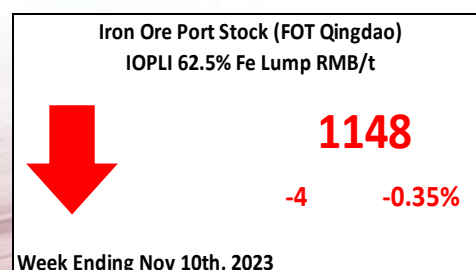
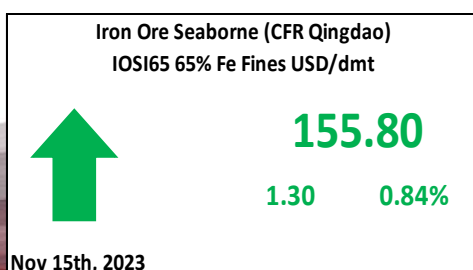
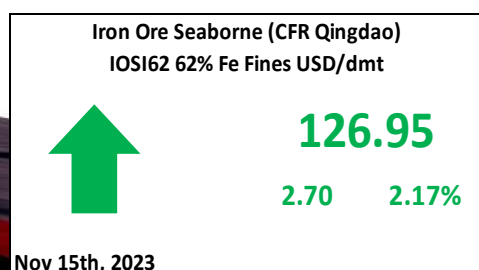
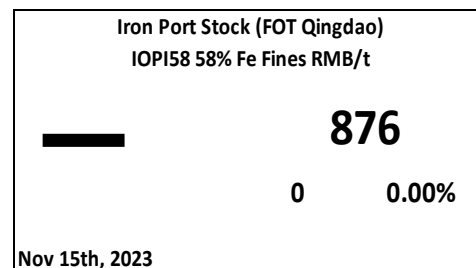
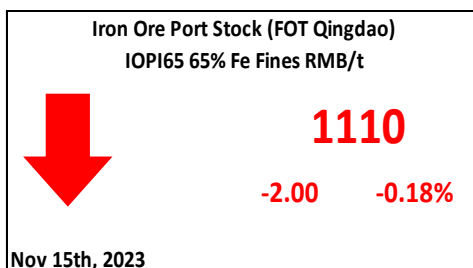
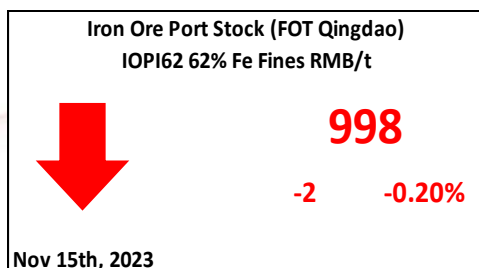


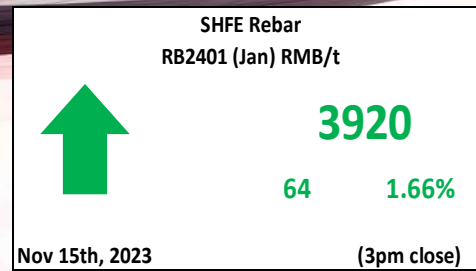
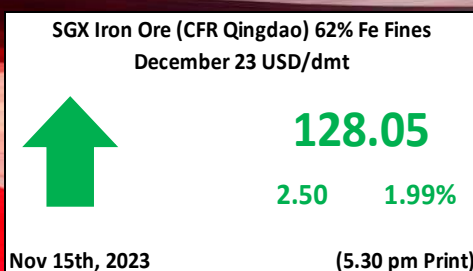
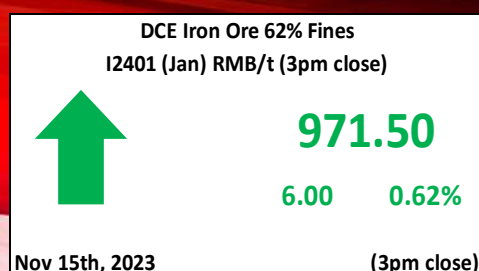


