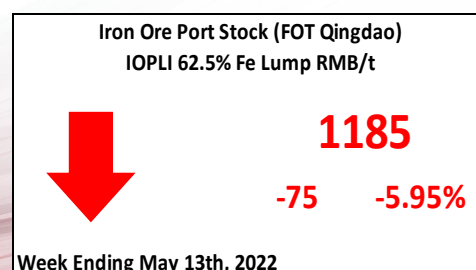
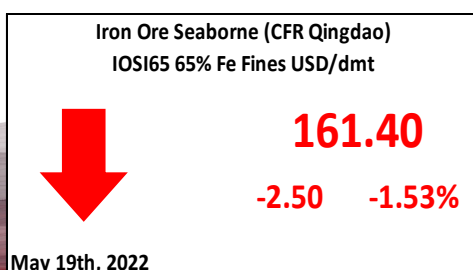
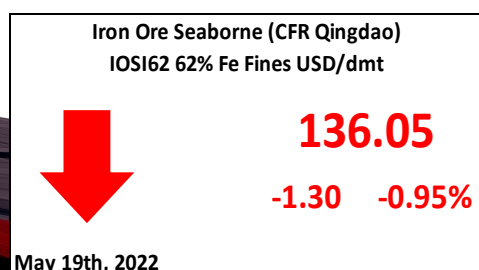
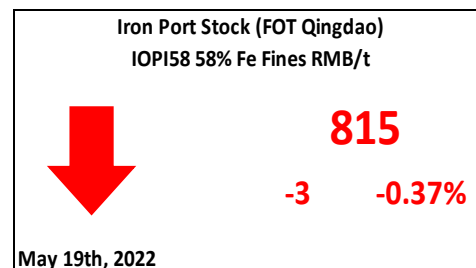
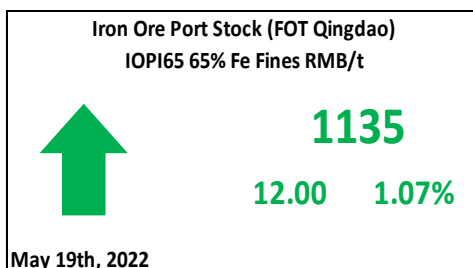
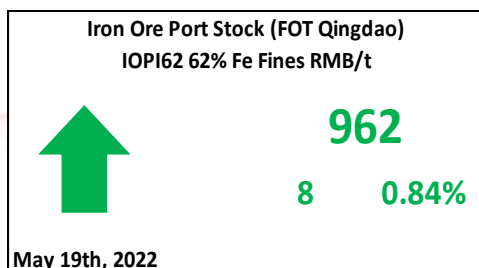


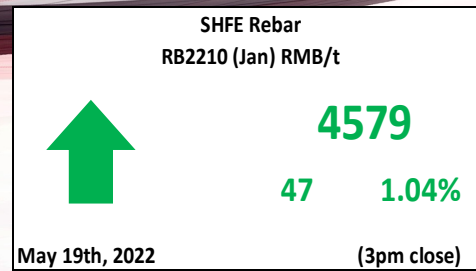
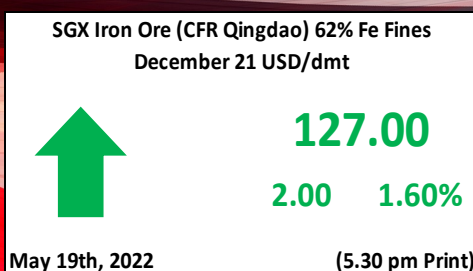
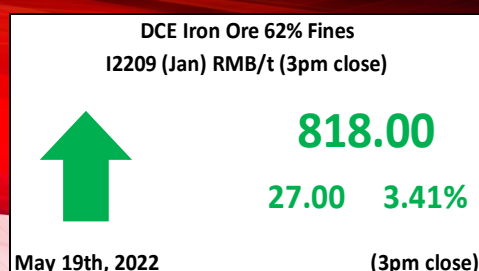


