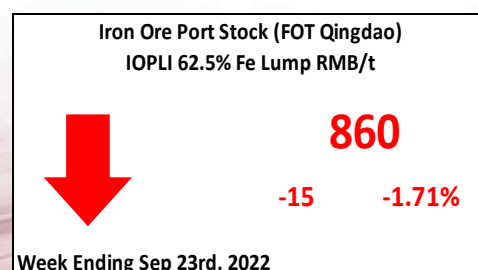
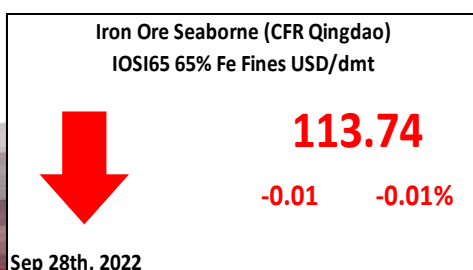
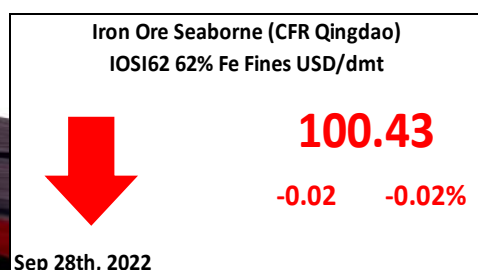
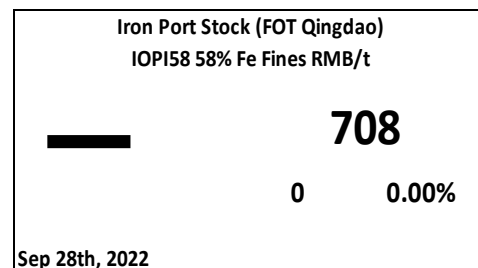
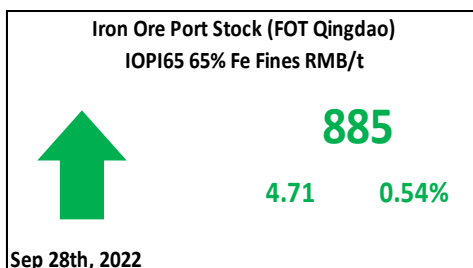
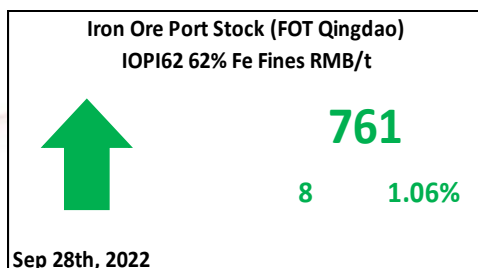


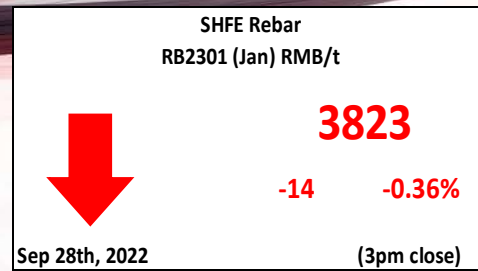
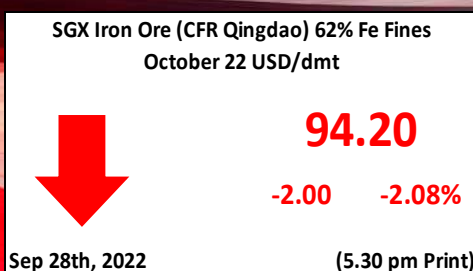
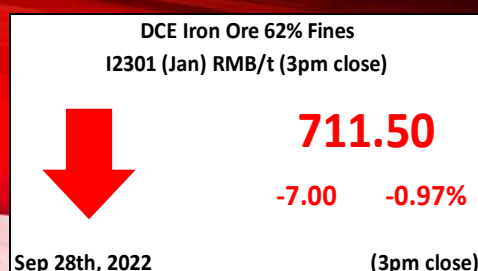


MMi Dashboard

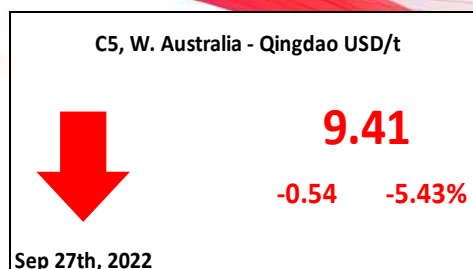
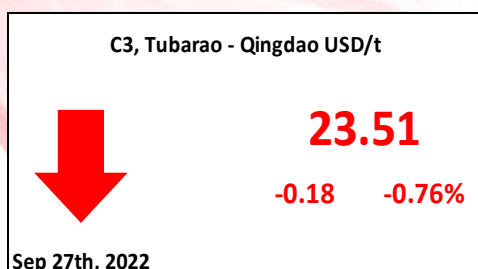
Iron Ore Price Indices



