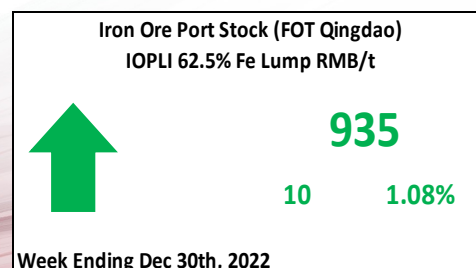
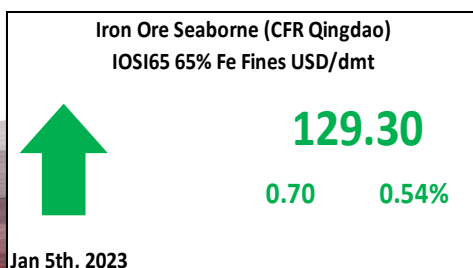
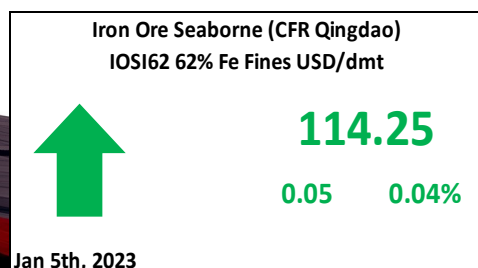
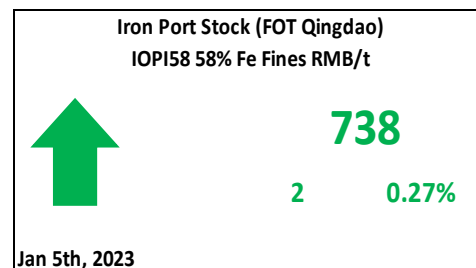
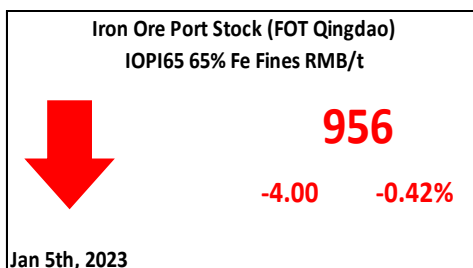
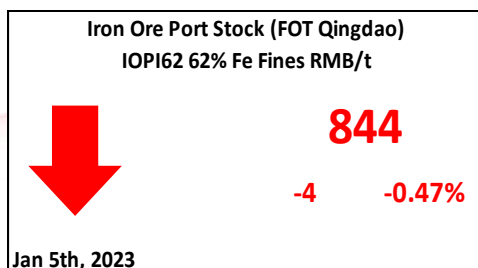


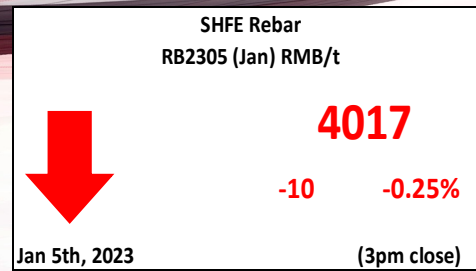
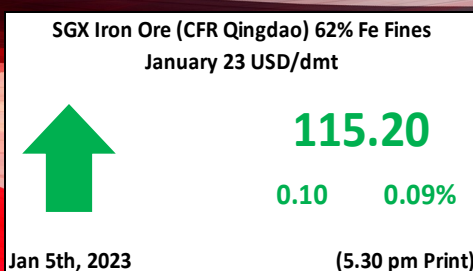
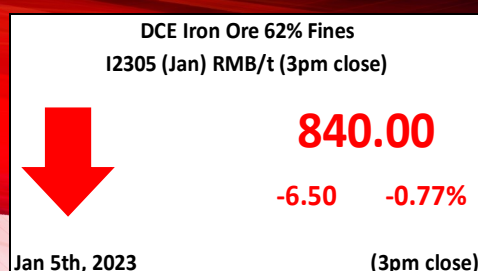