## MMi Dashboard

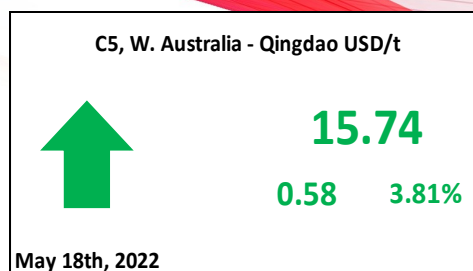
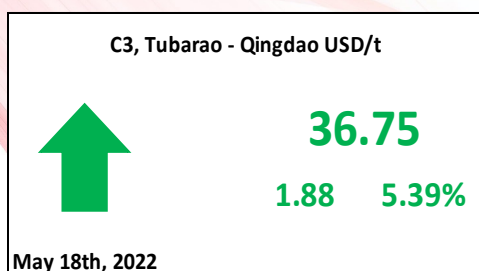
## Iron Ore Price Indices



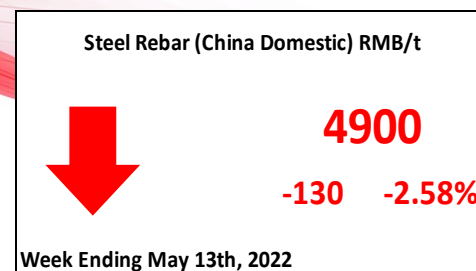
## Exchange Traded Contracts



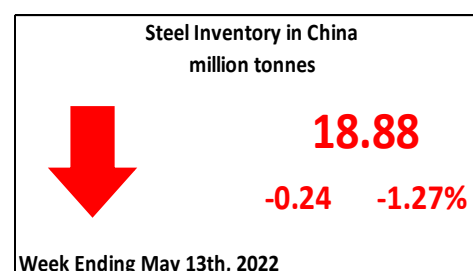
## Freight Rates



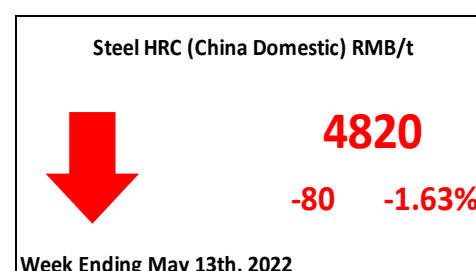
## Steel Price



## Inventory Levels



## Steel Price



## IRON ORE PORT STOCK INDEX (IOPI)

May 19th, 2022		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne <sup>1</sup>						
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low <sup>2</sup>	High <sup>2</sup>	Price	Change	Change %	MTD	YTD	Low <sup>2</sup>	High <sup>2</sup>
IOPI62	62% Fe Fines	962	8	0.8%	970	973	587	1616	133.05	0.94	0.7%	134.94	141.88	84.25	236.73
IOPI58	58% Fe Fines	815	-3	-0.4%	824	770	454	1403	113.34	-0.61	-0.5%	115.24	112.50	64.78	207.23
IOPI65	65% Fe Fines	1135	12	1.1%	1137	1161	843	1843	157.697	1.47	0.9%	158.82	170.08	122.83	270.24

## IRON ORE SEABORNE INDEX (IOSI)

## MARKET COMMENTARY

May 19th, 2022		CFR Qingdao, USD/dry tonne							DCE iron ore futures continued to fluctuate by 0.18% in a day, the main contract closed 818. The spot quotation in the morning almost kept steady, some traders were active to sell. Some steel mills tended to be wait-and-see, and purchasing enthusiasm is not high, today's overall market transaction atmosphere in general. PBF at Shandong port dealt 908-920 yuan/mt; increased 10 yuan/mt over yesterday. PBF at Tangshan port dealt 911 yuan/mt; increased 10 yuan/mt over yesterday. SF at Tangshan port dealt 708-710 yuan/mt; increased 10 yuan/mt over yesterday. Recently, the macroeconomic environment has improved slightly, boosting the disk. Due to the high landing cost of imported mines, traders are still willing to support prices. Combined with the port inventory, the stock removal range is large, supporting the ore price. Iron ore prices are easy to rise but difficult to fall, and continue to operate in shock in the short term.							
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low <sup>2</sup>	High <sup>2</sup>								
IOSI62	62% Fe Fines	136.05	-1.30	-0.95%	142.70	144.07	93.75	227.85								
IOSI65	65% Fe Fines	161.40	-2.50	-1.53%	167.63	170.14	108.20	262.95								

