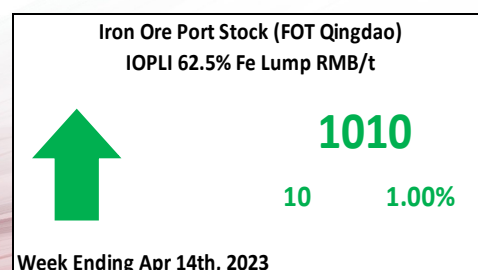
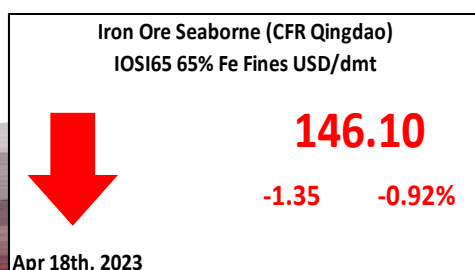
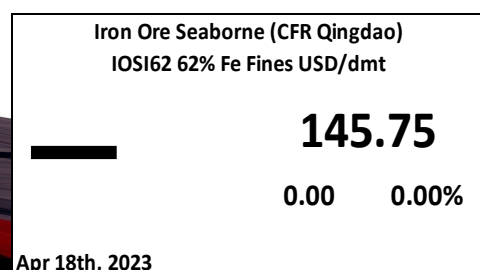
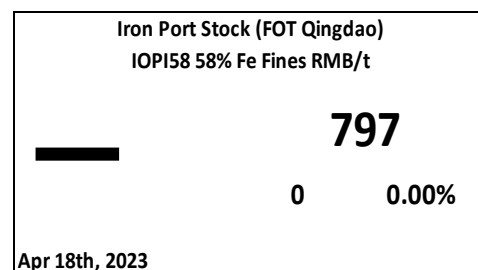
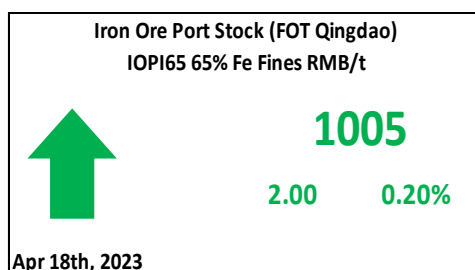
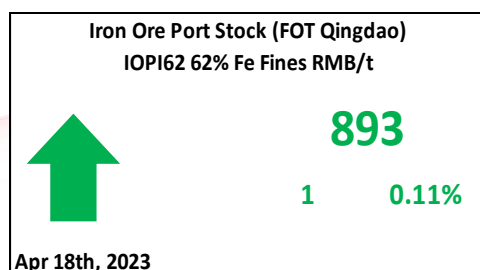


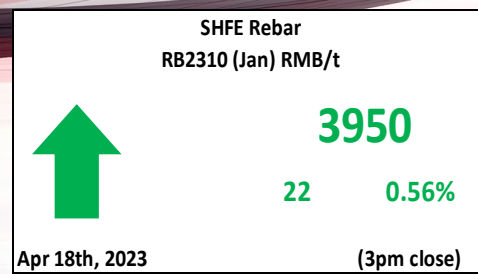
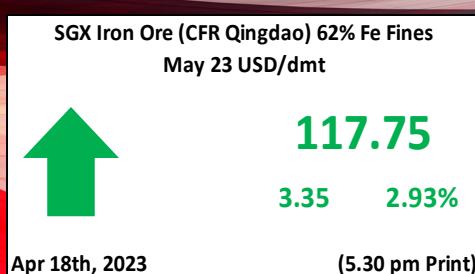
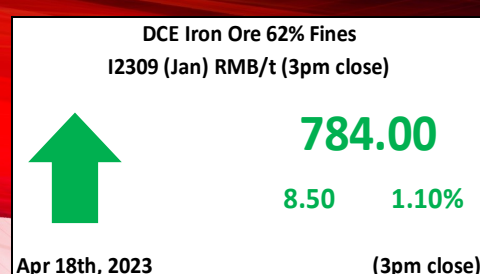


MMi Dashboard

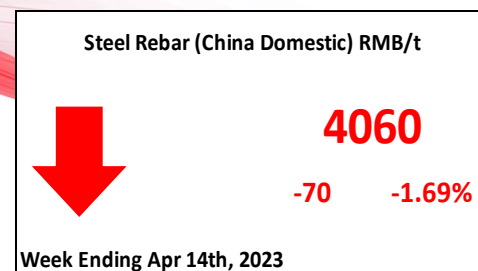
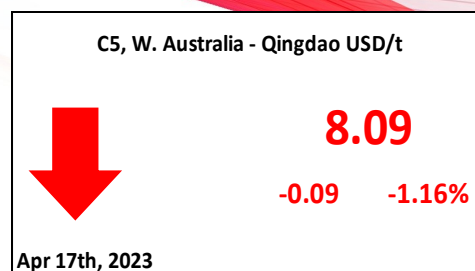
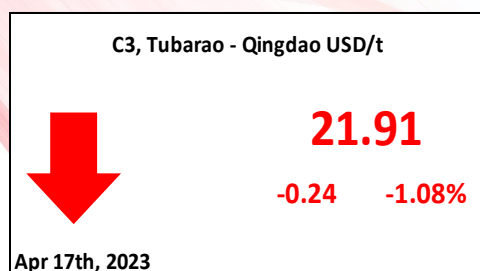
Iron Ore Price Indices



