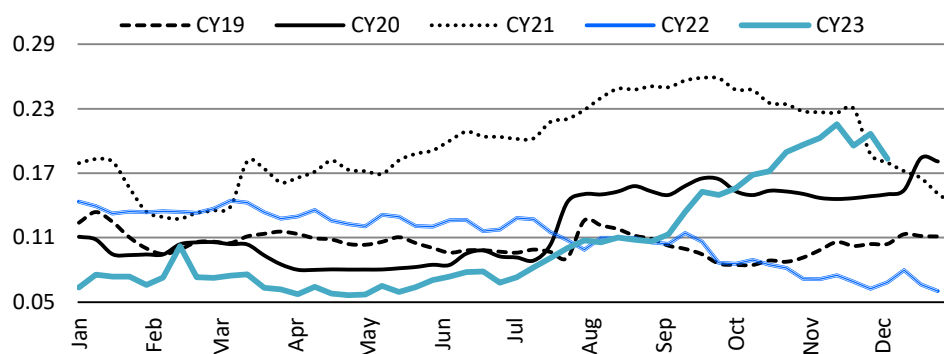


Exhibit 38: Total inventory (LME+SHFE, mt)



## Nickel

Exhibit 39: Nickel spot (USD/t)

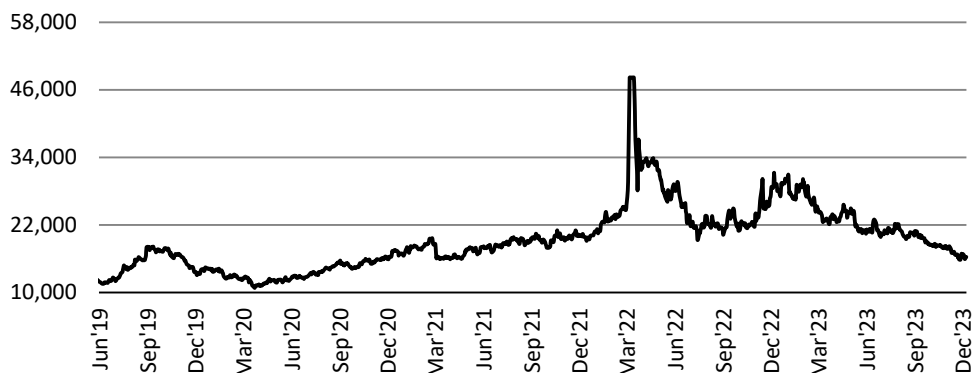
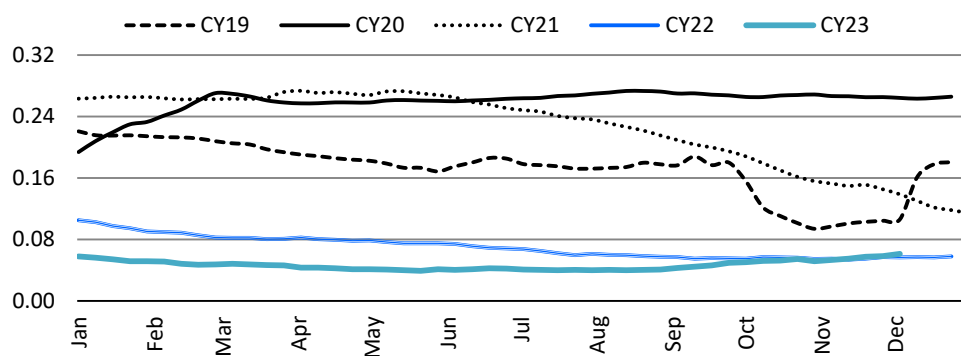


Exhibit 40: Total inventory (LME+SHFE, mt)



## India steel production, consumption, EXIM, and inventory

Exhibit 41: Crude steel production (mt)

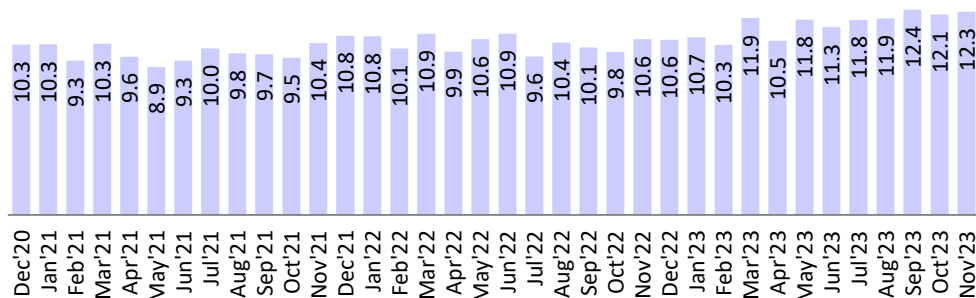


Exhibit 42: Finished steel production (mt)

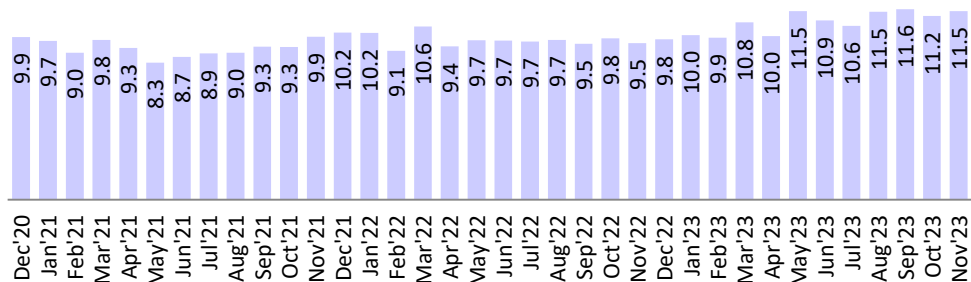


Exhibit 43: Imports including semis (kt)

