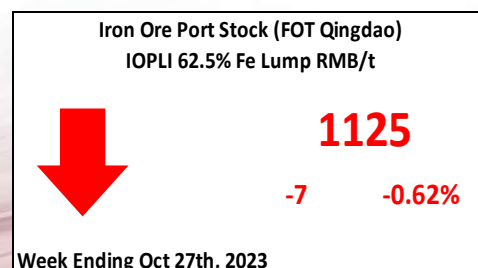
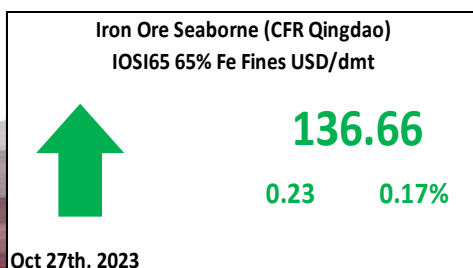
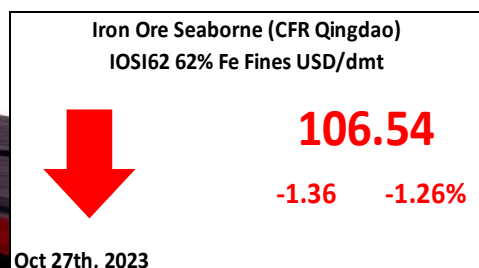
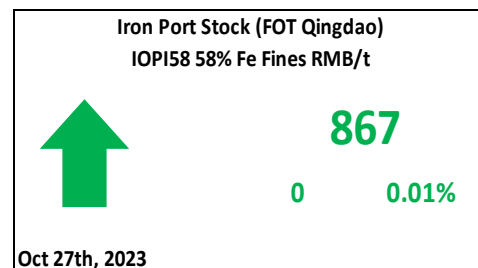
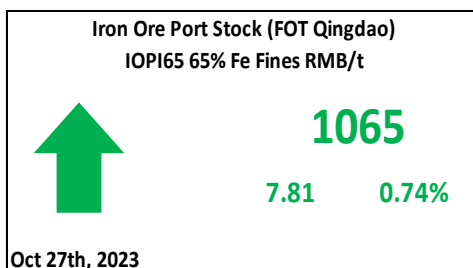
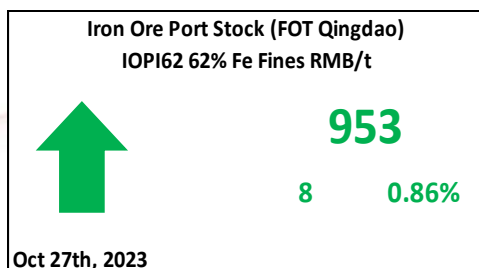


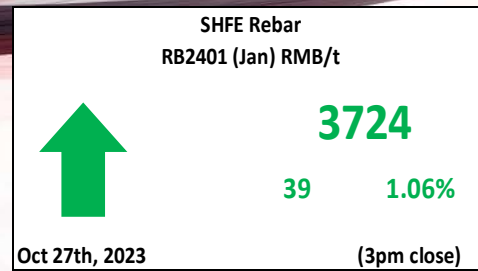
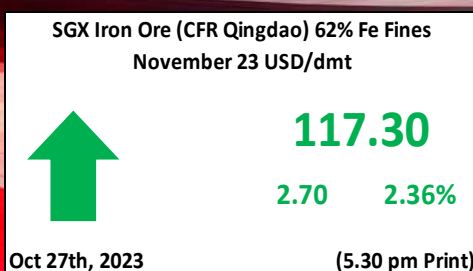
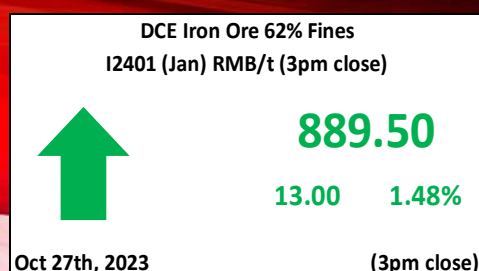


