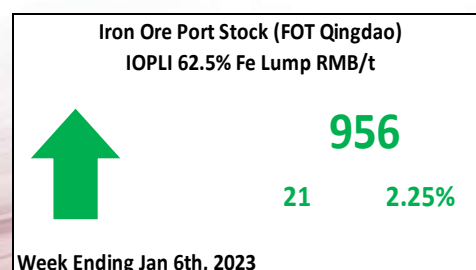
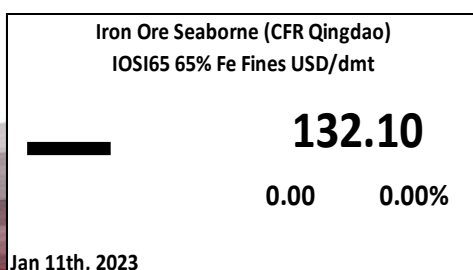
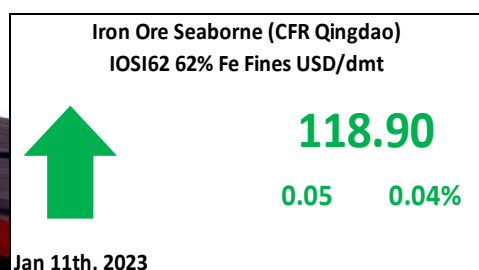
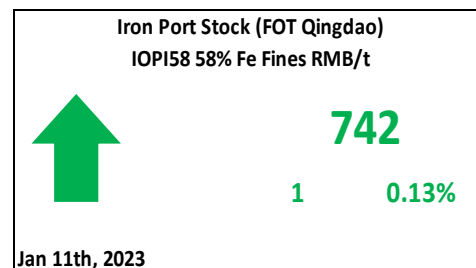
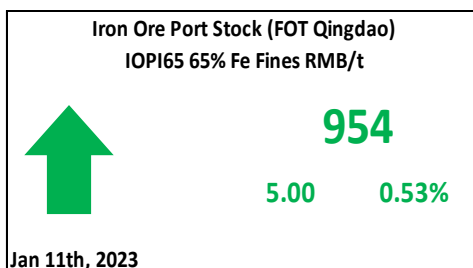
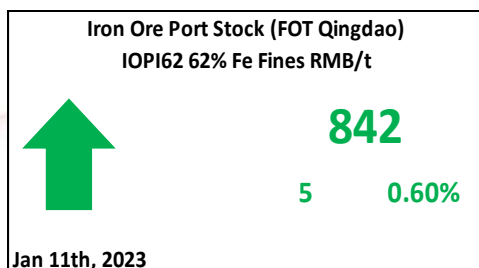


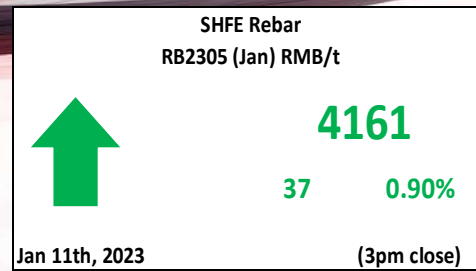
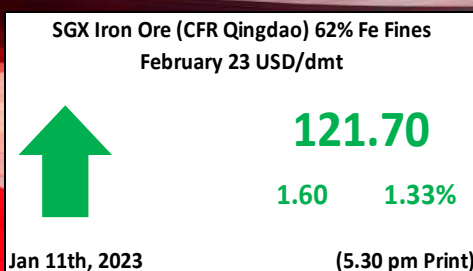
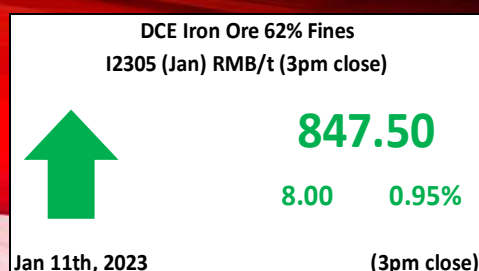


