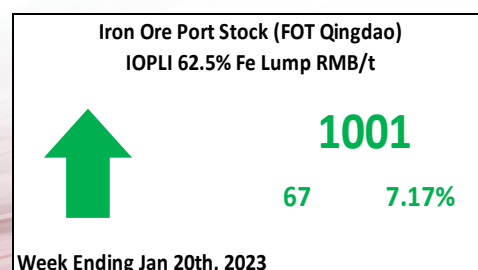
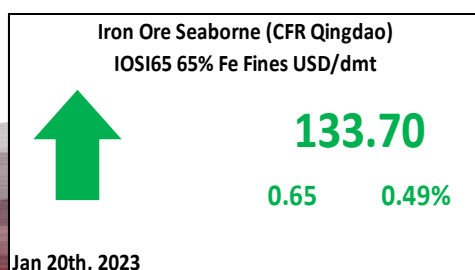
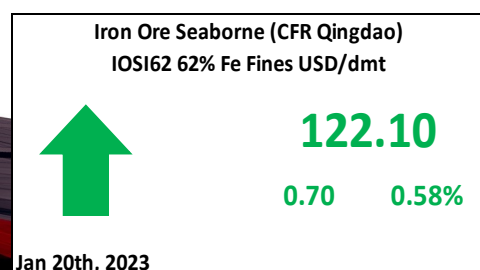
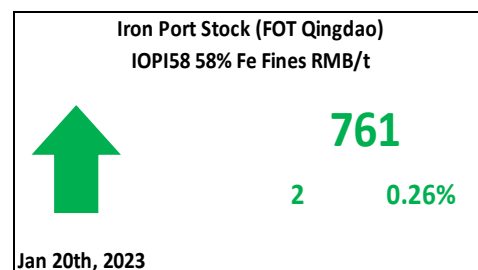
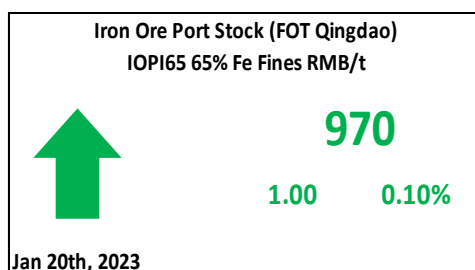
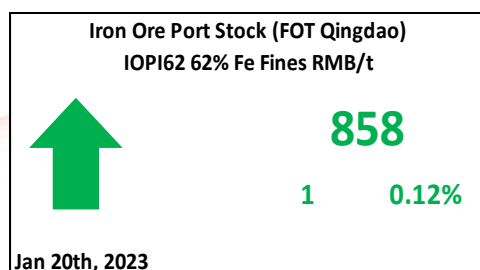


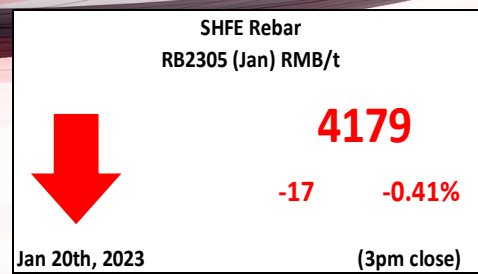
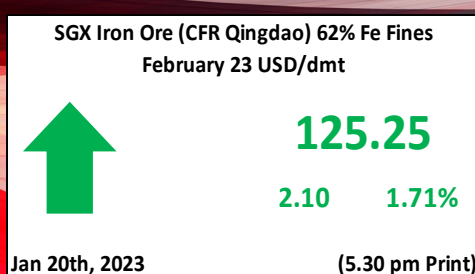
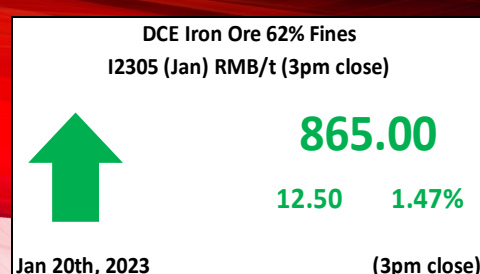


