

Indian companies' valuations

	Price (INR)	EV/ EBITDA (x)		P/B (x)	
		FY23E	FY24E	FY23E	FY24E
Steel					
Tata	913	4.5	4.0	0.9	0.8
JSW	577	6.4	5.6	1.8	1.6
JSP	351	4.3	3.0	0.9	0.8
SAIL	73	4.5	2.2	0.5	0.5
Non-ferrous					
Vedanta	229	4.5	4.4	1.3	1.3
Hindalco	356	4.8	4.5	1.3	1.1
Nalco	74	4.5	2.9	1.0	0.9
Mining					
Coal	193	3.4	4.3	2.2	1.9
HZL	271	5.6	5.4	3.5	3.7
NMDC	109	5.3	4.5	0.9	0.8

Global companies' valuations

Company	M-cap USD b	EV/EBITDA (x)		P/B (x)
		CY22/ FY23	CY23/ FY24	
Steel				
AM	19	2.1	2.4	0.3
SSAB	4	2.4	2.7	0.5
Nucor	29	5.3	5.4	1.2
POSCO	15	2.4	2.3	0.3
JFE	7	5.8	6.1	0.4
Aluminum				
Norsk Hydro	11	3.3	3.2	1.1
Alcoa	8	2.5	2.4	1.1
Zinc				
Teck	15	2.2	2.1	0.6
Korea Zinc	7	4.8	4.6	1.0
Iron ore				
Vale	71	3.3	3.7	1.5
FMG	35	4.0	4.8	1.9
Diversified				
BHP	130	3.9	4.7	2.6
Rio	95	3.9	4.3	1.6

Light at the end of the tunnel? Removal of export duty on cards

- Various media reports ([link1](#), [link2](#)) suggest that the govt may reconsider its stance on export duty on steel, iron ore, and pellets. This resulted in a 1-3% rally in steel companies on 11th Jul'22. In the last one week, the BSE Metal index has risen by 5.4%.
- Domestic HRC prices continue to trade at a discount of ~INR1,600/t to landed imports from FTA countries, while the premium to exports stood ~INR8,600/t
- Coking coal prices have corrected by 14% in the last one week and by 60% from its peak of USD704/t on 15th Mar'22, indicating normalization of margins for steel companies in 3QFY23.
- As per media reports ([link1](#), [link2](#)) China is planning a stimulus of USD220b (RMB1.5t) to jump start its slowing economy by preponing bond sales due in Jan'23. This should help improve the sentiment for commodities.

Commodities/forex tracker

		UoM	Spot	WoW (%)	MoM (%)
Steel	India HRC (ex-Mum)	INR/t	59,800	-1	-6
	India TMT Prime (ex-Mum)	INR/t	58,800	0	-5
	India TMT Secondary (ex-Mum)	INR/t	55,700	2	2
	Korea HRC - FoB	USD/t	715	-2	-15
	Dom. HRC (Prem/(Disc) vs FTA	INR/t	-755	629 INR	4,414 INR
	China HRC Dom.	USD/t	657	0	-10
	China HRC - FoB	USD/t	660	-2	-15
Coking coal	India Prem HCC CNF	USD/t	282	-14	-36
	India 64 Mid Vols CNF	USD/t	248	-16	-39
	India Low Vols PCI CNF	USD/t	267	-12	-39
Metallics	Iron Ore Fines (Odisha Index) Fe 62%	INR/t	3,500	9	-3
	Iron Ore Fines (China - CNF) Fe 62%	USD/t	115	-4	-22
	Europe Scrap HMS 1&2(80:20)	USD/t	465	9	2
	C-DRI (ex-Raipur)	INR/t	35,400	4	11
Thermal Coal	RB1 (6000 NAR) SA FoB	USD/t	367	1	10
	RB2 (5500 NAR), SA FoB	USD/t	264	17	-1
	Indonesia (4200 GAR) Futures	USD/t	84	-1	-5
Non-ferrous	Copper	USD/t	7,790	-2	-19
	Aluminum	USD/t	2,400	1	-12
	Zinc	USD/t	3,151	1	-16
	Lead	USD/t	1,948	2	-10
	Nickel	USD/t	21,512	-1	-27
	Alumina	USD/t	348	-3	-1
	Ali UBC Scrap	USD/t	1,698	0	-10
	Ali UBC Scrap Spread	USD/t	702	2	-14
Bullion	Gold	USD/Oz	1,744	-3	-6
	Silver	"	19.3	-2	-13
FX	INR:USD	x	79.3	0	2
	USD:EUR	"	1.02	-2	-5
	USD:GBP	"	1.20	-1	-4
	CNY:USD	"	6.69	0	0
	JPY:USD	"	136	1	3

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

FERROUS: India – prices

Exhibit 1: HRC - Mumbai (INR/t)

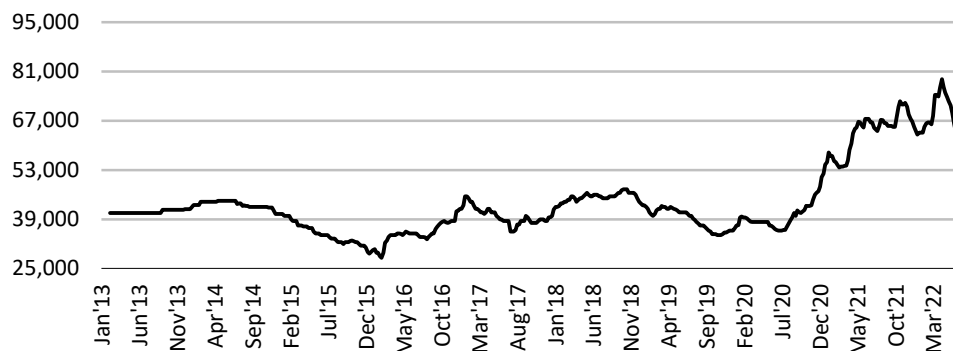


Exhibit 2: TMT Primary – Mumbai (INR/t)

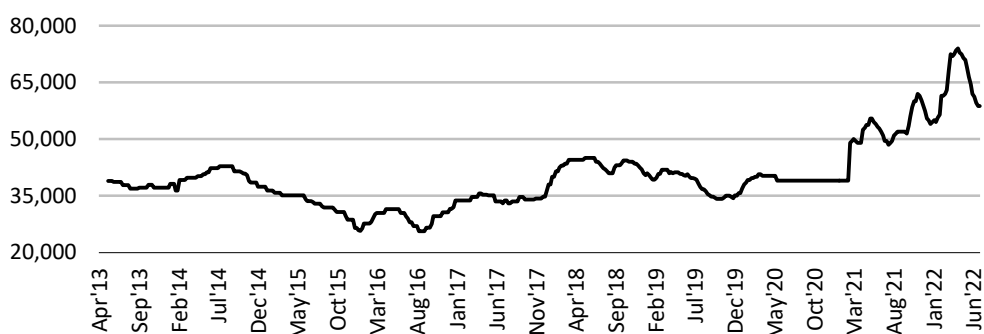


Exhibit 3: C-DRI (sponge iron), ExW-Raipur (INR/t)

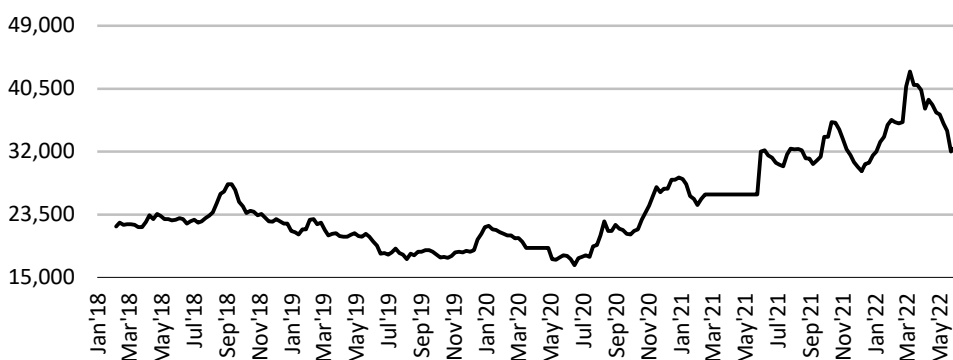


Exhibit 4: Domestic Pellet – Barbil – 63% Fe (INR/t)



Exhibit 5: Pellet export – FoB Fe 64% (USD/t)

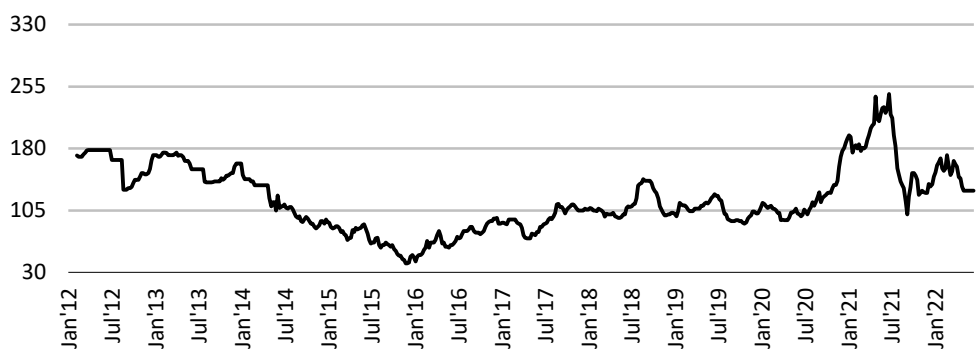


Exhibit 6: Iron Ore Fines Odisha – Fe 62% (INR/t)

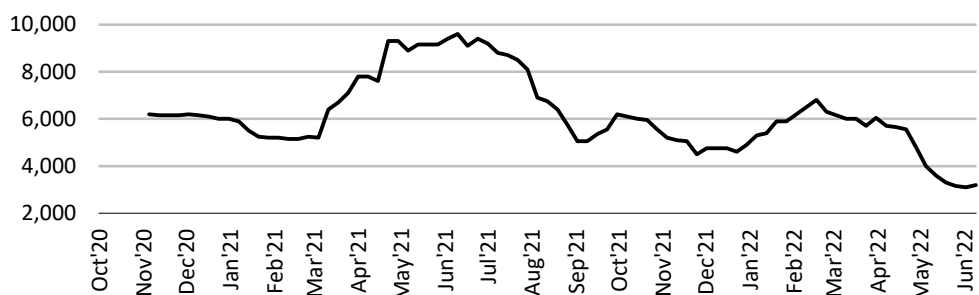


Exhibit 7: NMDC Fines – Fe 64% (INR/t)

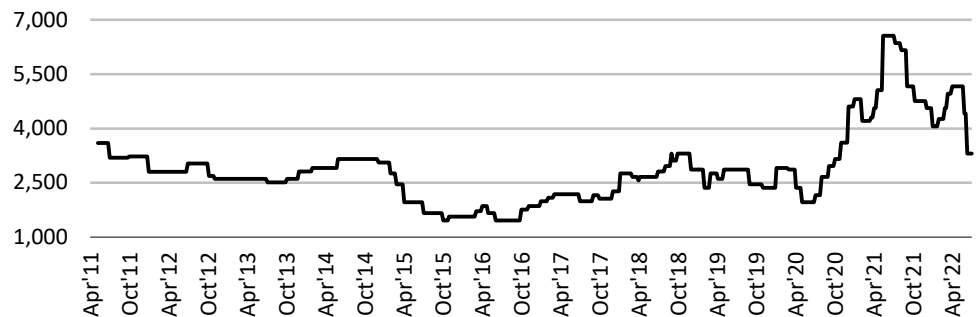
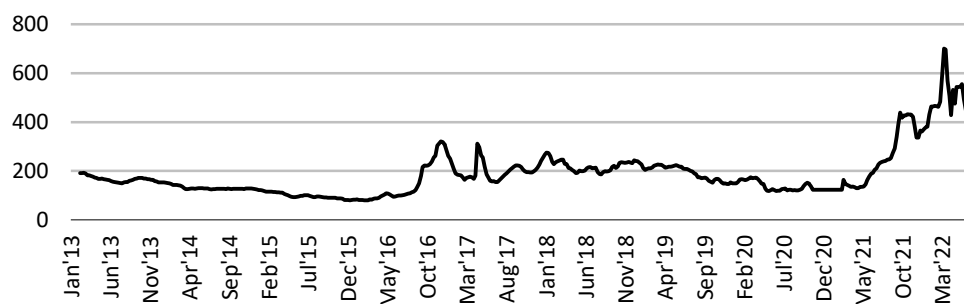


Exhibit 8: Premium HCC CNF Paradip (USD/t)



Domestic spreads

Exhibit 9: Prime HRC v/s primary TMT (INR/t)

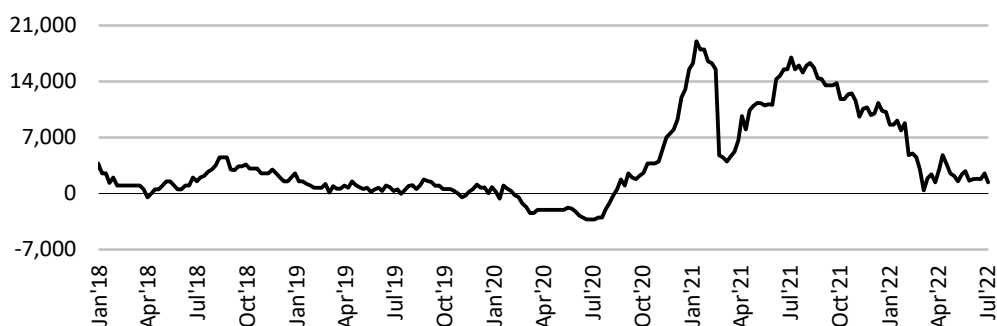


Exhibit 10: Primary TMT v/s secondary TMT (INR/t)

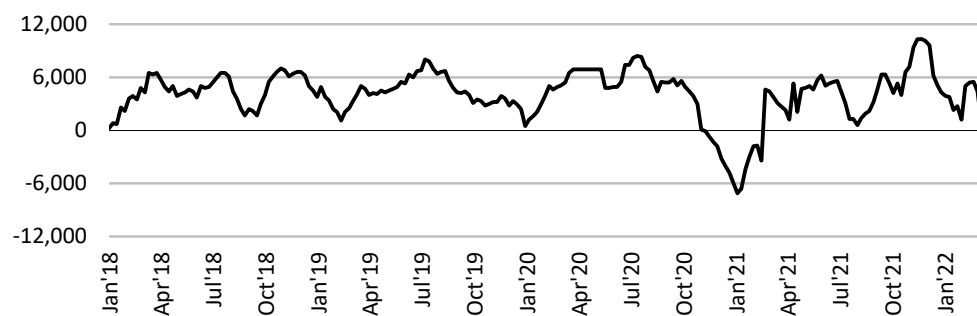


Exhibit 11: Secondary TMT v/s domestic scrap (INR/t)