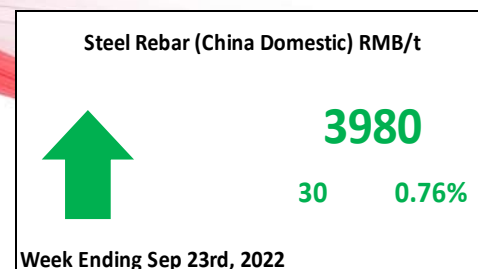
Exchange Traded Contracts



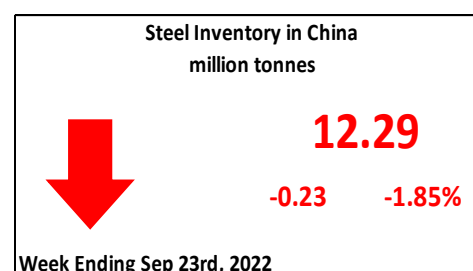
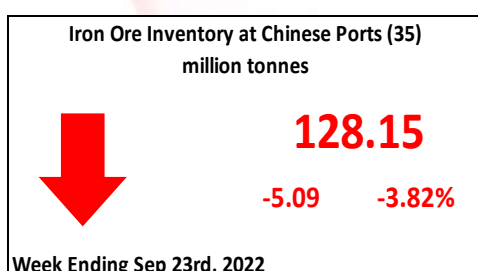
Freight Rates



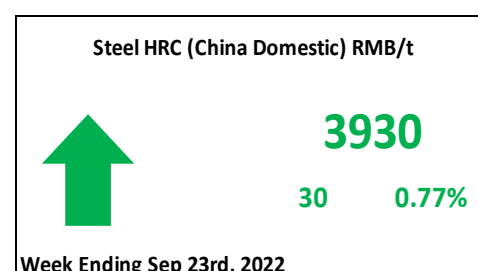
Steel Price



Inventory Levels



Steel Price



IRON ORE PORT STOCK INDEX (IOPI)

Sep 28th, 2022		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne ¹						
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low ²	High ²	Price	Change	Change %	MTD	YTD	Low ²	High ²
IOPI62	62% Fe Fines	761	8	1.1%	771	898	587	1083	99.16	0.55	0.6%	104.23	127.28	84.25	159.06
IOPI58	58% Fe Fines	708	0	0.0%	690	751	454	907	93.00	-0.51	-0.5%	93.81	106.68	64.78	134.15
IOPI65	65% Fe Fines	885	5	0.5%	876	1057	811	1265	115.93	0.01	0.0%	118.93	150.55	111.38	187.25

IRON ORE SEABORNE INDEX (IOSI)

MARKET COMMENTARY

Sep 28th, 2022		CFR Qingdao, USD/dry tonne							DCE iron ore futures declined by 0.49% today, the main contract closed 711.5. Some traders were active attitude to sell. More steel mills tended to purchasing. Total transactions returned to active PBF at Shandong port dealt 745 yuan/mt; increased 2-10 yuan/mt than yesterday. PBF at Tangshan port dealt 758-763 yuan/mt. Affected by the restrictions on sintering machines in Tangshan this week, the demand for lump ore continued to increase. According to SMM research, on September 28, the blast furnace operating rate according to SMM statistics was 94.06%, a week-on-week increase of 0.45%. According to the average daily hot metal output of sample steel plants, it is estimated that the national steel plant's average daily hot metal production increased by 32,500 tons week-on-week. In addition, the inventory replenishment continued before the National Day, driving the demand for iron ore. It is expected that iron ore prices will continue to fluctuate in the short term.
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low ²	High ²	
IOSI62	62% Fe Fines	100.43	-0.02	-0.02%	106.35	130.24	93.75	159.45	
IOSI65	65% Fe Fines	113.74	-0.01	-0.01%	117.25	151.16	102.05	185.82	

IRON ORE PORT LUMP INDEX (IOPLI)

Week Ending Sep 23rd, 2022		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne ³						
Index	Fe Content	Price	W-o-W	Change %	MTD	YTD	Low ²	High ²	Price	W-o-W	Change %	MTD	YTD	Low ²	High ²
IOPLI62	62.5% Fe Lump	860	-15	-1.7%	885	1104	730	1405	110.35	-2.83	-2.50%	115.45	151.07	101.31	199.00

IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

Week Ending Sep 23rd, 2022				RMB/tonne (excluding tax) ³				USD/tonne (excluding tax) ³			
Province	Region	Product	Basis	This week	Change %	Low ²	High ²	This week	Change %	Low ²	High ²
Hebei	Hanxing	66% Fe Concentrate	Dry	924	1.7%	779	1645	132.71	0.90%	110.31	255.69
Hebei	Qian'an	65% Fe Concentrate	Dry	885	-2.2%	780	1630	127.11	-2.93%	110.51	251.57
Liaoning	Anshan	65% Fe Concentrate	Wet	710	0.0%	620	1310	101.98	-0.73%	87.40	202.32
Shandong	Zibo	65% Fe Concentrate	Dry	947	1.6%	800	1752	136.02	0.86%	122.55	272.32

Week Ending Sep 23rd, 2022

	This week	Change %	Low ²	High ²
China Mines Concentrate Composite Index RMB/WT	840.07	0.50%	706.36	1511.22

¹ Exchange rate applied: RMB/USD = 6.7522 ² Last 12 months
³ Weekly exchange rate applied: RMB/USD = 6.96236

IRON ORE PORT INDEX, FOT QINGDAO (RMB/WT)



