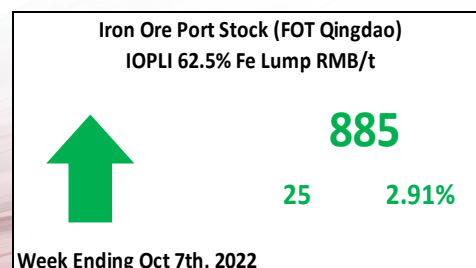
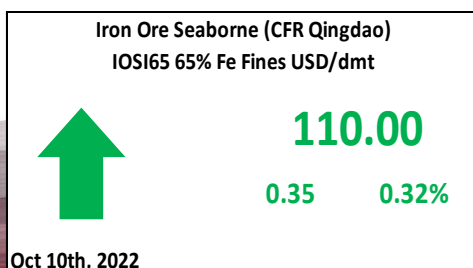
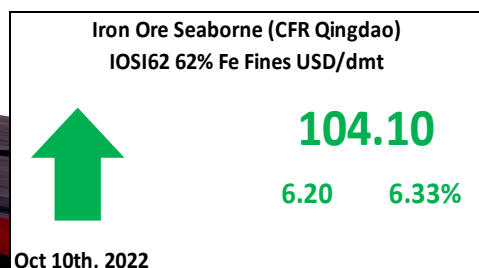
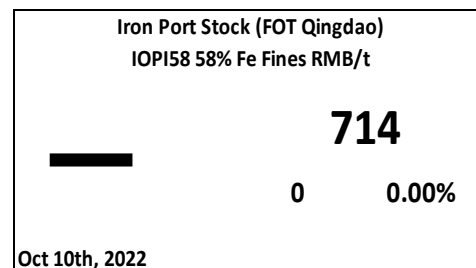
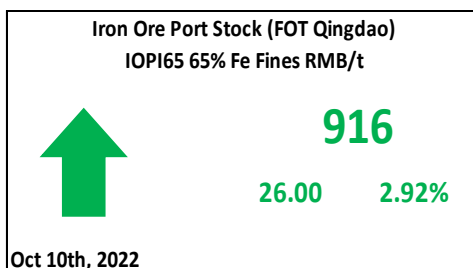
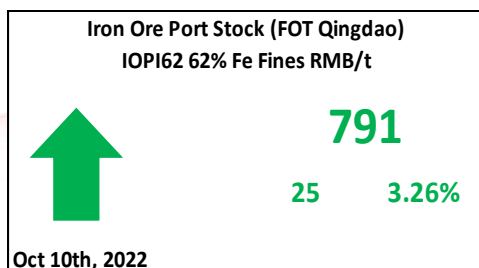


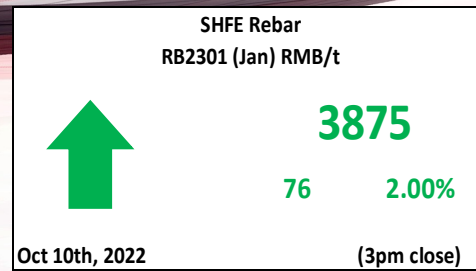
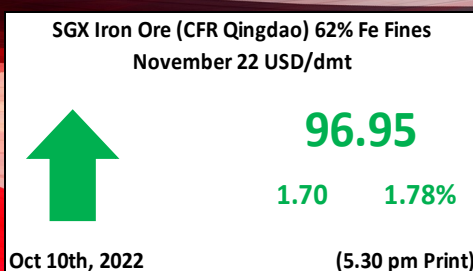
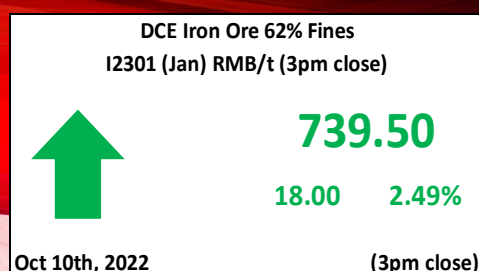


