

Indian companies valuation

	Price (INR)	EV/ EBITDA (x)		P/B (x)	
		FY23E	FY24E	FY23E	FY24E
Steel					
Tata	113	6.2	4.7	1.2	1.1
JSW	731	12.4	6.1	2.7	2.2
JSP	597	6.2	4.7	1.5	1.3
SAIL	86	7.2	4.6	0.6	0.6
Non-ferrous					
Vedanta	315	6.5	5.5	2.5	2.4
Hindalco	434	5.5	3.9	1.5	1.3
Nalco	81	5.9	4.0	1.1	1.1
Mining					
Coal	218	2.4	3.7	2.2	1.9
HZL	323	6.8	5.6	4.2	4.1
NMDC	119	4.5	3.6	1.8	1.6

Global companies valuation

Global companies valuation				
Company	M.Cap	EV/EBITDA (x)		P/B (x)
	USD b	CY22/ FY23	CY23/ FY24	CY22/ FY23
Steel				
AM	27	4.6	4.0	0.5
SSAB	7	4.4	5.6	1.1
Nucor	43	7.5	8.7	2.0
POSCO	22	4.4	3.9	0.5
JFE	8	5.9	6.4	0.5
Aluminum				
Norsk Hydro	16	5.9	5.1	1.6
Alcoa	8	6.8	3.5	1.6
Zinc				
Teck	23	4.5	4.1	1.1
Korea Zinc	9	8.6	7.6	1.3
Iron ore				
Vale	81	4.3	4.5	1.9
FMG	48	5.6	6.6	2.6
Diversified				
BHP	169	5.5	5.5	3.6
Rio	124	5.5	5.3	2.2

Domestic steel prices under pressure, despite the rise in Coking coal prices

- Domestic steel market, which has been resilient to international price movements and demand, has started showing some mixed signs.
- Domestic steel prices, which were quoting at a premium to international prices, have started sliding down with HRC steel prices correcting INR1,500/t and rebar prices correcting INR400/t in the last one week.
- Similarly, export prices have also reduced USD7/t as against price hikes seen across Europe and North America (up Euro25/t and USD60/t respectively) over the last few days.
- Even international steel manufacturers such as Taiwan's CSC have hiked its Mar '23 list price to USD20-40/t. Similarly, the world's largest steel manufacturer Baosteel has hiked its Mar '23 list price by USD29/t and Arcelor Mittal has hiked its Mar '23 Flat Steel list price by Euro40/t.
- Though steel demand in India is expected to be strong in 4QFY23, steel companies are facing headwinds with raw material prices soaring. Though this is not expected to reflect and have any significant impact on the margins of the steel companies in 4QFY23, the management across the board have guided for stormy tides from the end of Mar '23 onwards, if the prices of raw materials do not cool down. If the prices continue to remain at these levels, working capital cycle and margins of the steel companies would get adversely impacted.
- Though the overall sentiments are positive, demand is yet to pick up in the rural sector. Lower demand from two-wheeler manufacturers, owing to weaker sales, is offset by the robust demand from the construction sector.
- TATA, with strong presence in Europe, had guided for an operationally weaker quarter for European operations. However, the steel prices have recently seen an uptick in Europe in the recent week due to the earthquake in Turkey, which caused supply disruptions in Europe. Turkey exported around 6mt of finished steel and now Europe will be looking for alternatives. This could be a landmark opportunity for steel manufacturers with a strong foothold in Europe.
- Elevated raw material prices will be a major concern for Indian steel producers. In the last one month, coal prices have soared over USD60/t and are currently over USD400/t. However, we believe, in line with purchasing power parity, domestic prices are tending toward international prices. With companies across the globe taking multiple price hikes, India too should witness price hikes in the next few weeks. If domestic companies introduce price hikes and are able to pass on the input costs to consumers, the margin expansion will continue with the increase in sales volumes.
- Though the Indian steel sector is highly dependent on international price movements, we believe, as long as the demand for steel in India is robust, companies with strong domestic presence and strong infra portfolio will gain. We have a Buy rating on JSP.

Commodities and forex tracker

		UoM	Spot	WoW (%)	MoM (%)
Steel	India HRC (ex-Mum)	INR/t	58,300	-3	1
	India TMT Prime (ex-Mum)	INR/t	62,800	-1	3
	India TMT Secondary (ex-Mum)	INR/t	56,600	1	-1
	Korea HRC - FoB	USD/t	650	0	0
	Dom. HRC (Prem/(Disc) vs FTA	INR/t	2,498	-1,213 INR	-400 INR
	China HRC Dom.	USD/t	629	2	2
	China HRC - FoB	USD/t	660	1	2
Coking coal	India Prem HCC CNF	USD/t	402	5	19
	India 64 Mid Vols CNF	USD/t	363	1	15
	India Low Vols PCI CNF	USD/t	357	3	11
Metals	Iron Ore Fines (Odisha Index) Fe 62%	INR/t	5,400	0	10
	Iron Ore Fines (China - CNF) Fe 62%	USD/t	125	-1	0
	Europe Scrap HMS 1&2(80:20)	USD/t	440	-2	0
	C-DRI (ex-Raipur)	INR/t	33,700	4	-3
Thermal Coal	RB1 (6000 NAR) SA FoB	USD/t	157	0	-16
	RB2 (5500 NAR), SA FoB	USD/t	129	-1	-22
	Indonesia (4200 GAR) Futures	USD/t	72	-1	-9
Non-Ferrous	Copper	USD/t	9,023	1	-2
	Aluminum	USD/t	2,394	0	-7
	Zinc	USD/t	3,004	-1	-13
	Lead	USD/t	2,030	-3	-5
	Nickel	USD/t	26,489	0	-7
	Alumina	USD/t	365	0	6
	Ali UBC Scrap	USD/t	1,698	-1	-6
	Ali UBC Scrap Spread	USD/t	696	5	-10
FX	INR:USD	x	82.7	0	2
	USD:EUR	"	1.07	0	-2
	USD:GBP	"	1.20	-1	-3
	CNY:USD	"	6.87	1	1
	JPY:USD	"	134	1	4

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Source: SteelMint, JPC, Bloomberg, Company and MOFSL estimates

FERROUS: India – prices

Exhibit 1: HRC - Mumbai (INR/t)



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

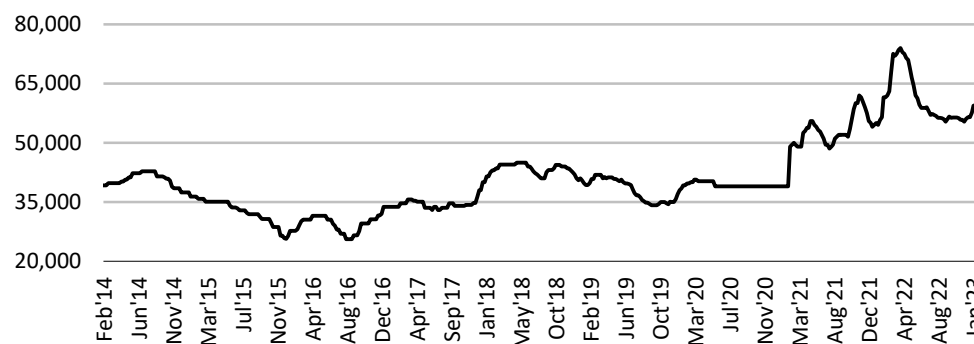


Exhibit 3: C-DRI (sponge iron), ExW-Raipur (INR/t)

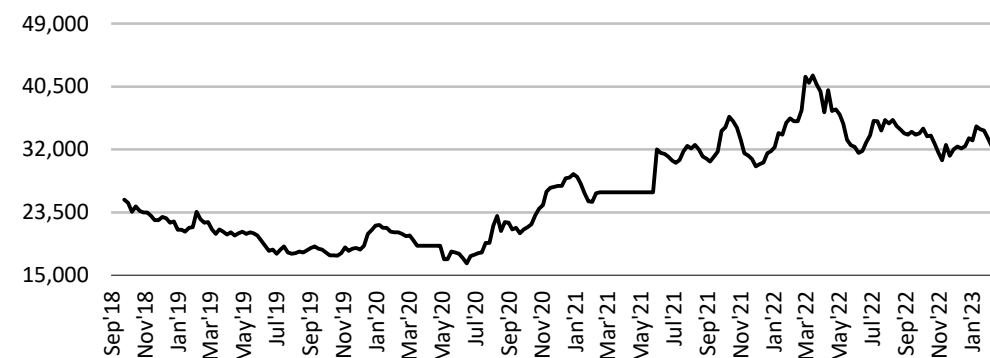


Exhibit 4: Domestic Pellet – Barbil – 63% Fe (INR/t)

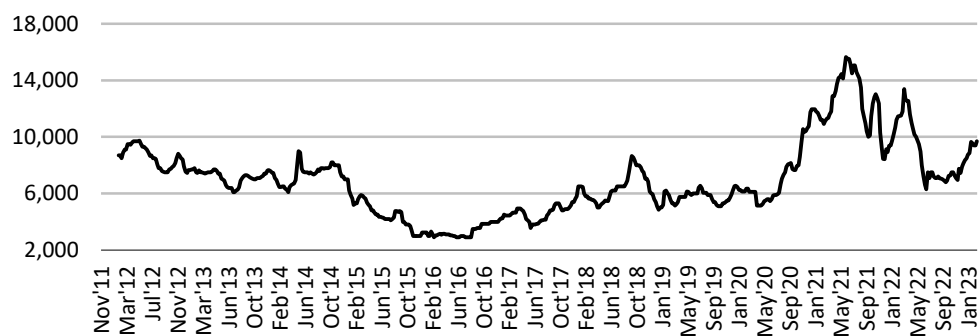


Exhibit 5: Iron Ore Fines Odisha – Fe 62% (INR/t)

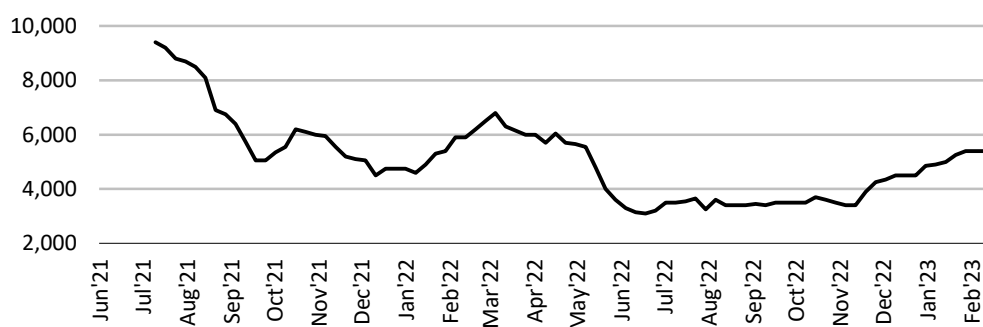


Exhibit 6: NMDC Fines – Fe 64% (INR/t)

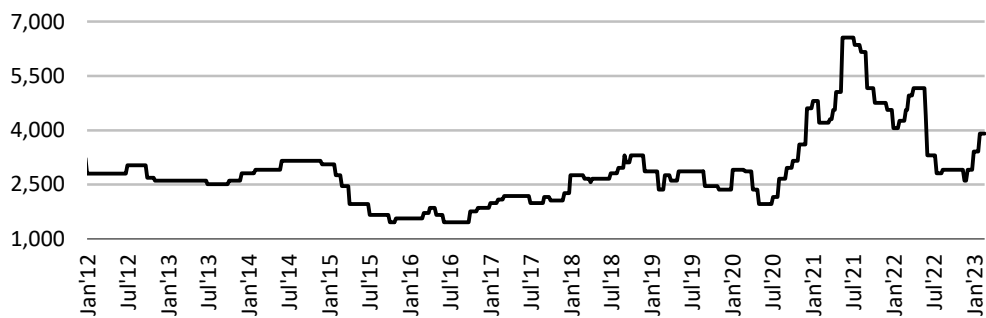
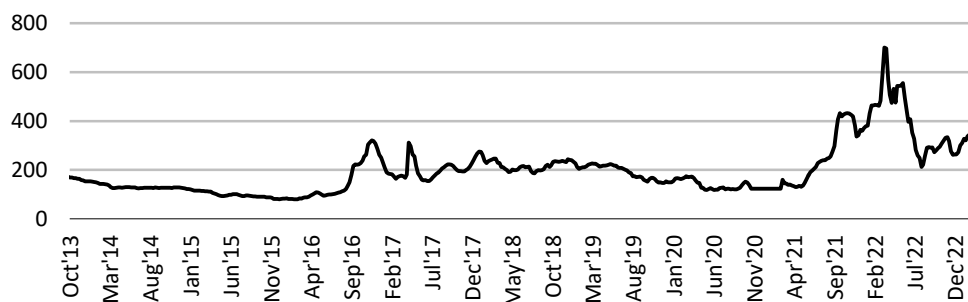


Exhibit 7: Premium HCC CNF Paradip (USD/t)



Domestic spreads

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

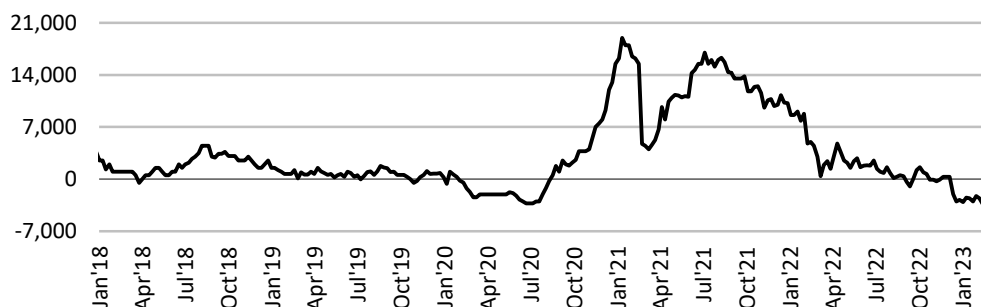


Exhibit 9: Primary TMT v/s secondary TMT (INR/t)



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

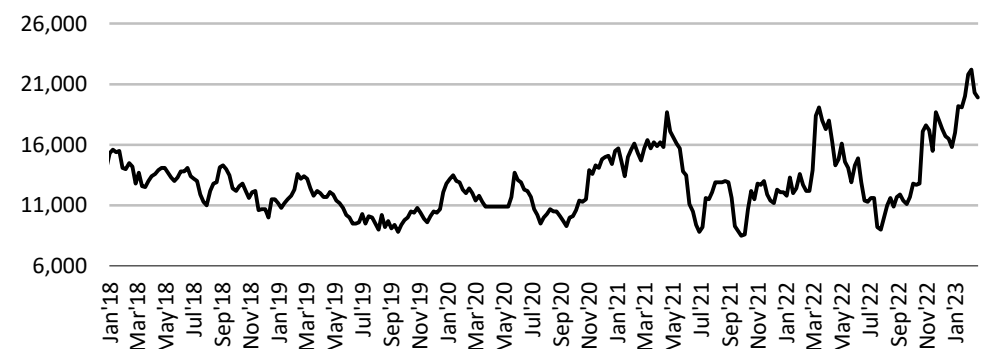


Exhibit 11: HRC v/s CRC (INR/t)

