



Indian companies' valuations

	Price (INR)	EV/ EBITDA (x)		P/B (x)	
		FY23E	FY24E	FY23E	FY24E
Steel					
Tata	113	4.6	1.8	1.1	1.0
JSW	678	7.3	6.3	2.2	1.8
JSP	404	4.8	3.5	1.0	0.9
SAIL	82	5.0	2.5	0.6	0.6
Non-ferrous					
Vedanta	262	4.9	4.8	1.5	1.4
Hindalco	436	5.6	5.2	1.6	1.4
Nalco	80	5.0	3.2	1.1	1.0
Mining					
Coal	222	3.9	4.9	2.5	2.2
HZL	274	5.7	5.5	3.6	3.7
NMDC	117	5.7	4.9	0.9	0.9

Global companies' valuations

Company	M-cap USD b	EV/EBITDA (x)		P/B (x)
		CY22/ FY23	CY23/ FY24	
Steel				
AM	22	2.7	2.8	0.3
SSAB	5	2.5	3.1	0.6
Nucor	37	6.5	7.0	1.6
POSCO	17	2.9	2.6	0.4
JFE	7	5.7	5.9	0.4
Aluminum				
Norsk Hydro	14	4.1	3.9	1.3
Alcoa	9	3.5	2.8	1.4
Zinc				
Teck	18	3.4	3.2	0.8
Korea Zinc	9	6.9	6.5	1.3
Iron ore				
Vale	64	2.8	3.1	1.3
FMG	42	4.8	6.0	2.3
Diversified				
BHP	144	4.6	5.4	2.8
Rio	96	4.0	4.3	1.6

Coking coal prices surge on India demand amid slowdown in China

- Premium HCC shot up 16% WoW to USD258/t CNF Paradeep on renewed demand from India. With a pick-up in the pace of production after maintenance shutdowns at a few mills, demand for both HCC and SCC have been robust.
- Aluminum prices are expected to remain stable to high as heat wave in China reduced hydroelectric power generation in the Sichuan province and available electricity is steered away from power intensive industries
- China continued with small doses of economic stimulus, with a sudden 10bps cut in lending rates by PBOC. This points to an acceptance of a slowdown in China and efforts to revive demand by easing money supply. We believe concrete measures are needed to revive the Chinese economy, in addition to a rethink on their zero COVID strategy (ZCS).
- Domestic steel prices remained stable last week as secondary TMT prices continued to rise, supported by rising iron ore and thermal coal prices.
- Primary HRC-TMT spreads have fallen to INR300/t while Primary TMT-Secondary TMT spreads have also contracted to INR300/t. We believe that either primary prices should rise or secondary TMT should correct as the compression in spreads is unsustainable.

Commodities/forex tracker

		UoM	Spot	WoW (%)	MoM (%)
Steel	India HRC (ex-Mum)	INR/t	57,300	0	-4
	India TMT Prime (ex-Mum)	INR/t	57,000	0	-3
	India TMT Secondary (ex-Mum)	INR/t	56,600	2	2
	Korea HRC - FoB	USD/t	630	-3	-12
	Dom. HRC (Prem/(Disc) vs FTA	INR/t	3,217	1,491 INR	4,438 INR
	China HRC Dom.	USD/t	602	0	-6
	China HRC - FoB	USD/t	612	1	-7
Coking coal	India Prem HCC CNF	USD/t	258	16	-3
	India 64 Mid Vols CNF	USD/t	238	18	2
	India Low Vols PCI CNF	USD/t	258	20	2
Metals	Iron Ore Fines (Odisha Index) Fe 62%	INR/t	3,600	11	3
	Iron Ore Fines (China - CNF) Fe 62%	USD/t	111	7	-3
	Europe Scrap HMS 1&2(80:20)	USD/t	473	5	1
	C-DRI (ex-Raipur)	INR/t	36,000	1	1
Thermal Coal	RB1 (6000 NAR) SA FoB	USD/t	325	-3	-12
	RB2 (5500 NAR), SA FoB	USD/t	215	-12	-19
	Indonesia (4200 GAR) Futures	USD/t	75	0	-10
Non-Ferrous	Copper	USD/t	7,866	-1	12
	Aluminum	USD/t	2,390	-4	3
	Zinc	USD/t	3,621	1	24
	Lead	USD/t	2,175	0	13
	Nickel	USD/t	21,938	2	13
	Alumina	USD/t	331	-2	-3
	Ali UBC Scrap	USD/t	1,742	1	7
	Ali UBC Scrap Spread	USD/t	648	-16	-6
Bullion	Gold	USD/Oz	1,744	0	0
	Silver	"	19.3	0	0
FX	INR:USD	x	79.7	0	0
	USD:EUR	"	1.02	0	1
	USD:GBP	"	1.21	0	2
	CNY:USD	"	6.79	0	0
	JPY:USD	"	133	-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)

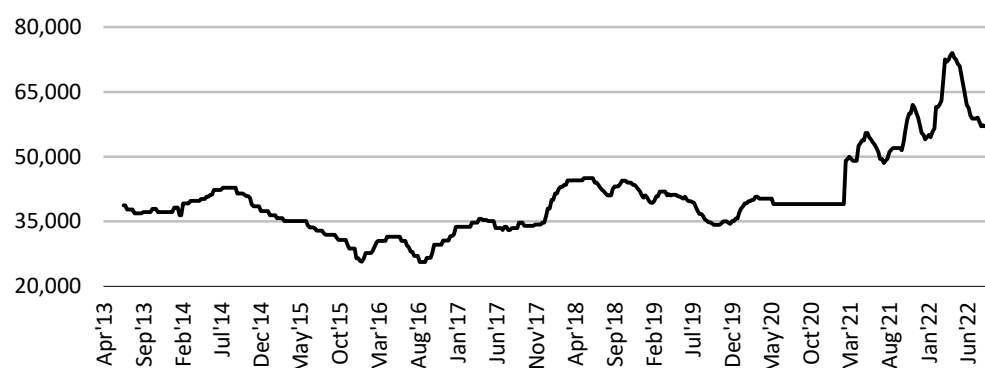


Exhibit 3: C-DRI (sponge iron), ExW-Raipur (INR/t)

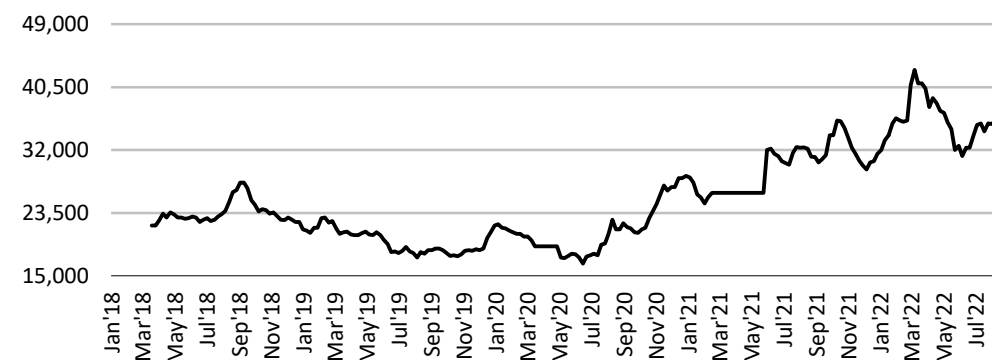


Exhibit 4: Domestic Pellet – Barbil – 63% Fe (INR/t)

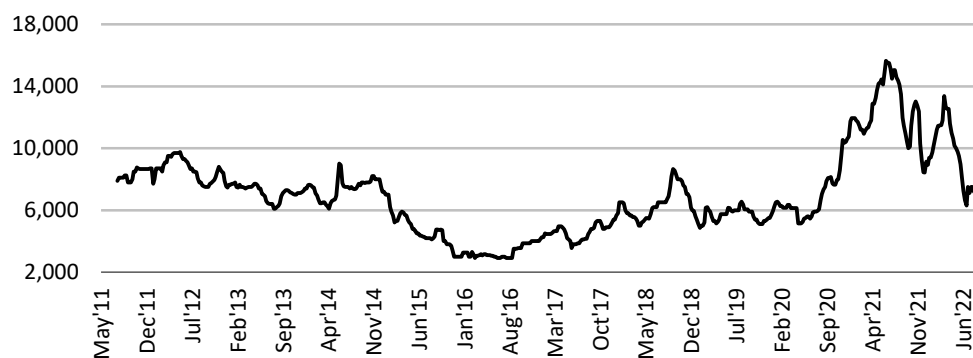


Exhibit 5: Iron Ore Fines Odisha – Fe 62% (INR/t)

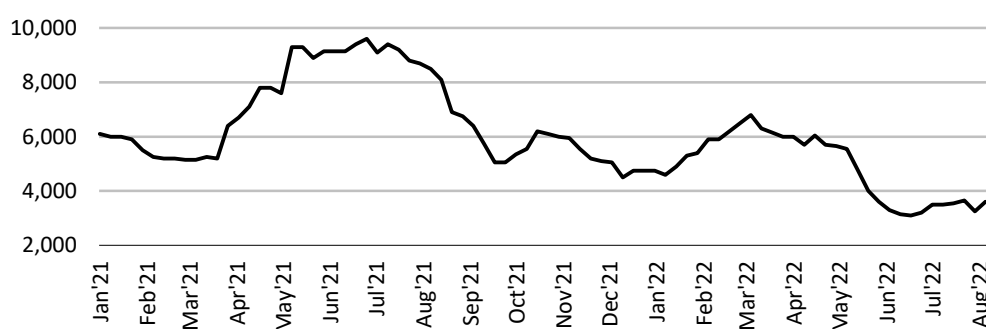


Exhibit 6: NMDC Fines – Fe 64% (INR/t)

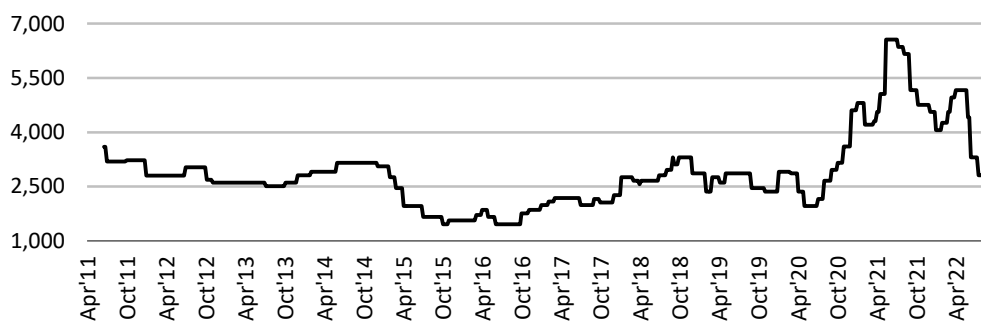
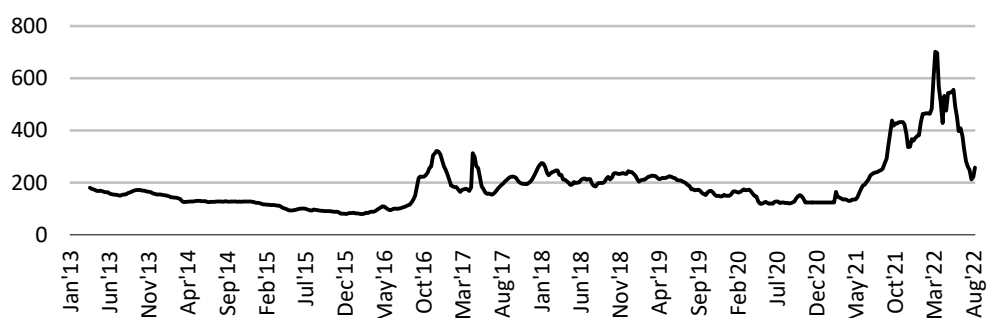


Exhibit 7: Premium HCC CNF Paradip (USD/t)



Domestic spreads

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

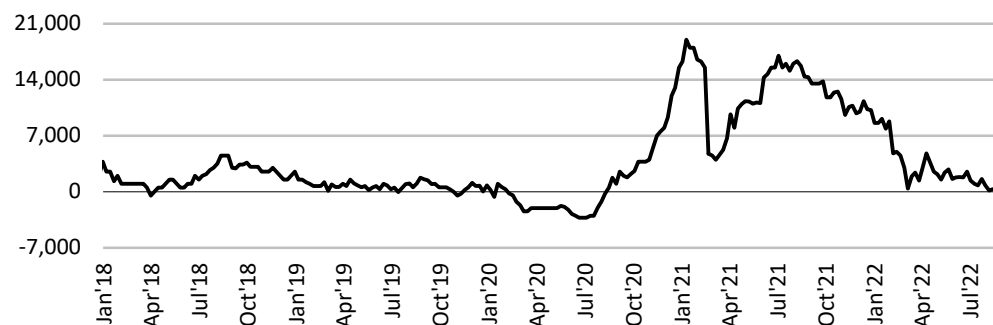


Exhibit 9: Primary TMT v/s secondary TMT (INR/t)

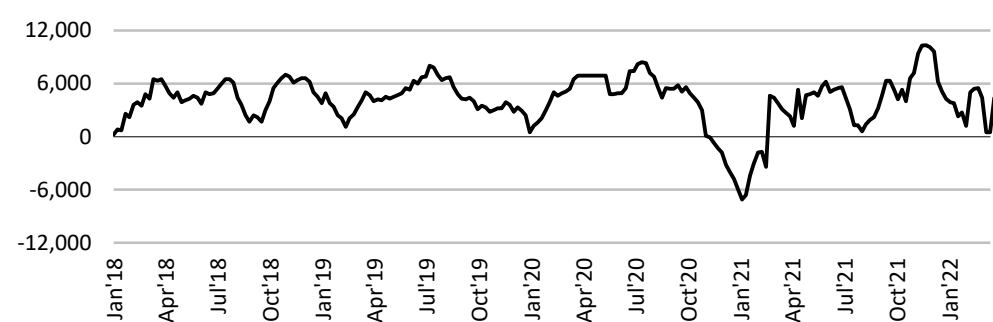


Exhibit 10: Secondary TMT v/s domestic scrap (INR/t)