## IRON ORE PORT LUMP INDEX (IOPLI)

Week Ending May 13th, 2022		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne <sup>3</sup>						
Index	Fe Content	Price	W-o-W	Change %	MTD	YTD	Low <sup>2</sup>	High <sup>2</sup>	Price	W-o-W	Change %	MTD	YTD	Low <sup>2</sup>	High <sup>2</sup>
IOPLI62	62.5% Fe Lump	1185	-75	-6.0%	1185	1228	730	1868	158.47	-19.69	-11.05%	158.47	172.74	101.31	262.13

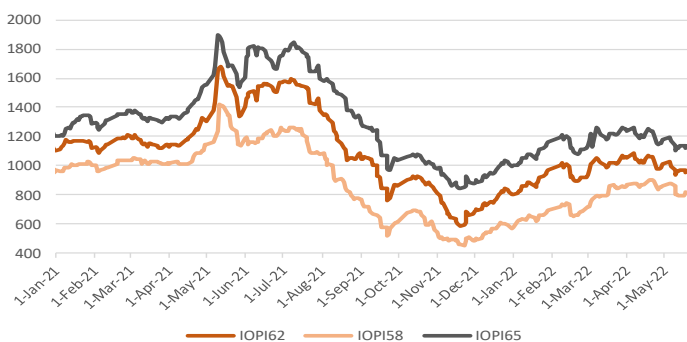
## IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

Week Ending May 13th, 2022				RMB/tonne (excluding tax) <sup>3</sup>				USD/tonne (excluding tax) <sup>3</sup>			
Province	Region	Product	Basis	This week	Change %	Low <sup>2</sup>	High <sup>2</sup>	This week	Change %	Low <sup>2</sup>	High <sup>2</sup>
Hebei	Hanxing	66% Fe Concentrate	Dry	1175	2.2%	779	1645	174.58	-0.44%	110.31	255.69
Hebei	Qian'an	65% Fe Concentrate	Dry	1005	-7.8%	780	1630	149.33	-10.16%	110.51	251.57
Liaoning	Anshan	65% Fe Concentrate	Wet	925	-4.1%	620	1310	137.44	-6.60%	87.40	202.32
Shandong	Zibo	65% Fe Concentrate	Dry	1155	0.0%	800	1752	171.61	-2.56%	122.55	272.32

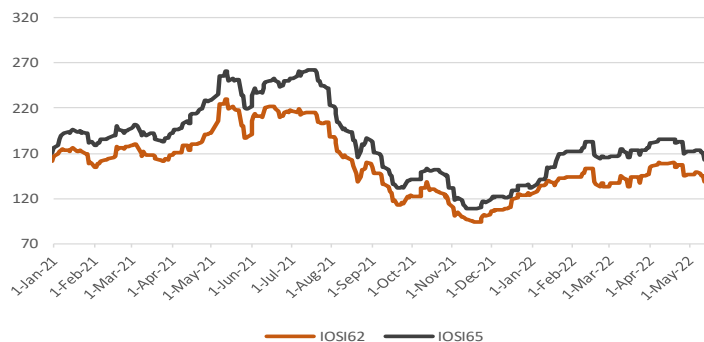
Week Ending May 13th, 2022				RMB/tonne (excluding tax) <sup>3</sup>				USD/tonne (excluding tax) <sup>3</sup>			
				This week	Change %	Low <sup>2</sup>	High <sup>2</sup>				
China Mines Concentrate Composite Index RMB/WT				1015.19	-3.68%	706.36	1511.22				

<sup>1</sup> Exchange rate applied: RMB/USD = 6.411864 <sup>2</sup> Last 12 months  
<sup>3</sup> Weekly exchange rate applied: RMB/USD 6.73026