MMi Dashboard

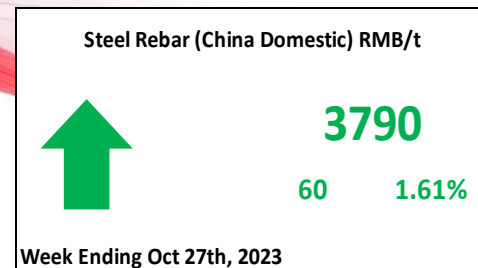
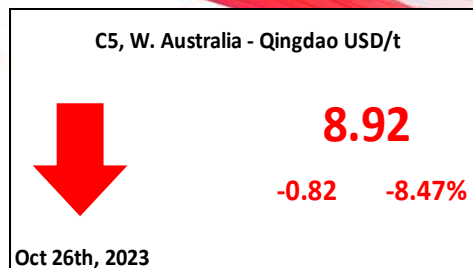
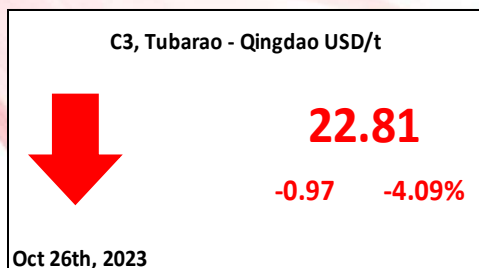
Iron Ore Price Indices



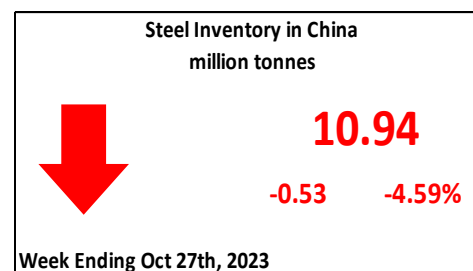
Exchange Traded Contracts



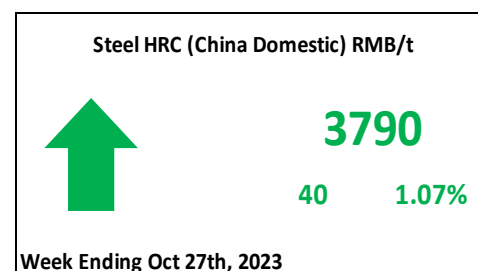
Freight Rates



Inventory Levels



Steel Price



IRON ORE PORT STOCK INDEX (IOPI)

Oct 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	953	8.1	0.86%	869	880	858	892	123.97	1.07	0.9%	120.06	120.58	117.93	122.93
IOPI58	58% Fe Fines	867	0.1	0.01%	813	798	761	793	113.68	-0.01	0.0%	113.29	110.17	105.29	110.04
IOPI65	65% Fe Fines	1065	7.8	0.74%	981	992	970	1003	138.94	1.07	0.8%	136.05	136.43	133.84	138.73

IRON ORE SEABORNE INDEX (IOSI)

MARKET COMMENTARY

Oct 27th, 2023		CFR Qingdao, USD/dry tonne						
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low ²	High ²
IOSI62	62% Fe Fines	106.54	-1.36	-1.26%	113.18	113.18	83.90	146.75
IOSI65	65% Fe Fines	136.66	0.23	0.17%	124.82	124.82	94.45	147.55

DCE iron ore futures tight in the morning, and falling sharply trends in the afternoon. The main contract (I2401) closed 889.5, an increase of 2.12% throughout the day, some traders were active to sell. Some steel mills tended to be low-and-see, and purchasing enthusiasm is not high. Total transactions is poor. FOB at Shandong port dealt 928 945 yuan/mt, increased 11 yuan/mt over yesterday. As of October 27th, the total inventory of 35 ports tracked by SMM was 105.75 million tons, a cumulative 75000 tons compared to last week and a decrease of 22.98 million tons compared to the same period last year. The daily average port clearance volume of imported mines in this period decreased by 174000 tons to 2.83 million tons on a weekly basis compared to last week. This week, although the production of molten iron from steel mills remains high, downstream demand is gradually decreasing, and iron ore demand has just fallen short of the peak season, dragging down the daily average port clearance. In addition, environmental production restrictions have been tightened again this week, and the enthusiasm for port powder mining has decreased. This week, the arrival of iron ore in China increased by 13.4% month on month, resulting in the accumulation of port inventory this week. There has been a turning point in port inventory, coupled with a lot of market news and rumors today, and the market sentiment is warm, driving a significant increase in iron ore futures. But steel mills have a low acceptance of high prices, and there are few market transactions after the price increase. In the future, attention still needs to be paid to the demand for finished products and the production of molten iron, and it is expected to continue the volatile trend next week.

