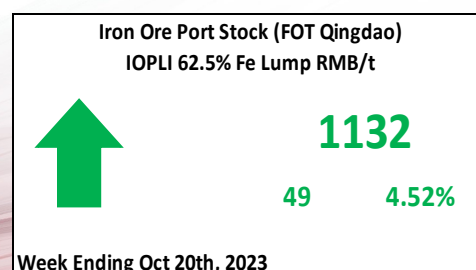
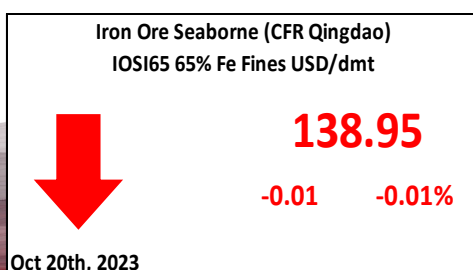
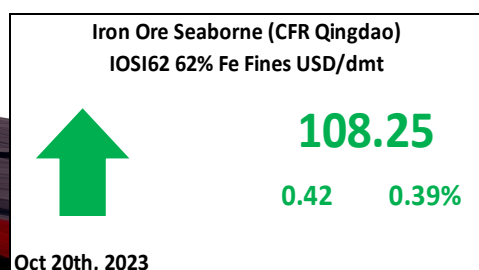
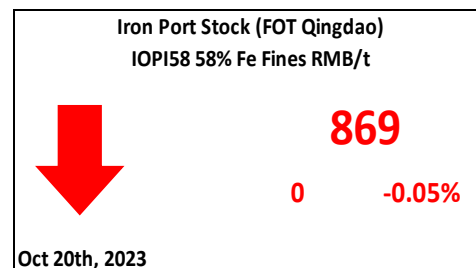
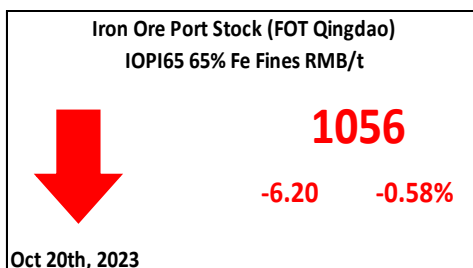
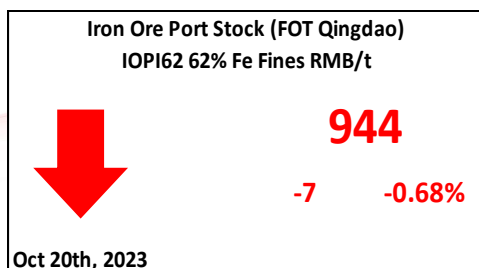


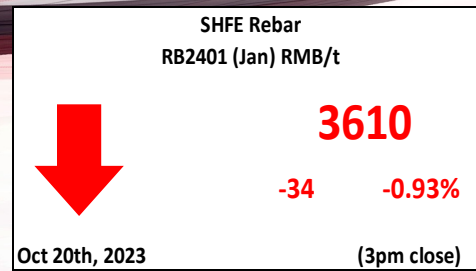
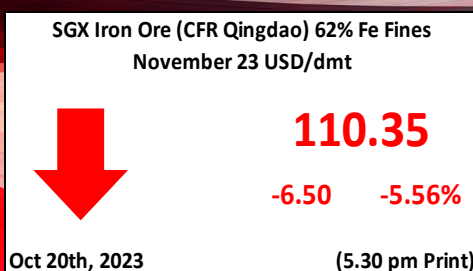
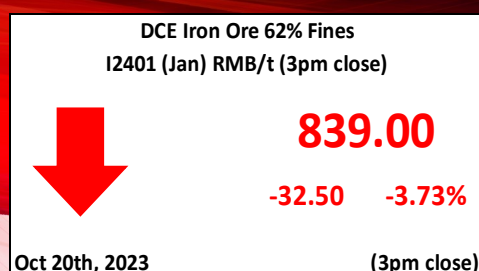