IRON ORE SEABORNE INDEX, CFR QINGDAO (USD/DMT)



IRON ORE PORT STOCK INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Sep 28th, 2022		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne						
Index	Fe Content	May	June	July	August	MTD	QTD	YTD	May	June	July	August	MTD	QTD	YTD
IOPI62	62% Fe Fines	981	934	770	781	771	771	898	136.86	130.13	106.01	106.64	104.23	104.82	127.28
IOPI58	58% Fe Fines	841	823	682	685	690	687	751	118.11	115.45	94.43	94.05	93.81	94.02	106.68
IOPI65	65% Fe Fines	1152	1086	915	878	876	889	1057	161.44	151.89	126.73	120.31	118.93	121.53	150.55

IRON ORE SEABORNE INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

FREIGHT RATES

Sep 28th, 2022		CFR Qingdao, USD/dry tonne							Sep 27th, 2022						
Index	Fe Content	May	June	July	August	MTD	QTD	YTD	FREIGHT RATES - DRY BULK US\$/wet tonne						
									Route	Designation	Change	Change %	Low ²	High ²	
IOSI62	62% Fe Fines	141.17	131.96	110.07	110.64	106.35	107.57	130.24	W. Australia - Qingdao	C5	9.41	-0.54	-5.43%	3.57	16.77
IOSI65	65% Fe Fines	166.30	154.17	124.60	112.53	117.25	119.66	151.16	Tubarao - Qingdao	C3	23.51	-0.18	-0.76%	6.70	36.40

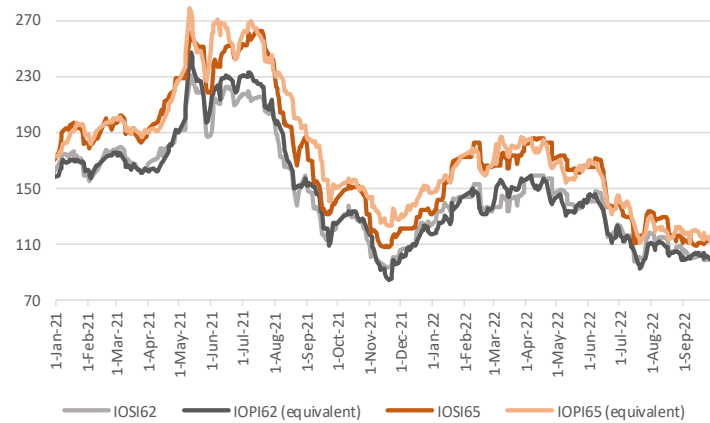
IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending Sep 23rd, 2022		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne ¹						
Index	Fe Content	May	June	July	August	MTD	QTD	YTD	May	June	July	August	MTD	QTD	YTD
IOPLI62	62.5% Fe Lump	1232	1189	906	900	885	893	1104	164.53	159.78	120.36	118.50	115.45	117.34	151.07

IRON ORE INDEX PREMIUMS/DISCOUNTS

Sep 28th, 2022				PORT STOCK INDEX (RMB/WT)		Sep 28th, 2022				SEABORNE INDEX (USD/DMT)	
Index	Fe Content	Spread to IOPI62		% Spread to IOPI62		Index	Fe Content	Spread to IOSI62		% Spread to IOSI62	
IOPI58	58% Fe Fines	-53		-6.96%		IOSI65	65% Fe Fines	13.31		13.25%	
IOPI65	65% Fe Fines	124		16.29%							

IRON ORE INDEX COMPARISONS (USD/DMT)



CHINA DOMESTIC COMPOSITE MINES INDEX (RMB/Wet Tonne, including VAT)



IRON ORE BRAND SPOT PRICE ASSESSMENTS

Sep 28th, 2022	PORT STOCK INDEX (RMB/WT)			Sep 28th, 2022	SEABORNE INDEX (USD/DMT)		
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	704	8	-57	Roy Hill	95.95	0.00	-4.48
SIMEC Fines	631	8	-130	SIMEC Fines	92.45	0.00	-7.98
PB Fines	731	8	-30	PB Fines	96.70	0.00	-3.73
Newman Fines	729	8	-32	Newman Fines	99.60	0.00	-0.83
MAC Fines	711	8	-50	MAC Fines	96.70	0.00	-3.73
Jimblebar Blended Fines	625	8	-136	Jimblebar Blended Fines	89.10	0.00	-11.33
Carajas Fines	941	8	180	Carajas Fines	130.00	0.00	29.57
Brazilian SSF	723	9	-38	Brazilian SSF	104.20	0.00	3.77
Brazilian Blend Fines	744	8	-17	Brazilian Blend Fines	105.85	0.00	5.42
RTX Fines	643	8	-118	RTX Fines	90.35	0.00	-10.08
West Pilbara Fines	673	8	-88	West Pilbara Fines	94.70	0.00	-5.73

Sep 28th, 2022	PORT STOCK INDEX (RMB/WT)		
	Price	Change	Diff to IOPI58
SSF	708	0	0
FMG Blended Fines	717	0	9
Robe River	717	0	9
Western Fines	720	0	12
Atlas Fines	714	0	6
Yandi	701	0	-7