MMi Dashboard

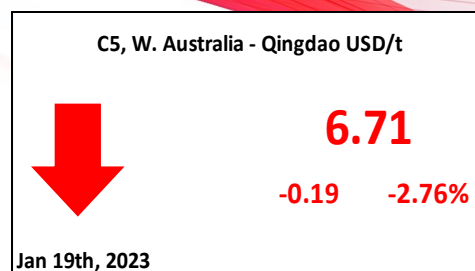
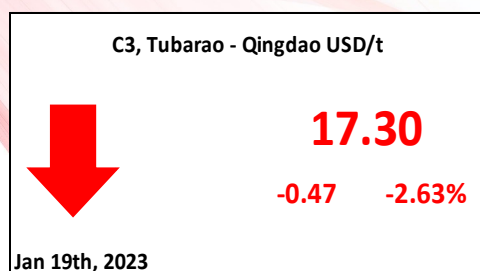
Iron Ore Price Indices



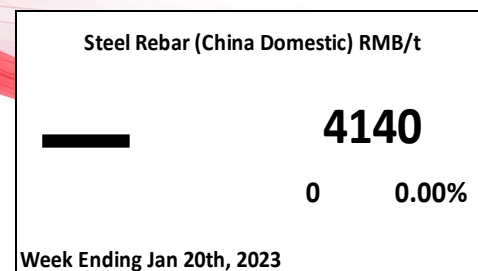
Exchange Traded Contracts



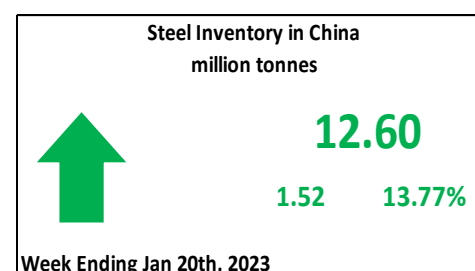
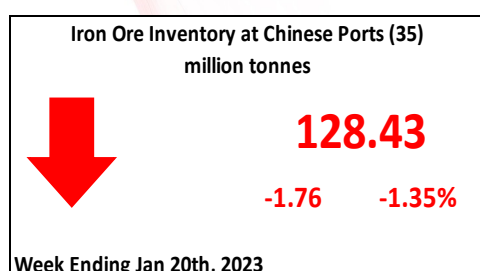
Freight Rates



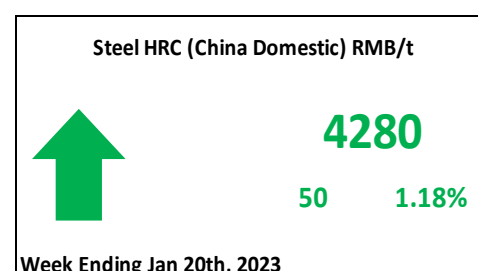
Steel Price



Inventory Levels



Steel Price



IRON ORE PORT STOCK INDEX (IOPI)

Jan 20th, 2023		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	858	1	0.1%	775	862	643	1083	117.93	0.09	0.1%	103.11	119.89	82.29	159.06
IOPI58	58% Fe Fines	761	2	0.3%	690	733	604	907	105.29	0.24	0.2%	92.35	102.17	77.29	134.15
IOPI65	65% Fe Fines	970	1	0.1%	901	1014	811	1265	133.84	0.09	0.1%	120.48	141.84	108.78	187.25

IRON ORE SEABORNE INDEX (IOSI)

MARKET COMMENTARY

Jan 20th, 2023		CFR Qingdao, USD/dry tonne							DCE iron ore futures rose by 1.76% today, the main contract closed 865.The traders' willingness to ship is less.The steel mills are wait and see .The overall trading sentiment of the market is worse.PBF at Shandong port deal 863 yuan/mt,increase 8 yuan/mt ; SSF at Shandong port deal 730 yuan/mt, PBF at Tangshan port deal 880 yuan/mt. As of January 20, the inventory of 35 ports tracked by SMM totaled 128.43 million tons, down 1.77 million tons from last week and 20.59 million tons from the same period last year. The average daily port dredging volume of imported mines in this period decreased by 31000 tons to 3.113 million tons on a weekly basis. Although the steel plant does not shut down during the Spring Festival, many holiday enterprises affect logistics and spot transactions. Considering that the efficiency of port unloading will be greatly reduced, the port inventory may increase again. After the festival, the steel plant will welcome replenishment, and the ore price will have some support at that time
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low ²	High ²	
IOSI62	62% Fe Fines	122.10	0.70	0.58%	104.00	122.03	83.90	159.45	
IOSI65	65% Fe Fines	133.70	0.65	0.49%	114.36	139.71	94.45	185.82	