MMi Dashboard

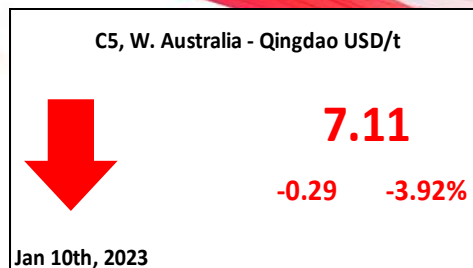
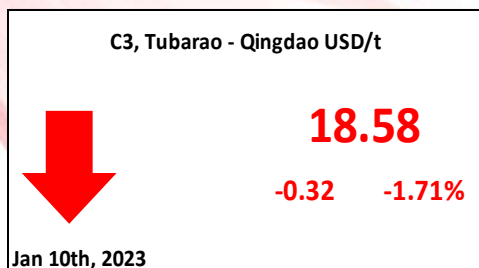
Iron Ore Price Indices



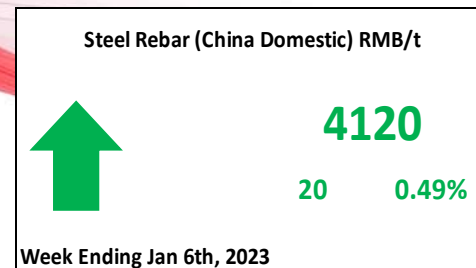
Exchange Traded Contracts



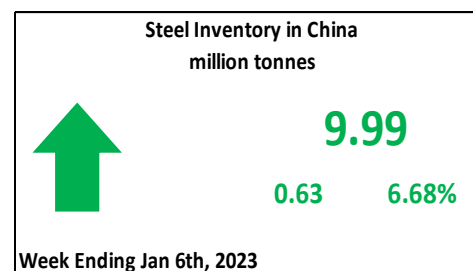
Freight Rates



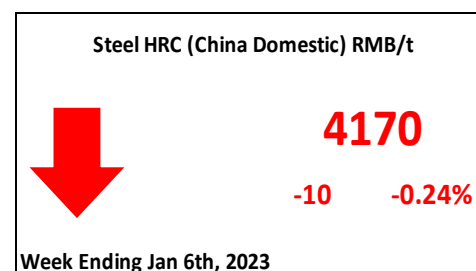
Steel Price



Inventory Levels



Steel Price



IRON ORE PORT STOCK INDEX (IOPI)

Jan 11th, 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	842	5	0.6%	769	862	643	1083	115.56	0.46	0.4%	102.18	119.95	82.29	159.06
IOPI58	58% Fe Fines	742	1	0.1%	686	732	604	907	102.48	-0.08	-0.1%	91.62	102.12	77.29	134.15
IOPI65	65% Fe Fines	954	5	0.5%	897	1016	811	1265	131.46	0.43	0.3%	119.64	142.07	108.78	187.25

IRON ORE SEABORNE INDEX (IOSI)

MARKET COMMENTARY

Jan 11th, 2023		CFR Qingdao, USD/dry tonne						
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low ²	High ²
IOSI62	62% Fe Fines	118.90	0.05	0.04%	102.97	122.07	83.90	159.45
IOSI65	65% Fe Fines	132.10	0.00	0.00%	113.20	139.90	94.45	185.82

DCE iron ore futures rose by 1.62% today, the main contract closed 847.5. The traders' willingness to ship is general. The steel mills are active to purchase. The overall trading sentiment of the market is better. PBF at Shandong port deal 845-850 yuan/mt, increase 5-10 yuan/mt; PBF at Tangshan port deal 848-851 yuan/mt, increase 8-11 yuan/mt. On the macro level, the relevant national departments will hold a special press conference of the National Development and Reform Commission at 10 a.m. on January 12 to introduce the work related to price stabilization. Fundamentals According to the inventory of steel mills surveyed by SMM, the replenishment of raw materials before the Spring Festival is significantly lower than that of previous years. At present, the steel mills have no production reduction plan, so it is expected that some steel mills in East and North China will still have replenishment demand before the Spring Festival. The current wide fluctuation of iron ore prices, the weak demand in the terminal off-season, or the stimulus from the news, is expected to be dominated by the wide fluctuation of iron ore prices in the short term.