MMi Dashboard

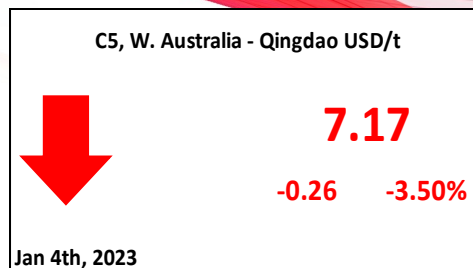
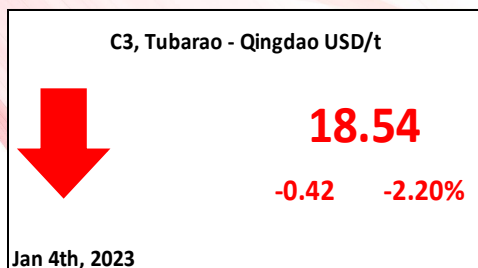
Iron Ore Price Indices



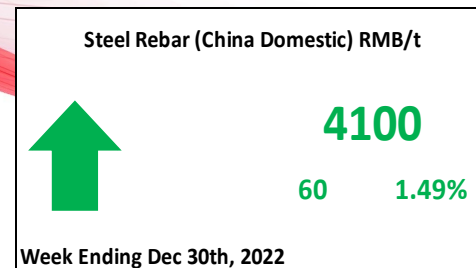
Exchange Traded Contracts



Freight Rates



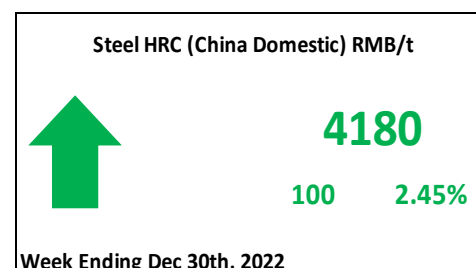
Steel Price



Inventory Levels



Steel Price



IRON ORE PORT STOCK INDEX (IOPI)

Jan 5th, 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	844	-4	-0.5%	767	862	643	1083	113.88	-0.22	-0.2%	101.72	120.03	82.29	159.06
IOPI58	58% Fe Fines	738	2	0.3%	684	732	604	907	100.17	0.58	0.6%	91.24	102.13	77.29	134.15
IOPI65	65% Fe Fines	956	-4	-0.4%	895	1017	811	1265	129.52	-0.17	-0.1%	119.24	142.27	108.78	187.25

IRON ORE SEABORNE INDEX (IOSI)

Jan 5th, 2023		CFR Qingdao, USD/dry tonne						
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low ²	High ²
IOSI62	62% Fe Fines	114.25	0.05	0.04%	102.47	122.16	83.90	159.45
IOSI65	65% Fe Fines	129.30	0.70	0.54%	112.55	140.04	94.45	185.82

MARKET COMMENTARY

DCE iron ore futures declined by 1.23% today, the main contract closed 840. The traders' willingness to ship is general. The steel mills are waiting and see. The overall trading sentiment of the market is general. PBF at Shandong port deal 832-838 yuan/mt, decrease 5-18 yuan/mt; PBF at Tangshan port deal 835-840 yuan/mt, decrease 5-18 yuan/mt. According to the inventory data of the top ten domestic ports tracked by SMM, the inventory of the top ten ports dropped by 0.5% to 88.76 million tons this week. In terms of varieties, except for pellets, concentrates, lump ore and were reduced to varying degrees. At the beginning of this week, the coke price was lowered, and the profit of the steel plant was restored. The enthusiasm for purchasing expensive varieties was increased. Overlapping the rating adjustment of Hebei Steel Plant or increasing the output, the demand for iron ore will be supported. However, considering that the steel plant has no plan to increase production temporarily, the news has not been fed back to the demand side, and it is expected that the short-term iron ore price will fluctuate.

IRON ORE PORT LUMP INDEX (IOPLI)

Week Ending Dec 30th, 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	935	10	1.1%	879	1043	770	1405	119.96	1.42	1.20%	112.19	140.23	94.72	199.13

IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

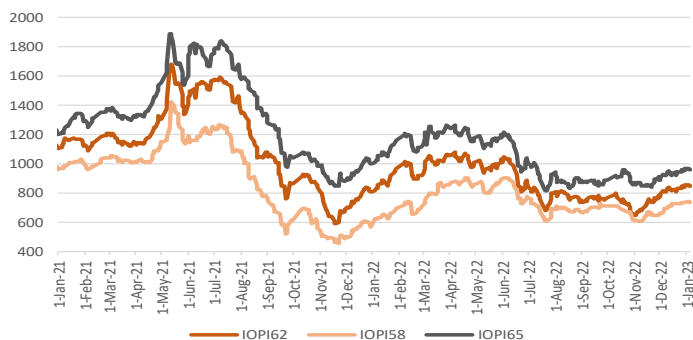
Week Ending Dec 30th, 2022				RMB/tonne (excluding tax) ³				USD/tonne (excluding tax) ³			
Province	Region	Product	Basis	This week	Change %	Low ²	High ²	This week	Change %	Low ²	High ²
Hebei	Hanxing	66% Fe Concentrate	Dry	1003	0.5%	779	1645	143.91	0.58%	110.31	255.69
Hebei	Qian'an	65% Fe Concentrate	Dry	1050	2.9%	780	1630	150.65	3.03%	110.51	251.57
Liaoning	Anshan	65% Fe Concentrate	Wet	740	0.0%	620	1310	106.17	0.08%	87.40	202.32
Shandong	Zibo	65% Fe Concentrate	Dry	1026	0.5%	800	1752	147.21	0.57%	117.19	272.32

Week Ending Dec 30th, 2022

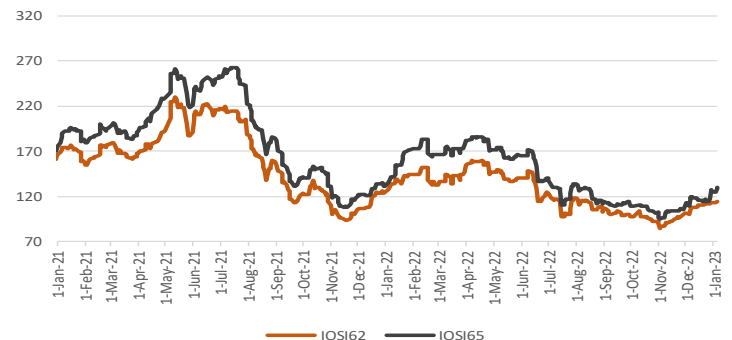
	This week	Change %	Low ²	High ²
China Mines Concentrate Composite Index RMB/WT	905.49	0.95%	706.36	1511.22

¹ Exchange rate applied: RMB/USD = 6.7522 ² Last 12 months
³ Weekly exchange rate applied: RMB/USD = 6.9596

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 5th, 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	767	767	862	101.14	95.56	92.18	109.43	101.72	102.42	120.03
IOPI58	58% Fe Fines	697	683	635	711	684	683	732	93.56	89.34	82.39	95.17	91.24	91.77	102.13
IOPI65	65% Fe Fines	875	918	865	935	895	898	1017	117.19	120.08	112.37	124.90	119.24	120.47	142.27

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

Jan 5th, 2023		CFR Qingdao, USD/dry tonne							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	102.47	103.66	122.16	W. Australia - Qingdao	C5	7.17	-0.26	-3.50%	3.57	16.77
IOSI65	65% Fe Fines	111.57	106.70	102.40	116.83	112.55	114.43	140.04	Tubarao - Qingdao	C3	18.54	-0.42	-2.20%	6.70	36.40

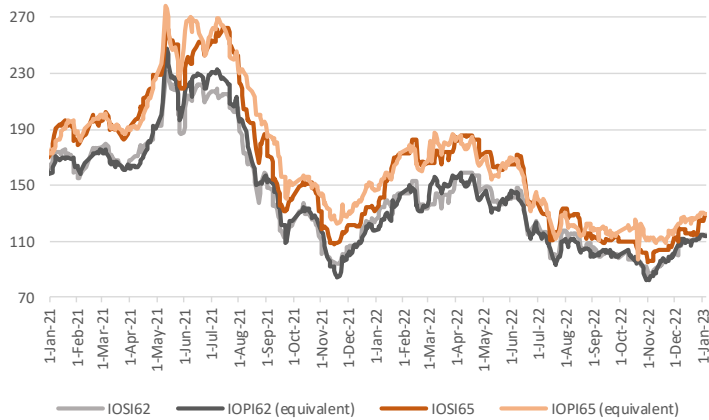
IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending Dec 30th, 2022		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	879	884	1043	112.75	109.81	100.83	117.06	112.19	113.76	140.23

IRON ORE INDEX PREMIUMS/DISCOUNTS

Jan 5th, 2023		PORT STOCK INDEX (RMB/WT)		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	-106	-12.56%	IOSI65	65% Fe Fines	15.05	13.17%
IOPI65	65% Fe Fines	112	13.27%				

IRON ORE INDEX COMPARISONS (USD/DMT)