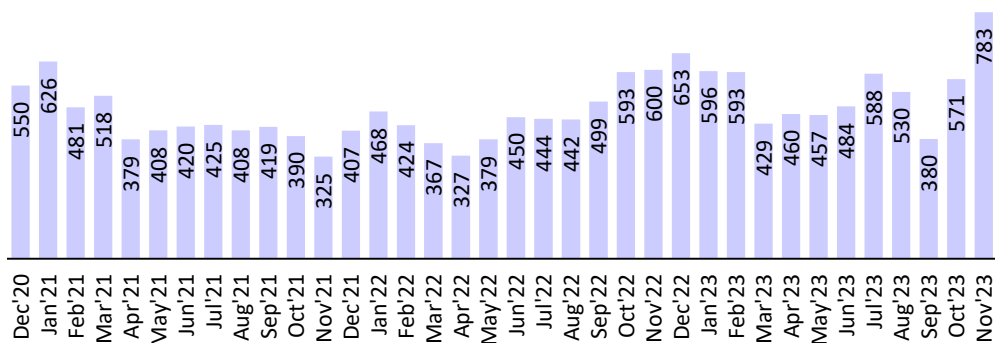


Exhibit 44: Exports including semis (kt)

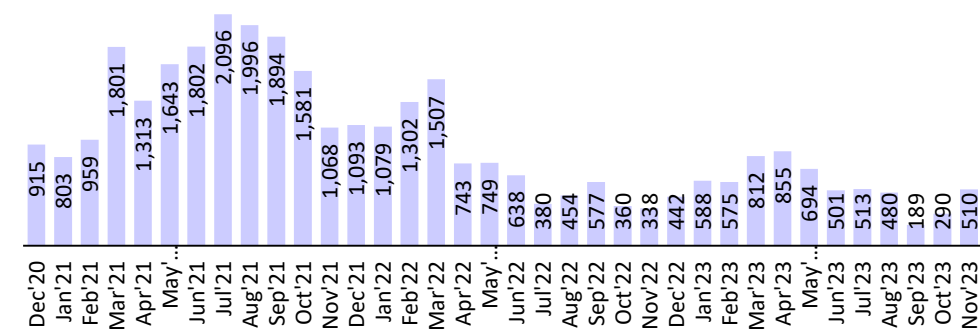


Exhibit 45: Net imports/(exports) of finished steel (kt)

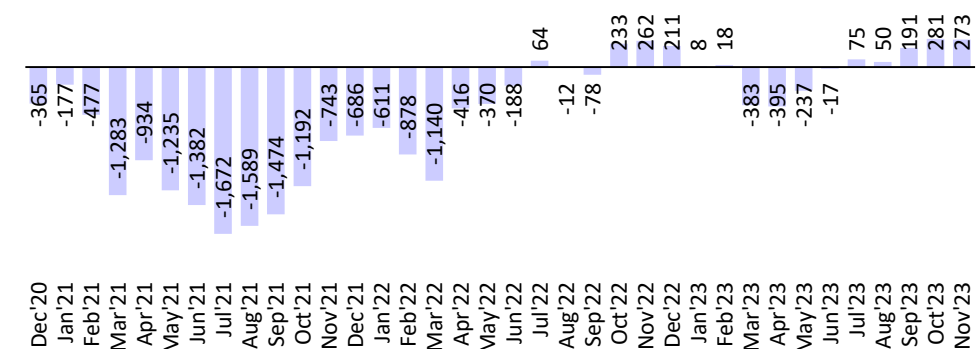
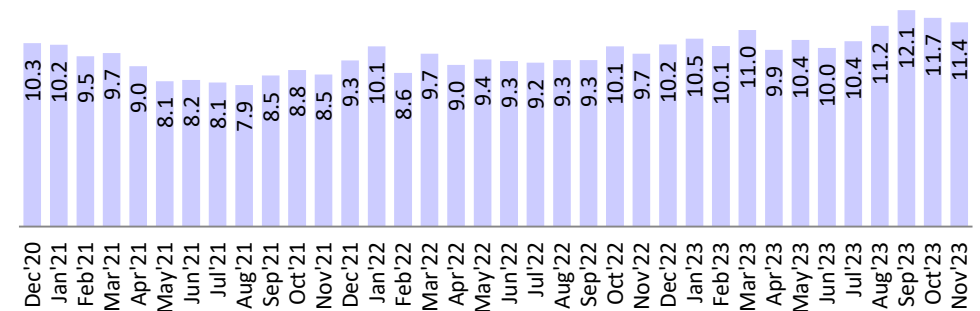
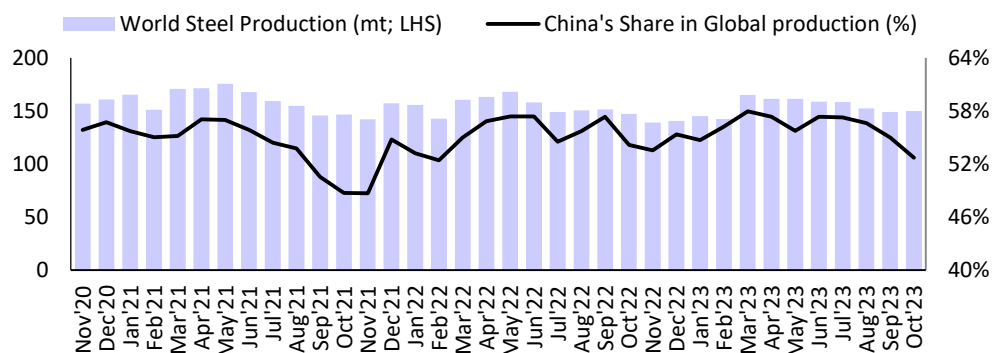