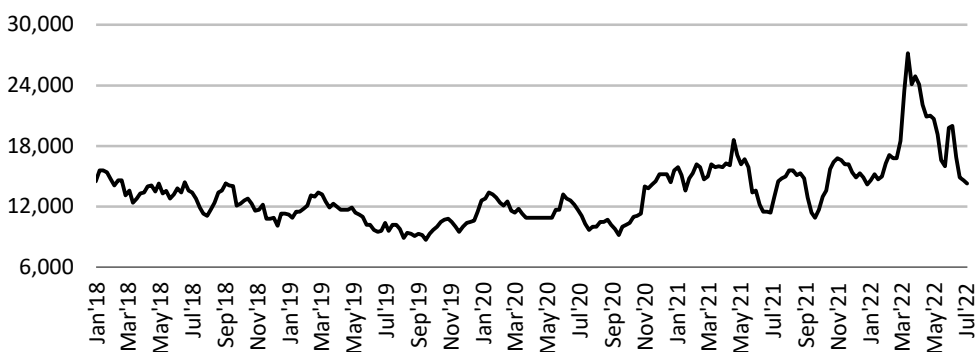


Exhibit 12: HRC v/s CRC (INR/t)

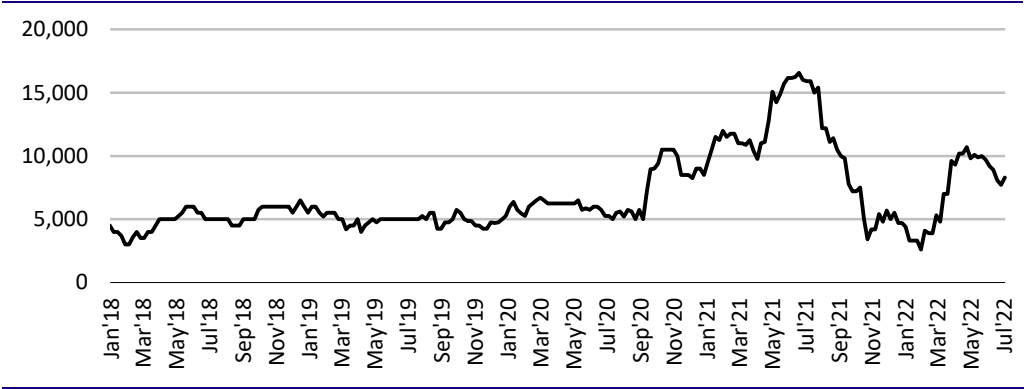


Exhibit 13: HRC – galvanized (INR/t)

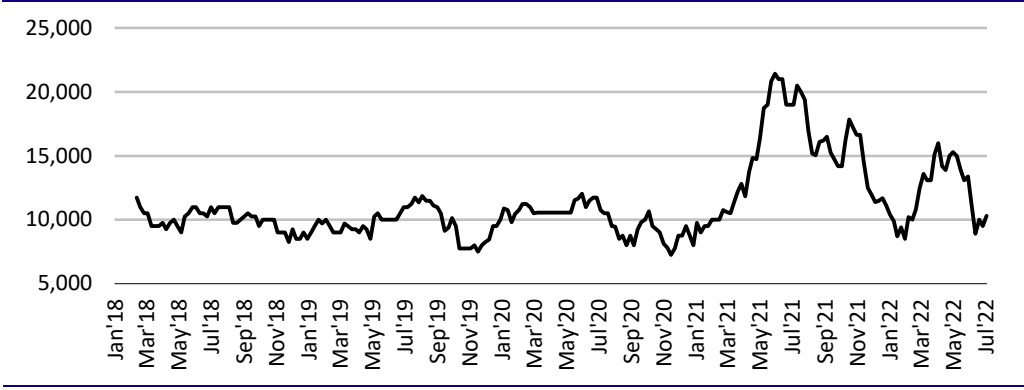


Exhibit 14: HRC – color coated (INR/t)

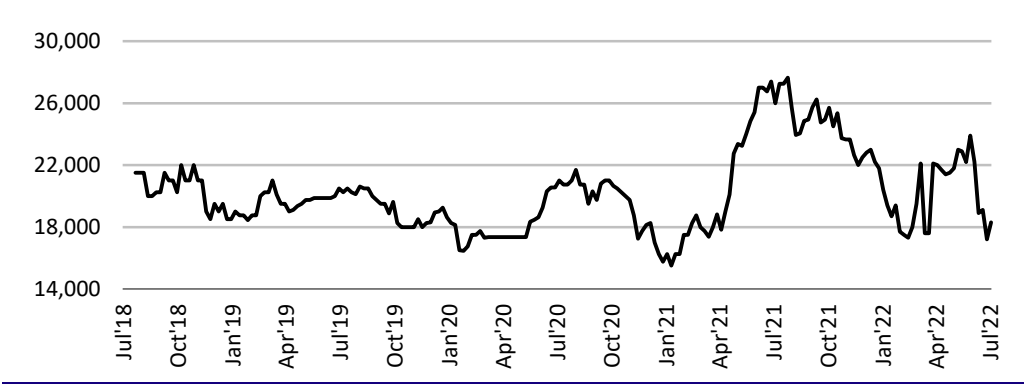


Exhibit 15: DRI v/s NMDC lumps (INR/t)



Exhibit 16: Secondary TMT v/s DRI (INR/t)

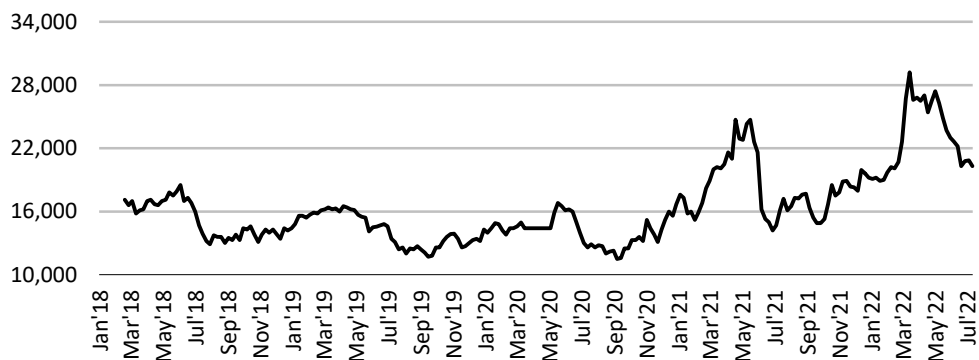


Exhibit 17: DRI v/s pellet (INR/t)

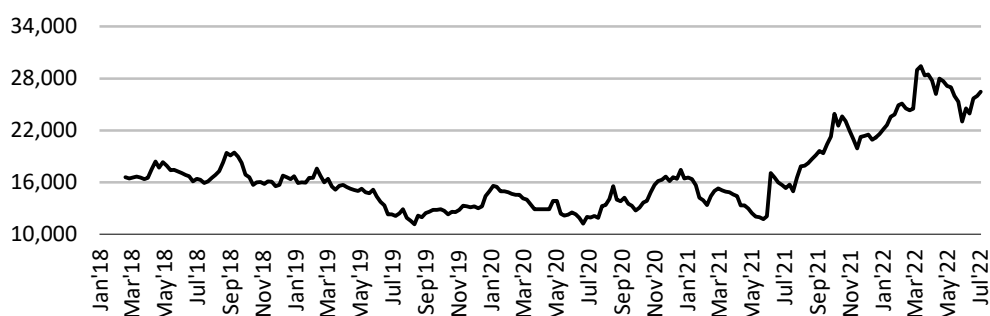
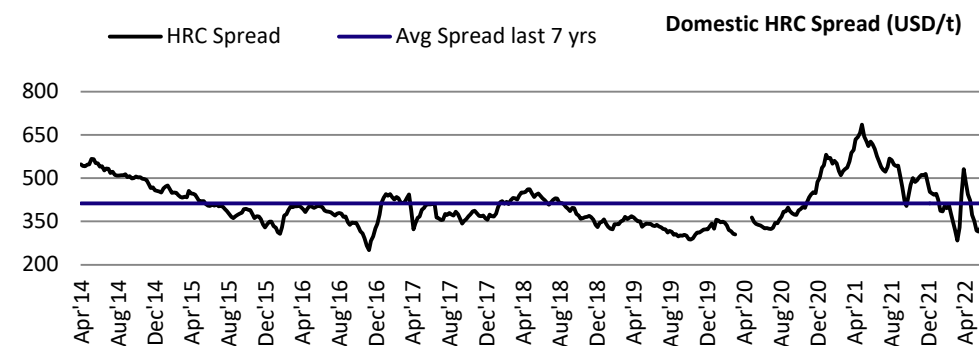


Exhibit 18: India HRC spread (1.6x IO and 0.85x HCC; 1.5 month lag in HCC)



China prices/spreads

Exhibit 19: China HRC FoB (USD/t)

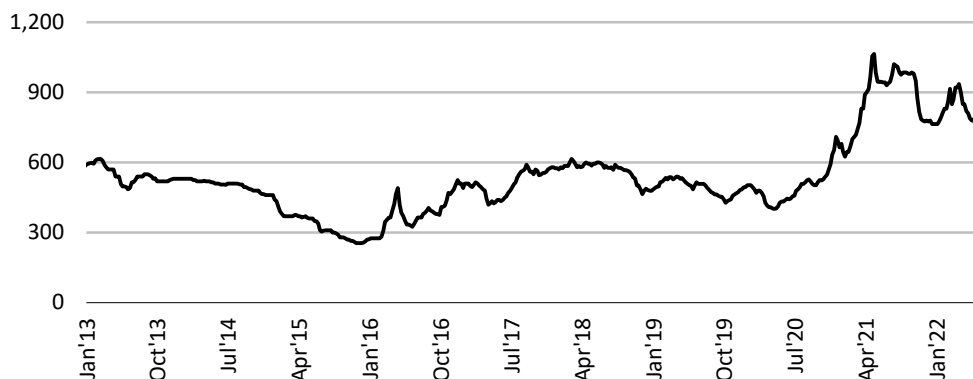


Exhibit 20: China HRC domestic (USD/t)

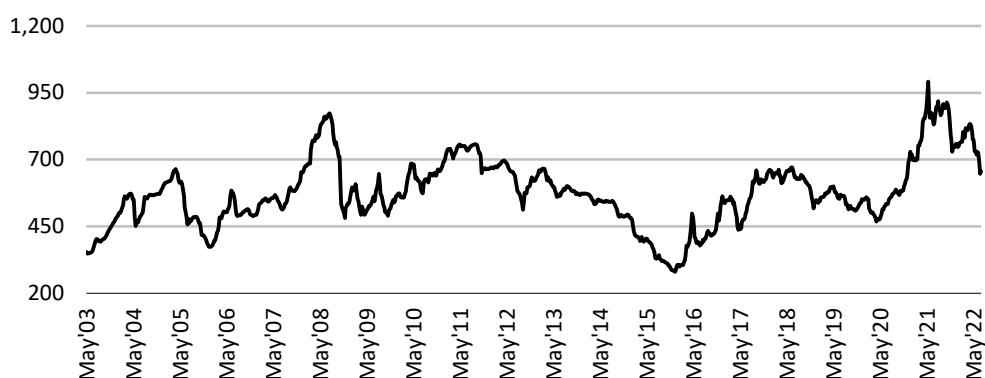


Exhibit 21: China domestic TMT (USD/t)

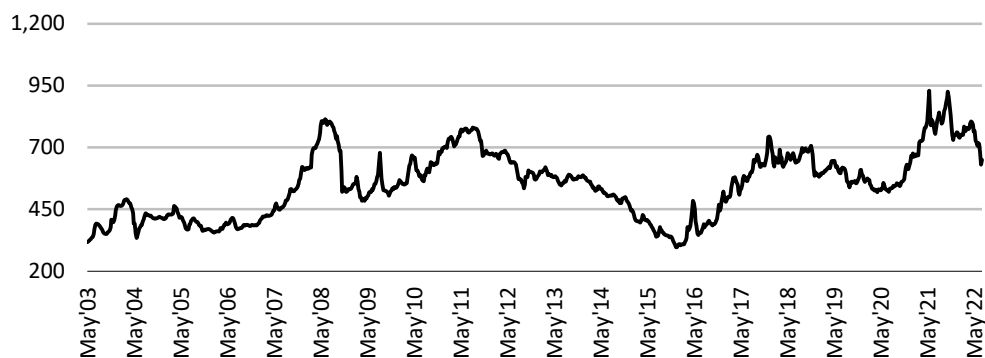


Exhibit 22: China domestic wire rod (USD/t)

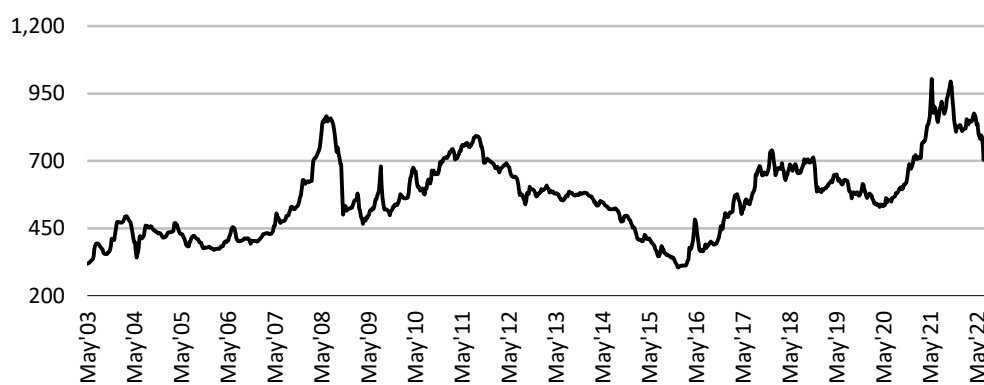
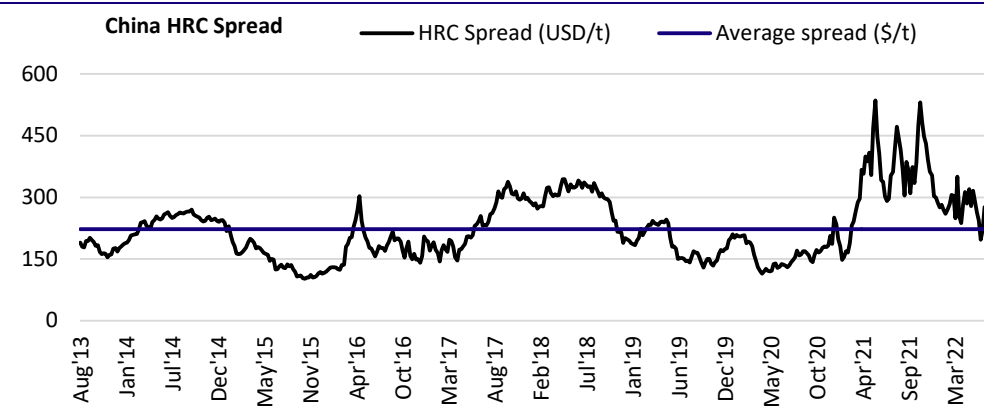