MMi Dashboard

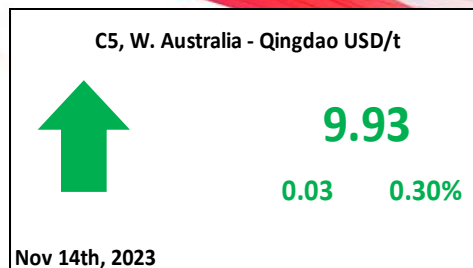
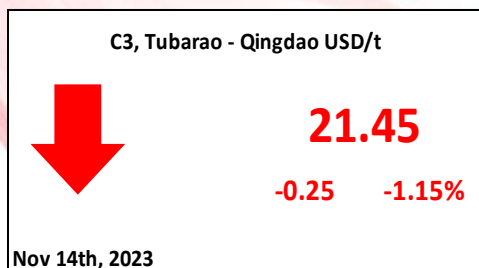
Iron Ore Price Indices



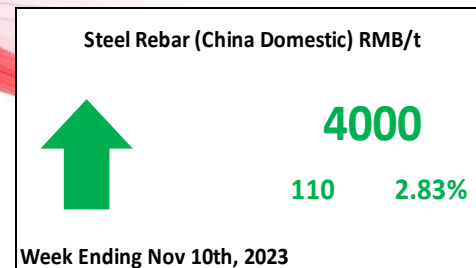
Exchange Traded Contracts



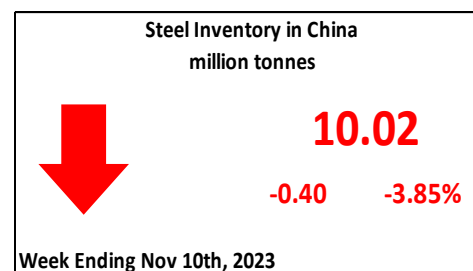
Freight Rates



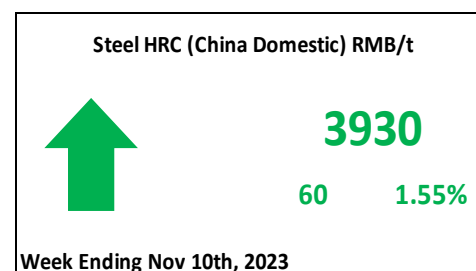
Steel Price



Inventory Levels



Steel Price



IRON ORE PORT STOCK INDEX (IOPI)

Nov 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	998	-2.0	-0.20%	869	880	858	892	130.04	-0.24	-0.2%	120.06	120.58	117.93	122.93
IOPI58	58% Fe Fines	876	0.0	0.00%	813	798	761	793	114.93	0.02	0.0%	113.29	110.17	105.29	110.04
IOPI65	65% Fe Fines	1110	-2.0	-0.18%	981	992	970	1003	145.05	-0.24	-0.2%	136.05	136.43	133.84	138.73

IRON ORE SEABORNE INDEX (IOSI)

Nov 15th, 2023		CFR Qingdao, USD/dry tonne						
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low ²	High ²
IOSI62	62% Fe Fines	126.95	2.70	2.17%	113.30	113.30	92.95	146.75
IOSI65	65% Fe Fines	155.80	1.30	0.84%	125.87	125.87	103.35	155.80

MARKET COMMENTARY

DCE iron ore futures rose by 0.99% today, the main contract closed at 971.5. The steel mills are not active to purchase. The overall trading sentiment of the market is general. PBF at Shandong port deal 985-1002 yuan/mt, PBF at Tangshan port deal 1000-1005 yuan/mt. The market sentiment was driven by factors such as the US China meeting, US CPI, and PPI data before yesterday's trading. Today, with confidence cooling and guidance news from the market, market sentiment has returned to some extent. According to SMM's tracking of blast furnace production in steel mills, the operating rate, capacity utilization rate, and sample steel mills' molten iron production have all rebounded this week, and there may be an increase in rigid demand for iron ore. On the macro level, there is an easing of political relations to support the bottom line, and the extent of the harbor or accumulated reserves is not significant. The basis is gradually being repaired. Currently, it is necessary to pay attention to the next shift in market news, and short-term mining prices will fluctuate in a narrow range.