Exhibit 46: Steel consumption (mt)

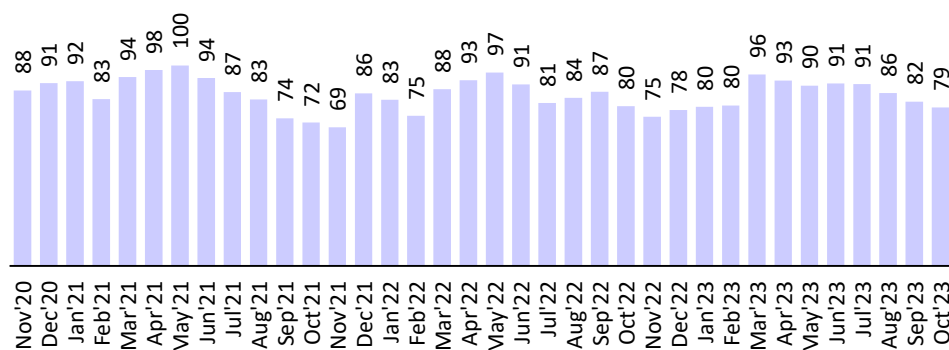


## Global production trends

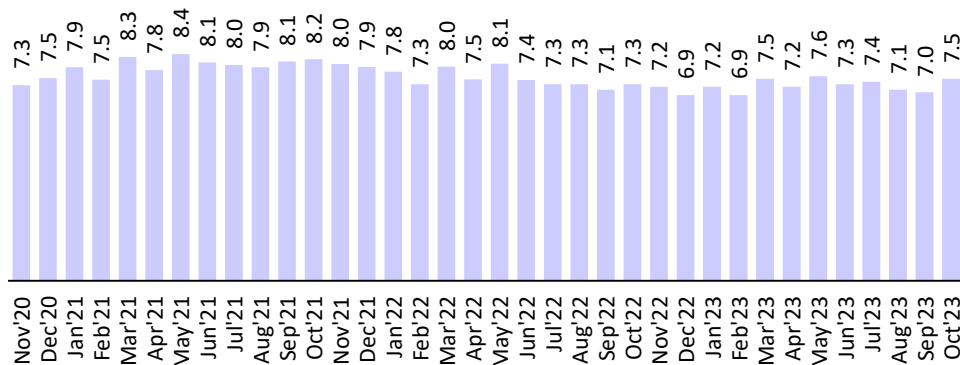
**Exhibit 47: World crude steel production and China's share**



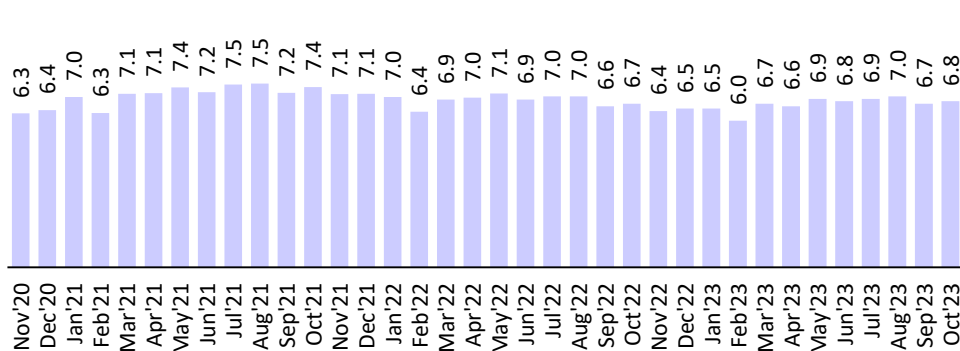
**Exhibit 48: Crude steel production in China (mt)**



**Exhibit 49: Crude steel production in Japan (mt)**



**Exhibit 50: Crude steel production in the US (mt)**



## China steel and macro

Exhibit 51: China's gross steel exports (mt)

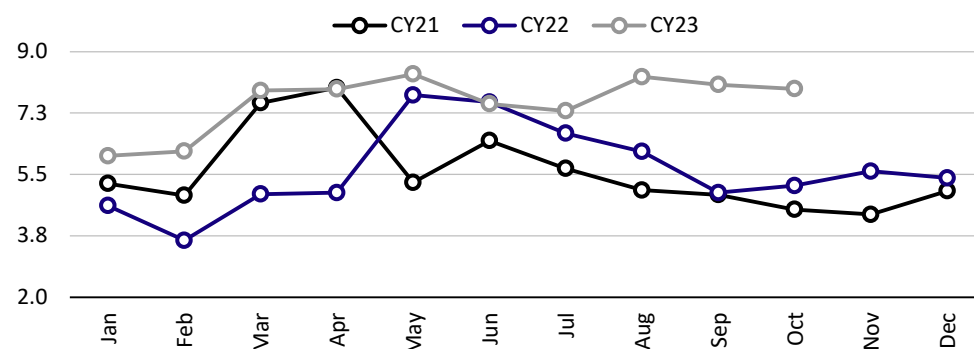


Exhibit 52: China's gross steel imports (mt)