IRON ORE PORT LUMP INDEX (IOPLI)

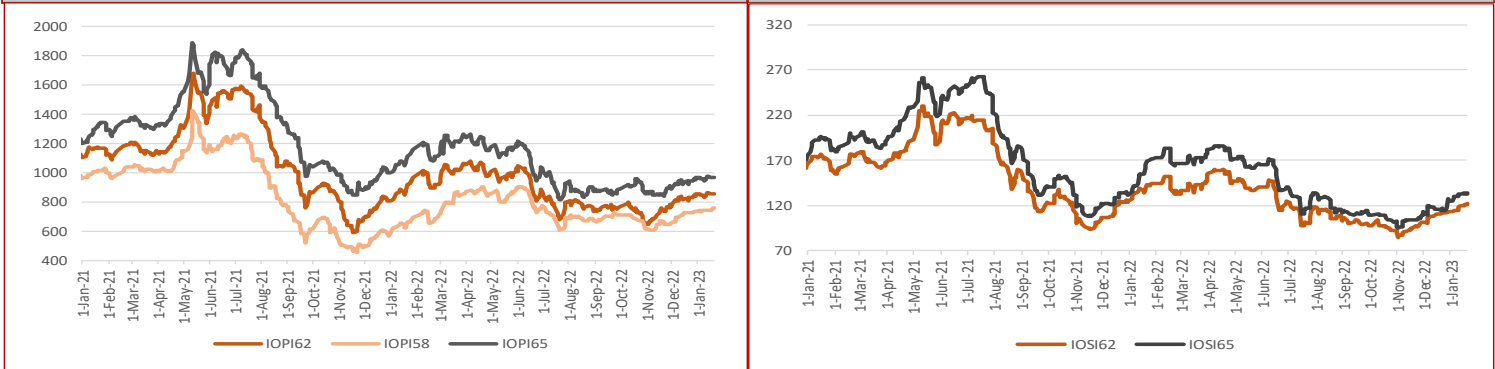
Week Ending Jan 20th, 2023		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne ³						
Index	Fe Content	Price	W-o-W	Change %	MTD	YTD	Low ²	High ²	Price	W-o-W	Change %	MTD	YTD	Low ²	High ²
IOPLI62	62.5% Fe Lump	1001	67	7.2%	889	1039	770	1405	132.78	9.21	7.45%	113.98	139.43	94.72	199.13

IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

Week Ending Jan 20th, 2023				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	1058	1.8%	779	1645	156.82	2.21%	110.31	255.69
Hebei	Qian'an	65% Fe Concentrate	Dry	1070	-1.4%	780	1630	158.60	-1.01%	110.51	251.57
Liaoning	Anshan	65% Fe Concentrate	Wet	760	0.0%	620	1310	112.65	0.38%	87.40	202.32
Shandong	Zibo	65% Fe Concentrate	Dry	1081	1.8%	800	1752	160.23	2.17%	117.19	272.32
Week Ending Jan 20th, 2023				This week	Change %	Low ²	High ²	¹ Exchange rate applied: RMB/USD = 6.7522 ² Last 12 months ³ Weekly exchange rate applied: RMB/USD =6.77208			
China Mines Concentrate Composite Index RMB/WT				938.09	0.61%	706.36	1511.22				

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

Jan 20th, 2023		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne						
Index	Fe Content	September	October	November	December	MTD	QTD	YTD	September	October	November	December	MTD	QTD	YTD
IOPI62	62% Fe Fines	759	736	714	822	775	774	862	101.14	95.56	92.18	109.43	103.11	103.55	119.89
IOPI58	58% Fe Fines	697	683	635	711	690	688	733	93.56	89.34	82.39	95.17	92.35	92.66	102.17
IOPI65	65% Fe Fines	875	918	865	935	901	903	1014	117.19	120.08	112.37	124.90	120.48	121.42	141.84