MMi Dashboard

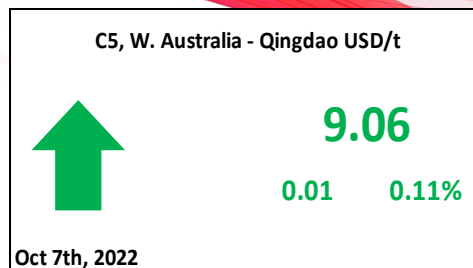
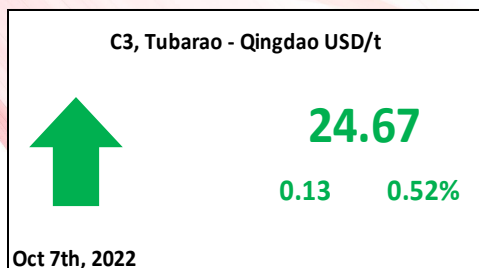
Iron Ore Price Indices



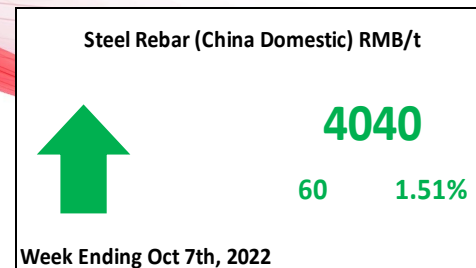
Exchange Traded Contracts



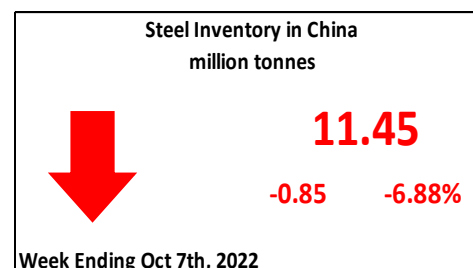
Freight Rates



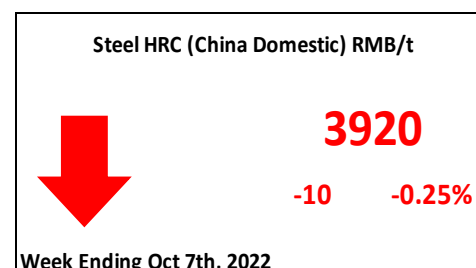
Steel Price



Inventory Levels



Steel Price



IRON ORE PORT STOCK INDEX (IOPI)

Oct 10th, 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	791	25	3.3%	771	896	587	1083	103.38	3.40	3.4%	104.00	126.84	84.25	159.06
IOPI58	58% Fe Fines	714	0	0.0%	691	750	454	907	93.97	0.01	0.0%	93.82	106.47	64.78	134.15
IOPI65	65% Fe Fines	916	26	2.9%	878	1054	811	1265	120.32	3.53	3.0%	118.86	150.01	111.38	187.25

IRON ORE SEABORNE INDEX (IOSI)

MARKET COMMENTARY

Oct 10th, 2022		CFR Qingdao, USD/dry tonne							DCE iron ore futures rose by 2.21% today, the main contract closed 739.5. More transactions in the market. PBF at Shandong port dealt 763-768 yuan/mt, increase 3-13yuan/mt. PBF at Tangshan port dealt 775 yuan/mt, increase 5 yuan/mt. According to SMM statistics, the global iron ore shipments this week totaled 30.47 million tons, down 4.5% month on month. Among them, 13.27 million tons were sent from Australia to China, a decrease of 17% month on month; Brazil sent 3.42 million tons to China, down 8.3% month on month. Overseas shipments have declined for two consecutive periods. In terms of demand, the steel plant's inventory was at a low level in the same period after the consumption of raw materials during the holiday, and under the guidance of the opening of futures, the steel plant began to replenish its inventory one after another. And the downstream demand margin improved after the festival. The current average daily molten iron output of the steel plant is high, driving the demand for iron ore. Considering the recent overhaul of a few steel plants due to production restriction, loss and other reasons, and the important meeting in October is approaching or affecting the production of steel plants, it is expected that the ore price will be
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low ²	High ²	
IOSI62	62% Fe Fines	104.10	6.20	6.33%	105.60	129.42	93.75	159.45	
IOSI65	65% Fe Fines	110.00	0.35	0.32%	116.49	150.07	102.05	185.82	

IRON ORE PORT LUMP INDEX (IOPLI)

Week Ending Oct 7th, 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	885	25	2.9%	885	1098	730	1405	111.51	1.16	1.05%	115.02	150.00	101.31	199.13

IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

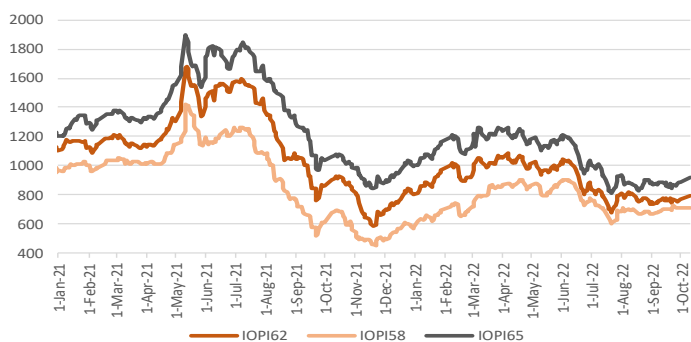
Week Ending Oct 7th, 2022				RMB/tonne (excluding tax) ³				USD/tonne (excluding tax) ³			
Province	Region	Product	Basis	This week	Change %	Low ²	High ²	This week	Change %	Low ²	High ²
Hebei	Hanxing	66% Fe Concentrate	Dry	905	-2.1%	779	1645	128.14	-3.45%	110.31	255.69
Hebei	Qian'an	65% Fe Concentrate	Dry	935	5.6%	780	1630	132.39	4.15%	110.51	251.57
Liaoning	Anshan	65% Fe Concentrate	Wet	710	0.0%	620	1310	100.53	-1.42%	87.40	202.32
Shandong	Zibo	65% Fe Concentrate	Dry	928	-2.0%	800	1752	131.40	-3.40%	122.55	272.32

Week Ending Oct 7th, 2022

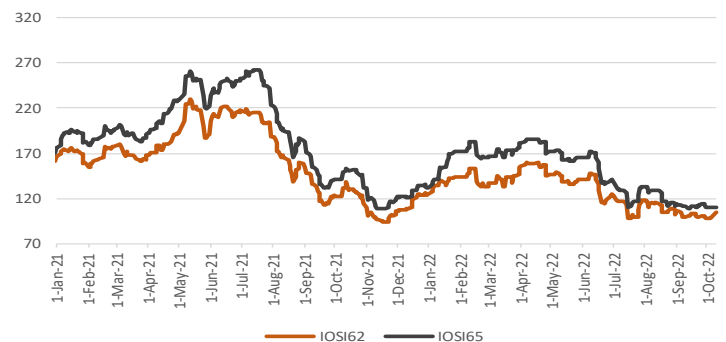
	This week	Change %	Low ²	High ²
China Mines Concentrate Composite Index RMB/WT	846.10	0.72%	706.36	1511.22

¹ Exchange rate applied: RMB/USD = 6.7522 ² Last 12 months
³ Weekly exchange rate applied: RMB/USD = 7.06254

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

Oct 10th, 2022		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne						
Index	Fe Content	June	July	August	September	MTD	QTD	YTD	June	June	August	September	MTD	QTD	YTD
IOPI62	62% Fe Fines	934	770	781	759	771	771	896	130.13	106.01	106.64	101.14	104.00	104.64	126.84
IOPI58	58% Fe Fines	823	682	685	697	691	688	750	115.45	94.43	94.05	93.56	93.82	94.02	106.47
IOPI65	65% Fe Fines	1086	915	878	875	878	889	1054	151.89	126.73	120.31	117.19	118.86	121.36	150.01

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

FREIGHT RATES

Oct 10th, 2022		CFR Qingdao, USD/dry tonne							FREIGHT RATES - DRY BULK US\$/wet tonne						
Index	Fe Content	June	July	August	September	MTD	QTD	YTD	Route	Designation	Change	Change %	Low ²	High ²	
IOSI62	62% Fe Fines	131.96	110.07	110.64	101.12	105.60	106.96	129.42	W. Australia - Qingdao	C5	9.06	0.01	0.11%	3.57	16.77
IOSI65	65% Fe Fines	154.17	124.60	112.53	111.57	116.49	118.95	150.07	Tubarao - Qingdao	C3	24.67	0.13	0.52%	6.70	36.40