IRON ORE PORT LUMP INDEX (IOPLI)

Week Ending Nov 10th, 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	1148	-4	-0.3%	955	1023	782	1148	143.85	-0.49	-0.34%	122.16	134.89	96.23	143.85

IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

Week Ending Nov 10th, 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	1111	4.0%	779	1645	154.79	4.04%	110.31	255.69
Hebei	Qian'an	65% Fe Concentrate	Dry	1130	1.3%	780	1630	157.44	1.36%	110.51	251.57
Liaoning	Anshan	65% Fe Concentrate	Wet	820	1.2%	620	1310	114.25	1.25%	87.40	202.32
Shandong	Zibo	65% Fe Concentrate	Dry	1184	4.2%	800	1752	164.96	4.24%	117.19	272.32

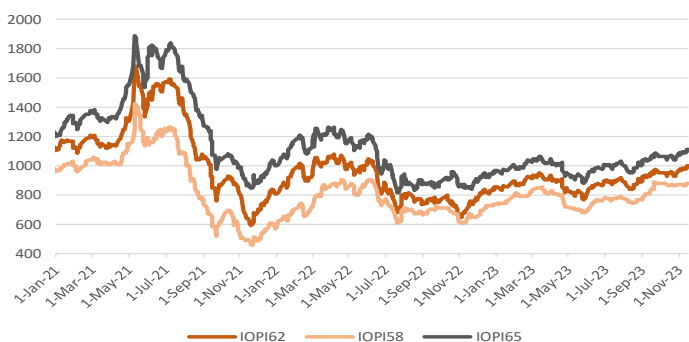
Week Ending Nov 10th, 2023

This week	Change %	Low ²	High ²
1010.75	1.73%	706.36	1511.22

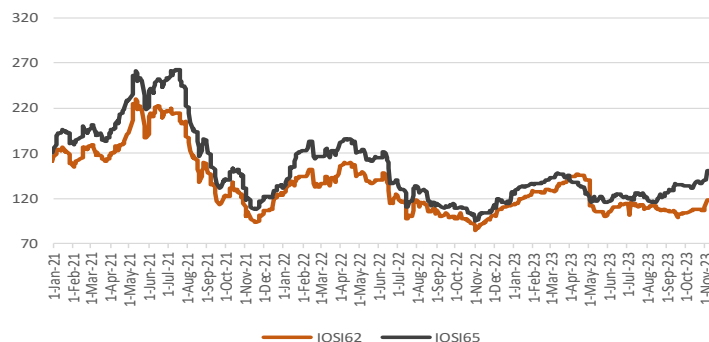
China Mines Concentrate Composite Index RMB/WT

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

Nov 15th, 2023		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne						
Index	Fe Content	July	August	September	October	MTD	QTD	YTD	July	August	September	October	MTD	QTD	YTD
IOPI62	62% Fe Fines	896	873	945	947	869	881	880	116.58	113.28	122.79	123.14	120.06	120.90	120.58
IOPI58	58% Fe Fines	777	759	838	869	813	792	798	101.68	99.13	109.67	113.94	113.29	109.35	110.17
IOPI65	65% Fe Fines	1008	985	1057	1059	981	993	992	131.57	128.31	137.74	138.13	136.05	136.72	136.43

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

Nov 15th, 2023		CFR Qingdao, USD/dry tonne							FREIGHT RATES - DRY BULK US\$/wet tonne						
Index	Fe Content	July	August	September	October	MTD	QTD	YTD	Route	Designation	Change	Change %	Low ²	High ²	
IOSI62	62% Fe Fines	108.57	109.02	104.25	106.44	112.14	112.41	113.30	W. Australia - Qingdao	C5	9.93	0.03	0.30%	3.57	16.77
IOSI65	65% Fe Fines	147.39	119.61	132.40	135.69	122.86	124.89	125.87	Tubarao - Qingdao	C3	21.45	-0.25	-1.15%	6.70	36.40

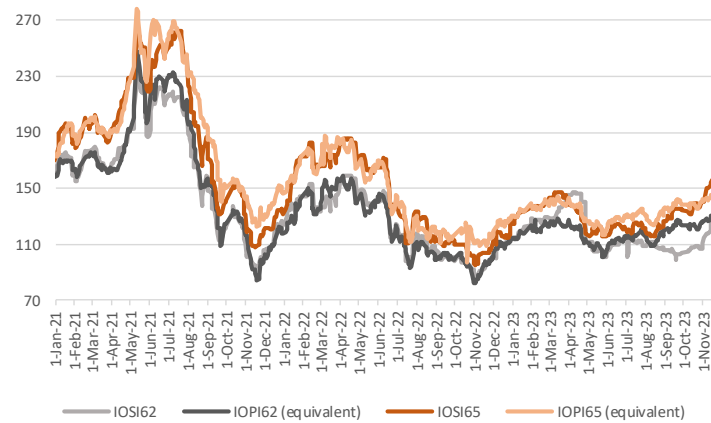
IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending Nov 10th, 2023		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne ¹						
Index	Fe Content	July	August	September	October	MTD	QTD	YTD	July	August	September	October	MTD	QTD	YTD
IOPLI62	62.5% Fe Lump	980	951	1043	1113	933	951	1017	122.51	118.96	130.25	139.38	119.96	122.02	134.98