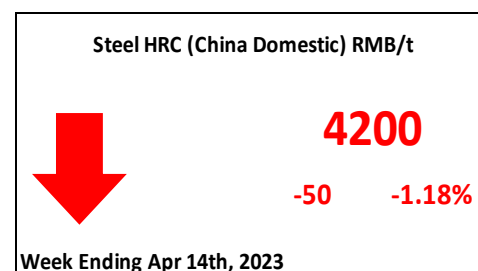
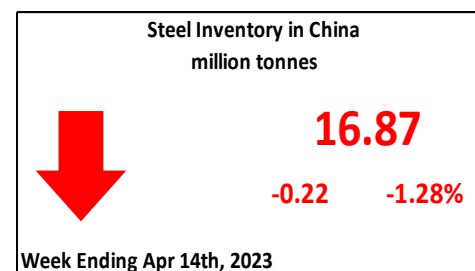
Exchange Traded Contracts



Freight Rates



Inventory Levels



IRON ORE PORT STOCK INDEX (IOPI)

Apr 18th, 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	893	1	0.1%	869	880	858	892	120.91	-0.10	-0.1%	120.06	120.58	117.93	122.93
IOPI58	58% Fe Fines	797	0	0.0%	813	798	761	793	108.68	-0.21	-0.2%	113.29	110.17	105.29	110.04
IOPI65	65% Fe Fines	1005	2	0.2%	981	992	970	1003	136.57	0.01	0.0%	136.05	136.43	133.84	138.73

IRON ORE SEABORNE INDEX (IOSI)

MARKET COMMENTARY

Apr 18th, 2023		CFR Qingdao, USD/dry tonne							DCE iron ore futures rose by 2.08% today, the main contract closed at 784. The traders' willingness to ship is better. The steel mills are active to purchase. The overall trading sentiment of the market is better. PBF at Shandong port deal 883-895 yuan/mt, increase 11 yuan/mt. PBF at Tangshan port deal 902-908 yuan/mt, increase 7-18 yuan/mt. The macro data released today showed that the GDP data of the first quarter exceeded the market expectations, the property data performed generally, and the market sentiment strengthened. As the May Day holiday approaches, many steel mills have a need to replenish inventory in advance. However, according to SMM statistics, the impact of blast furnace maintenance this week on molten iron was 587200 tons, an increase of 1000 tons compared to last week's maintenance. The production of molten iron from steel mills has decreased, which has loosened support for ore prices. The current negative feedback risk has been delayed due to the pre holiday terminal reserve. Considering the relatively active iron ore market, it is expected that iron ore prices will operate in a volatile trend in the short term.
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low ²	High ²	
IOSI62	62% Fe Fines	145.75	0.00	0.00%	113.86	124.12	83.90	156.65	
IOSI65	65% Fe Fines	146.10	-1.35	-0.92%	123.77	140.17	94.45	182.85	

IRON ORE PORT LUMP INDEX (IOPLI)

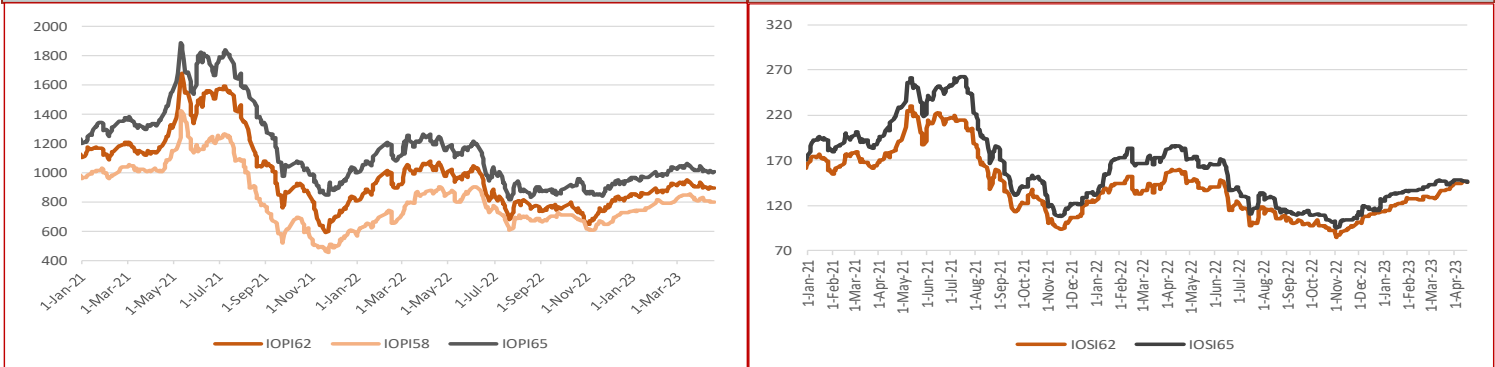
Week Ending Apr 14th, 2023		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne ³						
Index	Fe Content	Price	W-o-W	Change %	MTD	YTD	Low ²	High ²	Price	W-o-W	Change %	MTD	YTD	Low ²	High ²
IOPLI62	62.5% Fe Lump	1010	10	1.0%	922	1033	770	1330	137.26	6.97	5.35%	118.86	138.01	94.72	183.92

IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

Week Ending Apr 14th, 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	1025	-2.8%	779	1645	149.08	-2.82%	110.31	255.69
Hebei	Qian'an	65% Fe Concentrate	Dry	1065	-0.9%	780	1630	154.90	-0.90%	110.51	251.57
Liaoning	Anshan	65% Fe Concentrate	Wet	805	-2.4%	620	1310	117.09	-2.40%	87.40	202.32
Shandong	Zibo	65% Fe Concentrate	Dry	1041	-3.2%	800	1752	151.41	-3.14%	117.19	272.32
Week Ending Apr 14th, 2023				This week	Change %	Low ²	High ²	¹ Exchange rate applied: RMB/USD = 6.7522 ² Last 12 months ³ Weekly exchange rate applied: RMB/USD = 6.87528			
China Mines Concentrate Composite Index RMB/WT				941.87	-1.77%	706.36	1511.22				

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

Apr 18th, 2023		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne						
Index	Fe Content	December	January	February	March	MTD	QTD	YTD	December	January	February	March	MTD	QTD	YTD
IOPI62	62% Fe Fines	822	856	892	924	869	881	880	109.43	117.00	121.64	124.91	120.06	120.90	120.58
IOPI58	58% Fe Fines	711	751	799	832	813	792	798	95.17	103.34	109.79	113.41	113.29	109.35	110.17
IOPI65	65% Fe Fines	935	968	1003	1036	981	993	992	124.90	132.80	137.36	140.49	136.05	136.72	136.43

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

FREIGHT RATES

Apr 18th, 2023		CFR Qingdao, USD/dry tonne							Apr 17th, 2023		FREIGHT RATES - DRY BULK US\$/wet tonne				
Index	Fe Content	December	January	February	March	MTD	QTD	YTD	Route	Designation	Change	Change %	Low ²	High ²	
IOSI62	62% Fe Fines	108.92	119.76	127.73	134.77	112.14	113.48	124.12	W. Australia - Qingdao	C5	8.09	-0.09	-1.16%	3.57	16.77
IOSI65	65% Fe Fines	116.83	132.39	138.06	145.14	122.86	123.86	140.17	Tubarao - Qingdao	C3	21.91	-0.24	-1.08%	6.70	36.40

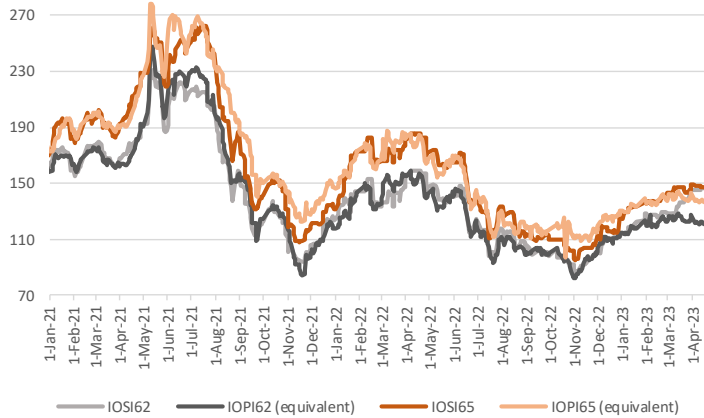
IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending Apr 14th, 2023		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne ¹						
Index	Fe Content	December	January	February	March	MTD	QTD	YTD	December	January	February	March	MTD	QTD	YTD
IOPLI62	62.5% Fe Lump	922	964	988	1012	925	922	1032	117.06	126.47	129.95	131.15	119.39	119.51	137.99

IRON ORE INDEX PREMIUMS/DISCOUNTS

Apr 18th, 2023		PORT STOCK INDEX (RMB/WT)		Apr 18th, 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	-96	-10.75%	IOSI65	65% Fe Fines	0.35	0.24%
IOPI65	65% Fe Fines	112	12.54%				

IRON ORE INDEX COMPARISONS (USD/DMT)



