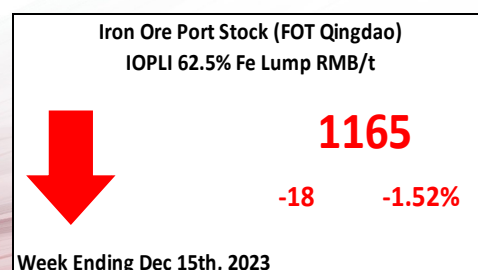
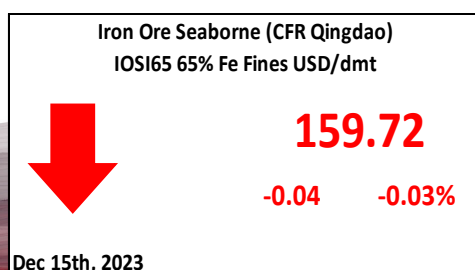
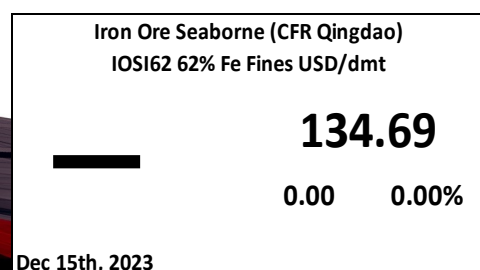
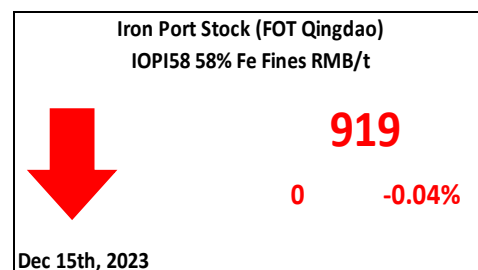
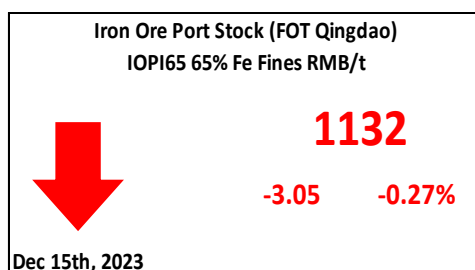
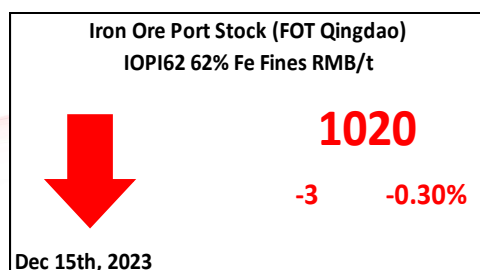


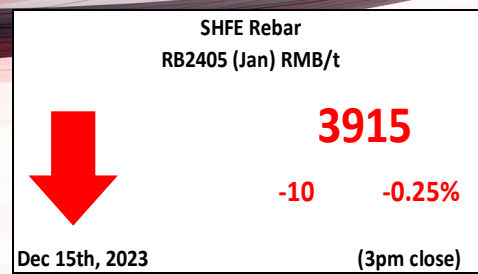
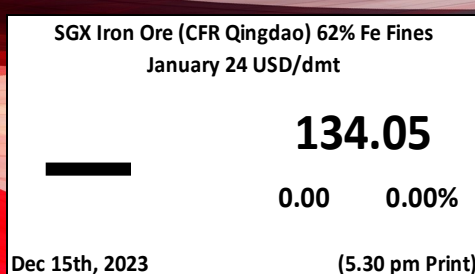
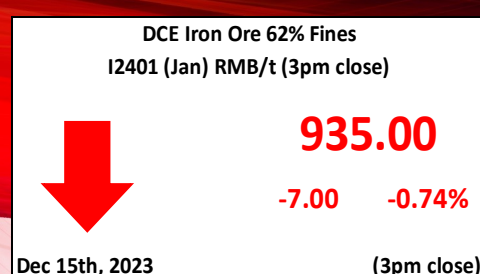