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

FREIGHT RATES

Jan 20th, 2023		CFR Qingdao, USD/dry tonne							Jan 19th, 2023		FREIGHT RATES - DRY BULK US\$/wet tonne				
Index	Fe Content	September	October	November	December	MTD	QTD	YTD	Route	Designation	Change	Change %	Low ²	High ²	
IOSI62	62% Fe Fines	101.12	95.80	93.05	108.92	104.00	104.87	122.03	W. Australia - Qingdao	C5	6.71	-0.19	-2.76%	3.57	16.77
IOSI65	65% Fe Fines	111.57	106.70	102.40	116.83	114.36	115.84	139.71	Tubarao - Qingdao	C3	17.30	-0.47	-2.63%	6.70	36.40

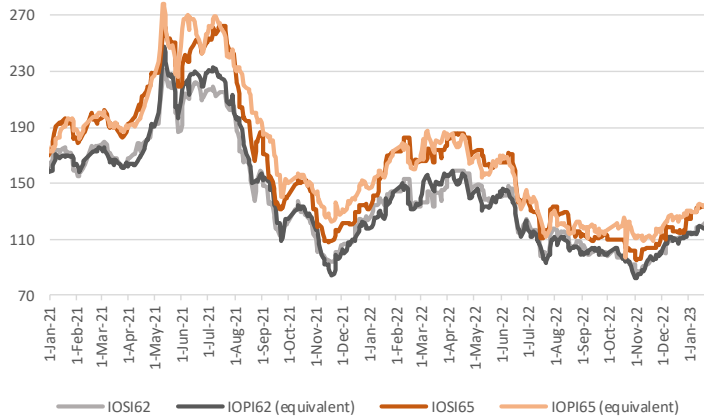
IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending Jan 20th, 2023		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne ¹						
Index	Fe Content	September	October	November	December	MTD	QTD	YTD	October	October	November	December	MTD	QTD	YTD
IOPLI62	62.5% Fe Lump	873	877	811	922	889	892	1039	112.75	109.81	100.83	117.06	113.98	115.08	139.43

IRON ORE INDEX PREMIUMS/DISCOUNTS

Jan 20th, 2023		PORT STOCK INDEX (RMB/WT)		Jan 20th, 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	-97	-11.31%	IOSI65	65% Fe Fines	11.60	9.50%
IOPI65	65% Fe Fines	112	13.05%				

IRON ORE INDEX COMPARISONS (USD/DMT)



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



IRON ORE BRAND SPOT PRICE ASSESSMENTS

Jan 20th, 2023	PORT STOCK INDEX (RMB/WT)			Jan 20th, 2023	SEABORNE INDEX (USD/DMT)		
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	801	1	-57	Roy Hill	117.60	0.70	-4.50
SIMEC Fines	730	1	-128	SIMEC Fines	114.10	0.70	-8.00
PB Fines	826	1	-32	PB Fines	118.35	0.70	-3.75
Newman Fines	827	1	-31	Newman Fines	121.25	0.70	-0.85
MAC Fines	808	1	-50	MAC Fines	118.35	0.70	-3.75
Jimblebar Blended Fines	723	1	-135	Jimblebar Blended Fines	110.75	0.70	-11.35
Carajas Fines	1038	1	180	Carajas Fines	151.65	0.70	29.55
Brazilian SSF	822	1	-36	Brazilian SSF	125.85	0.70	3.75
Brazilian Blend Fines	840	1	-18	Brazilian Blend Fines	127.50	0.70	5.40
RTX Fines	741	1	-117	RTX Fines	112.00	0.70	-10.10
West Pilbara Fines	769	1	-89	West Pilbara Fines	116.35	0.70	-5.75

Jan 20th, 2023	PORT STOCK INDEX (RMB/WT)		
	Price	Change	Diff to IOPI58
SSF	761	2	0
FMG Blended Fines	770	2	9
Robe River	771	2	10
Western Fines	774	2	13
Atlas Fines	768	2	7
Yandi	754	2	-7