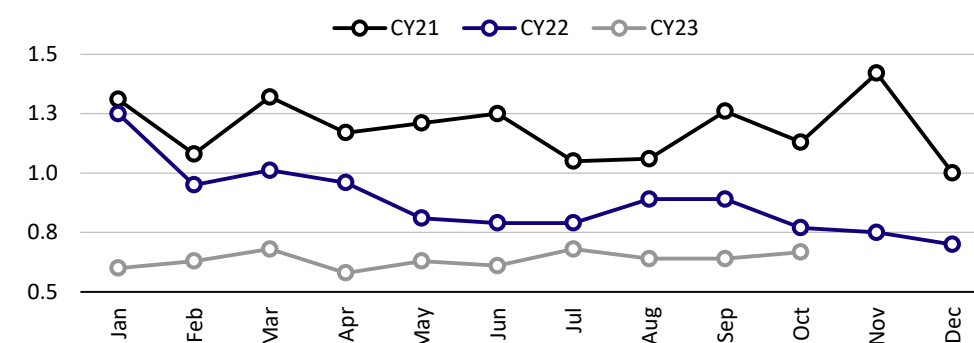


Exhibit 53: China's net steel exports/(imports) (mt)

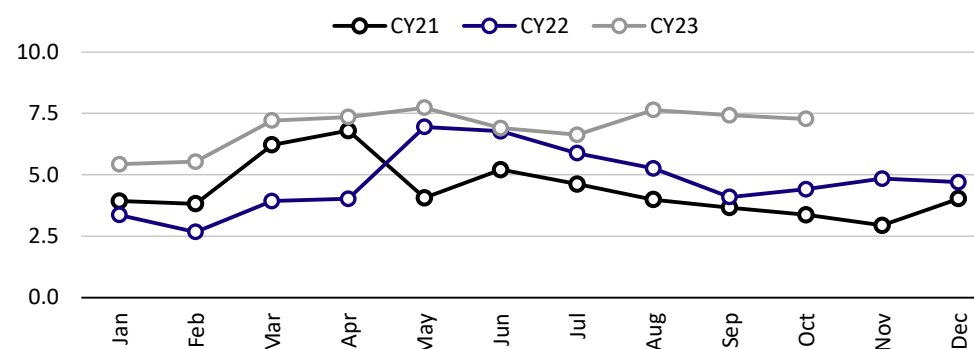


Exhibit 54: China's GDP growth YoY (constant prices)

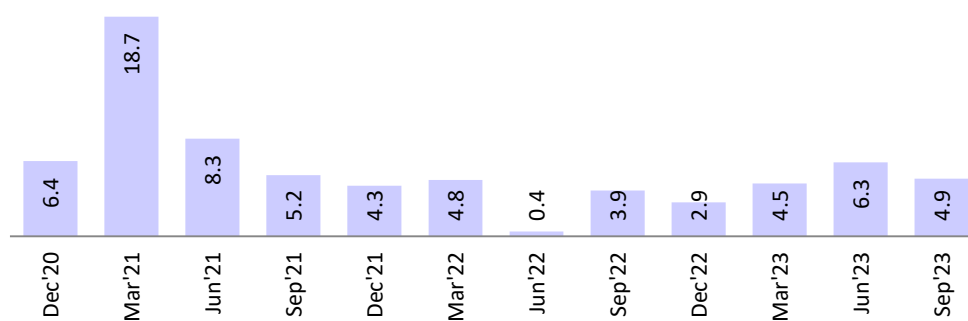


Exhibit 55: Automobile registration (m units)

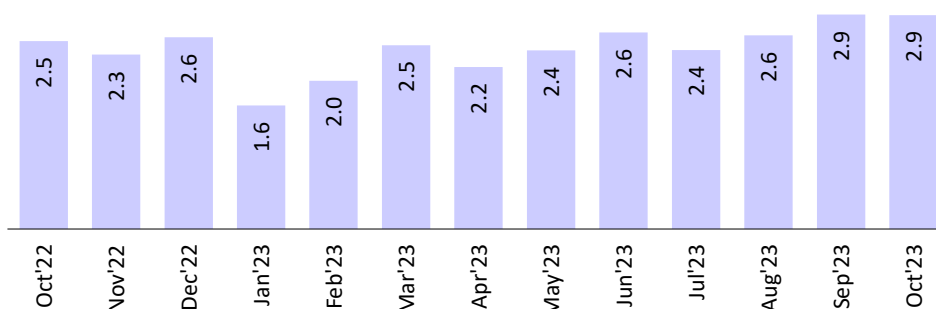


Exhibit 56: Floor space sold (m square meters)

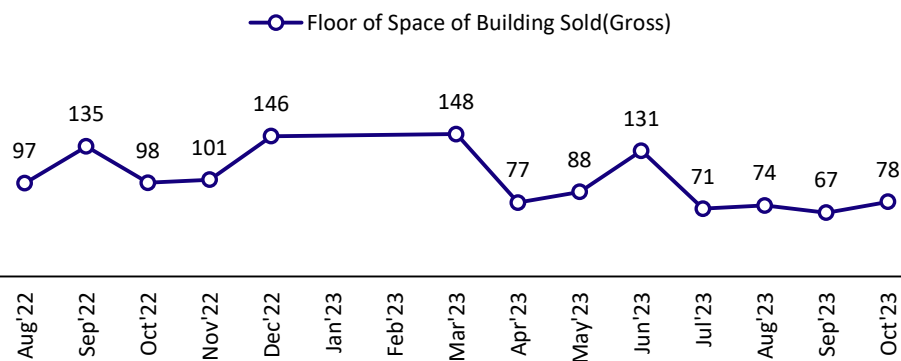


Exhibit 57: Floor space starts (m square meters)