MMi Dashboard

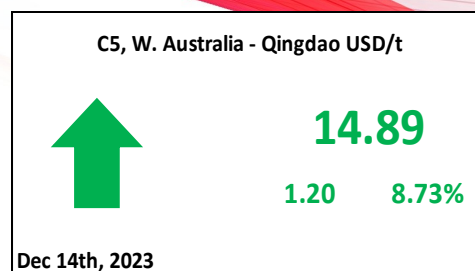
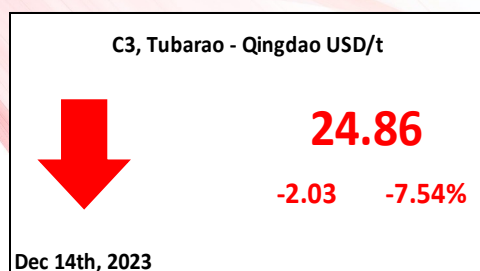
Iron Ore Price Indices



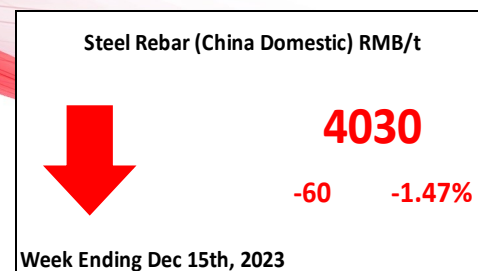
Exchange Traded Contracts



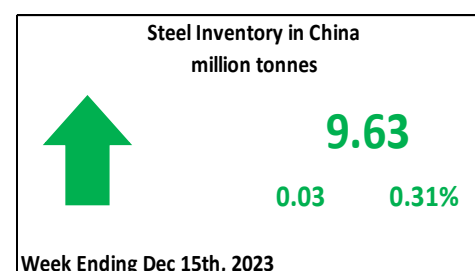
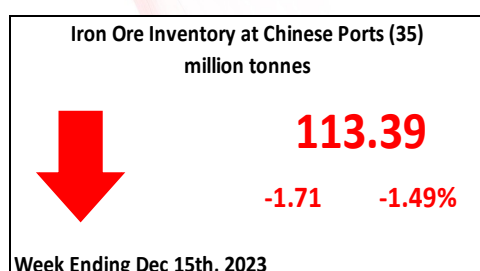
Freight Rates



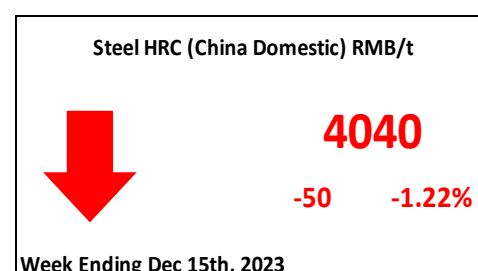
Steel Price



Inventory Levels



Steel Price



IRON ORE PORT STOCK INDEX (IOPI)

Dec 15th, 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	1020	-3.1	-0.30%	860	882	770	1023	134.49	-0.16	-0.1%	113.85	119.77	100.95	134.65
IOPI58	58% Fe Fines	919	-0.4	-0.04%	764	766	680	924	122.16	0.18	0.1%	101.81	104.38	89.86	122.47
IOPI65	65% Fe Fines	1132	-3.0	-0.27%	977	1016	881	1135	149.63	-0.13	-0.1%	129.78	138.57	116.19	149.76

IRON ORE SEABORNE INDEX (IOSI)

Dec 15th, 2023		CFR Qingdao, USD/dry tonne						
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low ²	High ²
IOSI62	62% Fe Fines	134.69	0.00	0.00%	114.69	114.69	99.20	146.75
IOSI65	65% Fe Fines	159.72	-0.04	-0.03%	127.97	127.97	114.75	162.60

DCE iron ore futures continued to fluctuate a sharp drop in the afternoon, the main contract 12405 closed 935, a decrease of 1.37% throughout the day; Traders ship according to market conditions. Some steel mills tended to be wait-and-see, and purchasing enthusiasm is not high, total transactions remained insipid. PBF at Tangshan port dealt 1004-1005 yuan/mt, decreased 7 yuan/mt over yesterday. As of December 15th, SMM has tracked a total of 112.4 million tons of inventory in 35 ports, with 2.69 million tons of inventory removed compared to last week; The daily average port clearance volume of imported ore in this period increased by 57000 tons to 2.926 million tons on a weekly basis compared to last week. According to SMM tracking of this week's blast furnace operating rate, there has been a slight increase in blast furnace operating rate and molten iron month on month, while demand for iron concentrate remains strong; In addition, as winter approaches, some steel mills are considering the impact of rain and snow on transportation, accelerating the transfer of iron ore from port inventory to factory inventory, resulting in an increase in port clearance volume; Looking at next week, starting from the profit of steel mills, with the third round of coke price increase landing and steel prices falling, the profit of steel mills has contracted significantly. The willingness of steel mills to replenish inventory is poor, and they mainly rely on on-demand procurement; Considering frequent environmental production restrictions, blast furnace maintenance may exceed expectations, and there is a risk of a decrease in demand for iron powder; Expected ore prices may fluctuate weakly.