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



IRON ORE BRAND SPOT PRICE ASSESSMENTS

Apr 18th, 2023				Apr 18th, 2023			
PORT STOCK INDEX (RMB/WT)				SEABORNE INDEX (USD/DMT)			
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	836	1	-57	Roy Hill	141.25	0.00	-4.50
SIMEC Fines	766	1	-127	SIMEC Fines	137.75	0.00	-8.00
PB Fines	861	1	-32	PB Fines	142.00	0.00	-3.75
Newman Fines	862	1	-31	Newman Fines	144.90	0.00	-0.85
MAC Fines	843	1	-50	MAC Fines	142.00	0.00	-3.75
Jimblebar Blended Fines	758	1	-135	Jimblebar Blended Fines	134.40	0.00	-11.35
Carajas Fines	1074	1	181	Carajas Fines	175.30	0.00	29.55
Brazilian SSF	857	1	-36	Brazilian SSF	149.50	0.00	3.75
Brazilian Blend Fines	874	1	-19	Brazilian Blend Fines	151.15	0.00	5.40
RTX Fines	776	1	-117	RTX Fines	135.65	0.00	-10.10
West Pilbara Fines	804	1	-89	West Pilbara Fines	140.00	0.00	-5.75

Apr 18th, 2023			
PORT STOCK INDEX (RMB/WT)			
	Price	Change	Diff to IOPI58
SSF	797	0	0
FMG Blended Fines	807	0	10
Robe River	808	0	11
Western Fines	811	0	14
Atlas Fines	804	0	7
Yandi	790	0	-7

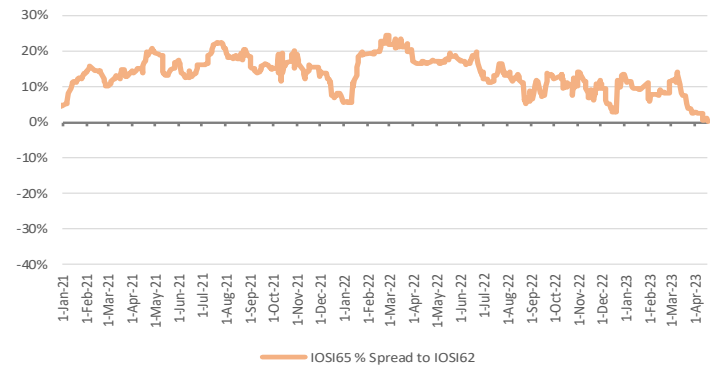
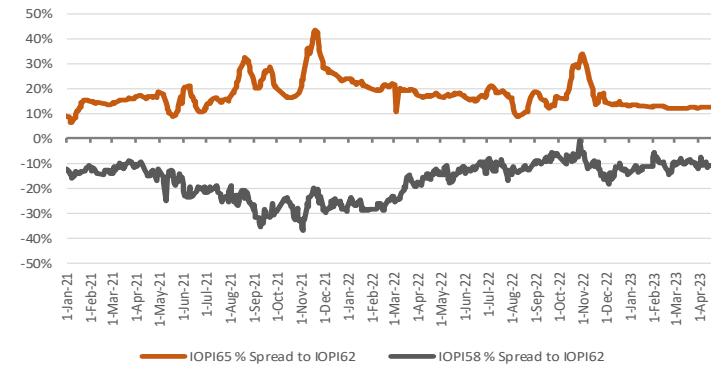
IRON ORE INDEX NORMALISATION DIFFERENTIALS

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	-3.00	1% Fe	High Grade Fe 60 - 63%	3.25	0.00
	High Grade Fe 63 - 64%	5.00	0.00		High Grade Fe 63 - 64%	0.75	0.25
	High Grade Fe 64 - 65%	5.00	0.00		High Grade Fe 64 - 65%	0.75	0.25
	High Grade Fe 65 - 65.5%	5.00	0.00		High Grade Fe 65 - 65.5%	0.75	0.25
1% Alumina	Low Grade Fe	19.00	1.00	1% Alumina	High Fe Grade Al <2.25%	0.75	0.00
	High Fe Grade Al <2.25%	43.00	-1.00		High Fe Grade Al 2.25-4%	0.25	0.00
	High Fe Grade Al 2.25-4%	5.00	0.00		High Fe Grade Si <4%	1.50	0.00
	Low Fe Grade Al <2.25%	90.00	5.00		High Fe Grade Si 4 - 6.5%	4.25	0.00
1% Silica	Low Fe Grade Al 2.25-4%	14.00	3.00	1% Silica	High Fe Grade Si <4%	1.50	0.00
	High Fe Grade Si <4%	13.00	0.00		High Fe Grade Si 4 - 6.5%	4.25	0.00
	High Fe Grade Si 4 - 6.5%	13.00	4.00		High Fe Grade 0.09%<P<0.115%	0.25	0.00
	Low Fe Grade	16.00	1.00		High Fe Grade 0.115%<P<0.15%	5.50	0.25
0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	11.00	0.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	0.25	0.00
	High Fe Grade 0.115%<P<0.15%	11.00	0.00		High Fe Grade 0.115%<P<0.15%	5.50	0.25
0.01% Phosphorus	Low Fe Grade 0.09%<P<0.1%	5.00	0.00	0.01% Phosphorus	High Fe Grade 0.115%<P<0.15%	5.50	0.25
	Low Fe Grade 0.09%<P<0.1%	5.00	0.00		High Fe Grade 0.115%<P<0.15%	5.50	0.25