IRON ORE PORT LUMP INDEX (IOPLI)

Week Ending Jan 6th, 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	956	21	2.2%	882	1042	770	1405	123.78	3.82	3.18%	112.72	139.90	94.72	199.13

IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

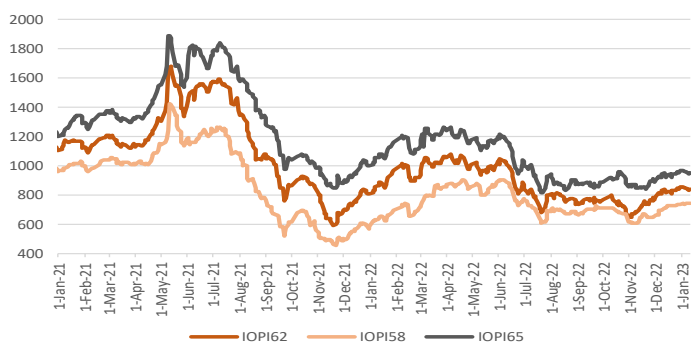
Week Ending Jan 6th, 2023				RMB/tonne (excluding tax) ³				USD/tonne (excluding tax) ³			
Province	Region	Product	Basis	This week	Change %	Low ²	High ²	This week	Change %	Low ²	High ²
Hebei	Hanxing	66% Fe Concentrate	Dry	1030	2.7%	779	1645	149.04	3.56%	110.31	255.69
Hebei	Qian'an	65% Fe Concentrate	Dry	1065	1.4%	780	1630	154.10	2.29%	110.51	251.57
Liaoning	Anshan	65% Fe Concentrate	Wet	750	1.4%	620	1310	108.52	2.21%	87.40	202.32
Shandong	Zibo	65% Fe Concentrate	Dry	1053	2.6%	800	1752	152.36	3.50%	117.19	272.32

Week Ending Jan 6th, 2023

This week	Change %	Low ²	High ²	
China Mines Concentrate Composite Index RMB/WT	917.88	1.37%	706.36	1511.22

¹ Exchange rate applied: RMB/USD = 6.7522 ² Last 12 months
³ Weekly exchange rate applied: RMB/USD = 6.9111

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 11th, 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	769	769	862	101.14	95.56	92.18	109.43	102.18	102.79	119.95
IOPI58	58% Fe Fines	697	683	635	711	686	685	732	93.56	89.34	82.39	95.17	91.62	92.07	102.12
IOPI65	65% Fe Fines	875	918	865	935	897	900	1016	117.19	120.08	112.37	124.90	119.64	120.77	142.07

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

FREIGHT RATES

Jan 11th, 2023		CFR Qingdao, USD/dry tonne							Jan 10th, 2023							
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	102.97	104.05	122.07	W. Australia - Qingdao		C5	7.11	-0.29	-3.92%	3.57	16.77
IOSI65	65% Fe Fines	111.57	106.70	102.40	116.83	113.20	114.92	139.90	Tubarao - Qingdao		C3	18.58	-0.32	-1.71%	6.70	36.40

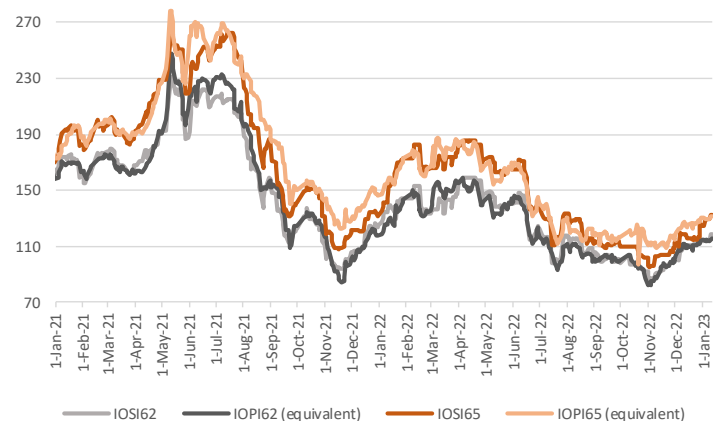
IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending Jan 6th, 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	882	886	1042	112.75	109.81	100.83	117.06	112.72	114.13	139.90