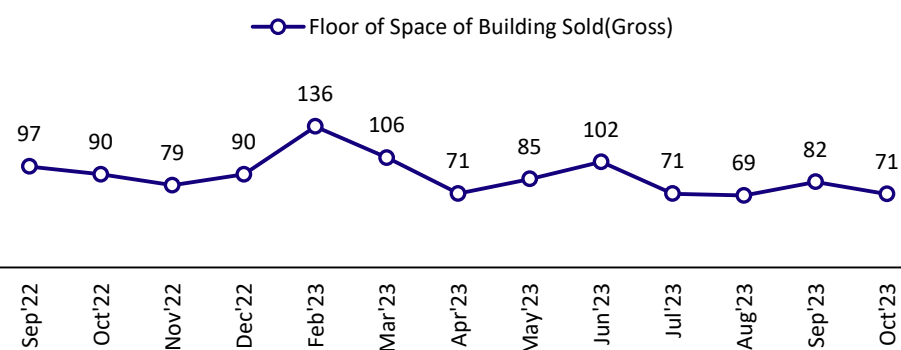


Exhibit 58: Manufacturing PMI

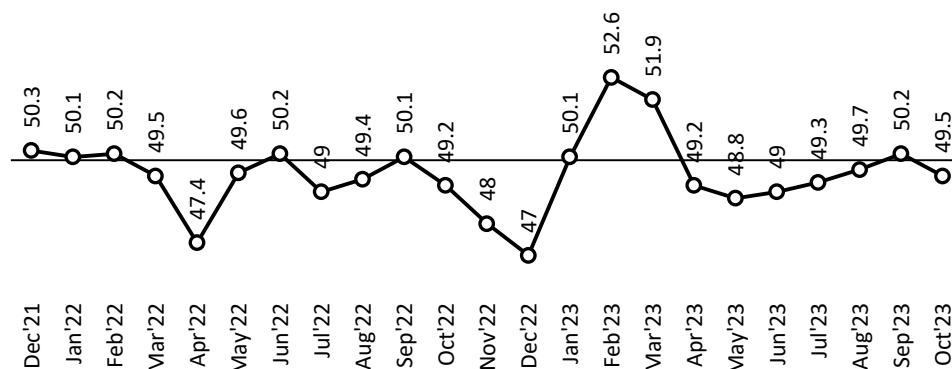
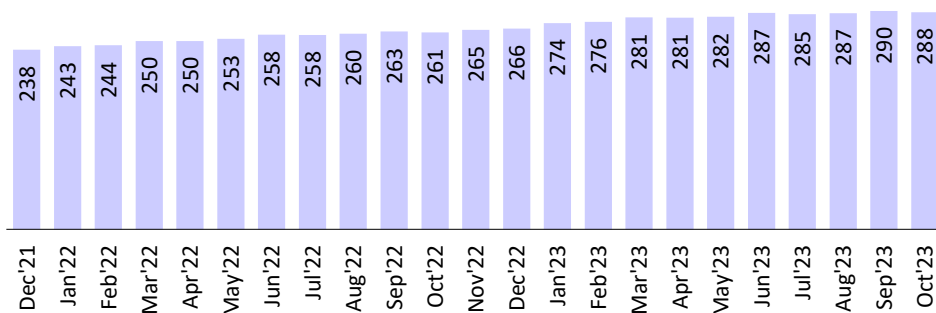


Exhibit 59: M2 money supply (CNY t)