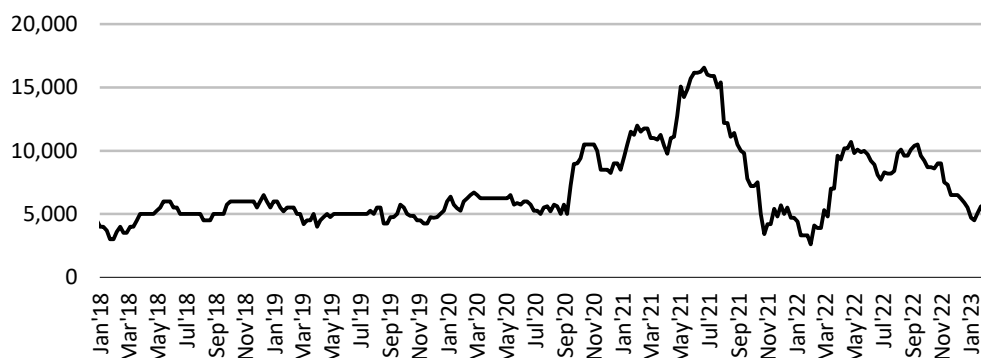


Exhibit 12: HRC – galvanized (INR/t)

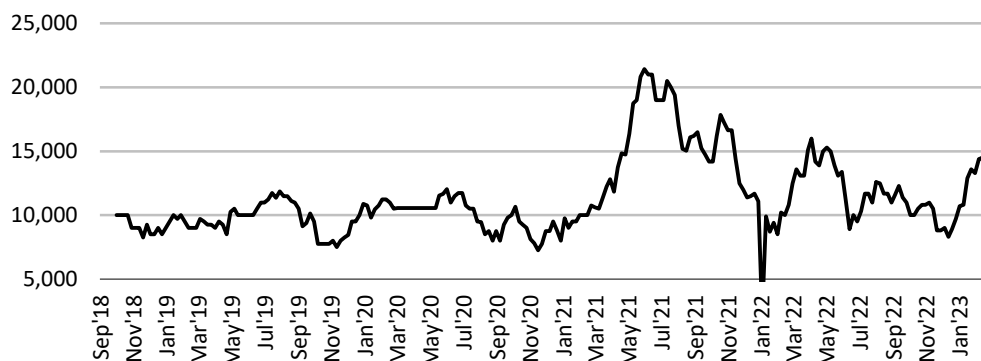


Exhibit 13: HRC – color coated (INR/t)

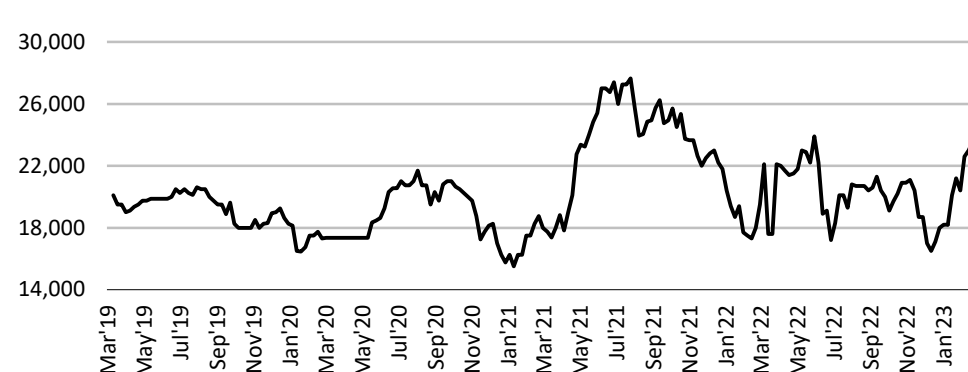


Exhibit 14: DRI v/s NMDC lumps (INR/t)

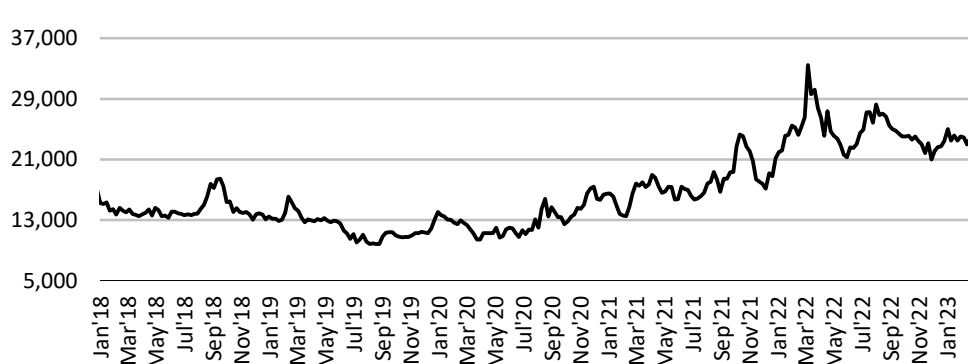


Exhibit 15: Secondary TMT v/s DRI (INR/t)

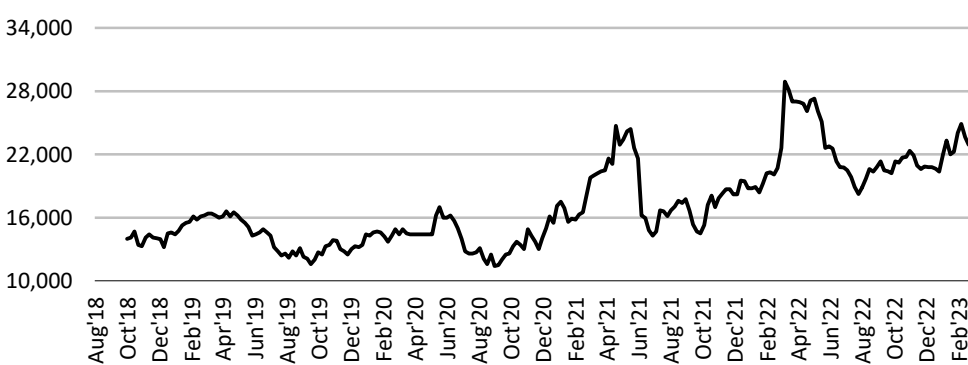


Exhibit 16: DRI v/s pellet (INR/t)

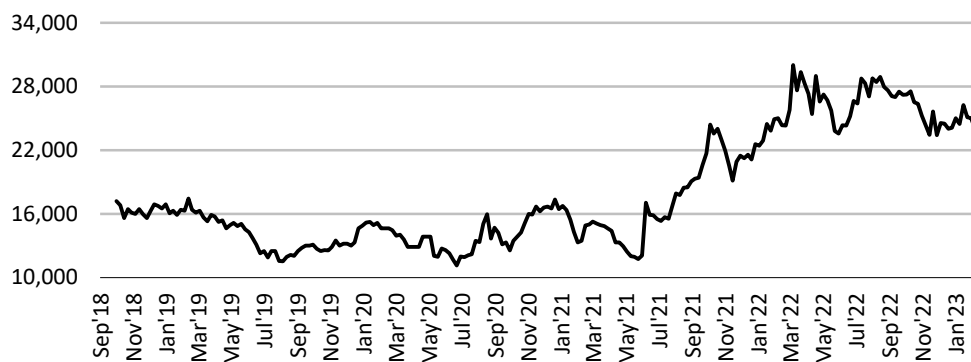
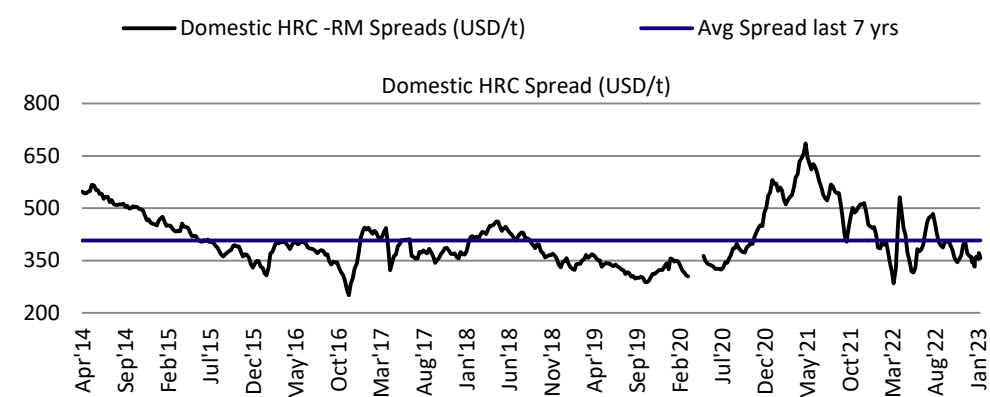


Exhibit 17: India HRC spread (1.6x IO and 0.85x HCC; 1.5 month lag in HCC)



China prices/spreads

Exhibit 18: China HRC FoB (USD/t)

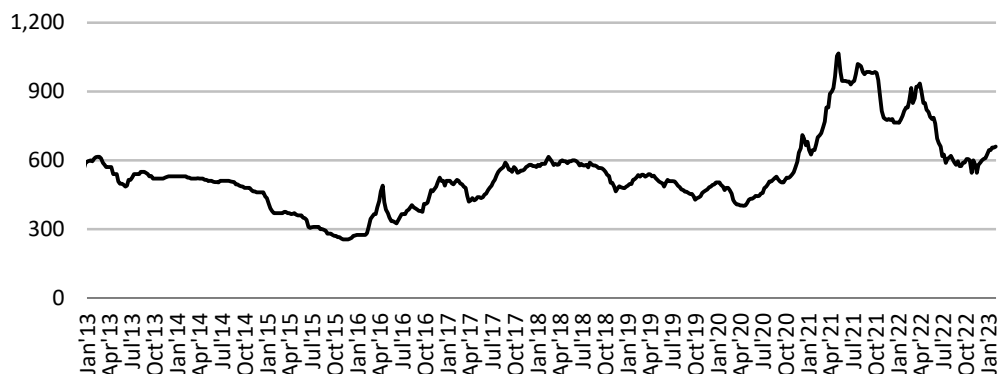


Exhibit 19: China HRC domestic (USD/t)

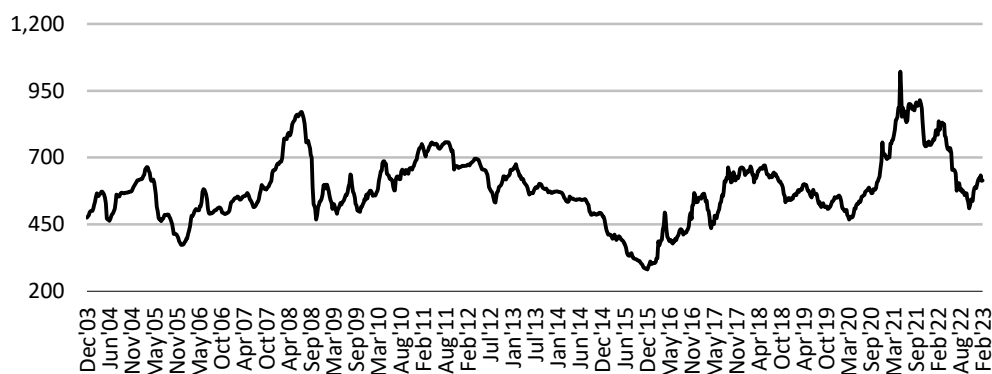


Exhibit 20: China domestic TMT (USD/t)

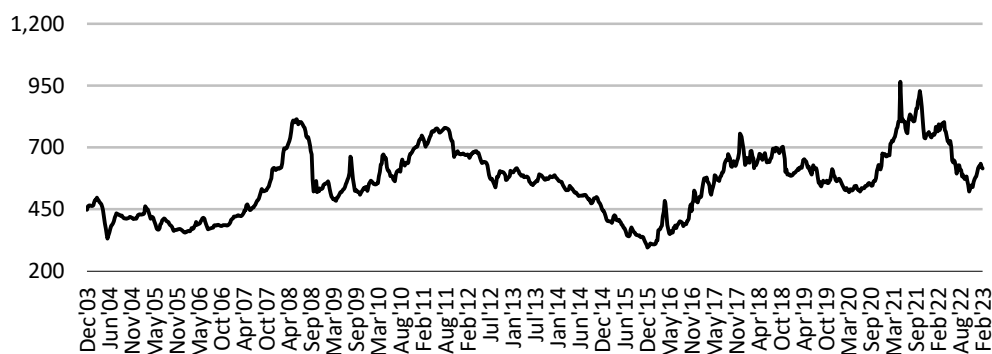


Exhibit 21: China domestic wire rod (USD/t)

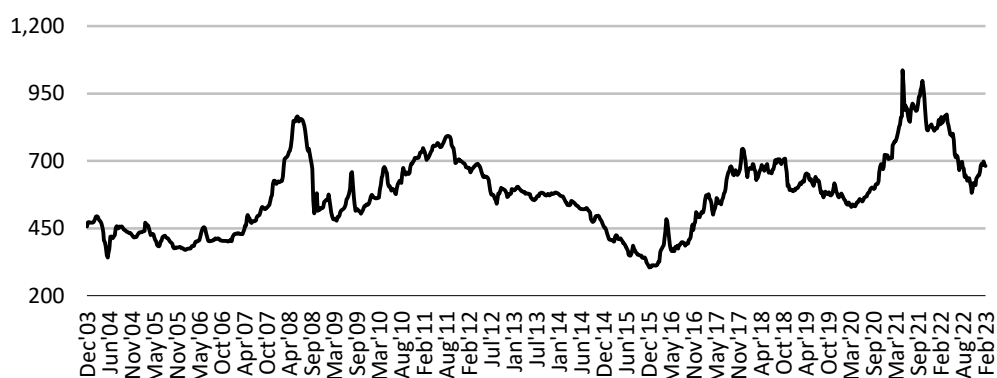
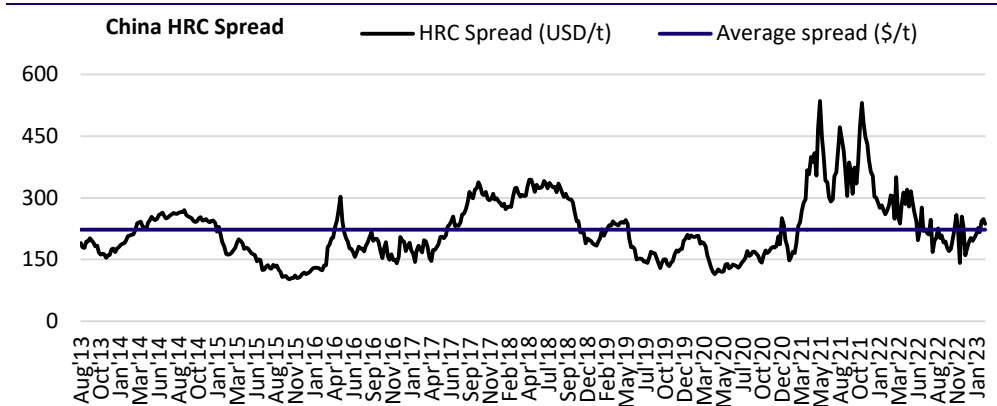


Exhibit 22: China HRC spread (1.6x IO and 0.85x HCC)



Global prices

Exhibit 23: Northern Europe HRC domestic (USD/t)