IRON ORE INDEX PREMIUMS/DISCOUNTS

Nov 15th, 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	-122	-12.22%	IOSI65	65% Fe Fines	28.85	22.73%
IOPI65	65% Fe Fines	112	11.22%				

IRON ORE INDEX COMPARISONS (USD/DMT)



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



IRON ORE BRAND SPOT PRICE ASSESSMENTS

Nov 15th, 2023				Nov 15th, 2023			
PORT STOCK INDEX (RMB/WT)				SEABORNE INDEX (USD/DMT)			
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	941	-2	-57	Roy Hill	122.45	2.70	-4.50
SIMEC Fines	873	-2	-125	SIMEC Fines	118.95	2.70	-8.00
PB Fines	964	-3	-34	PB Fines	123.20	2.70	-3.75
Newman Fines	968	-2	-30	Newman Fines	126.10	2.70	-0.85
MAC Fines	948	-2	-50	MAC Fines	123.20	2.70	-3.75
Jimblebar Blended Fines	864	-2	-134	Jimblebar Blended Fines	115.60	2.70	-11.35
Carajas Fines	1179	-2	181	Carajas Fines	156.50	2.70	29.55
Brazilian SSF	965	-2	-33	Brazilian SSF	130.70	2.70	3.75
Brazilian Blend Fines	978	-2	-20	Brazilian Blend Fines	132.35	2.70	5.40
RTX Fines	882	-2	-116	RTX Fines	116.85	2.70	-10.10
West Pilbara Fines	909	-2	-89	West Pilbara Fines	121.20	2.70	-5.75

Nov 15th, 2023			
PORT STOCK INDEX (RMB/WT)			
	Price	Change	Diff to IOPI58
SSF	876	0	0
FMG Blended Fines	887	0	11
Robe River	888	0	12
Western Fines	891	0	15
Atlas Fines	884	0	8
Yandi	868	0	-8

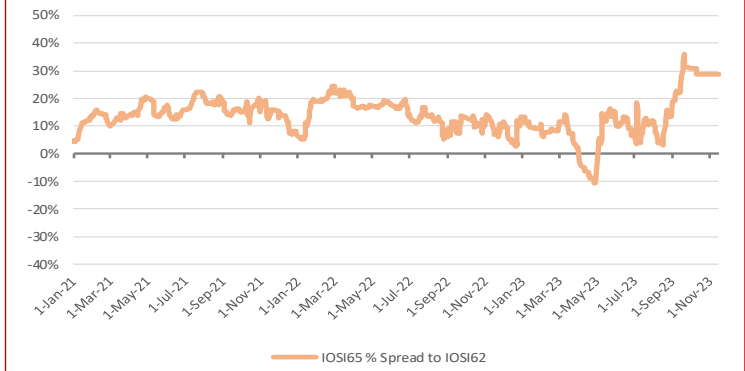
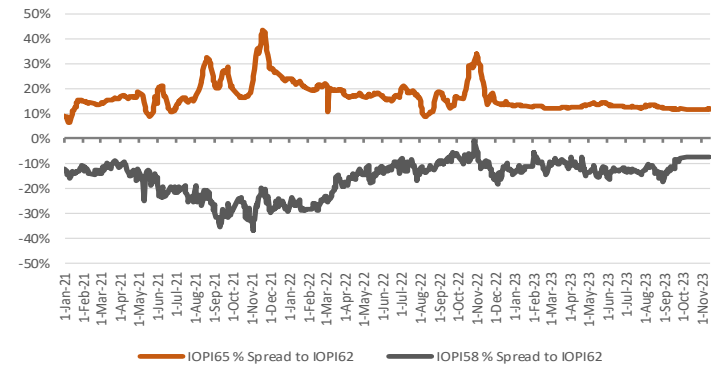
IRON ORE INDEX NORMALISATION DIFFERENTIALS