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



IRON ORE BRAND SPOT PRICE ASSESSMENTS

Jan 5th, 2023				Jan 5th, 2023			
PORT STOCK INDEX (RMB/WT)				SEABORNE INDEX (USD/DMT)			
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	787	-4	-57	Roy Hill	109.75	0.05	-4.50
SIMEC Fines	716	-4	-128	SIMEC Fines	106.25	0.05	-8.00
PB Fines	812	-4	-32	PB Fines	110.50	0.05	-3.75
Newman Fines	813	-4	-31	Newman Fines	113.35	0.00	-0.90
MAC Fines	794	-4	-50	MAC Fines	110.50	0.05	-3.75
Jimblebar Blended Fines	709	-4	-135	Jimblebar Blended Fines	102.85	0.00	-11.40
Carajas Fines	1024	-4	180	Carajas Fines	143.80	0.05	29.55
Brazilian SSF	807	-5	-37	Brazilian SSF	118.00	0.05	3.75
Brazilian Blend Fines	826	-4	-18	Brazilian Blend Fines	119.65	0.05	5.40
RTX Fines	727	-4	-117	RTX Fines	104.15	0.05	-10.10
West Pilbara Fines	755	-4	-89	West Pilbara Fines	108.50	0.05	-5.75

Jan 5th, 2023			
PORT STOCK INDEX (RMB/WT)			
	Price	Change	Diff to IOPI58
SSF	738	2	0
FMG Blended Fines	747	2	9
Robe River	748	2	10
Western Fines	751	2	13
Atlas Fines	745	2	7
Yandi	731	2	-7

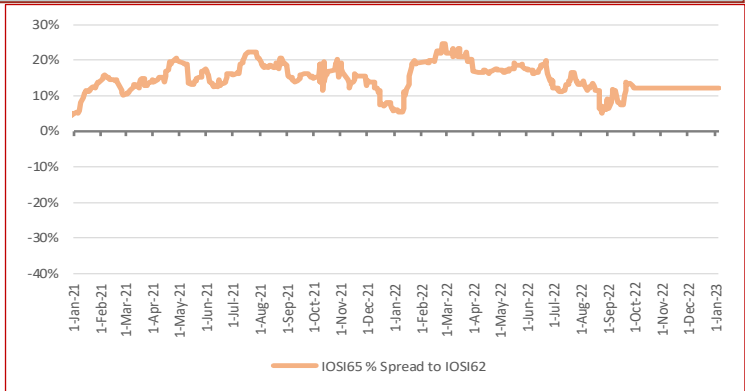
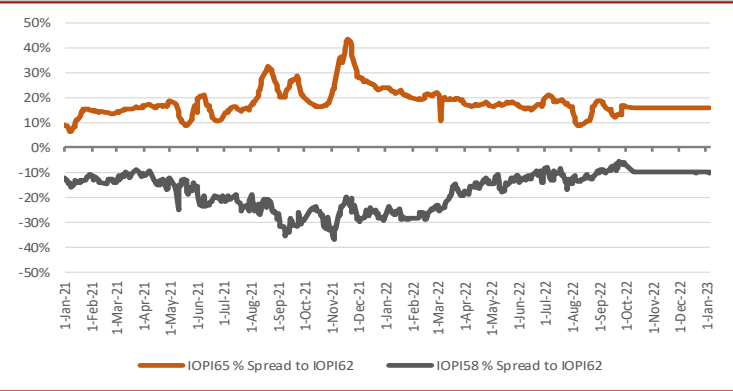
IRON ORE INDEX NORMALISATION DIFFERENTIALS

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%	31.00	-2.00	1% Fe	High Grade Fe 60 - 63%	1.50	-0.25
	High Grade Fe 63 - 64%	35.00	-2.00		High Grade Fe 63 - 64%	2.50	0.00
	High Grade Fe 64 - 65%	35.00	-2.00		High Grade Fe 64 - 65%	2.50	0.00
	High Grade Fe 65 - 65.5%	35.00	-2.00		High Grade Fe 65 - 65.5%	2.50	0.00
1% Alumina	Low Grade Fe	21.00	0.00	1% Alumina	High Fe Grade Al <2.25%	3.75	0.00
	High Fe Grade Al <2.25%	96.00	5.00		High Fe Grade Al 2.25-4%	0.25	0.00
	High Fe Grade Al 2.25-4%	37.00	-2.00				
	Low Fe Grade Al <2.25%	17.00	0.00				
1% Silica	Low Fe Grade Al 2.25-4%	19.00	1.00	1% Silica	High Fe Grade Si <4%	2.50	0.00
	High Fe Grade Si <4%	40.00	-1.00		High Fe Grade Si 4 - 6.5%	0.50	0.00
	High Fe Grade Si 4-6.5%	36.00	1.00				
0.01% Phosphorus	Low Fe Grade	17.00	1.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	2.00	0.00
	High Fe Grade 0.09%<P<0.115%	21.00	-3.00		High Fe Grade 0.115%<P<0.15%	5.50	0.25
	High Fe Grade 0.115%<P<0.15%	21.00	-3.00		Low Fe Grade 0.09<P<0.1%	5.00	0.00
	Low Fe Grade 0.09<P<0.1%	5.00	0.00				