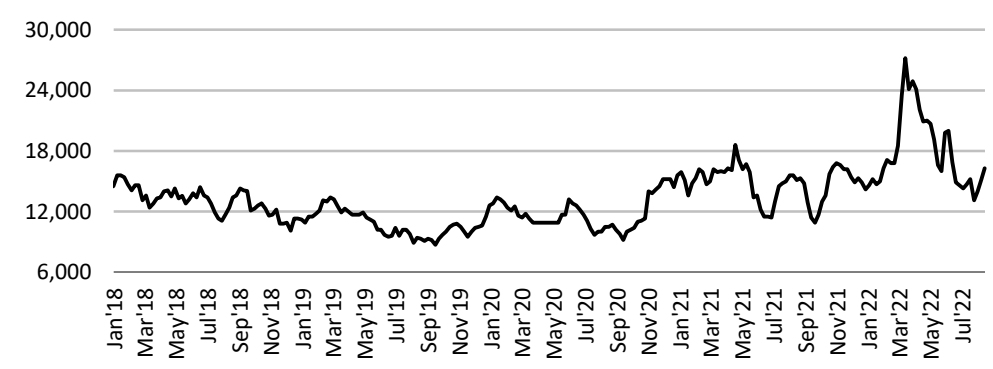


Exhibit 11: HRC v/s CRC (INR/t)

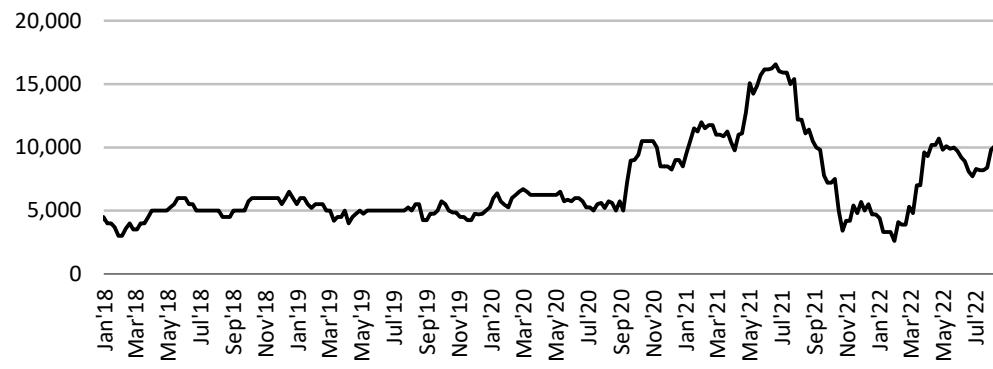


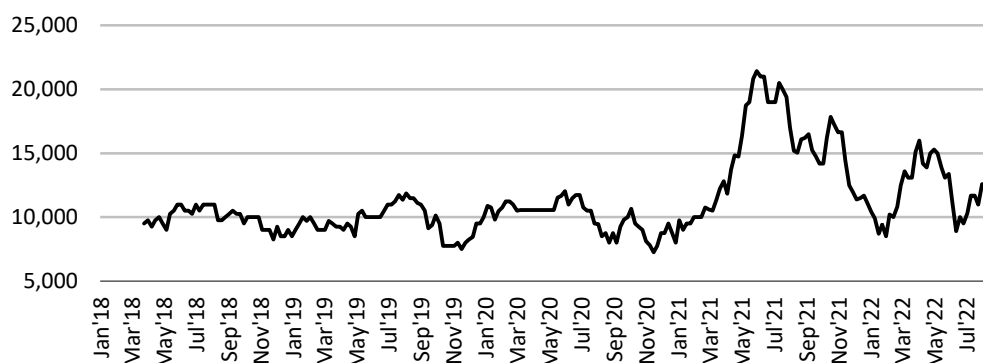
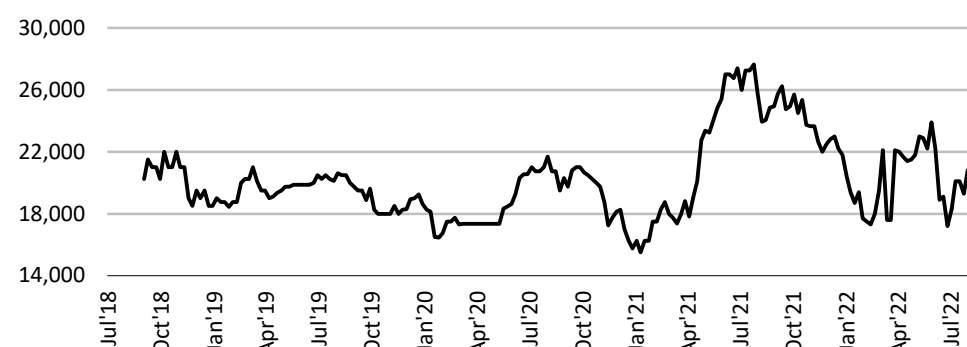
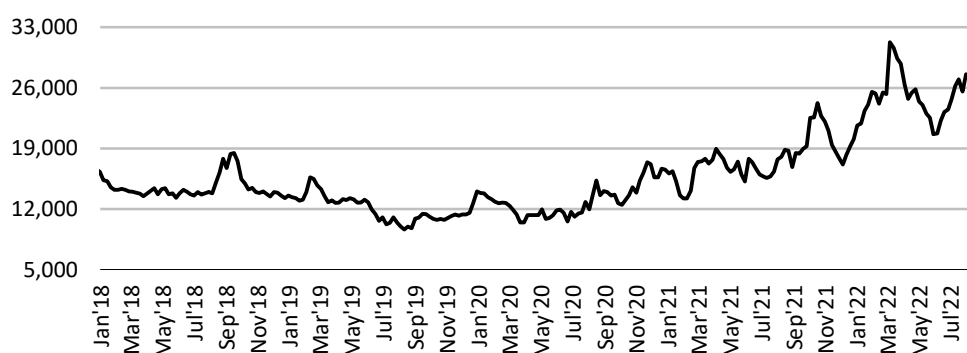
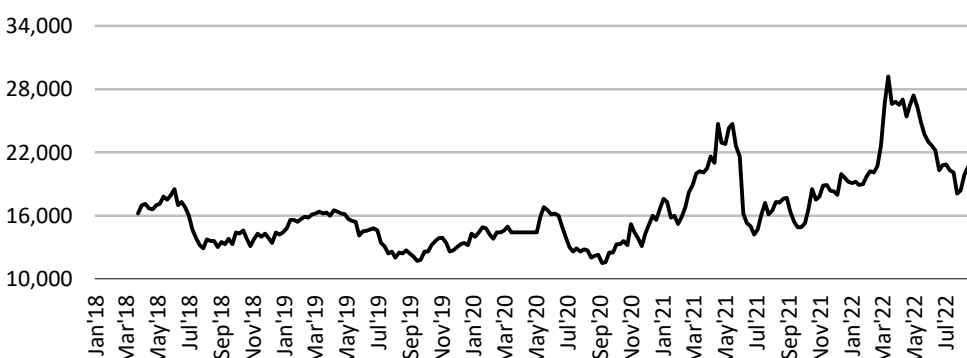
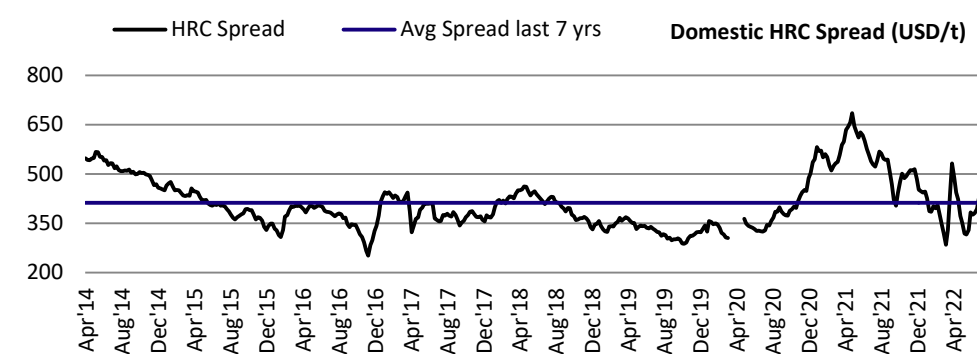
Exhibit 12: HRC – galvanized (INR/t)**Exhibit 13: HRC – color coated (INR/t)****Exhibit 14: DRI v/s NMDC lumps (INR/t)****Exhibit 15: Secondary TMT v/s DRI (INR/t)**

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)

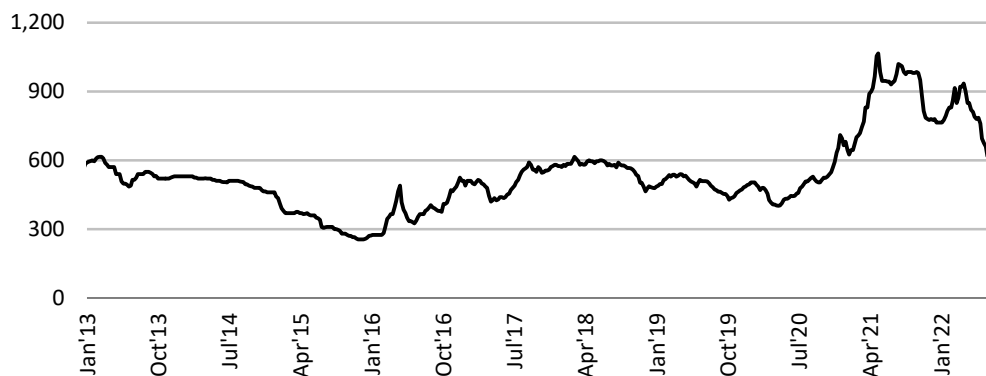


Exhibit 19: China HRC domestic (USD/t)



Exhibit 20: China domestic TMT (USD/t)

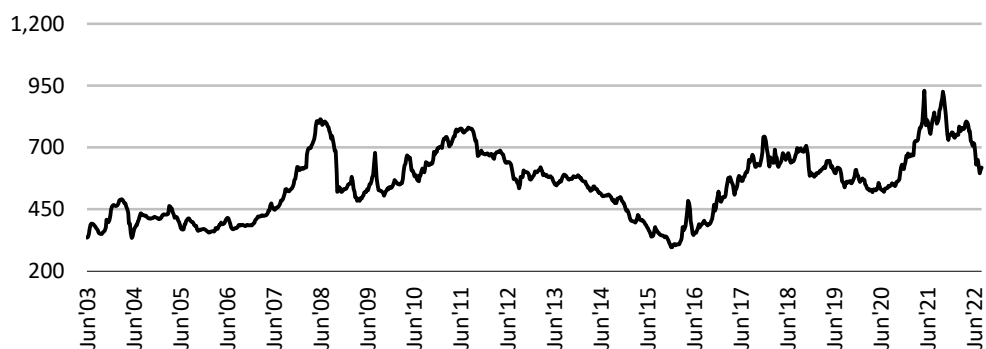


Exhibit 21: China domestic wire rod (USD/t)

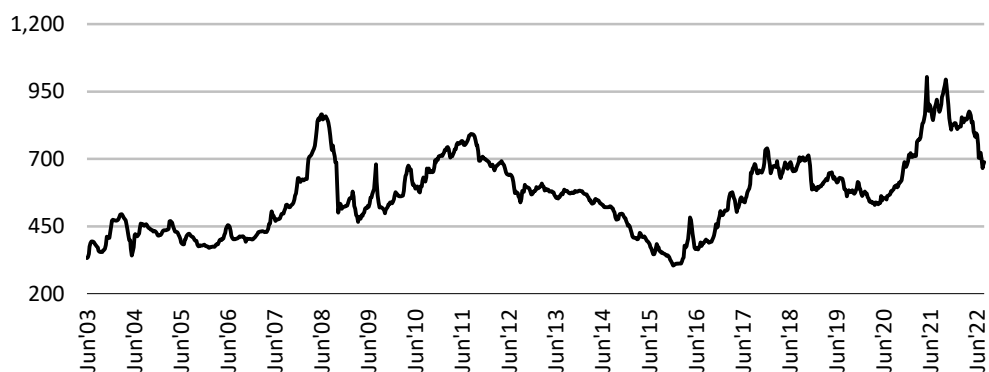
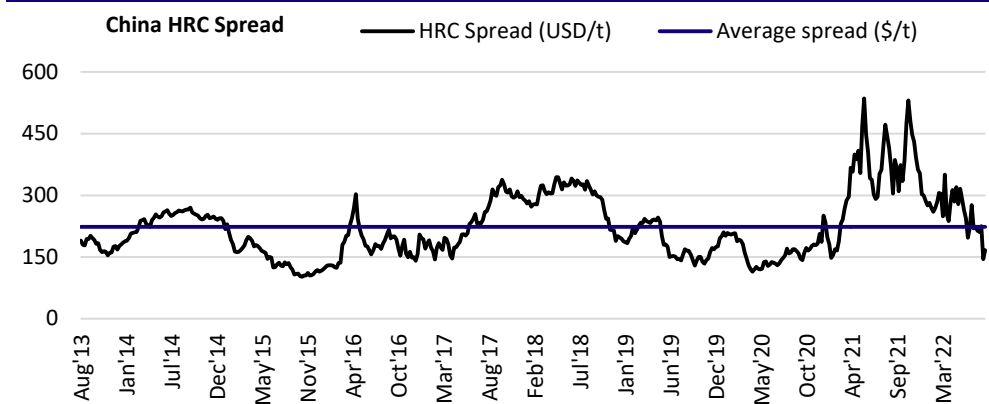


Exhibit 22: China HRC spread (1.6x IO and 0.85x HCC)



Global prices

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

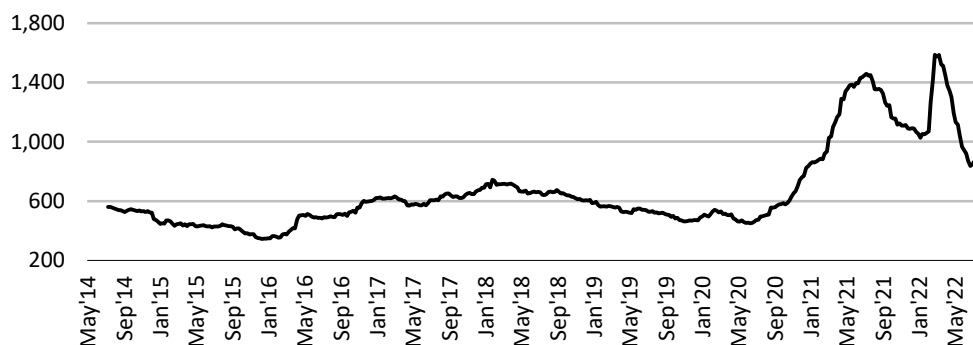


Exhibit 24: North America HRC domestic (USD/short ton)

