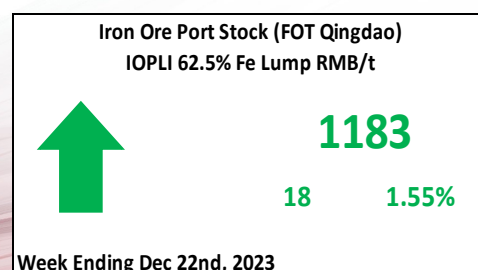
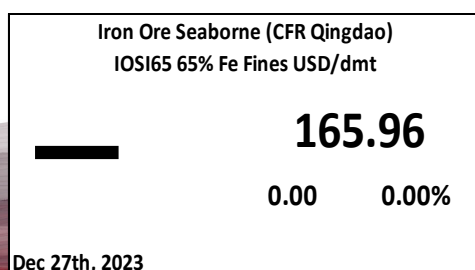
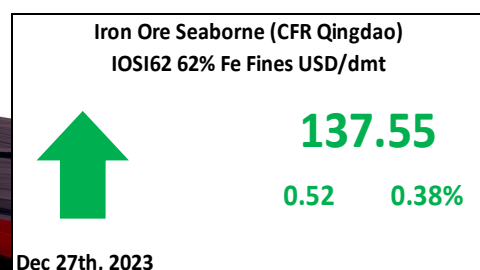
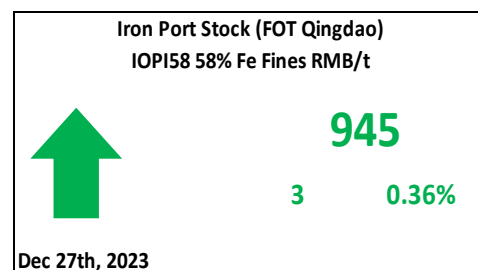
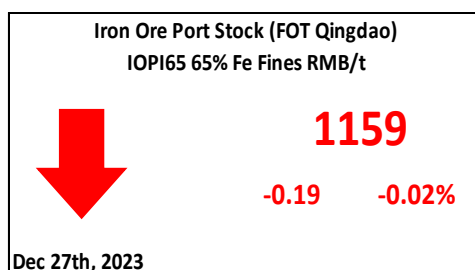
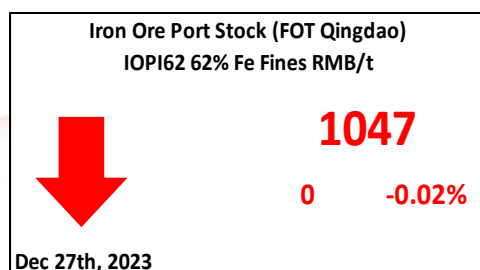


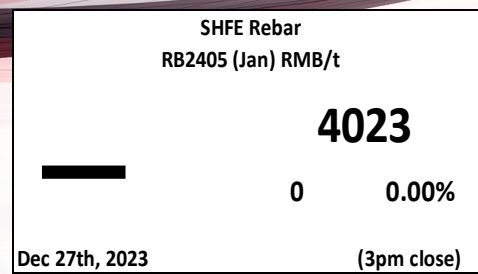
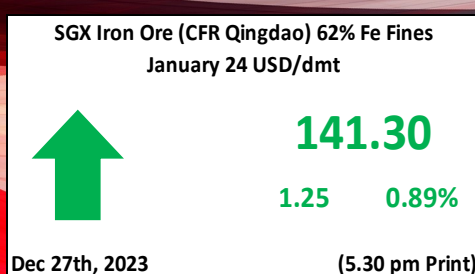
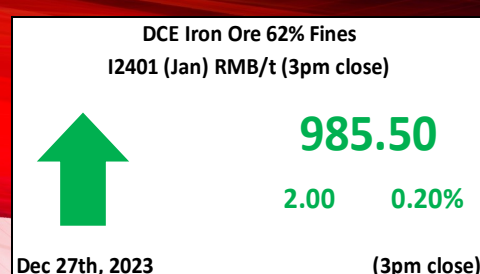