## Commodity monthly heat map

Commodity	UoM	Jan'23	Feb'23	Mar'23	Apr'23	May'23	Jun'23	Jul'23	Aug'23	Sep'23	Oct'23	Nov'23	Dec'23	MoM
<b>Oil and non-ferrous - prices</b>														
Brent Crude	USD/bbl	83	83	79	84	76	75	80	86	94	91	83	77	-8
Copper	USD/t	8,972	8,955	8,836	8,816	8,253	8,386	8,445	8,353	8,271	7,940	8,174	8,312	2
Aluminum	USD/t	2,483	2,417	2,290	2,337	2,270	2,181	2,152	2,134	2,178	2,192	2,202	2,122	-4
Zinc	USD/t	3,277	3,144	2,956	2,777	2,486	2,368	2,397	2,400	2,488	2,449	2,544	2,435	-4
Lead	USD/t	2,214	2,099	2,115	2,147	2,090	2,118	2,107	2,153	2,253	2,136	2,185	2,038	-7
Nickel	USD/t	28,271	26,728	23,289	23,771	22,135	21,233	21,091	20,446	19,645	18,264	17,027	16,323	-4
Alumina	USD/t	343	362	365	359	348	341	329	339	340	337	332	333	0
Aluminum Ingot Premium (Asia - MJP)	USD/t	86	82	88	99	124	122	119	117	103	104	108	99	-8
Aluminum Ingot Premium (EU - Rotterdam)	USD/t	257	294	311	323	323	318	305	290	275	233	202	180	-11
Aluminum Ingot Premium (US midwest)	USD/t	569	642	609	553	550	537	516	476	451	434	418	413	-1
Aluminum scrap	USD/t	1,759	1,738	1,665	1,715	1,608	1,536	1,515	1,532	1,521	1,552	1,570	1,551	-1
Aluminum scrap spread	USD/t	725	679	625	622	662	645	638	602	656	640	632	572	-10
Silver	USD/t	841	758	775	886	860	830	861	831	828	795	820	#DIV/0!	NA
USD:INR (Bloomberg)	INR	82	83	82	82	82	82	82	83	83	83	83	83	0
<b>Ferrous- International Prices</b>														
China HRC domestic	RMB/t	4,187	4,262	4,415	4,185	3,838	3,846	3,916	3,960	3,934	3,829	3,961	4,021	2
China HRC domestic	USD/t	616	623	640	608	549	537	545	546	539	524	548	563	3
China TMT domestic	RMB/t	4,196	4,315	4,356	4,023	3,748	3,774	3,796	3,765	3,910	3,928	4,003	4,130	3
China TMT domestic	USD/t	618	631	632	584	536	527	528	519	536	537	554	578	4
China HRC FoB	USD/t	636	660	688	661	562	551	563	569	555	532	559	575	3
Korea HRC FoB	USD/t	629	662	698	689	681	624	601	605	600	595	NA	620	NA
North Europe HRC domestic	EUR/t	714	770	824	853	806	702	669	656	659	624	648	665	3
North America HRC domestic (USD/short ton)	USD/st	727	830	1,036	1,155	1,128	969	964	828	721	707	874	1,028	18
India HRC Export FoB (USD/t)	USD/t	639	707	712	700	598	567	570	575	580	580	NA	580	NA
Australia Fe 62% iron ore CNF	USD/t	122	126	127	118	105	111	112	109	121	119	130	133	2
<b>Chinese steel futures</b>														
TMT - Shanghai futures	RMB/t	4,131	4,116	4,212	3,885	3,607	3,691	3,764	3,720	3,731	3,649	3,890	3,956	2
HRC - Shanghai futures	RMB/t	4,168	4,180	4,316	3,962	3,681	3,794	3,892	3,904	3,883	3,775	3,971	4,037	2
Iron ore - Dalian Commodity Exchange	RMB/t	851	873	899	768	712	794	806	765	854	854	942	926	-2
Coking coal - Dalian Commodity Exchange	RMB/t	1,863	1,888	1,913	1,561	1,336	1,317	1,419	1,441	1,781	1,777	1,982	1,996	1
China HRC FOB spread over RM (HRC - 1.7x iron ore -.85x HCC)	RMB/t	1,138	1,092	1,161	1,329	1,334	1,324	1,317	1,378	917	812	685	766	12
<b>India steel and metallics prices</b>														
India HRC ex-Mumbai 5-10mm	INR/t	57,589	59,600	60,260	59,900	57,575	55,422	55,560	56,367	57,827	58,010	55,300	55,150	0
Dom HRC prem to India export FoB price	INR/t	5,255	1,161	1,640	2,468	8,354	8,785	8,734	8,759	9,647	9,740	NA	6,806	NA

Commodity	UoM	Jan'23	Feb'23	Mar'23	Apr'23	May'23	Jun'23	Jul'23	Aug'23	Sep'23	Oct'23	Nov'23	Dec'23	MoM
CRC ex-Mumbai - 0.9mm	INR/t	62,722	64,733	64,875	64,186	62,500	59,888	59,443	60,800	62,244	63,450	62,600	62,500	0
Galvanized plain - 120 GSM	INR/t	70,500	74,214	74,529	74,643	70,500	67,943	67,538	67,925	68,617	69,980	68,700	68,300	-1
Color coated /PPGI ex-Mumbai 90GSM	INR/t	77,256	82,443	82,260	82,725	81,550	79,540	78,900	78,800	79,200	79,500	78,700	78,600	0
Wire rod - Primary Producers	INR/t	56,807	59,167	58,178	56,383	54,525	51,843	50,343	50,250	53,400	55,833	54,100	53,600	-1
TMT primary - Mumbai	INR/t	60,210	62,957	60,967	59,780	57,225	53,713	51,211	51,060	56,538	57,486	55,650	54,800	-2
TMT secondary - Mumbai	INR/t	57,154	56,896	56,065	54,929	53,458	50,857	46,977	48,926	51,977	50,835	49,067	48,267	-2
Domestic scrap-HMS(80:20) - Mumbai	INR/t	37,475	36,493	38,084	38,177	37,442	36,987	34,268	35,503	36,807	35,442	33,760	33,589	-1
Sponge iron (DRI)	INR/t	31,567	31,067	30,408	29,540	27,885	27,155	25,518	28,318	30,023	28,248	26,642	26,056	-2
Domestic pellet prices- Barbil - 63% Fe	INR/t	9,085	9,621	9,525	9,064	8,417	7,925	7,613	8,067	8,989	8,470	8,440	8,375	-1
Pellet Export Prices - FoB 64%Fe	USD/t	116	123	118	109	97	108	107	103	111	112	125	126	0
<b>Domestic ferrous spreads</b>														
Primary HRC v/s primary TMT	INR/t	-2,621	-3,357	-707	120	350	1,710	4,349	5,307	1,290	524	-350	350	-200
Primary TMT v/s secondary TMT	INR/t	3,056	6,061	4,901	4,851	3,767	2,856	4,234	2,134	4,561	6,650	6,583	6,533	-1
Secondary TMT v/s domestic Scrap	INR/t	19,679	20,404	17,982	16,752	16,016	13,870	12,710	13,423	15,170	15,394	15,307	14,678	-4
Hot rolled v/s cold rolled	INR/t	5,133	5,133	4,615	4,286	4,925	4,465	3,883	4,433	4,417	5,440	7,300	7,350	1
Hot rolled - galvanized Plan	INR/t	12,911	14,614	14,269	14,743	12,925	12,521	11,978	11,558	10,789	11,970	13,400	13,150	-2
Hot rolled - color coated	INR/t	19,667	22,843	22,000	22,825	23,975	24,118	23,340	22,433	21,373	21,490	23,400	23,450	0
<b>Coking coal</b>														
India premium HCC CNF	USD/t	328	380	365	290	246	244	245	267	316	364	337	351	4
India 64 mid vols coking coal CNF	USD/t	306	349	328	258	222	216	213	234	264	286	276	293	6
<b>NMDC iron ore - Chhattisgarh</b>														
64% Bailadila fines	INR/t	3,510	NA	4,010	4,010	3,785	3,560	3,950	3,910	4,110	4,460	4,593	4,660	1
Iron ore lump	INR/t	4,550	NA	4,450	4,200	4,050	3,900	4,530	4,650	4,850	5,200	5,333	5,400	1
<b>Domestic ferro alloys</b>														
Silico manganese	INR/t	79,583	76,496	74,145	75,048	73,510	70,979	67,184	67,313	69,760	65,777	63,030	62,789	0
Ferro manganese	INR/t	79,820	79,428	77,019	77,500	75,456	73,392	69,539	67,982	69,898	66,805	63,648	62,989	-1
Ferro chrome	INR/t	37,475	36,493	38,084	38,177	37,442	36,987	34,268	35,503	36,807	35,442	33,760	33,589	-1
<b>Ferrous - inventory</b>														
China HRC	mt	2	3	3	2	3	3	3	3	3	3	3	3	-11
China wire rod	mt	1	2	3	3	2	2	2	2	1	1	1	1	-10
China TMT	mt	5	8	8	7	6	5	5	6	5	5	4	4	-7
<b>Non-ferrous - inventory</b>														
<b>Aluminum</b>														
LME	kt	410	521	542	544	568	563	524	506	495	489	473	447	-6
SHFE	kt	71	110	120	96	74	54	54	50	52	63	66	57	-13
<b>Total</b>	<b>kt</b>	<b>481</b>	<b>631</b>	<b>662</b>	<b>640</b>	<b>642</b>	<b>617</b>	<b>578</b>	<b>556</b>	<b>547</b>	<b>552</b>	<b>539</b>	<b>504</b>	<b>-6</b>
<b>Zinc</b>														
LME	kt	22	25	38	48	55	83	82	122	126	86	130	221	69
SHFE	kt	8	44	48	28	12	9	16	18	13	7	7	5	-26
<b>Total</b>	<b>kt</b>	<b>29</b>	<b>70</b>	<b>86</b>	<b>76</b>	<b>67</b>	<b>92</b>	<b>98</b>	<b>141</b>	<b>139</b>	<b>93</b>	<b>137</b>	<b>226</b>	<b>64</b>