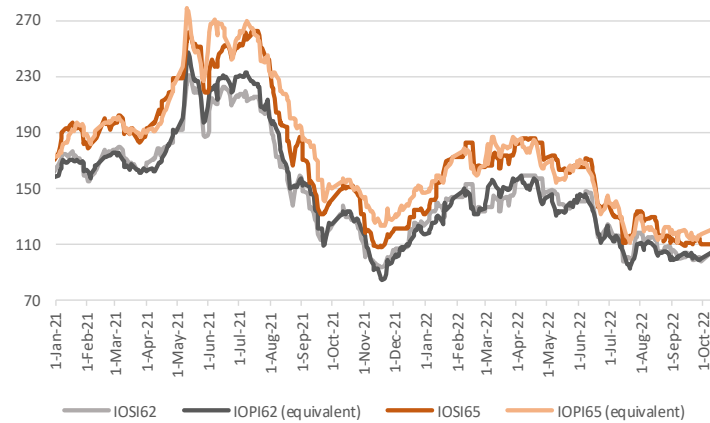
IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending Oct 7th, 2022		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne ¹						
Index	Fe Content	June	July	August	September	MTD	QTD	YTD	June	July	August	September	MTD	QTD	YTD
IOPLI62	62.5% Fe Lump	1189	906	900	877	885	893	1098	159.78	120.36	118.50	112.75	115.02	116.92	150.00

IRON ORE INDEX PREMIUMS/DISCOUNTS

Oct 10th, 2022				PORT STOCK INDEX (RMB/WT)		Oct 10th, 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	-77	-9.73%	IOSI65	65% Fe Fines	5.90	5.67%				
IOPI65	65% Fe Fines	125	15.80%								

IRON ORE INDEX COMPARISONS (USD/DMT)



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



IRON ORE BRAND SPOT PRICE ASSESSMENTS

Oct 10th, 2022	PORT STOCK INDEX (RMB/WT)			Oct 10th, 2022	SEABORNE INDEX (USD/DMT)		
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	734	25	-57	Roy Hill	99.60	6.20	-4.50
SIMEC Fines	662	26	-129	SIMEC Fines	96.10	6.20	-8.00
PB Fines	760	24	-31	PB Fines	100.35	6.20	-3.75
Newman Fines	759	25	-32	Newman Fines	103.25	6.20	-0.85
MAC Fines	741	25	-50	MAC Fines	100.35	6.20	-3.75
Jimblebar Blended Fines	655	25	-136	Jimblebar Blended Fines	92.75	6.20	-11.35
Carajas Fines	971	25	180	Carajas Fines	133.65	6.20	29.55
Brazilian SSF	753	25	-38	Brazilian SSF	107.85	6.20	3.75
Brazilian Blend Fines	773	24	-18	Brazilian Blend Fines	109.50	6.20	5.40
RTX Fines	674	25	-117	RTX Fines	94.00	6.20	-10.10
West Pilbara Fines	703	25	-88	West Pilbara Fines	98.35	6.20	-5.75

Oct 10th, 2022	PORT STOCK INDEX (RMB/WT)		
	Price	Change	Diff to IOPI58
SSF	714	0	0
FMG Blended Fines	723	0	9
Robe River	723	0	9
Western Fines	726	0	12
Atlas Fines	720	0	6
Yandi	707	0	-7

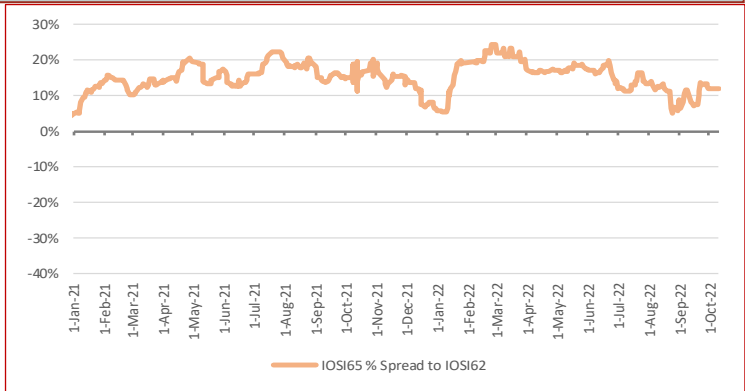
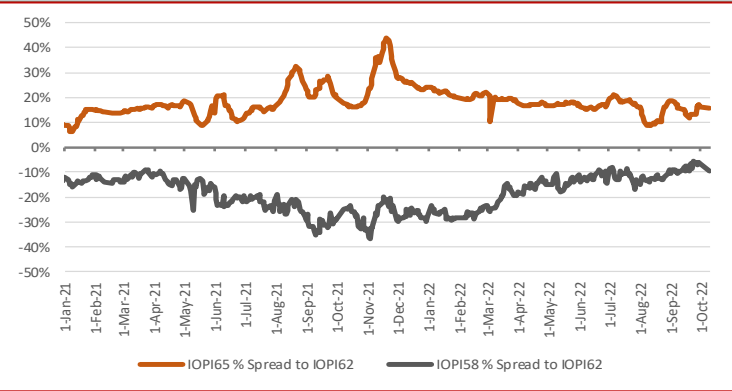
IRON ORE INDEX NORMALISATION DIFFERENTIALS