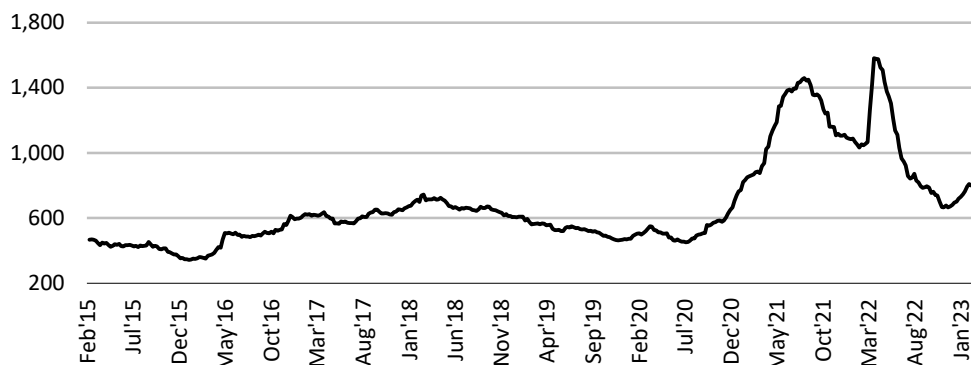


Exhibit 24: North America HRC domestic (USD/short ton)

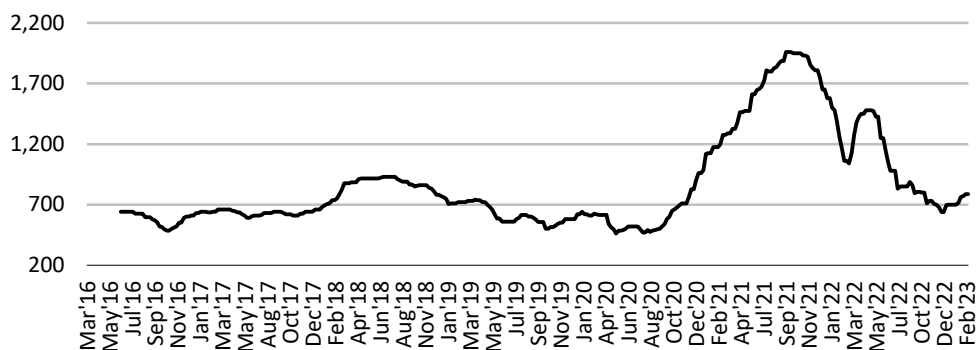
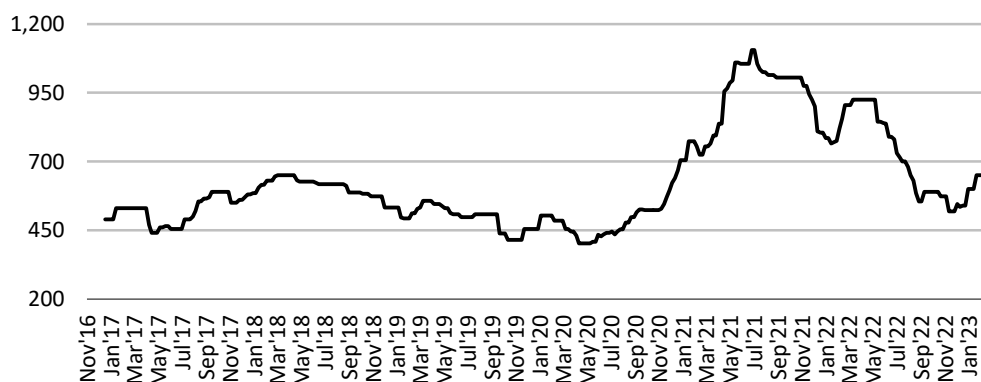


Exhibit 25: Korea HRC FOB (USD/t)



Inventories

Exhibit 26: India steel inventory (mt)

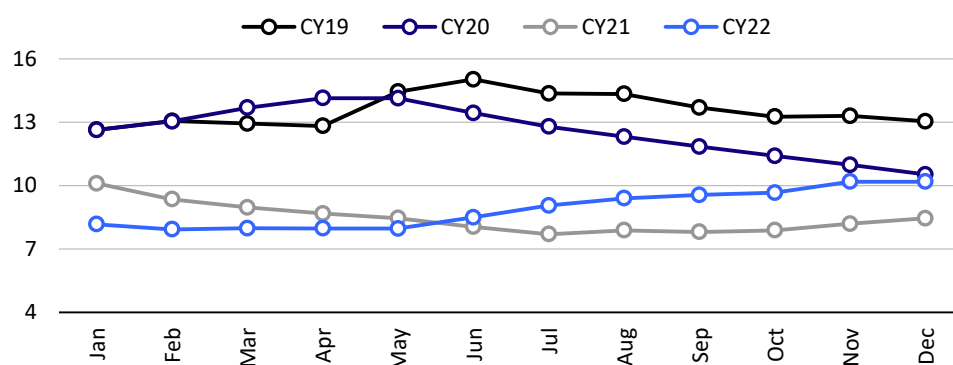


Exhibit 27: China wire rod and TMT inventory (mt)

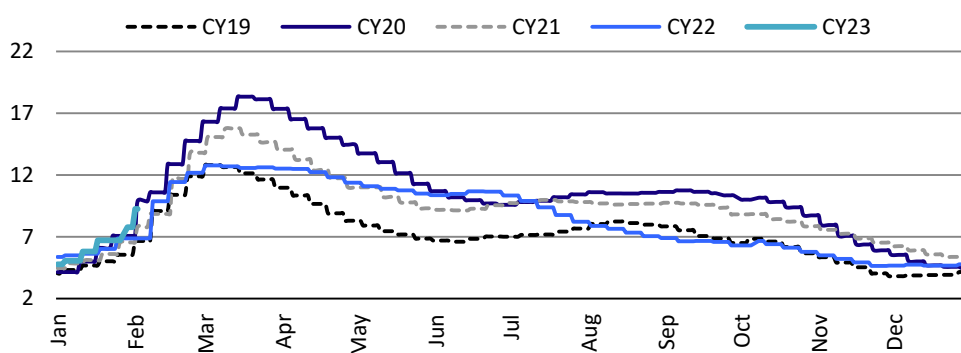
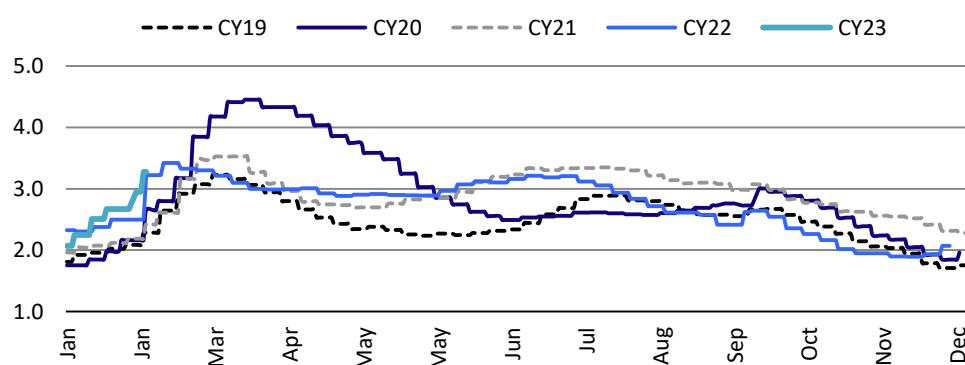


Exhibit 28: China HRC inventory (mt)



NON-FERROUS: Aluminum

Exhibit 29: LME spot (USD/t)

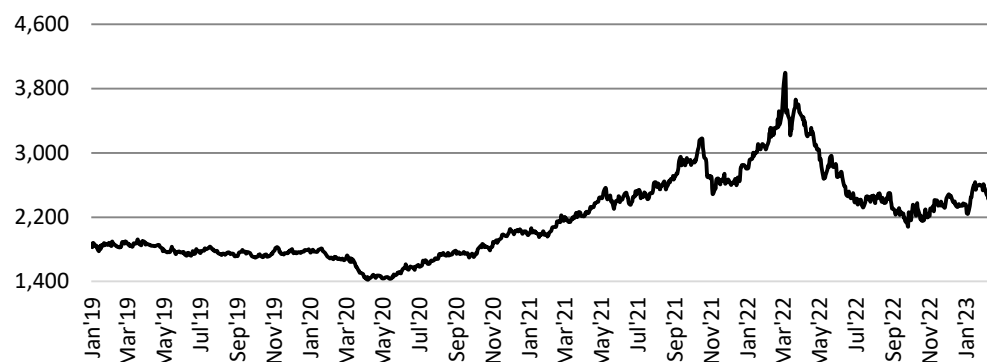


Exhibit 30: Alumina FoB Australia (USD/t)

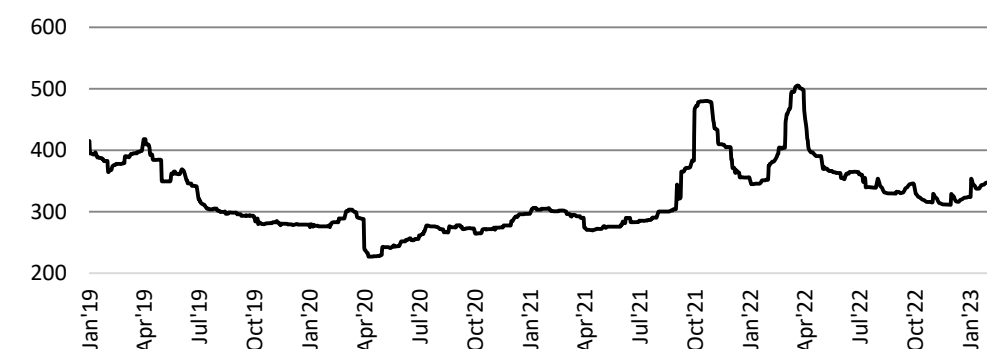


Exhibit 31: Caustic soda (USD/t)

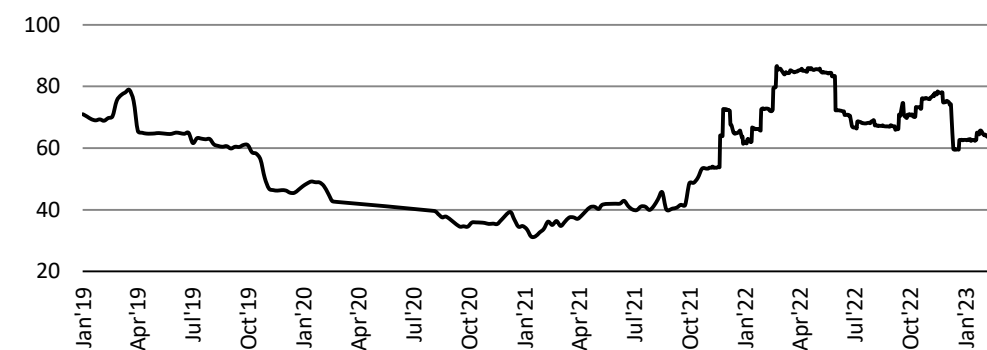


Exhibit 32: Total inventory (LME + SHFE, mt)

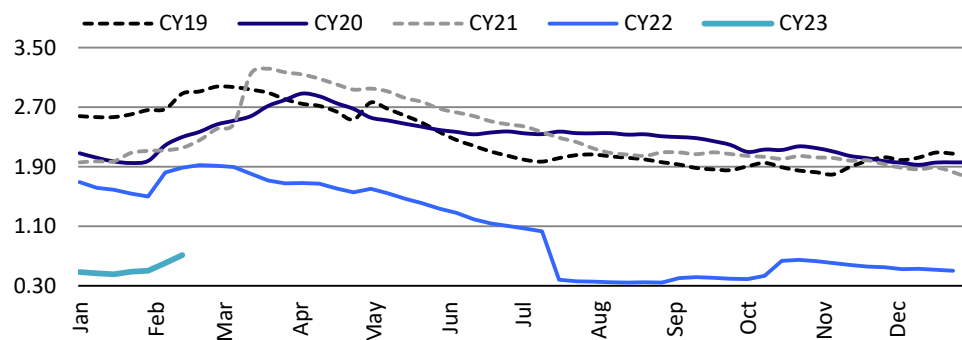


Exhibit 33: Ingot premiums (mt)

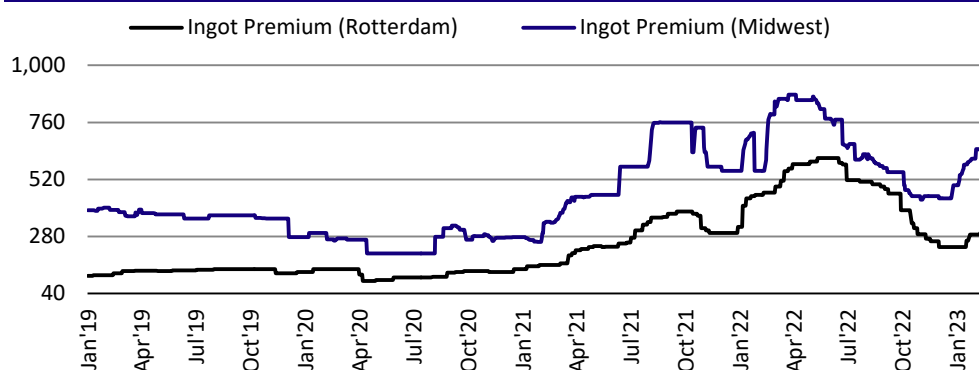
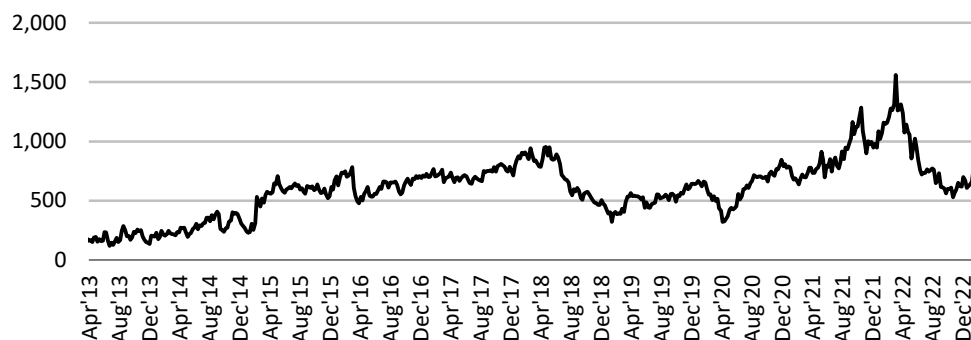


Exhibit 34: Aluminum scrap spread (USD/t)



Copper

Exhibit 35: LME spot (USD/t)

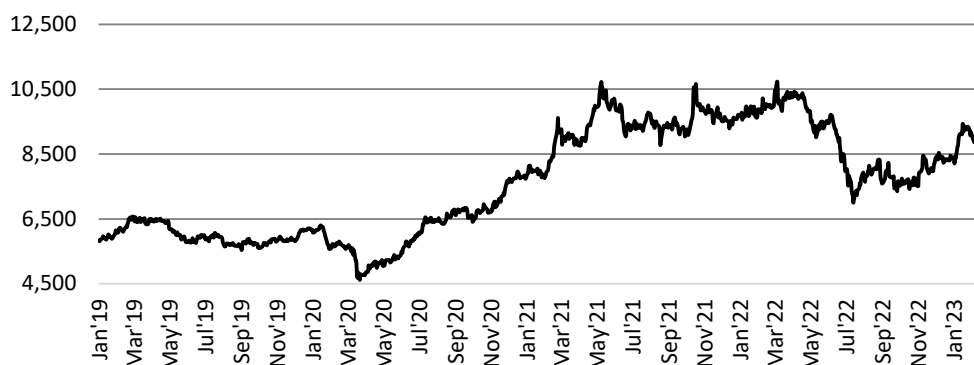
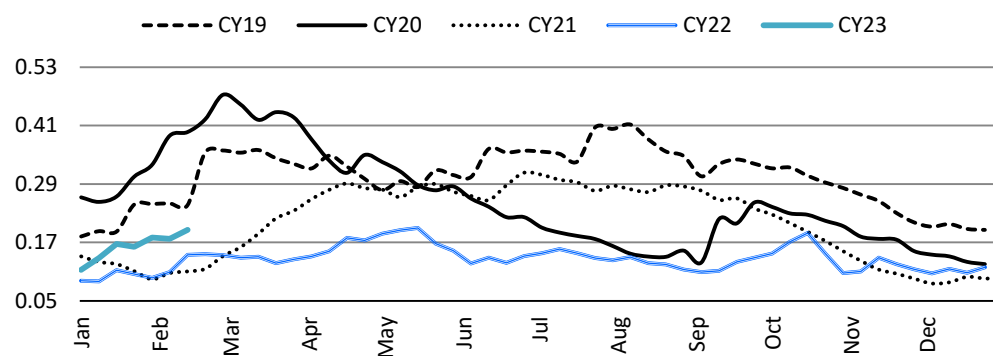