MMi Dashboard

Iron Ore Price Indices



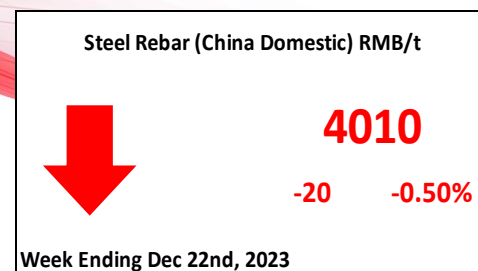
Exchange Traded Contracts



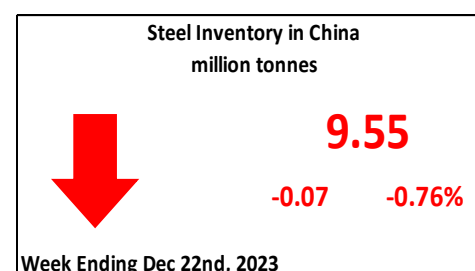
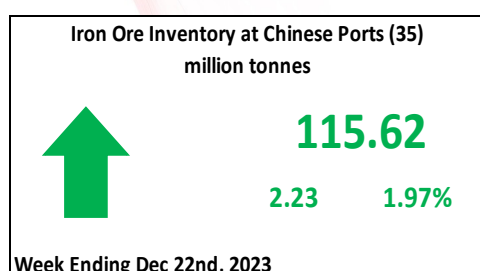
Freight Rates



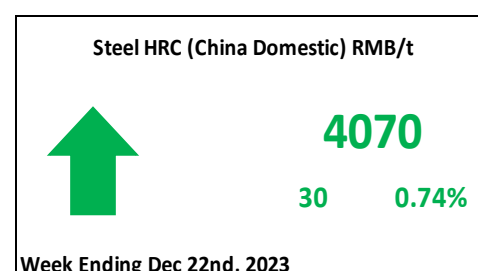
Steel Price



Inventory Levels



Steel Price



IRON ORE PORT STOCK INDEX (IOPI)

Dec 27th, 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	1047	-0.2	-0.02%	864	885	770	1047	138.06	-0.10	-0.1%	114.34	120.03	100.95	138.16
IOPI58	58% Fe Fines	945	3.4	0.36%	768	768	680	945	125.63	0.40	0.3%	102.31	104.69	89.86	125.63
IOPI65	65% Fe Fines	1159	-0.2	-0.02%	980	1018	881	1159	153.20	-0.11	-0.1%	130.26	138.76	116.19	153.30

IRON ORE SEABORNE INDEX (IOSI)

MARKET COMMENTARY

Dec 27th, 2023		CFR Qingdao, USD/dry tonne							DCE iron ore futures tight by 0.51%, the main contract i2405 closed 985.5, some traders were active to sell, and 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 Shandong port dealt 1027 yuan/mt, increased 2 yuan/mt over yesterday. SSF at Shandong port dealt 912 yuan/mt, the same as yesterday. PBF at Tangshan port dealt 1045 yuan/mt, the same as yesterday. The operating rate of blast furnaces according to SMM statistics is 88.11%, a decrease of 1.63% compared to last week. The utilization rate of blast furnace production capacity was 88.21%, a decrease of 2.21% compared to the previous period. The daily average production of molten iron in sample steel was 2.1105 million tons, a decrease of 58400 tons compared to the previous period. The operating rate of this blast furnace is mainly due to environmental protection production restrictions, with a short time cycle. It is expected to resume production gradually next week, and the molten iron may experience a significant increase. In the short term, the fundamentals of iron ore have weakened at the margin, but there is still demand for essential goods, and pre holiday reserves will also increase demand for iron ore, providing some support for ore prices.
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low ²	High ²	
IOSI62	62% Fe Fines	137.55	0.52	0.38%	115.21	115.21	99.20	146.75	
IOSI65	65% Fe Fines	165.96	0.00	0.00%	128.85	128.85	115.45	165.96	

IRON ORE PORT LUMP INDEX (IOPLI)