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%	16.00	4.00	1% Fe	High Grade Fe 60 - 63%	2.75	0.00
	High Grade Fe 63 - 64%	16.00	-5.00		High Grade Fe 63 - 64%	1.25	0.00
	High Grade Fe 64 - 65%	16.00	-5.00		High Grade Fe 64 - 65%	1.25	0.00
	High Grade Fe 65 - 65.5%	16.00	-5.00		High Grade Fe 65 - 65.5%	1.25	0.00
1% Alumina	Low Grade Fe	13.00	0.00	1% Alumina	High Fe Grade Al <2.25%	0.25	0.00
	High Fe Grade Al <2.25%	35.00	5.00		High Fe Grade Al 2.25-4%	1.00	0.00
	High Fe Grade Al 2.25-4%	5.00	0.00				
	Low Fe Grade Al <2.25%	34.00	-1.00				
1% Silica	Low Fe Grade Al 2.25-4%	16.00	3.00	1% Silica	High Fe Grade Si <4%	2.50	0.00
	High Fe Grade Si <4%	19.00	1.00		High Fe Grade Si 4 - 6.5%	1.00	0.00
0.01% Phosphorus	High Fe Grade Si <4%	19.00	1.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	0.75	0.00
	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				

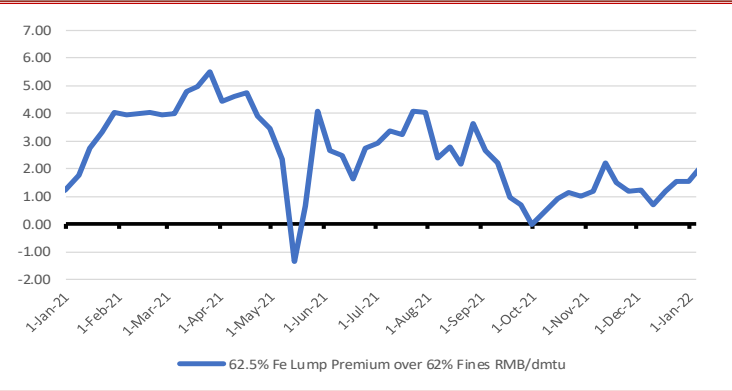
Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

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

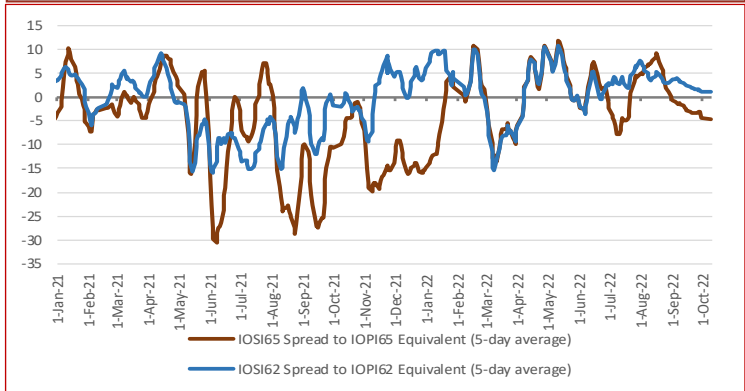
IRON ORE INDEX PREMIUMS/DISCOUNTS



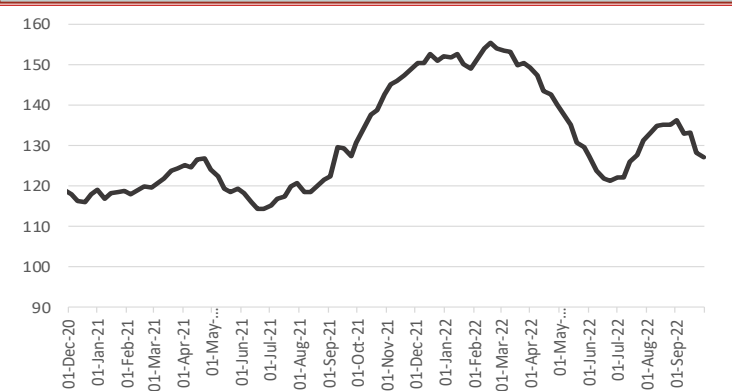
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