Exhibit 36: Total inventory (LME+SHFE, mt)



Zinc

Exhibit 37: LME spot (USD/t)

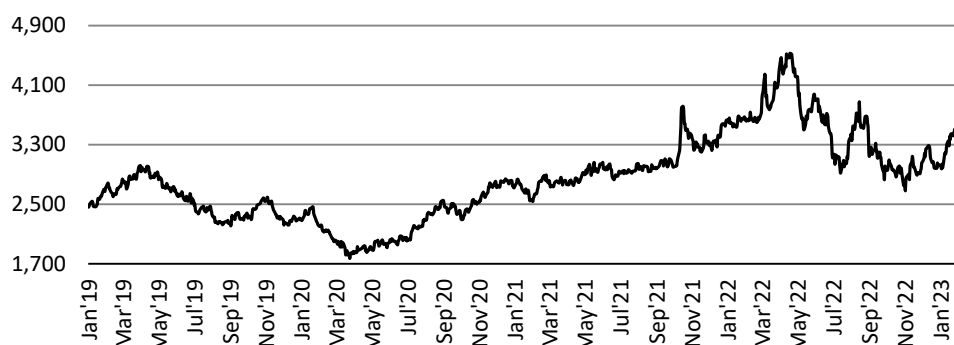
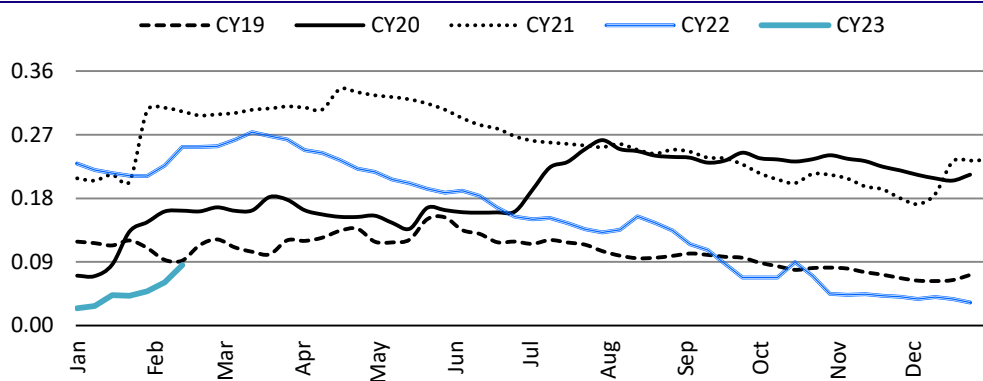


Exhibit 38: Total inventory (LME+SHFE, mt)



Lead

Exhibit 39: LME spot (USD/t)

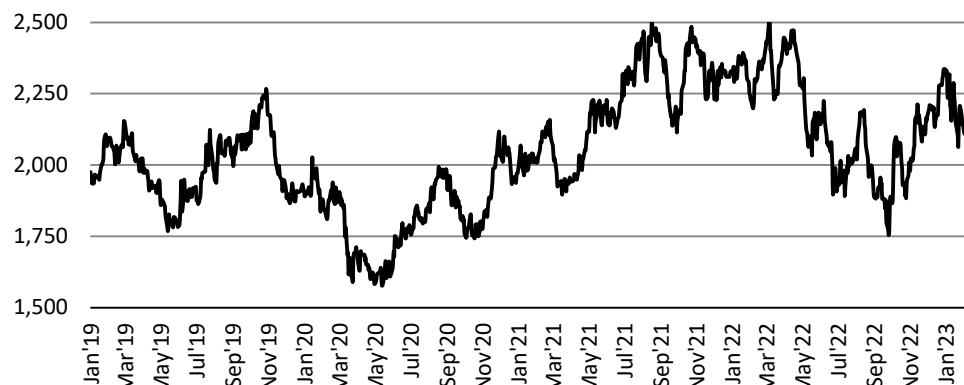
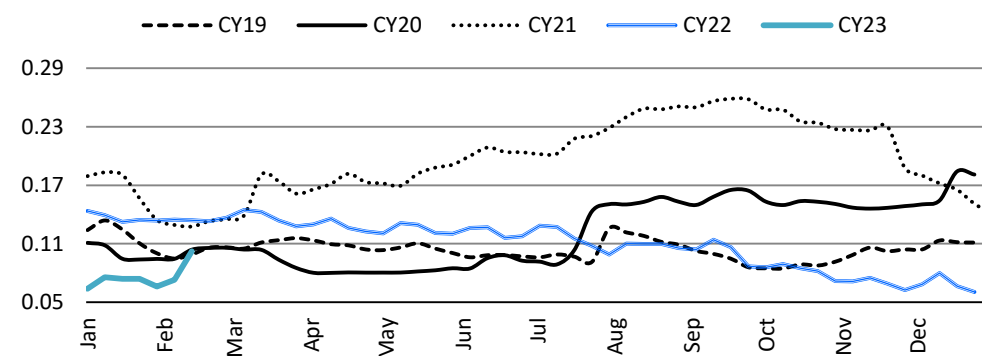


Exhibit 40: Total inventory (LME+SHFE, mt)



Nickel

Exhibit 41: Nickel spot (USD/t)

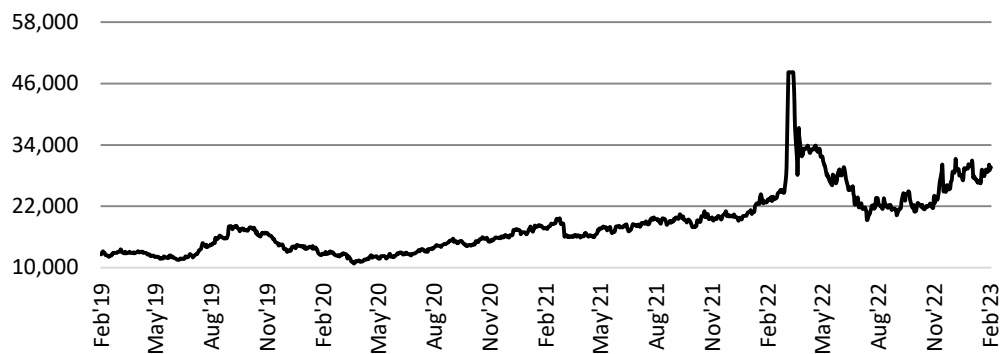
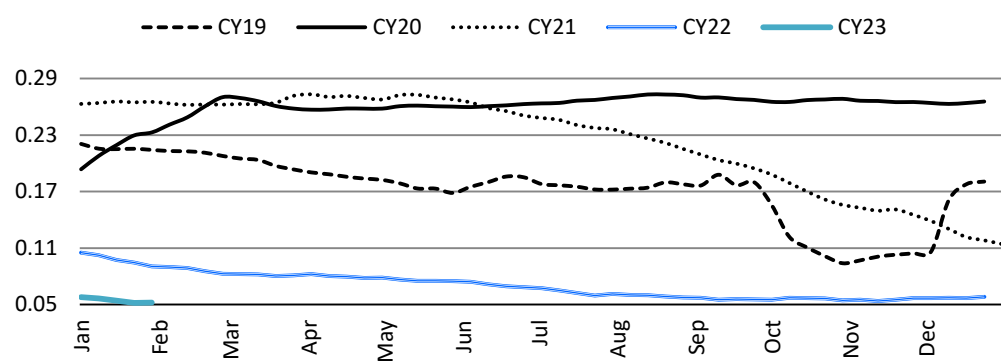


Exhibit 42: Total inventory (LME+SHFE, mt)



India steel production, consumption, EXIM, and inventory

Exhibit 43: Crude steel production (mt)

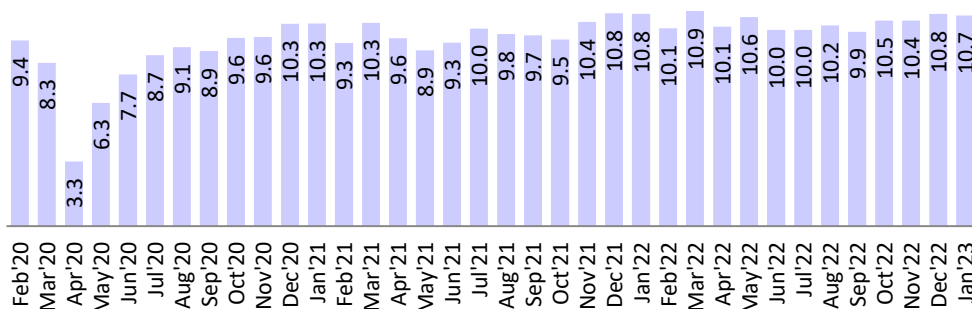


Exhibit 44: Finished steel production (mt)

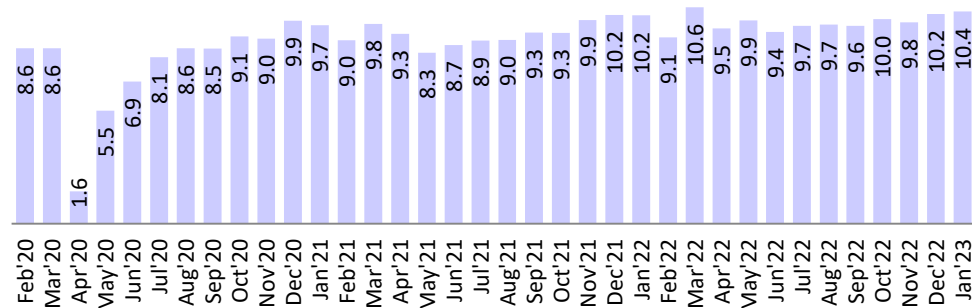


Exhibit 45: Imports including semis (kt)

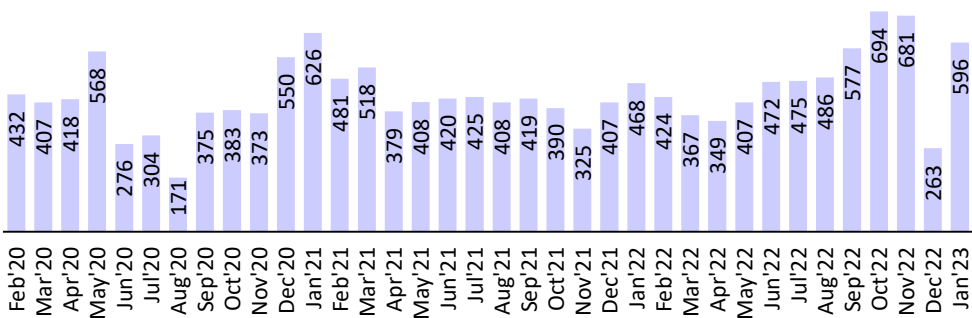


Exhibit 46: Exports including semis (kt)

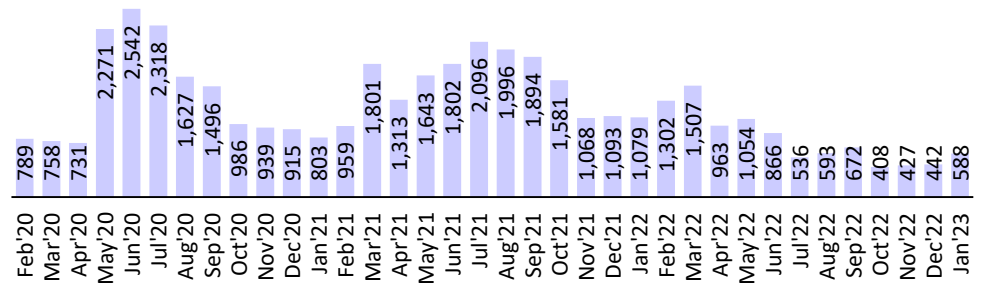


Exhibit 47: Net imports/(exports) of finished steel (kt)

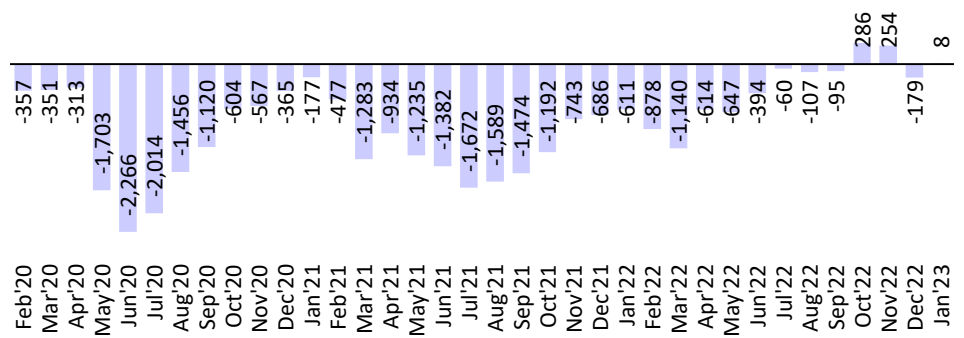
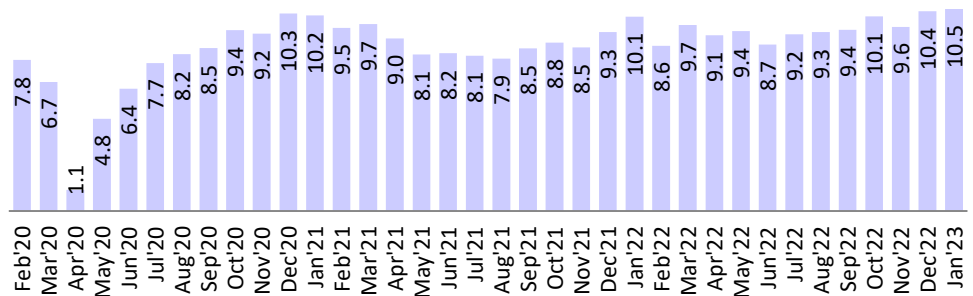


Exhibit 48: Steel consumption (mt)



Global production trends

Exhibit 49: World crude steel production and China's share

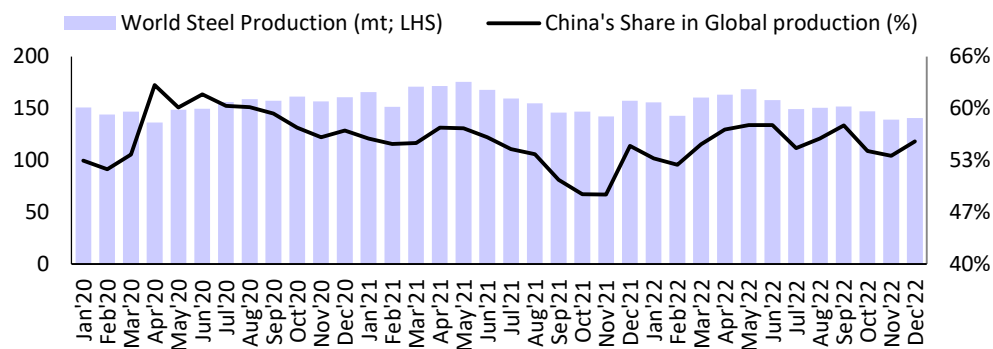


Exhibit 50: Crude steel production in China (mt)