IRON ORE PORT LUMP INDEX (IOPLI)

Week Ending Oct 27th, 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	1125	-7	-0.6%	947	1020	770	1132	140.87	-0.88	-0.62%	120.46	134.92	94.72	141.75

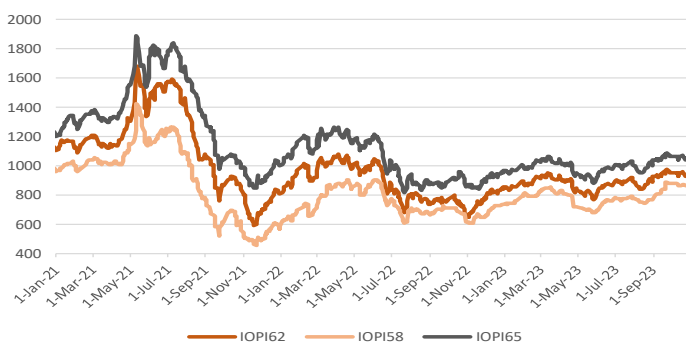
IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

Week Ending Oct 27th, 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	1066	1.4%	779	1645	148.50	1.44%	110.31	255.69
Hebei	Qian'an	65% Fe Concentrate	Dry	1095	-0.9%	780	1630	152.54	-0.89%	110.51	251.57
Liaoning	Anshan	65% Fe Concentrate	Wet	800	-0.6%	620	1310	111.44	-0.61%	87.40	202.32
Shandong	Zibo	65% Fe Concentrate	Dry	1134	0.9%	800	1752	157.97	0.90%	117.19	272.32

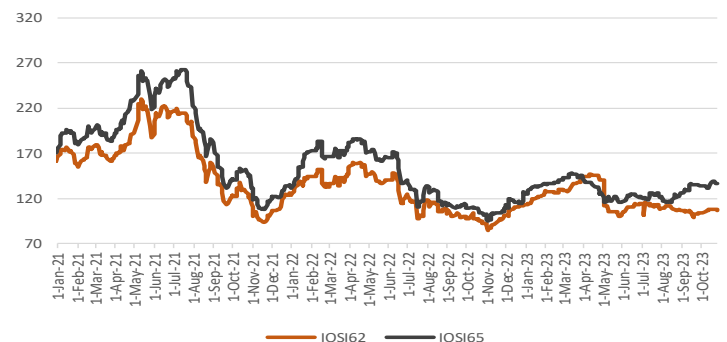
Week Ending Oct 27th, 2023		This week	Change %	Low ²	High ²
China Mines Concentrate Composite Index RMB/WT		982.65	-0.16%	706.36	1511.22

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

Oct 27th, 2023		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne						
Index	Fe Content	June	July	August	September	MTD	QTD	YTD	June	July	August	September	MTD	QTD	YTD
IOPI62	62% Fe Fines	863	896	873	945	869	881	880	112.38	116.58	113.28	122.79	120.06	120.90	120.58
IOPI58	58% Fe Fines	748	777	759	838	813	792	798	97.98	101.68	99.13	109.67	113.29	109.35	110.17
IOPI65	65% Fe Fines	975	1008	985	1057	981	993	992	127.41	131.57	128.31	137.74	136.05	136.72	136.43

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

FREIGHT RATES

Oct 27th, 2023		CFR Qingdao, USD/dry tonne							Oct 26th, 2023							
Index	Fe Content	June	July	August	September	MTD	QTD	YTD	Route		Designation	Change	Change %	Low ²	High ²	
IOSI62	62% Fe Fines	110.54	108.57	109.02	104.25	112.14	112.27	113.18	W. Australia - Qingdao		C5	8.92	-0.82	-8.47%	3.57	16.77
IOSI65	65% Fe Fines	135.30	147.39	119.61	132.40	122.86	123.98	124.82	Tubarao - Qingdao		C3	22.81	-0.97	-4.09%	6.70	36.40