## 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

May 19th, 2022		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne						
Index	Fe Content	January	February	March	April	MTD	QTD	YTD	January	February	March	April	MTD	QTD	YTD
IOPI62	62% Fe Fines	886	946	1020	1030	970	1008	973	129.82	139.07	150.42	150.00	134.94	144.48	141.88
IOPI58	58% Fe Fines	646	696	812	874	824	856	770	94.58	102.36	120.15	128.09	113.34	123.38	112.50
IOPI65	65% Fe Fines	1079	1139	1219	1206	1137	1181	1161	159.15	168.36	180.56	176.31	157.70	169.90	170.08

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

## FREIGHT RATES

May 19th, 2022		CFR Qingdao, USD/dry tonne							May 18th, 2022						
Index	Fe Content	January	February	March	April	MTD	QTD	YTD	FREIGHT RATES - DRY BULK US\$/wet tonne						
Index	Fe Content	January	February	March	April	MTD	QTD	YTD	Route	Designation	Change	Change %	Low <sup>2</sup>	High <sup>2</sup>	
IOSI62	62% Fe Fines	137.61	142.80	141.23	155.13	142.70	150.46	144.07	W. Australia - Qingdao	C5	15.74	0.58	3.81%	3.57	16.77
IOSI65	65% Fe Fines	155.72	172.28	171.21	181.23	167.63	176.13	170.14	Tubarao - Qingdao	C3	36.75	1.88	5.39%	6.70	36.40

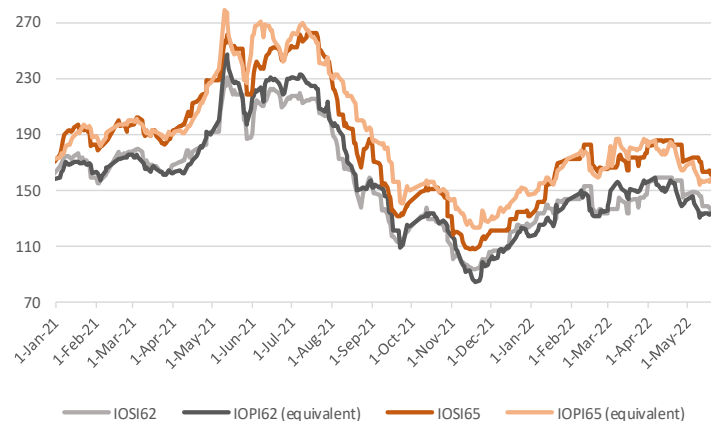
## IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending May 13th, 2022		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne <sup>1</sup>						
Index	Fe Content	January	February	March	April	MTD	QTD	YTD	January	February	March	April	MTD	QTD	YTD
IOPLI62	62.5% Fe Lump	1049	1145	1355	1328	1185	1304	1228	147.80	161.53	191.90	187.99	158.47	182.21	172.74

## IRON ORE INDEX PREMIUMS/DISCOUNTS

May 19th, 2022				PORT STOCK INDEX (RMB/WT)				May 19th, 2022				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	-147		-15.28%		IOSI65	65% Fe Fines	25.35		18.63%					
IOPI65	65% Fe Fines	173		17.98%											

## IRON ORE INDEX COMPARISONS (USD/DMT)



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



## IRON ORE BRAND SPOT PRICE ASSESSMENTS

May 19th, 2022				May 19th, 2022			
PORT STOCK INDEX (RMB/WT)				SEABORNE INDEX (USD/DMT)			
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	902	8	-60	Roy Hill	131.55	-1.30	-4.50
SIMEC Fines	836	8	-126	SIMEC Fines	128.05	-1.30	-8.00
PB Fines	929	8	-33	PB Fines	132.30	-1.30	-3.75
Newman Fines	948	8	-14	Newman Fines	135.20	-1.30	-0.85
MAC Fines	905	8	-57	MAC Fines	132.30	-1.30	-3.75
Jimblebar Blended Fines	825	8	-137	Jimblebar Blended Fines	124.70	-1.30	-11.35
Carajas Fines	1141	8	179	Carajas Fines	165.60	-1.30	29.55
Brazilian SSF	928	8	-34	Brazilian SSF	139.80	-1.30	3.75
Brazilian Blend Fines	940	8	-22	Brazilian Blend Fines	141.45	-1.30	5.40
RTX Fines	846	8	-116	RTX Fines	125.95	-1.30	-10.10
West Pilbara Fines	873	8	-89	West Pilbara Fines	130.30	-1.30	-5.75