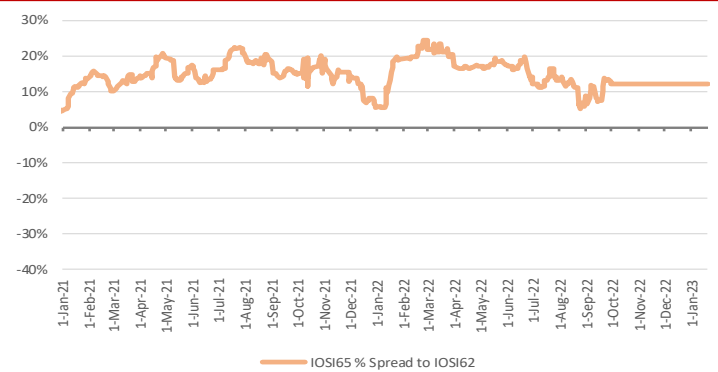
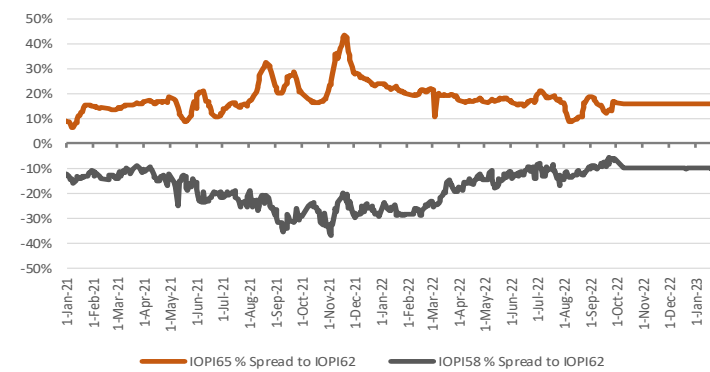
IRON ORE INDEX NORMALISATION DIFFERENTIALS

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%	5.00	-1.00	1% Fe	High Grade Fe 60 - 63%	2.00	0.00
	High Grade Fe 63 - 64%	37.00	0.00		High Grade Fe 63 - 64%	2.50	0.00
	High Grade Fe 64 - 65%	37.00	0.00		High Grade Fe 64 - 65%	2.50	0.00
	High Grade Fe 65 - 65.5%	37.00	0.00		High Grade Fe 65 - 65.5%	2.50	0.00
	Low Grade Fe	30.00	0.00	1% Alumina	High Fe Grade Al <2.25%	3.00	0.75
1% Alumina	High Fe Grade Al <2.25%	105.00	-5.00		High Fe Grade Al 2.25-4%	0.50	0.00
	High Fe Grade Al 2.25-4%	5.00	0.00		High Fe Grade Si <4%	2.75	0.25
	Low Fe Grade Al <2.25%	31.00	5.00		High Fe Grade Si 4 - 6.5%	1.25	-0.25
	Low Fe Grade Al 2.25-4%	38.00	-3.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	2.75	0.00
1% Silica	High Fe Grade Si <4%	29.00	-3.00		High Fe Grade 0.115%<P<0.15%	4.75	0.00
	High Fe Grade Si 4 - 6.5%	35.00	-5.00		Low Fe Grade 0.09%<P<0.1%	5.00	0.00
	Low Fe Grade	33.00	3.00				

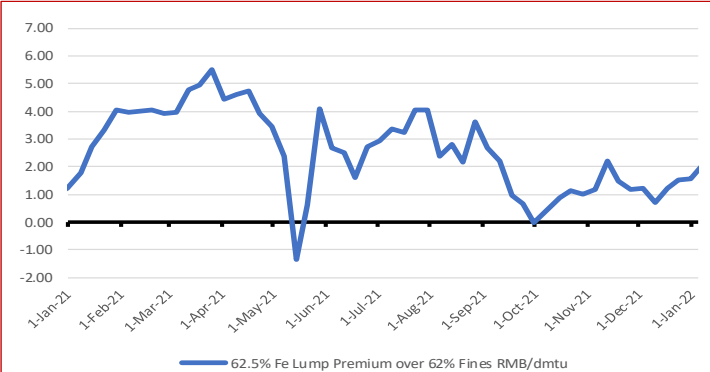
Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

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	-5.00	0.00	Jingtang	-20.00	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	-10.00	0.00