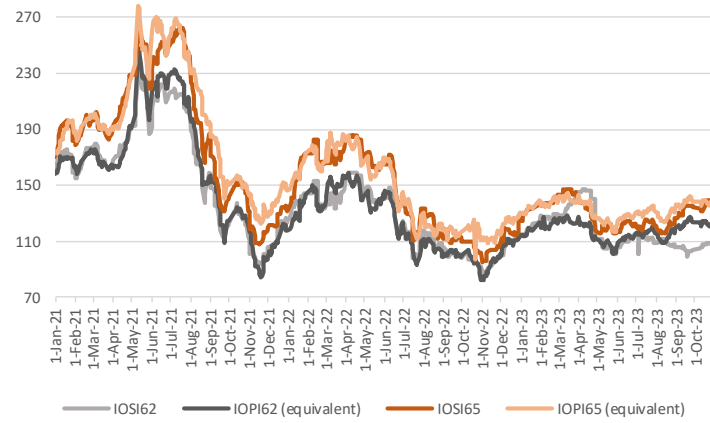
IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending Oct 27th, 2023		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne ¹						
Index	Fe Content	June	July	August	September	MTD	QTD	YTD	June	July	August	September	MTD	QTD	YTD
IOPLI62	62.5% Fe Lump	969	980	951	1043	933	944	1017	121.33	122.51	118.96	130.25	119.96	120.45	134.98

IRON ORE INDEX PREMIUMS/DISCOUNTS

Oct 27th, 2023		PORT STOCK INDEX (RMB/WT)				Oct 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	-86		-9.02%		IOSI65	65% Fe Fines	30.12		28.27%	
IOPI65	65% Fe Fines	112		11.72%							

IRON ORE INDEX COMPARISONS (USD/DMT)



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



IRON ORE BRAND SPOT PRICE ASSESSMENTS

Oct 27th, 2023	PORT STOCK INDEX (RMB/WT)			Oct 27th, 2023	SEABORNE INDEX (USD/DMT)		
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	896	8	-57	Roy Hill	102.05	-1.45	-4.49
SIMEC Fines	827	8	-126	SIMEC Fines	98.55	-1.45	-7.99
PB Fines	920	8	-33	PB Fines	102.80	-1.45	-3.74
Newman Fines	922	8	-31	Newman Fines	105.70	-1.45	-0.84
MAC Fines	903	8	-50	MAC Fines	102.80	-1.45	-3.74
Jimblebar Blended Fines	819	9	-134	Jimblebar Blended Fines	95.20	-1.45	-11.34
Carajas Fines	1134	8	181	Carajas Fines	136.10	-1.45	29.56
Brazilian SSF	919	9	-34	Brazilian SSF	110.30	-1.45	3.76
Brazilian Blend Fines	934	8	-19	Brazilian Blend Fines	111.95	-1.45	5.41
RTX Fines	836	8	-117	RTX Fines	96.45	-1.45	-10.09
West Pilbara Fines	864	8	-89	West Pilbara Fines	100.80	-1.45	-5.74

Oct 27th, 2023	PORT STOCK INDEX (RMB/WT)		
	Price	Change	Diff to IOPI58
SSF	867	0	0
FMG Blended Fines	878	0	11
Robe River	879	0	12
Western Fines	882	0	15
Atlas Fines	875	0	8
Yandi	859	0	-8

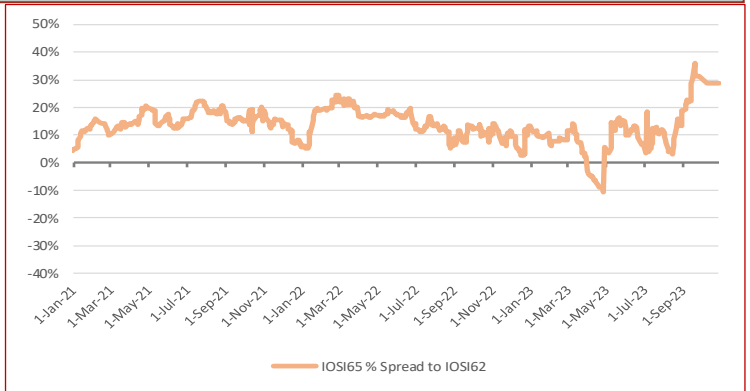
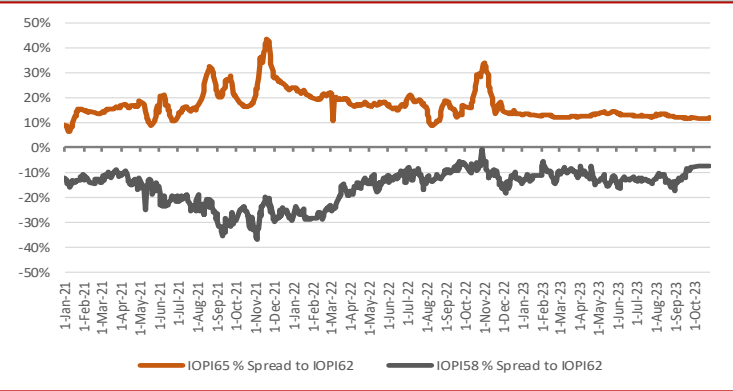
IRON ORE INDEX NORMALISATION DIFFERENTIALS