MMi Dashboard

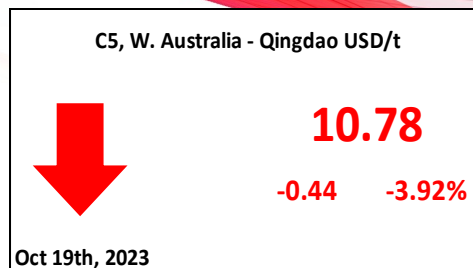
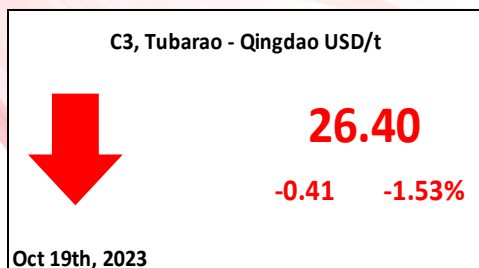
Iron Ore Price Indices



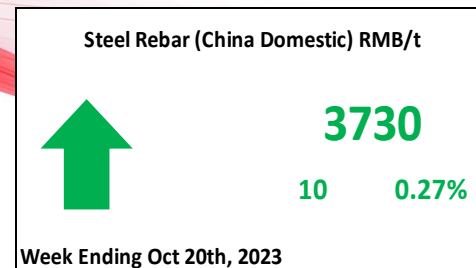
Exchange Traded Contracts



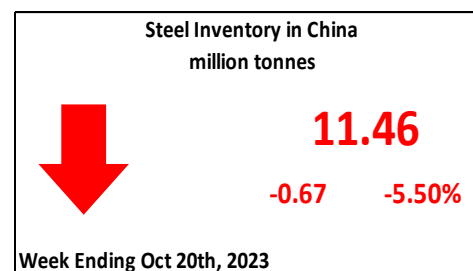
Freight Rates



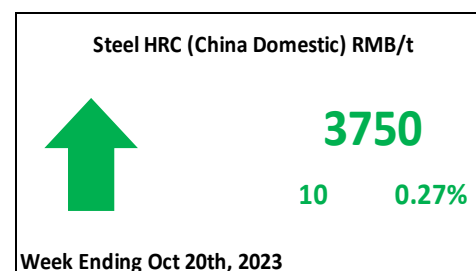
Steel Price



Inventory Levels



Steel Price



IRON ORE PORT STOCK INDEX (IOPI)

Oct 20th, 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	944	-6.5	-0.68%	869	880	858	892	122.73	-0.87	-0.7%	120.06	120.58	117.93	122.93
IOPI58	58% Fe Fines	869	-0.4	-0.05%	813	798	761	793	113.92	-0.05	0.0%	113.29	110.17	105.29	110.04
IOPI65	65% Fe Fines	1056	-6.2	-0.58%	981	992	970	1003	137.74	-0.83	-0.6%	136.05	136.43	133.84	138.73

IRON ORE SEABORNE INDEX (IOSI)

Oct 20th, 2023		CFR Qingdao, USD/dry tonne							MARKET COMMENTARY							
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low ²	High ²	DCE iron ore futures declined by 3.17% today, the main contract closed at 839. The steel mills are active to purchase. The overall trading sentiment of the market is general. PBF at Shandong port deal 910 yuan/mt. PBF at Tangshan port deal 935-945 yuan/mt. The performance of the stock market today and the outflow of overseas funds have dragged down investor confidence in the domestic financial market, and macroeconomic sentiment has eased. The total inventory of 35 ports tracked by fundamental SMM is 105.01 million tons, a decrease of 550000 tons compared to last week and a decrease of 211.7 million tons compared to the same period last year. Port inventory has decreased for six consecutive periods. The daily average port clearance volume of imported mines in this period decreased by 124000 tons to 3.004 million tons on a weekly basis compared to before the holiday. This week, the production of molten iron at the steel plant fell from a high level, and some finished product varieties had poor profits, resulting in a significant decline in port dredging volume this week. The subsequent inventory turning point will come, and the iron ore supply and demand pattern may gradually weaken. Overall, short-term iron ore prices may be operating under pressure.							
IOSI62	62% Fe Fines	108.25	0.42	0.39%	113.26	113.26	83.90	146.75								
IOSI65	65% Fe Fines	138.95	-0.01	-0.01%	124.64	124.64	94.45	147.55								

IRON ORE PORT LUMP INDEX (IOPLI)

Week Ending Oct 20th, 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	1132	49	4.5%	944	1019	770	1132	141.75	6.26	4.62%	120.47	134.93	94.72	141.75

IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

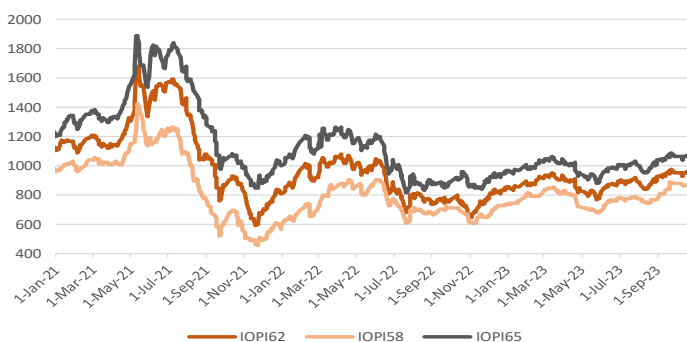
Week Ending Oct 20th, 2023				RMB/tonne (excluding tax) ³				USD/tonne (excluding tax) ³			
Province	Region	Product	Basis	This week	Change %	Low ²	High ²	This week	Change %	Low ²	High ²
Hebei	Hanxing	66% Fe Concentrate	Dry	1051	-2.1%	779	1645	146.39	-2.07%	110.31	255.69
Hebei	Qian'an	65% Fe Concentrate	Dry	1105	1.4%	780	1630	153.91	1.35%	110.51	251.57
Liaoning	Anshan	65% Fe Concentrate	Wet	805	-1.2%	620	1310	112.12	-1.25%	87.40	202.32
Shandong	Zibo	65% Fe Concentrate	Dry	1124	-2.6%	800	1752	156.56	-2.62%	117.19	272.32

Week Ending Oct 20th, 2023

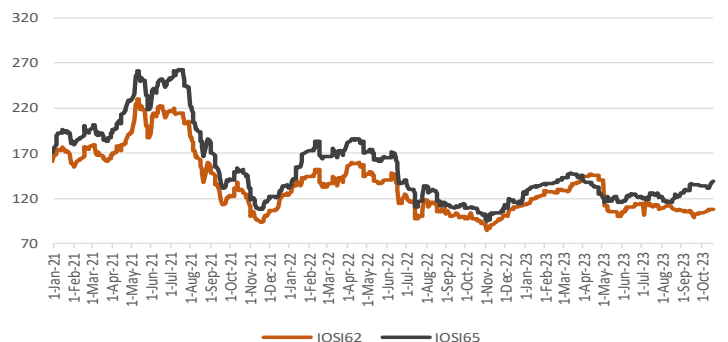
	This week	Change %	Low ²	High ²
China Mines Concentrate Composite Index RMB/WT	984.27	-0.73%	706.36	1511.22

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 20th, 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

Oct 20th, 2023		CFR Qingdao, USD/dry tonne							FREIGHT RATES						
Index	Fe Content	June	July	August	September	MTD	QTD	YTD	FREIGHT RATES - DRY BULK US\$/wet tonne						
									Route	Designation	Change	Change %	Low ²	High ²	
IOSI62	62% Fe Fines	110.54	108.57	109.02	104.25	112.14	112.33	113.26	W. Australia - Qingdao	C5	10.78	-0.44	-3.92%	3.57	16.77
IOSI65	65% Fe Fines	135.30	147.39	119.61	132.40	122.86	123.82	124.64	Tubarao - Qingdao	C3	26.40	-0.41	-1.53%	6.70	36.40

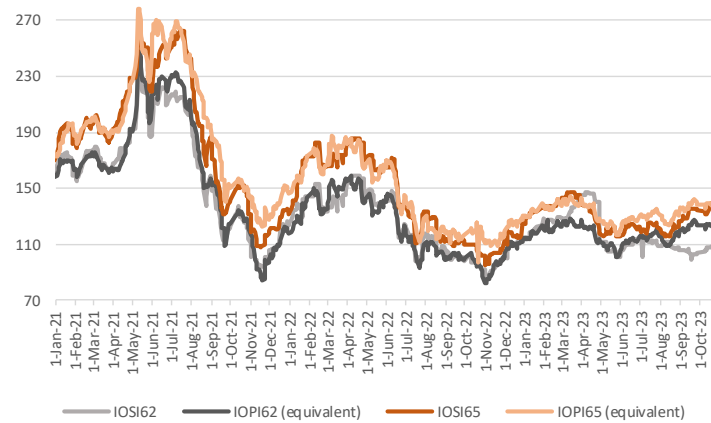
IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending Oct 20th, 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	941	1017	121.33	122.51	118.96	130.25	119.96	120.46	134.98