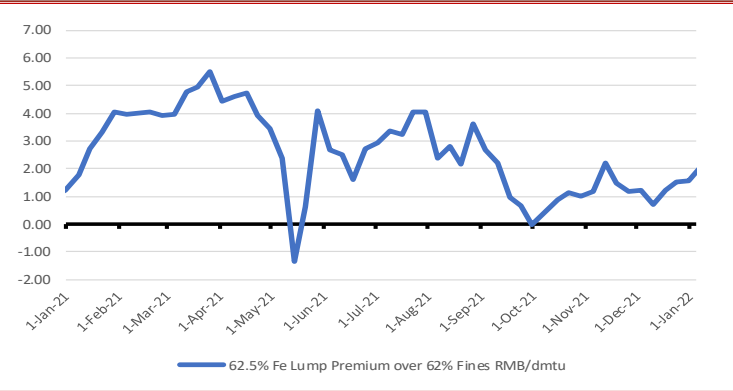
Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

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	-20.00	0.00	Majishan	0.00	0.00	Taichang	-30.00	0.00
Dalian	0.00	0.00	Lanqiao	0.00	0.00	Qingdao	0.00	0.00	Tianjin	-10.00	0.00

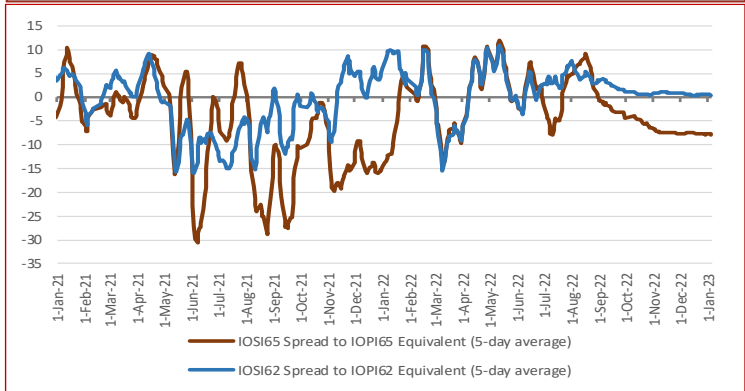
IRON ORE INDEX PREMIUMS/DISCOUNTS



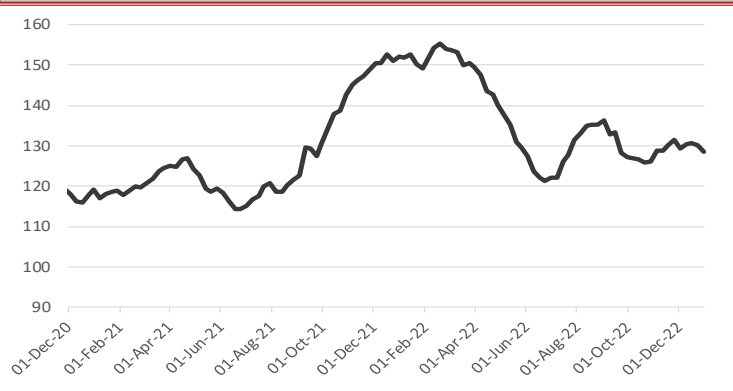
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