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%	5.00	0.00	1% Fe	High Grade Fe 60 - 63%	5.75	0.25
	High Grade Fe 63 - 64%	22.00	3.00		High Grade Fe 63 - 64%	2.75	0.00
	High Grade Fe 64 - 65%	22.00	3.00		High Grade Fe 64 - 65%	2.75	0.00
	High Grade Fe 65 - 65.5%	22.00	3.00		High Grade Fe 65 - 65.5%	2.75	0.00
1% Alumina	Low Grade Fe	15.00	0.00	1% Alumina	High Fe Grade Al <2.25%	3.25	0.00
	High Fe Grade Al <2.25%	17.00	1.00		High Fe Grade Al 2.25-4%	0.25	-0.50
	High Fe Grade Al 2.25-4%	5.00	0.00				
	Low Fe Grade Al <2.25%	5.00	0.00				
1% Silica	Low Fe Grade Al 2.25-4%	5.00	0.00	1% Silica	High Fe Grade Si <4%	0.25	0.00
	High Fe Grade Si <4%	14.00	0.00		High Fe Grade Si 4 - 6.5%	2.50	0.00
0.01% Phosphorus	High Fe Grade Si 4-6.5%	11.00	3.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	1.00	-0.50
	Low Fe Grade	5.00	0.00		High Fe Grade 0.115%<P<0.15%	2.75	-0.50
	High Fe Grade 0.09%<P<0.115%	5.00	0.00		Low Fe Grade 0.09<P<0.1%	5.00	0.00

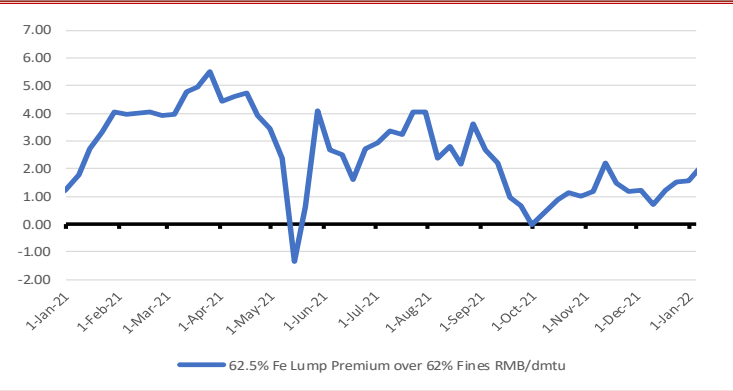
Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

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	-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

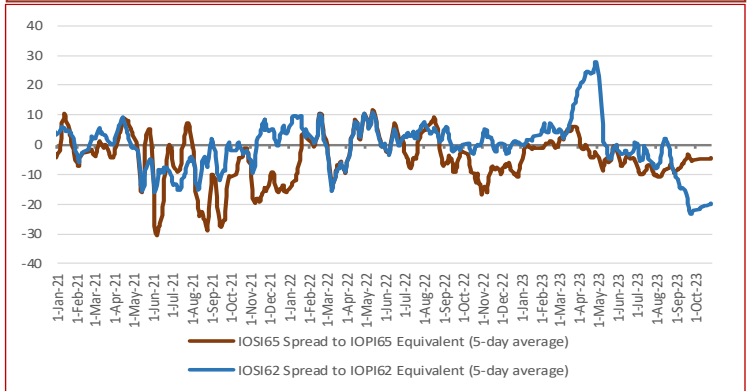
IRON ORE INDEX PREMIUMS/DISCOUNTS



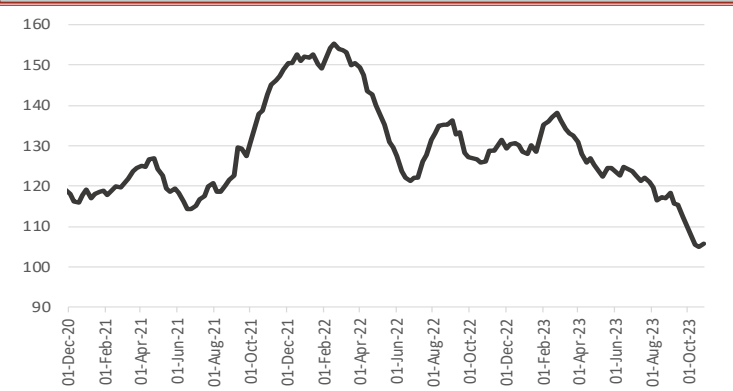
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