IRON ORE INDEX PREMIUMS/DISCOUNTS

Oct 20th, 2023				PORT STOCK INDEX (RMB/WT)		Oct 20th, 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	-75	-7.94%	IOSI65	65% Fe Fines	30.70	28.36%				
IOPI65	65% Fe Fines	112	11.86%								

IRON ORE INDEX COMPARISONS (USD/DMT)



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



IRON ORE BRAND SPOT PRICE ASSESSMENTS

Oct 20th, 2023	PORT STOCK INDEX (RMB/WT)			Oct 20th, 2023	SEABORNE INDEX (USD/DMT)		
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	887	-7	-57	Roy Hill	103.75	0.45	-4.50
SIMEC Fines	818	-7	-126	SIMEC Fines	100.25	0.45	-8.00
PB Fines	911	-7	-33	PB Fines	104.50	0.45	-3.75
Newman Fines	913	-7	-31	Newman Fines	107.40	0.50	-0.85
MAC Fines	894	-7	-50	MAC Fines	104.50	0.45	-3.75
Jimblebar Blended Fines	810	-7	-134	Jimblebar Blended Fines	96.90	0.45	-11.35
Carajas Fines	1125	-7	181	Carajas Fines	137.80	0.45	29.55
Brazilian SSF	910	-7	-34	Brazilian SSF	112.00	0.45	3.75
Brazilian Blend Fines	925	-7	-19	Brazilian Blend Fines	113.65	0.45	5.40
RTX Fines	827	-8	-117	RTX Fines	98.15	0.45	-10.10
West Pilbara Fines	855	-7	-89	West Pilbara Fines	102.50	0.45	-5.75
Oct 20th, 2023	PORT STOCK INDEX (RMB/WT)						
	Price	Change	Diff to IOPI58				
SSF	869	0	0				
FMG Blended Fines	880	0	11				
Robe River	881	0	12				
Western Fines	884	0	15				
Atlas Fines	877	0	8				
Yandi	861	0	-8				

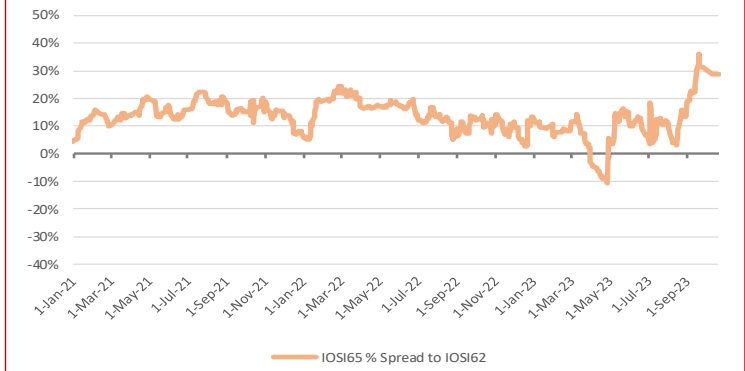
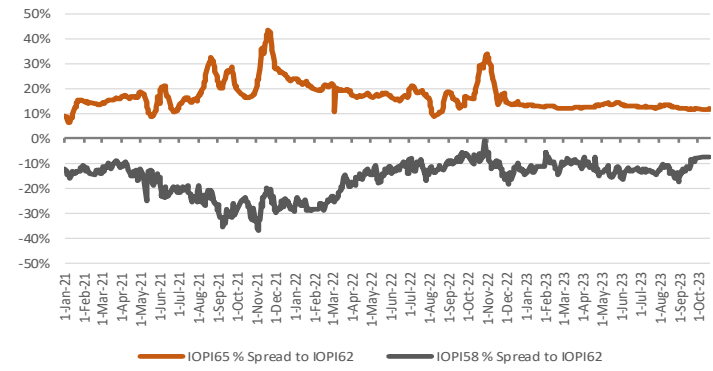
IRON ORE INDEX NORMALISATION DIFFERENTIALS