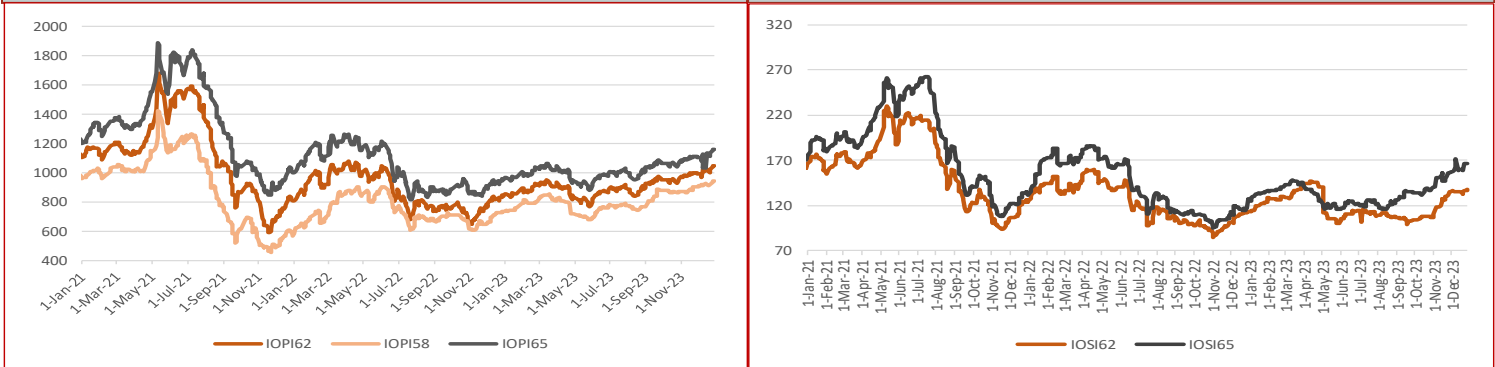
Week Ending Dec 22nd, 2023		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne ³						
Index	Fe Content	Price	W-o-W	Change %	MTD	YTD	Low ²	High ²	Price	W-o-W	Change %	MTD	YTD	Low ²	High ²
IOPLI62	62.5% Fe Lump	1183	18	1.5%	976	1032	903	1183	150.02	2.61	1.77%	124.81	135.67	114.47	150.02

IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

Week Ending Dec 22nd, 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	1183	1.5%	779	1645	166.69	1.65%	110.31	255.69
Hebei	Qian'an	65% Fe Concentrate	Dry	1215	0.8%	780	1630	171.20	1.02%	110.51	251.57
Liaoning	Anshan	65% Fe Concentrate	Wet	935	1.1%	620	1310	131.75	1.27%	87.40	202.32
Shandong	Zibo	65% Fe Concentrate	Dry	1245	1.5%	800	1752	175.43	1.74%	0.00	272.32
Week Ending Dec 22nd, 2023				This week	Change %	Low ²	High ²	1 Exchange rate applied: RMB/USD = 6.7522 2 Last 12 months			
China Mines Concentrate Composite Index RMB/WT				1094.27	2.18%	706.36	1511.22	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 27th, 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	864	858	885	113.28	122.79	123.14	129.07	114.34	113.85	120.03
IOPI58	58% Fe Fines	759	838	869	884	768	763	768	99.13	109.67	113.94	116.42	102.31	101.83	104.69
IOPI65	65% Fe Fines	985	1057	1059	1100	980	976	1018	128.31	137.74	138.13	144.10	130.26	130.03	138.76

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

FREIGHT RATES

Dec 27th, 2023		CFR Qingdao, USD/dry tonne							Dec 26th, 2023		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	114.10	115.21	W. Australia - Qingdao	C5	HOLIDAY			
IOSI65	65% Fe Fines	119.61	132.40	135.69	150.46	122.86	127.49	128.85	Tubarao - Qingdao	C3				