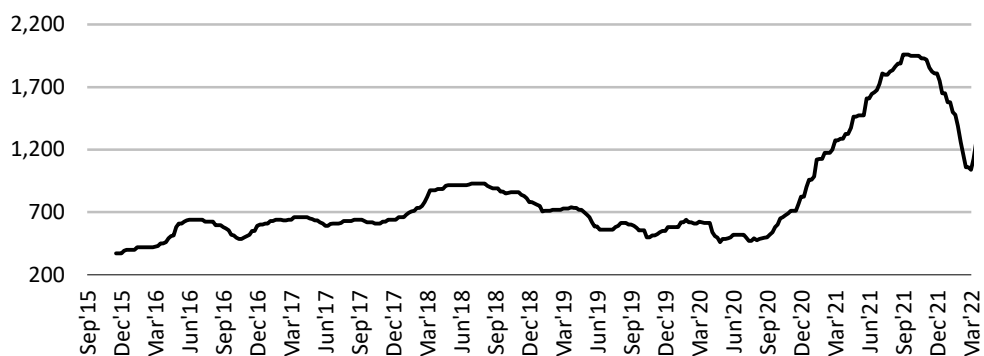
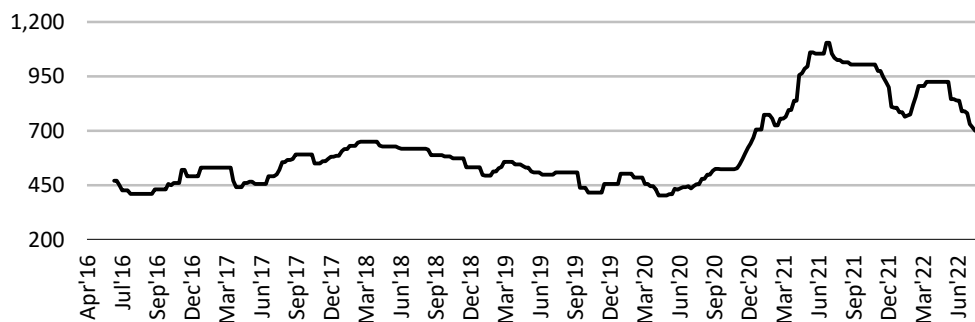


Exhibit 25: Korea HRC FOB (USD/t)



Inventories

Exhibit 26: India steel inventory (mt)

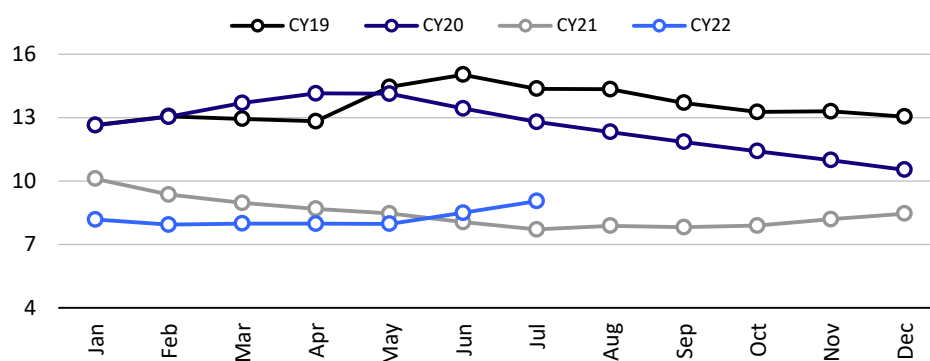


Exhibit 27: China wire rod and TMT inventory (mt)

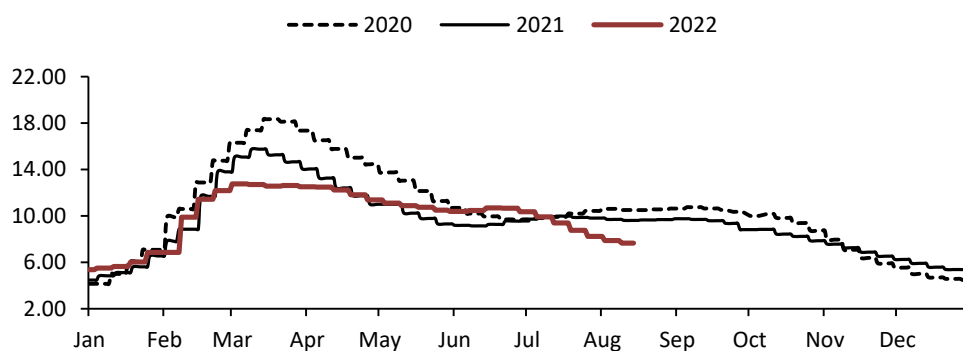
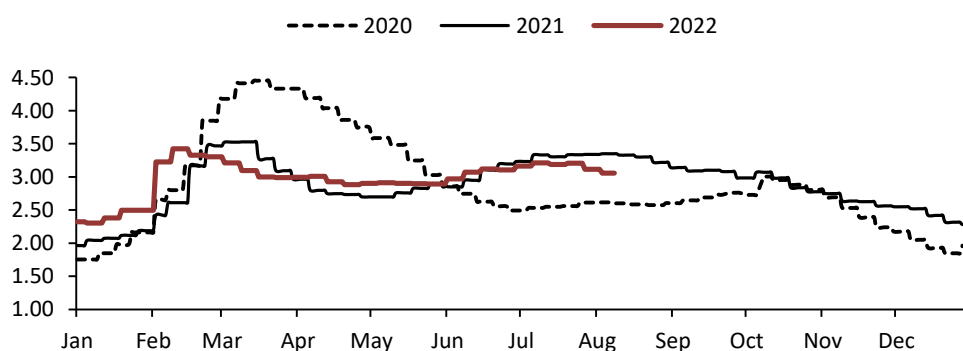


Exhibit 28: China HRC inventory (mt)



NON-FERROUS: Aluminum

Exhibit 29: LME spot (USD/t)

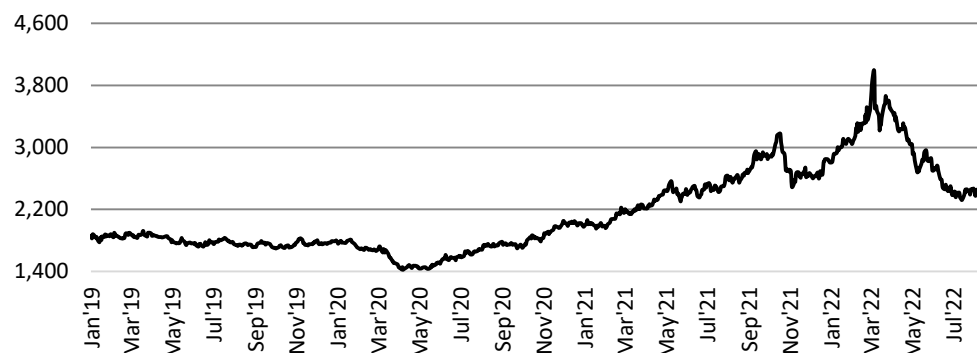


Exhibit 30: Alumina FoB Australia (USD/t)

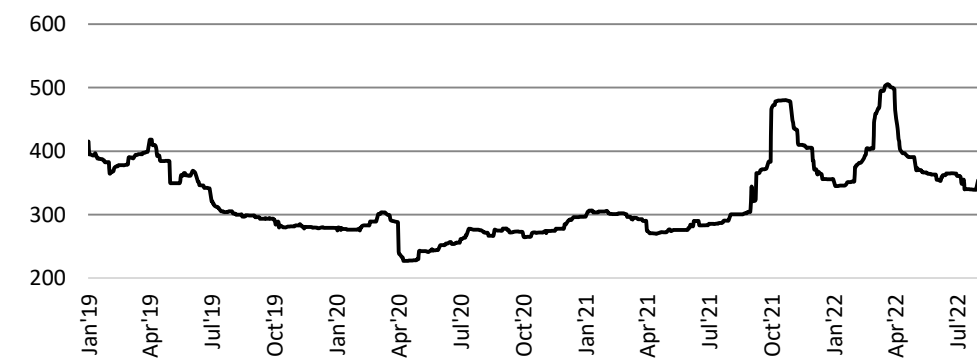


Exhibit 31: Caustic soda (USD/t)

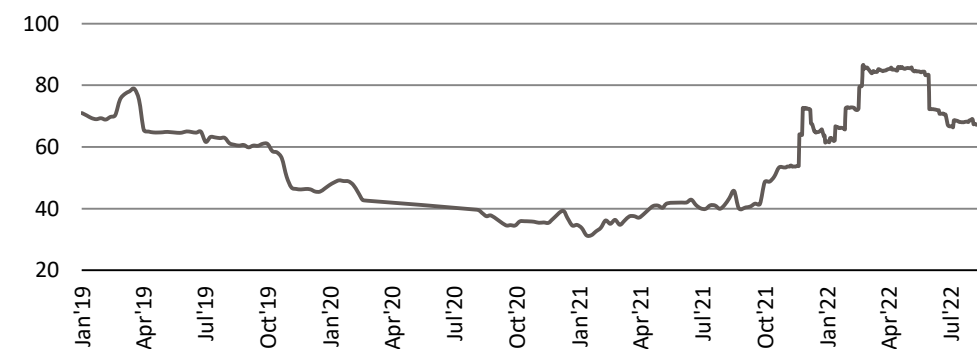
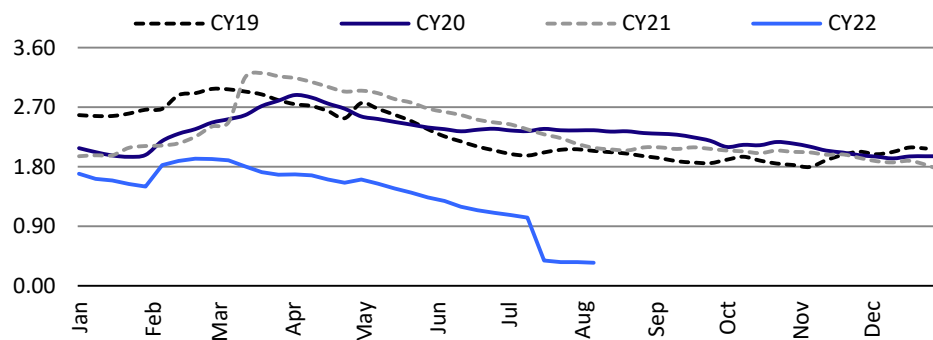
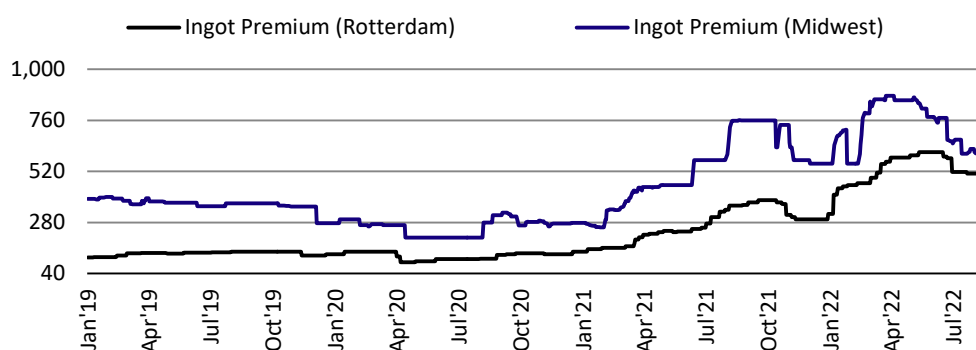
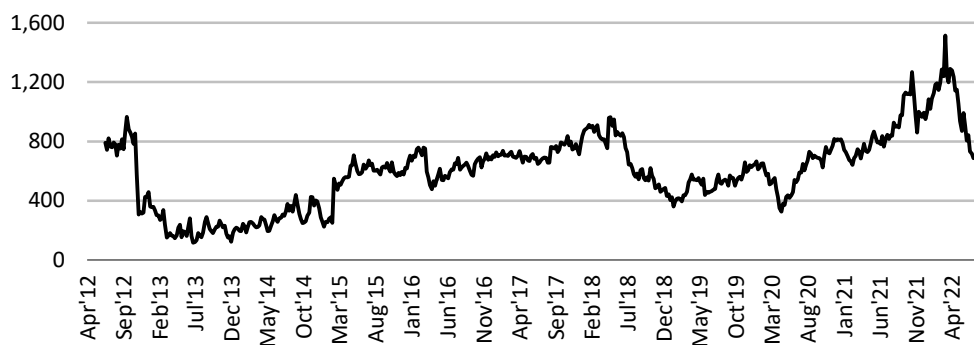


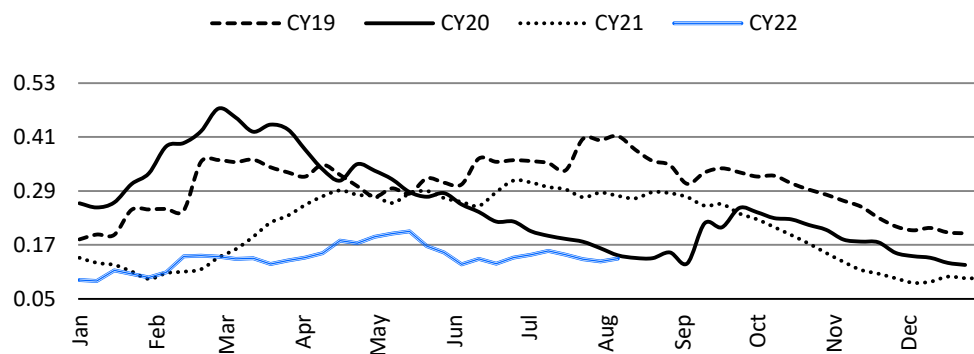
Exhibit 32: Total inventory (LME + SHFE, mt)

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)