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%	18.00	1.00	1% Fe	High Grade Fe 60 - 63%	3.00	0.50
	High Grade Fe 63 - 64%	5.00	0.00		High Grade Fe 63 - 64%	2.75	0.00
	High Grade Fe 64 - 65%	5.00	0.00		High Grade Fe 64 - 65%	2.75	0.00
	High Grade Fe 65 - 65.5%	5.00	0.00		High Grade Fe 65 - 65.5%	2.75	0.00
1% Alumina	Low Grade Fe	31.00	7.00	1% Alumina	High Fe Grade Al <2.25%	5.00	2.75
	High Fe Grade Al <2.25%	8.00	3.00		High Fe Grade Al 2.25-4%	1.00	0.00
	High Fe Grade Al 2.25-4%	18.00	-1.00				
	Low Fe Grade Al <2.25%	37.00	5.00				
1% Silica	Low Fe Grade Al 2.25-4%	40.00	13.00	1% Silica	High Fe Grade Si <4%	0.25	0.00
	High Fe Grade Si <4%	5.00	0.00		High Fe Grade Si 4 - 6.5%	5.00	2.50
	High Fe Grade Si 4-6.5%	12.00	0.00				
0.01% Phosphorus	Low Fe Grade	9.00	0.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	0.50	0.25
	High Fe Grade 0.09%<P<0.115%	5.00	0.00		High Fe Grade 0.115%<P<0.15%	0.25	0.00
	High Fe Grade 0.115%<P<0.15%	5.00	0.00				
	Low Fe Grade 0.09<P<0.1%	5.00	0.00				

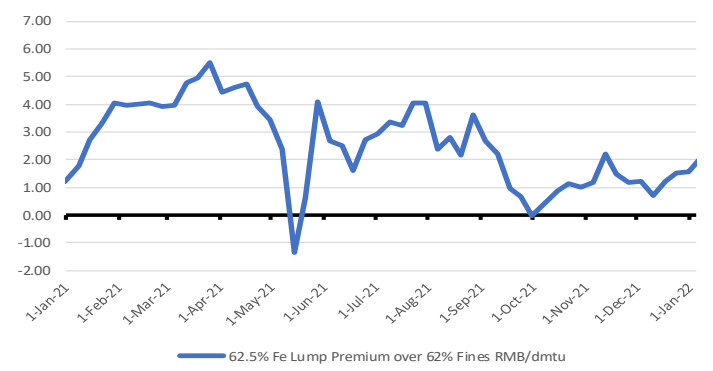
Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

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	-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	Taichang	-30.00	0.00
Dalian	0.00	0.00	Lanqiao	0.00	0.00	Qingdao	0.00	0.00	Tianjin	-30.00	0.00

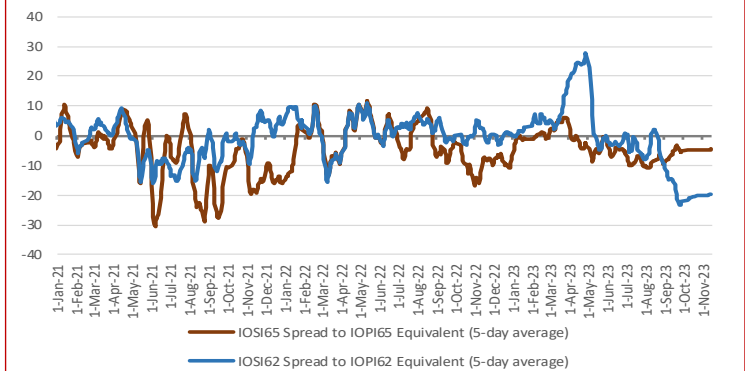
IRON ORE INDEX PREMIUMS/DISCOUNTS



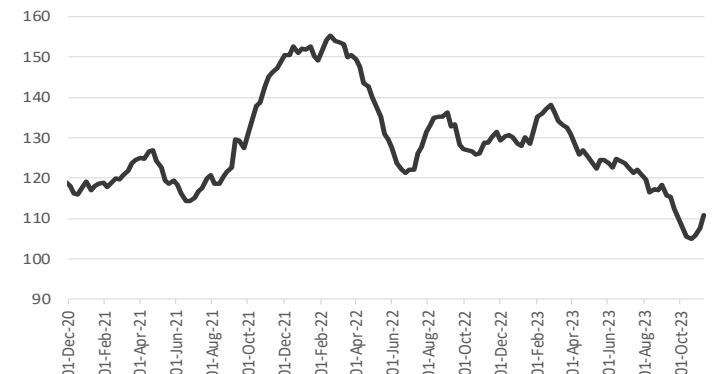
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