IRON ORE PORT LUMP INDEX (IOPLI)

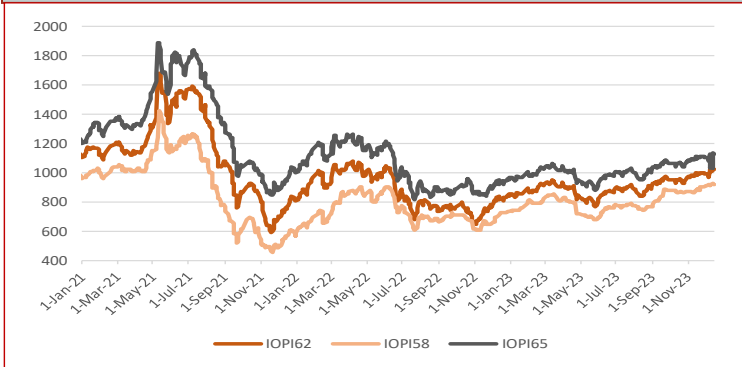
Week Ending Dec 15th, 2023		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne ³						
Index	Fe Content	Price	W-o-W	Change %	MTD	YTD	Low ²	High ²	Price	W-o-W	Change %	MTD	YTD	Low ²	High ²
IOPLI62	62.5% Fe Lump	1165	-18	-1.5%	971	1031	903	1183	147.41	-2.31	-1.54%	122.22	134.93	114.47	147.41

IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

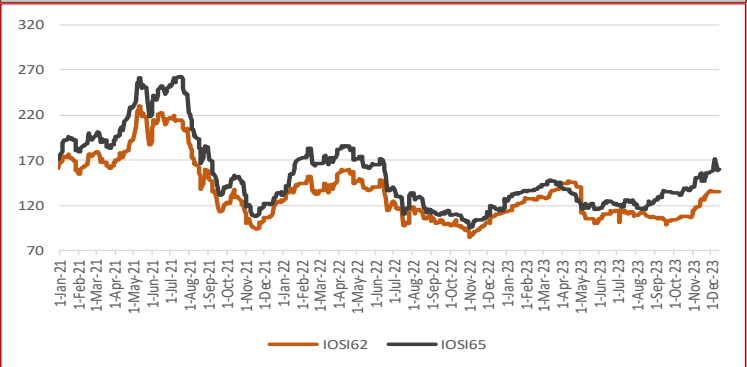
Week Ending Dec 15th, 2023				RMB/tonne (excluding tax) ³				USD/tonne (excluding tax) ³			
Province	Region	Product	Basis	This week	Change %	Low ²	High ²	This week	Change %	Low ²	High ²
Hebei	Hanxing	66% Fe Concentrate	Dry	1166	1.4%	779	1645	163.99	1.41%	110.31	255.69
Hebei	Qian'an	65% Fe Concentrate	Dry	1205	1.3%	780	1630	169.47	1.28%	110.51	251.57
Liaoning	Anshan	65% Fe Concentrate	Wet	925	2.8%	620	1310	130.09	2.80%	87.40	202.32
Shandong	Zibo	65% Fe Concentrate	Dry	1226	1.5%	800	1752	172.43	1.51%	0.00	272.32
Week Ending Dec 15th, 2023				This week	Change %	Low ²	High ²				
China Mines Concentrate Composite Index RMB/WT				1070.89	0.00%	706.36	1511.22				

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

Dec 15th, 2023		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne						
Index	Fe Content	August	September	October	November	MTD	QTD	YTD	August	September	October	November	MTD	QTD	YTD
IOPI62	62% Fe Fines	873	945	947	988	860	855	882	113.28	122.79	123.14	129.07	113.85	113.37	119.77
IOPI58	58% Fe Fines	759	838	869	884	764	759	766	99.13	109.67	113.94	116.42	101.81	101.35	104.38
IOPI65	65% Fe Fines	985	1057	1059	1100	977	973	1016	128.31	137.74	138.13	144.10	129.78	129.57	138.57