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%	5.00	0.00
	High Grade Fe 63 - 64%	6.00	1.00		High Grade Fe 63 - 64%	2.75	0.00
	High Grade Fe 64 - 65%	6.00	1.00		High Grade Fe 64 - 65%	2.75	0.00
	High Grade Fe 65 - 65.5%	6.00	1.00		High Grade Fe 65 - 65.5%	2.75	0.00
1% Alumina	Low Grade Fe	16.00	-1.00	1% Alumina	High Fe Grade Al <2.25%	2.25	0.25
	High Fe Grade Al <2.25%	15.00	-5.00		High Fe Grade Al 2.25-4%	0.75	0.00
	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%	20.00	-5.00	1% Silica	High Fe Grade Si <4%	0.25	0.00
	High Fe Grade Si <4%	11.00	1.00		High Fe Grade Si 4 - 6.5%	3.00	-0.75
0.01% Phosphorus	High Fe Grade Si 4-6.5%	5.00	-5.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	2.00	-0.25
	Low Fe Grade	7.00	-2.00		High Fe Grade 0.115%<P<0.15%	4.50	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

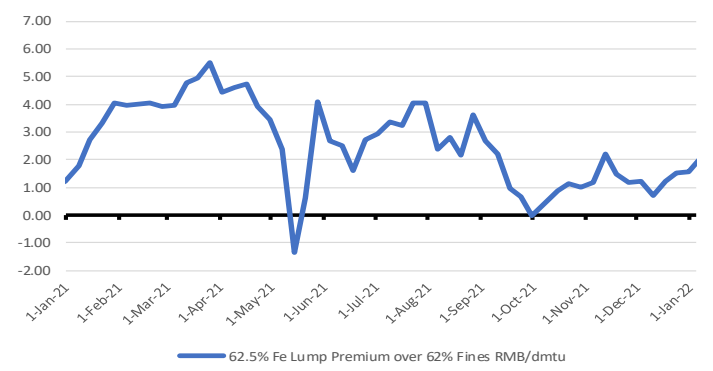
Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

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	-5.00	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

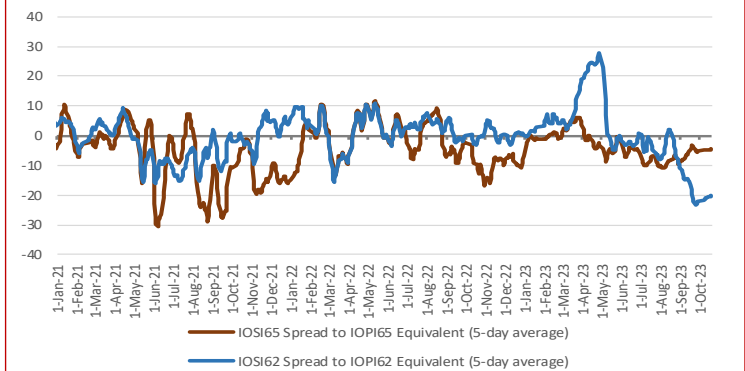
IRON ORE INDEX PREMIUMS/DISCOUNTS



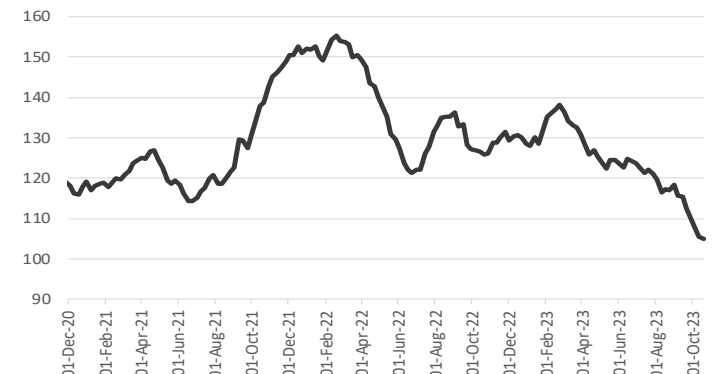
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



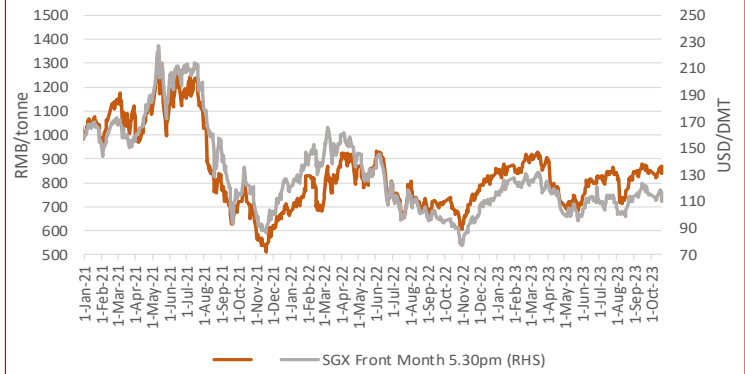
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