IRON ORE INDEX PREMIUMS/DISCOUNTS

Jan 11th, 2023		PORT STOCK INDEX (RMB/WT)		Jan 11th, 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	-100	-11.88%	IOSI65	65% Fe Fines	13.20	11.10%
IOPI65	65% Fe Fines	112	13.30%				

IRON ORE INDEX COMPARISONS (USD/DMT)



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



IRON ORE BRAND SPOT PRICE ASSESSMENTS

Jan 11th, 2023				Jan 11th, 2023			
PORT STOCK INDEX (RMB/WT)				SEABORNE INDEX (USD/DMT)			
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	785	5	-57	Roy Hill	114.40	0.05	-4.50
SIMEC Fines	714	6	-128	SIMEC Fines	110.90	0.05	-8.00
PB Fines	811	5	-31	PB Fines	115.15	0.05	-3.75
Newman Fines	811	6	-31	Newman Fines	118.05	0.10	-0.85
MAC Fines	792	5	-50	MAC Fines	115.15	0.05	-3.75
Jimblebar Blended Fines	707	5	-135	Jimblebar Blended Fines	107.55	0.10	-11.35
Carajas Fines	1022	5	180	Carajas Fines	148.45	0.05	29.55
Brazilian SSF	805	5	-37	Brazilian SSF	122.65	0.05	3.75
Brazilian Blend Fines	824	5	-18	Brazilian Blend Fines	124.30	0.05	5.40
RTX Fines	725	5	-117	RTX Fines	108.80	0.05	-10.10
West Pilbara Fines	753	5	-89	West Pilbara Fines	113.15	0.05	-5.75

Jan 11th, 2023			
PORT STOCK INDEX (RMB/WT)			
	Price	Change	Diff to IOPI58
SSF	742	1	0
FMG Blended Fines	751	1	9
Robe River	752	1	10
Western Fines	755	1	13
Atlas Fines	749	1	7
Yandi	735	1	-7

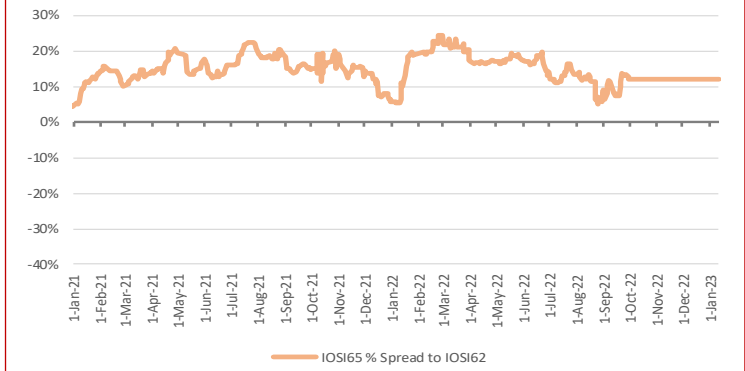
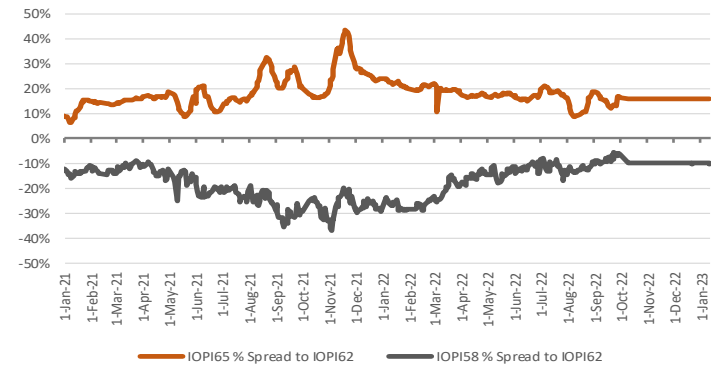
IRON ORE INDEX NORMALISATION DIFFERENTIALS

