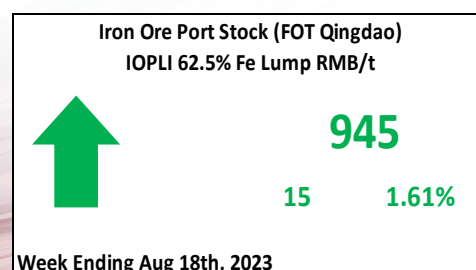
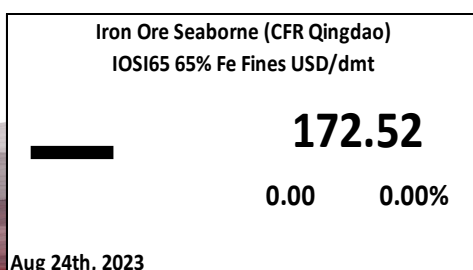
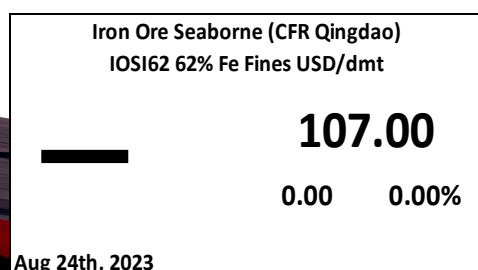
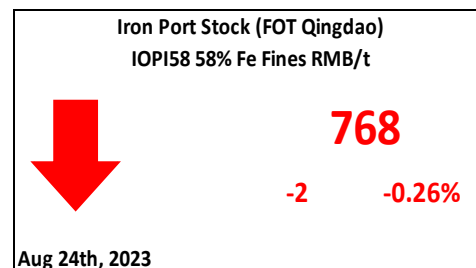
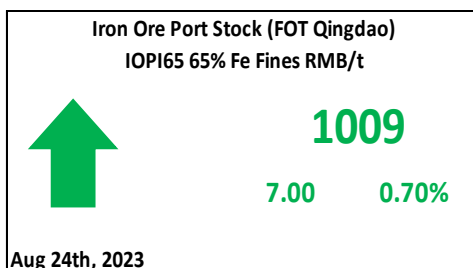
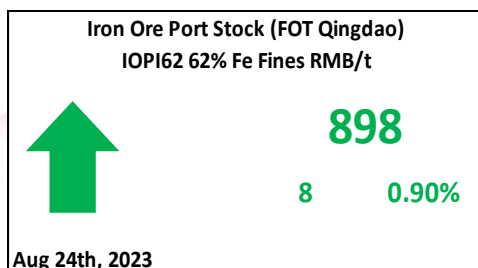


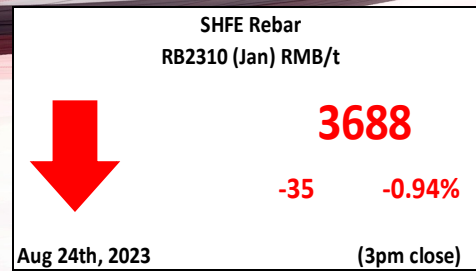
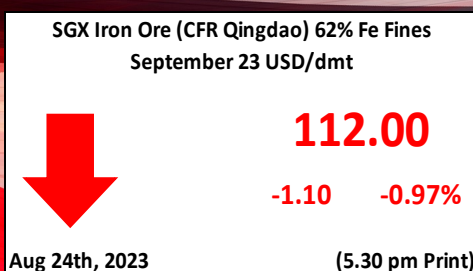
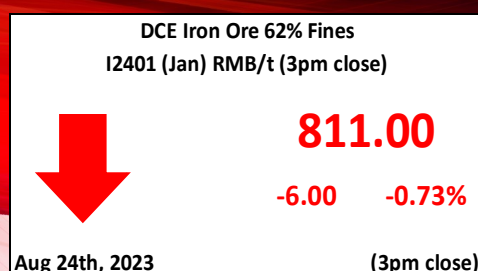


## MMi Dashboard

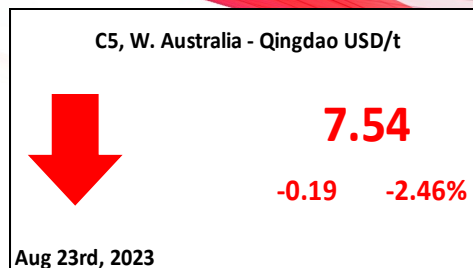
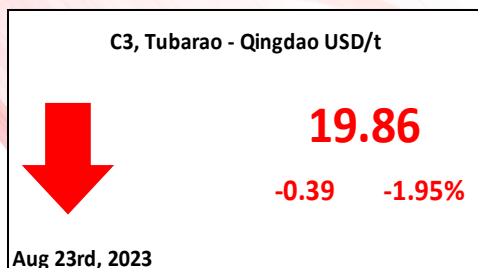
## Iron Ore Price Indices