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

Dec 15th, 2023		CFR Qingdao, USD/dry tonne							FREIGHT RATES - DRY BULK US\$/wet tonne						
Index	Fe Content	August	September	October	November	MTD	QTD	YTD	Route	Designation	Change	Change %	Low ²	High ²	
IOSI62	62% Fe Fines	109.02	104.25	106.44	124.61	112.14	113.64	114.69	W. Australia - Qingdao	C5	14.89	1.20	8.73%	3.57	16.77
IOSI65	65% Fe Fines	119.61	132.40	135.69	150.46	122.86	126.72	127.97	Tubarao - Qingdao	C3	24.86	-2.03	-7.54%	6.70	36.40

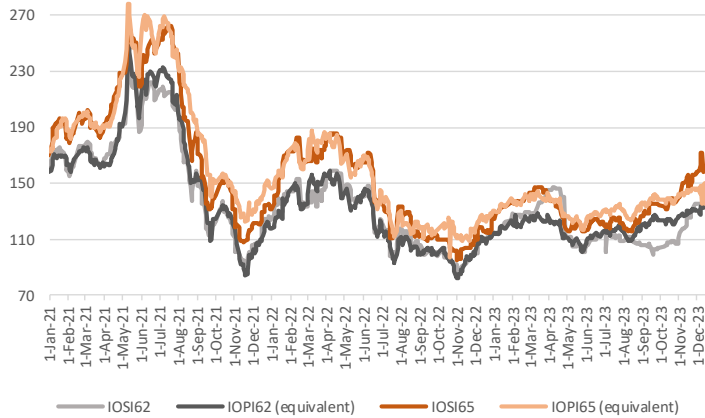
IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending Dec 15th, 2023		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne ¹						
Index	Fe Content	August	September	October	November	MTD	QTD	YTD	August	September	October	November	MTD	QTD	YTD
IOPLI62	62.5% Fe Lump	951	1043	1113	1155	933	967	1017	118.96	130.25	139.38	145.07	119.96	121.92	134.98

IRON ORE INDEX PREMIUMS/DISCOUNTS

Dec 15th, 2023		PORT STOCK INDEX (RMB/WT)		Dec 15th, 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	-101	-9.87%	IOSI65	65% Fe Fines	25.03	18.58%
IOPI65	65% Fe Fines	112	10.95%				

IRON ORE INDEX COMPARISONS (USD/DMT)



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



IRON ORE BRAND SPOT PRICE ASSESSMENTS

Dec 15th, 2023	PORT STOCK INDEX (RMB/WT)			Dec 15th, 2023	SEABORNE INDEX (USD/DMT)		
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	963	-3	-57	Roy Hill	130.20	0.00	-4.49
SIMEC Fines	896	-3	-124	SIMEC Fines	126.70	0.00	-7.99
PB Fines	986	-3	-34	PB Fines	130.95	0.00	-3.74
Newman Fines	990	-3	-30	Newman Fines	133.85	0.00	-0.84
MAC Fines	970	-3	-50	MAC Fines	130.95	0.00	-3.74
Jimblebar Blended Fines	886	-3	-134	Jimblebar Blended Fines	123.35	0.00	-11.34
Carajas Fines	1201	-3	181	Carajas Fines	164.25	0.00	29.56
Brazilian SSF	987	-3	-33	Brazilian SSF	138.45	0.00	3.76
Brazilian Blend Fines	1000	-3	-20	Brazilian Blend Fines	140.10	0.00	5.41
RTX Fines	904	-3	-116	RTX Fines	124.60	0.00	-10.09
West Pilbara Fines	930	-3	-90	West Pilbara Fines	128.95	0.00	-5.74

Dec 15th, 2023	PORT STOCK INDEX (RMB/WT)		
	Price	Change	Diff to IOPI58
SSF	919	-1	0
FMG Blended Fines	930	-1	11
Robe River	931	-1	12
Western Fines	935	-1	16
Atlas Fines	927	-1	8
Yandi	910	-1	-9