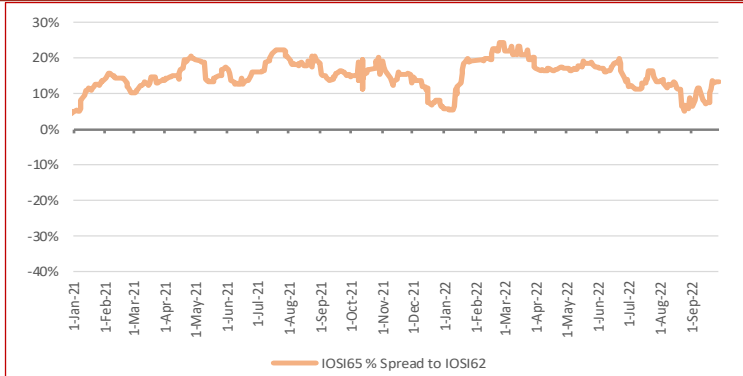
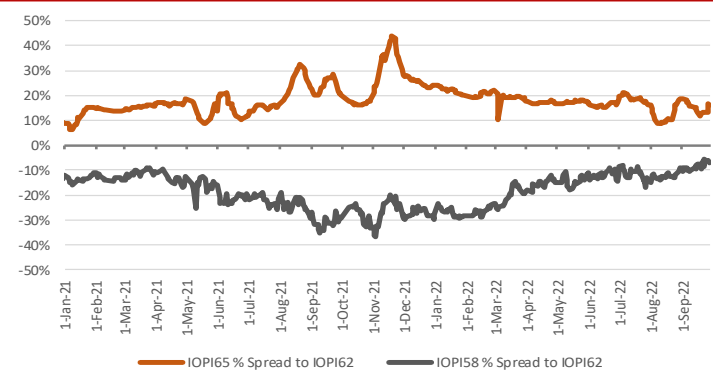
IRON ORE INDEX NORMALISATION DIFFERENTIALS

Port Stock Index Product Differentials (RMB/wet tonne)				Seaborne Index Product Differentials (USD/dry tonne)			
	Applicable range	Value	Change		Applicable range	Value	Change
1% Fe	High Grade Fe 60 - 63%	5.00	0.00	1% Fe	High Grade Fe 60 - 63%	3.75	-0.25
	High Grade Fe 63 - 64%	31.00	-5.00		High Grade Fe 63 - 64%	0.75	0.00
	High Grade Fe 64 - 65%	31.00	-5.00		High Grade Fe 64 - 65%	0.75	0.00
	High Grade Fe 65 - 65.5%	31.00	-5.00		High Grade Fe 65 - 65.5%	0.75	0.00
1% Alumina	Low Grade Fe	10.00	0.00	1% Alumina	High Fe Grade Al <2.25%	0.25	0.00
	High Fe Grade Al <2.25%	20.00	5.00		High Fe Grade Al 2.25-4%	2.00	-0.25
	High Fe Grade Al 2.25-4%	5.00	0.00				
	Low Fe Grade Al <2.25%	33.00	2.00				
1% Silica	Low Fe Grade Al 2.25-4%	10.00	0.00	1% Silica	High Fe Grade Si <4%	2.75	0.00
	High Fe Grade Si <4%	16.00	1.00		High Fe Grade Si 4 - 6.5%	1.50	-0.25
0.01% Phosphorus	High Fe Grade Si <4%	16.00	1.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	1.25	-0.25
	High Fe Grade 0.09%<P<0.115%	5.00	0.00		High Fe Grade 0.115%<P<0.15%	3.25	0.00
	High Fe Grade 0.115%<P<0.15%	5.00	0.00		Low Fe Grade 0.09%<P<0.1%	5.00	0.00
	Low Fe Grade 0.09%<P<0.1%	5.00	0.00				

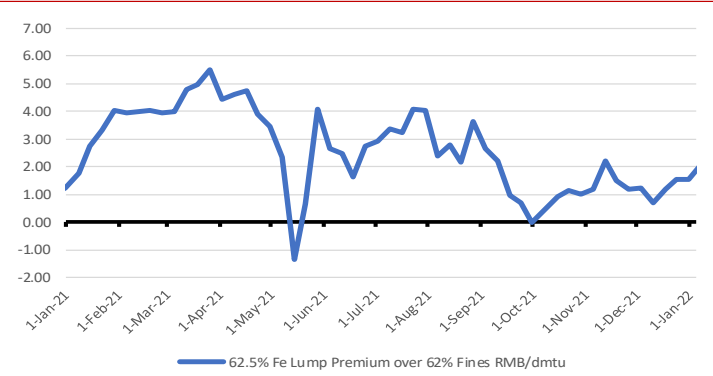
Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

Port	Value	Change	Port	Value	Change	Port	Value	Change	Port	Value	Change
Bayuquan	-100.00	0.00	Fangcheng	-25.00	0.00	Lanshan	0.00	0.00	Rizhao	0.00	0.00
Beilun	0.00	0.00	Jiangyin	-30.00	0.00	Lianyungang	0.00	0.00	Shekou	0.00	0.00
Caofeidian	-10.00	0.00	Jingtang	-5.00	0.00	Majishan	0.00	0.00	Taichang	-40.00	0.00
Dalian	0.00	0.00	Lanqiao	0.00	0.00	Qingdao	0.00	0.00	Tianjin	-20.00	0.00