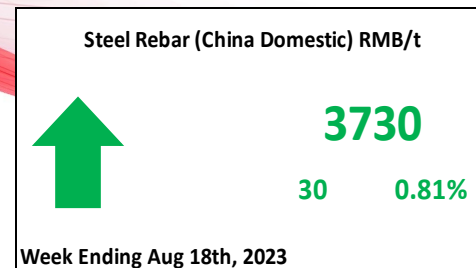
## Exchange Traded Contracts



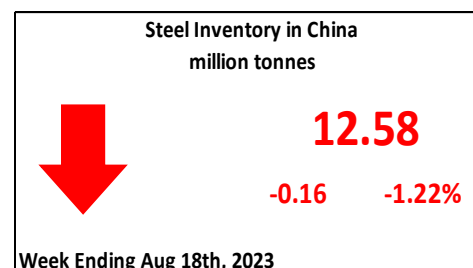
## Freight Rates



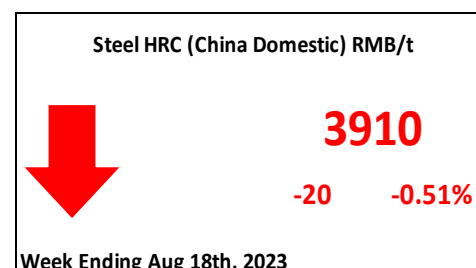
## Steel Price



## Inventory Levels



## Steel Price



## IRON ORE PORT STOCK INDEX (IOPI)

Aug 24th, 2023		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne <sup>1</sup>						
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low <sup>2</sup>	High <sup>2</sup>	Price	Change	Change %	MTD	YTD	Low <sup>2</sup>	High <sup>2</sup>
IOPI62	62% Fe Fines	898	8	0.9%	869	880	858	892	116.41	1.24	1.1%	120.06	120.58	117.93	122.93
IOPI58	58% Fe Fines	768	-2	-0.3%	813	798	761	793	100.11	-0.07	-0.1%	113.29	110.17	105.29	110.04
IOPI65	65% Fe Fines	1009	7	0.7%	981	992	970	1003	131.27	1.17	0.9%	136.05	136.43	133.84	138.73

## IRON ORE SEABORNE INDEX (IOSI)

## MARKET COMMENTARY

Aug 24th, 2023		CFR Qingdao, USD/dry tonne							DCE iron ore futures fall today by 0.86%, the main contract I2401 closed 811, some traders were negative to sell. Some steel procurement more cautious, the continuation of a small number of multi-frequency procurement strategy, total transactions remained insipid. PBF at Shandong port dealt 890-895 yuan/mt, decreased 5-15 yuan/mt over yesterday. PBF at Tangshan port dealt 895 yuan/mt, decreased 5 yuan/mt over yesterday. Today, influenced by rumors of "strict control of infrastructure investment efficiency by the central government", the ferrous metals market has weakened collectively. Coupled with the issuance of a commitment letter for restriction of production by steel mills in Xinzhou, Shanxi, the market mentality has significantly weakened, and iron ore prices have significantly decreased. However, at present, the production of pig iron is high, and the inventory of steel mills iron ore is short, with some support for ore prices. It is expected that the impact of the news will be difficult to sustain, and short-term ore prices may fluctuate at high levels.							
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low <sup>2</sup>	High <sup>2</sup>								
IOSI62	62% Fe Fines	107.00	0.00	0.00%	113.37	121.58	83.90	146.75								
IOSI65	65% Fe Fines	172.52	0.00	0.00%	129.92	140.64	94.45	172.52								

## IRON ORE PORT LUMP INDEX (IOPLI)

Week Ending Aug 18th, 2023		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne <sup>3</sup>						
Index	Fe Content	Price	W-o-W	Change %	MTD	YTD	Low <sup>2</sup>	High <sup>2</sup>	Price	W-o-W	Change %	MTD	YTD	Low <sup>2</sup>	High <sup>2</sup>
IOPLI62	62.5% Fe Lump	945	15	1.6%	933	1017	770	1026	118.47	1.94	1.66%	119.99	135.19	94.72	137.26

## IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

Week Ending Aug 18th, 2023				RMB/tonne (excluding tax) <sup>3</sup>				USD/tonne (excluding tax) <sup>3</sup>			
Province	Region	Product	Basis	This week	Change %	Low <sup>2</sup>	High <sup>2</sup>	This week	Change %	Low <sup>2</sup>	High <sup>2</sup>
Hebei	Hanxing	66% Fe Concentrate	Dry	940	-1.9%	779	1645	130.73	-2.38%	110.31	255.69
Hebei	Qian'an	65% Fe Concentrate	Dry	1080	0.5%	780	1630	150.20	-0.05%	110.51	251.57
Liaoning	Anshan	65% Fe Concentrate	Wet	800	-1.2%	620	1310	111.26	-1.74%	87.40	202.32
Shandong	Zibo	65% Fe Concentrate	Dry	945	-2.1%	800	1752	131.42	-2.57%	117.19	272.32

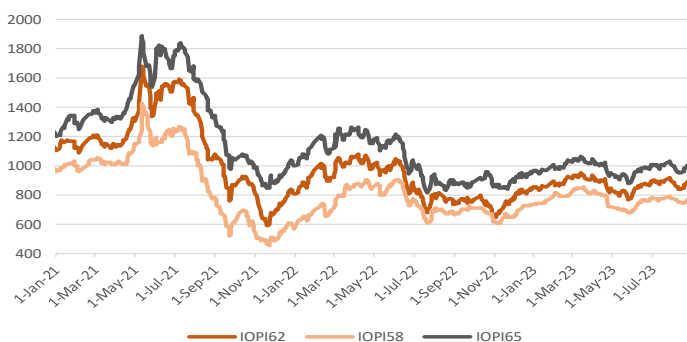
Week Ending Aug 18th, 2023

This week	Change %	Low <sup>2</sup>	High <sup>2</sup>
926.82	-0.54%	706.36	1511.22

China Mines Concentrate Composite Index RMB/WT

<sup>1</sup> Exchange rate applied: RMB/USD = 6.7522    <sup>2</sup> Last 12 months  
<sup>3</sup> Weekly exchange rate applied: RMB/USD = 6.87528

## 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

Aug 24th, 2023		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne						
Index	Fe Content	April	May	June	July	MTD	QTD	YTD	April	May	June	July	MTD	QTD	YTD
IOPI62	62% Fe Fines	879	804	863	896	869	881	880	118.84	106.85	112.38	116.58	120.06	120.90	120.58
IOPI58	58% Fe Fines	782	698	748	777	813	792	798	106.43	93.21	97.98	101.68	113.29	109.35	110.17
IOPI65	65% Fe Fines	991	916	975	1008	981	993	992	134.47	122.23	127.41	131.57	136.05	136.72	136.43

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

## FREIGHT RATES

Aug 24th, 2023		CFR Qingdao, USD/dry tonne							Aug 23rd, 2023							
Index	Fe Content	April	May	June	July	MTD	QTD	YTD	Route		Designation	Change	Change %	Low <sup>2</sup>	High <sup>2</sup>	
IOSI62	62% Fe Fines	144.76	108.53	110.54	108.57	112.14	113.15	121.58	W. Australia - Qingdao		C5	7.54	-0.19	-2.46%	3.57	16.77
IOSI65	65% Fe Fines	147.67	127.20	135.30	147.39	122.86	129.55	140.64	Tubarao - Qingdao		C3	19.86	-0.39	-1.95%	6.70	36.40

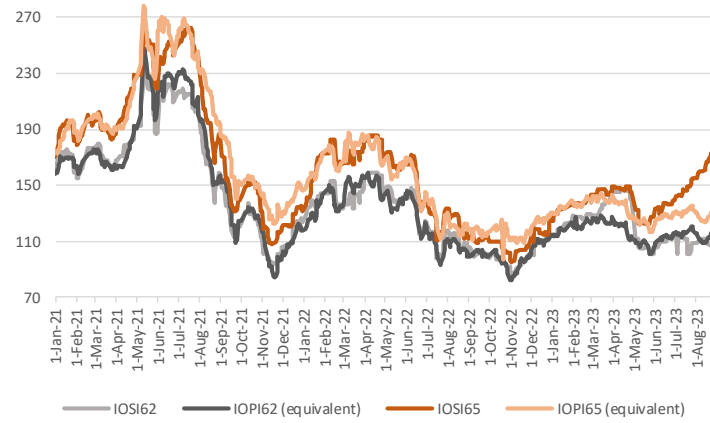
## IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending Aug 18th, 2023		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne <sup>1</sup>						
Index	Fe Content	April	May	June	July	MTD	QTD	YTD	April	May	June	July	MTD	QTD	YTD
IOPLI62	62.5% Fe Lump	983	919	969	980	933	931	1017	132.68	117.67	121.33	122.51	119.96	120.00	134.98