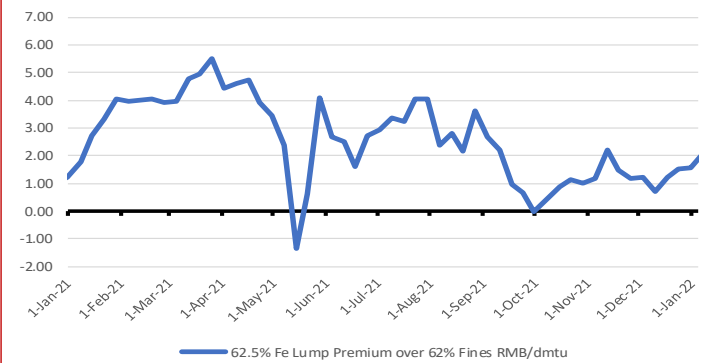
Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

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	-10.00	0.00	Jingtang	-10.00	0.00	Majishan	0.00	0.00	Taicang	-30.00	0.00
Dalian	0.00	0.00	Lanqiao	0.00	0.00	Qingdao	0.00	0.00	Tianjin	-15.00	0.00

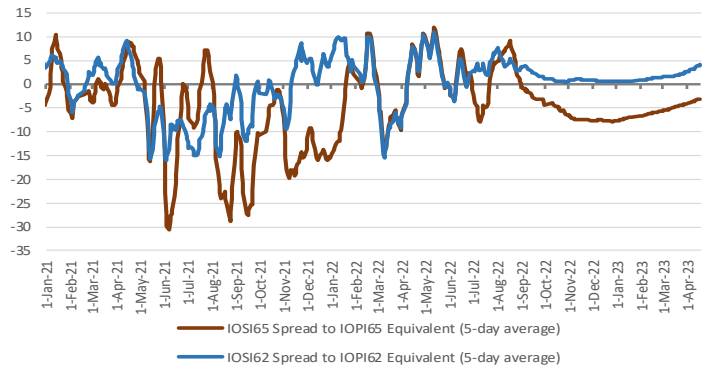
IRON ORE INDEX PREMIUMS/DISCOUNTS



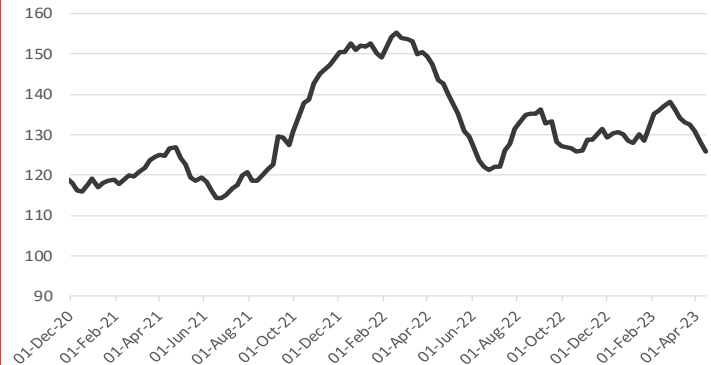
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



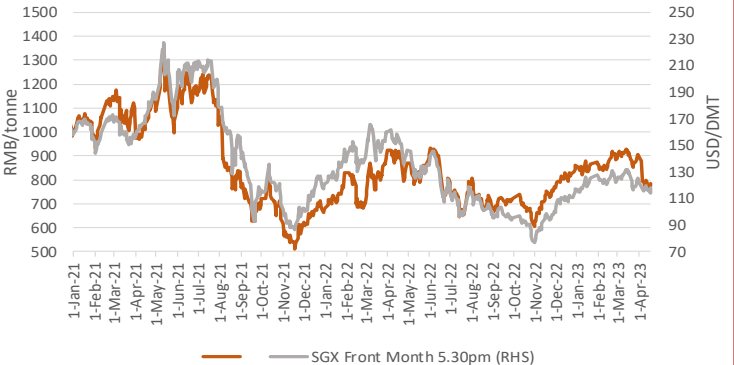
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



IRON ORE PORT INVENTORIES (MILLION TONNES)