Exhibit 23: China HRC spread (1.6x IO and 0.85x HCC)



Global prices

Exhibit 24: Northern Europe HRC domestic (USD/t)

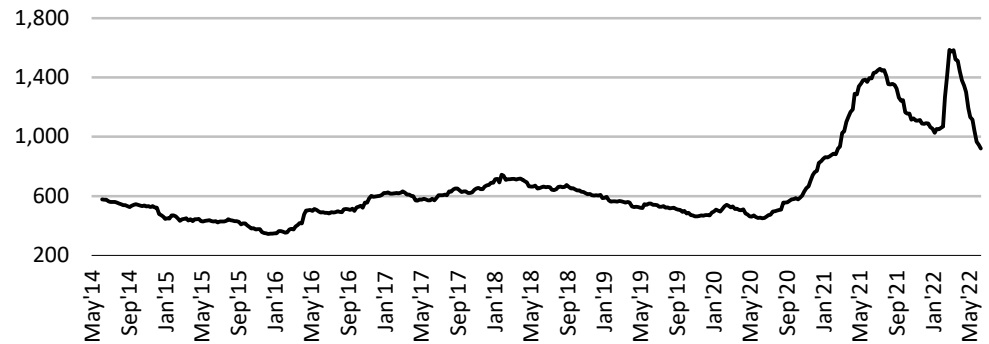


Exhibit 25: North America HRC domestic (USD/short ton)

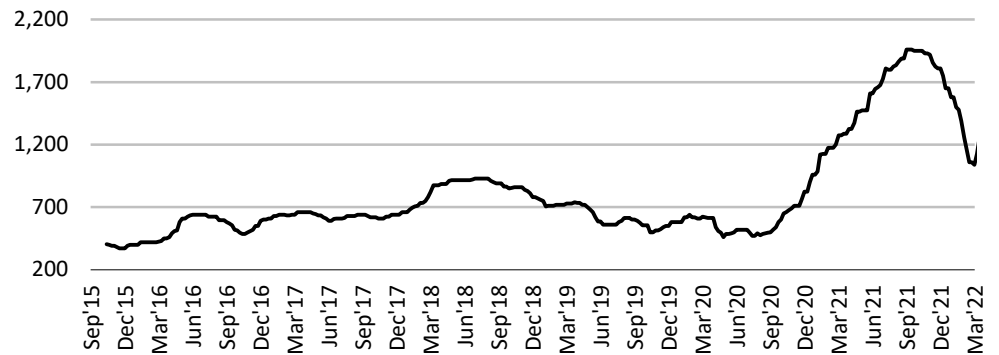


Exhibit 26: Korea HRC FOB (USD/t)



Inventories

Exhibit 27: India steel inventory (mt)

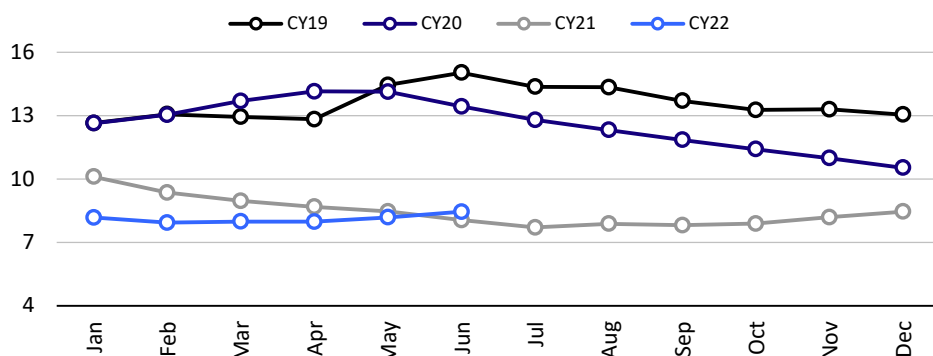


Exhibit 28: China wire rod and TMT inventory (mt)

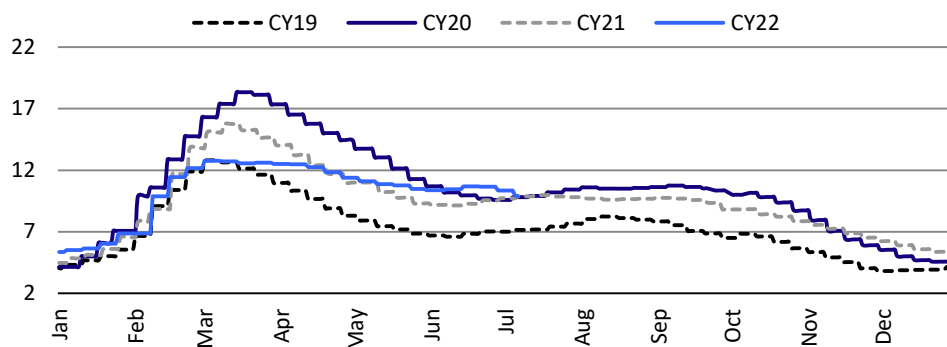
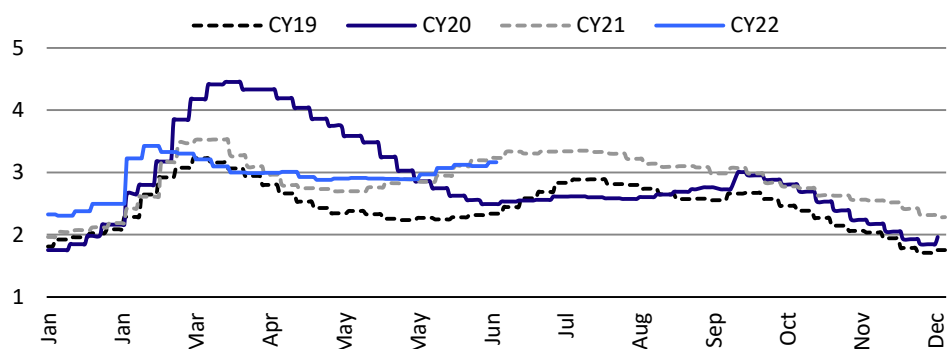


Exhibit 29: China HRC inventory (mt)



NON-FERROUS: Aluminum

Exhibit 30: LME spot (USD/t)

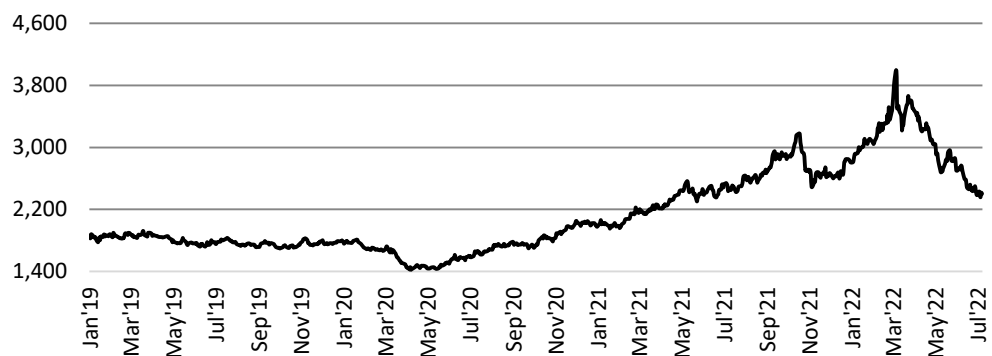


Exhibit 31: Alumina FoB Australia (USD/t)

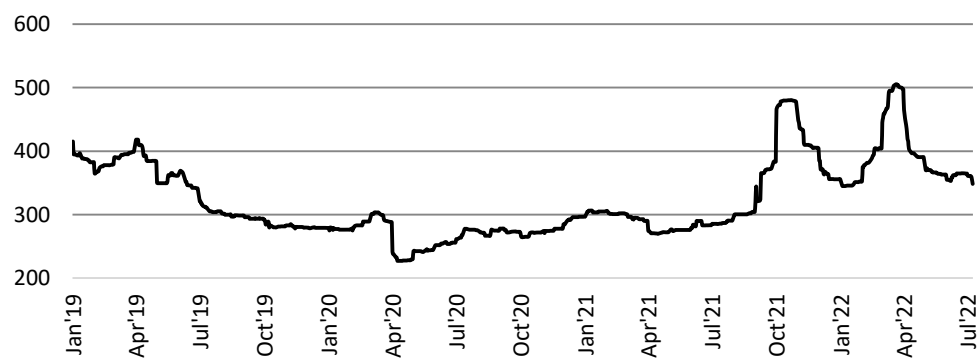


Exhibit 32: Caustic soda (USD/t)

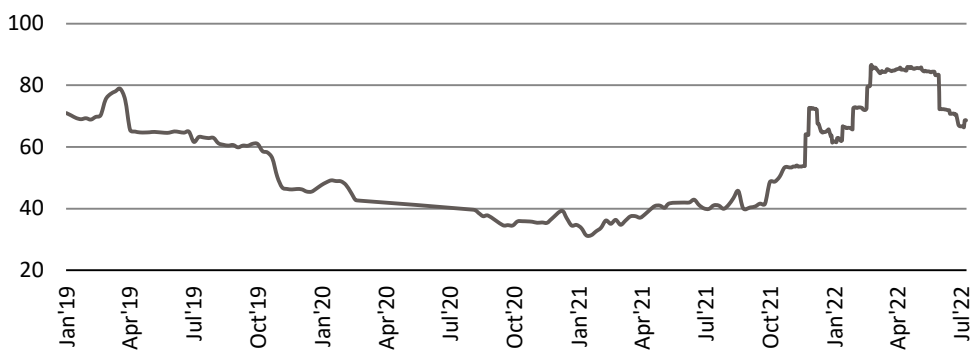


Exhibit 33: Total inventory (LME + SHFE, mt)

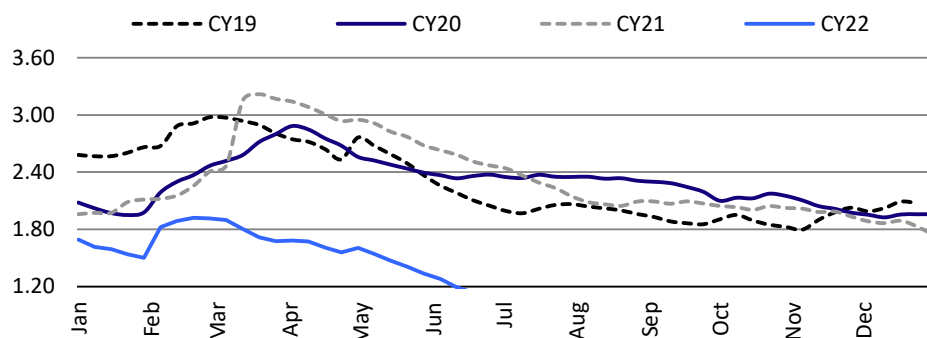


Exhibit 34: Ingot premiums (mt)

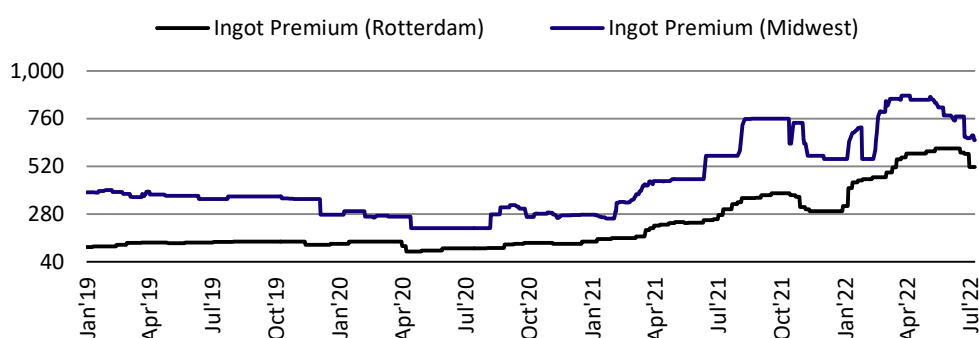
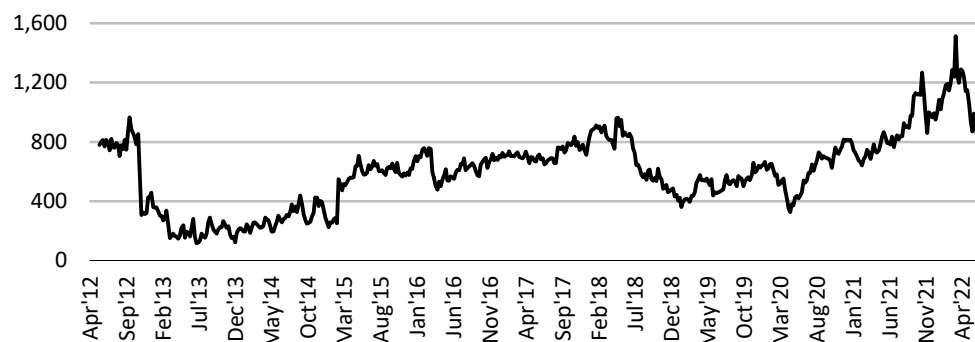


Exhibit 35: Aluminum scrap spread (USD/t)

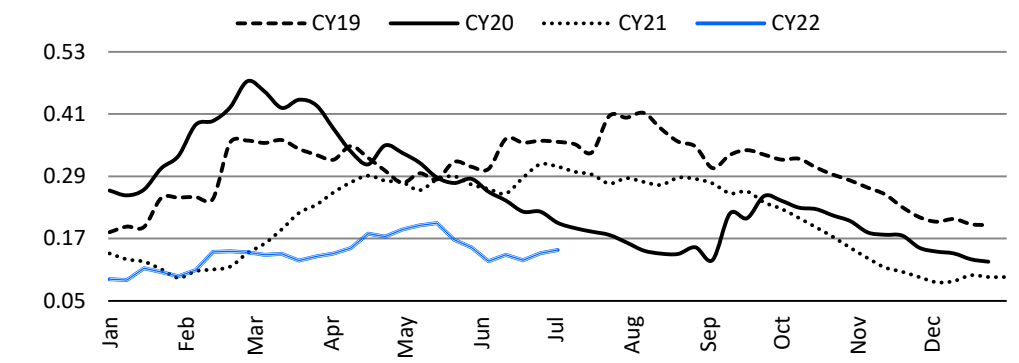


Copper

Exhibit 36: LME spot (USD/t)