## IRON ORE INDEX PREMIUMS/DISCOUNTS

Aug 24th, 2023		PORT STOCK INDEX (RMB/WT)		Aug 24th, 2023		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	-130	-14.48%	IOSI65	65% Fe Fines	65.52	61.23%
IOPI65	65% Fe Fines	111	12.36%				

## IRON ORE INDEX COMPARISONS (USD/DMT)



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



## IRON ORE BRAND SPOT PRICE ASSESSMENTS

Aug 24th, 2023				Aug 24th, 2023			
PORT STOCK INDEX (RMB/WT)				SEABORNE INDEX (USD/DMT)			
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	841	8	-57	Roy Hill	102.50	0.00	-4.50
SIMEC Fines	771	8	-127	SIMEC Fines	99.00	0.00	-8.00
PB Fines	866	8	-32	PB Fines	103.25	0.00	-3.75
Newman Fines	867	8	-31	Newman Fines	106.15	0.00	-0.85
MAC Fines	848	8	-50	MAC Fines	103.25	0.00	-3.75
Jimblebar Blended Fines	763	8	-135	Jimblebar Blended Fines	95.65	0.00	-11.35
Carajas Fines	1079	8	181	Carajas Fines	136.55	0.00	29.55
Brazilian SSF	863	9	-35	Brazilian SSF	110.75	0.00	3.75
Brazilian Blend Fines	879	8	-19	Brazilian Blend Fines	112.35	0.00	5.35
RTX Fines	781	8	-117	RTX Fines	96.85	0.00	-10.15
West Pilbara Fines	809	8	-89	West Pilbara Fines	101.25	0.00	-5.75

Aug 24th, 2023			
PORT STOCK INDEX (RMB/WT)			
	Price	Change	Diff to IOPI58
SSF	768	-2	0
FMG Blended Fines	778	-2	10
Robe River	778	-2	10
Western Fines	781	-2	13
Atlas Fines	775	-2	7
Yandi	761	-2	-7

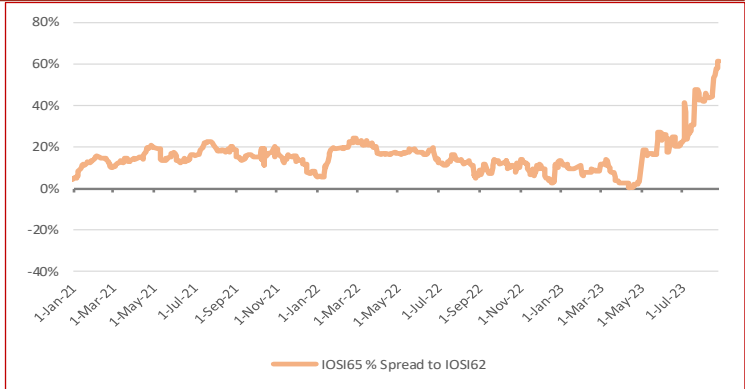
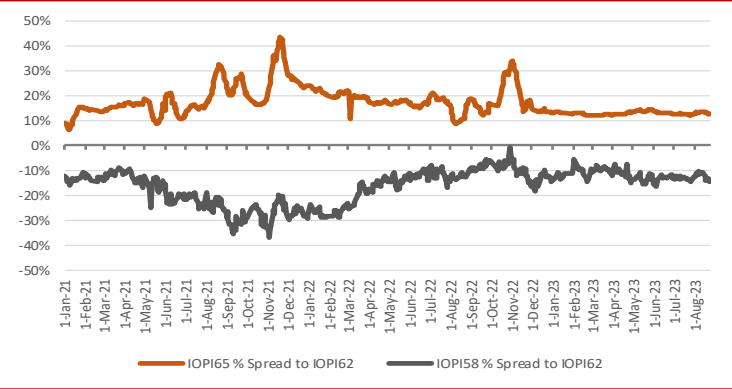
## IRON ORE INDEX NORMALISATION DIFFERENTIALS