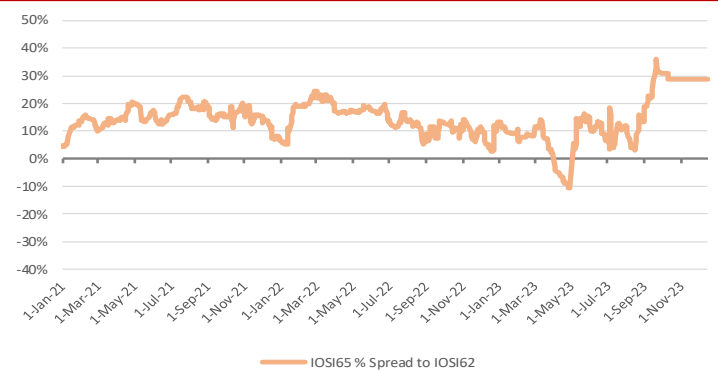
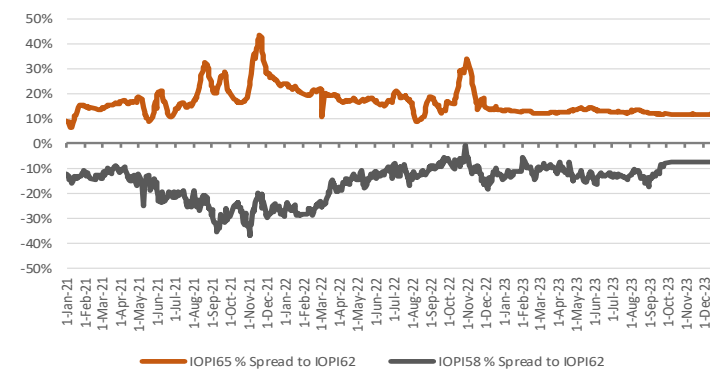
IRON ORE INDEX NORMALISATION DIFFERENTIALS

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	0.00	1% Fe	High Grade Fe 60 - 63%	4.25	-0.50
	High Grade Fe 63 - 64%	13.00	3.00		High Grade Fe 63 - 64%	2.75	0.00
	High Grade Fe 64 - 65%	13.00	3.00		High Grade Fe 64 - 65%	2.75	0.00
	High Grade Fe 65 - 65.5%	13.00	3.00		High Grade Fe 65 - 65.5%	2.75	0.00
	Low Grade Fe	22.00	-1.00	1% Alumina	High Fe Grade Al <2.25%	6.50	0.00
1% Alumina	High Fe Grade Al <2.25%	31.00	2.00		High Fe Grade Al 2.25-4%	0.75	0.00
	High Fe Grade Al 2.25-4%	19.00	1.00				
	Low Fe Grade Al <2.25%	80.00	-8.00				
	Low Fe Grade Al 2.25-4%	25.00	-3.00				
1% Silica	High Fe Grade Si <4%	13.00	2.00	1% Silica	High Fe Grade Si <4%	1.75	0.00
	High Fe Grade Si 4-6.5%	33.00	-2.00		High Fe Grade Si 4 - 6.5%	1.75	0.00
	Low Fe Grade	21.00	-1.00	0.01% Phosphorus			
0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	5.00	0.00		High Fe Grade 0.09%<P<0.115%	0.25	0.00
	High Fe Grade 0.115%<P<0.15%	5.00	0.00		High Fe Grade 0.115%<P<0.15%	3.25	-0.25
	Low Fe Grade 0.09%<P<0.1%	5.00	0.00				

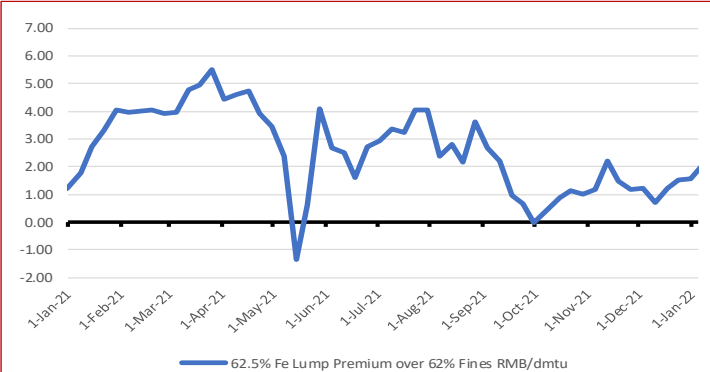
Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

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	-20.00	0.00	Lianyungang	0.00	0.00	Shekou	0.00	0.00
Caofeidian	-10.00	0.00	Jingtang	-10.00	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	-40.00	-10.00