Exhibit 37: Total inventory (LME+SHFE, mt)



Zinc

Exhibit 38: LME spot (USD/t)

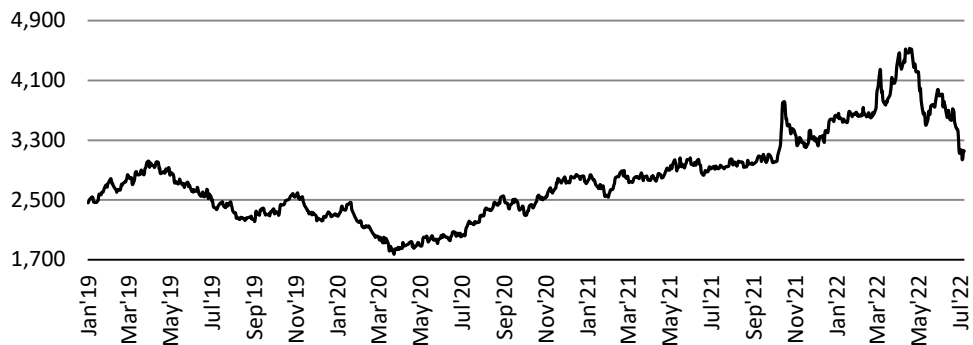
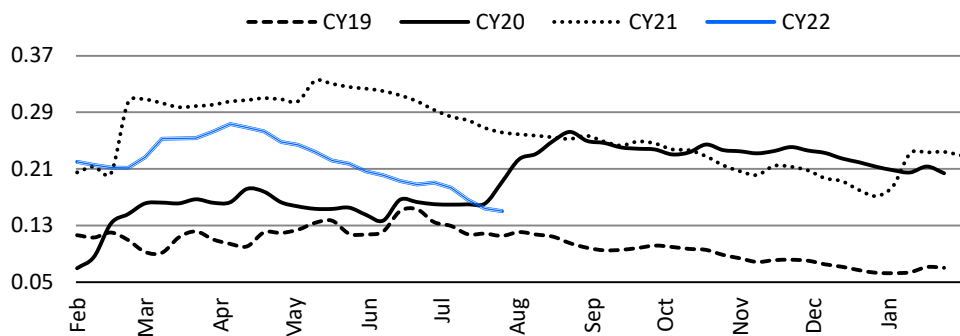


Exhibit 39: Total inventory (LME+SHFE, mt)



Lead

Exhibit 40: LME spot (USD/t)

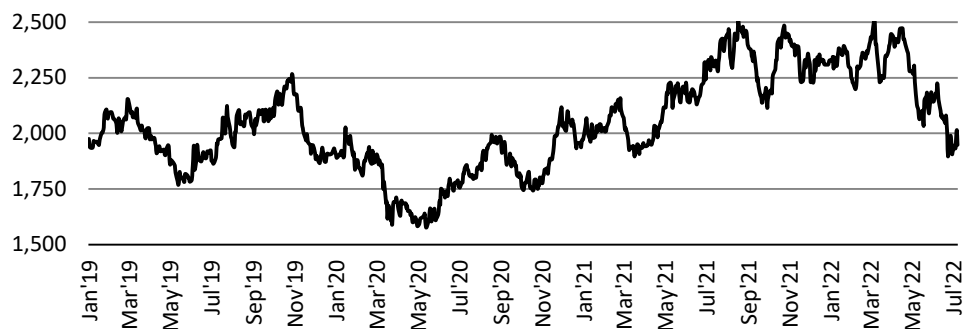
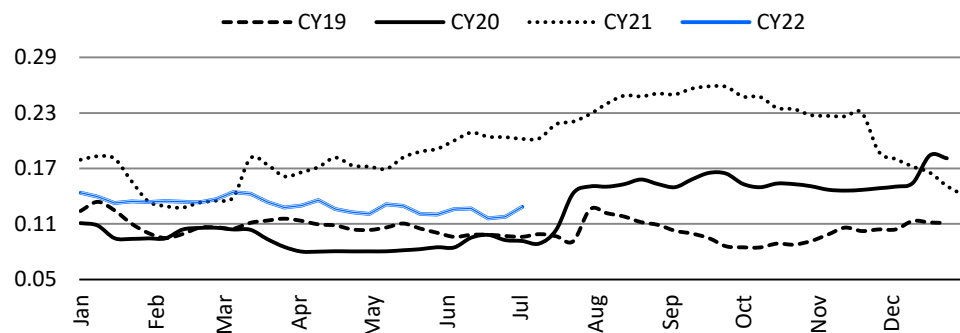


Exhibit 41: Total inventory (LME+SHFE, mt)



Nickel

Exhibit 42: Nickel spot (USD/t)

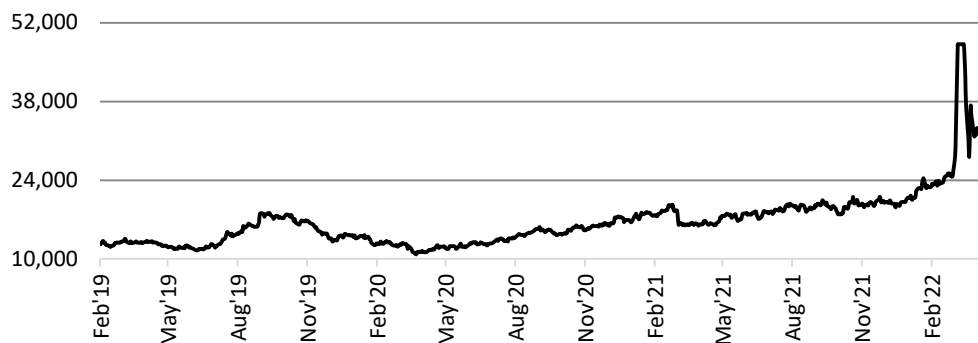
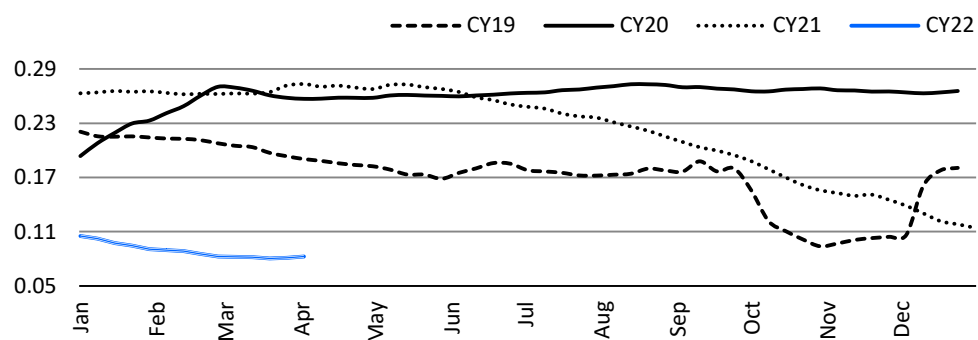


Exhibit 43: Total inventory (LME+SHFE, mt)



India steel production, consumption, EXIM, and inventory

Exhibit 44: Crude steel production (mt)

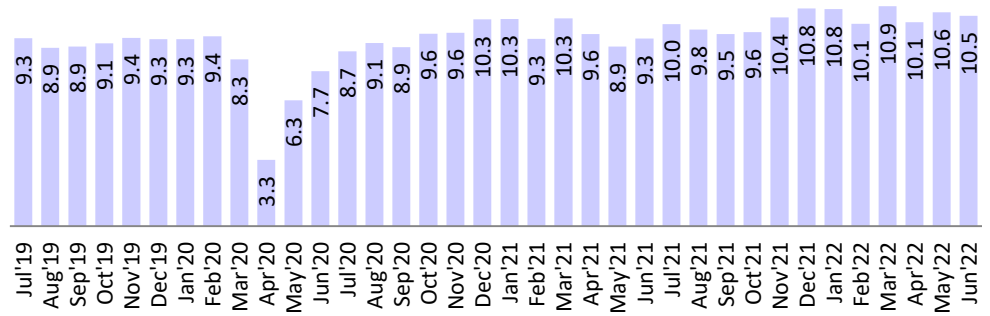


Exhibit 45: Finished steel production (mt)

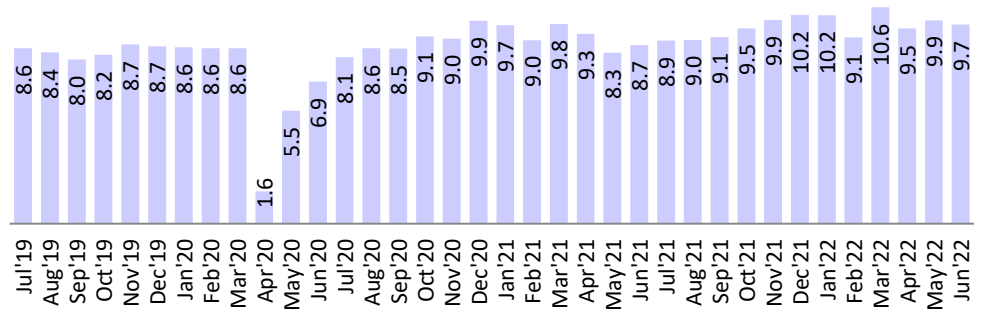


Exhibit 46: Imports including semis (kt)

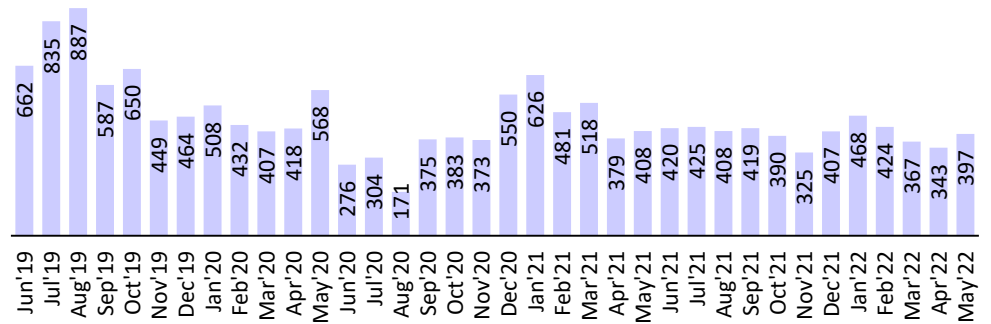


Exhibit 47: Exports including semis (kt)

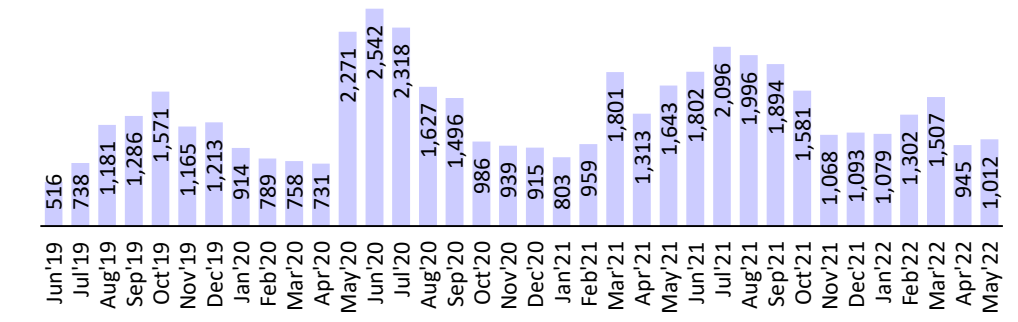


Exhibit 48: Net imports/(exports) of finished steel (kt)

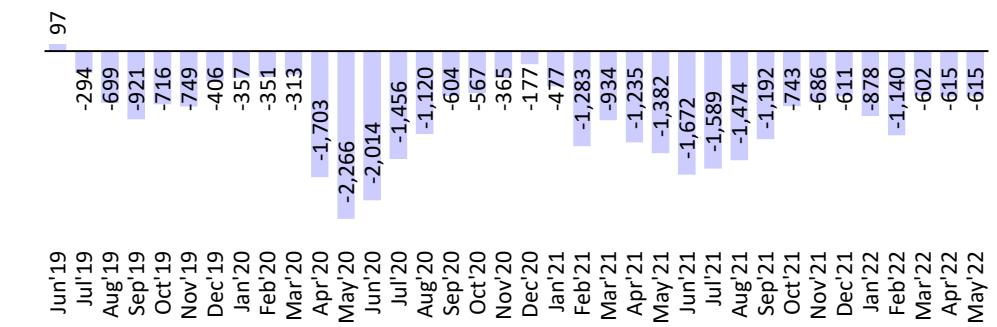
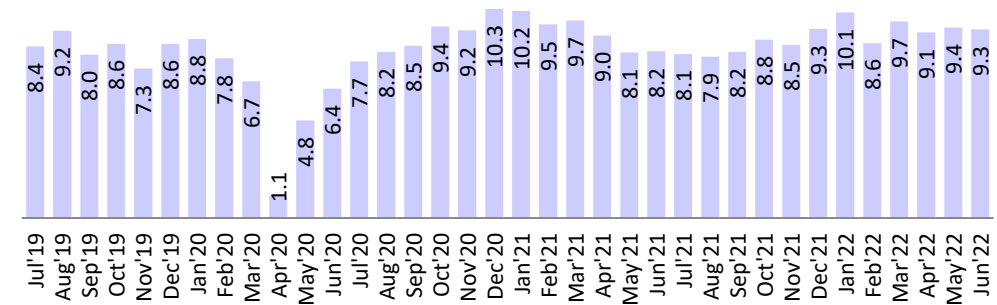


Exhibit 49: Steel consumption (mt)



Global production trends

Exhibit 50: World crude steel production and China's share

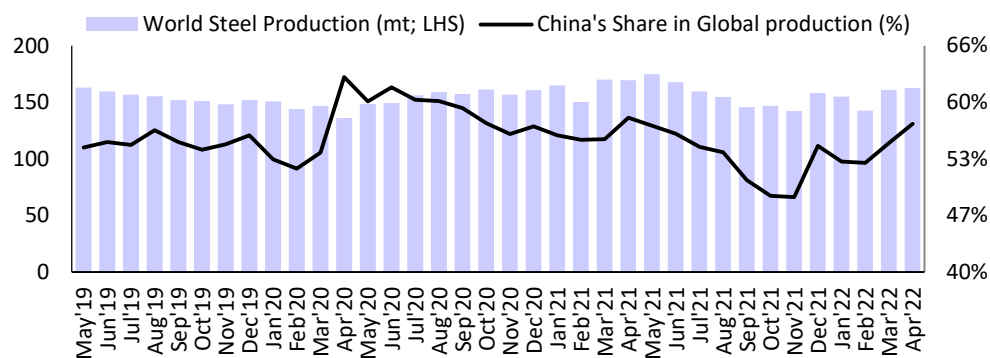


Exhibit 51: Crude steel production in China (mt)