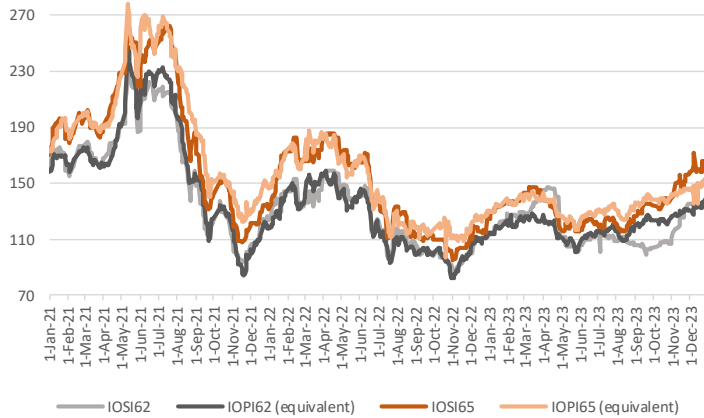
IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending Dec 22nd, 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	971	1017	118.96	130.25	139.38	145.07	119.96	124.40	134.98

IRON ORE INDEX PREMIUMS/DISCOUNTS

Dec 27th, 2023		PORT STOCK INDEX (RMB/WT)		Dec 27th, 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	-102	-9.73%	IOSI65	65% Fe Fines	28.41	20.65%
IOPI65	65% Fe Fines	112	10.67%				

IRON ORE INDEX COMPARISONS (USD/DMT)



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



IRON ORE BRAND SPOT PRICE ASSESSMENTS

Dec 27th, 2023	PORT STOCK INDEX (RMB/WT)			Dec 27th, 2023	SEABORNE INDEX (USD/DMT)		
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	990	0	-57	Roy Hill	133.05	0.55	-4.50
SIMEC Fines	923	0	-124	SIMEC Fines	129.55	0.55	-8.00
PB Fines	1013	0	-34	PB Fines	133.80	0.55	-3.75
Newman Fines	1017	0	-30	Newman Fines	136.70	0.55	-0.85
MAC Fines	997	0	-50	MAC Fines	133.80	0.55	-3.75
Jimblebar Blended Fines	913	0	-134	Jimblebar Blended Fines	126.20	0.55	-11.35
Carajas Fines	1228	0	181	Carajas Fines	167.10	0.55	29.55
Brazilian SSF	1015	0	-32	Brazilian SSF	141.30	0.55	3.75
Brazilian Blend Fines	1026	0	-21	Brazilian Blend Fines	142.95	0.60	5.40
RTX Fines	931	0	-116	RTX Fines	127.45	0.60	-10.10
West Pilbara Fines	957	0	-90	West Pilbara Fines	131.80	0.55	-5.75

Dec 27th, 2023	PORT STOCK INDEX (RMB/WT)		
	Price	Change	Diff to IOPI58
SSF	945	3	0
FMG Blended Fines	957	3	12
Robe River	958	4	13
Western Fines	961	3	16
Atlas Fines	954	4	9
Yandi	936	3	-9

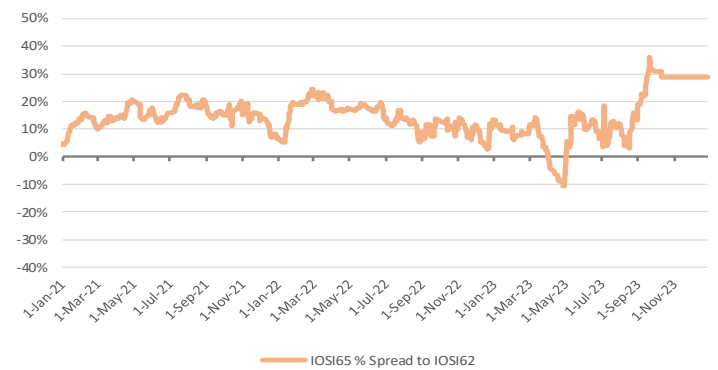
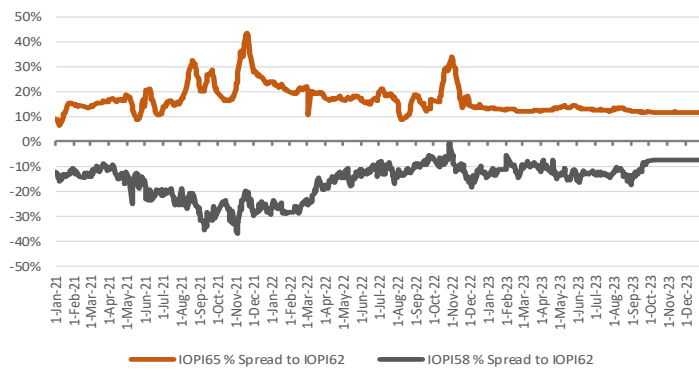
IRON ORE INDEX NORMALISATION DIFFERENTIALS