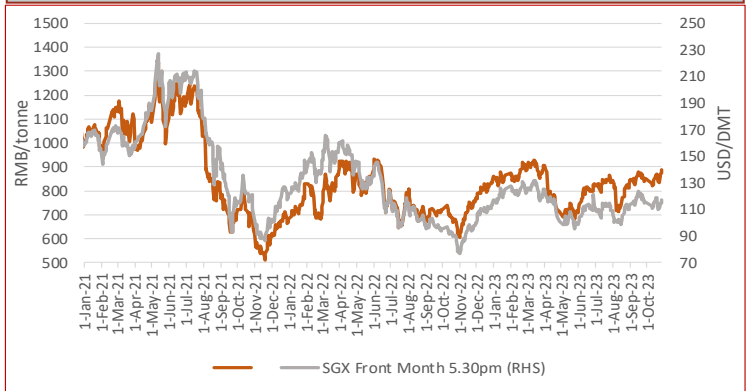
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



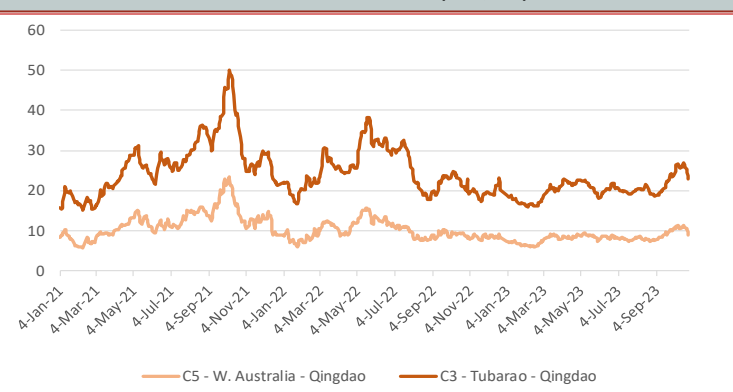
IRON ORE PORT INVENTORIES (MILLION TONNES)

Week Ending Oct 27th, 2023				
Province	This week	Change %	Low ²	High ²
Jingtang	8.46	-2.76%	8.46	19.20
Qingdao	22.37	-6.32%	9.41	26.24
Caofeidian	7.56	-21.09%	7.56	16.29
Tianjin	7.09	9.24%	6.49	12.97
Rizhao	11.99	-1.72%	9.44	19.26
Total (35 Ports)	105.75	0.70%	98.80	155.39

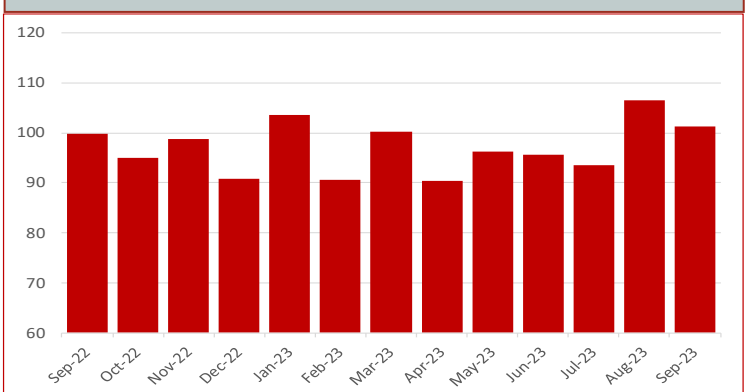
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	Oct 27th, 3pm close			Oct 27th, 5:30pm		
Contract	12401	Change	Change %	Nov. 23	Change	Change %
Closing Price	889.50	13.00	1.48%	117.30	2.70	2.36%
Vol traded ('000 lots)	76.14	13.06	20.71%	10.35	2.16	26.36%
Open positions ('000 lots)	91.03	2.66	3.00%	36.47	0.18	0.49%
Day Low	867.0	3.00	0.35%	115.75	-0.15	-0.13%
Day High	894.5	14.00	1.59%	120.00	2.20	1.87%