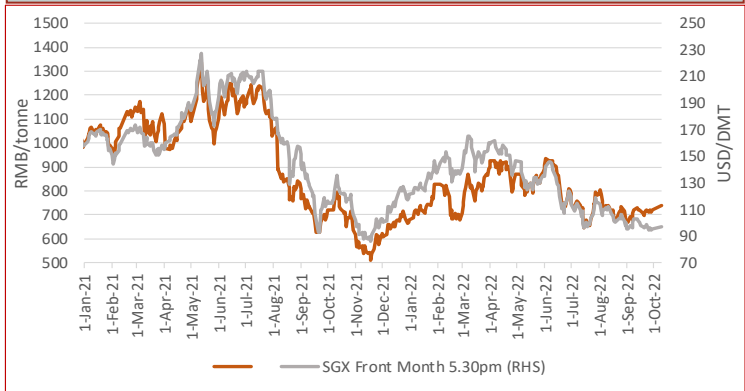
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



IRON ORE PORT INVENTORIES (MILLION TONNES)

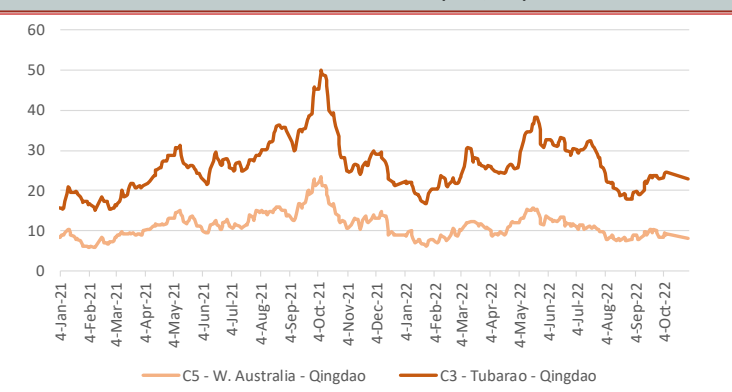
Week Ending Oct 7th, 2022

Province	This week	Change %	Low ²	High ²
Jingtang	11.88	3.04%	9.84	19.20
Qingdao	24.45	0.78%	9.41	26.24
Caofeidian	11.77	-0.84%	9.05	16.29
Tianjin	10.28	-1.53%	7.14	12.97
Rizhao	18.24	1.84%	9.44	19.26
Total (35 Ports)	127.09	-0.83%	98.80	155.39

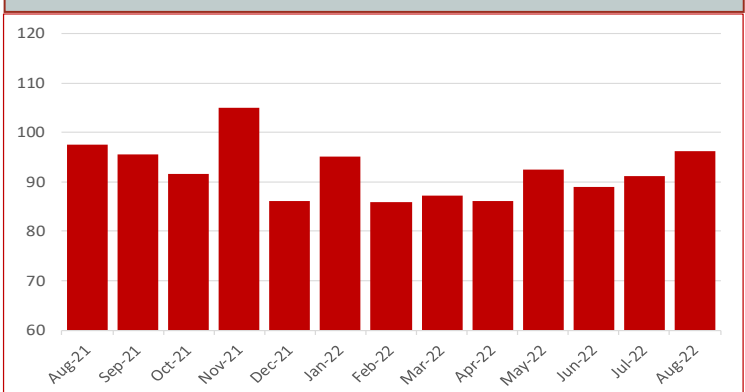
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	Oct 10th, 3pm close			Oct 10th, 5:30pm		
Contract	I2301	Change	Change %	Nov. 22	Change	Change %
Closing Price	739.50	18.00	2.49%	96.95	1.70	1.78%
Vol traded ('000 lots)	46.88	-14.04	-23.05%	6.93	3.44	98.89%
Open positions ('000 lots)	76.02	7.20	10.47%	26.96	4.21	18.50%
Day Low	728.0	12.00	1.68%	93.35	-1.40	-1.48%
Day High	744.5	14.00	1.92%	97.40	-0.15	-0.15%

DRY BULK FREIGHT RATES (USD/MT)



TOTAL CHINA IRON ORE IMPORT VOLUMES (MILLION TONNES)