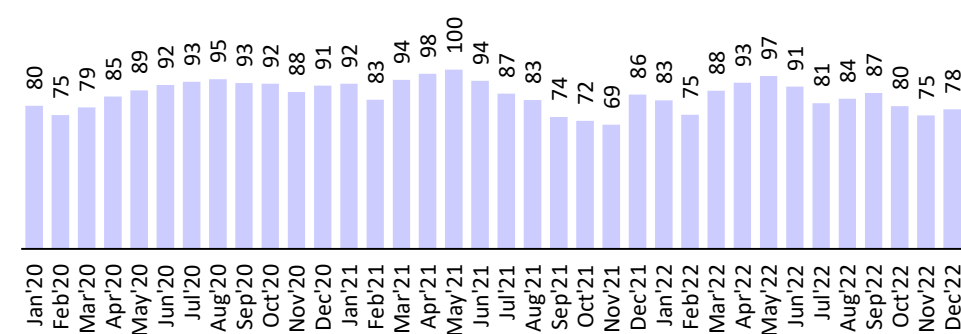


Exhibit 51: Crude steel production in Japan (mt)

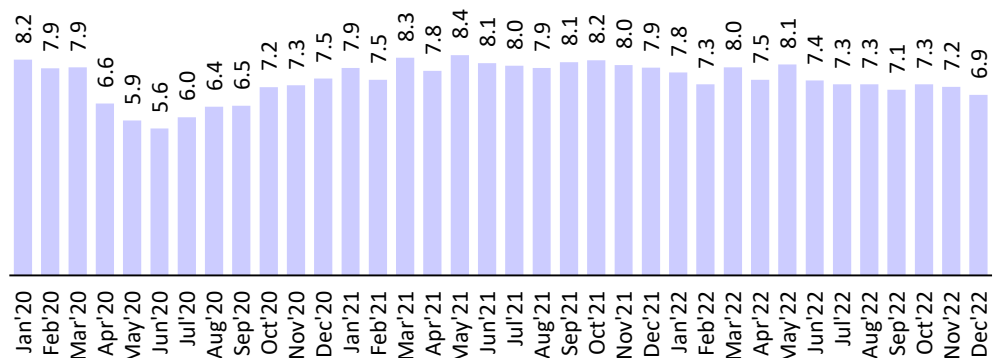


Exhibit 52: Crude steel production in the US (mt)

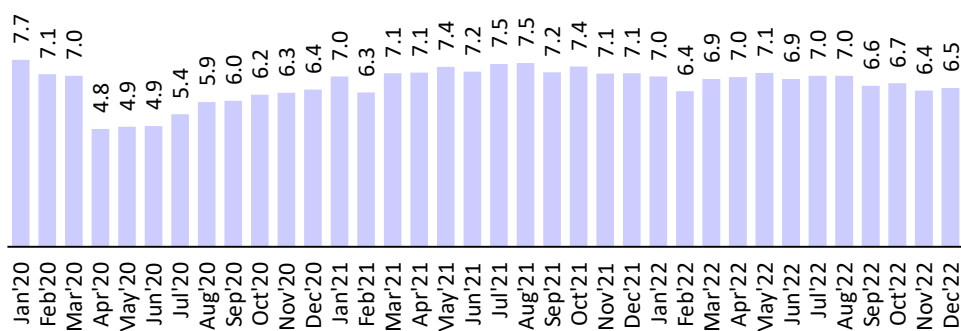


Exhibit 53: Crude steel production in Russia (mt)

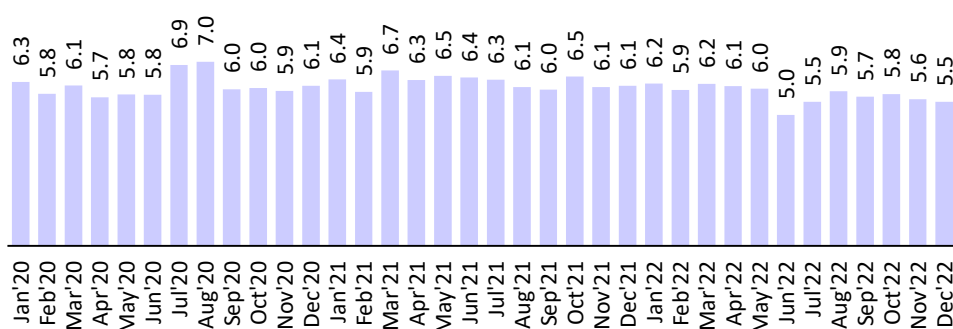
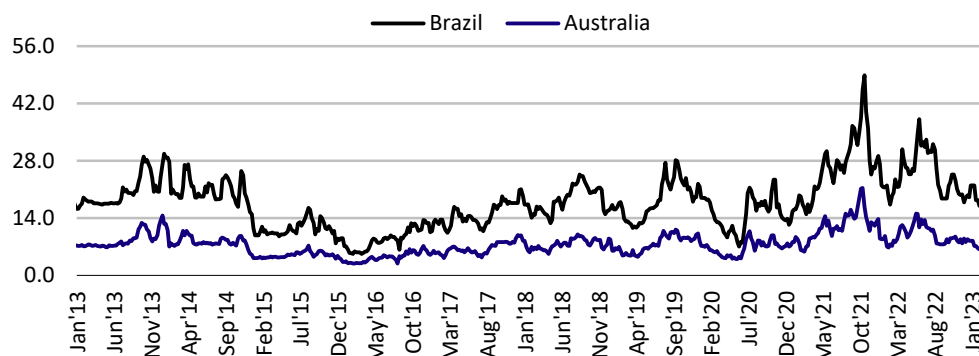


Exhibit 54: Dry bulk freight rates to China (USD/t)



China steel and macro

Exhibit 55: China's gross steel exports (mt)

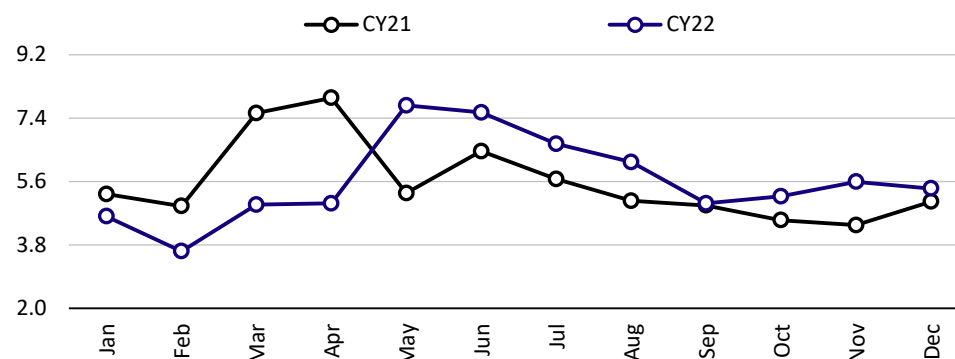


Exhibit 56: China's gross steel imports (mt)

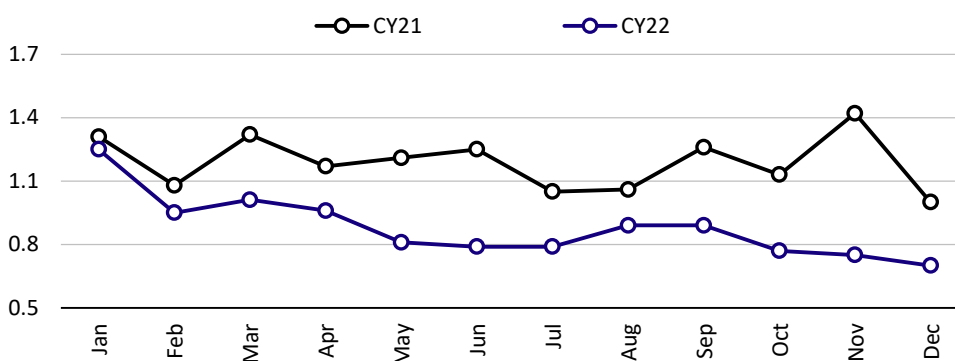


Exhibit 57: China's net steel exports/(imports) (mt)

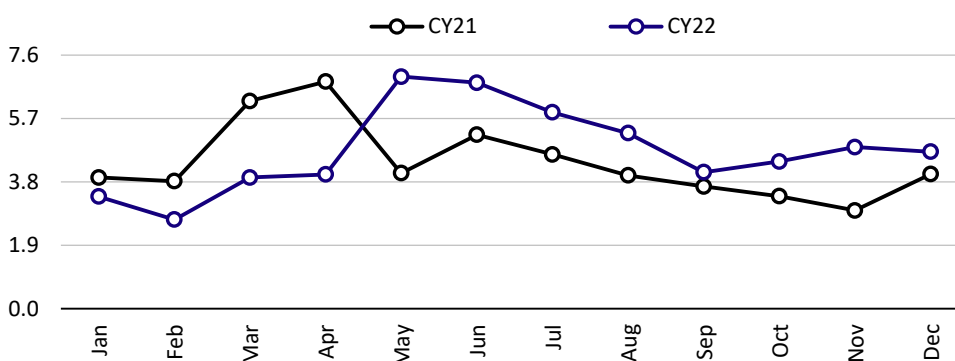


Exhibit 58: China's GDP growth YoY (constant prices)

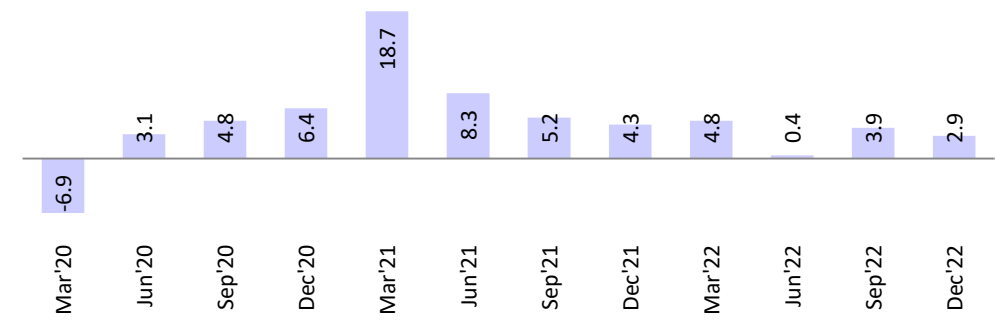


Exhibit 59: Total FAI investments (CNY b)

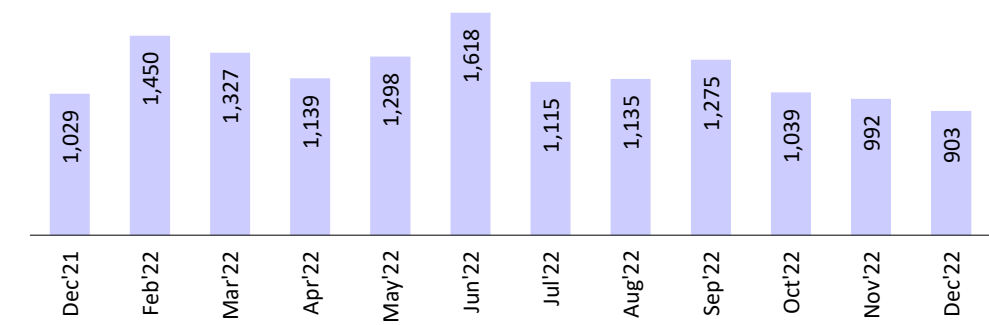


Exhibit 60: Automobile registration (m units)

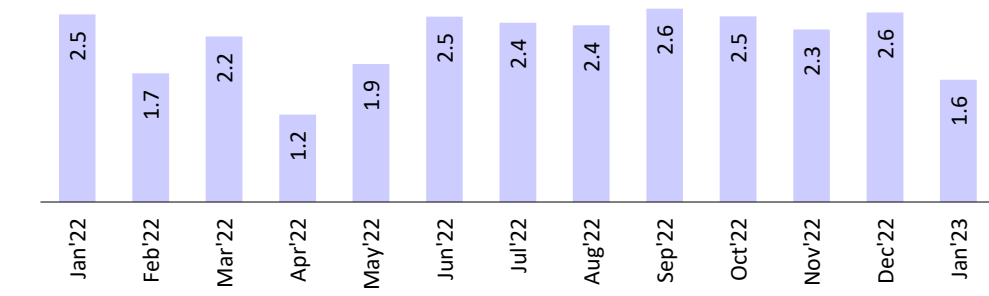


Exhibit 61: Floor space sold (m square meters)

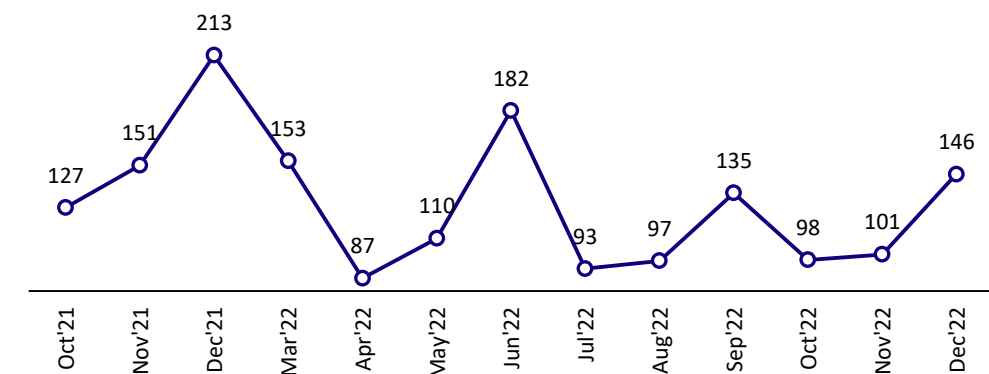


Exhibit 62: Floor space starts (m square meters)

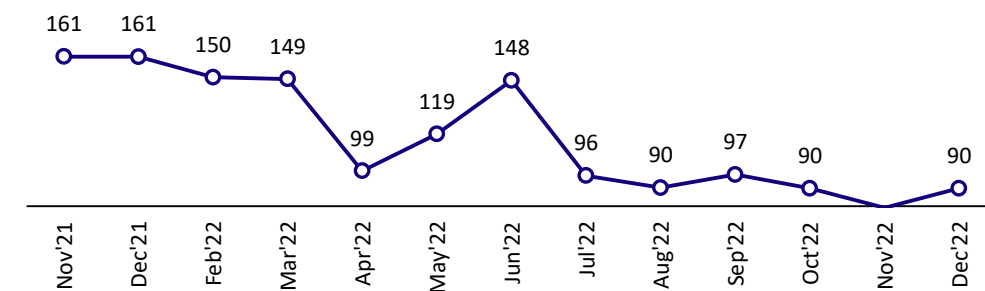


Exhibit 63: Land sales (m square meters)