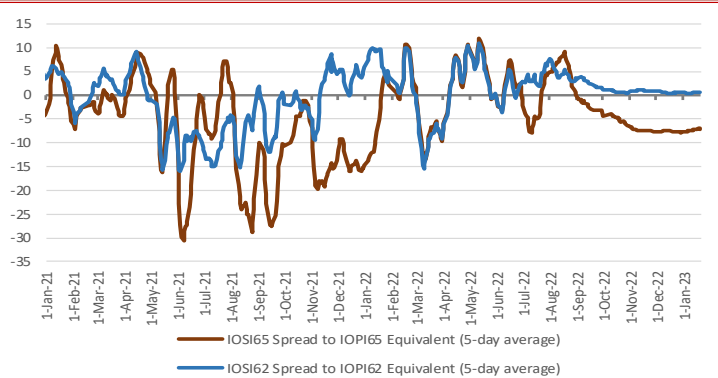
IRON ORE INDEX PREMIUMS/DISCOUNTS



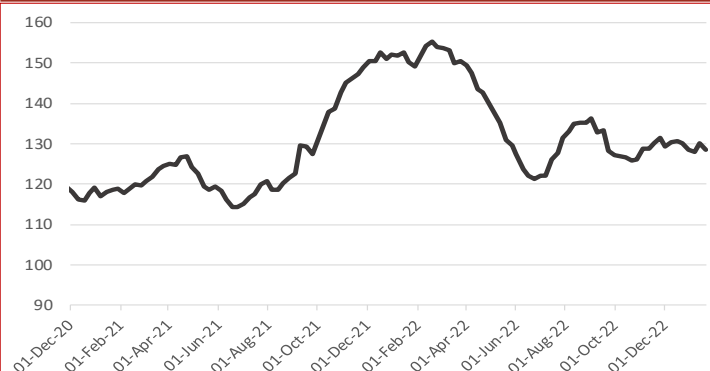
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



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



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



IRON ORE PORT INVENTORIES (MILLION TONNES)

Week Ending Jan 20th, 2023

Province	This week	Change %	Low ²	High ²
Jingtang	11.62	-2.43%	9.84	19.20
Qingdao	25.25	0.80%	9.41	26.24
Caofeidian	11.22	-3.86%	9.05	16.29
Tianjin	10.69	-0.37%	7.14	12.97
Rizhao	18.03	1.12%	9.44	19.26
Total (35 Ports)	128.43	-1.35%	98.80	155.39

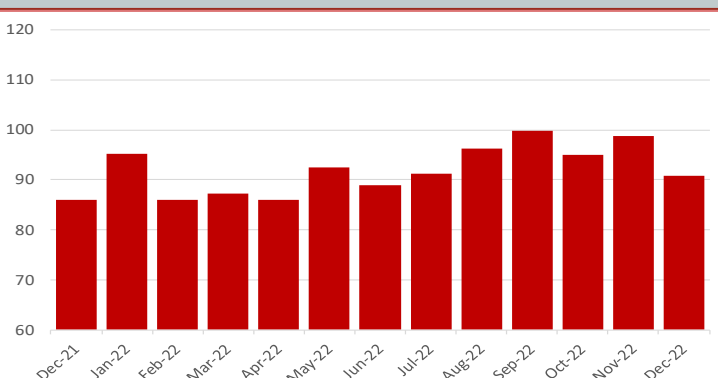
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	Jan 20th, 3pm close			Jan 20th, 5:30pm		
Contract	I2305	Change	Change %	Feb. 23	Change	Change %
Closing Price	865.00	12.50	1.47%	125.25	2.10	1.71%
Vol traded ('000 lots)	40.90	-20.80	-33.72%	5.51	0.26	4.99%
Open positions ('000 lots)	78.34	-2.30	-2.85%	29.65	-1.25	-4.05%
Day Low	848.0	6.00	0.71%	123.10	1.10	0.90%
Day High	865.5	6.00	0.70%	126.95	2.65	2.13%

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	2023/1/20	Change	Change %
ReBar HRB400 ϕ 18mm	4,140	0	0.00%
Wirerod Q300 ϕ 6.5mm	4,400	0	0.00%
HRC Q235/SS400 5.5mm*1500*C	4,280	50	1.18%
CRC SPCC/ST12 1.0mm*1250*2500	4,570	0	0.00%
Medium & Heavy Plate Q235B 20mm	4,210	0	0.00%
GI ST02Z 1.0mm*1000*C	4,780	0	0.00%
Colour Coated Plate	7,500	0	0.00%