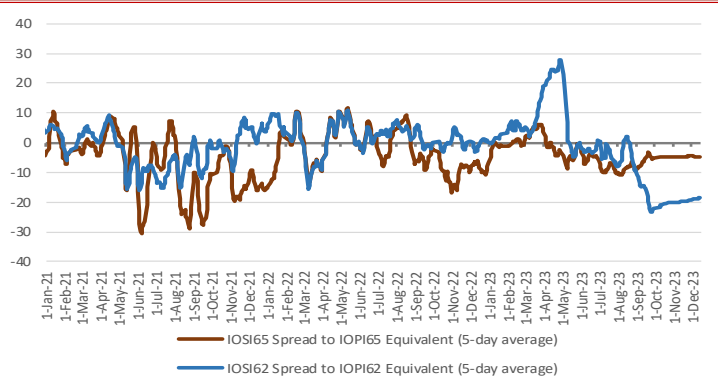
IRON ORE INDEX PREMIUMS/DISCOUNTS



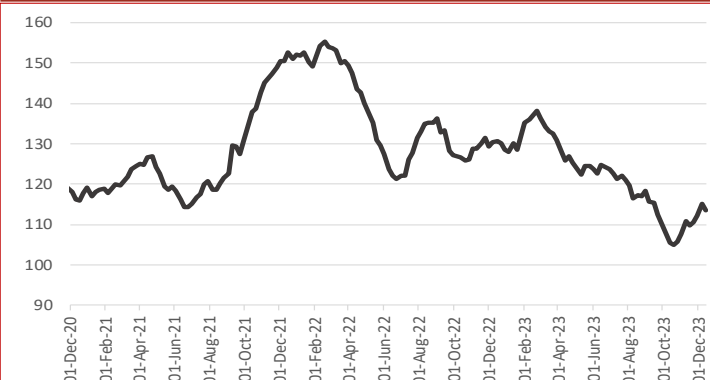
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



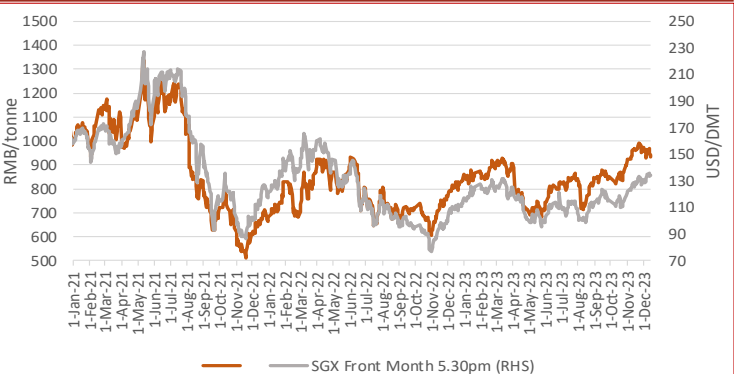
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



IRON ORE PORT INVENTORIES (MILLION TONNES)

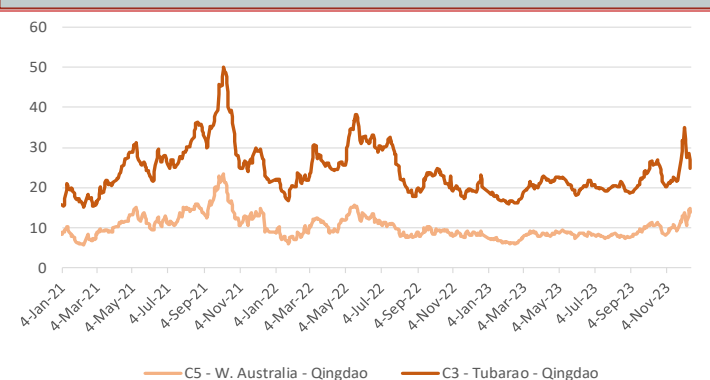
Week Ending Dec 15th, 2023

Province	This week	Change %	Low ²	High ²
Jingtang	8.77	-6.20%	8.41	19.20
Qingdao	24.09	0.75%	9.41	26.24
Caofeidian	10.76	4.06%	7.56	16.29
Tianjin	8.38	3.20%	6.49	12.97
Rizhao	13.48	1.20%	9.44	19.26
Total (35 Ports)	113.39	-1.49%	98.80	155.39