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%	22.00	-2.00	1% Fe	High Grade Fe 60 - 63%	0.75	0.00
	High Grade Fe 63 - 64%	31.00	0.00		High Grade Fe 63 - 64%	1.75	-0.25
	High Grade Fe 64 - 65%	31.00	0.00		High Grade Fe 64 - 65%	1.75	-0.25
	High Grade Fe 65 - 65.5%	31.00	0.00		High Grade Fe 65 - 65.5%	1.75	-0.25
1% Alumina	Low Grade Fe	29.00	3.00	1% Alumina	High Fe Grade Al <2.25%	2.75	-0.50
	High Fe Grade Al <2.25%	117.00	6.00		High Fe Grade Al 2.25-4%	0.25	0.00
	High Fe Grade Al 2.25-4%	34.00	-1.00				
	Low Fe Grade Al <2.25%	10.00	-7.00				
1% Silica	Low Fe Grade Al 2.25-4%	36.00	5.00	1% Silica	High Fe Grade Si <4%	1.25	-0.50
	High Fe Grade Si <4%	39.00	0.00		High Fe Grade Si 4 - 6.5%	0.25	0.00
0.01% Phosphorus	High Fe Grade Si <4%	39.00	0.00	0.01% Phosphorus	High Fe Grade Si 4 - 6.5%	0.25	0.00
	High Fe Grade 0.09%<P<0.115%	15.00	-2.00		High Fe Grade 0.09%<P<0.115%	1.00	-0.50
	High Fe Grade 0.115%<P<0.15%	15.00	-2.00		High Fe Grade 0.115%<P<0.15%	5.00	-0.50
	Low Fe Grade 0.09%<P<0.1%	5.00	0.00				

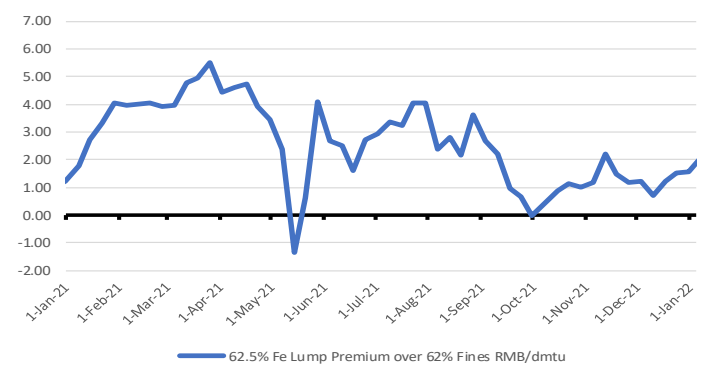
Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

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	-5.00	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

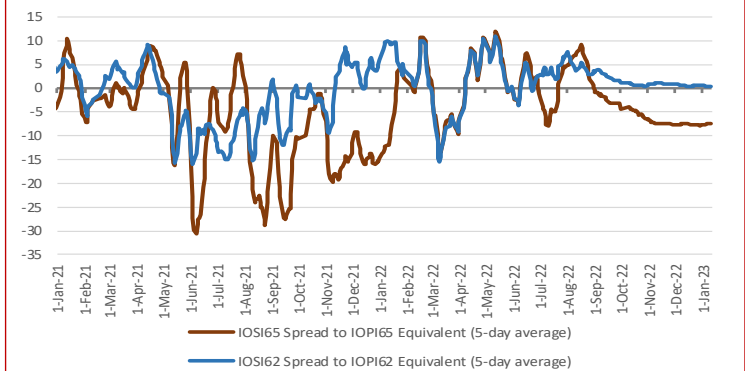
IRON ORE INDEX PREMIUMS/DISCOUNTS



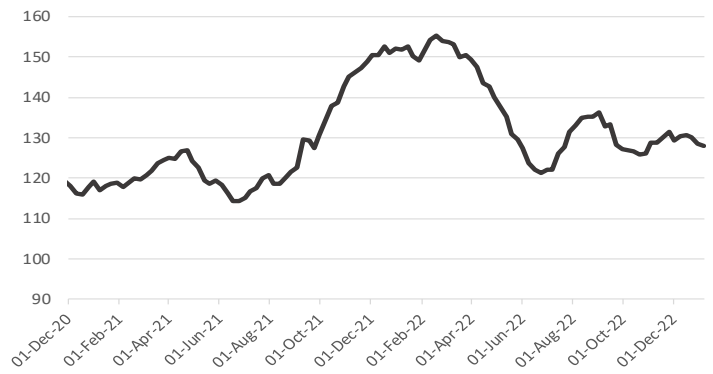
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