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%	0.25	0.00
	High Grade Fe 63 - 64%	10.00	-7.00		High Grade Fe 63 - 64%	2.75	0.00
	High Grade Fe 64 - 65%	10.00	-7.00		High Grade Fe 64 - 65%	2.75	0.00
	High Grade Fe 65 - 65.5%	10.00	-7.00		High Grade Fe 65 - 65.5%	2.75	0.00
1% Alumina	Low Grade Fe	21.00	-1.00	1% Alumina	High Fe Grade Al <2.25%	6.75	0.00
	High Fe Grade Al <2.25%	28.00	-3.00		High Fe Grade Al 2.25-4%	3.75	0.75
	Low Fe Grade Al <2.25%	70.00	-8.00				
	Low Fe Grade Al 2.25-4%	24.00	-5.00				
1% Silica	High Fe Grade Si <4%	21.00	-1.00	1% Silica	High Fe Grade Si <4%	7.00	2.00
	High Fe Grade Si 4-6.5%	10.00	0.00		High Fe Grade Si 4 - 6.5%	7.00	2.00
	Low Fe Grade	19.00	-3.00				
0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	8.00	-1.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	0.50	0.25
	High Fe Grade 0.115%<P<0.15%	8.00	-1.00		High Fe Grade 0.115%<P<0.15%	1.00	0.00
	Low Fe Grade 0.09%<P<0.1%	5.00	0.00				

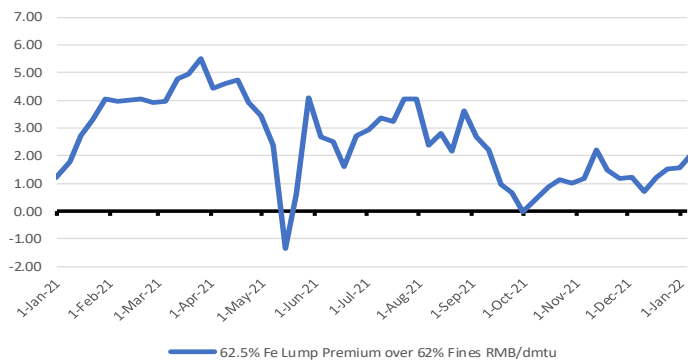
Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

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	-20.00	0.00	Lianyungang	0.00	0.00	Shekou	0.00	0.00
Caofeidian	-15.00	0.00	Jingtang	-15.00	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	0.00