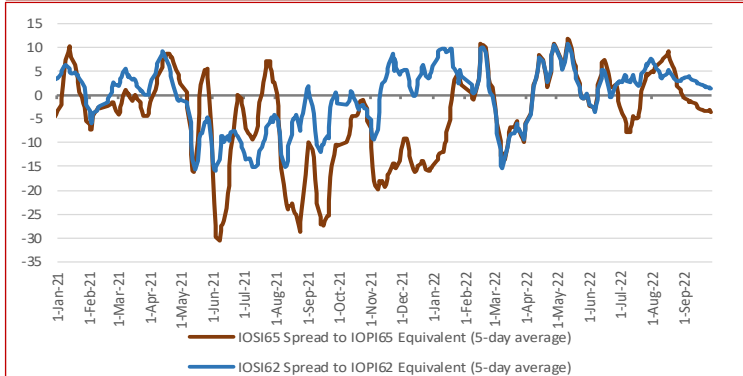
IRON ORE INDEX PREMIUMS/DISCOUNTS



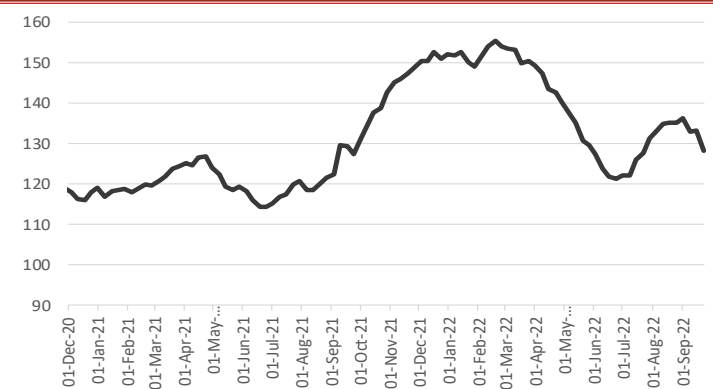
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



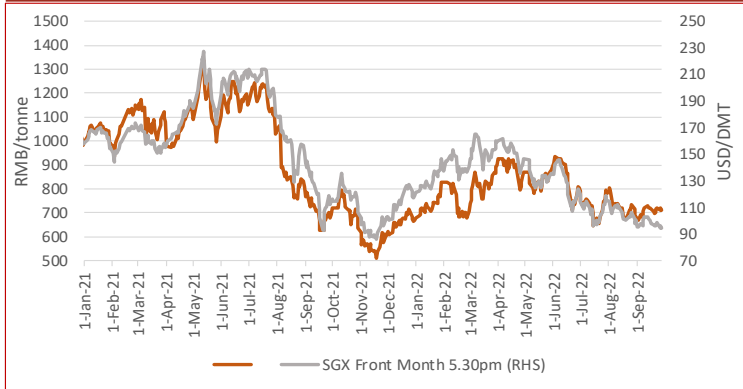
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



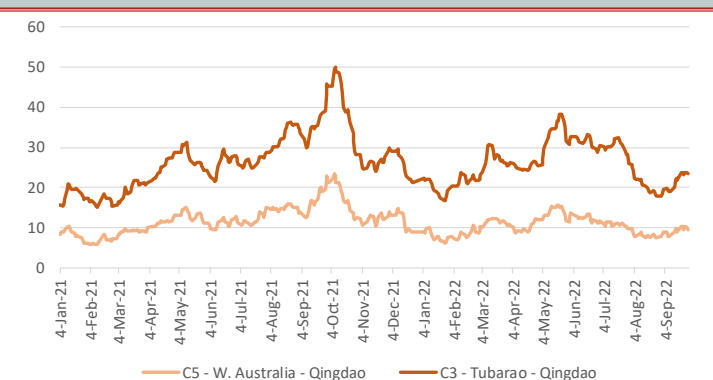
IRON ORE PORT INVENTORIES (MILLION TONNES)

Week Ending Sep 23rd, 2022				
Province	This week	Change %	Low ²	High ²
Jingtang	11.53	-6.03%	9.84	19.20
Qingdao	24.26	-2.77%	9.41	26.24
Caofeidian	11.87	-5.04%	9.05	16.29
Tianjin	10.44	1.56%	7.14	12.97
Rizhao	17.91	-1.32%	9.44	19.26
Total (35 Ports)	128.15	-3.82%	98.80	155.39