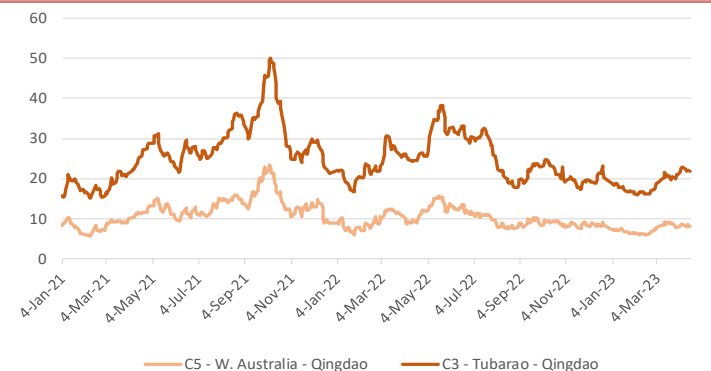
Week Ending Apr 14th, 2023

Province	This week	Change %	Low ²	High ²
Jingtang	12.59	0.48%	9.84	19.20
Qingdao	24.55	-0.41%	9.41	26.24
Caofeidian	12.41	2.73%	9.05	16.29
Tianjin	8.83	-4.33%	7.14	12.97
Rizhao	17.03	2.16%	9.44	19.26
Total (35 Ports)	125.77	-1.64%	98.80	155.39

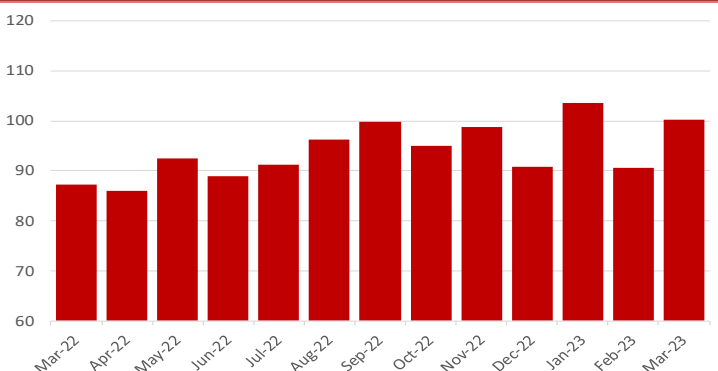
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	Apr 18th, 3pm close			Apr 18th, 5:30pm		
Contract	I2309	Change	Change %	May. 23	Change	Change %
Closing Price	784.00	8.50	1.10%	117.75	3.35	2.93%
Vol traded ('000 lots)	71.02	-3.86	-5.16%	5.48	0.38	7.36%
Open positions ('000 lots)	73.14	2.83	4.02%	26.27	-0.31	-1.16%
Day Low	779.0	19.00	2.50%	116.50	2.15	1.88%
Day High	794.5	16.00	2.06%	119.20	2.25	1.92%

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	2023/4/14	Change	Change %
ReBar HRB400 ϕ 18mm	4,060	-70	-1.69%
Wirerod Q300 ϕ 6.5mm	4,270	-70	-1.61%
HRC Q235/SS400 5.5mm*1500*C	4,200	-50	-1.18%
CRC SPCC/ST12 1.0mm*1250*2500	4,670	-50	-1.06%
Medium & Heavy Plate Q235B 20mm	4,380	-30	-0.68%
GI ST02Z 1.0mm*1000*C	5,000	-40	-0.79%
Colour Coated Plate	7,450	0	0.00%

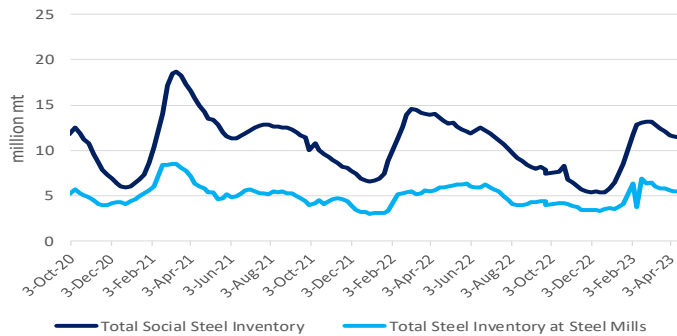
CHINESE STEEL MILL PROFITABILITY

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

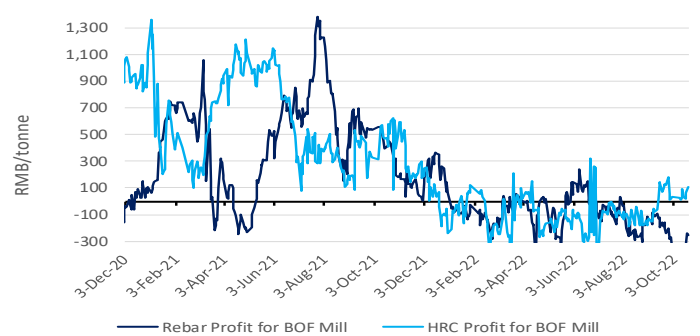
Category	Price	Change (WoW)	Note
MMi (Fe 62%), USD/mt excluding tax	146.75	2	Mmi CFR Equivalent index for 1st Feb
Coke	2,810	-50	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	3,070	-50	steel scrap (6mm) in Zhangjiagang, excl. tax
Billet Cost	3,537	-29	Q234, incl. tax
Rebar cost - Blast furnace	4,063	0	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	-51	-48	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	4,042	-33	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	168	3	based on Shanghai prices, incl. tax