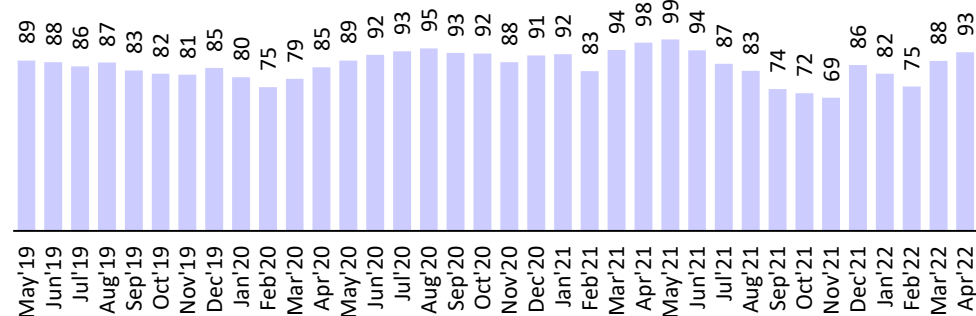


Exhibit 52: Crude steel production in Japan (mt)

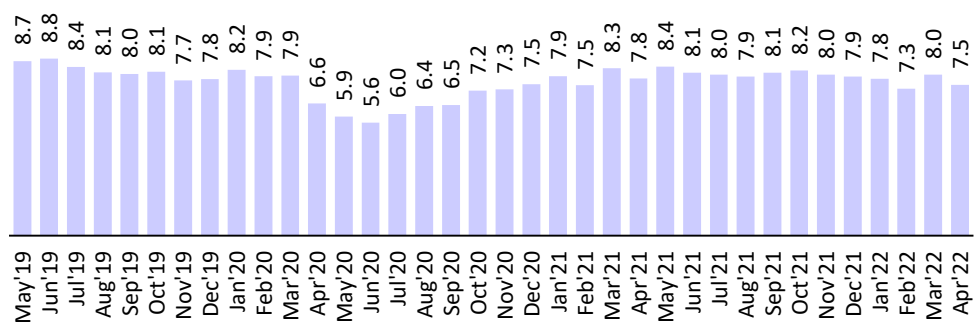


Exhibit 53: Crude steel production in the US (mt)

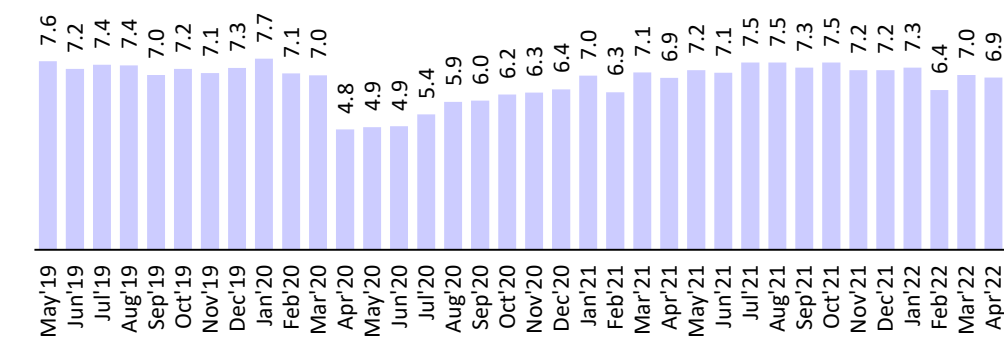


Exhibit 54: Crude steel production in Russia (mt)

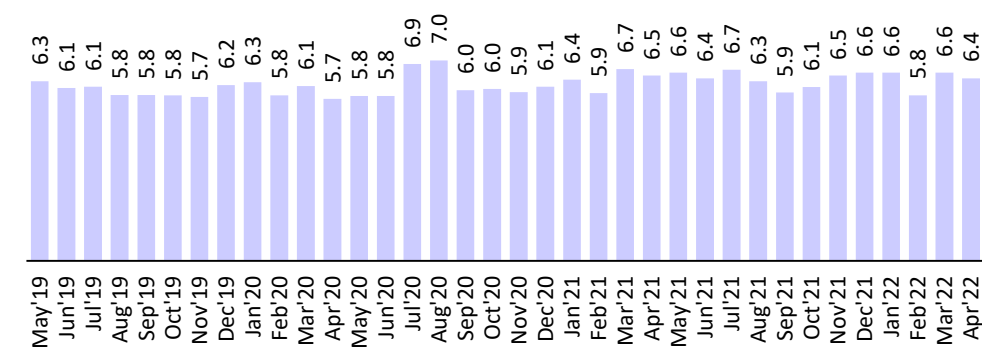
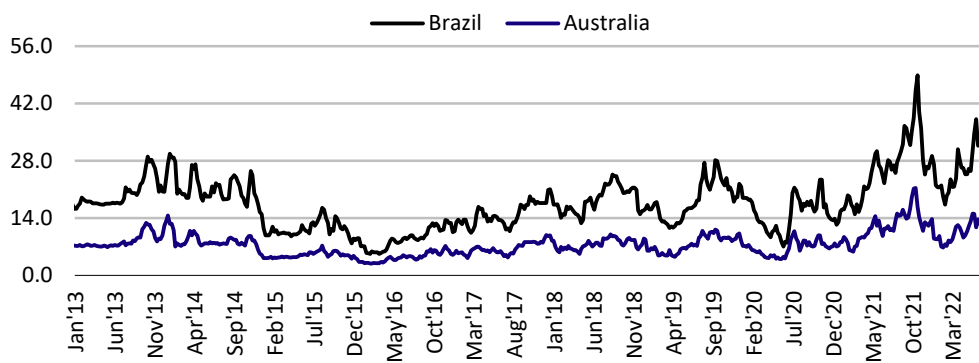


Exhibit 55: Dry bulk freight rates to China (USD/t)



China steel and macro

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

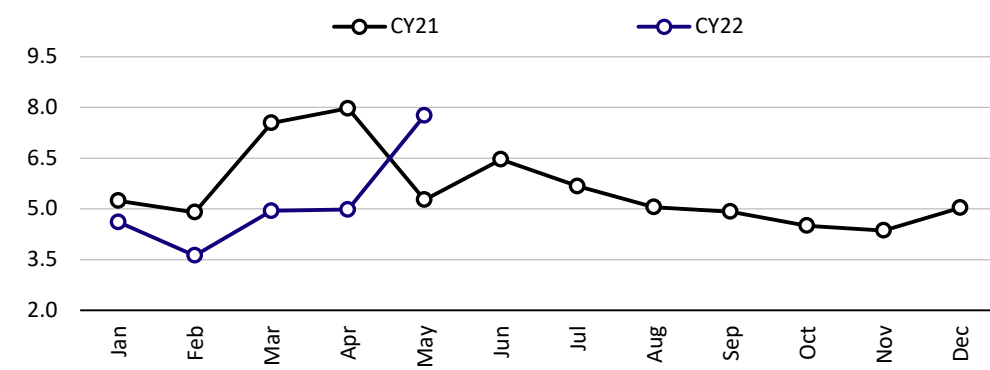


Exhibit 57: China's gross steel imports (mt)

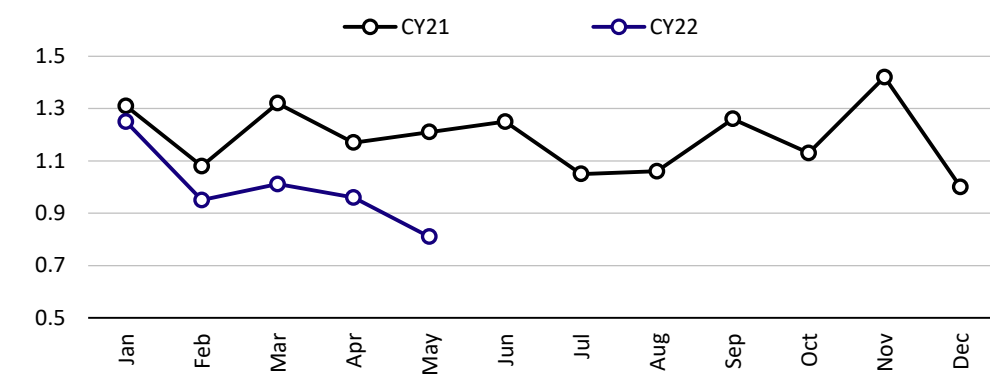


Exhibit 58: China's net steel exports/(imports) (mt)

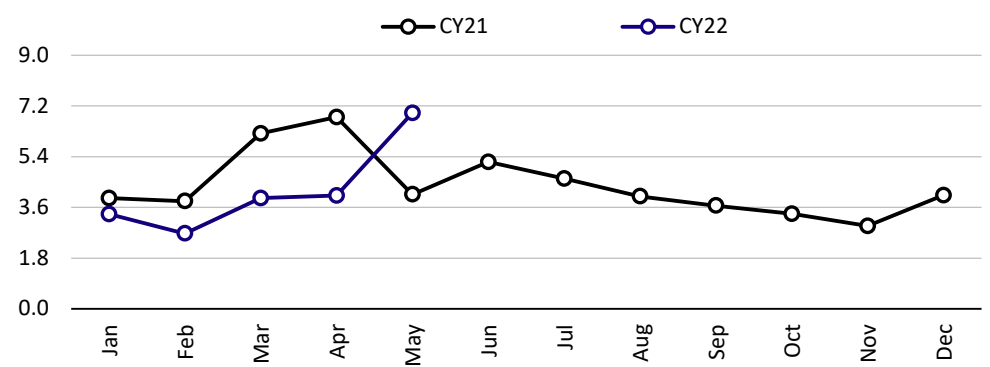


Exhibit 59: China's GDP growth YoY (constant prices)

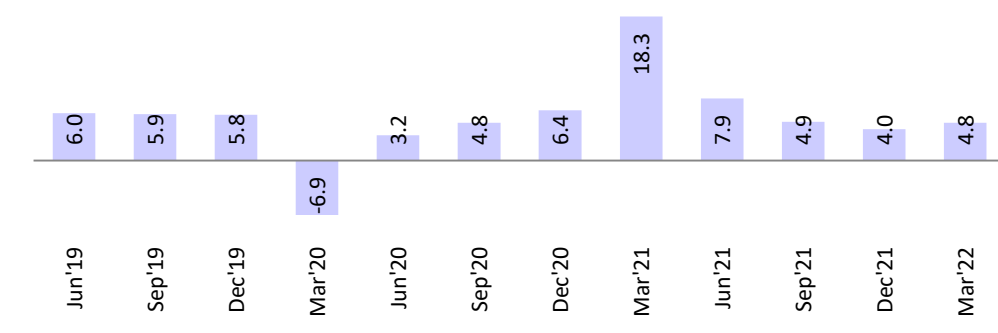


Exhibit 60: Total FAI investments (CNY b)

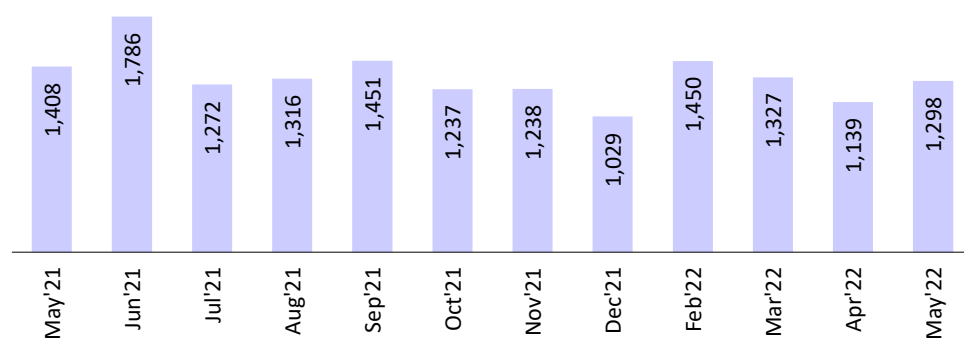


Exhibit 61: Automobile registration (m units)

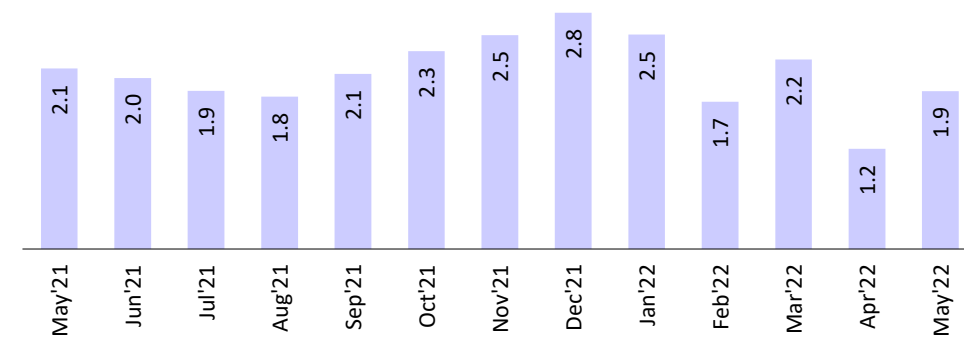


Exhibit 62: Floor space sold (m square meters)

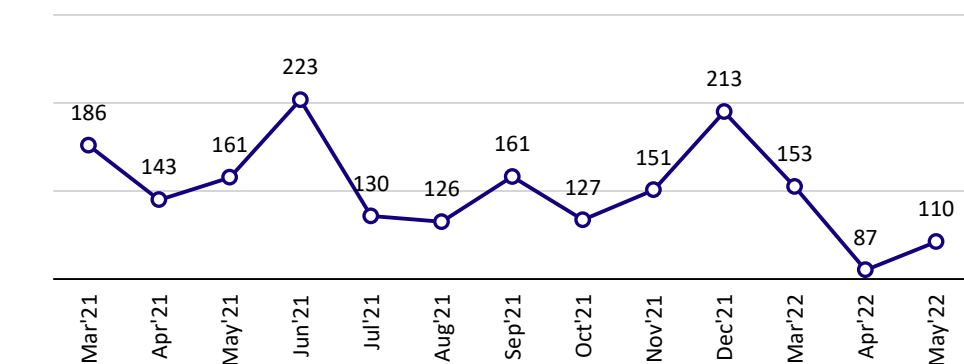


Exhibit 63: Floor space starts (m square meters)