DRY BULK FREIGHT RATES (USD/MT)



TOTAL CHINA IRON ORE IMPORT VOLUMES (MILLION TONNES)



STEEL SPOT MARKET PRICES—CHINA

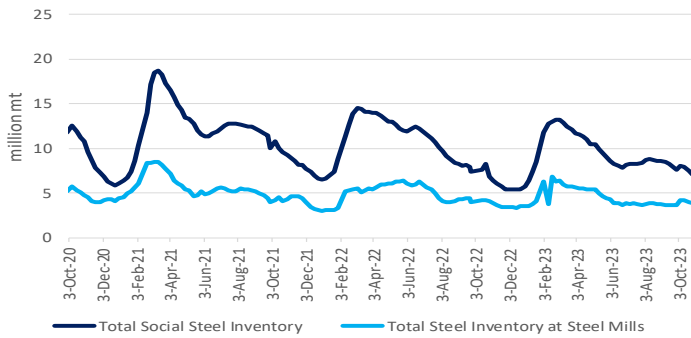
Product	2023/10/27	Change	Change %
ReBar HRB400 φ18mm	3,790	60	1.61%
Wirerod Q300 φ6.5mm	3,980	50	1.27%
HRC Q235/SS400 5.5mm*1500*C	3,790	40	1.07%
CRC SPCC/ST12 1.0mm*1250*2500	4,760	-40	-0.83%
Medium & Heavy Plate Q235B 20mm	3,770	10	0.27%
GI ST02Z 1.0mm*1000*C	5,040	-10	-0.20%
Colour Coated Plate	6,900	-50	-0.72%

CHINESE STEEL MILL PROFITABILITY

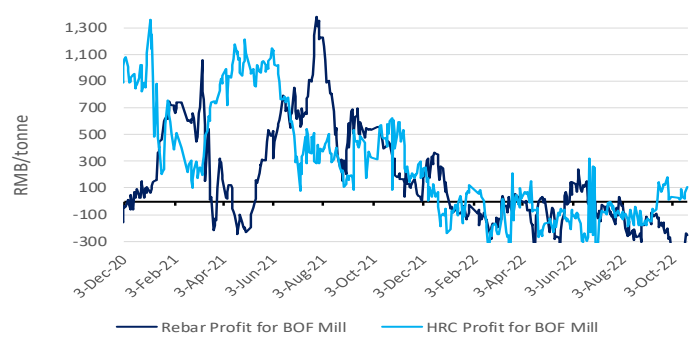
SMM Tracking of Steel Mill P&L - Rebar and Hot-rolled Coil (RMB/tonne)			
Category	Price	Change (WoW)	Note
MMi (Fe 62%), USD/mt excluding tax	107.90	0	Mmi CFR Equivalent index for 1st Feb
Coke	2,560	0	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	2,860	-30	steel scrap (6mm) in Zhangjiagang, excl. tax
Billet Cost	3,244	-10	Q234, incl. tax
Rebar cost - Blast furnace	3,892	-11	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	-192	71	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	3,947	-13	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	-137	83	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