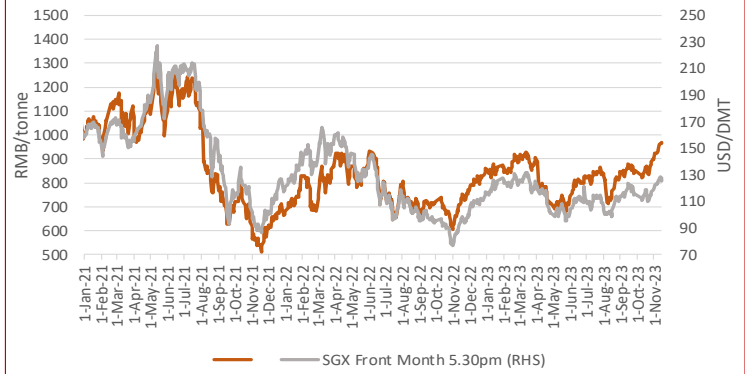
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



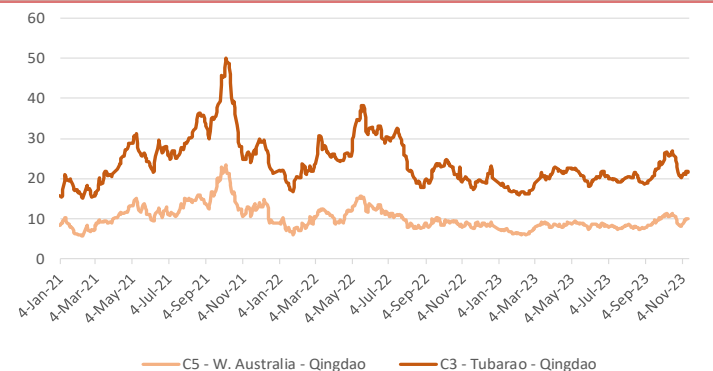
IRON ORE PORT INVENTORIES (MILLION TONNES)

Week Ending Nov 10th, 2023				
Province	This week	Change %	Low ²	High ²
Jingtang	8.41	-2.66%	8.41	19.20
Qingdao	22.77	0.13%	9.41	26.24
Caofeidian	8.15	-2.63%	7.56	16.29
Tianjin	7.58	8.13%	6.49	12.97
Rizhao	13.12	3.39%	9.44	19.26
Total (35 Ports)	110.75	2.98%	98.80	155.39

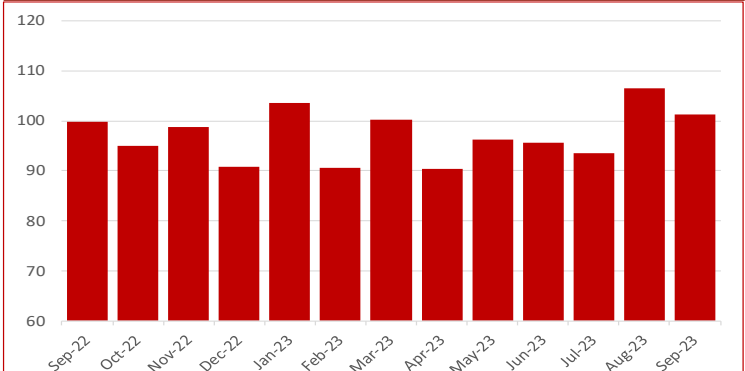
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	Nov 15th, 3pm close			Nov 15th, 5:30pm		
Contract	12401	Change	Change %	Dec. 23	Change	Change %
Closing Price	971.50	6.00	0.62%	128.05	2.50	1.99%
Vol traded ('000 lots)	69.83	38.31	121.54%	9.68	3.33	52.44%
Open positions ('000 lots)	87.82	-3.25	-3.57%	42.66	-0.31	-0.72%
Day Low	961.5	4.50	0.47%	127.80	1.15	0.91%
Day High	995.0	27.00	2.79%	131.45	2.70	2.10%