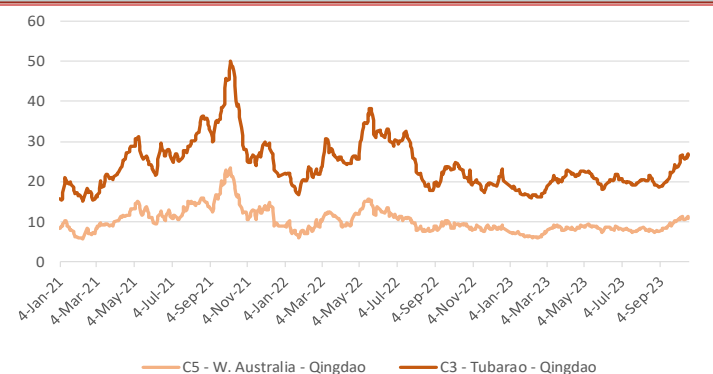
IRON ORE PORT INVENTORIES (MILLION TONNES)

Week Ending Oct 20th, 2023				
Province	This week	Change %	Low ²	High ²
Jingtang	8.70	-10.31%	8.70	19.20
Qingdao	23.88	0.93%	9.41	26.24
Caofeidian	9.58	13.78%	8.42	16.29
Tianjin	6.49	-2.26%	6.49	12.97
Rizhao	12.20	5.90%	9.44	19.26
Total (35 Ports)	105.01	-0.52%	98.80	155.39

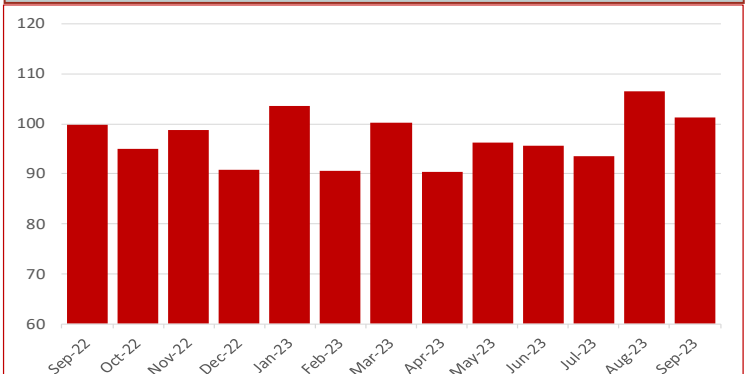
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	Oct 20th, 3pm close			Oct 20th, 5:30pm		
Contract	12401	Change	Change %	Nov. 23	Change	Change %
Closing Price	839.00	-32.50	-3.73%	110.35	-6.50	-5.56%
Vol traded ('000 lots)	73.38	20.37	38.42%	9.35	2.31	32.88%
Open positions ('000 lots)	81.09	-6.42	-7.34%	37.59	0.55	1.47%
Day Low	837.0	-19.50	-2.28%	112.20	-2.65	-2.31%
Day High	873.5	-1.50	-0.17%	117.25	-0.30	-0.26%

DRY BULK FREIGHT RATES (USD/MT)



TOTAL CHINA IRON ORE IMPORT VOLUMES (MILLION TONNES)



STEEL SPOT MARKET PRICES—CHINA

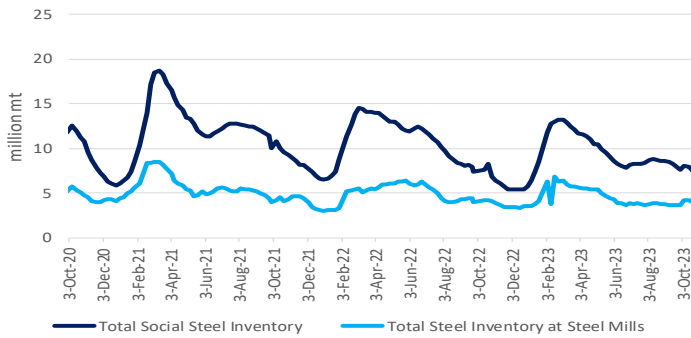
Product	2023/10/20	Change	Change %
ReBar HRB400 φ18mm	3,730	10	0.27%
Wirerod Q300 φ6.5mm	3,930	10	0.26%
HRC Q235/SS400 5.5mm*1500*C	3,750	10	0.27%
CRC SPCC/ST12 1.0mm*1250*2500	4,800	-50	-1.03%
Medium & Heavy Plate Q235B 20mm	3,760	0	0.00%
GI ST02Z 1.0mm*1000*C	5,050	-40	-0.79%
Colour Coated Plate	6,950	0	0.00%