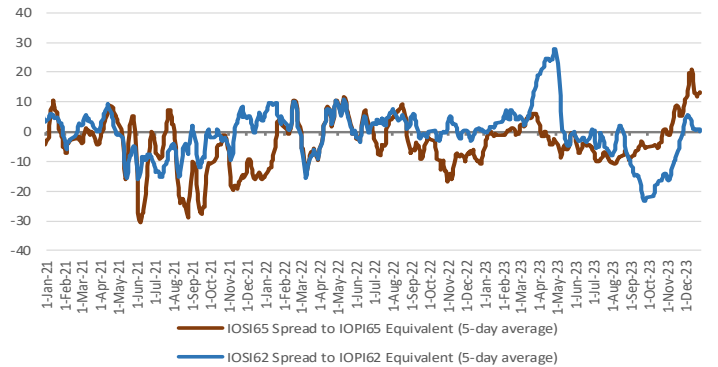
IRON ORE INDEX PREMIUMS/DISCOUNTS



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



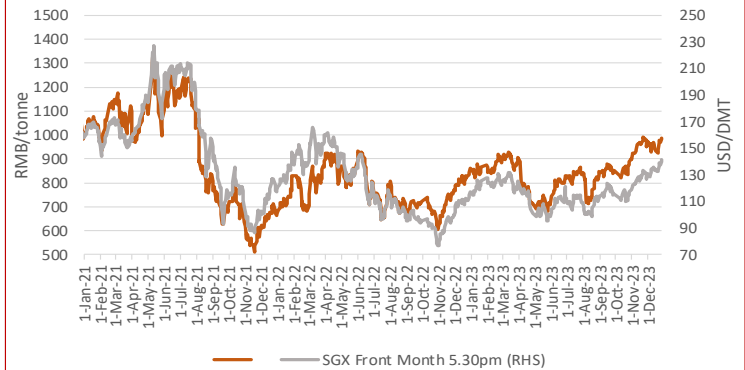
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



IRON ORE PORT INVENTORIES (MILLION TONNES)

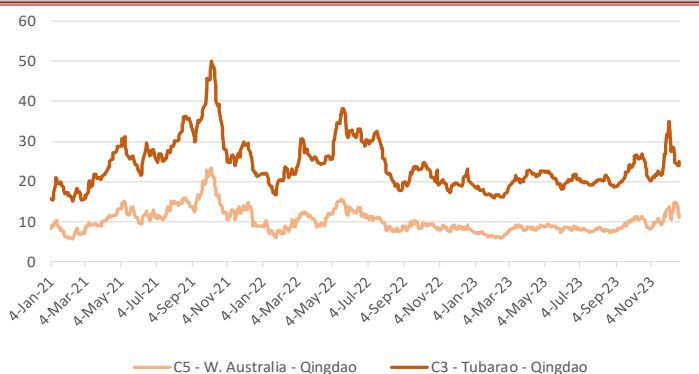
Week Ending Dec 22nd, 2023

Province	This week	Change %	Low ²	High ²
Jingtang	9.03	2.96%	8.41	19.20
Qingdao	23.56	-2.20%	9.41	26.24
Caofeidian	10.72	-0.37%	7.56	16.29
Tianjin	8.94	6.68%	6.49	12.97
Rizhao	13.81	2.45%	9.44	19.26
Total (35 Ports)	115.62	1.97%	98.80	155.39

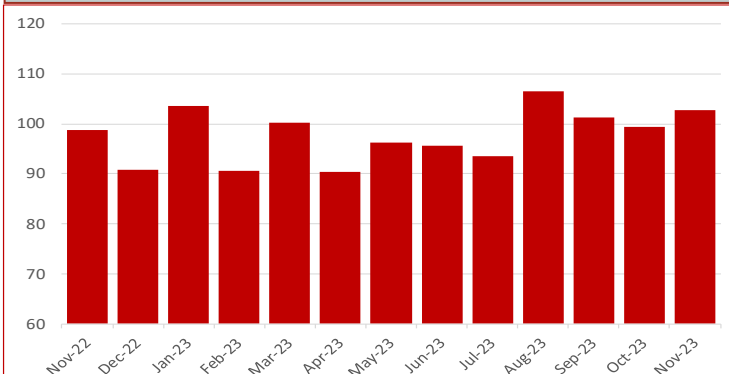
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	Dec 27th, 3pm close			Dec 27th, 5:30pm		
Contract	I2405	Change	Change %	Jan. 24	Change	Change %
Closing Price	985.50	2.00	0.20%	141.30	1.25	0.89%
Vol traded ('000 lots)	24.66	2.50	11.28%	5.31	0.34	6.75%
Open positions ('000 lots)	53.95	-0.10	-0.19%	28.20	-0.39	-1.38%
Day Low	966.5	-3.00	-0.31%	138.30	0.25	0.18%
Day High	987.0	-3.50	-0.35%	141.40	0.70	0.50%