Note: 1. Costs in the table are calculated based on today's market prices and factored our management, sales, financial and depreciations fees.
2. The cost refers to average cost in the industry based on SMM's survey of small, medium and large mills in China

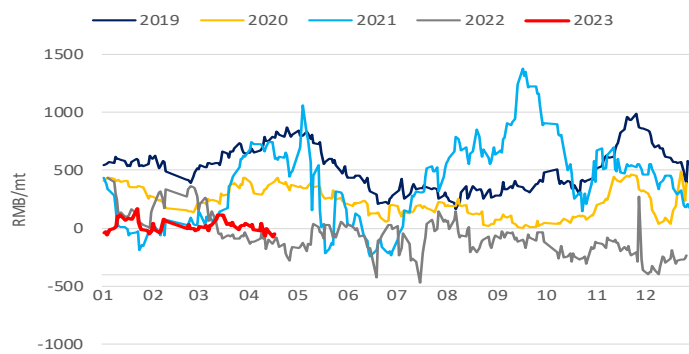
CHINESE STEEL INVENTORIES



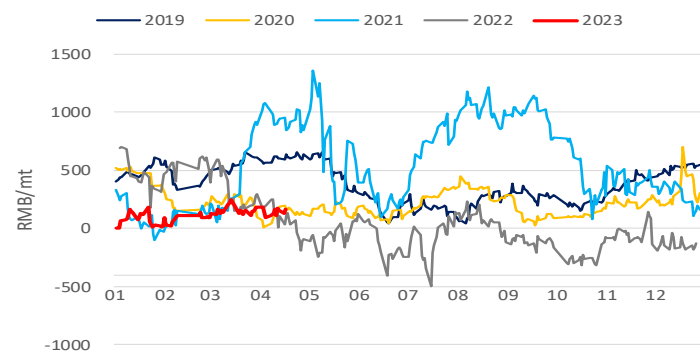
CHINESE STEEL MILL PROFITABILITY



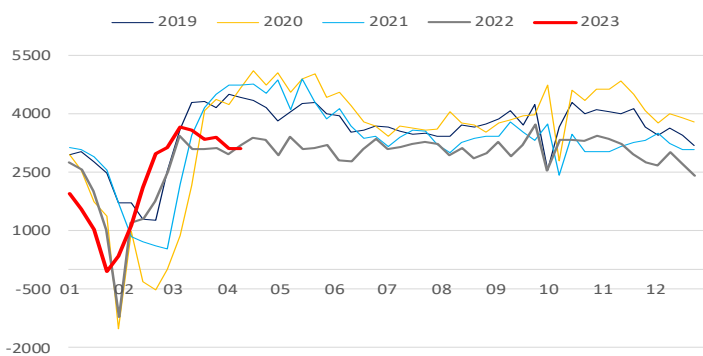
CHINESE STEEL MILL PROFITABILITY—Rebar



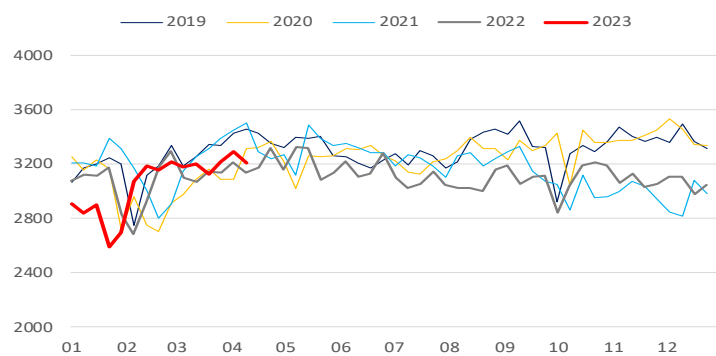
CHINESE STEEL MILL PROFITABILITY—Hot-rolled Coil



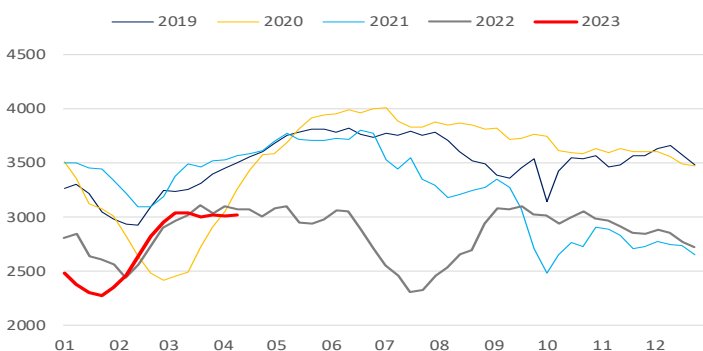
CHINESE STEEL CONSUMPTION—Rebar



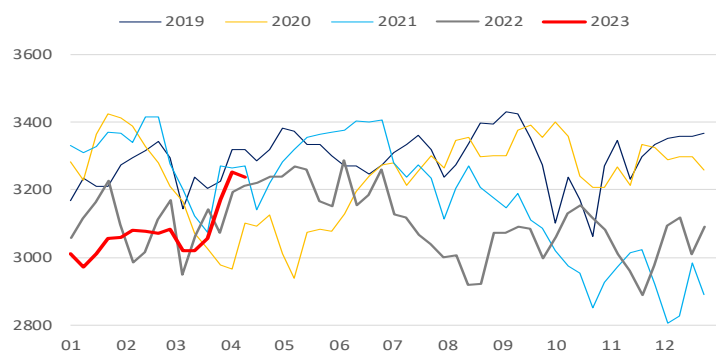
CHINESE STEEL CONSUMPTION—Hot-rolled Coil