CHINESE STEEL MILL PROFITABILITY

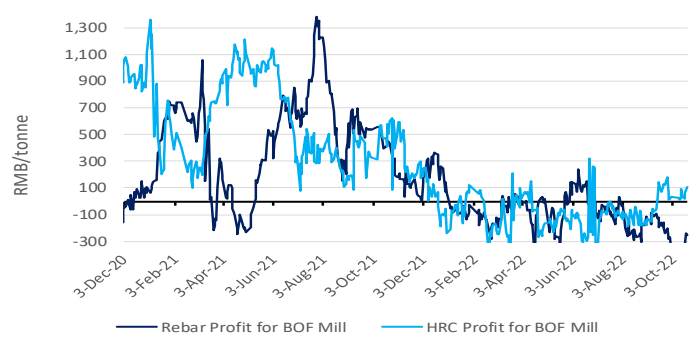
SMM Tracking of Steel Mill P&L - Rebar and Hot-rolled Coil (RMB/tonne)			
Category	Price	Change (WoW)	Note
MMi (Fe 62%), USD/mt excluding tax	107.83	5	Mmi CFR Equivalent index for 1st Feb
Coke	2,560	110	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	2,890	-80	steel scrap (6mm) in Zhangjiagang, excl. tax
Billet Cost	3,254	-2	Q234, incl. tax
Rebar cost - Blast furnace	3,903	-3	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	-263	-78	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	3,961	7	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	-221	-137	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