DRY BULK FREIGHT RATES (USD/MT)



TOTAL CHINA IRON ORE IMPORT VOLUMES (MILLION TONNES)



STEEL SPOT MARKET PRICES—CHINA

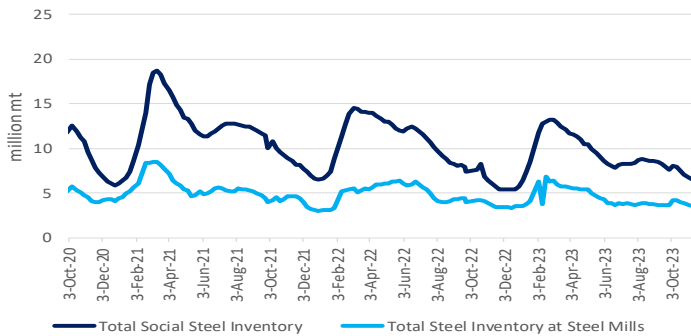
Steel Spot Market RMB/tonne			
Product	2023/11/10	Change	Change %
ReBar HRB400 φ18mm	4,000	110	2.83%
Wirerod Q300 φ6.5mm	4,220	120	2.93%
HRC Q235/SS400 5.5mm*1500*C	3,930	60	1.55%
CRC SPCC/ST12 1.0mm*1250*2500	4,770	10	0.21%
Medium & Heavy Plate Q235B 20mm	3,880	40	1.04%
GI ST02Z 1.0mm*1000*C	5,040	0	0.00%
Colour Coated Plate	6,900	0	0.00%

CHINESE STEEL MILL PROFITABILITY

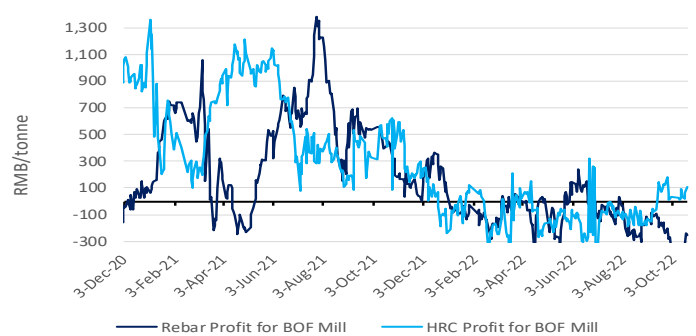
SMM Tracking of Steel Mill P&L - Rebar and Hot-rolled Coil (RMB/tonne)			
Category	Price	Change (WoW)	Note
MMi (Fe 62%), USD/mt excluding tax	118.10	4	Mmi CFR Equivalent index for 1st Feb
Coke	2,450	0	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	2,910	50	steel scrap (6mm) in Zhangjiagang, excl. tax
Billet Cost	3,261	22	Q234, incl. tax
Rebar cost - Blast furnace	3,922	36	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	10	55	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	3,966	25	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	-46	35	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