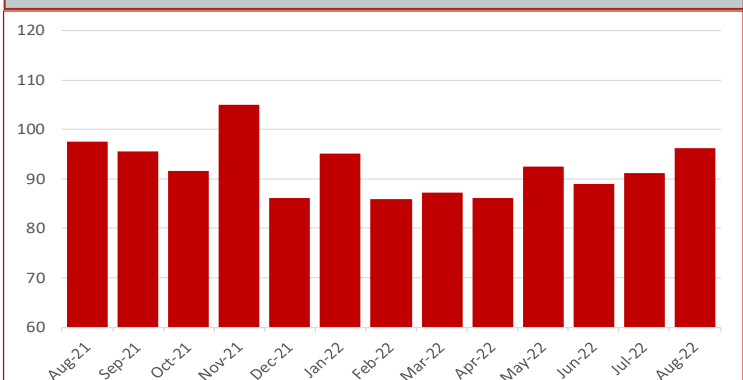
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	Sep 28th, 3pm close			Sep 28th, 5:30pm		
Contract	I2301	Change	Change %	Oct. 22	Change	Change %
Closing Price	711.50	-7.00	-0.97%	94.20	-2.00	-2.08%
Vol traded ('000 lots)	58.04	-14.49	-19.98%	4.05	-0.53	-11.55%
Open positions ('000 lots)	71.93	-0.46	-0.64%	24.97	-0.58	-2.26%
Day Low	708.5	2.00	0.28%	94.00	-1.55	-1.62%
Day High	726.5	4.50	0.62%	97.90	0.45	0.46%

DRY BULK FREIGHT RATES (USD/MT)



TOTAL CHINA IRON ORE IMPORT VOLUMES (MILLION TONNES)



STEEL SPOT MARKET PRICES—CHINA

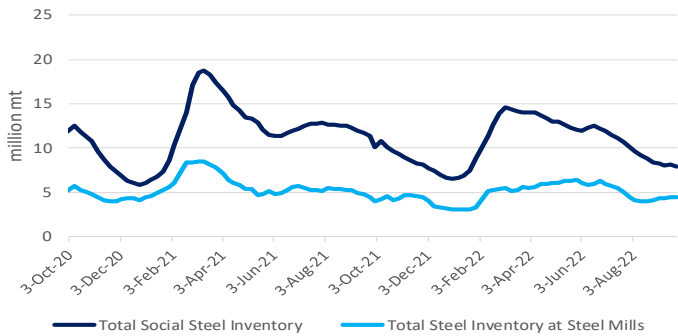
Steel Spot Market RMB/tonne			
Product	2022/9/23	Change	Change %
ReBar HRB400 φ18mm	3,980	30	0.76%
Wirerod Q300 φ6.5mm	4,210	0	0.00%
HRC Q235/SS400 5.5mm*1500*C	3,930	30	0.77%
CRC SPCC/ST12 1.0mm*1250*2500	4,400	50	1.15%
Medium & Heavy Plate Q235B 20mm	4,060	-30	-0.73%
GI ST02Z 1.0mm*1000*C	4,660	10	0.22%
Colour Coated Plate	7,550	0	0.00%

CHINESE STEEL MILL PROFITABILITY

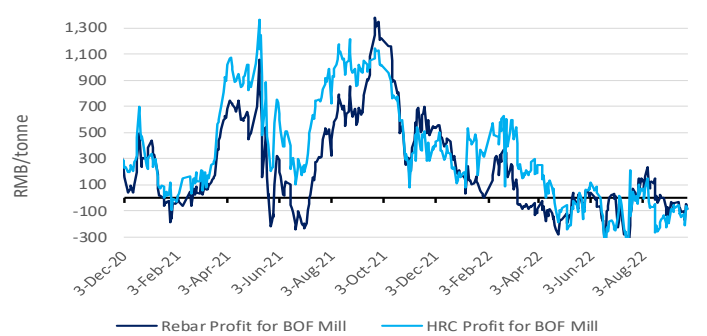
SMM Tracking of Steel Mill P&L - Rebar and Hot-rolled Coil (RMB/tonne)			
Category	Price	Change (WoW)	Note
MMi (Fe 62%), USD/mt excluding tax	99.20	-4	Mmi CFR Equivalent index for 1st Feb
Coke	2,910	0	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	3,090	-50	steel scrap (6mm) in Zhangjiagang, ext. tax
Billet Cost	3,549	-16	Q234, incl. tax
Rebar cost - Blast furnace	4,044	-18	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	-4	108	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	4,009	-19	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	-89	59	based on Shanghai prices, incl. tax

Note: 1. Costs in the table are calculated based on today's market prices and factored our management, sales, financial and depreciations fees.
2. The cost refers to average cost in the industry based on SMM's survey of small, medium and large mills in China