STEEL SPOT MARKET PRICES—CHINA

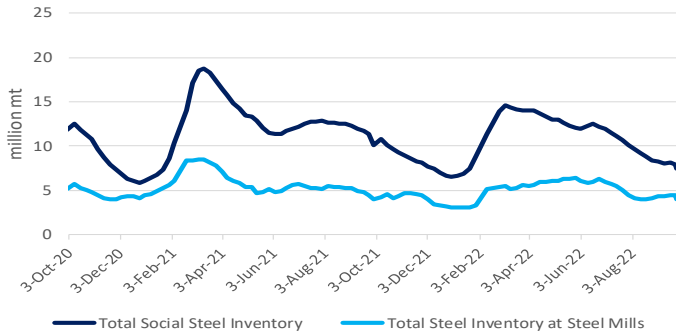
Steel Spot Market RMB/tonne			
Product	2022/10/7	Change	Change %
ReBar HRB400 φ18mm	4,040	60	1.51%
Wirerod Q300 φ6.5mm	4,300	90	2.14%
HRC Q235/SS400 5.5mm*1500*C	3,920	-10	-0.25%
CRC SPCC/ST12 1.0mm*1250*2500	4,410	10	0.23%
Medium & Heavy Plate Q235B 20mm	4,060	0	0.00%
GI ST02Z 1.0mm*1000*C	4,680	20	0.43%
Colour Coated Plate	7,550	0	0.00%

CHINESE STEEL MILL PROFITABILITY

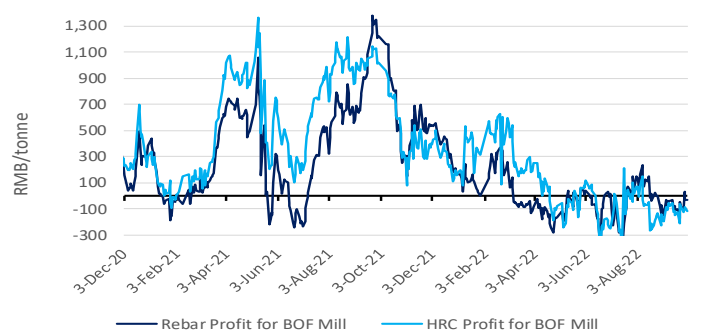
SMM Tracking of Steel Mill P&L - Rebar and Hot-rolled Coil (RMB/tonne)			
Category	Price	Change (WoW)	Note
MMi (Fe 62%), USD/mt excluding tax	99.64	0	Mmi CFR Equivalent index for 1st Feb
Coke	2,910	0	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	3,090	0	steel scrap (6mm) in Zhangjiagang, ext. tax
Billet Cost	3,566	17	Q234, incl. tax
Rebar cost - Blast furnace	4,063	19	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	-33	-29	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	4,029	19	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	-119	-29	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