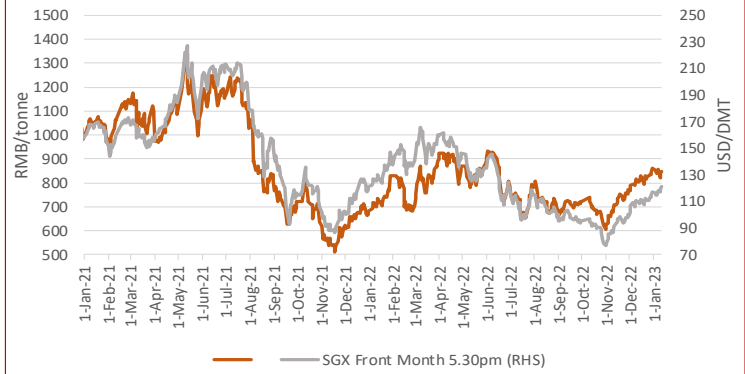
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



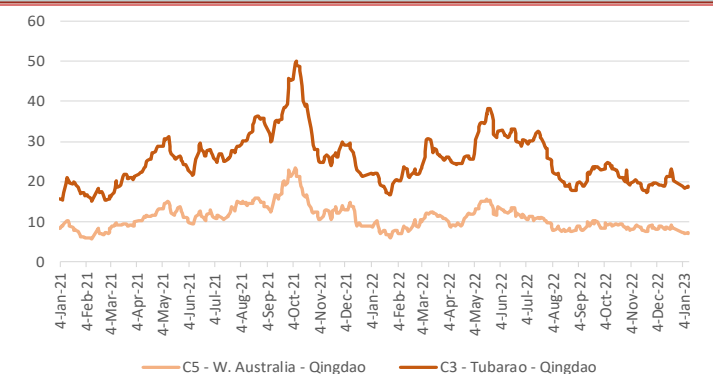
IRON ORE PORT INVENTORIES (MILLION TONNES)

Week Ending Jan 6th, 2023				
Province	This week	Change %	Low ²	High ²
Jingtang	12.27	-1.37%	9.84	19.20
Qingdao	25.54	0.79%	9.41	26.24
Caofeidian	11.10	-4.15%	9.05	16.29
Tianjin	10.44	4.61%	7.14	12.97
Rizhao	17.14	-1.10%	9.44	19.26
Total (35 Ports)	127.87	-0.47%	98.80	155.39

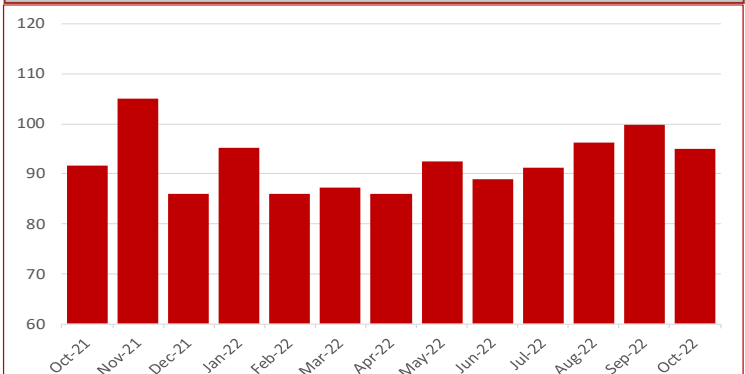
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	Jan 11th, 3pm close			Jan 11th, 5:30pm		
Contract	12305	Change	Change %	Feb. 23	Change	Change %
Closing Price	847.50	8.00	0.95%	121.70	1.60	1.33%
Vol traded ('000 lots)	55.46	-17.12	-23.58%	4.28	-2.40	-35.89%
Open positions ('000 lots)	90.19	2.57	2.94%	27.13	0.94	3.59%
Day Low	835.0	8.50	1.03%	118.90	2.40	2.06%
Day High	852.5	8.50	1.01%	122.30	1.75	1.45%

DRY BULK FREIGHT RATES (USD/MT)



TOTAL CHINA IRON ORE IMPORT VOLUMES (MILLION TONNES)