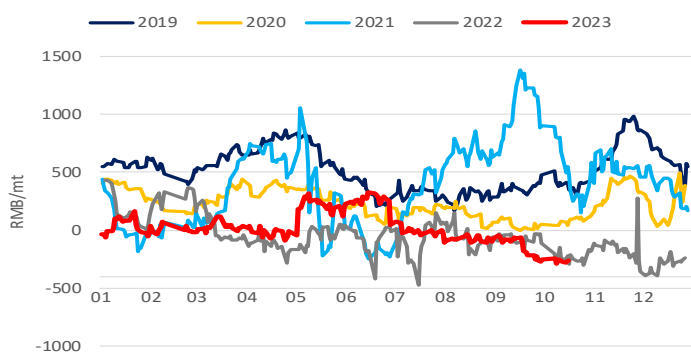
CHINESE STEEL INVENTORIES



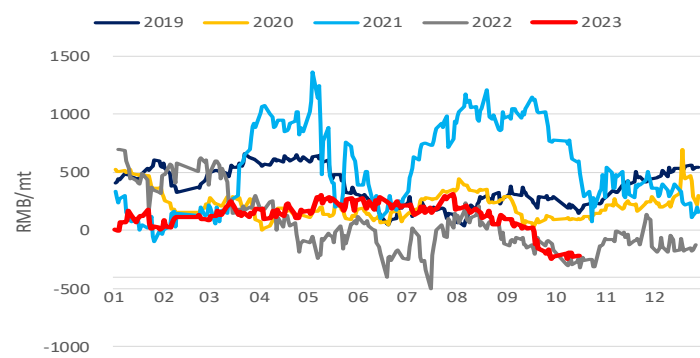
CHINESE STEEL MILL PROFITABILITY



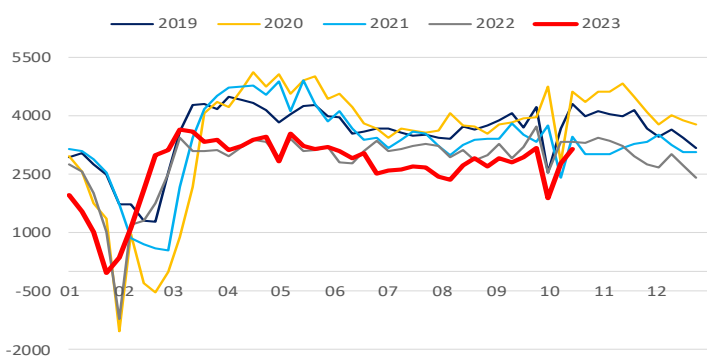
CHINESE STEEL MILL PROFITABILITY—Rebar



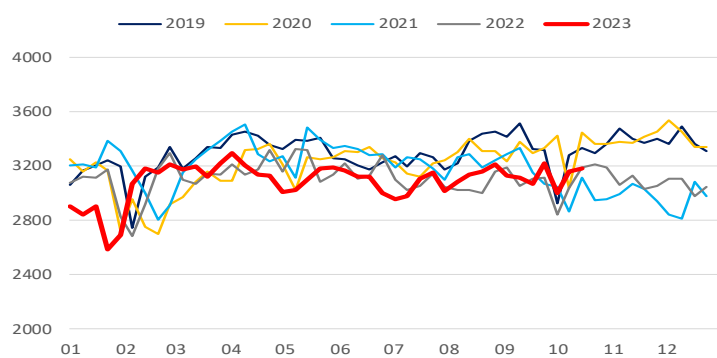
CHINESE STEEL MILL PROFITABILITY—Hot-rolled Coil



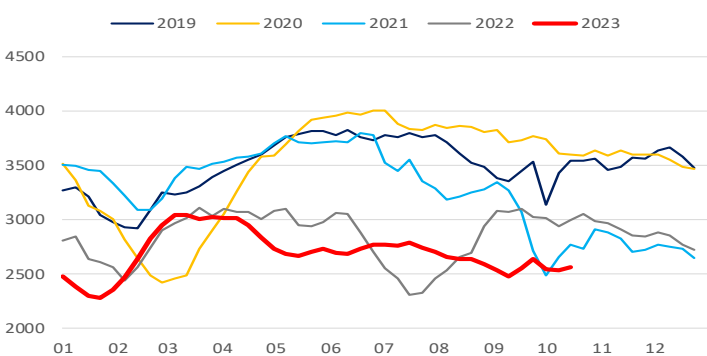
CHINESE STEEL CONSUMPTION—Rebar



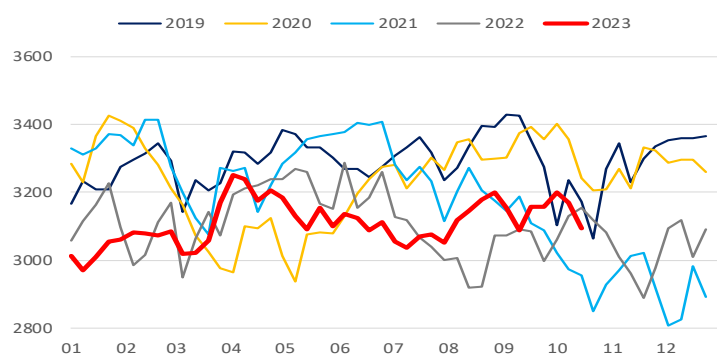
CHINESE STEEL CONSUMPTION—Hot-rolled Coil



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	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
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		
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					
Oct 20th, 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 20th, 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		

CONTACT US

MMI Singapore Office Details: Level 28, Manulife Tower, 8 Cross Street Singapore. Tel: + 65 6850 7629 E: prices@mmiprices.com

SMM Singapore Office Details: Level 28, Manulife Tower, 8 Cross Street Singapore. Tel: + 65 6850 7630 E: service.en@smm.cn

SMM Shanghai Office Details: 9th FL, Building 9, Lujiazui Software Park, No.20, Lane 91, Pudong, Shanghai Tel: +86 021 5155 0306 E: service.en@smm.cn

Visit www.mmiprices.com for full index price histories and archive of daily reports

This information has been prepared by Metals Market Index ("MMI"). Use of the information presented here is at your sole risk, and any content, material and/or data presented or otherwise obtained through your use of the information in this document is at your own discretion and risk and you will be solely responsible for any damage to you personally or your company or organisation or business associates whatsoever which in anyway results from the use, reliance or application of such content material and/or information. Certain data has been obtained from various sources and any copyright existing in such data shall remain the property of the source. Except for the foregoing, MMi retains all copyright within this document. The copying or redistribution of any part of this document without the express written authority of MMi is forbidden.