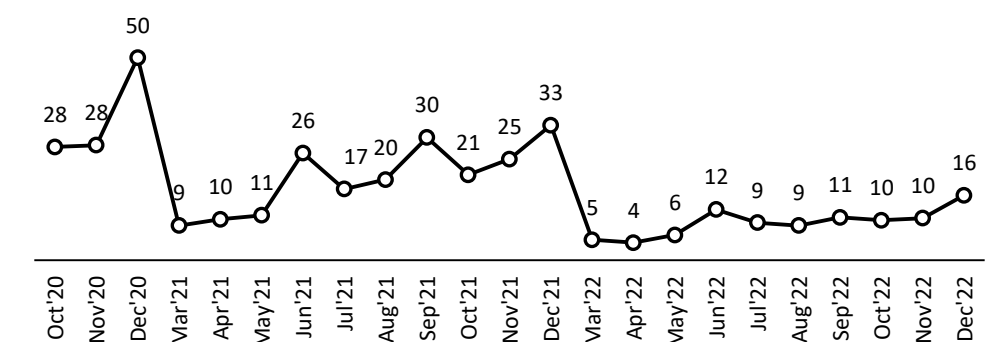


Exhibit 64: Manufacturing PMI

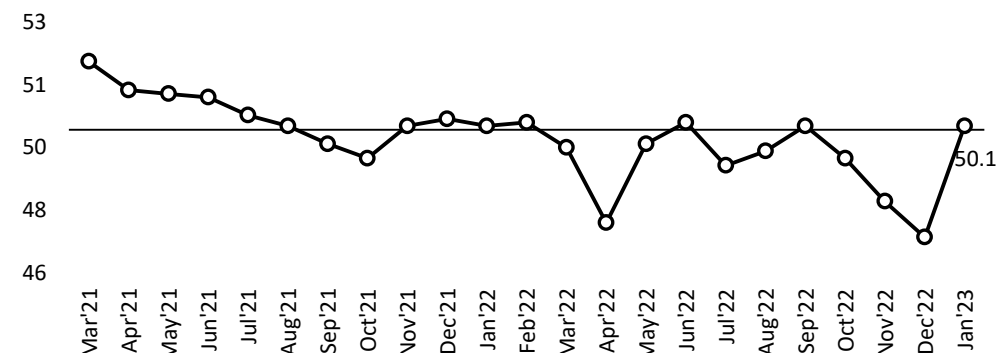
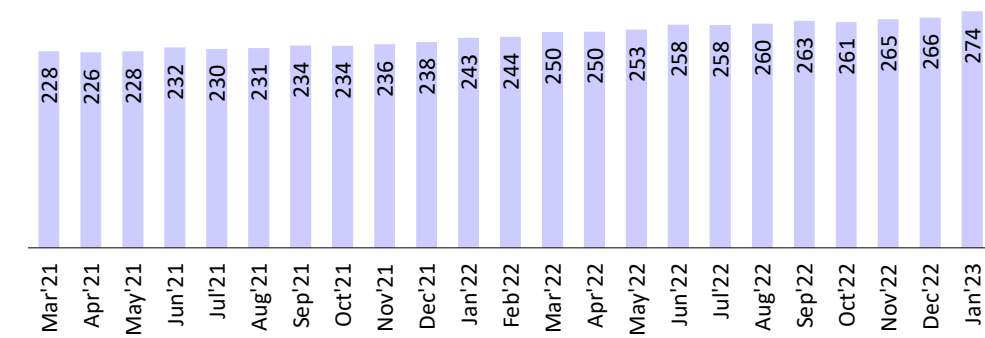


Exhibit 65: M2 money supply (CNY t)



Commodity monthly heat map

Commodity	UoM	Mar'22	Apr'22	May'22	Jun'22	Jul'22	Aug'22	Sep'22	Oct'22	Nov'22	Dec'22	Jan'23	Feb'23	MoM
Oil and non-ferrous - prices														
Brent Crude	USD/bbl	116	106	112	120	109	99	90	93	91	81	83	83	0
Copper	USD/t	10,238	10,192	9,384	9,071	7,530	7,976	7,735	7,621	8,030	8,362	8,972	8,948	0
Aluminum	USD/t	3,538	3,255	2,836	2,576	2,402	2,434	2,230	2,243	2,335	2,390	2,483	2,442	-2
Zinc	USD/t	3,974	4,381	3,780	3,667	3,097	3,577	3,136	2,960	2,924	3,115	3,277	3,167	-3
Lead	USD/t	2,359	2,404	2,151	2,074	1,976	2,074	1,874	1,988	2,099	2,219	2,214	2,092	-5
Nickel	USD/t	37,649	33,134	28,229	25,877	21,482	22,035	22,774	22,033	25,563	28,986	28,271	27,207	-4
Alumina	USD/t	487	403	366	362	346	335	338	320	316	322	343	360	5
Aluminum Ingot Premium (Asia - MJP)	USD/t	141	140	120	119	123	121	115	114	114	90	86	80	-6
Aluminum Ingot Premium (EU - Rotterdam)	USD/t	528	585	605	596	515	502	459	351	272	236	257	293	14
Aluminum Ingot Premium (US midwest)	USD/t	859	857	822	740	635	594	553	466	447	454	569	644	13
Aluminum scrap	USD/t	2,240	2,103	1,903	1,799	1,669	1,720	1,632	1,644	1,710	1,739	1,759	1,753	0
Aluminum scrap spread	USD/t	1,298	1,152	933	777	732	714	598	599	626	651	725	689	-5
Silver	USD/t	891	866	771	758	682	681	667	686	743	825	841	764	-9
USD:INR (Bloomberg)	INR	76	76	77	78	80	80	80	82	82	83	82	83	1
Ferrous- International Prices														
China HRC domestic	RMB/t	5,176	5,235	4,957	4,645	4,223	4,027	3,991	3,931	3,821	4,069	4,187	4,216	1
China HRC domestic	USD/t	816	814	740	694	627	592	569	547	533	583	616	619	0
China TMT domestic	RMB/t	4,950	5,090	4,901	4,561	4,204	4,205	4,082	4,046	3,859	4,005	4,196	4,259	1
China TMT domestic	USD/t	780	791	732	681	624	618	582	563	538	574	618	625	1
China HRC FoB	USD/t	874	919	824	755	633	611	585	593	574	593	636	657	3
Korea HRC FoB	USD/t	920	925	876	800	705	605	581	584	534	559	629	650	3
North Europe HRC domestic	EUR/t	1,333	1,377	1,178	961	850	801	785	725	655	666	714	760	6
North America HRC domestic (USD/short ton)	USD/st	1,185	1,453	1,459	1,198	938	857	819	760	689	682	727	794	9
India HRC Export FoB (USD/t)	USD/t	864	1,006	878	718	626	579	581	580	534	563	639	707	11
Australia Fe 62% iron ore CNF	USD/t	150	152	134	131	107	105	99	93	92	111	122	125	2
Chinese steel futures														
TMT - Shanghai futures	RMB/t	4,810	4,999	4,662	4,508	3,974	3,890	3,734	3,698	3,598	3,939	4,131	4,071	-1
HRC - Shanghai futures	RMB/t	5,023	5,133	4,775	4,588	3,968	3,904	3,793	3,726	3,696	4,010	4,168	4,135	-1
Iron ore - Dalian Commodity Exchange	RMB/t	805	887	837	849	678	712	707	693	696	807	851	860	1
Coking coal - Dalian Commodity Exchange	RMB/t	2,782	2,987	2,645	2,627	2,056	1,945	1,978	2,067	1,925	1,871	1,863	1,832	-2
China HRC FOB spread over RM (HRC - 1.7x iron ore -.85x HCC)	RMB/t	1,290	1,086	1,104	912	1,068	1,040	910	791	876	1,049	1,138	1,116	-2
India steel and metallics prices														
India HRC ex-Mumbai 5-10mm	INR/t	72,775	76,725	70,600	62,400	59,440	57,175	55,925	56,920	56,000	53,900	57,589	59,686	4

Dom HRC prem to India export FoB price	INR/t	6,939	93	2,759	6,360	9,640	11,143	9,299	9,163	12,295	7,442	5,255	1,321	-75
CRC ex-Mumbai - 0.9mm	INR/t	79,875	86,825	80,500	70,875	68,020	67,025	65,850	65,825	62,860	59,525	62,722	64,900	3
Galvanized plain - 120 GSM	INR/t	86,500	91,500	84,740	72,300	70,900	68,900	67,500	67,340	65,467	63,600	70,500	74,180	5
Color coated /PPGI ex-Mumbai 90GSM	INR/t	92,625	98,375	93,360	81,750	79,160	77,800	76,500	77,080	75,825	71,467	77,256	82,580	7
Wire rod - Primary Producers	INR/t	67,500	70,300	67,000	59,338	58,740	57,775	56,440	55,750	55,200	54,000	56,807	59,223	4
TMT primary - Mumbai	INR/t	71,250	73,225	68,500	60,413	58,320	56,838	55,950	56,300	56,000	56,417	60,210	63,100	5
TMT secondary - Mumbai	INR/t	68,417	64,931	59,573	53,681	54,515	55,842	54,777	55,638	52,786	53,308	57,154	57,170	0
Domestic scrap-HMS(80:20) - Mumbai	INR/t	50,476	49,104	45,335	40,827	44,400	44,508	43,169	41,088	35,300	36,350	37,475	36,290	-3
Sponge iron (DRI)	INR/t	39,752	35,825	32,838	30,488	33,413	33,810	31,598	30,804	28,696	29,873	31,567	31,033	-2
Domestic pellet prices- Barbil - 63% Fe	INR/t	12,594	11,444	9,683	7,044	7,360	7,119	6,938	7,231	7,320	7,861	9,085	9,550	5
Pellet Export Prices - FoB 64%Fe	USD/t	159	159	138	NA	NA	NA	NA	NA	102	107	116	121	4
Domestic ferrous spreads														
Primary HRC v/s primary TMT	INR/t	1,525	3,500	2,100	1,988	1,120	338	-25	620	-	-2,517	-2,621	-3,414	30
Primary TMT v/s secondary TMT	INR/t	2,833	8,294	8,927	6,732	3,805	996	1,173	663	3,214	3,109	3,056	5,930	94
Secondary TMT v/s domestic Scrap	INR/t	17,941	15,827	14,238	12,854	10,115	11,334	11,608	14,550	17,486	16,958	19,679	20,880	6
Hot rolled v/s cold rolled	INR/t	7,100	10,100	9,900	8,475	8,580	9,850	9,925	8,905	6,860	5,625	5,133	5,214	2
Hot rolled - galvanized Plan	INR/t	13,725	14,775	14,140	9,900	11,460	11,725	11,575	10,420	9,467	9,700	12,911	14,494	12
Hot rolled - color coated	INR/t	19,850	21,650	22,760	19,350	19,720	20,625	20,575	20,160	19,825	17,567	19,667	22,894	16
Sponge iron -NMDC lumps spread	INR/t	29,552	25,455	23,488	23,008	26,783	26,840	24,628	23,834	21,981	22,903	23,832	23,553	-1
Coking coal														
India premium HCC CNF	USD/t	617	505	535	404	269	258	286	309	299	277	328	380	16
India 64 mid vols coking coal CNF	USD/t	583	468	498	369	237	239	268	280	260	256	306	352	15
NMDC iron ore - Chhattisgarh														
64% Bailadila fines	INR/t	4,960	5,160	4,410	3,310	2,810	2,910	2,910	2,910	2,760	2,910	3,510	3,910	11
Iron ore lump	INR/t	6,000	6,100	5,500	4,400	3,900	4,100	4,100	4,100	3,950	4,100	4,550	4,400	-3
Manganese ore														
Manganese ore, Balaghat Mn 37%, Fe 7.5%	INR/t	16,424	18,066	18,066	15,447	16,219	14,598	13,138	13,138	13,138	12,481	13,417	14,088	5
Manganese ore, import India, Mn 37.5%	USD/dmtu	6	5	5	5	5	5	4	4	4	4	4	5	5
Domestic ferro alloys														
Silico manganese	INR/t	1,18,776	1,05,406	88,984	81,968	80,805	77,815	74,311	76,322	75,341	75,420	79,583	76,882	-3
Ferro manganese	INR/t	1,15,480	1,09,385	94,692	87,147	85,486	80,285	76,686	75,550	76,182	74,545	79,820	79,735	0
Ferro chrome	INR/t	50,476	49,104	45,335	40,827	44,400	44,508	43,169	41,088	35,300	36,350	37,475	36,290	-3
Freight rates														
Baltic Dry index	Points	2,464	2,212	2,919	2,412	2,077	1,398	1,490	1,814	1,299	1,467	936	590	-37
Ferrous - inventory														
China HRC	mt	3	3	3	3	3	3	3	3	2	2	2	3	31
China wire rod	mt	4	3	3	3	2	2	2	2	1	1	1	2	72
China TMT	mt	9	9	8	8	7	6	5	5	4	4	5	8	62

Total steel inventory	mt	15.8	15.1	13.8	13.5	12.6	10.6	9.3	9	7	7	8	13	54
Non-ferrous - inventory														
Aluminum														
LME	kt	732	603	526	415	331	281	327	450	539	479	410	501	22
SHFE	kt	1,090	1,038	977	801	393	68	67	64	55	49	71	116	64
Total	kt	1,822	1,641	1,503	1,215	724	350	394	513	594	528	481	617	28
Zinc														
LME	kt	143	116	89	82	78	74	70	51	43	37	22	22	4
SHFE	kt	122	126	116	100	70	67	33	26	1	1	8	41	420
Total	kt	265	242	205	183	148	141	103	77	44	38	29	63	115
Lead														
LME	kt	40	39	38	39	39	39	35	30	27	24	22	22	1
SHFE	kt	98	90	87	83	82	68	71	55	46	45	47	53	14
Total	kt	138	130	125	122	121	107	106	86	73	69	69	76	9
Copper														
LME	kt	77	118	168	124	133	126	114	137	90	85	82	66	-19
SHFE	kt	62	36	18	13	16	5	5	35	34	27	49	119	142
Total	kt	139	154	186	137	148	132	119	172	123	112	131	185	41
Nickel														
LME	kt	75	73	73	69	63	56	53	53	51	54	53	48	-9
SHFE	kt	7	8	4	3	2	3	3	3	4	3	3	3	15
Total	kt	81	81	77	72	64	60	56	56	55	57	55	51	-8

Metals valuation matrix

Exhibit 66: Indian companies valuation

Exhibit 66: Indian companies valuation											
	Rating	CMP (INR)	M-cap (INR b)	EPS (INR)		P/E (x)		EV/EBITDA (x)		P/B(x)	
				FY23E	FY24E	FY23E	FY24E	FY23E	FY24E	FY23E	FY24E
Steel											
Tata	Neutral	113	1,374	8.7	15.8	12.9	7.1	6.2	4.7	1.2	1.1
JSW	Neutral	731	1,767	12.3	79.6	59.4	9.2	12.4	6.1	2.7	2.2
JSP	Buy	597	603	45.8	67.8	13.0	8.8	6.2	4.7	1.5	1.3
SAIL	Neutral	86	356	4.7	12.3	18.2	7.0	7.2	4.6	0.6	0.6
Non-ferrous											
Vedanta	Neutral	315	1,170	29.5	38.5	10.7	8.2	6.5	5.5	2.5	2.4
Hindalco	Buy	434	964	47.4	70.0	9.2	6.2	5.5	3.9	1.5	1.3
Nalco	Neutral	81	149	6.4	11.3	12.7	7.2	5.9	4.0	1.1	1.1
Mining											
Coal	Buy	218	1,343	54.0	33.0	4.0	6.6	2.4	3.7	2.2	1.9
HZL	Neutral	323	1,366	25.2	32.7	12.8	9.9	6.8	5.6	4.2	4.1
NMDC	Buy	119	350	16.3	18.3	7.3	6.5	4.5	3.6	1.8	1.6