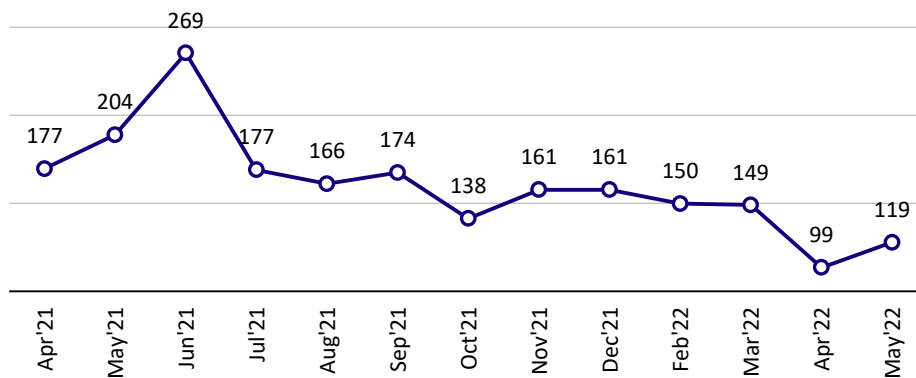


Exhibit 64: Land sales (m square meters)

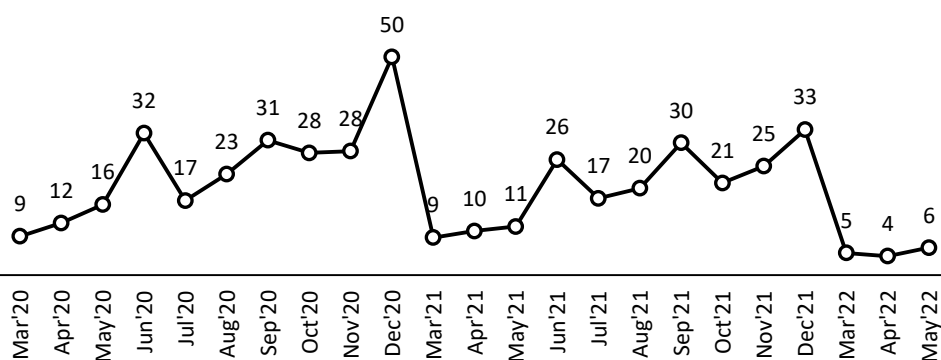


Exhibit 65: Manufacturing PMI

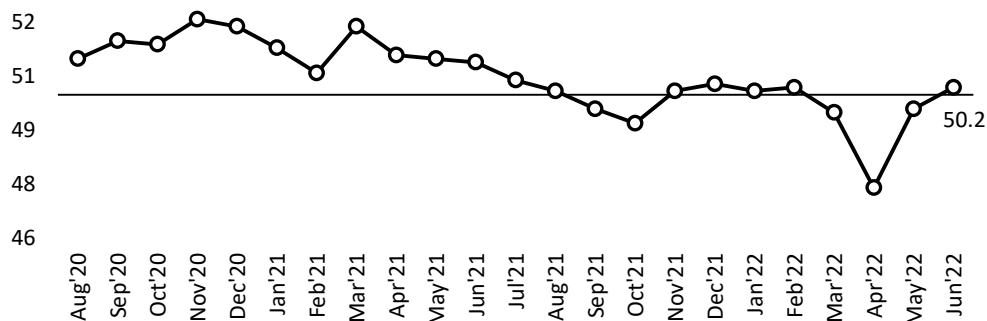
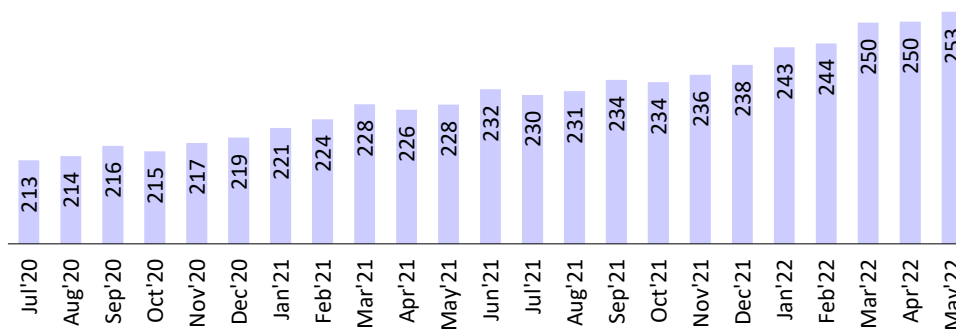


Exhibit 66: M2 money supply (CNY t)



Commodity monthly heat map

Commodity	UoM	Aug'21	Sep'21	Oct'21	Nov'21	Dec'21	Jan'22	Feb'22	Mar'22	Apr'22	May'22	Jun'22	Jul'22	MoM
Oil and non-ferrous - prices														
Brent Crude	USD/bbl	70	75	84	81	74	86	96	116	106	112	120	113	-6
Copper	USD/t	9,357	9,324	9,779	9,765	9,553	9,772	9,941	10,238	10,192	9,384	9,071	7,828	-14
Aluminum	USD/t	2,614	2,840	2,955	2,641	2,709	2,994	3,261	3,538	3,255	2,836	2,576	2,394	-7
Zinc	USD/t	2,989	3,042	3,370	3,317	3,423	3,611	3,644	3,974	4,381	3,780	3,667	3,118	-15
Lead	USD/t	2,430	2,257	2,339	2,348	2,305	2,342	2,300	2,359	2,404	2,151	2,074	1,957	-6
Nickel	USD/t	19,137	19,377	19,362	19,933	20,026	22,285	24,016	37,649	33,134	28,229	25,877	21,925	-15
Alumina	USD/t	301	360	478	416	362	348	391	487	403	366	362	358	-1
Aluminum Ingot Premium (Asia - MJP)	USD/t	158	171	180	150	164	170	164	141	140	120	119	98	-17
Aluminum Ingot Premium (EU - Rotterdam)	USD/t	358	379	372	300	298	422	462	528	585	605	596	518	-13
Aluminum Ingot Premium (US midwest)	USD/t	737	759	731	593	557	557	661	859	857	822	740	665	-10
Aluminum scrap	USD/t	1,701	1,751	1,811	1,664	1,708	1,868	2,016	2,240	2,103	1,903	1,799	1,683	-6
Aluminum scrap spread	USD/t	913	1,089	1,144	977	1,001	1,126	1,245	1,298	1,152	933	777	711	-8
Silver	USD/t	846	821	825	850	794	817	830	891	866	771	758	685	-10
USD:INR (Bloomberg)	INR	74	74	75	74	75	74	75	76	76	77	78	79	1
Ferrous- International Prices														
China HRC domestic	RMB/t	5,727	5,786	5,743	4,902	4,792	4,822	4,978	5,176	5,235	4,957	4,645	4,396	-5
China HRC domestic	USD/t	884	896	895	767	752	759	785	816	814	740	694	656	-5
China TMT domestic	RMB/t	5,262	5,527	5,714	4,846	4,804	4,745	4,875	4,950	5,090	4,901	4,561	4,354	-5
China TMT domestic	USD/t	812	856	890	758	754	747	769	780	791	732	681	649	-5
China HRC FoB	USD/t	1,001	983	975	814	778	767	817	874	919	824	755	668	-12
Korea HRC FoB	USD/t	1,015	1,005	1,005	955	830	776	871	920	925	876	800	723	-10
North Europe HRC domestic	EUR/t	1,204	1,143	1,048	988	971	936	933	1,333	1,377	1,178	961	870	-9
North America HRC domestic (USD/short ton)	USD/st	1,859	1,951	1,944	1,870	1,717	1,519	1,185	1,185	1,453	1,459	1,198	980	-18
India HRC Export FoB (USD/t)	USD/t	906	879	872	852	778	734	850	864	1,006	878	718	653	-9
Australia Fe 62% iron ore CNF	USD/t	161	121	122	95	112	130	142	150	152	134	131	115	-13
Chinese steel futures														
TMT - Shanghai futures	RMB/t	5,247	5,531	5,092	4,063	4,391	4,574	4,602	4,810	4,999	4,662	4,508	4,226	-6
HRC - Shanghai futures	RMB/t	5,735	5,785	5,408	4,308	4,544	4,717	4,781	5,023	5,133	4,775	4,588	4,238	-8
Iron ore - Dalian Commodity Exchange	RMB/t	1,020	778	704	568	663	725	723	805	887	837	849	746	-12
Coking coal - Dalian Commodity Exchange	RMB/t	2,446	3,294	2,835	1,765	2,102	2,273	2,362	2,782	2,987	2,645	2,627	2,262	-14
China HRC FOB spread over RM (HRC - 1.7x iron ore -.85x HCC)	RMB/t	1,922	1,664	1,801	1,842	1,631	1,553	1,544	1,290	1,086	1,104	912	1,048	15

Commodity	UoM	Aug'21	Sep'21	Oct'21	Nov'21	Dec'21	Jan'22	Feb'22	Mar'22	Apr'22	May'22	Jun'22	Jul'22	MoM
India steel and metallics prices														
India HRC ex-Mumbai 5-10mm	INR/t	66,540	65,450	69,620	70,875	65,950	63,840	66,325	72,775	76,725	70,600	62,400	60,000	-4
Dom HRC prem to India export FoB price	INR/t	-647	782	4,251	7,427	7,304	9,226	2,621	6,939	93	2,759	6,360	8,335	31
Domestic CRC ex-Mumbai - 0.9mm	INR/t	78,020	74,150	75,080	75,900	70,925	67,220	70,625	79,875	86,825	80,500	70,875	68,250	-4
Galvanized plain - 120 GSM	INR/t	82,450	80,625	86,050	84,763	77,375	73,220	77,200	86,500	91,500	84,740	72,300	71,000	-2
Color coated /PPGI ex-Mumbai 90GSM	INR/t	91,250	90,875	94,210	93,575	88,400	82,960	84,400	92,625	98,375	93,360	81,750	79,200	-3
Wire rod - Primary Producers	INR/t	51,150	52,200	56,083	58,875	54,000	53,500	57,750	67,500	70,300	67,000	59,338	58,800	-1
TMT primary - Mumbai	INR/t	51,200	51,875	57,600	60,688	55,500	55,250	62,000	71,250	73,225	68,500	60,413	58,800	-3
TMT secondary - Mumbai	INR/t	49,481	46,452	52,471	50,400	49,492	52,384	56,746	68,417	64,931	59,573	53,681	54,988	2
Domestic scrap-HMS(80:20) - Mumbai	INR/t	34,296	34,504	37,571	34,517	34,654	37,336	39,588	43,576	43,219	41,769	37,213	40,625	9
Sponge iron (DRI)	INR/t	30,435	29,425	33,252	29,254	27,931	31,722	34,015	39,752	35,825	32,838	30,488	32,806	8
Domestic pellet prices- Barbil - 63% Fe	INR/t	13,710	10,700	11,955	11,163	8,731	9,870	11,406	12,594	11,444	9,683	7,044	7,300	4
Pellet Export Prices - FoB 64%Fe	USD/t	165	121	140	130	129	145	160	159	159	138	NA	NA	NA
Domestic ferrous spreads														
Primary HRC v/s primary TMT	INR/t	15,340	13,575	12,020	10,188	10,450	8,590	4,325	1,525	3,500	2,100	1,988	1,200	-40
Primary TMT v/s secondary TMT	INR/t	1,719	5,423	5,129	10,288	6,008	2,866	5,254	2,833	8,294	8,927	6,732	3,813	-43
Secondary TMT v/s domestic Scrap	INR/t	15,185	11,948	14,900	15,883	14,838	15,048	17,158	24,841	21,712	17,804	16,467	14,363	-13
Hot rolled v/s cold rolled	INR/t	11,480	8,700	5,460	5,025	4,975	3,380	4,300	7,100	10,100	9,900	8,475	8,250	-3
Hot rolled - galvanized Plan	INR/t	15,910	15,175	16,430	13,888	11,425	9,380	10,875	13,725	14,775	14,140	9,900	11,000	11
Hot rolled - color coated	INR/t	24,710	25,425	24,590	22,700	22,450	19,120	18,075	19,850	21,650	22,760	19,350	19,200	-1
Sponge iron -NMDC lumps spread	INR/t	18,280	18,970	23,137	19,777	19,601	22,882	24,495	29,552	25,455	23,488	23,008	25,326	10
Coking coal														
India premium HCC CNF	USD/t	254	370	427	377	361	426	467	617	505	535	404	310	-23
India 64 mid vols coking coal CNF	USD/t	226	323	364	319	313	379	420	583	468	498	369	276	-25
NMDC iron ore - Chhattisgarh														
64% Bailadila fines	INR/t	6,160	5,160	4,760	4,660	4,060	4,260	4,560	4,960	5,160	4,410	3,310	3,310	0
Iron ore lump	INR/t	7,150	6,150	5,950	5,575	4,900	5,200	5,600	6,000	6,100	5,500	4,400	4,400	0
Manganese ore														
Manganese ore, Balaghat Mn 37%, Fe 7.5%	INR/t	15,334	15,334	15,334	15,717	15,717	14,931	14,931	16,424	18,066	18,066	15,447	16,219	5
Manganese ore, import India, Mn 37.5%	USD/dmtu	5	5	5	5	5	5	5	6	5	5	5	5	-2
Domestic ferro alloys														
Silico manganese	INR/t	95,846	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	83,508	2
Ferro manganese	INR/t	99,179	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	87,383	0
Ferro chrome	INR/t	34,296	34,504	37,571	34,517	34,654	37,336	39,588	43,576	43,219	41,769	37,213	40,625	9
Freight rates														
Baltic Dry index	Points	3,743	4,288	4,820	2,780	2,698	1,783	1,835	2,464	2,212	2,919	2,412	2,109	-13
China steel exports (mt)														

Commodity	UoM	Aug'21	Sep'21	Oct'21	Nov'21	Dec'21	Jan'22	Feb'22	Mar'22	Apr'22	May'22	Jun'22	Jul'22	MoM
China steel exports (mt)	mt	5	5	4	4	5	NA	4	5	5	ND	ND	ND	NA
Ferrous - inventory														
China HRC	mt	3	3	3	3	2	2	3	3	3	3	3	3	4
China wire rod	mt	3	3	2	2	2	2	3	4	3	3	3	3	-3
China TMT	mt	7	7	6	5	4	4	7	9	9	8	8	8	-3
Total steel inventory	mt	13	13	11	10	8	8	13	16	15	14	14	13	-2
Non-ferrous - inventory														
Aluminum														
LME	kt	1,331	1,307	1,127	967	940	881	823	732	603	526	415	359	-13
SHFE	kt	741	775	921	1,017	906	744	1,021	1,090	1,038	977	801	729	-9
Total	kt	2,072	2,083	2,048	1,984	1,846	1,625	1,844	1,822	1,641	1,503	1,215	1,088	-10
Zinc														
LME	kt	240	226	197	181	186	179	150	143	116	89	82	83	1
SHFE	kt	9	10	14	15	26	44	96	122	126	116	100	69	-31
Total	kt	250	236	211	196	212	223	246	265	242	205	183	152	-16
Lead														
LME	kt	57	52	52	56	55	54	49	40	39	38	39	39	1
SHFE	kt	185	202	189	158	112	84	84	98	90	87	83	80	-4
Total	kt	243	255	241	214	168	138	133	138	130	125	122	119	-2
Copper														
LME	kt	243	236	182	101	85	90	77	77	118	168	124	134	8
SHFE	kt	37	18	11	13	8	10	59	62	36	18	13	15	16
Total	kt	281	254	193	114	92	100	136	139	154	186	137	149	9
Nickel														
LME	kt	202	174	147	128	107	97	84	75	73	73	69	66	-5
SHFE	kt	6	7	6	8	6	4	4	7	8	4	3	2	-33
Total	kt	208	181	153	136	113	101	89	81	81	77	72	68	-6