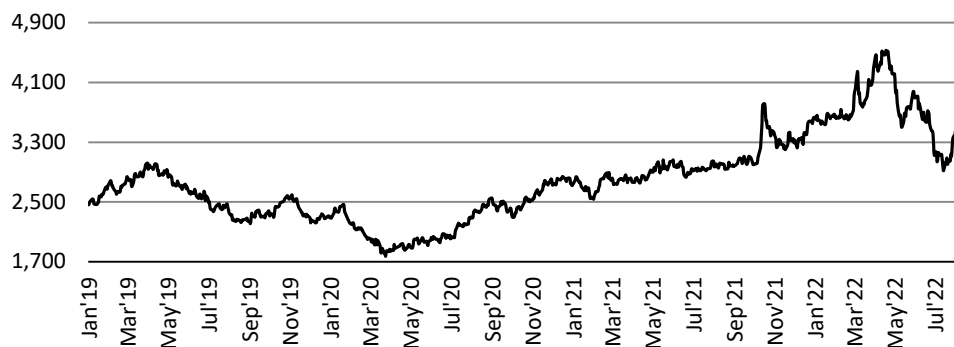
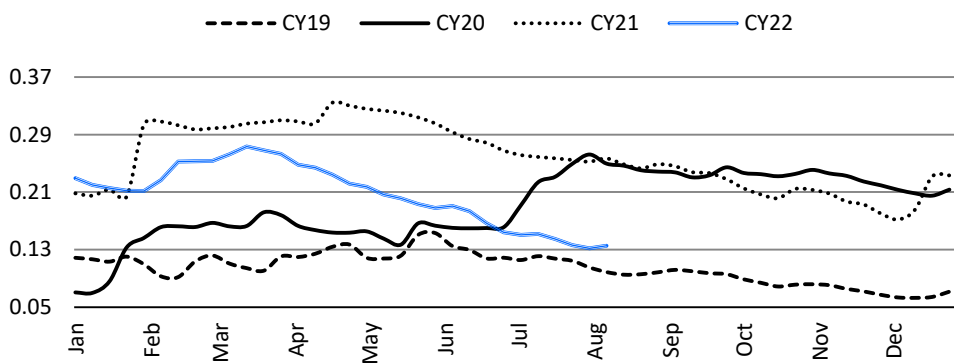


Exhibit 38: Total inventory (LME+SHFE, mt)

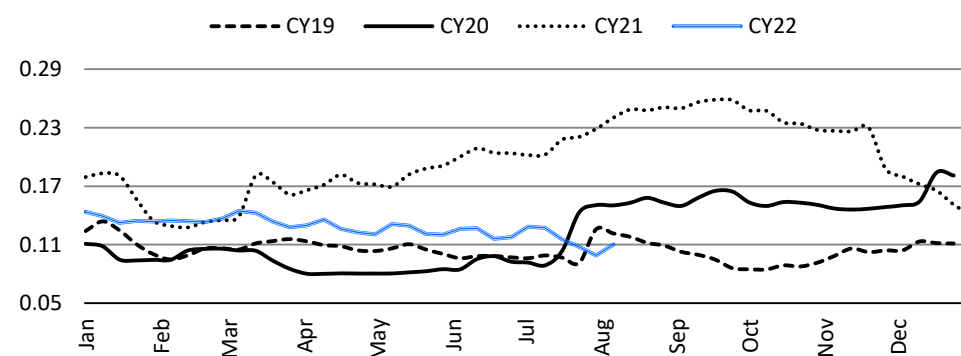


Lead

Exhibit 39: LME spot (USD/t)



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



Nickel

Exhibit 41: Nickel spot (USD/t)

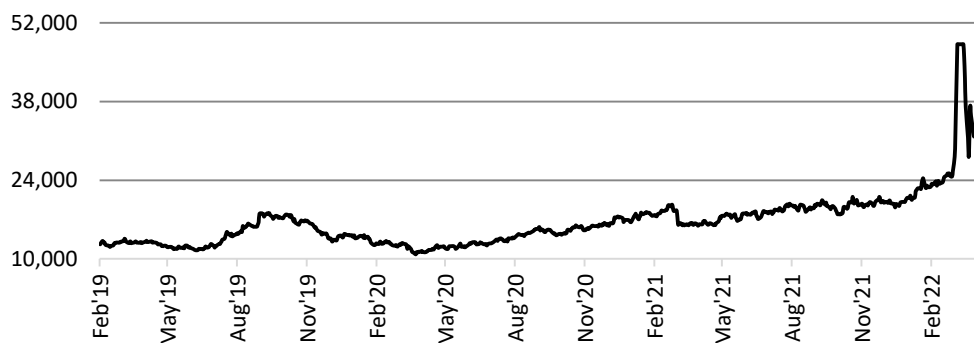
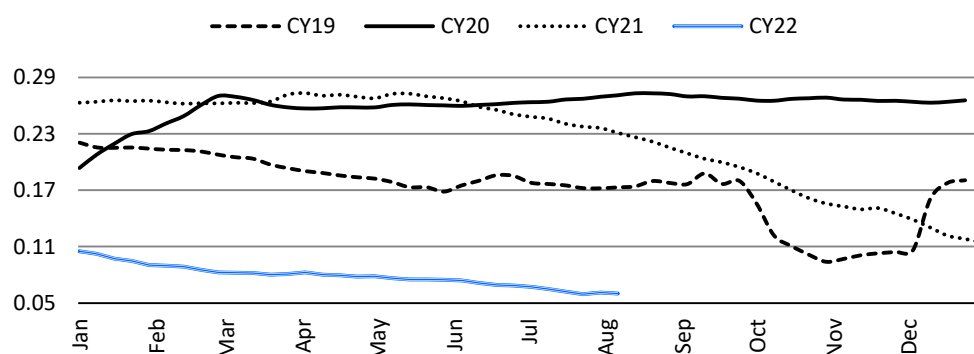


Exhibit 42: Total inventory (LME+SHFE, mt)



India steel production, consumption, EXIM, and inventory

Exhibit 43: Crude steel production (mt)

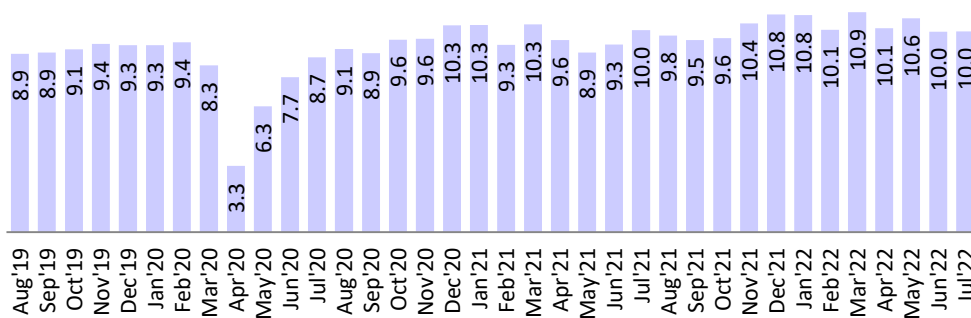


Exhibit 44: Finished steel production (mt)

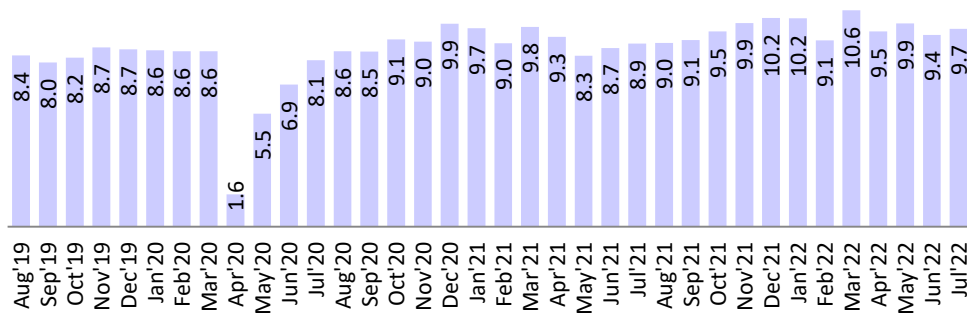


Exhibit 45: Imports including semis (kt)

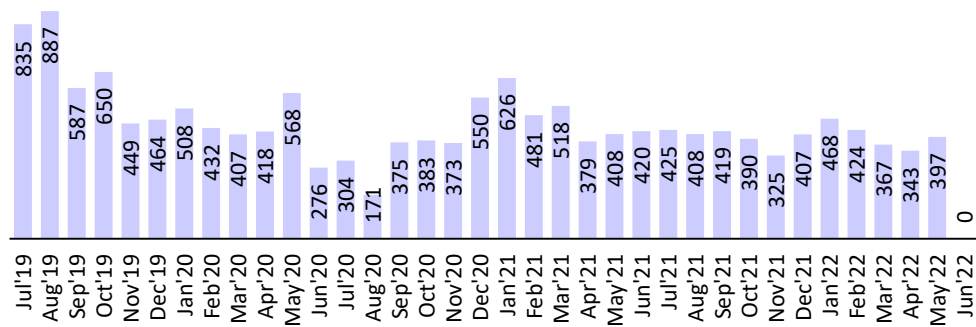


Exhibit 46: Exports including semis (kt)

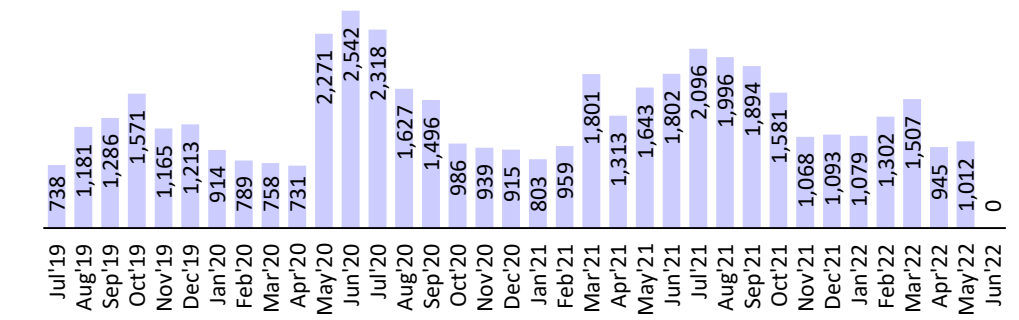


Exhibit 47: Net imports/(exports) of finished steel (kt)

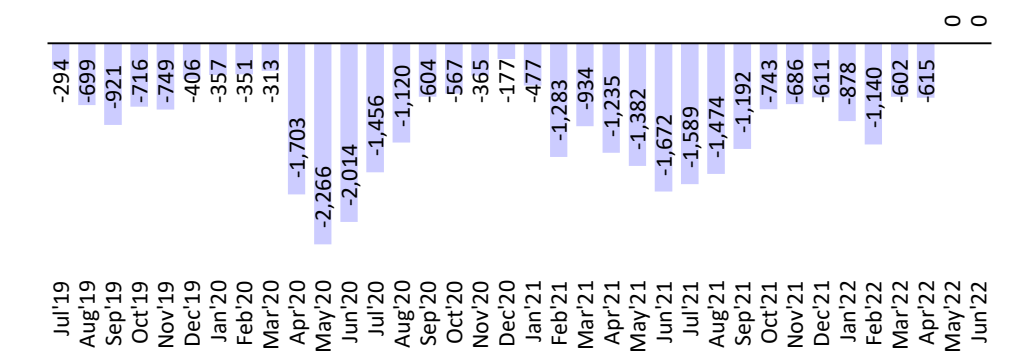
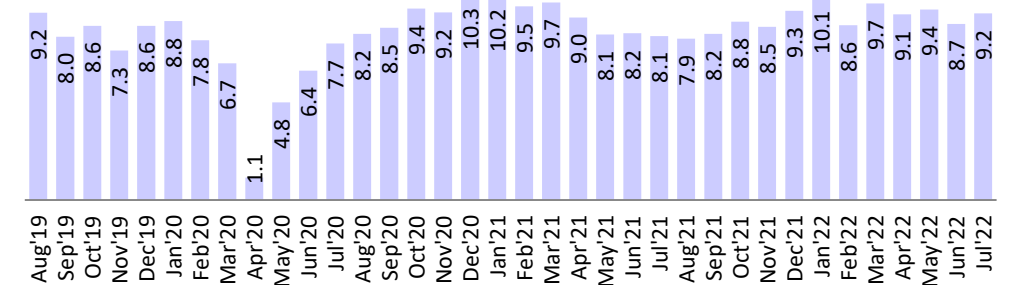


Exhibit 48: Steel consumption (mt)



Global production trends

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

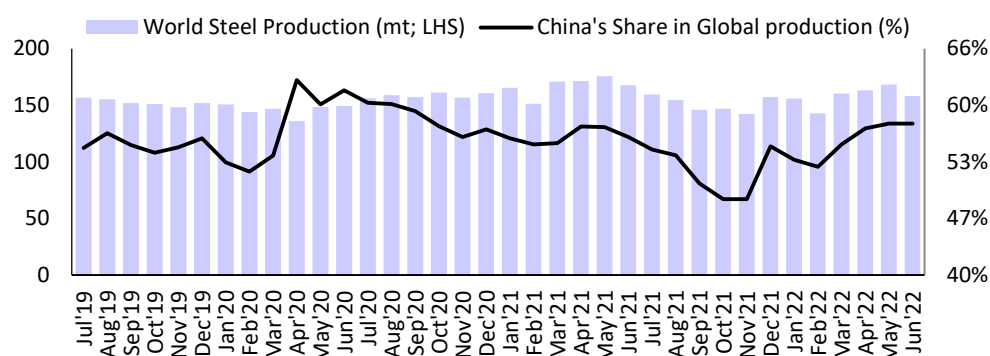


Exhibit 50: Crude steel production in China (mt)

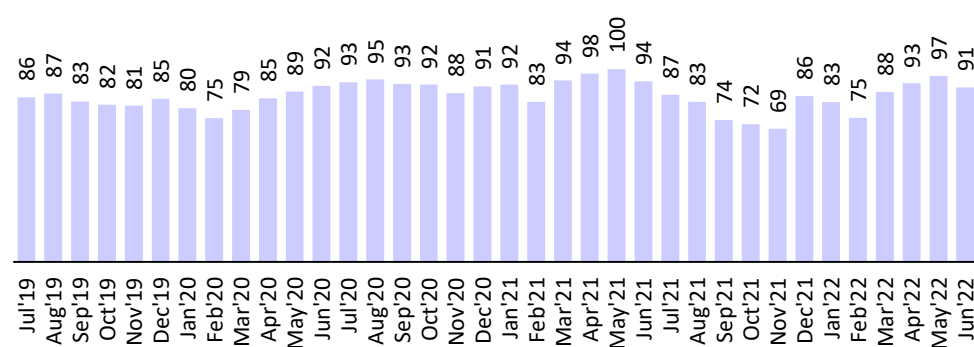


Exhibit 51: Crude steel production in Japan (mt)