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%	11.00	0.00	1% Fe	High Grade Fe 60 - 63%	6.00	0.75
	High Grade Fe 63 - 64%	25.00	0.00		High Grade Fe 63 - 64%	7.00	0.00
	High Grade Fe 64 - 65%	25.00	0.00		High Grade Fe 64 - 65%	7.00	0.00
	High Grade Fe 65 - 65.5%	25.00	0.00		High Grade Fe 65 - 65.5%	7.00	0.00
1% Alumina	Low Grade Fe	21.00	0.00	1% Alumina	High Fe Grade Al <2.25%	2.25	-0.50
	High Fe Grade Al <2.25%	51.00	-7.00		High Fe Grade Al 2.25-4%	0.25	-1.00
	High Fe Grade Al 2.25-4%	5.00	0.00				
	Low Fe Grade Al <2.25%	17.00	-5.00				
1% Silica	Low Fe Grade Al 2.25-4%	20.00	0.00	1% Silica	High Fe Grade Si <4%	5.00	0.00
	High Fe Grade Si <4%	25.00	-1.00		High Fe Grade Si 4 - 6.5%	3.75	0.00
	High Fe Grade Si 4 - 6.5%	5.00	0.00				
0.01% Phosphorus	Low Fe Grade	17.00	0.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	0.25	0.00
	High Fe Grade 0.09%<P<0.115%	5.00	0.00		High Fe Grade 0.115%<P<0.15%	11.00	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

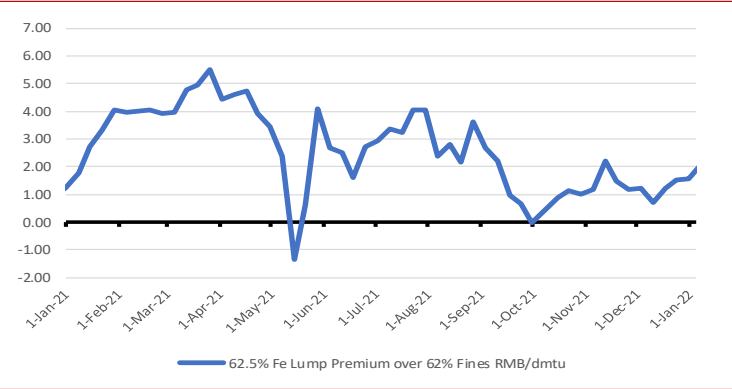
## Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

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	0.00	0.00	Jingtang	0.00	0.00	Majishan	0.00	0.00	Taicang	-30.00	0.00
Dalian	0.00	0.00	Lanqiao	0.00	0.00	Qingdao	0.00	0.00	Tianjin	-15.00	0.00

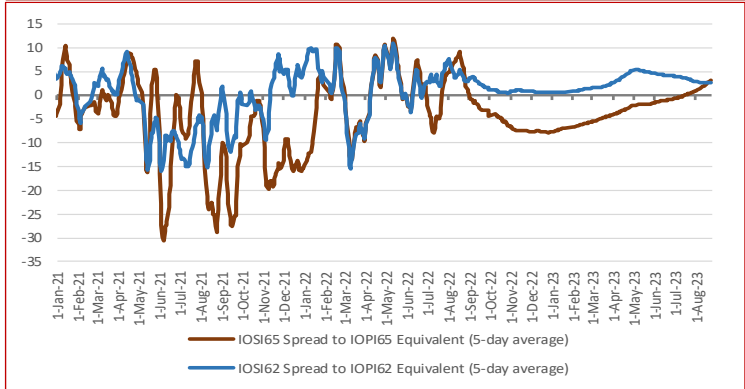
IRON ORE INDEX PREMIUMS/DISCOUNTS



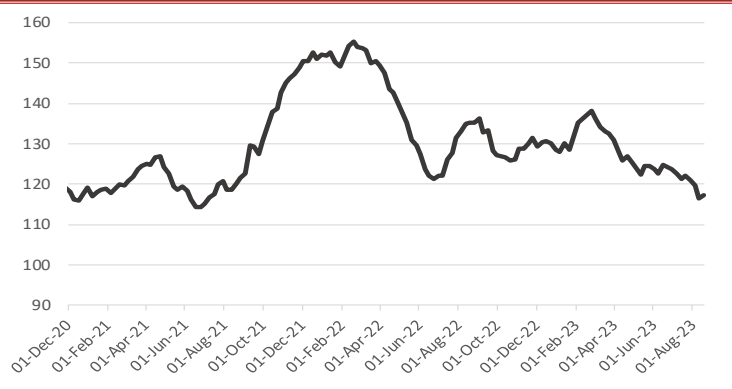
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