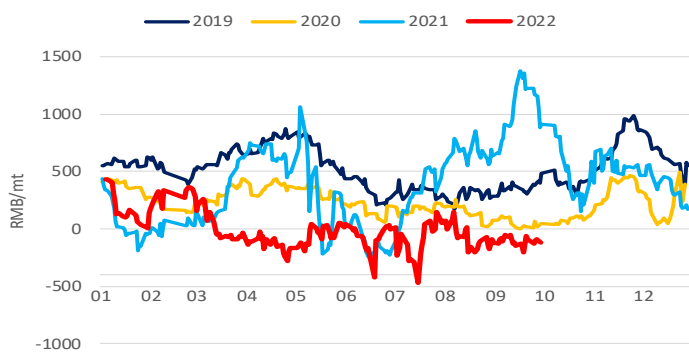
CHINESE STEEL INVENTORIES



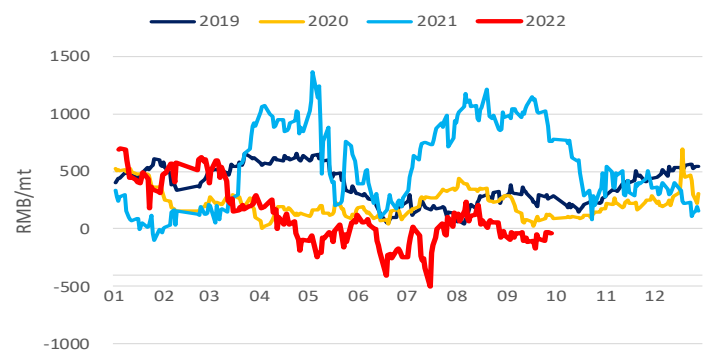
CHINESE STEEL MILL PROFITABILITY



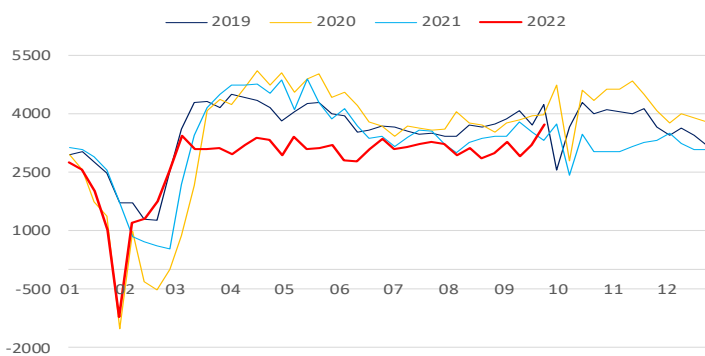
CHINESE STEEL MILL PROFITABILITY—Rebar



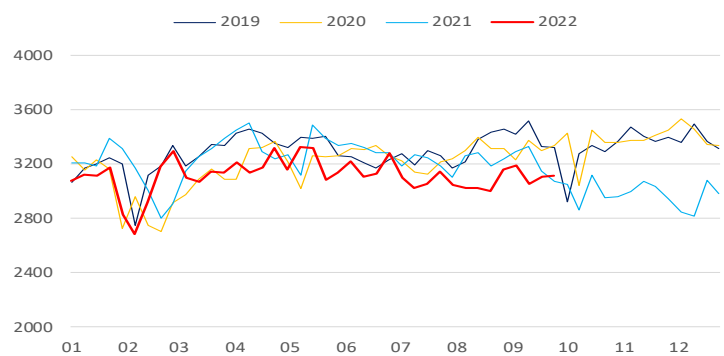
CHINESE STEEL MILL PROFITABILITY—Hot-rolled Coil



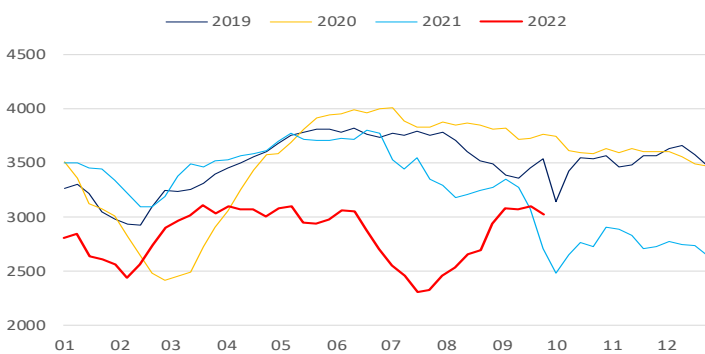
CHINESE STEEL CONSUMPTION—Rebar



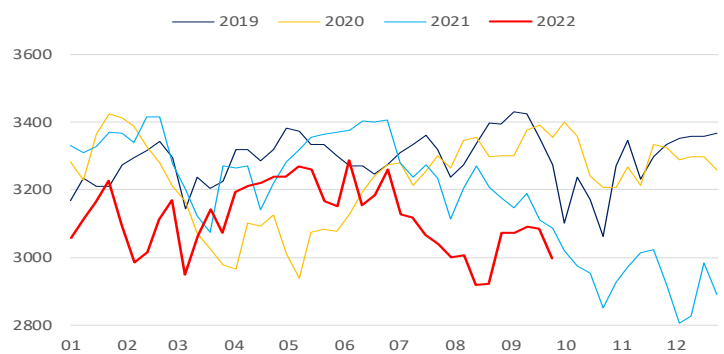
CHINESE STEEL CONSUMPTION—Hot-rolled Coil



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	
Fe %	65.00	62.00	58.00	62.50	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
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*			
	62%	58%	65%
Port Index	0	0	0
Seaborne index	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					
Oct 10th, 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%
Oct 10th, 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	IOSI62	IRCN0034	
IOPI58	IRCNQ002	IRCNQ005	IOSI65	IRCN0035	
IOPI65	IRCNQ003	IRCNQ006			
IOPLI62	IRCN0036	IRCN0037			

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