CHINESE STEEL PRODUCTION—Rebar



CHINESE STEEL PRODUCTION—Hot-rolled Coil



IRON ORE INDEX SPECIFICATIONS, COMPILATION RATIONALE AND DATA EXCLUSIONS

Iron Ore Index Specifications (Port and Seaborne)					Iron Ore Index Compilation Rationale and Data Exclusions																				
Fe %	65% Fe Fines	62% Fe Fines	58% Fe Fines	62.5% Fe Lump	MMi iron ore indices are compiled from data provided by companies that are part of the iron ore supply chain and involved in spot market transactions. The indices are calculated using detailed transaction-level data submitted to MMi by these companies. This data is normalised to the appropriate specifications and screened to remove outliers before volume-weighted average prices are calculated from the remaining core set of data. For more details on MMi's iron ore methodology please download the guide published on our website at: www.mmiprices.com																				
Alumina %	65.00	62.00	58.00	62.50																					
Silica%	1.40	2.25	2.25	1.50																					
Phosphorus %	1.50	4.00	5.50	3.50																					
Sulphur %	0.06	0.09	0.05	0.08																					
Moisture %	0.01	0.02	0.02	0.02																					
	8.00	8.00	9.00	4.00																					
Sizing	Granular size below 10mm for at least 90% of cargo; maximum of 40% below 150 micron			Size below 6.3mm max 15% Size above 31.15mm max 25%																					
Pricing Point	Qingdao Port (FOT and CFR respectively)			FOT Qingdao Port																					
Timing (Seaborne)	Loading within 4 weeks, Delivery within 8 weeks			Delivery within 2 weeks																					
Payment Terms	L/C at sight			L/C at sight or CAD																					
					<table><tr><th colspan="4">Data Exclusions*</th></tr><tr><td></td><th>62%</th><th>58%</th><th>65%</th></tr><tr><td>Port Index</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Seaborne index</td><td>0</td><td></td><td>0</td></tr><tr><td>Lump Index 62.5</td><td>0</td><td></td><td></td></tr></table>	Data Exclusions*					62%	58%	65%	Port Index	0	0	0	Seaborne index	0		0	Lump Index 62.5	0		
Data Exclusions*																									
	62%	58%	65%																						
Port Index	0	0	0																						
Seaborne index	0		0																						
Lump Index 62.5	0																								
					* Number of price submissions for iron ore indices that were excluded from index calculations today as they were anomalous and could not be verified																				

IRON ORE DOMESTIC CONCENTRATE INDEX CALCULATION METHODOLOGY

The compilation method for price index generally refers to the compilation method of CPI price index and other price indices, breakdown the price data and calculate the average value according to a certain method, taking the vertical axis as the regional composite index (average of different grade index) and the horizontal axis as the grade composite index (average of different regional index), a total composite index for domestic ore can be output ultimately. The process system is also adopted in the calculation i.e. each sub-index can be obtained as well.

AVERAGE IRON ORE SPECIFICATIONS APPLIED FOR BRAND PRICE ASSESSMENTS

PORT STOCK BRANDS						SEABORNE BRANDS					
Apr 18th, 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%
Apr 18th, 2023	Specifications applied for 58% brand assessments										
	Fe	Alumina	Silica	Phos	Moisture						
SSF	56.49%	3.20%	6.19%	0.065%	9.18%						
FMG Blended Fines	58.20%	2.43%	5.54%	0.057%	8.29%						
Robe River	56.44%	3.16%	5.73%	0.042%	8.44%						
Western Fines	57.88%	2.87%	7.50%	0.062%	7.45%						
Atlas Fines	58.00%	1.85%	5.50%	0.090%	9.00%						
Yandi	56.87%	1.58%	6.41%	0.042%	9.53%						

BLOOMBERG TICKERS

PORT STOCK INDICES			SEABORNE INDICES		
	FOT Qingdao (RMB/wet tonne)	CFR Qingdao Equivalent (USD/dry tonne)		CFR Qingdao (USD/DMT)	
IOPI62	IRCNQ001	IRCNQ004	IOSI62	IRCN0034	
IOPI58	IRCNQ002	IRCNQ005	IOSI65	IRCN0035	
IOPI65	IRCNQ003	IRCNQ006			
IOPLI62	IRCN0036	IRCN0037			

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