Metals valuation matrix

Exhibit 67: 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	913	975	1,115	157.7	169.1	5.8	5.4	4.5	4.0	0.9	0.8
JSW	Neutral	577	525	1,395	57.2	68.1	10.1	8.5	6.4	5.6	1.8	1.6
JSP	Buy	351	415	355	46.6	64.1	7.5	5.5	4.3	3.0	0.9	0.8
SAIL	Buy	73	81	299	8.2	20.2	8.8	3.6	4.5	2.2	0.5	0.5
Non-ferrous												
Vedanta	Neutral	229	225	854	38.3	39.6	6.0	5.8	4.5	4.4	1.3	1.3
Hindalco	Buy	356	475	791	44.8	50.4	8.0	7.1	4.8	4.5	1.3	1.1
Nalco	Buy	74	80	135	8.2	14.4	9.0	5.1	4.5	2.9	1.0	0.9
Mining												
Coal	Buy	193	230	1,192	36.2	28.3	5.3	6.8	3.4	4.3	2.2	1.9
HZL	Neutral	271	290	1,147	25.5	26.5	10.6	10.3	5.6	5.4	3.5	3.7
NMDC	Neutral	109	122	319	14.6	17.7	7.5	6.2	5.3	4.5	0.9	0.8

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

Exhibit 68: 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*	14,040	2.8	5.8	5.4	2.6	4.5	4.0	1.0	0.9	0.8	44.6	16.6	16.1
JSW*	17,564	6.5	10.1	8.5	5.0	6.4	5.6	2.1	1.8	1.6	37.9	19.3	20.0
JSP*	4,506	4.1	7.5	5.5	2.9	4.3	3.0	1.0	0.9	0.8	25.9	12.4	15.0
SAIL*	3,769	2.2	8.8	3.6	2.2	4.5	2.2	0.6	0.5	0.5	27.7	6.2	14.6
Japan													
JFE	6,626	3.2	4.9	6.0	4.7	5.8	6.1	0.5	0.4	0.4	15.5	8.6	7.0
Nippon Steel	13,510	3.5	5.0	5.5	4.5	5.5	5.7	0.6	0.5	0.5	18.1	11.1	8.7
Kobe Steel	1,789	4.4	4.4	4.8	5.2	5.5	5.3	0.3	0.3	0.3	7.2	6.8	5.3
Korea													
POSCO	15,337	3.7	4.0	4.1	2.5	2.4	2.3	0.3	0.3	0.3	10.0	8.5	7.9
Hyundai Steel	3,281	2.7	3.2	3.3	3.4	3.3	3.0	0.2	0.2	0.2	8.6	6.7	6.1
US													
Nucor	28,997	4.1	8.8	10.3	2.8	5.3	5.4	1.5	1.2	1.1	44.3	15.9	12.1
US Steel	4,592	1.8	5.4	6.9	1.1	2.1	2.2	0.4	0.4	0.4	28.6	7.3	5.3
Steel Dynamics	12,484	3.3	6.4	8.7	2.2	3.4	4.1	1.3	1.1	0.9	48.5	20.4	13.2
Europe													
AM	19,009	1.7	3.6	3.8	1.3	2.1	2.4	0.3	0.3	0.3	21.6	9.3	7.4
SSAB	4,228	2.4	6.0	8.3	1.1	2.4	2.7	0.5	0.5	0.5	23.9	8.9	6.0
TKA	3,336	2.5	4.7	4.6	0.0	NA	NA	0.3	0.3	0.2	10.1	4.6	5.2
VOE	3,698	3.4	4.2	5.9	2.8	2.6	2.8	0.6	0.5	0.5	16.7	11.5	8.6
China													
Baosteel	20,073	6.3	6.2	5.5	3.5	3.4	2.7	0.7	0.6	0.6	11.0	10.8	10.7

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

Exhibit 69: 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*	4,020	3.3	7.5	6.2	2.2	5.3	4.5	0.9	0.9	0.8	30.2	12.0	13.8
Vale	70,895	3.8	4.5	4.9	2.7	3.3	3.7	1.6	1.5	1.4	46.4	33.6	26.9
FMG	35,128	5.6	6.5	8.8	3.5	4.0	4.8	2.0	1.9	1.9	36.5	33.1	22.4

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

Exhibit 70: 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*	10,735	4.9	6.0	5.8	3.1	4.5	4.4	1.3	1.3	1.3	27.2	21.7	22.0
BHP	1,30,253	5.9	7.3	9.9	3.3	3.9	4.7	2.5	2.6	2.5	42.5	36.2	26.4
Rio	95,464	5.3	6.8	7.9	3.2	3.9	4.3	1.7	1.6	1.5	32.0	22.9	18.1
Glencore	66,416	3.6	5.4	7.0	2.5	3.1	3.6	1.4	1.3	1.3	41.1	25.6	20.2
Anglo	39,559	5.1	6.1	7.0	2.8	3.2	3.5	1.3	1.1	1.0	26.1	18.8	14.6
South 32	11,376	4.4	4.5	5.7	2.4	2.4	2.8	1.1	1.0	0.9	26.7	23.6	17.1

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

Exhibit 71: 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*	14,433	11.7	10.6	10.3	6.0	5.6	5.4	3.3	3.5	3.7	29.3	32.3	35.4
Korea Zinc	6,690	10.2	10.1	10.0	4.9	4.8	4.6	1.1	1.0	0.9	10.8	10.2	9.6
Teck	14,827	3.3	5.1	6.0	2.0	2.2	2.1	0.7	0.6	0.6	23.4	12.7	7.7

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

Exhibit 72: 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*	14,997	6.9	5.3	6.8	3.0	3.4	4.3	2.8	2.2	1.9	40.3	41.1	27.7
China Shenhua	80,656	5.6	6.2	6.2	4.0	4.3	4.2	0.9	0.9	0.9	16.2	14.8	14.3
Banpu	2,410	3.3	5.2	6.3	2.8	2.8	2.5	1.0	0.9	0.9	30.8	18.3	14.3
Bukit Asam	2,975	3.9	4.3	5.1	2.2	2.7	3.2	1.4	1.4	1.3	43.4	31.9	22.4
Adaro Energy	6,041	3.3	5.1	6.7	1.5	2.3	2.7	1.1	1.0	1.0	36.9	21.7	15.1

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

Exhibit 73: 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*	10,075	5.8	8.0	7.1	4.2	4.8	4.5	1.5	1.3	1.1	28.0	17.1	16.8
Nalco*	1,703	4.6	9.0	5.1	2.2	4.5	2.9	1.1	1.0	0.9	25.4	11.6	19.0
Alcoa	8,269	4.7	5.1	5.2	2.7	2.5	2.4	1.4	1.1	0.9	31.2	21.2	17.7
Norsk Hydro	11,182	5.2	6.2	6.3	3.0	3.3	3.2	1.2	1.1	1.1	22.5	16.2	15.4
CHALCO	10,449	5.8	5.7	6.3	6.6	5.6	6.4	0.7	0.6	0.5	13.1	11.0	6.5
RUSAL	6,581	2.2	2.2	NA	2.3	NA	NA	0.6	0.5	NA	24.9	24.3	NA
Alumina	2,888	8.7	9.5	9.5	8.3	9.1	9.4	1.7	1.5	1.5	19.6	16.8	16.3

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

Exhibit 74: 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	690	3.4	4.3	3.1	2.5	3.0	1.7	1.1	0.8	0.7	32.8	20.4	21.9
JSHL	644	NA	3.9	4.4	NA	NA	NA	NA	0.9	0.7	NA	21.8	16.9
Acerinox	2,315	2.9	5.2	5.8	2.0	2.6	2.5	0.8	0.8	0.7	31.6	14.4	11.6
Outokumpu	1,688	2.2	4.5	5.3	1.3	1.8	1.6	0.4	0.4	0.4	22.2	9.6	7.7
Aperam	2,102	2.7	4.7	4.7	2.1	2.8	2.3	0.6	0.5	0.5	23.1	12.4	11.3