Commodity	UoM	Jan'23	Feb'23	Mar'23	Apr'23	May'23	Jun'23	Jul'23	Aug'23	Sep'23	Oct'23	Nov'23	Dec'23	MoM
<b>Lead</b>														
LME	kt	22	23	25	29	34	39	48	56	64	101	135	135	0
SHFE	kt	47	56	46	32	27	36	34	51	67	69	68	65	-5
<b>Total</b>	<b>kt</b>	<b>69</b>	<b>79</b>	<b>71</b>	<b>61</b>	<b>61</b>	<b>75</b>	<b>82</b>	<b>107</b>	<b>131</b>	<b>171</b>	<b>203</b>	<b>199</b>	<b>-2</b>
<b>Copper</b>														
LME	kt	82	66	71	59	83	88	61	89	143	179	178	180	1
SHFE	kt	49	124	105	66	53	29	22	13	9	9	3	3	-1
<b>Total</b>	<b>kt</b>	<b>131</b>	<b>190</b>	<b>176</b>	<b>125</b>	<b>136</b>	<b>117</b>	<b>83</b>	<b>101</b>	<b>152</b>	<b>188</b>	<b>181</b>	<b>182</b>	<b>1</b>
<b>Nickel</b>														
LME	kt	53	47	44	42	39	38	38	37	40	44	44	47	8
SHFE	kt	3	3	3	2	1	3	3	3	5	9	11	12	10
<b>Total</b>	<b>kt</b>	<b>55</b>	<b>50</b>	<b>47</b>	<b>43</b>	<b>40</b>	<b>41</b>	<b>40</b>	<b>40</b>	<b>45</b>	<b>52</b>	<b>54</b>	<b>59</b>	<b>8</b>

## Metals valuation matrix

**Exhibit 60: Global steel comparative valuation**

Company	M-Cap USD m	P/E (x)		EV/EBITDA (x)		P/B (x)		RoE (%)	
		CY22/ FY23	CY23/ FY24	CY22/ FY23	CY23/ FY24	CY22/ FY23	CY23/ FY24	CY22/ FY23	CY23/ FY24
India									
Tata*	19,055	18.2	21.3	7.0	9.7	1.6	1.7	8.3	7.8
JSW*	24,616	57.1	16.9	14.1	8.4	3.1	2.7	5.3	17.1
JSP*	8,395	18.8	13.5	7.6	7.9	1.8	1.6	9.9	12.5
SAIL*	4,859	21.1	20.2	8.8	7.7	0.7	0.7	3.5	3.6
Japan									
JFE	9,175	8.0	6.5	6.9	5.7	0.6	0.5	7.4	8.8
Nippon Steel	21,714	4.8	7.2	5.2	5.8	0.8	0.7	17.3	9.9
Kobe Steel	4,499	10.3	5.5	7.7	5.0	0.8	0.6	7.5	12.2
Korea									
POSCO	30,388	13.8	11.4	6.0	5.5	0.7	0.7	5.2	5.9
Hyundai Steel	3,534	5.7	5.5	5.0	4.2	0.2	0.2	4.3	4.2
US									
Nucor	40,126	9.1	13.6	5.6	7.7	1.9	1.8	21.9	12.8
US Steel	8,014	8.5	13.6	4.7	5.4	0.8	0.7	9.4	5.4
Steel Dynamics	18,513	7.9	12.1	5.4	7.8	2.1	1.9	27.7	15.9
Europe									
AM	21,863	5.1	5.9	3.7	3.9	0.4	0.4	7.8	6.9
SSAB	7,560	6.1	10.2	3.0	4.5	1.1	1.1	18.5	10.8
TKA	4,299	24.2	8.6	0.5	0.7	0.3	0.3	0.7	4.1
VOE	5,075	4.7	9.2	2.8	3.9	0.6	0.6	13.8	6.6
China									
Baosteel	18,872	12.2	10.0	5.3	4.5	0.7	0.6	5.5	6.4