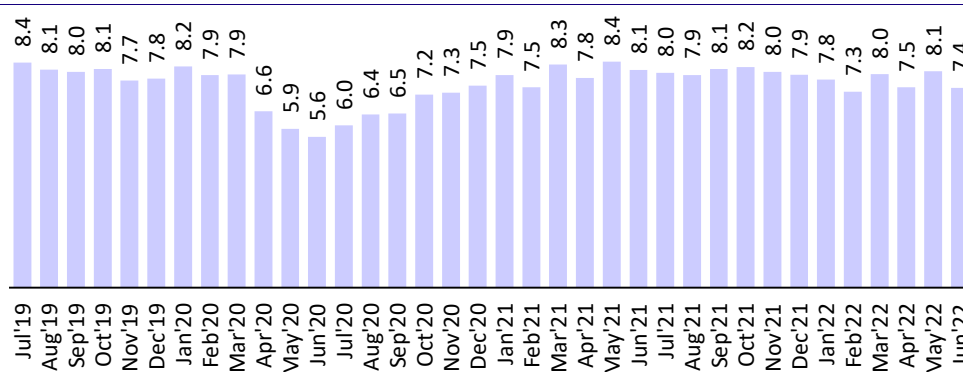


Exhibit 52: Crude steel production in the US (mt)

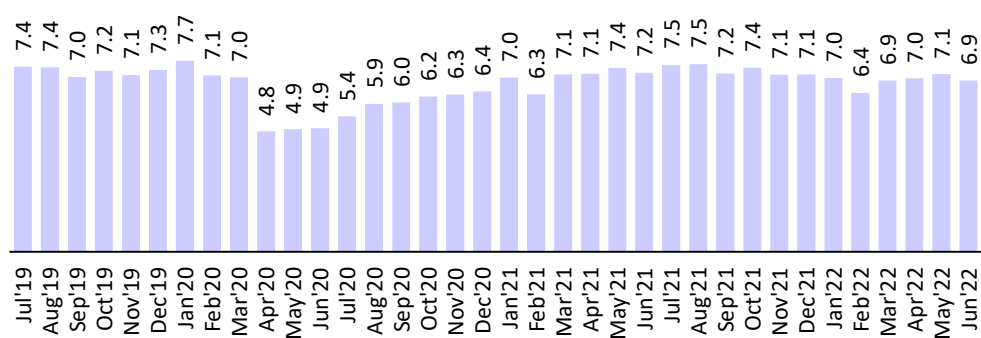


Exhibit 53: Crude steel production in Russia (mt)

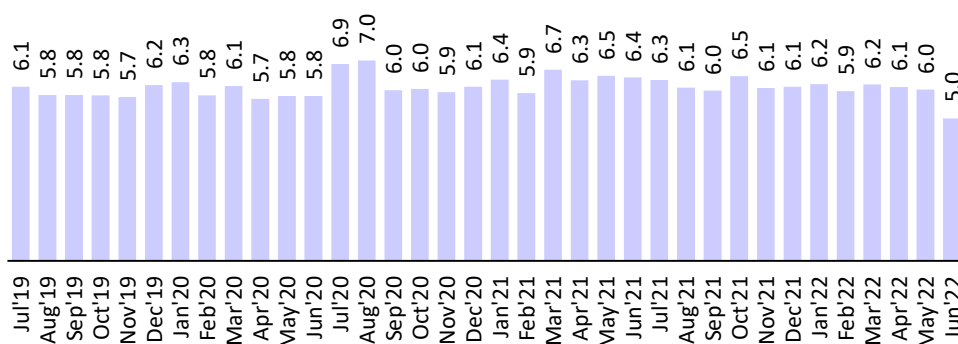
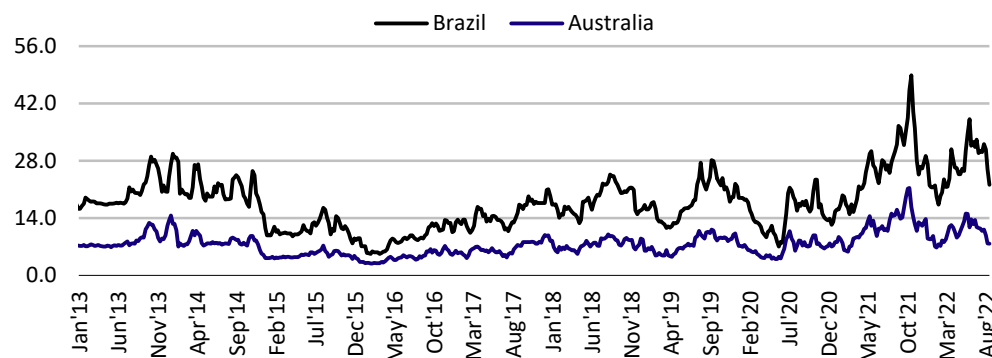


Exhibit 54: Dry bulk freight rates to China (USD/t)



China steel and macro

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

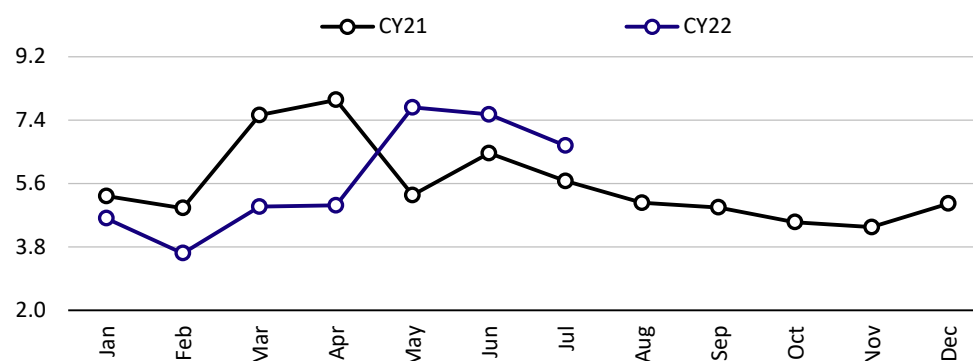


Exhibit 56: China's gross steel imports (mt)

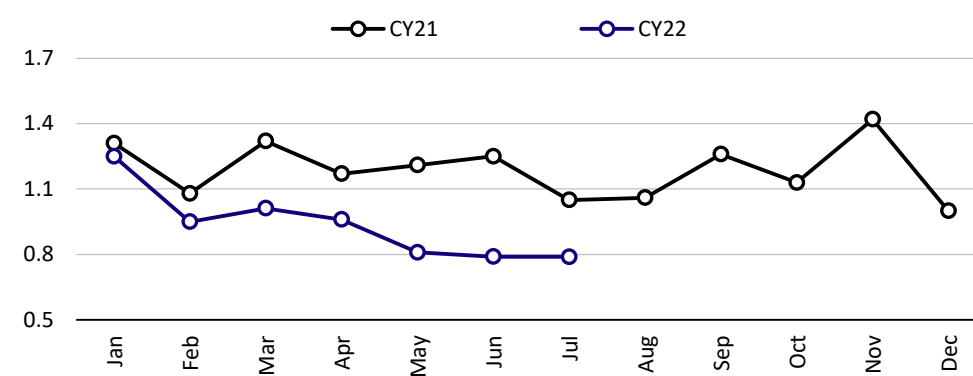


Exhibit 57: China's net steel exports/(imports) (mt)

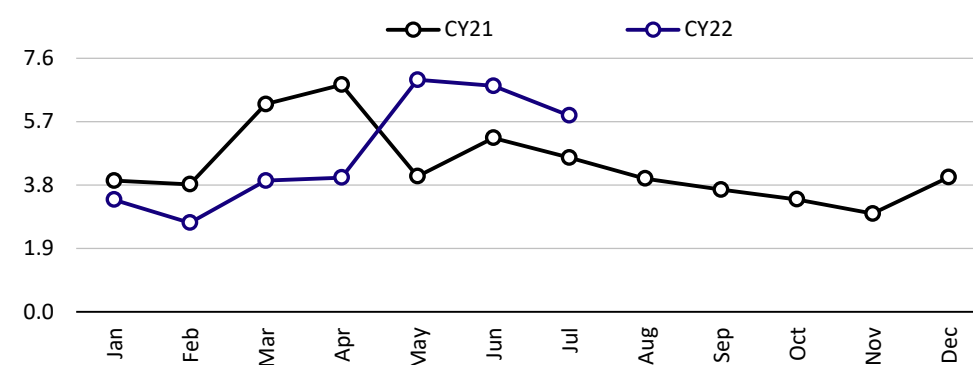


Exhibit 58: China's GDP growth YoY (constant prices)

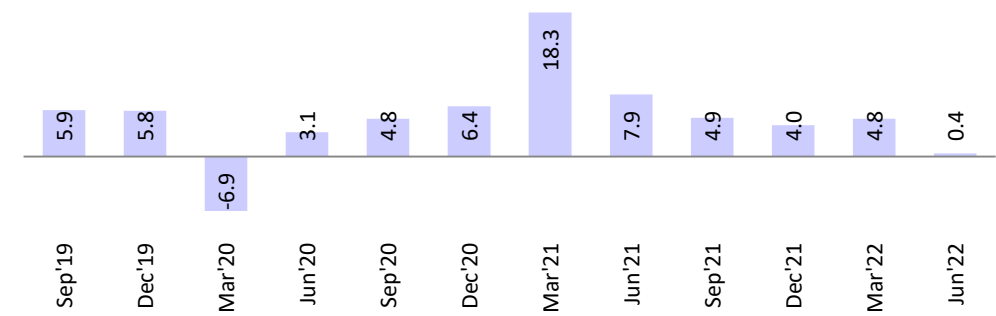


Exhibit 59: Total FAI investments (CNY b)

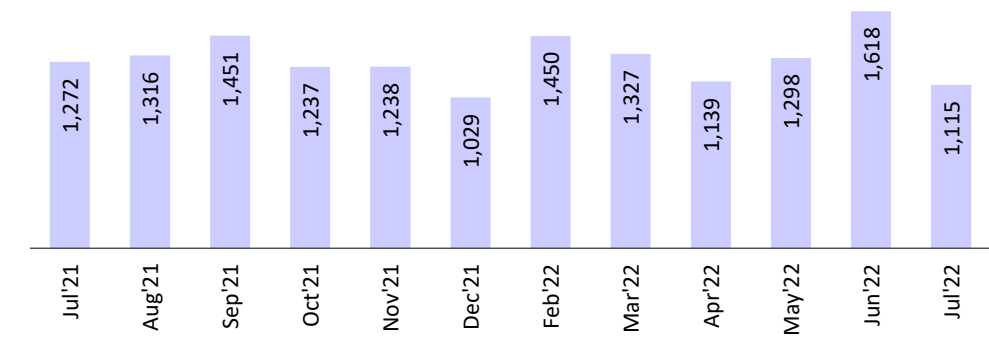


Exhibit 60: Automobile registration (m units)

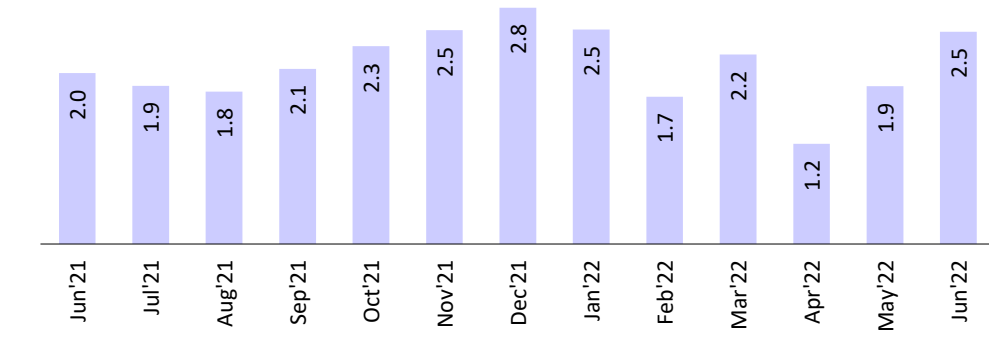


Exhibit 61: Floor space sold (m square meters)

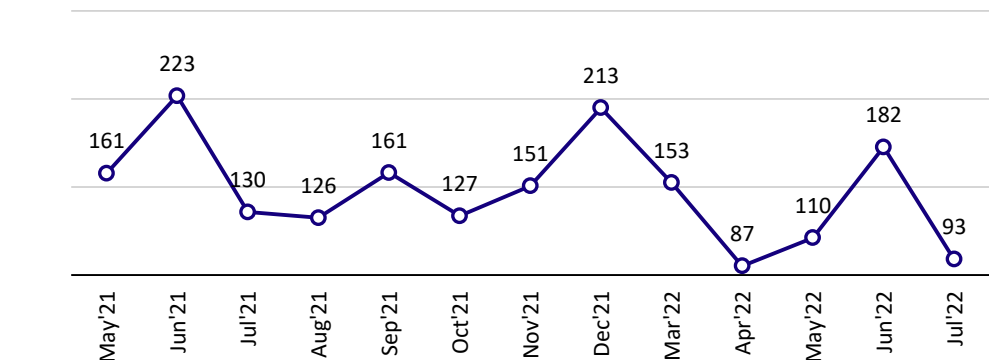


Exhibit 62: Floor space starts (m square meters)

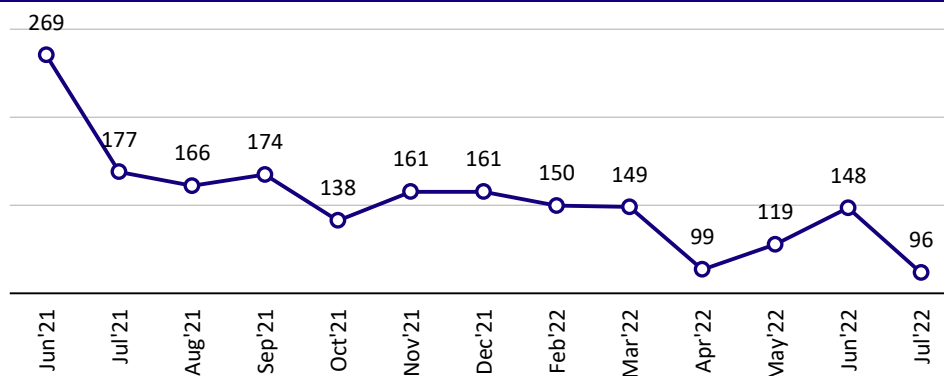


Exhibit 63: Land sales (m square meters)