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	2023/12/22	Change	Change %
ReBar HRB400 ϕ 18mm	4,010	-20	-0.50%
Wirerod Q300 ϕ 6.5mm	4,190	-30	-0.71%
HRC Q235/SS400 5.5mm*1500*C	4,070	30	0.74%
CRC SPCC/ST12 1.0mm*1250*2500	4,850	10	0.21%
Medium & Heavy Plate Q235B 20mm	4,050	20	0.50%
GI ST02Z 1.0mm*1000*C	5,000	-40	-0.79%
Colour Coated Plate	6,950	-50	-0.71%

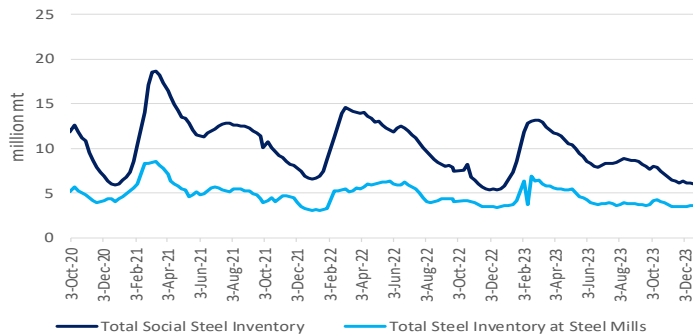
CHINESE STEEL MILL PROFITABILITY

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

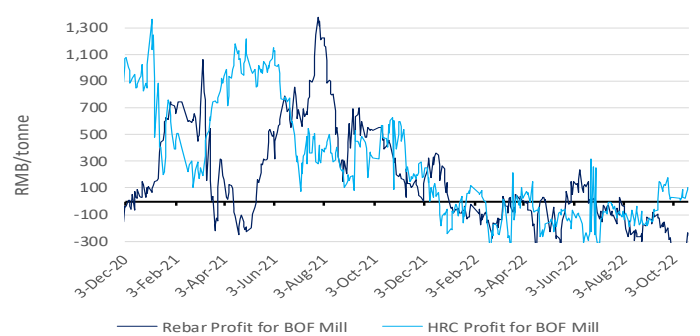
Category	Price	Change (WoW)	Note
MMi (Fe 62%), USD/mt excluding tax	136.02	1	Mmi CFR Equivalent index for 1st Feb
Coke	2,780	0	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	2,910	0	steel scrap (6mm) in Zhangjiagang, excl. tax
Billet Cost	3,440	0	Q234, incl. tax
Rebar cost - Blast furnace	4,114	0	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	-184	0	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	4,179	0	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	-169	0	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