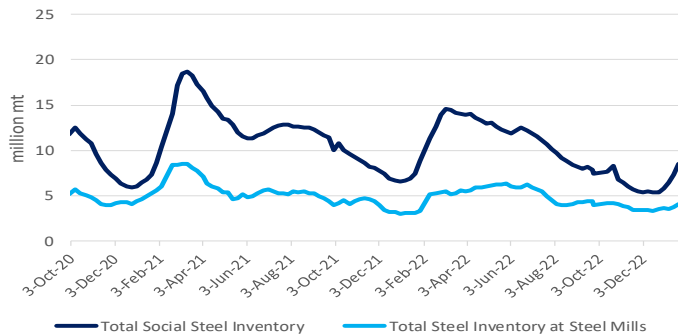
CHINESE STEEL MILL PROFITABILITY

SMM Tracking of Steel Mill P&L - Rebar and Hot-rolled Coil (RMB/tonne)

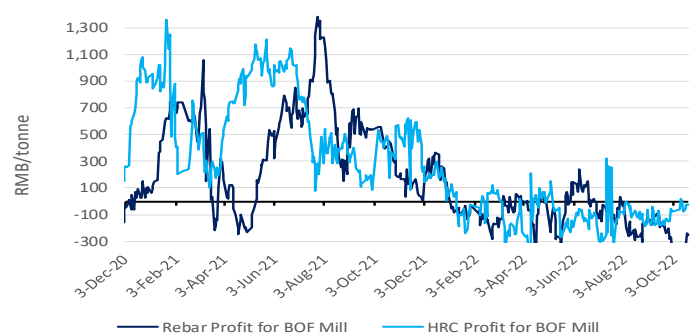
Category	Price	Change (WoW)	Note
MMi (Fe 62%), USD/mt excluding tax	121.40	3	Mmi CFR Equivalent index for 1st Feb
Coke	2,960	0	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	3,120	0	steel scrap (6mm) in Zhangjiagang, excl. tax
Billet Cost	3,753	-3	Q234, incl. tax
Rebar cost - Blast furnace	4,275	-3	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	-115	-37	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	4,228	-5	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	-28	-15	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