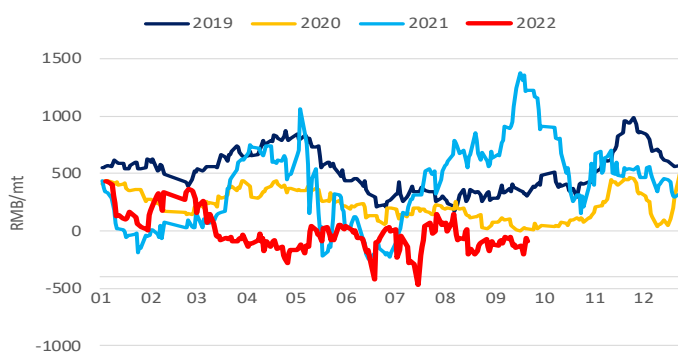
CHINESE STEEL INVENTORIES



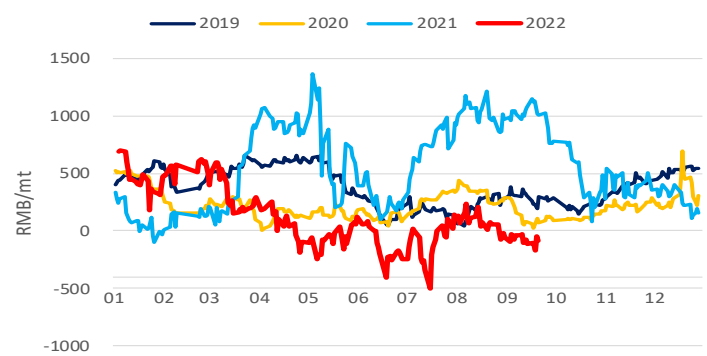
CHINESE STEEL MILL PROFITABILITY



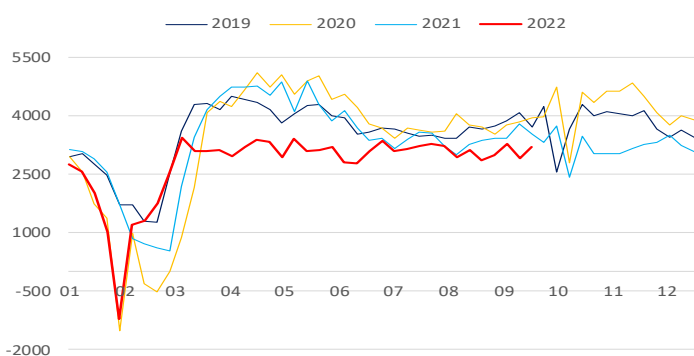
CHINESE STEEL MILL PROFITABILITY—Rebar



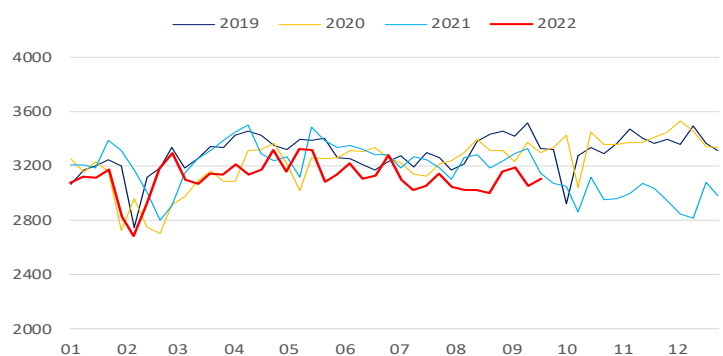
CHINESE STEEL MILL PROFITABILITY—Hot-rolled Coil



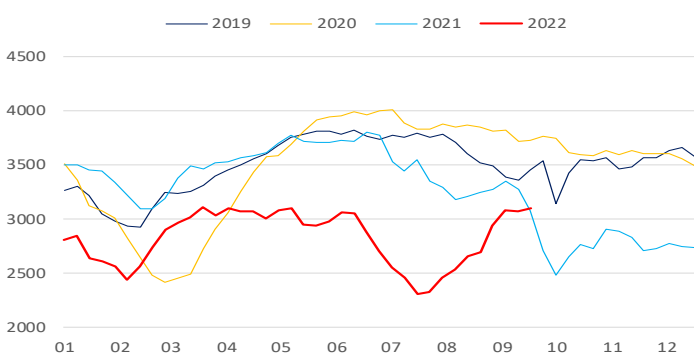
CHINESE STEEL CONSUMPTION—Rebar



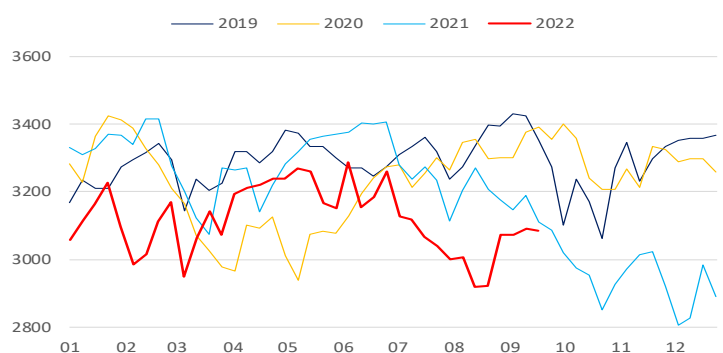
CHINESE STEEL CONSUMPTION—Hot-rolled Coil



CHINESE STEEL PRODUCTION—Rebar



CHINESE STEEL PRODUCTION—Hot-rolled Coil



IRON ORE INDEX SPECIFICATIONS, COMPILATION RATIONALE AND DATA EXCLUSIONS

Iron Ore Index Specifications (Port and Seaborne)					Iron Ore Index Compilation Rationale and Data Exclusions
	65% Fe Fines	62% Fe Fines	58% Fe Fines	62.5% Fe Lump	MMi iron ore indices are compiled from data provided by companies that are part of the iron ore supply chain and involved in spot market transactions. The indices are calculated using detailed transaction-level data submitted to MMi by these companies. This data is normalised to the appropriate specifications and screened to remove outliers before volume-weighted average prices are calculated from the remaining core set of data. For more details on MMi's iron ore methodology please download the guide published on our website at: www.mmiprices.com
Fe %	65.00	62.00	58.00	62.50	
Alumina %	1.40	2.25	2.25	1.50	
Silica%	1.50	4.00	5.50	3.50	
Phosphorus %	0.06	0.09	0.05	0.08	
Sulphur %	0.01	0.02	0.02	0.02	
Moisture %	8.00	8.00	9.00	4.00	
Sizing	Granular size below 10mm for at least 90% of cargo; maximum of 40% below 150 micron		Size below 6.3mm max 15% Size above 31.15mm max 25%		
Pricing Point	Qingdao Port (FOT and CFR respectively)		FOT Qingdao Port		
Timing (Seaborne)	Loading within 4 weeks, Delivery within 8 weeks		Delivery within 2 weeks		
Payment Terms	L/C at sight		L/C at sight or CAD		