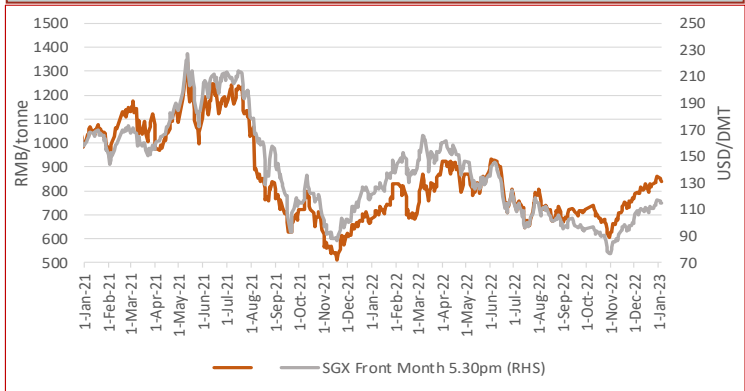
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



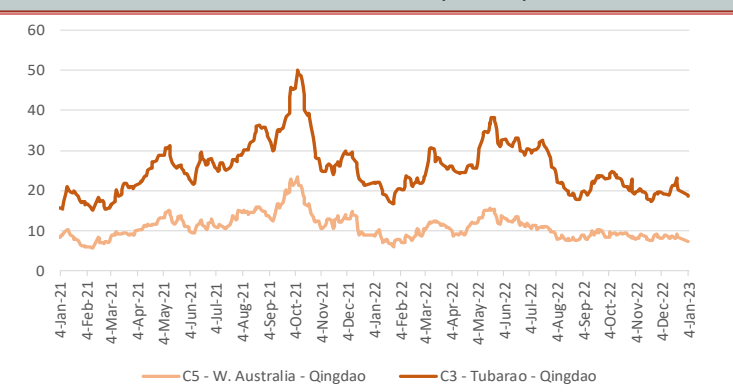
IRON ORE PORT INVENTORIES (MILLION TONNES)

Week Ending Dec 30th, 2022				
Province	This week	Change %	Low ²	High ²
Jingtang	12.44	-1.66%	9.84	19.20
Qingdao	25.34	-0.78%	9.41	26.24
Caofeidian	11.58	-5.31%	9.05	16.29
Tianjin	9.98	5.83%	7.14	12.97
Rizhao	17.33	-1.76%	9.44	19.26
Total (35 Ports)	128.47	-1.18%	98.80	155.39

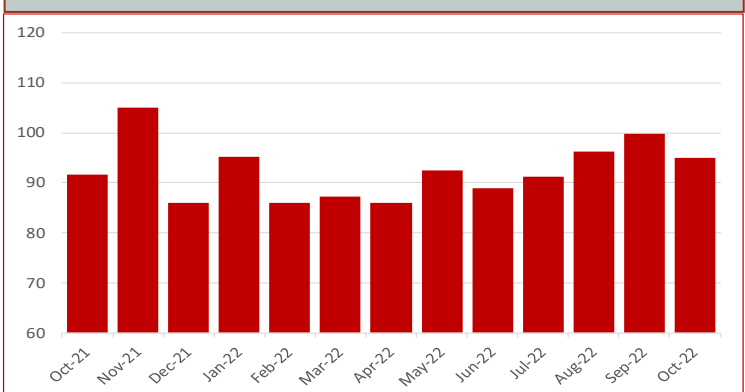
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	Jan 5th, 3pm close			Jan 5th, 5:30pm		
	Contract	Change	Change %	Jan. 23	Change	Change %
Closing Price	840.00	-6.50	-0.77%	115.20	0.10	0.09%
Vol traded ('000 lots)	73.44	-1.97	-2.61%	1.23	-0.69	-35.82%
Open positions ('000 lots)	85.50	-1.90	-2.17%	24.93	-0.76	-2.94%
Day Low	830.0	-10.00	-1.19%	114.65	-0.35	-0.30%
Day High	847.0	-13.50	-1.57%	116.25	-1.90	-1.61%

DRY BULK FREIGHT RATES (USD/MT)



TOTAL CHINA IRON ORE IMPORT VOLUMES (MILLION TONNES)