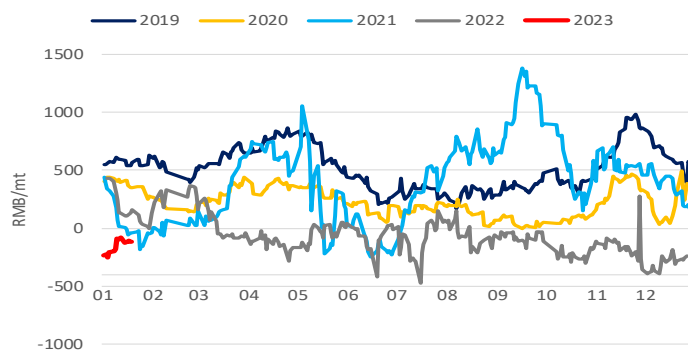
CHINESE STEEL INVENTORIES



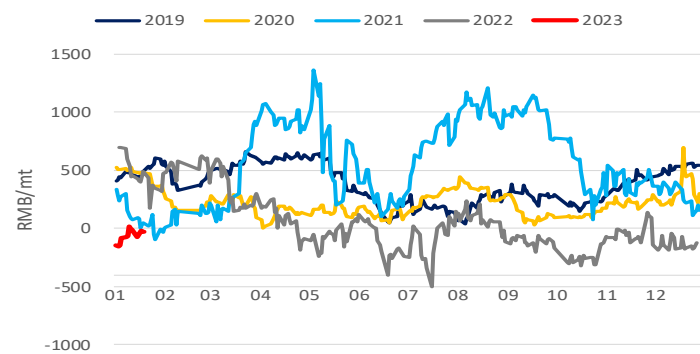
CHINESE STEEL MILL PROFITABILITY



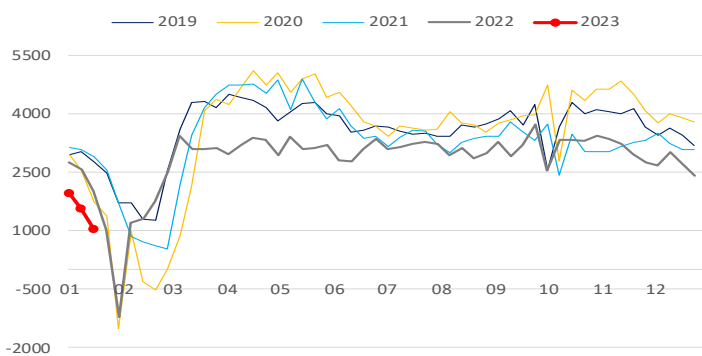
CHINESE STEEL MILL PROFITABILITY—Rebar



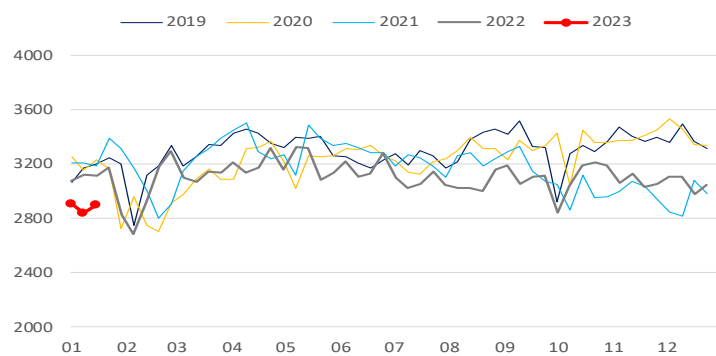
CHINESE STEEL MILL PROFITABILITY—Hot-rolled Coil



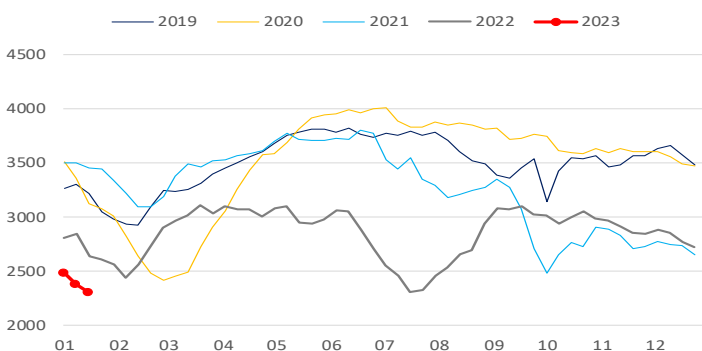
CHINESE STEEL CONSUMPTION—Rebar



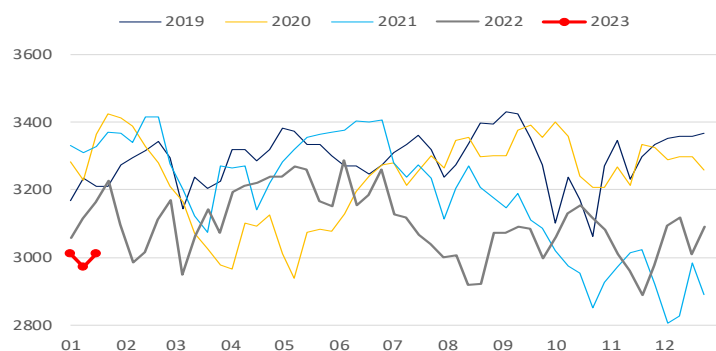
CHINESE STEEL CONSUMPTION—Hot-rolled Coil



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																				
Fe %	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																				
Alumina %	65.00	62.00	58.00	62.50																					
Silica%	1.40	2.25	2.25	1.50																					
Phosphorus %	1.50	4.00	5.50	3.50																					
Sulphur %	0.06	0.09	0.05	0.08																					
Moisture %	0.01	0.02	0.02	0.02																					
	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																					
					<table><tr><th colspan="4">Data Exclusions*</th></tr><tr><td></td><th>62%</th><th>58%</th><th>65%</th></tr><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></table>	Data Exclusions*					62%	58%	65%	Port Index	0	0	0	Seaborne index	0		0	Lump Index 62.5	0		
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					
Jan 20th, 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%
Jan 20th, 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	IOSI62	IRCN0034	
IOPI58	IRCNQ002	IRCNQ005	IOSI65	IRCN0035	
IOPI65	IRCNQ003	IRCNQ006			
IOPLI62	IRCN0036	IRCN0037			

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