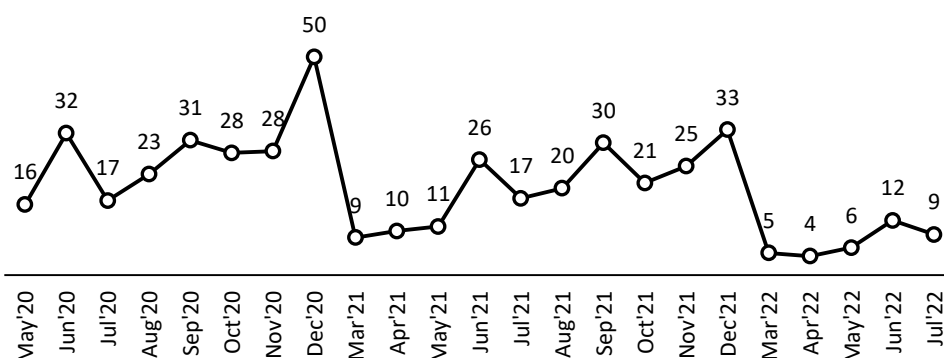


Exhibit 64: Manufacturing PMI

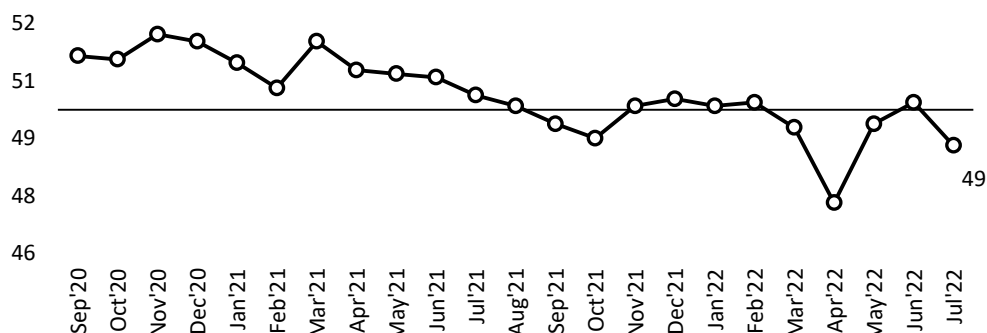
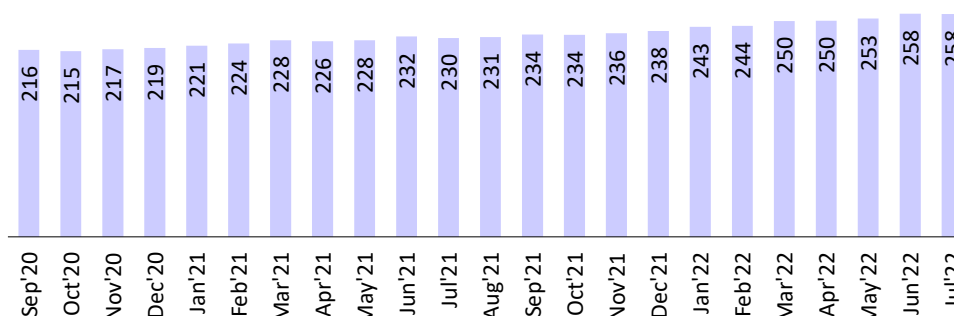


Exhibit 65: M2 money supply (CNY t)



Commodity monthly heat map

Commodity	UoM	Sep'21	Oct'21	Nov'21	Dec'21	Jan'22	Feb'22	Mar'22	Apr'22	May'22	Jun'22	Jul'22	Aug'22	MoM
Oil and non-ferrous - prices														
Brent Crude	USD/bbl	75	84	81	74	86	96	116	106	112	120	109	99	-9
Copper	USD/t	9,324	9,779	9,765	9,553	9,772	9,941	10,238	10,192	9,384	9,071	7,530	7,893	5
Aluminum	USD/t	2,840	2,955	2,641	2,709	2,994	3,261	3,538	3,255	2,836	2,576	2,402	2,440	2
Zinc	USD/t	3,042	3,370	3,317	3,423	3,611	3,644	3,974	4,381	3,780	3,667	3,097	3,545	14
Lead	USD/t	2,257	2,339	2,348	2,305	2,342	2,300	2,359	2,404	2,151	2,074	1,976	2,120	7
Nickel	USD/t	19,377	19,362	19,933	20,026	22,285	24,016	37,649	33,134	28,229	25,877	21,482	22,372	4
Alumina	USD/t	360	478	416	362	348	391	487	403	366	362	346	340	-2
Aluminum Ingot Premium (Asia - MJP)	USD/t	171	180	150	164	170	164	141	140	120	119	123	104	-15
Aluminum Ingot Premium (EU - Rotterdam)	USD/t	379	372	300	298	422	462	528	585	605	596	515	510	-1
Aluminum Ingot Premium (US midwest)	USD/t	759	731	593	557	557	661	859	857	822	740	635	602	-5
Aluminum scrap	USD/t	1,751	1,811	1,664	1,708	1,868	2,016	2,240	2,103	1,903	1,799	1,669	1,709	2
Aluminum scrap spread	USD/t	1,089	1,144	977	1,001	1,126	1,245	1,298	1,152	933	777	732	731	0
Silver	USD/t	821	825	850	794	817	830	891	866	771	758	682	681	0
USD:INR (Bloomberg)	INR	74	75	74	75	74	75	76	76	77	78	80	79	0
Ferrous- International Prices														
China HRC domestic	RMB/t	5,786	5,743	4,902	4,792	4,822	4,978	5,176	5,235	4,957	4,645	4,223	4,057	-4
China HRC domestic	USD/t	896	895	767	752	759	785	816	814	740	694	627	601	-4
China TMT domestic	RMB/t	5,527	5,714	4,846	4,804	4,745	4,875	4,950	5,090	4,901	4,561	4,204	4,224	0
China TMT domestic	USD/t	856	890	758	754	747	769	780	791	732	681	624	625	0
China HRC FoB	USD/t	983	975	814	778	767	817	874	919	824	755	633	609	-4
Korea HRC FoB	USD/t	1,005	1,005	955	830	776	871	920	925	876	800	705	640	-9
North Europe HRC domestic	EUR/t	1,143	1,048	988	971	936	933	1,333	1,377	1,178	961	850	810	-5
North America HRC domestic (USD/short ton)	USD/st	1,951	1,944	1,870	1,717	1,519	1,185	1,185	1,453	1,459	1,198	938	850	-9
India HRC Export FoB (USD/t)	USD/t	879	872	852	778	734	850	864	1,006	878	718	626	574	-8
Australia Fe 62% iron ore CNF	USD/t	121	122	95	112	130	142	150	152	134	131	107	110	2
Chinese steel futures														
TMT - Shanghai futures	RMB/t	5,531	5,092	4,063	4,391	4,574	4,602	4,810	4,999	4,662	4,508	3,974	4,095	3
HRC - Shanghai futures	RMB/t	5,785	5,408	4,308	4,544	4,717	4,781	5,023	5,133	4,775	4,588	3,968	4,045	2
Iron ore - Dalian Commodity Exchange	RMB/t	778	704	568	663	725	723	805	887	837	849	678	724	7
Coking coal - Dalian Commodity Exchange	RMB/t	3,294	2,835	1,765	2,102	2,273	2,362	2,782	2,987	2,645	2,627	2,096	2,172	4
China HRC FOB spread over RM (HRC - 1.7x iron ore -.85x HCC)	RMB/t	1,664	1,801	1,842	1,631	1,553	1,544	1,290	1,086	1,104	912	1,034	968	-6
India steel and metallics prices														

India HRC ex-Mumbai 5-10mm	INR/t	65,450	69,620	70,875	65,950	63,840	66,325	72,775	76,725	70,600	62,400	59,440	57,350	-4
Dom HRC prem to India export FoB price	INR/t	782	4,251	7,427	7,304	9,226	2,621	6,939	93	2,759	6,360	9,640	11,763	22
CRC ex-Mumbai - 0.9mm	INR/t	74,150	75,080	75,900	70,925	67,220	70,625	79,875	86,825	80,500	70,875	68,020	67,200	-1
Galvanized plain - 120 GSM	INR/t	80,625	86,050	84,763	77,375	73,220	77,200	86,500	91,500	84,740	72,300	70,900	69,450	-2
Color coated /PPGI ex-Mumbai 90GSM	INR/t	90,875	94,210	93,575	88,400	82,960	84,400	92,625	98,375	93,360	81,750	79,160	78,050	-1
Wire rod - Primary Producers	INR/t	52,200	56,083	58,875	54,000	53,500	57,750	67,500	70,300	67,000	59,338	58,740	57,750	-2
TMT primary - Mumbai	INR/t	51,875	57,600	60,688	55,500	55,250	62,000	71,250	73,225	68,500	60,413	58,320	57,125	-2
TMT secondary - Mumbai	INR/t	46,452	52,471	50,400	49,492	52,384	56,746	68,417	64,931	59,573	53,681	54,515	55,845	2
Domestic scrap-HMS(80:20) - Mumbai	INR/t	34,504	37,571	34,517	34,654	37,336	39,588	43,576	43,219	41,769	37,213	40,173	40,127	0
Sponge iron (DRI)	INR/t	29,425	33,252	29,254	27,931	31,722	34,015	39,752	35,825	32,838	30,488	33,413	34,264	3
Domestic pellet prices- Barbil - 63% Fe	INR/t	10,700	11,955	11,163	8,731	9,870	11,406	12,594	11,444	9,683	7,044	7,360	7,100	-4
Pellet Export Prices - FoB 64%Fe	USD/t	121	140	130	129	145	160	159	159	138	NA	NA	NA	NA
Domestic ferrous spreads														
Primary HRC v/s primary TMT	INR/t	13,575	12,020	10,188	10,450	8,590	4,325	1,525	3,500	2,100	1,988	1,120	225	-80
Primary TMT v/s secondary TMT	INR/t	5,423	5,129	10,288	6,008	2,866	5,254	2,833	8,294	8,927	6,732	3,805	1,280	-66
Secondary TMT v/s domestic Scrap	INR/t	11,948	14,900	15,883	14,838	15,048	17,158	24,841	21,712	17,804	16,467	14,342	15,718	10
Hot rolled v/s cold rolled	INR/t	8,700	5,460	5,025	4,975	3,380	4,300	7,100	10,100	9,900	8,475	8,580	9,850	15
Hot rolled - galvanized Plan	INR/t	15,175	16,430	13,888	11,425	9,380	10,875	13,725	14,775	14,140	9,900	11,460	12,100	6
Hot rolled - color coated	INR/t	25,425	24,590	22,700	22,450	19,120	18,075	19,850	21,650	22,760	19,350	19,720	20,700	5
Sponge iron -NMDC lumps spread	INR/t	18,970	23,137	19,777	19,601	22,882	24,495	29,552	25,455	23,488	23,008	26,783	27,294	2
Coking coal														
India premium HCC CNF	USD/t	370	427	377	361	426	467	617	505	535	404	269	223	-17
India 64 mid vols coking coal CNF	USD/t	323	364	319	313	379	420	583	468	498	369	237	203	-14
NMDC iron ore - Chhattisgarh														
64% Bailadila fines	INR/t	5,160	4,760	4,660	4,060	4,260	4,560	4,960	5,160	4,410	3,310	2,810	2,910	4
Iron ore lump	INR/t	6,150	5,950	5,575	4,900	5,200	5,600	6,000	6,100	5,500	4,400	3,900	4,100	5
Manganese ore														
Manganese ore, Balaghat Mn 37%, Fe 7.5%	INR/t	15,334	15,334	15,717	15,717	14,931	14,931	16,424	18,066	18,066	15,447	16,219	14,598	-10
Manganese ore, import India, Mn 37.5%	USD/dm tu	5	5	5	5	5	5	6	5	5	5	5	5	-9
Domestic ferro alloys														
Silico manganese	INR/t	94,154	1,28,498	1,02,759	93,453	1,00,222	98,875	1,18,776	1,05,406	88,984	81,968	80,805	76,489	-5
Ferro manganese	INR/t	1,01,495	1,30,600	1,15,146	1,00,796	99,938	97,790	1,15,480	1,09,385	94,692	87,147	85,486	79,967	-6
Ferro chrome	INR/t	34,504	37,571	34,517	34,654	37,336	39,588	43,576	43,219	41,769	37,213	40,173	40,127	0
Freight rates														
Baltic Dry index	Points	4,288	4,820	2,780	2,698	1,783	1,835	2,464	2,212	2,919	2,412	2,077	1,596	-23

China steel exports (mt)														
China steel exports (mt)	mt	5	4	4	5	NA	4	5	5	8	8	ND	ND	NA
Ferrous - inventory														
China HRC	mt	3	3	3	2	2	3	3	3	3	3	3	3	-2
China wire rod	mt	3	2	2	2	2	3	4	3	3	3	2	2	-15
China TMT	mt	7	6	5	4	4	7	9	9	8	8	7	6	-17
Total steel inventory	mt	13	11	10	8	8	13	16	15	14	14	13	11	-13
Non-ferrous - inventory														
Aluminum														
LME	kt	1,307	1,127	967	940	881	823	732	603	526	415	331	285	-14
SHFE	kt	775	921	1,017	906	744	1,021	1,090	1,038	977	801	393	69	-83
Total	kt	2,083	2,048	1,984	1,846	1,625	1,844	1,822	1,641	1,503	1,215	724	354	-51
Zinc														
LME	kt	226	197	181	186	179	150	143	116	89	82	78	72	-7
SHFE	kt	10	14	15	26	44	96	122	126	116	100	70	59	-15
Total	kt	236	211	196	212	223	246	265	242	205	183	148	132	-11
Lead														
LME	kt	52	52	56	55	54	49	40	39	38	39	39	39	-1
SHFE	kt	202	189	158	112	84	84	98	90	87	83	82	65	-20
Total	kt	255	241	214	168	138	133	138	130	125	122	121	104	-14
Copper														
LME	kt	236	182	101	85	90	77	77	118	168	124	133	130	-2
SHFE	kt	18	11	13	8	10	59	62	36	18	13	16	6	-60
Total	kt	254	193	114	92	100	136	139	154	186	137	148	136	-8
Nickel														
LME	kt	174	147	128	107	97	84	75	73	73	69	63	57	-9
SHFE	kt	7	6	8	6	4	4	7	8	4	3	2	3	72
Total	kt	181	153	136	113	101	89	81	81	77	72	64	60	-7