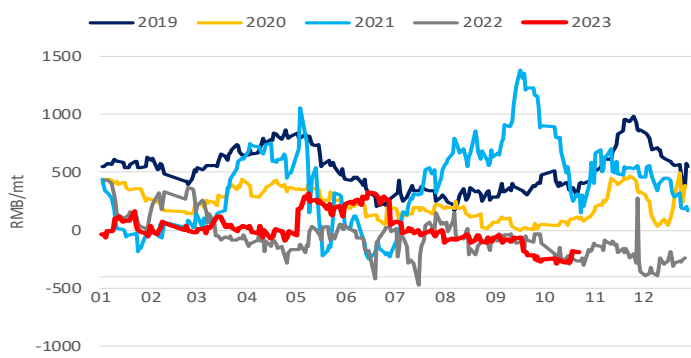
CHINESE STEEL INVENTORIES



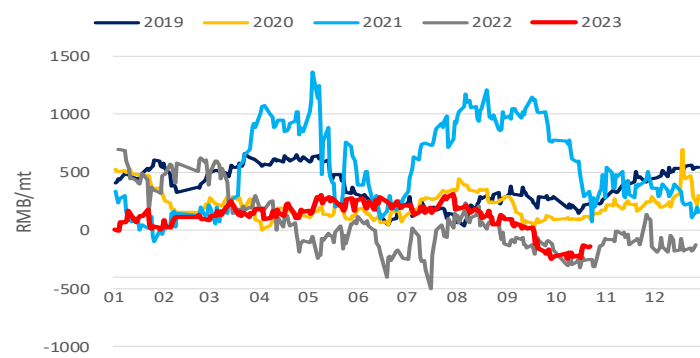
CHINESE STEEL MILL PROFITABILITY



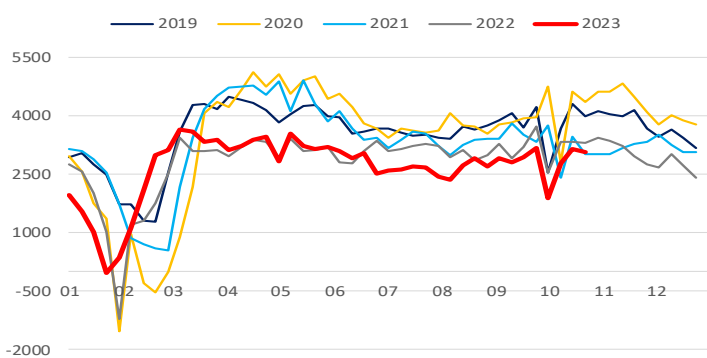
CHINESE STEEL MILL PROFITABILITY—Rebar



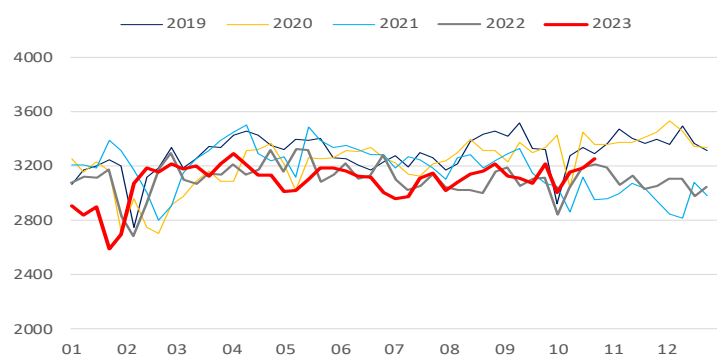
CHINESE STEEL MILL PROFITABILITY—Hot-rolled Coil



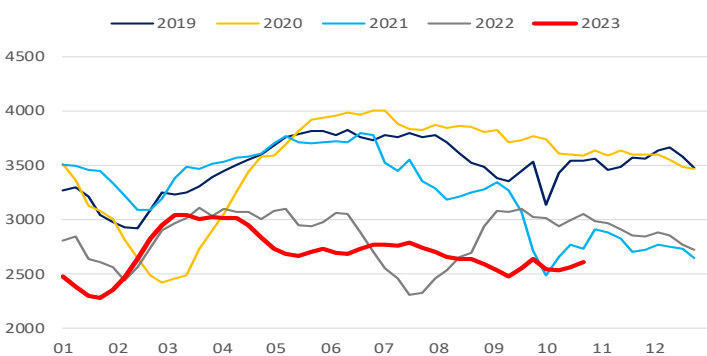
CHINESE STEEL CONSUMPTION—Rebar



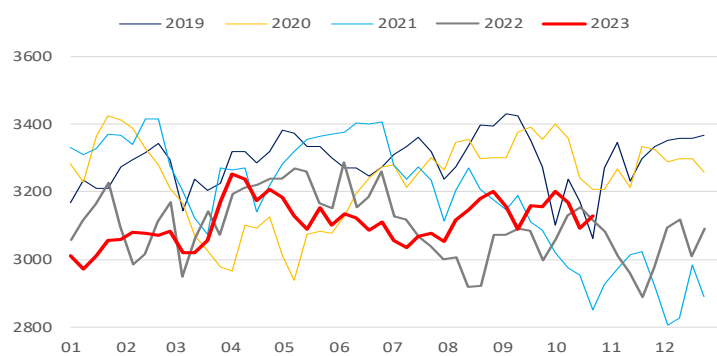
CHINESE STEEL CONSUMPTION—Hot-rolled Coil



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																						
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Lump Index 62.5	0																								
Pricing Point	Qingdao Port (FOT and CFR respectively)			FOT Qingdao Port	* Number of price submissions for iron ore indices that were excluded from index calculations today as they were anomalous and could not be verified																				
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					
Oct 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%
Oct 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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