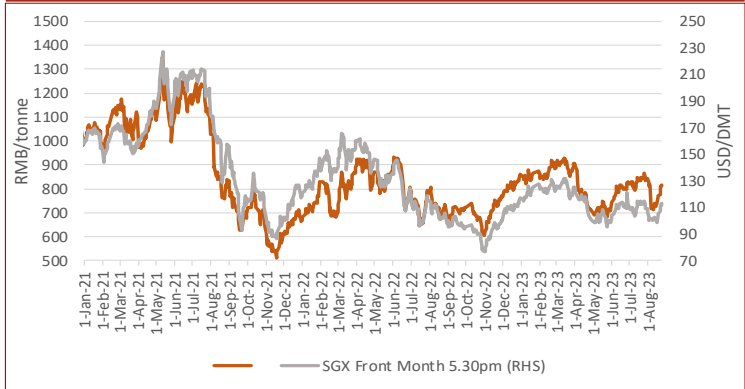
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



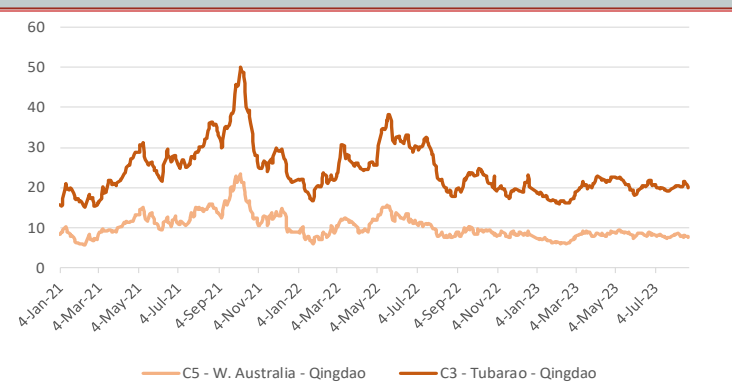
IRON ORE PORT INVENTORIES (MILLION TONNES)

Week Ending Aug 18th, 2023				
Province	This week	Change %	Low <sup>2</sup>	High <sup>2</sup>
Jingtang	11.39	-4.45%	9.84	19.20
Qingdao	24.65	1.61%	9.41	26.24
Caofeidian	11.49	7.58%	9.05	16.29
Tianjin	8.98	2.86%	7.14	12.97
Rizhao	12.99	-3.92%	9.44	19.26
<b>Total (35 Ports)</b>	<b>117.34</b>	<b>0.85%</b>	<b>98.80</b>	<b>155.39</b>

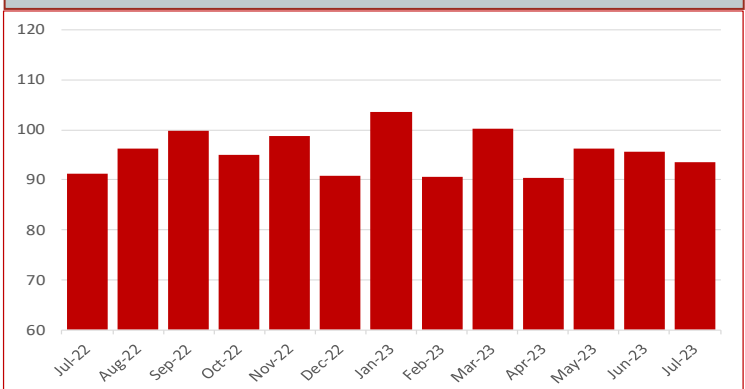
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	Aug 24th, 3pm close			Aug 24th, 5:30pm		
Contract	12401	Change	Change %	Sep. 23	Change	Change %
Closing Price	811.00	-6.00	-0.73%	112.00	-1.10	-0.97%
Vol traded ('000 lots)	64.94	-9.95	-13.28%	10.31	0.13	1.25%
Open positions ('000 lots)	67.77	0.56	0.83%	38.23	0.67	1.78%
Day Low	809.5	5.00	0.62%	110.80	0.15	0.14%
Day High	831.5	-1.00	-0.12%	114.85	0.95	0.83%

DRY BULK FREIGHT RATES (USD/MT)



TOTAL CHINA IRON ORE IMPORT VOLUMES (MILLION TONNES)