STEEL SPOT MARKET PRICES—CHINA

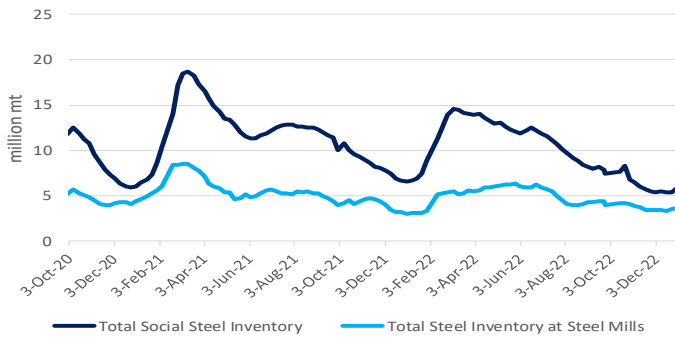
Product	2022/12/30	Change	Change %
ReBar HRB400 φ18mm	4,100	60	1.49%
Wirerod Q300 φ6.5mm	4,360	60	1.40%
HRC Q235/SS400 5.5mm*1500*C	4,180	100	2.45%
CRC SPCC/ST12 1.0mm*1250*2500	4,550	-30	-0.66%
Medium & Heavy Plate Q235B 20mm	4,130	-20	-0.48%
GI ST02Z 1.0mm*1000*C	4,790	-30	-0.62%
Colour Coated Plate	7,530	0	0.00%

CHINESE STEEL MILL PROFITABILITY

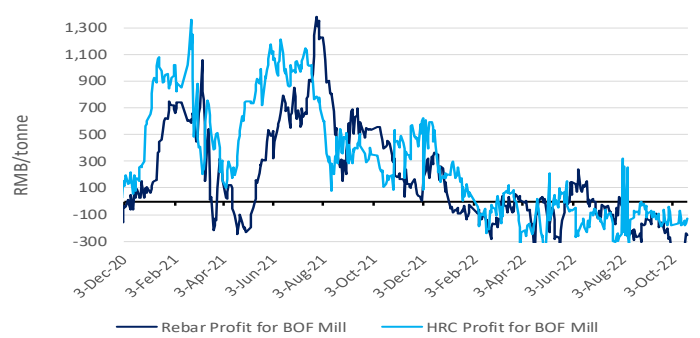
SMM Tracking of Steel Mill P&L - Rebar and Hot-rolled Coil (RMB/tonne)			
Category	Price	Change (WoW)	Note
MMi (Fe 62%), USD/mt excluding tax	113.35	1	Mmi CFR Equivalent index for 1st Feb
Coke	3,180	0	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	3,120	80	steel scrap (6mm) in Zhangjiagang, excl. tax
Billet Cost	3,808	25	Q234, incl. tax
Rebar cost - Blast furnace	4,337	28	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	-237	72	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	4,295	26	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	-125	54	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