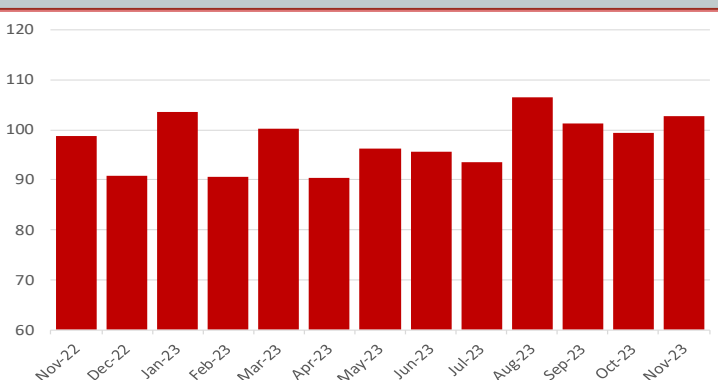
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	Dec 15th, 3pm close			Dec 15th, 5:30pm		
Contract	I2405	Change	Change %	Jan. 24	Change	Change %
Closing Price	935.00	-7.00	-0.74%	134.05	0.00	0.00%
Vol traded ('000 lots)	30.74	8.50	38.22%	8.22	1.91	30.16%
Open positions ('000 lots)	49.19	0.75	1.55%	38.77	-0.77	-1.94%
Day Low	930.0	-10.50	-1.12%	133.00	0.15	0.11%
Day High	955.5	-2.50	-0.26%	135.35	-0.75	-0.55%

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	2023/12/15	Change	Change %
ReBar HRB400 ϕ 18mm	4,030	-60	-1.47%
Wirerod Q300 ϕ 6.5mm	4,220	-70	-1.63%
HRC Q235/SS400 5.5mm*1500*C	4,040	-50	-1.22%
CRC SPCC/ST12 1.0mm*1250*2500	4,840	-20	-0.41%
Medium & Heavy Plate Q235B 20mm	4,030	-20	-0.49%
GI ST02Z 1.0mm*1000*C	5,040	-10	-0.20%
Colour Coated Plate	7,000	0	0.00%

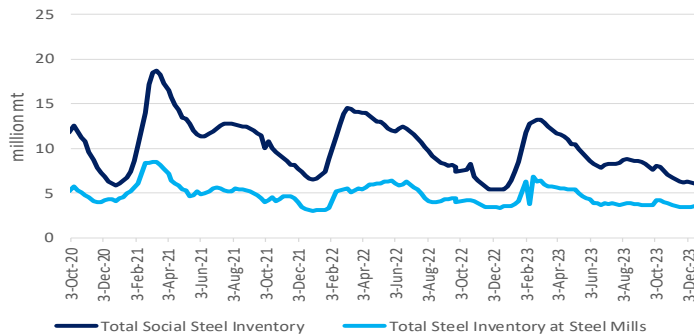
CHINESE STEEL MILL PROFITABILITY

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

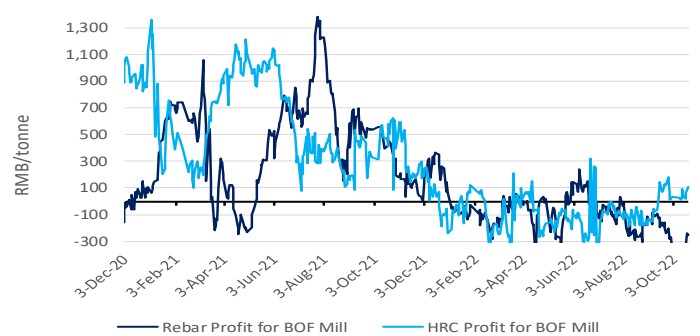
Category	Price	Change (WoW)	Note
MMi (Fe 62%), USD/mt excluding tax	134.69	-1	Mmi CFR Equivalent index for 1st Feb
Coke	2,780	110	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	2,910	0	steel scrap (6mm) in Zhangjiagang, excl. tax
Billet Cost	3,440	58	Q234, incl. tax
Rebar cost - Blast furnace	4,114	65	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	-184	-165	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	4,179	66	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	-169	-136	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