Metals valuation matrix

Exhibit 66: Indian companies valuation

	Rating	CMP (INR)	TP (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	106	1,376	17.8	15.3	6.3	7.4	4.6	1.8	1.1	1.0
JSW	Neutral	678	525	1,639	57.2	68.1	11.8	10.0	7.3	6.3	2.2	1.8
JSP	Buy	404	415	409	46.6	64.1	8.7	6.3	4.8	3.5	1.0	0.9
SAIL	Buy	82	81	337	8.2	20.2	9.9	4.0	5.0	2.5	0.6	0.6
Non-ferrous												
Vedanta	Neutral	262	225	976	38.3	39.6	6.9	6.6	4.9	4.8	1.5	1.4
Hindalco	Buy	436	475	968	44.8	50.4	9.7	8.7	5.6	5.2	1.6	1.4
Nalco	Buy	80	80	147	8.2	14.4	9.8	5.5	5.0	3.2	1.1	1.0
Mining												
Coal	Buy	222	230	1,366	36.2	28.3	6.1	7.8	3.9	4.9	2.5	2.2
HZL	Neutral	274	290	1,156	25.5	26.5	10.7	10.3	5.7	5.5	3.6	3.7
NMDC	Neutral	117	122	343	14.6	17.7	8.0	6.6	5.7	4.9	0.9	0.9

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

Exhibit 67: Global steel comparative valuation

Exhibit 67: Global steel 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	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY22/ FY23	CY23/ FY24
India													
Tata*													
JSW*	17,289	3.4	6.3	7.4	3.0	4.6	1.8	1.2	1.1	1.0	44.6	18.5	14.4
JSP*	20,587	7.6	11.8	10.0	5.6	7.3	6.3	2.4	2.2	1.8	37.9	19.3	20.0
SAIL*	5,180	4.7	8.7	6.3	3.2	4.8	3.5	1.1	1.0	0.9	25.9	12.4	15.0
Japan													
JFE	4,232	2.4	9.9	4.0	2.4	5.0	2.5	0.6	0.6	0.6	27.7	6.2	14.6
Nippon Steel	6,777	3.2	5.2	6.0	4.7	5.7	5.9	0.5	0.4	0.4	15.5	7.8	6.6
Kobe Steel	15,146	3.8	5.0	5.5	4.7	5.5	5.7	0.6	0.5	0.5	18.1	10.3	8.6
Korea													
POSCO	1,798	4.3	4.2	4.6	5.1	5.2	5.2	0.3	0.3	0.3	7.2	6.2	5.3
Hyundai Steel	17,254	4.1	4.8	4.7	2.8	2.9	2.6	0.4	0.4	0.3	10.3	8.1	7.7
US													
Nucor	3,482	2.7	3.5	3.5	3.4	3.4	3.0	0.2	0.2	0.2	8.9	6.4	6.1
US Steel	37,139	4.8	10.9	14.3	3.2	6.5	7.0	1.9	1.6	1.5	45.7	15.7	10.6
Steel Dynamics	5,791	2.5	7.3	11.8	1.3	3.0	3.3	0.6	0.5	0.5	28.7	6.9	3.9
Europe													
AM	15,257	3.9	8.3	12.3	2.7	5.0	7.7	1.7	1.4	1.3	50.0	19.8	11.5
SSAB	21,522	2.1	4.9	4.7	1.6	2.7	2.8	0.4	0.3	0.3	22.0	8.0	7.1
TKA	4,825	2.4	6.7	9.2	1.1	2.5	3.1	0.6	0.6	0.5	26.6	8.5	6.4
VOE	3,720	3.0	5.7	5.5	0.1	NA	NA	0.3	0.3	0.3	9.4	4.2	4.9
China													
Baosteel	3,946	3.6	4.2	6.7	2.9	2.8	3.2	0.6	0.5	0.5	16.7	11.8	7.3

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	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY22/ FY23	CY23/ FY24
NMDC*	4,302	3.5	8.0	6.6	2.4	5.7	4.9	1.0	0.9	0.9	30.2	12.0	13.8
Vale	64,034	3.5	4.3	4.6	2.5	2.8	3.1	1.5	1.3	1.3	45.5	33.3	26.8
FMG	42,062	6.8	8.3	11.4	4.1	4.8	6.0	2.4	2.3	2.3	34.9	30.9	21.4

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	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY22/ FY23	CY23/ FY24
Vedanta*	12,251	5.6	6.9	6.6	3.4	4.9	4.8	1.5	1.5	1.4	27.2	21.7	22.0
BHP	1,44,455	6.7	8.9	11.1	3.7	4.6	5.4	2.8	2.8	2.7	41.2	33.5	25.6
Rio	96,172	5.9	7.1	8.2	3.5	4.0	4.3	1.7	1.6	1.5	29.8	22.6	17.7
Glencore	73,150	3.9	6.0	7.8	2.6	3.5	3.9	1.5	1.5	1.5	42.2	25.4	19.5
Anglo	42,850	6.0	7.1	7.6	3.2	3.5	3.8	1.4	1.2	1.1	24.1	18.2	14.0
South 32	13,196	5.3	6.5	7.7	2.8	3.1	3.2	1.3	1.2	1.1	26.2	19.4	15.8

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	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY22/ FY23	CY23/ FY24
HZL*	14,523	11.8	10.7	10.3	6.0	5.7	5.5	3.4	3.6	3.7	29.3	32.3	35.4
Korea Zinc	8,622	13.1	14.0	13.6	6.7	6.9	6.5	1.3	1.3	1.1	10.8	9.4	9.1
Teck	17,864	4.6	7.4	7.7	2.8	3.4	3.2	0.9	0.8	0.7	20.5	11.0	7.6

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	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY22/ FY23	CY23/ FY24
Coal*	17,154	7.9	6.1	7.8	3.6	3.9	4.9	3.2	2.5	2.2	40.3	41.1	27.7
China Shenhua	80,680	5.7	6.3	6.5	4.1	4.1	4.0	1.0	1.0	0.9	17.0	15.4	14.5
Banpu	2,560	2.8	4.6	6.3	2.6	4.0	2.7	1.0	1.0	0.8	34.6	20.8	14.4
Bukit Asam	3,199	4.3	4.9	5.9	2.3	2.7	3.1	1.5	1.4	1.3	42.8	30.8	21.9
Adaro Energy	6,801	3.7	5.7	7.6	1.7	2.4	2.9	1.2	1.1	1.2	36.4	21.9	14.8

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	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY22/ FY23	CY23/ FY24
Hindalco*	12,311	7.1	9.7	8.7	4.8	5.6	5.2	1.8	1.6	1.4	28.0	17.1	16.8
Nalco*	1,841	5.0	9.8	5.5	2.4	5.0	3.2	1.2	1.1	1.0	25.4	11.6	19.0
Alcoa	9,302	6.7	6.9	6.3	3.8	3.5	2.8	1.6	1.4	1.2	21.2	15.7	18.0
Norsk Hydro	13,549	5.8	7.6	7.1	3.4	4.1	3.9	1.3	1.3	1.2	24.0	14.9	15.3
CHALCO	10,301	6.6	6.0	5.0	7.3	6.2	5.1	0.7	0.6	0.5	8.9	9.3	11.6
RUSAL	6,145	1.9	2.5	6.7	2.4	3.1	NA	0.5	0.4	0.4	25.3	20.4	11.5
Alumina	3,152	15.3	15.5	12.6	15.3	13.1	10.9	1.9	2.0	1.6	12.3	11.6	13.2

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	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY22/ FY23	CY23/ FY24	CY21/ FY22	CY22/ FY23	CY23/ FY24
JSL	`	3.9	6.5	4.6	2.8	3.3	1.8	1.2	1.0	0.8	32.8	16.2	17.7
JSHL	685	NA	5.5	5.2	NA	NA	NA	NA	1.0	0.8	NA	17.5	16.2
Acerinox	2,607	3.0	6.0	6.6	2.1	3.0	3.1	0.9	0.8	0.8	31.1	13.1	11.2
Outokumpu	1,967	2.4	6.6	7.6	1.3	2.2	2.1	0.5	0.5	0.5	23.1	7.6	6.6
Aperam	2,483	3.0	5.8	5.5	2.4	3.3	3.0	0.7	0.6	0.6	24.1	11.4	10.8