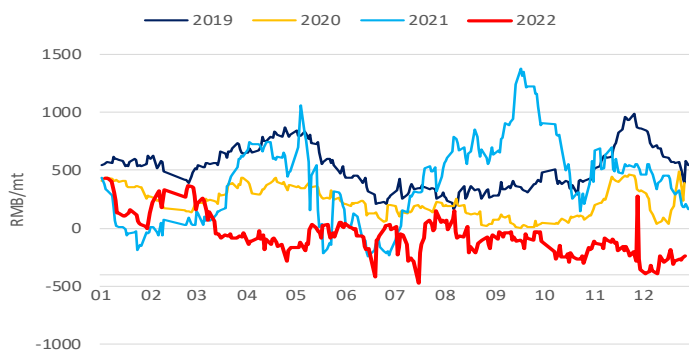
CHINESE STEEL INVENTORIES



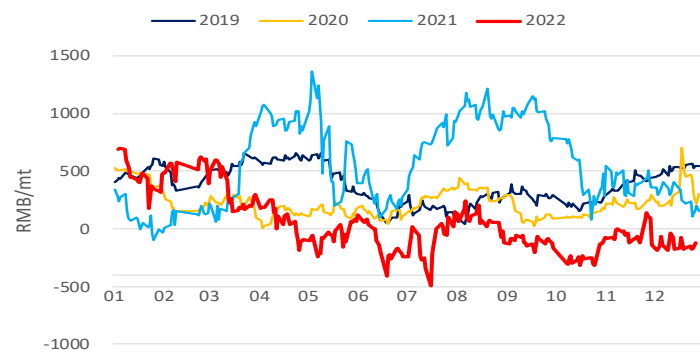
CHINESE STEEL MILL PROFITABILITY



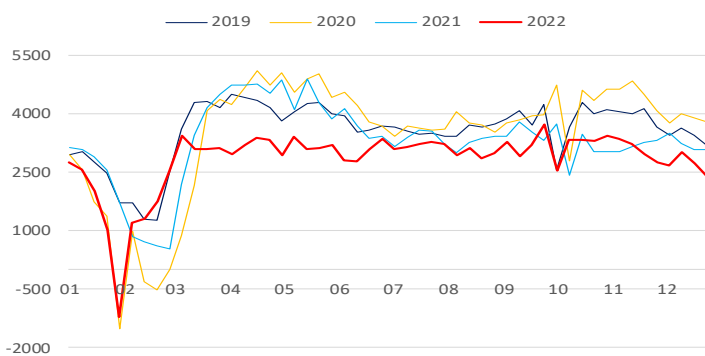
CHINESE STEEL MILL PROFITABILITY—Rebar



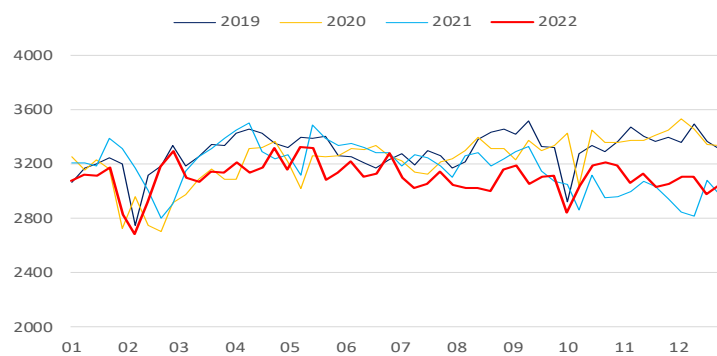
CHINESE STEEL MILL PROFITABILITY—Hot-rolled Coil



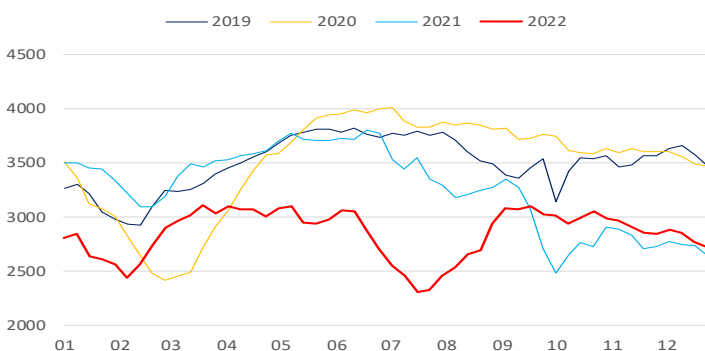
CHINESE STEEL CONSUMPTION—Rebar



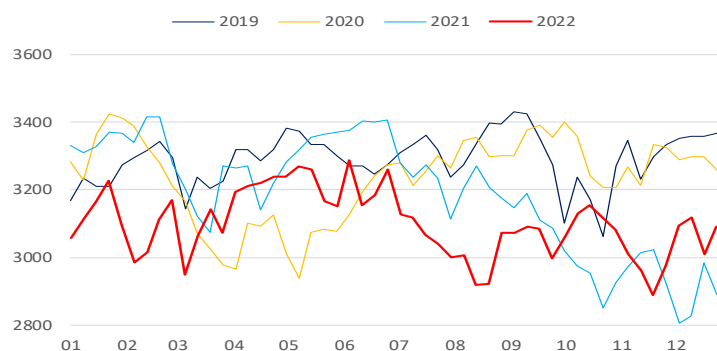
CHINESE STEEL CONSUMPTION—Hot-rolled Coil



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	<p>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.</p> <p>For more details on MMi's iron ore methodology please download the guide published on our website at: www.mmiprices.com</p> <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> <p>* Number of price submissions for iron ore indices that were excluded from index calculations today as they were anomalous and could not be verified</p>	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																								
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																						

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 5th, 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 5th, 2023	Specifications applied for 58% brand assessments						Specifications applied for 58% brand assessments				
	Fe	Alumina	Silica	Phos	Moisture		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

Visit www.mmiprices.com for full index price histories and archive of daily reports

This information has been prepared by Metals Market Index ("MMI"). Use of the information presented here is at your sole risk, and any content, material and/or data presented or otherwise obtained through your use of the information in this document is at your own discretion and risk and you will be solely responsible for any damage to you personally or your company or organisation or business associates whatsoever which in anyway results from the use, reliance or application of such content material and/or information. Certain data has been obtained from various sources and any copyright existing in such data shall remain the property of the source. Except for the foregoing, MMi retains all copyright within this document. The copying or redistribution of any part of this document without the express written authority of MMi is forbidden.