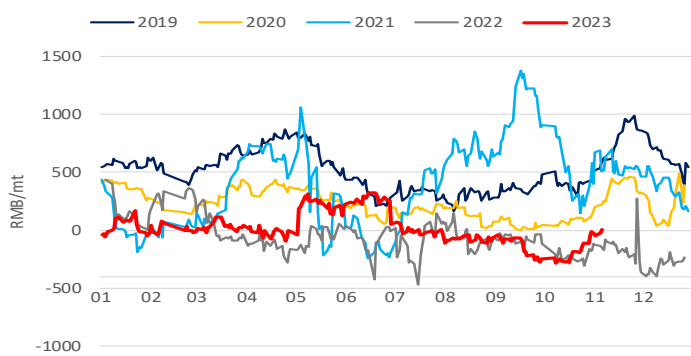
CHINESE STEEL INVENTORIES



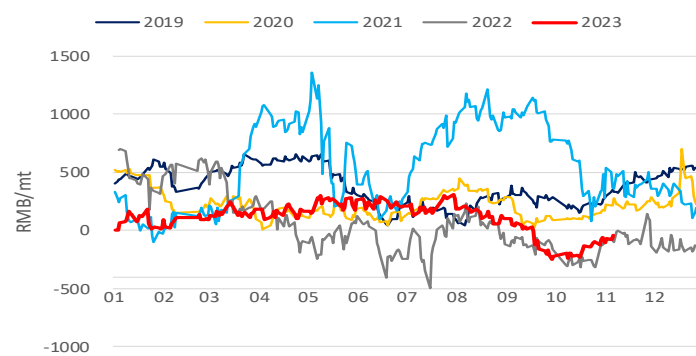
CHINESE STEEL MILL PROFITABILITY



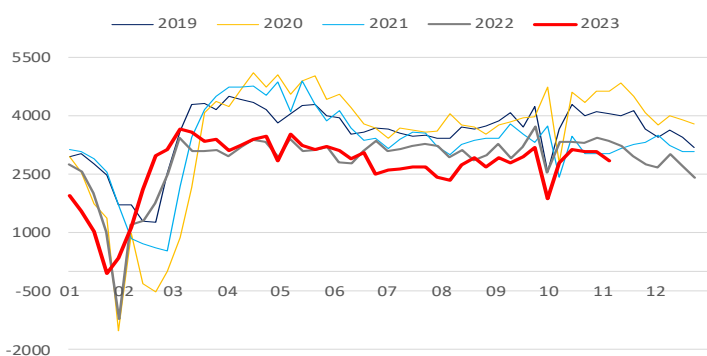
CHINESE STEEL MILL PROFITABILITY—Rebar



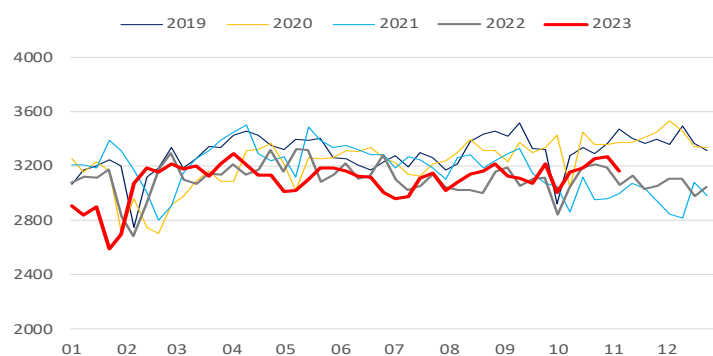
CHINESE STEEL MILL PROFITABILITY—Hot-rolled Coil



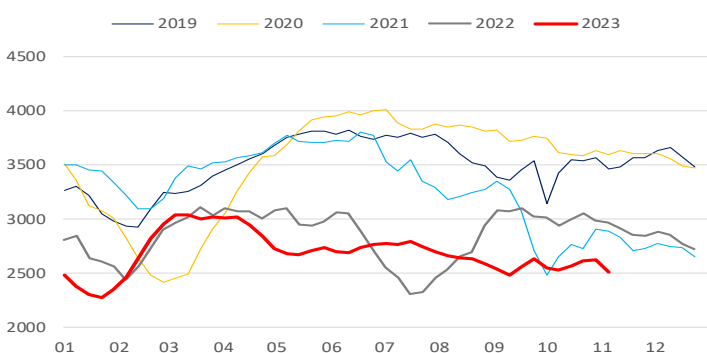
CHINESE STEEL CONSUMPTION—Rebar



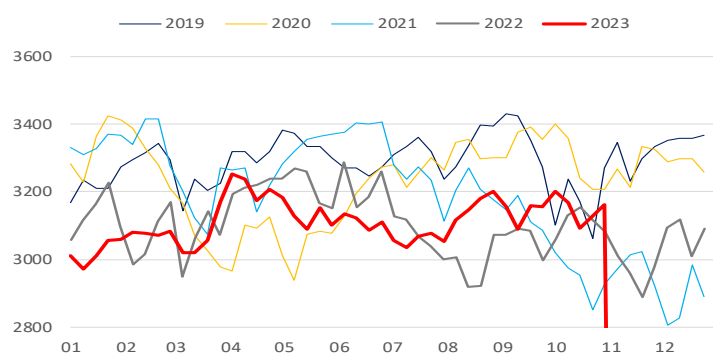
CHINESE STEEL CONSUMPTION—Hot-rolled Coil



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					
Nov 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%
Nov 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		IRCN0034
IOPI58	IRCNQ002		IRCNQ005		IRCN0035
IOPI65	IRCNQ003		IRCNQ006		
IOPLI62	IRCN0036		IRCN0037		

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