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

Exhibit 67: Global steel comparative valuation

Exhibit 67: Global steel comparative valuation													
Company	MCap USD m	P/E (x)			EV/EBITDA (x)			P/B (x)			RoE (%)		
		CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY22/F Y23	CY23/ FY24	CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY22/ FY23	CY23/ FY24
India													
Tata*	16,624	3.4	12.9	7.1	3.0	6.2	4.7	1.2	1.2	1.1	44.6	9.4	15.9
JSW*	21,367	8.3	59.4	9.2	5.9	12.4	6.1	2.6	2.7	2.2	37.5	4.5	26.1
JSP*	7,361	6.9	13.0	8.8	4.5	6.2	4.7	1.7	1.5	1.3	25.9	12.3	16.1
SAIL*	4,309	2.9	18.2	7.0	2.4	7.2	4.6	0.7	0.6	0.6	24.3	3.6	8.9
Japan													
JFE	7,993	3.7	6.4	7.0	5.0	5.9	6.4	0.5	0.5	0.5	15.5	8.1	6.8
Nippon Steel	21,903	5.5	4.9	7.5	5.6	4.6	5.4	0.9	0.7	0.7	18.1	17.3	9.6
Kobe Steel	2,634	6.3	7.0	7.4	5.7	6.2	5.8	0.4	0.4	0.4	7.2	6.2	5.3
Korea													
POSCO	22,493	6.7	8.0	6.8	4.1	4.4	3.9	0.5	0.5	0.5	8.3	6.5	7.3
Hyundai Steel	3,683	3.4	5.2	4.3	3.9	4.4	3.7	0.2	0.2	0.2	7.6	4.8	5.4
US													
Nucor	43,117	5.9	13.0	16.2	4.0	7.5	8.7	2.3	2.0	1.9	43.5	15.6	11.1
US Steel	6,349	2.9	12.2	16.0	1.7	4.3	4.4	0.7	0.7	0.7	26.2	6.1	4.6
Steel Dynamics	21,941	5.7	10.6	15.5	4.1	6.8	8.7	2.8	2.2	1.8	51.9	23.0	11.9
Europe													
AM	26,521	2.9	8.3	6.3	2.3	4.6	4.0	0.5	0.5	0.4	18.8	6.2	7.2
SSAB	7,162	3.4	9.5	13.0	1.9	4.4	5.6	0.8	1.1	1.0	26.0	11.3	8.2
TKA	4,647	4.6	12.2	7.9	0.5	0.6	0.6	0.3	0.3	0.3	8.4	3.0	4.0
VOE	6,551	5.7	6.2	10.3	4.0	3.4	4.4	0.9	0.8	0.7	16.7	13.2	7.5
China													
Baosteel	20,728	9.2	7.9	7.4	5.3	4.6	4.0	0.7	0.7	0.7	7.2	7.9	8.1

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

Exhibit 68: Iron ore mining global comparative valuation

Company	M-Cap USD m	P/E (x)			EV/EBITDA (x)			P/B (x)			RoE (%)		
		CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22
NMDC*	4,232	3.6	7.3	6.5	2.3	4.5	3.6	1.9	1.8	1.6	41.0	25.3	25.6
Vale	81,427	4.8	6.2	6.8	4.3	4.3	4.5	2.2	1.9	1.7	45.7	30.7	23.4
FMG	47,957	7.7	9.8	12.3	4.6	5.6	6.6	2.7	2.6	2.5	36.4	27.7	21.9

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

Exhibit 69: Diversified miners global comparative valuation

Company	M-Cap USD m	P/E (x)			EV/EBITDA (x)			P/B (x)			RoE (%)		
		CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22
Vedanta*	14,137	6.0	10.7	8.2	3.9	6.5	5.5	1.8	2.5	2.4	30.7	19.5	29.8
BHP	1,69,339	8.0	11.0	11.1	4.3	5.5	5.5	3.3	3.6	3.3	41.2	33.1	31.2
Rio	1,23,889	8.5	9.8	9.8	4.9	5.5	5.3	2.3	2.2	2.0	27.1	22.0	19.6
Glencore	77,716	4.2	6.6	7.3	2.9	3.7	3.8	1.6	1.6	1.5	43.0	23.7	19.2
Anglo	47,352	8.1	8.9	9.5	4.3	4.4	4.7	1.6	1.5	1.3	22.4	17.4	14.0
South 32	14,129	5.7	10.4	8.9	3.0	4.6	4.1	1.4	1.3	1.2	26.2	12.9	13.4

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

Exhibit 70: Zinc global comparative valuation

Company	M-Cap USD m	P/E (x)			EV/EBITDA (x)			P/B (x)			RoE (%)		
		CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22
HZL*	16,514	14.0	12.8	9.9	7.3	6.8	5.6	4.0	4.2	4.1	29.3	32.0	42.0
Korea Zinc	8,848	15.9	16.1	14.2	7.9	8.6	7.6	1.4	1.3	1.2	8.9	8.0	8.5
Teck	22,654	6.8	9.0	9.0	3.8	4.5	4.1	1.2	1.1	1.0	18.0	11.5	9.5

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

Exhibit 71: Coal global comparative valuation

Company	M-Cap USD m	P/E (x)			EV/EBITDA (x)			P/B (x)			RoE (%)		
		CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22
Coal*	16,243	7.7	4.0	6.6	3.5	2.4	3.7	3.1	2.2	1.9	40.3	55.6	29.1
China Shenhua	76,331	5.6	6.0	6.1	3.8	4.1	4.0	1.0	1.0	1.0	18.8	16.7	15.8
Banpu	2,732	1.6	3.2	4.9	1.9	2.7	2.9	0.8	0.7	0.7	47.1	21.8	13.7
Bukit Asam	2,659	3.1	3.9	4.9	2.0	2.3	2.8	1.3	1.2	1.1	45.8	31.9	22.8
Adaro Energy	6,012	2.6	3.9	5.5	1.1	1.6	1.9	1.0	0.9	0.8	44.2	25.3	15.6

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

Exhibit 72: Aluminum global comparative valuation

Company	M-Cap USD m	P/E (x)			EV/EBITDA (x)			P/B (x)			RoE (%)		
		CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22
Hindalco*	11,793	7.1	9.2	6.2	4.8	5.5	3.9	1.8	1.5	1.3	28.0	17.9	22.2
Nalco*	1,805	5.1	12.7	7.2	2.4	5.9	4.0	1.2	1.1	1.1	25.4	9.2	15.2
Alcoa	8,297	12.6	18.9	7.4	4.5	6.8	3.5	1.6	1.6	1.3	14.1	7.5	12.1
Norsk Hydro	15,593	6.7	11.7	10.2	4.0	5.9	5.1	1.4	1.6	1.5	26.4	12.7	14.2
CHALCO	13,219	11.3	11.3	8.7	7.0	6.8	5.7	1.0	0.9	0.8	9.4	8.6	10.4
RUSAL	7,547	2.4	3.1	4.1	3.5	3.6	NA	0.6	0.5	0.5	25.3	20.3	11.5
Alumina	3,012	27.3	47.2	15.3	21.5	26.9	10.2	1.8	1.8	1.7	7.9	3.1	10.1

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

Exhibit 73: Stainless steel global comparative valuation

Company	M-Cap USD m	P/E (x)			EV/EBITDA (x)			P/B (x)			RoE (%)		
		CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22
JSL	1,699	8.8	12.2	7.7	5.1	7.1	4.3	2.7	2.0	1.6	32.8	18.0	22.9
JSHL	1,397	NA	9.2	8.0	NA	NA	NA	NA	1.9	1.6	NA	20.8	19.8
Acerinox	2,793	3.2	8.0	7.9	2.3	4.1	3.8	0.9	0.9	0.8	31.5	11.4	10.3
Outokumpu	2,717	3.0	11.4	10.1	1.9	4.3	3.8	0.6	0.6	0.6	25.7	4.5	5.6
Aperam	3,119	3.8	8.1	7.0	3.0	5.0	4.2	0.8	0.8	0.7	22.7	9.6	10.5