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

Metals valuation charts

Exhibit 75: Tata Steel EV/EBITDA

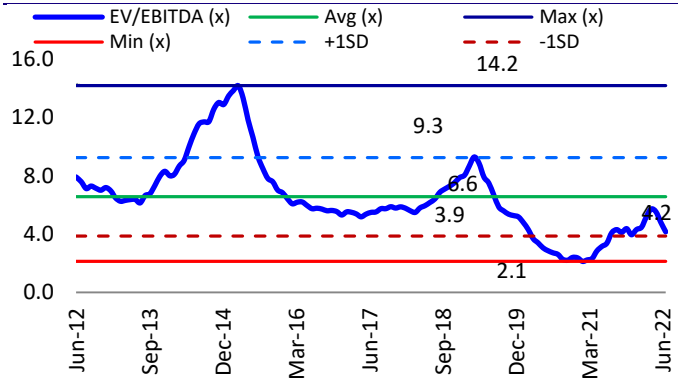


Exhibit 76: Tata Steel P/B

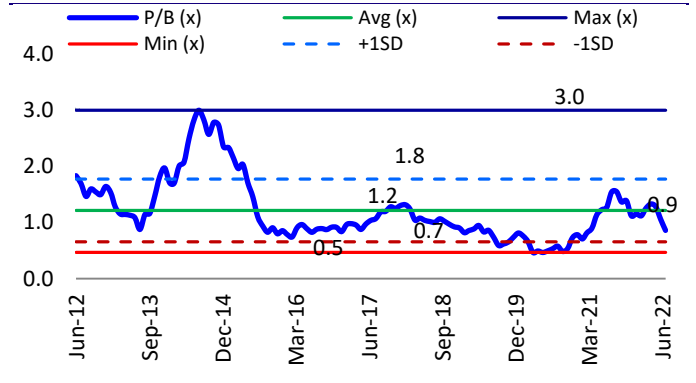


Exhibit 77: JSW Steel EV/EBITDA

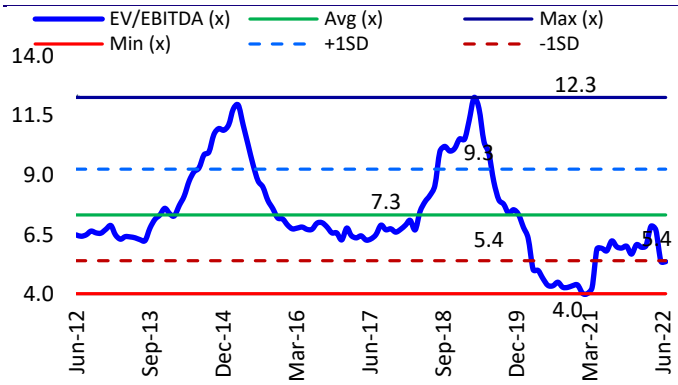


Exhibit 78: JSW Steel P/B

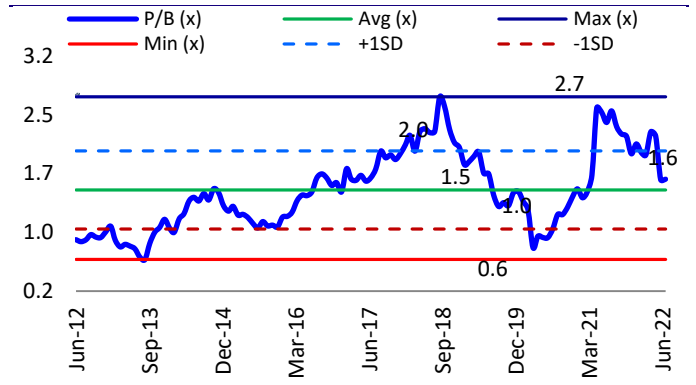


Exhibit 79: JSPL EV/EBITDA

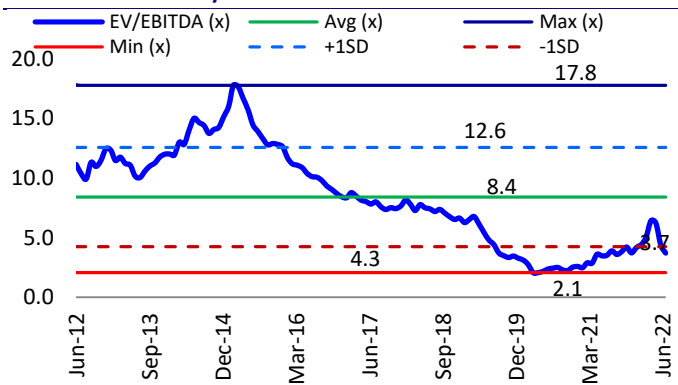


Exhibit 80: JSPL P/B

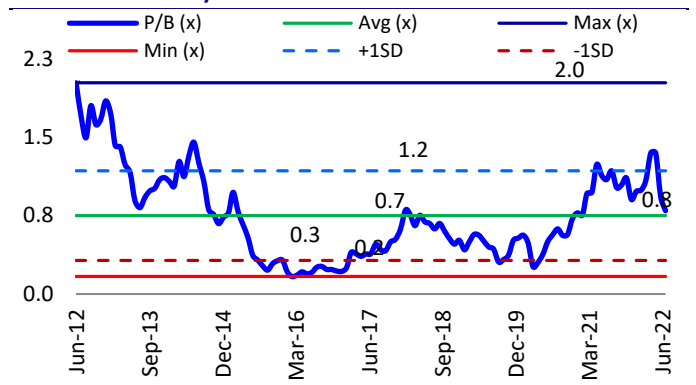


Exhibit 81: SAIL EV/EBITDA

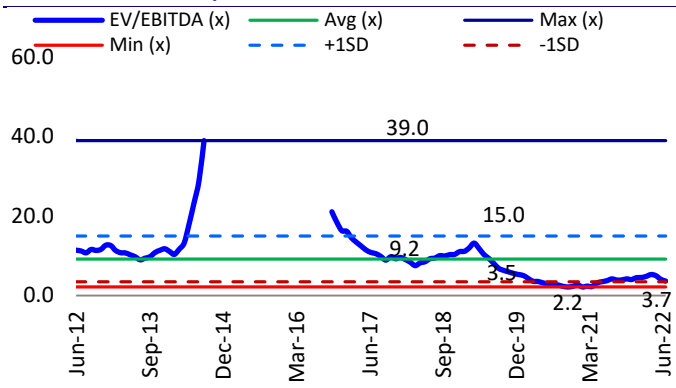


Exhibit 82: SAIL P/B

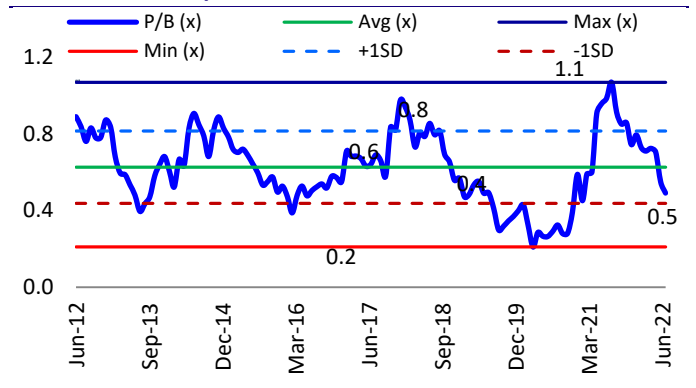


Exhibit 83: NMDC EV/EBITDA

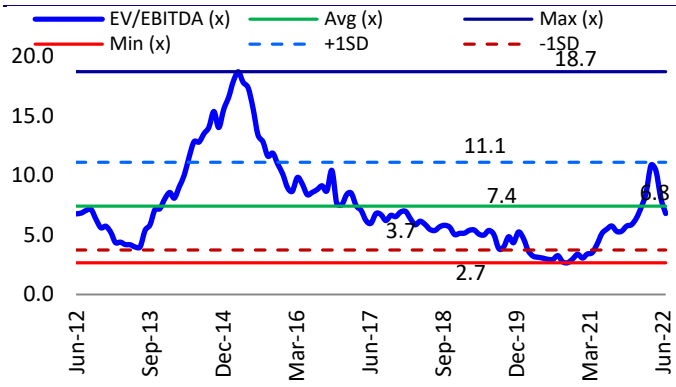


Exhibit 84: NMDC P/B

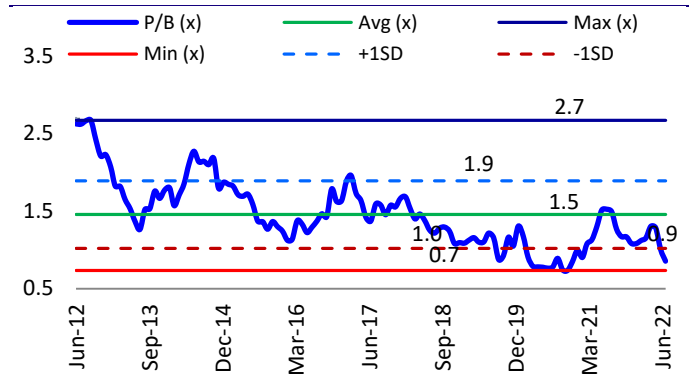


Exhibit 85: Vedanta EV/EBITDA

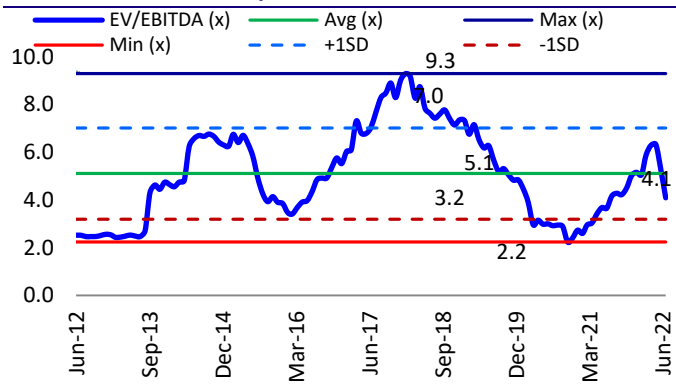


Exhibit 86: Vedanta P/B

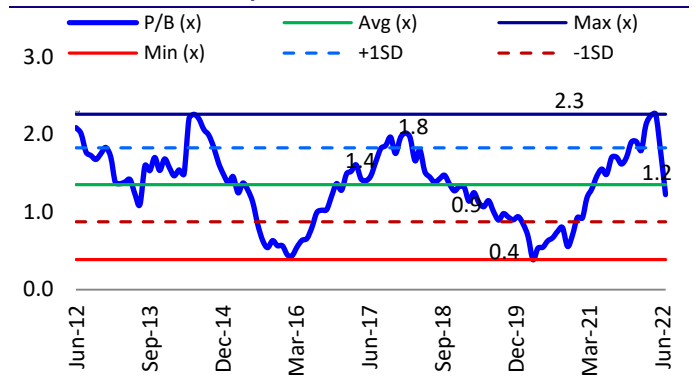


Exhibit 87: Hindustan Zinc EV/EBITDA

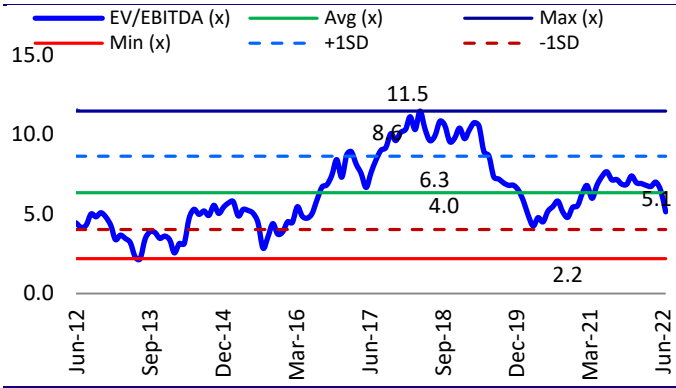


Exhibit 88: Hindustan Zinc P/B

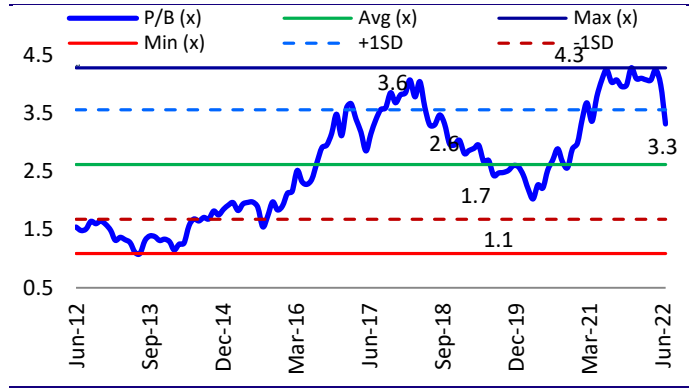


Exhibit 89: Hindalco EV/EBITDA

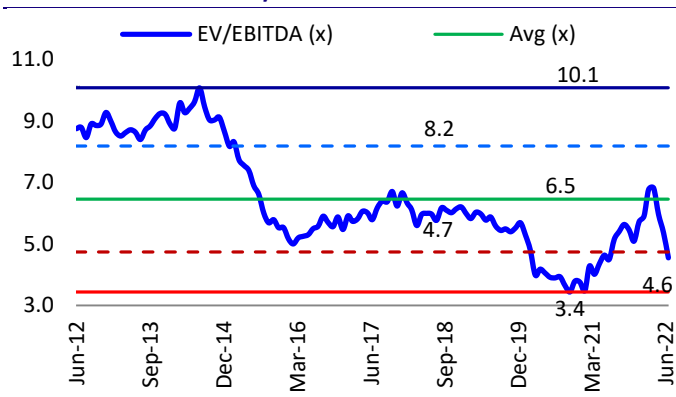


Exhibit 90: Hindalco P/B

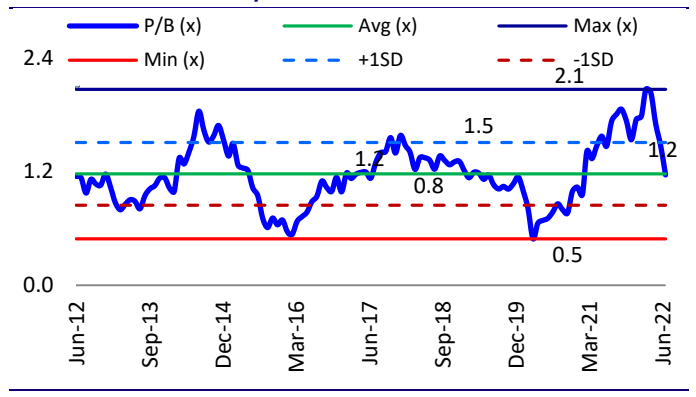


Exhibit 91: Nalco EV/EBITDA

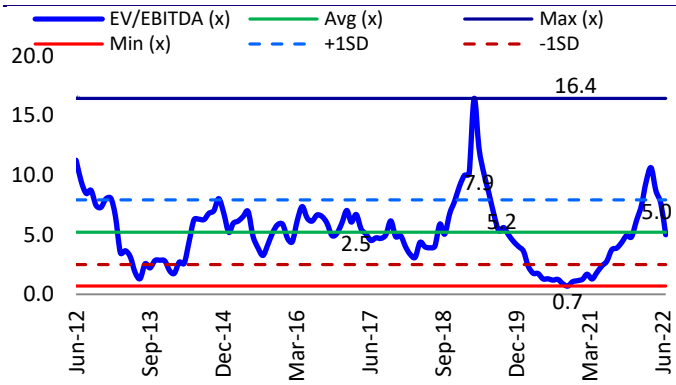
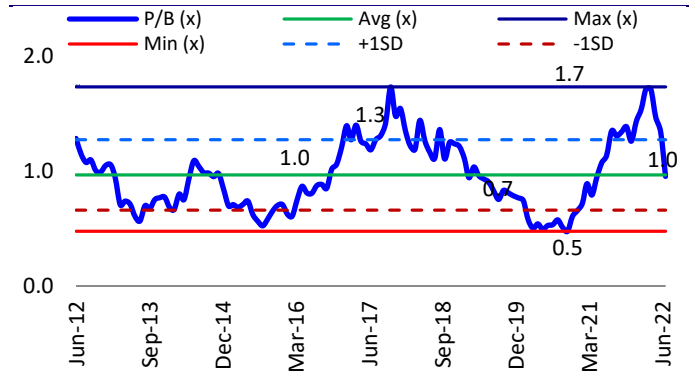


Exhibit 92: Nalco P/B



Performance of metal and mining shares

Exhibit 93: 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	3	7	-11	-33	-21	-26	3	5	-11	-25	-12	-30
JSW	2	5	1	-24	-14	-15	2	2	1	-15	-5	-19
JSP	2	6	-4	-38	-14	-11	2	4	-5	-29	-5	-15
SAIL	1	5	-1	-35	-35	-42	1	3	-1	-26	-26	-46
Non-ferrous												
Vedanta	2	6	-24	-47	-32	-15	3	4	-24	-38	-23	-19
Hindalco	0	5	-8	-39	-28	-9	0	2	-8	-30	-19	-13
Nalco	-1	5	-19	-42	-33	-14	-1	3	-19	-33	-24	-18
Mining												
Coal	2	6	-3	-1	23	32	2	4	-3	8	32	28
Hind. Zinc	3	10	-6	-20	-18	-18	3	7	-6	-11	-10	-22
NMDC	0	0	-9	-37	-21	-35	0	-2	-9	-29	-12	-39
SENSEX	0	2	0	-8	-9	4	-	-	-	-	-	-
NIFTY	0	2	0	-9	-9	3	-	-	-	-	-	-
BSE Metals index	2	5	-8	-31	-18	-15	-	-	-	-	-	-

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

Period	Absolute performance (%)					
	1D	1W	1M	3M	6M	12M
Steel						
India						
Tata	3	7	-11	-33	-21	-26
JSW	2	5	1	-24	-14	-15
JSP	2	6	-4	-38	-14	-11
SAIL	1	5	-1	-35	-35	-42
Japan						
JFE	1	3	-9	-9	-8	18
Nippon Steel	1	2	-9	-5	-3	9
Kobe Steel	0	1	-12	11	3	-11
Korea						
POSCO	0	0	-18	-19	-25	-32
Hyundai Steel	-2	0	-21	-20	-28	-38
US						
Nucor	0	3	-9	-28	-5	12
US Steel	0	-2	-20	-51	-31	-28
Steel Dynamics	0	0	-11	-20	6	8
Europe						
ArcelorMittal	-2	-2	-21	-24	-30	-18
SSAB A	-2	2	-18	-26	-16	5
thyssenkrupp	-2	-1	-36	-23	-48	-41
voestalpine	-3	-2	-25	-17	-40	-42
China						
Baosteel	-2	-2	-9	-17	-21	-21

Exhibit 95: Performance of global Metal stocks on an absolute basis (%)

Period	Absolute performance (%)					
	1D	1W	1M	3M	6M	12M
Iron ore mining						
NMDC	0	0	-9	-37	-21	-35
Vale	0	1	-11	-21	-10	-34
FMG	-3	-1	-21	-23	-17	-29
Diversified miners						
Vedanta	2	6	-24	-47	-32	-15
BHP	-3	-5	-18	-18	-2	-14
Rio	-1	-1	-16	-22	-8	-22
Glencore	-2	-2	-16	-20	7	33
Anglo	-4	-5	-25	-35	-17	-10
South 32	-3	-7	-24	-28	-7	24
Zinc						
Hind. Zinc	3	10	-6	-20	-18	-18
Korea Zinc	0	-4	-17	-26	-10	9
Teck	0	-7	-35	-33	-9	17
Coal						
Coal	2	6	-3	-1	23	32
China Shenhua	-2	-3	-20	-15	19	46
Banpu	2	6	-1	16	15	16
Bukit Asam	-2	5	-1	8	39	82
Adaro Energy	0	2	-17	-10	16	126
Aluminum						
Hindalco	0	5	-8	-39	-28	-9
Nalco	-1	5	-19	-42	-33	-14
Alcoa	0	0	-15	-47	-28	20
Norsk Hydro	0	0	-17	-37	-22	-2
CHALCO	-2	-2	-16	-37	-33	-37
RUSAL	-4	4	-7	-25	-55	-33
Alumina	-4	-1	-7	-25	-22	-7
Stainless steel						
JSL	1	4	-8	-49	-47	-14
JSHL	4	7	-4	-44	-41	-2
Acerinox	-2	-2	-25	-10	-30	-20
Outokumpu	-3	-6	-29	-19	-38	-32
Aperam	-3	-2	-26	-28	-48	-44

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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