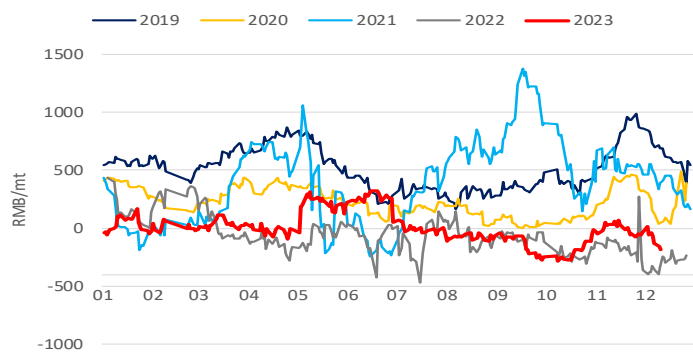
CHINESE STEEL INVENTORIES



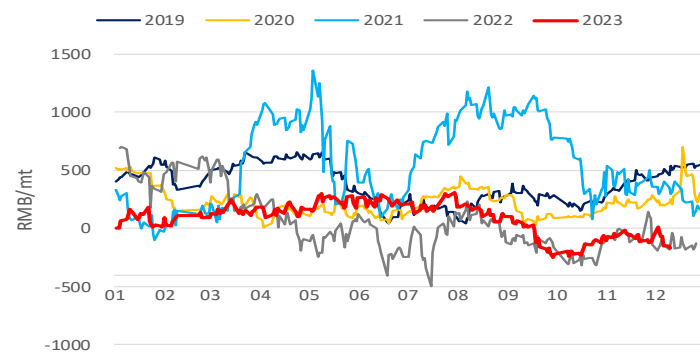
CHINESE STEEL MILL PROFITABILITY



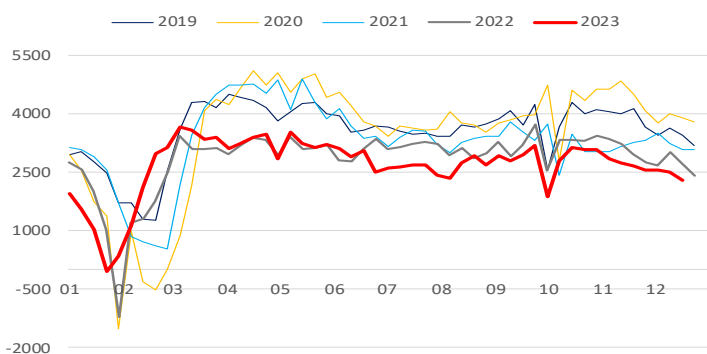
CHINESE STEEL MILL PROFITABILITY—Rebar



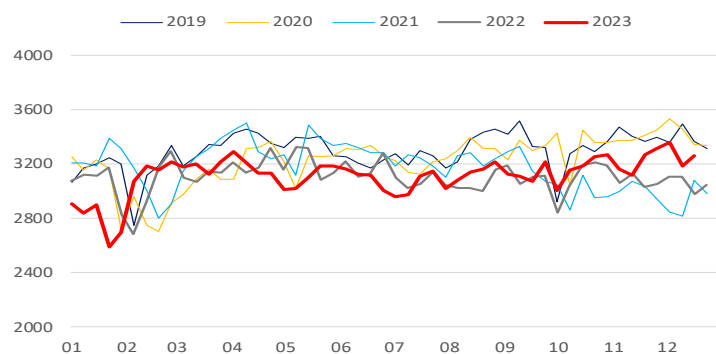
CHINESE STEEL MILL PROFITABILITY—Hot-rolled Coil



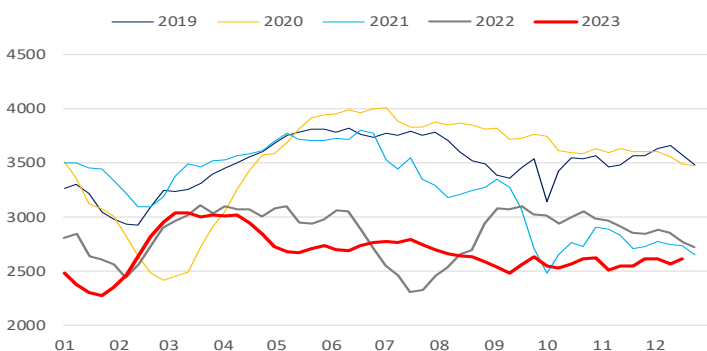
CHINESE STEEL CONSUMPTION—Rebar



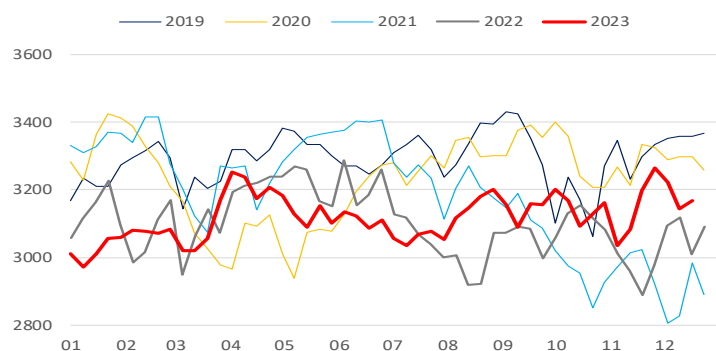
CHINESE STEEL CONSUMPTION—Hot-rolled Coil



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	

Data Exclusions*			
Port Index	62%	58%	65%
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 27th, 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 27th, 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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