Data Exclusions*			
Port Index	62%	58%	65%
Seaborne index	0	0	0
Lump Index 62.5	0		

* Number of price submissions for iron ore indices that were excluded from index calculations today as they were anomalous and could not be verified

IRON ORE DOMESTIC CONCENTRATE INDEX CALCULATION METHODOLOGY

The compilation method for price index generally refers to the compilation method of CPI price index and other price indices, breakdown the price data and calculate the average value according to a certain method, taking the vertical axis as the regional composite index (average of different grade index) and the horizontal axis as the grade composite index (average of different regional index), a total composite index for domestic ore can be output ultimately. The process system is also adopted in the calculation i.e. each sub-index can be obtained as well.

AVERAGE IRON ORE SPECIFICATIONS APPLIED FOR BRAND PRICE ASSESSMENTS

PORT STOCK BRANDS						SEABORNE BRANDS					
Sep 28th, 2022	Specifications applied for 62% brand assessments					Specifications applied for 62% brand assessments					
	Fe	Alumina	Silica	Phos	Moisture		Fe	Alumina	Silica	Phos	Moisture
Roy Hill	60.88%	2.35%	4.45%	0.055%	9.26%	Roy Hill	60.70%	2.30%	4.90%	0.055%	8.00%
SIMEC Fines	60.00%	2.30%	6.30%	0.060%	6.00%	SIMEC Fines	60.00%	2.30%	6.30%	0.060%	6.00%
PB Fines	61.64%	2.31%	3.87%	0.099%	9.45%	PB Fines 62%	62.00%	2.60%	4.30%	0.090%	9.50%
Newman Fines	62.49%	2.31%	3.98%	0.090%	7.72%	Newman Fines	62.30%	2.40%	4.30%	0.095%	8.00%
MAC Fines	60.43%	2.38%	4.64%	0.078%	7.57%	MAC Fines	60.80%	2.35%	4.40%	0.075%	7.80%
Jimblebar Blended Fines	60.87%	2.95%	4.53%	0.111%	7.32%	Jimblebar Blended Fines	60.50%	3.10%	4.80%	0.120%	7.80%
Carajas Fines	64.90%	1.39%	1.82%	0.080%	7.78%	Carajas Fines	65.10%	1.50%	1.70%	0.080%	8.50%
Brazilian SSF	62.00%	1.00%	6.50%	0.040%	6.00%	Brazilian SSF	62.00%	1.00%	6.50%	0.040%	6.00%
Brazilian Blend Fines	62.56%	1.58%	4.79%	0.091%	8.72%	Brazilian Blend Fines	63.00%	1.50%	5.00%	0.070%	7.00%
RTX Fines	61.00%	3.10%	4.50%	0.135%	7.50%	RTX Fines	61.00%	3.10%	4.50%	0.135%	7.50%
West Pilbara Fines	60.10%	2.30%	4.70%	0.075%	8.50%	West Pilbara Fines	60.10%	2.30%	4.70%	0.075%	8.50%
Sep 28th, 2022	Specifications applied for 58% brand assessments										
	Fe	Alumina	Silica	Phos	Moisture						
SSF	56.49%	3.20%	6.19%	0.065%	9.18%						
FMG Blended Fines	58.20%	2.43%	5.54%	0.057%	8.29%						
Robe River	56.44%	3.16%	5.73%	0.042%	8.44%						
Western Fines	57.88%	2.87%	7.50%	0.062%	7.45%						
Atlas Fines	58.00%	1.85%	5.50%	0.090%	9.00%						
Yandi	56.87%	1.58%	6.41%	0.042%	9.53%						

BLOOMBERG TICKERS

PORT STOCK INDICES				SEABORNE INDICES	
	FOT Qingdao (RMB/wet tonne)		CFR Qingdao Equivalent (USD/dry tonne)		CFR Qingdao (USD/DMT)
IOPI62	IRCNQ001		IRCNQ004		IRCN0034
IOPI58	IRCNQ002		IRCNQ005		IRCN0035
IOPI65	IRCNQ003		IRCNQ006		
IOPLI62	IRCN0036		IRCN0037		

CONTACT US

MMi Singapore Office Details: Level 28, Manulife Tower, 8 Cross Street Singapore. Tel: + 65 6850 7629 E: prices@mmiprices.com
SMM Singapore Office Details: Level 28, Manulife Tower, 8 Cross Street Singapore. Tel: + 65 6850 7630 E: service.en@smm.cn
SMM Shanghai Office Details: 9th FL, Building 9, Lujiazui Software Park, No.20, Lane 91, Pudong, Shanghai Tel: +86 021 5155 0306 E: service.en@smm.cn

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