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

Metals valuation charts

Exhibit 74: Tata Steel EV/EBITDA

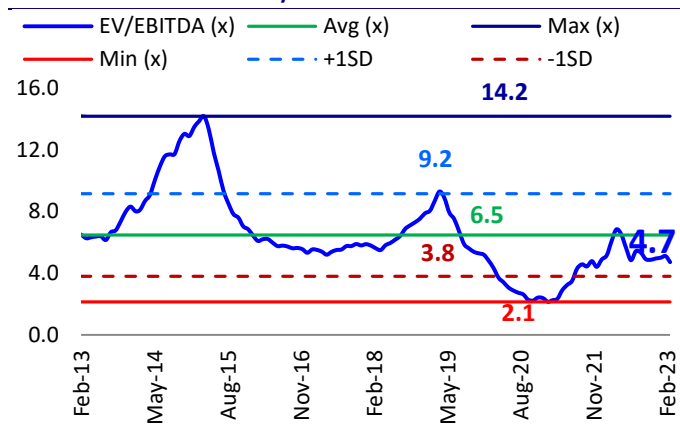


Exhibit 75: Tata Steel P/B

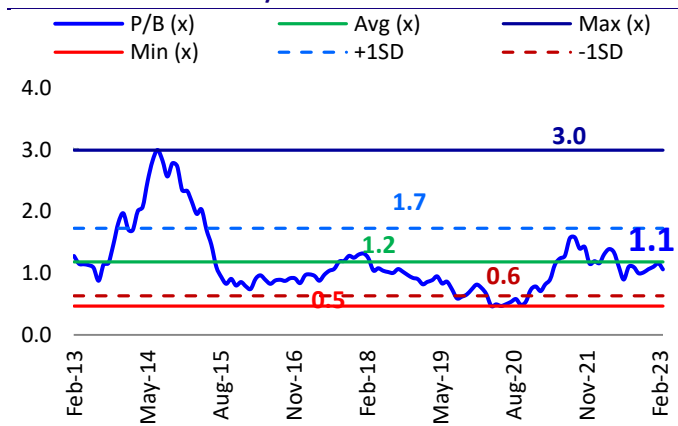


Exhibit 76: JSW Steel EV/EBITDA

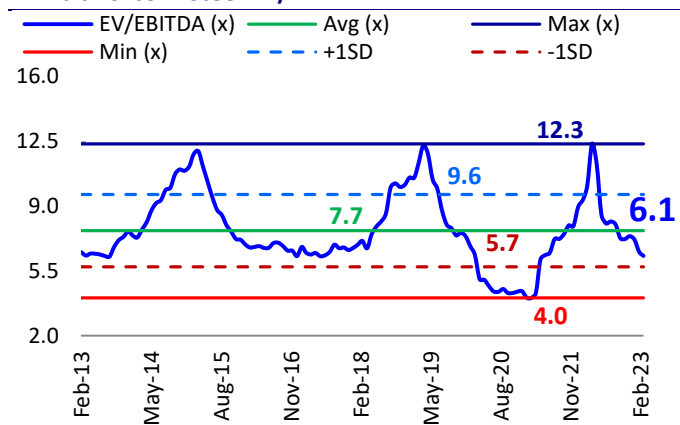


Exhibit 77: JSW Steel P/B

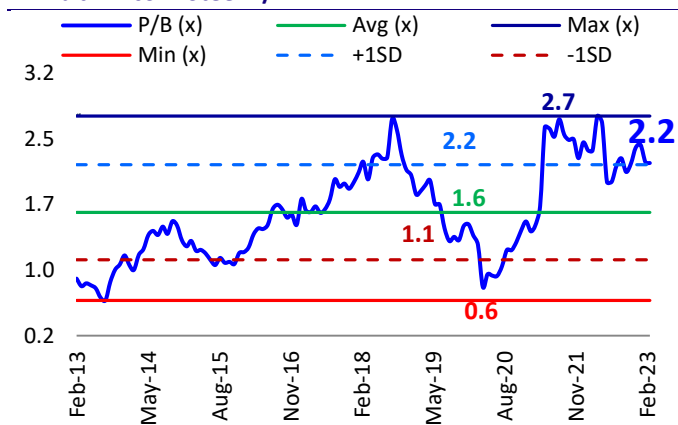


Exhibit 78: JSPL EV/EBITDA

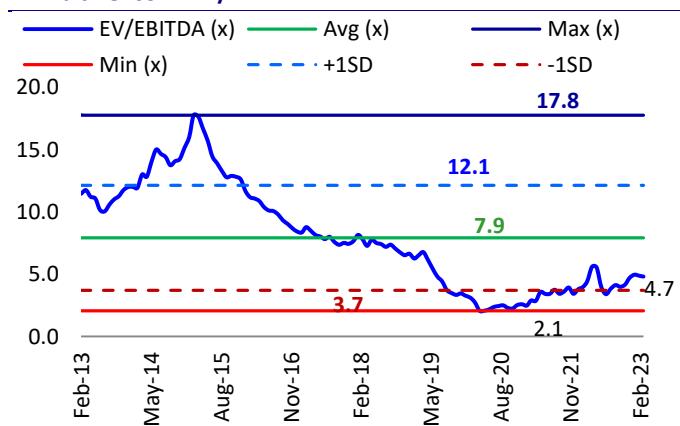


Exhibit 79: JSPL P/B

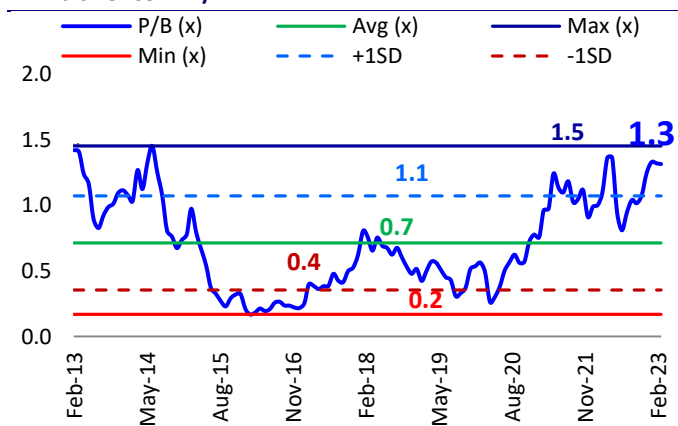


Exhibit 80: SAIL EV/EBITDA

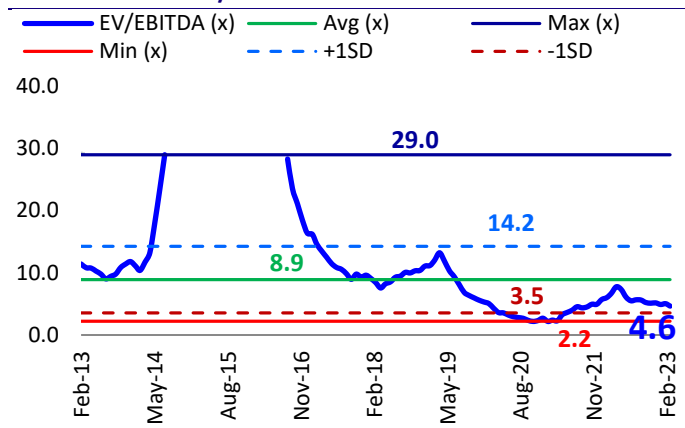


Exhibit 81: SAIL P/B

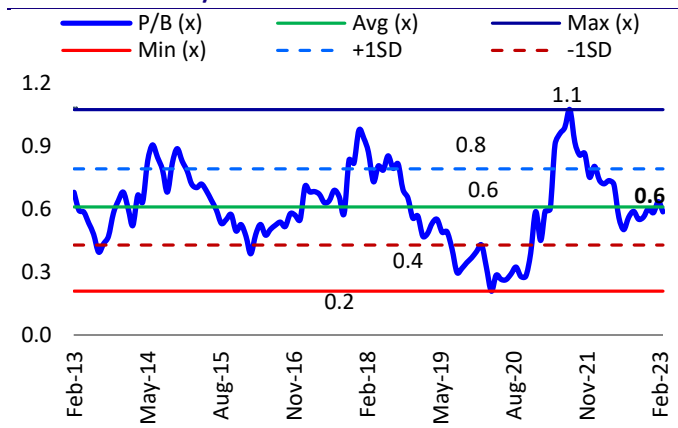


Exhibit 82: NMDC EV/EBITDA

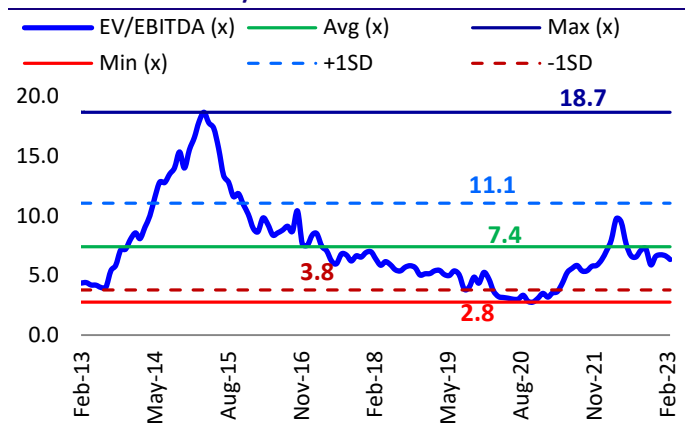


Exhibit 83: NMDC P/B

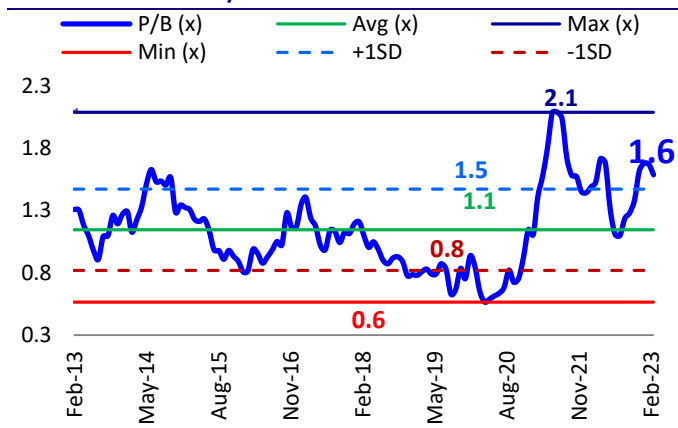


Exhibit 84: Vedanta EV/EBITDA

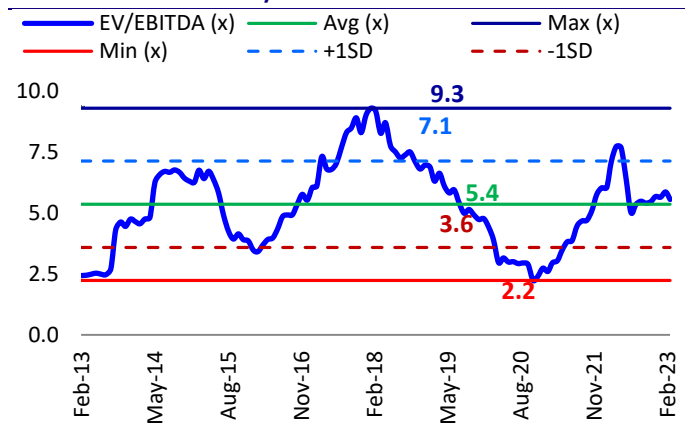


Exhibit 85: Vedanta P/B

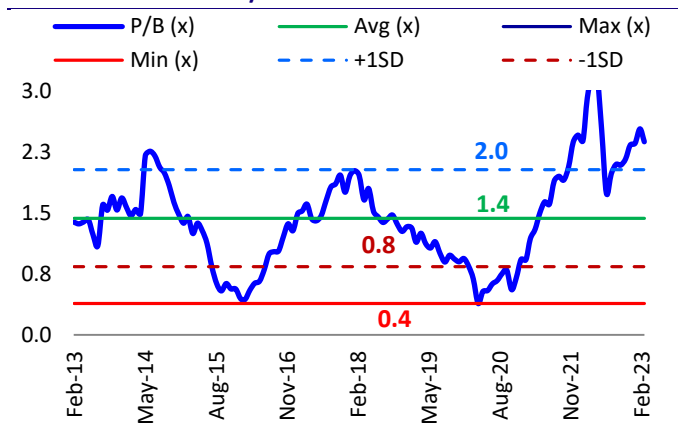


Exhibit 86: Hindustan Zinc EV/EBITDA

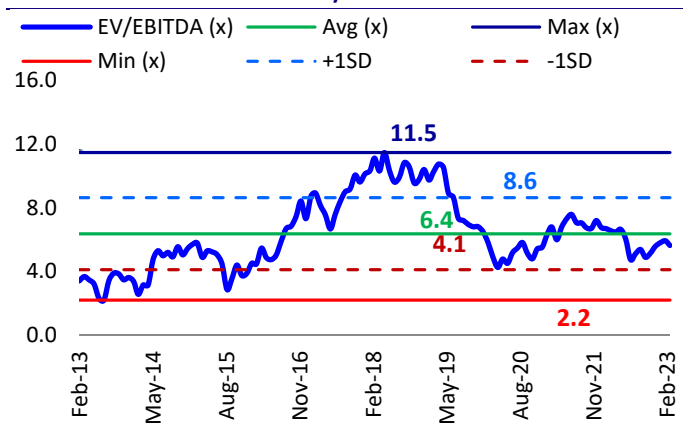


Exhibit 87: Hindustan Zinc P/B

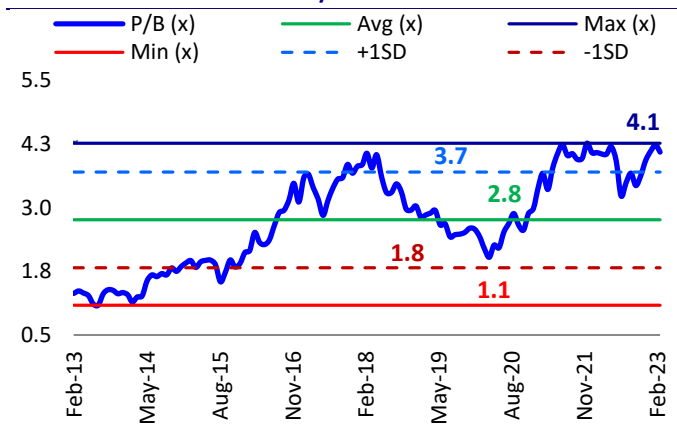


Exhibit 88: Hindalco EV/EBITDA

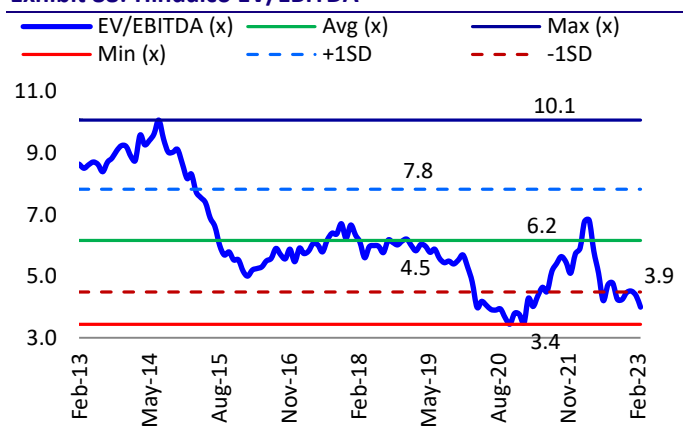


Exhibit 89: Hindalco P/B

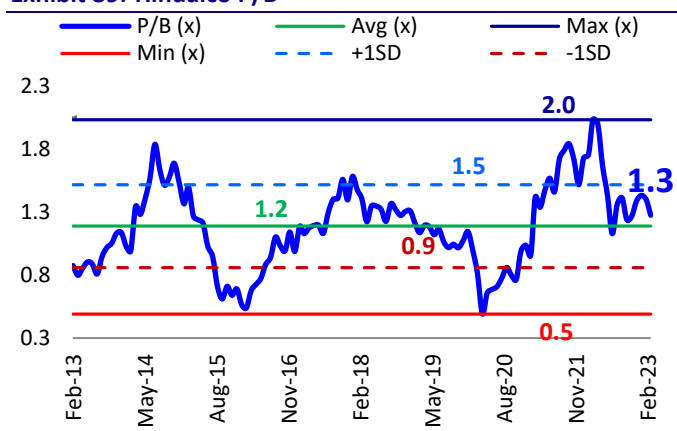


Exhibit 90: Nalco EV/EBITDA

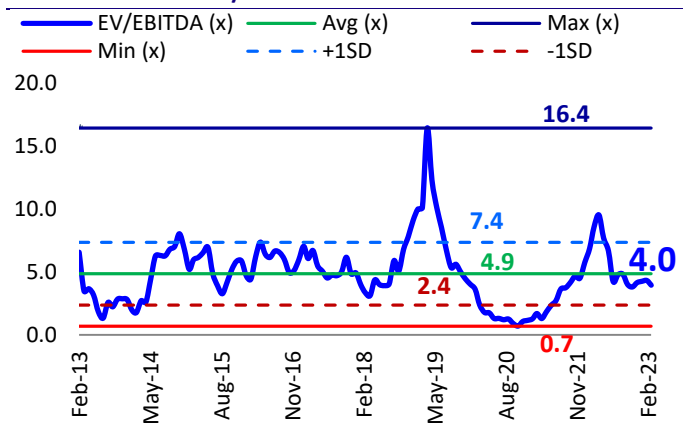
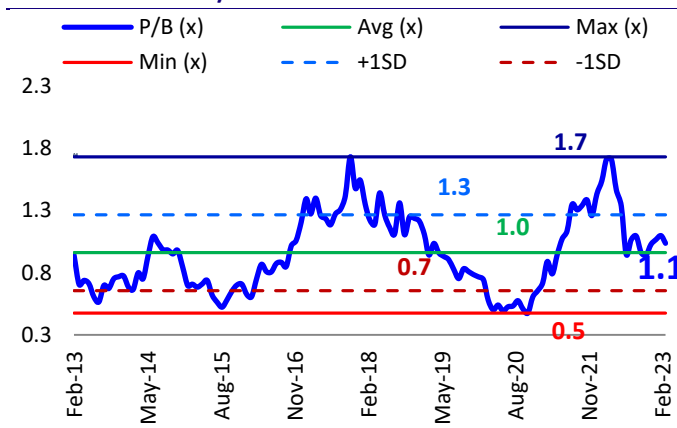


Exhibit 91: Nalco P/B



Performance of metal and mining shares

Exhibit 92: Performance of our Metals coverage on an absolute and relative basis (%)

Period	Absolute performance (%)						Relative performance to Sensex (%)					
	1D	1W	1M	3M	6M	12M	1D	1W	1M	3M	6M	12M
Steel												
Tata	0	3	-9	7	2	-6	0	2	-9	7	0	-11
JSW	0	2	-1	3	10	16	0	1	-2	4	8	10
JSP	1	2	-1	15	48	45	1	1	-2	16	45	39
SAIL	0	3	-6	7	5	-11	0	2	-7	8	3	-17
Non-ferrous												
Vedanta	0	2	-5	1	20	-14	0	1	-6	2	18	-19
Hindalco	1	2	-11	-1	2	-18	1	0	-12	0	-1	-24
Nalco	1	3	-3	11	3	-29	1	2	-4	12	0	-35
Mining												
Coal	0	2	-4	-5	0	30	0	1	-5	-4	-2	25
Hind. Zinc	0	-1	-8	0	16	2	0	-2	-9	1	13	-4
NMDC	-1	1	-6	8	44	17	-2	0	-7	8	41	12
SENSEX	0	1	1	-1	2	6	-	-	-	-	-	-
NIFTY	0	1	0	-2	1	4	-	-	-	-	-	-
BSE Metals index	0	2	-6	4	9	2	-	-	-	-	-	-

Exhibit 93: Performance of global Metal stocks on an absolute basis (%)

Period	Absolute performance (%)					
	1D	1W	1M	3M	6M	12M
Steel						
India						
Tata	0	3	-9	7	2	-6
JSW	0	2	-1	3	10	16
JSP	1	2	-1	15	48	45
SAIL	0	3	-6	7	5	-11
Japan						
JFE	2	12	6	17	17	4
Nippon Steel	1	9	18	41	44	51
Kobe Steel	1	9	33	46	45	45
Korea						
POSCO	3	13	12	19	35	23
Hyundai Steel	2	6	2	8	9	-11
US						
Nucor	0	0	10	18	22	37
US Steel	0	-1	-1	19	21	16
Steel Dynamics	0	1	16	24	53	95
Europe						
ArcelorMittal	0	4	0	13	22	5
SSAB A	0	4	14	29	50	38
thyssenkrupp	0	-1	-1	28	20	-21
voestalpine	0	4	18	33	67	12
China						
Baosteel	4	5	4	20	20	-16

Period	Absolute performance (%)					
	1D	1W	1M	3M	6M	12M
Iron ore mining						
NMDC	-1	1	-6	8	44	17
Vale	0	2	-6	9	31	3
FMG	1	2	0	13	18	14
Diversified miners						
Vedanta	0	2	-5	1	20	-14
BHP	1	1	-3	10	17	13
Rio	0	2	-2	13	24	8
Glencore	0	-1	-11	1	5	21
Anglo	0	-1	-10	2	13	-9
South 32	-1	-2	-2	15	7	-2
Zinc						
Hind. Zinc	0	-1	-8	0	16	2
Korea Zinc	3	8	2	-11	-2	8
Teck	0	6	4	34	30	24
Coal						
Coal	0	2	-4	-5	0	30
China Shenhua	1	1	-5	7	1	6
Banpu	2	0	-13	-10	-20	2
Bukit Asam	0	4	-2	-1	-17	19
Adaro Energy	-1	3	-12	-21	-12	27
Aluminum						
Hindalco	1	2	-11	-1	2	-18
Nalco	1	3	-3	11	3	-29
Alcoa	0	-2	-8	-1	-8	-40
Norsk Hydro	0	-2	-4	9	15	0
CHALCO	7	3	6	45	54	-19
RUSAL	0	-1	-5	4	11	-54
Alumina	-1	-3	-4	-1	-2	-29
Stainless steel						
JSL	1	4	5	60	112	36
JSHL	2	4	4	52	99	32
Acerinox	0	5	-1	7	8	-13
Outokumpu	0	7	6	19	37	2
Aperam	0	10	6	30	29	-26

Explanation of Investment Rating	
Investment Rating	Expected return (over 12-month)
BUY	>=15%
SELL	< - 10%
NEUTRAL	> - 10 % to 15%
UNDER REVIEW	Rating may undergo a change
NOT RATED	We have forward looking estimates for the stock but we refrain from assigning recommendation

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