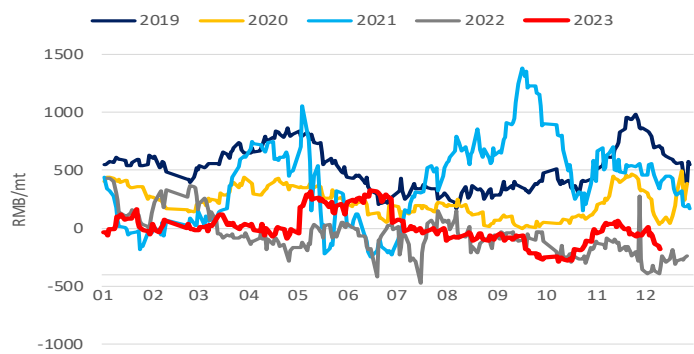
CHINESE STEEL INVENTORIES



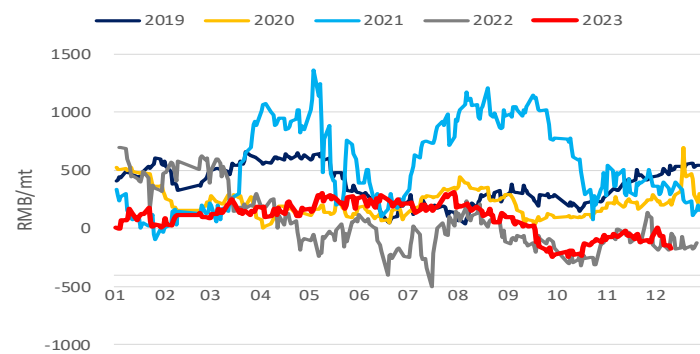
CHINESE STEEL MILL PROFITABILITY



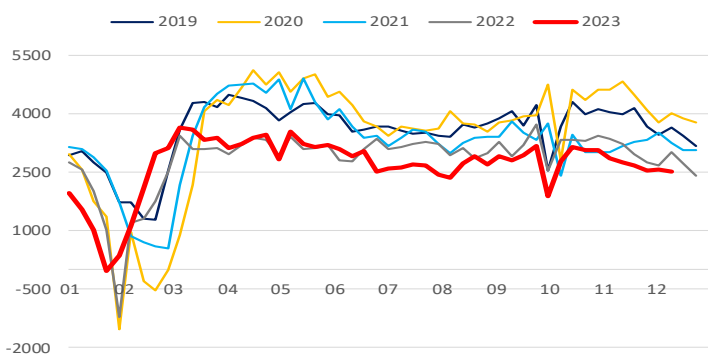
CHINESE STEEL MILL PROFITABILITY—Rebar



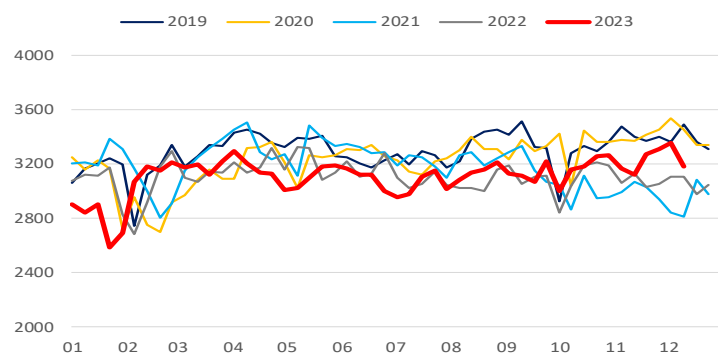
CHINESE STEEL MILL PROFITABILITY—Hot-rolled Coil



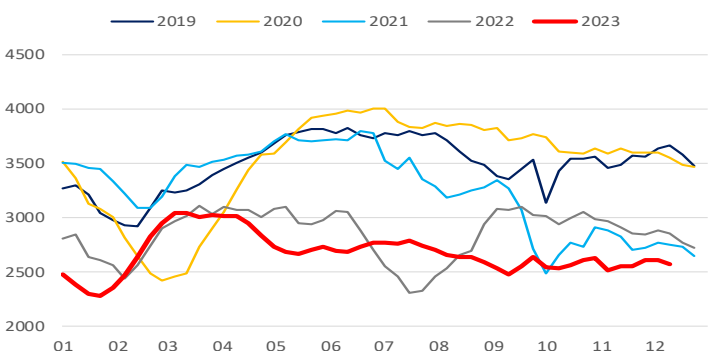
CHINESE STEEL CONSUMPTION—Rebar



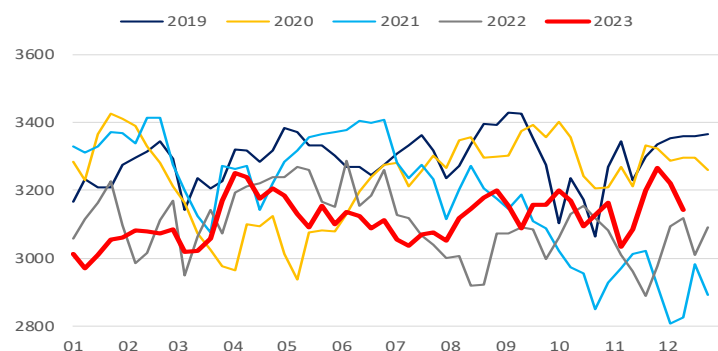
CHINESE STEEL CONSUMPTION—Hot-rolled Coil



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><td>62%</td><td>58%</td><td>65%</td></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					
Dec 15th, 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%
Dec 15th, 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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