STEEL SPOT MARKET PRICES—CHINA

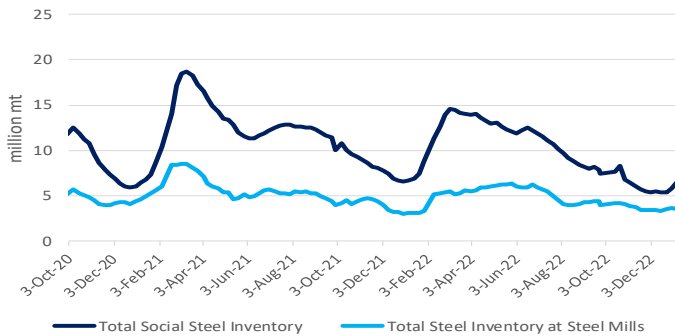
Steel Spot Market RMB/tonne			
Product	2023/1/6	Change	Change %
ReBar HRB400 φ18mm	4,120	20	0.49%
Wirerod Q300 φ6.5mm	4,380	20	0.46%
HRC Q235/SS400 5.5mm*1500*C	4,170	-10	-0.24%
CRC SPCC/ST12 1.0mm*1250*2500	4,550	0	0.00%
Medium & Heavy Plate Q235B 20mm	4,150	20	0.48%
GI ST02Z 1.0mm*1000*C	4,780	-10	-0.21%
Colour Coated Plate	7,530	0	0.00%

CHINESE STEEL MILL PROFITABILITY

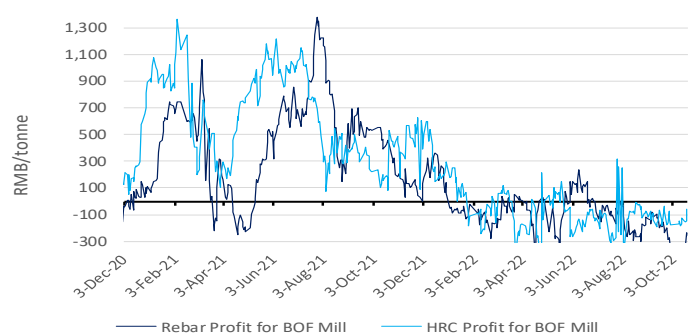
SMM Tracking of Steel Mill P&L - Rebar and Hot-rolled Coil (RMB/tonne)			
Category	Price	Change (WoW)	Note
MMi (Fe 62%), USD/mt excluding tax	114.25	1	Mmi CFR Equivalent index for 1st Feb
Coke	3,070	-110	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	3,120	0	steel scrap (6mm) in Zhangjiagang, ext. tax
Billet Cost	3,747	-61	Q234, incl. tax
Rebar cost - Blast furnace	4,268	-69	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	-178	59	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	4,227	-69	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	-57	69	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