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

Metals valuation charts

Exhibit 74: Tata Steel EV/EBITDA

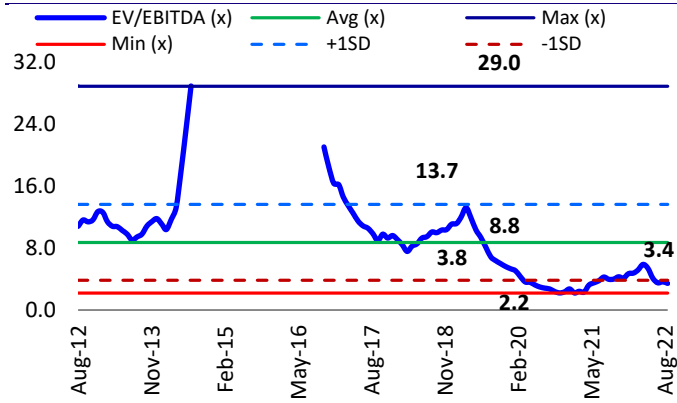


Exhibit 75: Tata Steel P/B

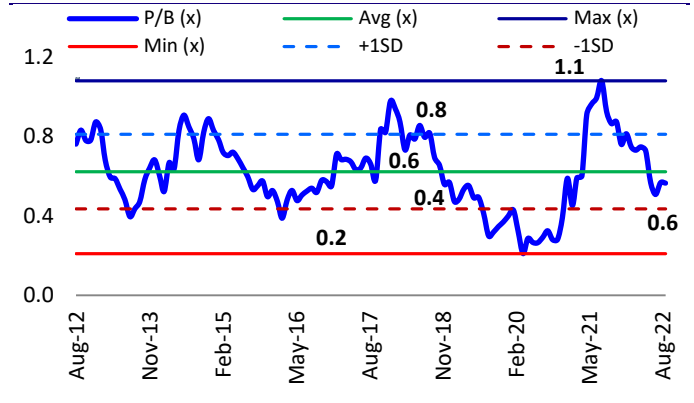


Exhibit 76: JSW Steel EV/EBITDA

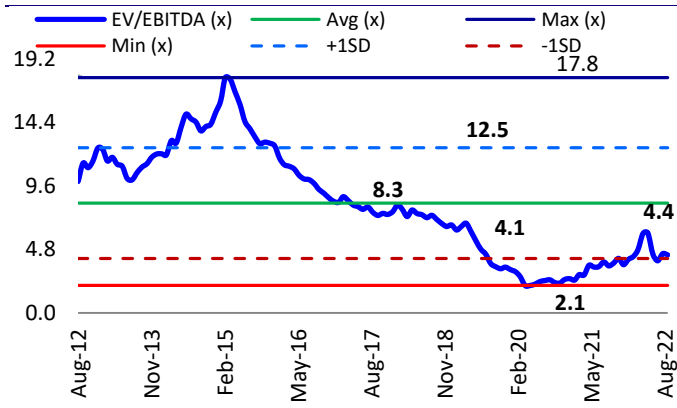


Exhibit 77: JSW Steel P/B

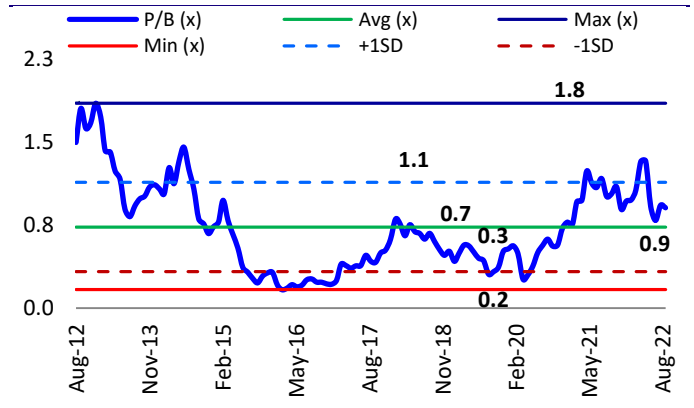


Exhibit 78: JSPL EV/EBITDA

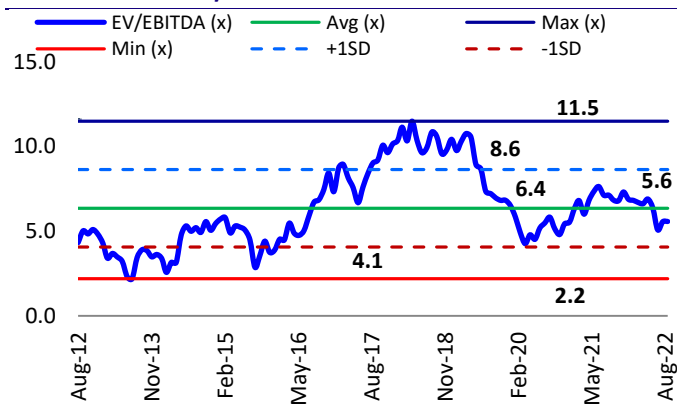


Exhibit 79: JSPL P/B

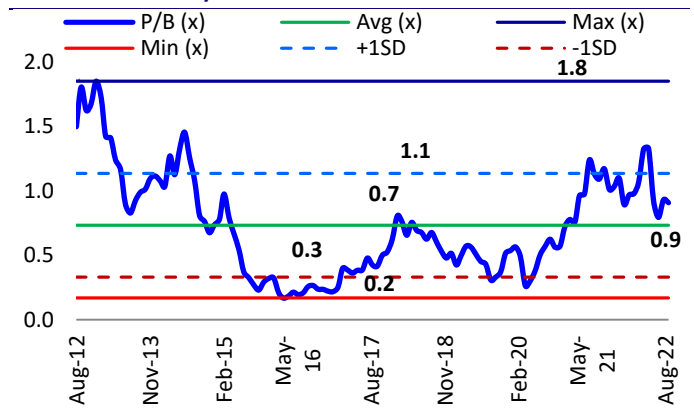


Exhibit 80: SAIL EV/EBITDA

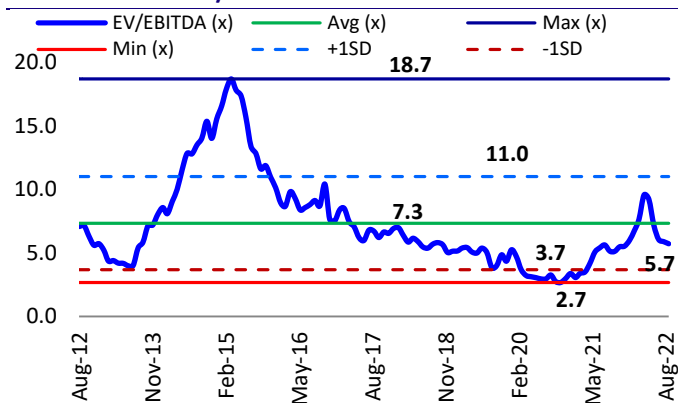


Exhibit 81: SAIL P/B

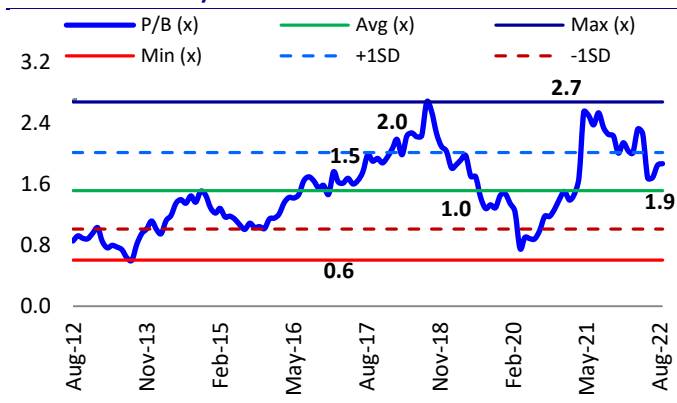


Exhibit 82: NMDC EV/EBITDA

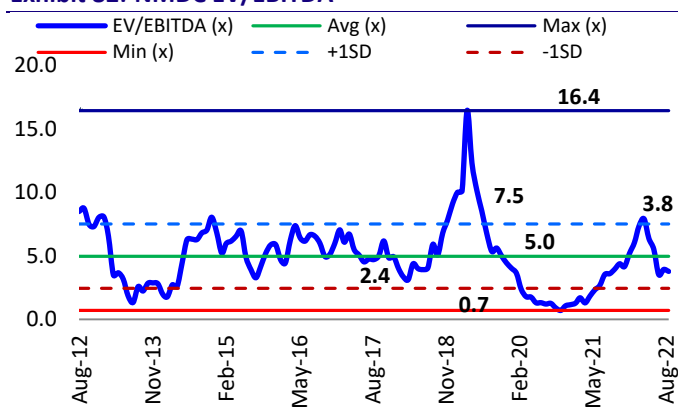


Exhibit 83: NMDC P/B

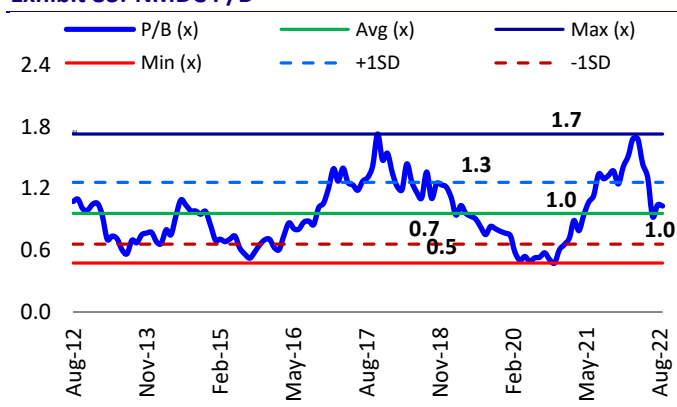


Exhibit 84: Vedanta EV/EBITDA

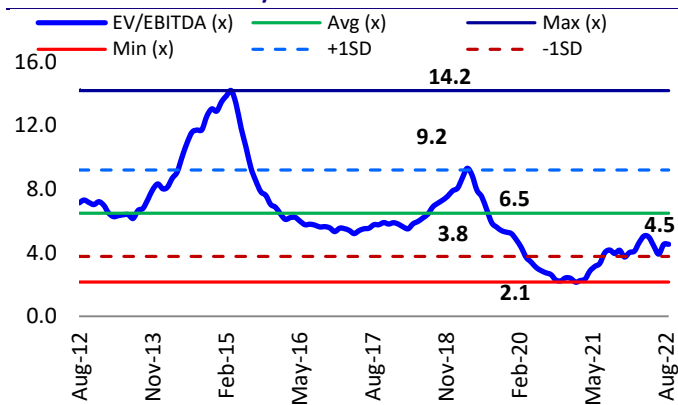


Exhibit 85: Vedanta P/B

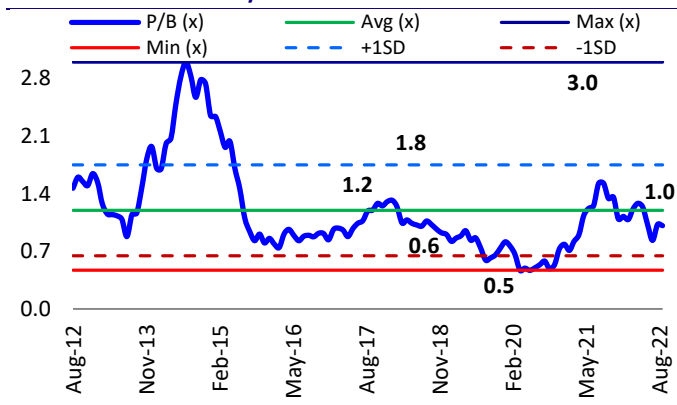


Exhibit 86: Hindustan Zinc EV/EBITDA

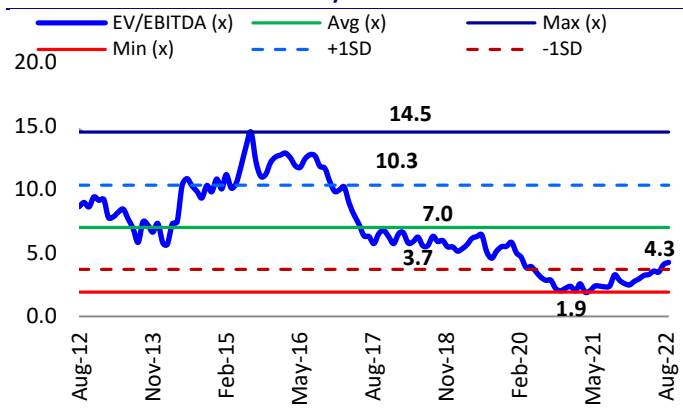


Exhibit 87: Hindustan Zinc P/B

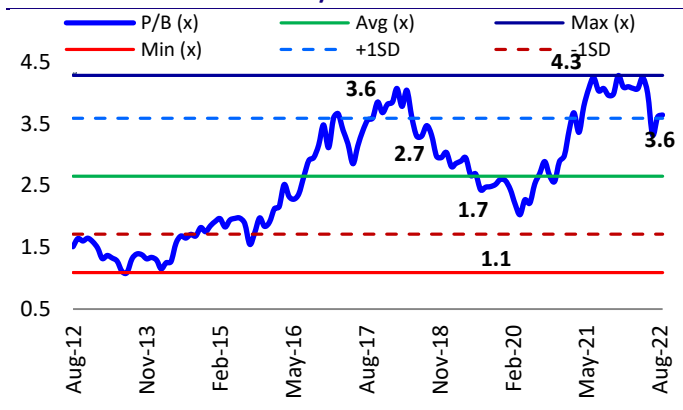


Exhibit 88: Hindalco EV/EBITDA

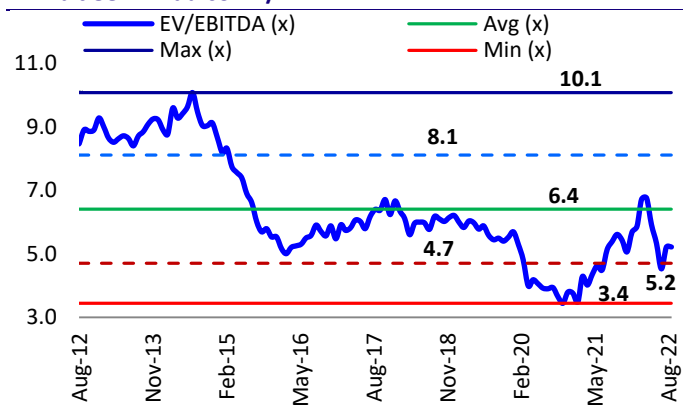


Exhibit 89: Hindalco P/B

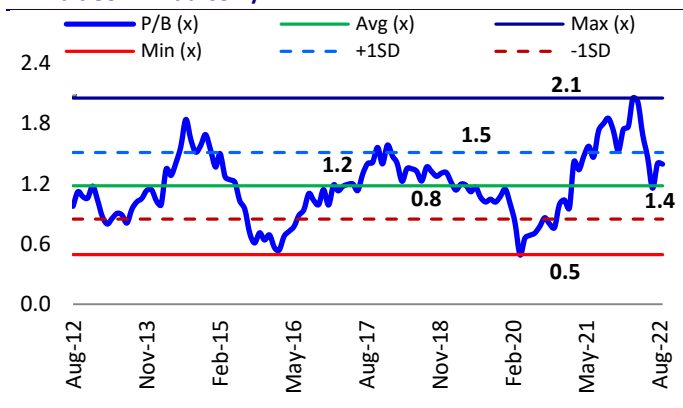


Exhibit 90: Nalco EV/EBITDA

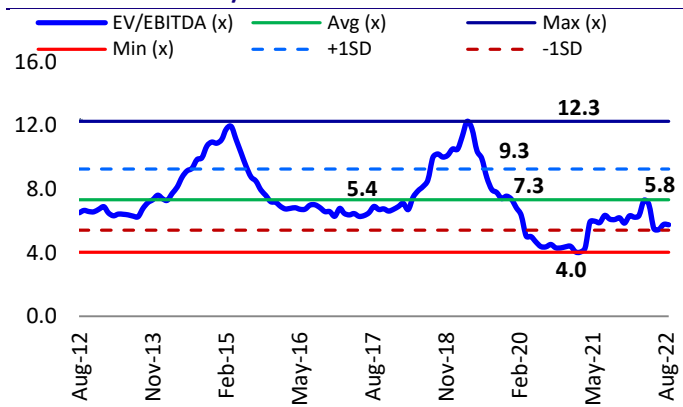
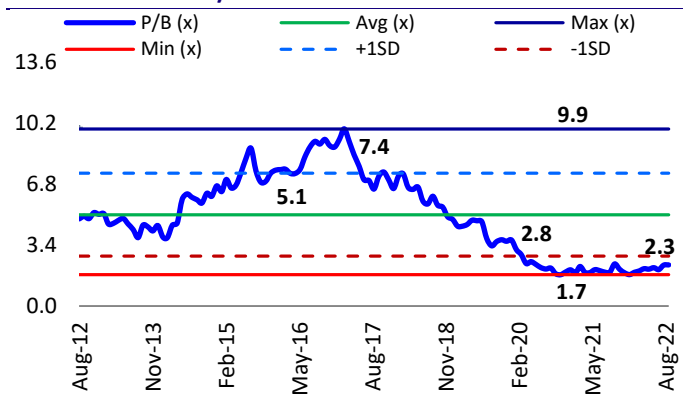


Exhibit 91: Nalco P/B



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	5	27	2	-10	-26	0	4	17	-10	-12	-33
JSW	0	1	18	13	1	-11	0	0	7	0	-1	-18
JSP	0	3	17	-13	-7	-6	0	2	6	-25	-10	-13
SAIL	0	4	18	0	-20	-39	0	3	7	-12	-22	-46
Non-ferrous												
Vedanta	0	2	15	-9	-31	-22	0	1	5	-21	-33	-29
Hindalco	0	3	24	11	-20	-1	0	2	14	-1	-22	-8
Nalco	0	1	14	-12	-35	-4	0	0	3	-24	-37	-11
Mining												
Coal	0	3	15	29	33	56	0	2	4	17	31	49
Hind. Zinc	0	1	-4	-3	-16	-17	0	0	-15	-15	-19	-24
NMDC	0	3	17	-15	-26	-32	0	2	6	-27	-28	-39
SENSEX	0	1	11	12	2	7	-	-	-	-	-	-
NIFTY	0	1	10	12	2	7	-	-	-	-	-	-
BSE Metals index	0	4	21	7	-9	-11	-	-	-	-	-	-

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

Period	Absolute performance (%)					
	1D	1W	1M	3M	6M	12M
Steel						
India						
Tata	0	5	27	2	-10	-26
JSW	0	1	18	13	1	-11
JSP	0	3	17	-13	-7	-6
SAIL	0	4	18	0	-20	-39
Japan						
JFE	0	2	0	-2	-14	-12
Nippon Steel	0	1	8	4	3	-3
Kobe Steel	0	-1	-2	-6	0	-17
Korea						
POSCO	0	5	15	-8	-11	-24
Hyundai Steel	-3	1	9	-15	-16	-32
US						
Nucor	0	2	29	18	20	14
US Steel	0	0	38	0	3	-16
Steel Dynamics	0	3	25	11	38	17
Europe						
ArcelorMittal	0	0	12	-11	-14	-20
SSAB A	0	2	9	-9	-11	-4
thyssenkrupp	0	0	13	-28	-34	-31
voestalpine	0	1	11	-13	-32	-45
China						
Baosteel	0	0	-7	-14	-30	-37

Exhibit 94: Performance of global Metal stocks on an absolute basis (%)

Period	Absolute performance (%)					
	1D	1W	1M	3M	6M	12M
Iron ore mining						
NMDC	0	3	17	-15	-26	-32
Vale	0	-2	0	-15	-26	-37
FMG	2	2	19	2	-15	-11
Diversified miners						
Vedanta	0	2	15	-9	-31	-22
BHP	4	5	12	1	-7	-12
Rio	0	-5	3	-11	-17	-14
Glencore	0	0	14	-3	11	41
Anglo	0	-1	14	-13	-19	-13
South 32	-1	4	19	-8	-8	37
Zinc						
Hind. Zinc	0	1	-4	-3	-16	-17
Korea Zinc	1	6	32	8	12	14
Teck	0	8	25	-12	-7	51
Coal						
Coal	0	3	15	29	33	56
China Shenhua	0	1	3	-8	2	45
Banpu	0	6	7	16	19	34
Bukit Asam	-1	1	4	8	42	76
Adaro Energy	0	1	14	-2	45	131
Aluminum						
Hindalco	0	3	24	11	-20	-1
Nalco	0	1	14	-12	-35	-4
Alcoa	0	3	20	-14	-30	19
Norsk Hydro	0	-2	19	-9	-18	4
CHALCO	-2	0	2	-11	-47	-42
RUSAL	-1	1	-4	-6	-62	-41
Alumina	1	1	12	-5	-24	-9
Stainless steel						
JSL	0	-2	8	-17	-42	-24
JSHL	0	1	9	-17	-42	-21
Acerinox	0	1	13	-8	-19	-18
Outokumpu	0	0	12	-10	-28	-27
Aperam	0	0	18	-11	-42	-43

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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