Source: MOFSL, Company, Bloomberg(\*) denotes MOFSL estimates

**Exhibit 61: Diversified miners global comparative valuation**

Company	M-Cap USD m	P/E (x)		EV/EBITDA (x)		P/B (x)		RoE (%)	
		CY22/ FY23	CY23/ FY24	CY22/ FY23	CY23/ FY24	CY22/ FY23	CY23/ FY24	CY22/ FY23	CY23/ FY24
<b>Vedanta*</b>	<b>10,913</b>	<b>8.7</b>	<b>20.0</b>	<b>4.9</b>	<b>7.4</b>	<b>2.3</b>	<b>3.4</b>	<b>20.1</b>	<b>13.7</b>
BHP	1,59,853	11.6	11.6	6.2	5.9	3.7	3.2	31.1	29.3
Rio	1,19,097	9.6	9.4	5.2	5.0	2.1	1.9	22.2	20.7
Glencore	70,115	10.4	11.3	4.6	4.6	1.6	1.5	15.0	13.6
Anglo	31,527	9.9	8.3	4.8	4.1	1.1	1.1	11.2	13.0
South 32	9,365	10.0	12.8	3.7	4.8	1.0	1.0	9.7	7.5

Source: MOFSL, Company, Bloomberg(\*) denotes MOFSL estimates

**Exhibit 62: Zinc global comparative valuation**

Company	M-Cap USD m	P/E (x)		EV/EBITDA (x)		P/B (x)		RoE (%)	
		CY22/ FY23	CY23/ FY24	CY22/ FY23	CY23/ FY24	CY22/ FY23	CY23/ FY24	CY22/ FY23	CY23/ FY24
<b>HZL*</b>	<b>16,350</b>	<b>13.0</b>	<b>16.6</b>	<b>7.8</b>	<b>9.3</b>	<b>10.6</b>	<b>8.1</b>	<b>44.5</b>	<b>55.0</b>
Korea Zinc	7,943	19.6	16.5	10.2	8.9	1.1	1.1	5.5	6.5
Teck	19,391	9.6	8.6	5.1	4.3	1.0	0.9	10.6	11.7

Source: MOFSL, Company, Bloomberg(\*) denotes MOFSL estimates

**Exhibit 63: Coal global comparative valuation**

Company	M-Cap USD m	P/E (x)		EV/EBITDA (x)		P/B (x)		RoE (%)	
		CY22/ FY23	CY23/ FY24	CY22/ FY23	CY23/ FY24	CY22/ FY23	CY23/ FY24	CY22/ FY23	CY23/ FY24
<b>Coal*</b>	<b>25,942</b>	<b>7.7</b>	<b>8.5</b>	<b>4.1</b>	<b>4.5</b>	<b>3.8</b>	<b>3.1</b>	<b>49.2</b>	<b>36.3</b>
China Shenhua	81,075	7.1	7.3	4.8	4.8	1.1	1.0	15.1	14.1
Banpu	1,913	8.0	7.3	5.2	4.8	0.5	0.5	7.2	6.0
Bukit Asam	1,786	5.5	5.9	3.7	3.7	1.2	1.1	21.2	20.1
Adaro Energy	5,269	3.6	4.7	NA	NA	0.8	0.7	22.6	15.5

Source: MOFSL, Company, Bloomberg(\*) denotes MOFSL estimates

**Exhibit 64: Aluminum global comparative valuation**

Company	M-Cap USD m	P/E (x)		EV/EBITDA (x)		P/B (x)		RoE (%)	
		CY22/ FY23	CY23/ FY24	CY22/ FY23	CY23/ FY24	CY22/ FY23	CY23/ FY24	CY22/ FY23	CY23/ FY24
Hindalco*	14,024	10.6	10.4	6.3	5.9	1.5	1.4	16.3	13.9
Nalco*	2,146	12.4	15.3	6.3	6.6	1.4	1.3	11.2	8.7
Alcoa	4,451	NA	26.6	13.0	6.6	1.0	1.0	-9.1	3.0
Norsk Hydro	11,626	14.2	10.9	5.9	5.1	1.2	1.1	8.3	10.9
CHALCO	11,450	8.2	7.0	5.8	4.7	0.9	0.8	11.9	12.7
RUSAL	5,057	3.7	2.6	6.4	4.5	0.4	0.3	10.6	14.1
Alumina	1,553	NA	31.5	NA	17.8	1.0	1.0	-3.4	2.5

Source: MOFSL, Company, Bloomberg(\*) denotes MOFSL estimates

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NEUTRAL	> - 10 % to 15%
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