STEEL SPOT MARKET PRICES—CHINA

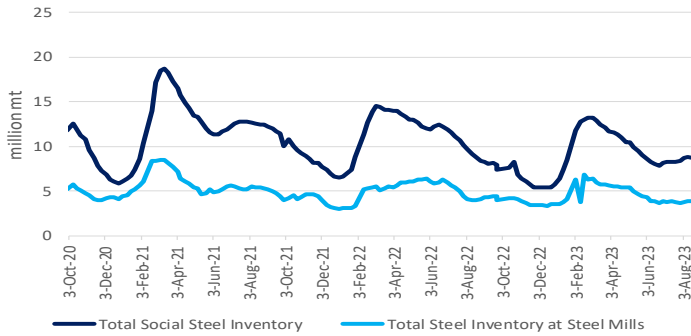
Product	2023/8/18	Change	Change %
ReBar HRB400 φ18mm	3,730	30	0.81%
Wirerod Q300 φ6.5mm	3,960	30	0.76%
HRC Q235/SS400 5.5mm*1500*C	3,910	-20	-0.51%
CRC SPCC/ST12 1.0mm*1250*2500	4,720	40	0.85%
Medium & Heavy Plate Q235B 20mm	3,990	-10	-0.25%
GI ST02Z 1.0mm*1000*C	5,000	-10	-0.20%
Colour Coated Plate	7,050	50	0.71%

CHINESE STEEL MILL PROFITABILITY

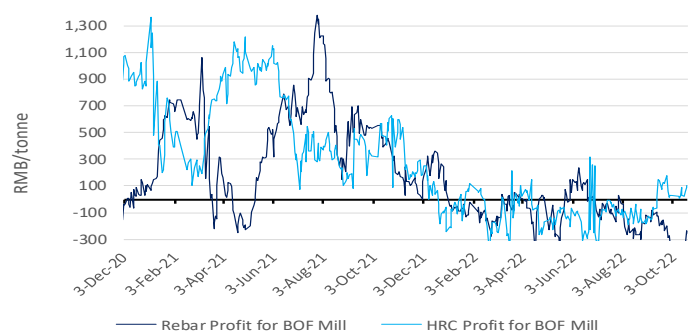
SMM Tracking of Steel Mill P&L - Rebar and Hot-rolled Coil (RMB/tonne)			
Category	Price	Change (WoW)	Note
MMi (Fe 62%), USD/mt excluding tax	108.75	-3	Mmi CFR Equivalent index for 1st Feb
Coke	2,450	0	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	2,920	0	steel scrap (6mm) in Zhangjiagang, ext. tax
Billet Cost	3,258	12	Q234, incl. tax
Rebar cost - Blast furnace	3,715	14	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	-75	26	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	3,735	16	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	155	-26	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