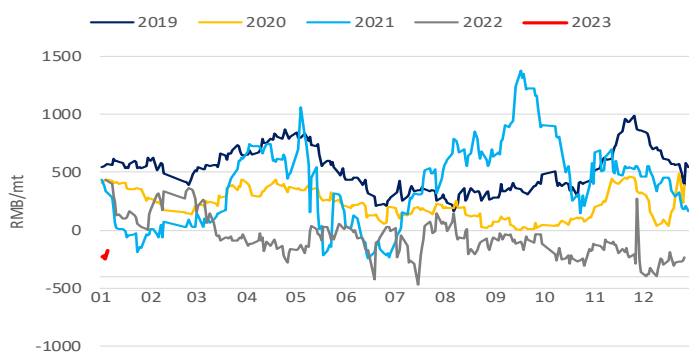
CHINESE STEEL INVENTORIES



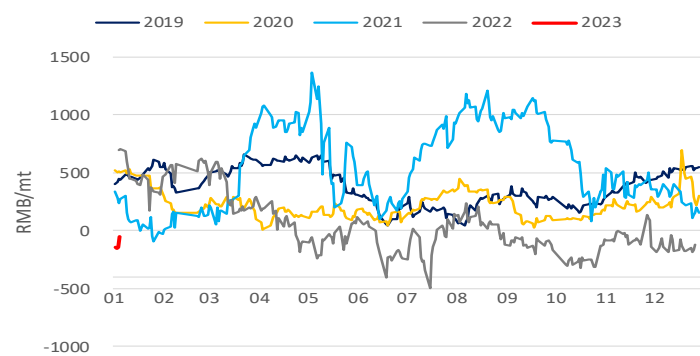
CHINESE STEEL MILL PROFITABILITY



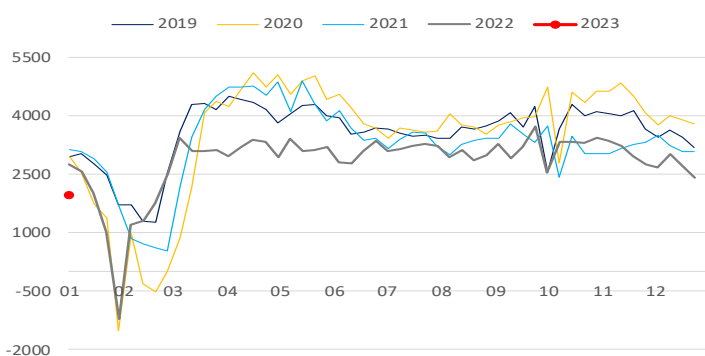
CHINESE STEEL MILL PROFITABILITY—Rebar



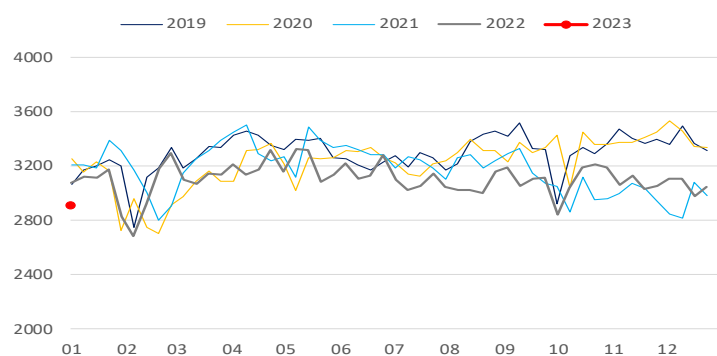
CHINESE STEEL MILL PROFITABILITY—Hot-rolled Coil



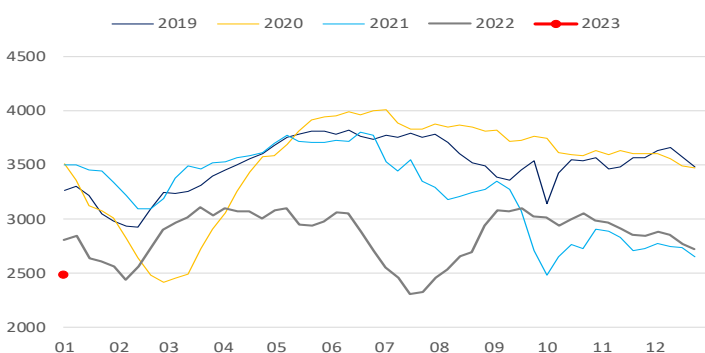
CHINESE STEEL CONSUMPTION—Rebar



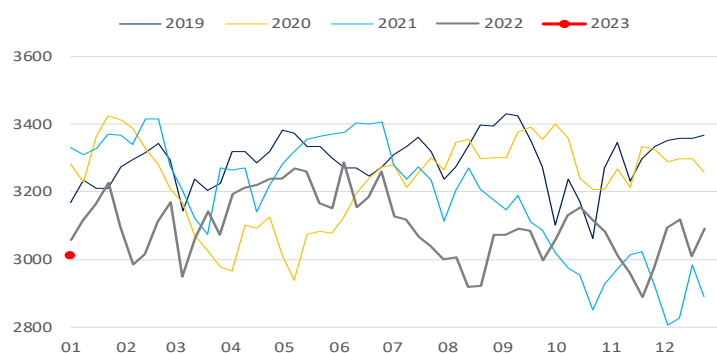
CHINESE STEEL CONSUMPTION—Hot-rolled Coil



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%	<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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	62%	58%	65%																						
Port Index	0	0	0																						
Seaborne index	0		0																						
Lump Index 62.5	0																								
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 11th, 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 11th, 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		

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