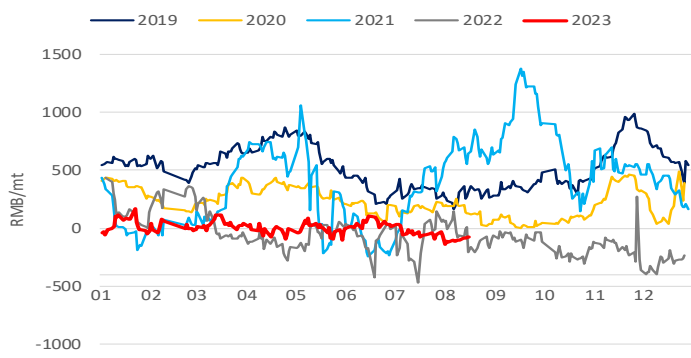
CHINESE STEEL INVENTORIES



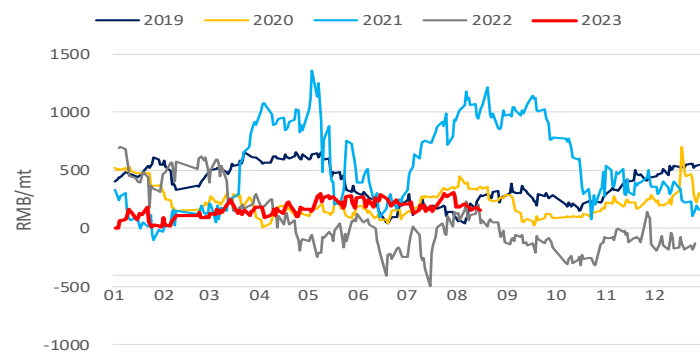
CHINESE STEEL MILL PROFITABILITY



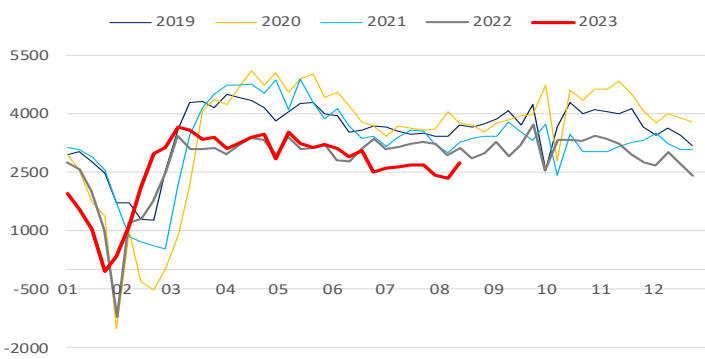
CHINESE STEEL MILL PROFITABILITY—Rebar



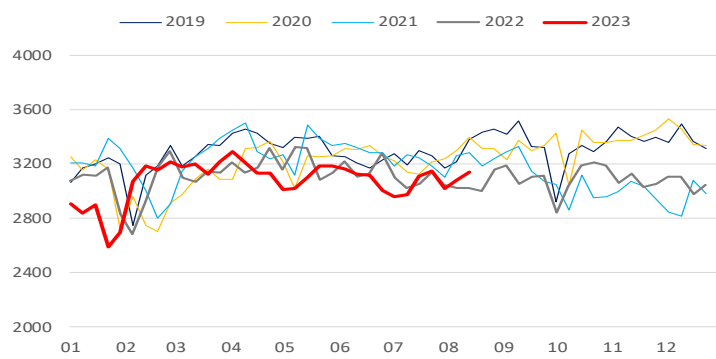
CHINESE STEEL MILL PROFITABILITY—Hot-rolled Coil



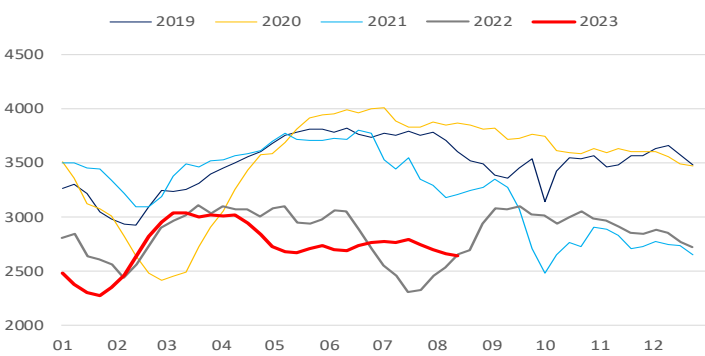
CHINESE STEEL CONSUMPTION—Rebar



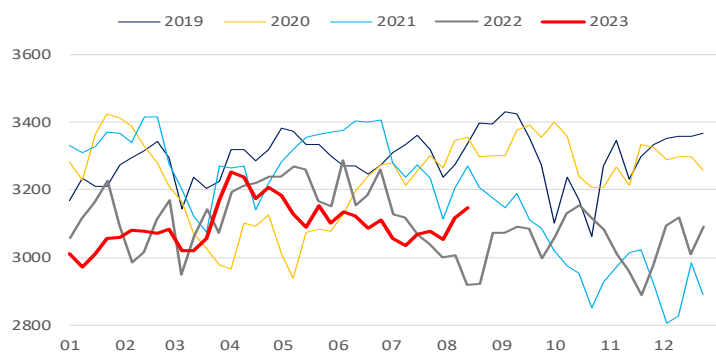
CHINESE STEEL CONSUMPTION—Hot-rolled Coil



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: <a href="http://www.mmiprices.com">www.mmiprices.com</a>																				
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%	<table border="1"> <thead> <tr> <th colspan="4">Data Exclusions*</th> </tr> <tr> <th></th> <th>62%</th> <th>58%</th> <th>65%</th> </tr> </thead> <tbody> <tr> <td>Port Index</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Seaborne index</td> <td>0</td> <td></td> <td>0</td> </tr> <tr> <td>Lump Index 62.5</td> <td>0</td> <td></td> <td></td> </tr> </tbody> </table>	Data Exclusions*					62%	58%	65%	Port Index	0	0	0	Seaborne index	0		0	Lump Index 62.5	0		
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Lump Index 62.5	0																								
Pricing Point	Qingdao Port (FOT and CFR respectively)			FOT Qingdao Port	* Number of price submissions for iron ore indices that were excluded from index calculations today as they were anomalous and could not be verified																				
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																					

## 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					
Aug 24th, 2023	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%
Aug 24th, 2023	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		

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