May 19th, 2022			
PORT STOCK INDEX (RMB/WT)			
	Price	Change	Diff to IOPI58
SSF	815	-3	0
FMG Blended Fines	824	-3	9
Robe River	820	-3	5
Western Fines	829	-3	14
Atlas Fines	822	-3	7
Yandi	809	-3	-6

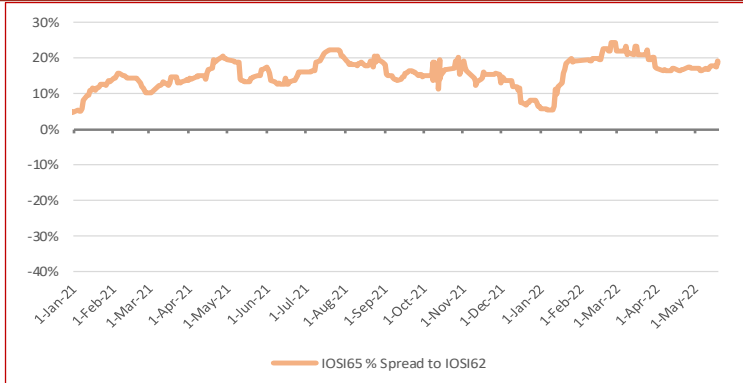
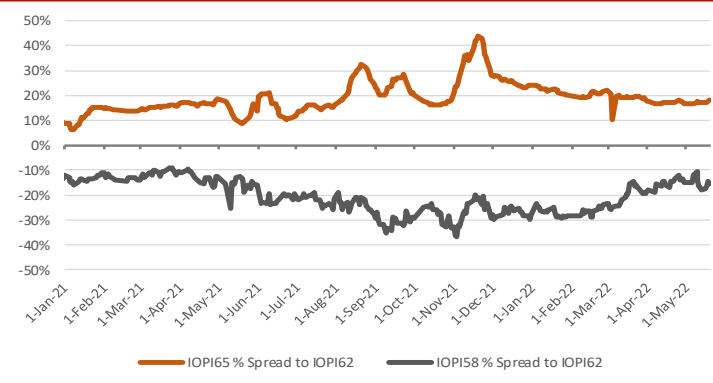
## IRON ORE INDEX NORMALISATION DIFFERENTIALS

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%	44.00	3.00	1% Fe	High Grade Fe 60 - 63%	6.80	0.10
	High Grade Fe 63 - 64%	56.00	0.00		High Grade Fe 63 - 64%	0.25	0.00
	High Grade Fe 64 - 65%	56.00	0.00		High Grade Fe 64 - 65%	0.25	0.00
	High Grade Fe 65 - 65.5%	56.00	0.00		High Grade Fe 65 - 65.5%	0.25	0.00
1% Alumina	Low Grade Fe	72.00	5.00	1% Alumina	High Fe Grade Al <2.25%	5.80	0.30
	High Fe Grade Al <2.25%	6.00	1.00		High Fe Grade Al 2.25-4%	6.75	-0.25
	High Fe Grade Al 2.25-4%	48.00	5.00				
	Low Fe Grade Al <2.25%	100.00	0.00				
1% Silica	Low Fe Grade Al 2.25-4%	18.00	0.00	1% Silica	High Fe Grade Si <4%	5.25	0.00
	High Fe Grade Si <4%	5.00	0.00		High Fe Grade Si 4 - 6.5%	8.00	0.00
	High Fe Grade Si 4-6.5%	40.00	5.00				
0.01% Phosphorus	Low Fe Grade	5.00	0.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	3.25	0.00
	High Fe Grade 0.09%<P<0.115%	9.00	0.00		High Fe Grade 0.115%<P<0.15%	3.50	0.00
	High Fe Grade 0.115%<P<0.15%	9.00	0.00		Low Fe Grade 0.09<P<0.1%	7.00	0.00

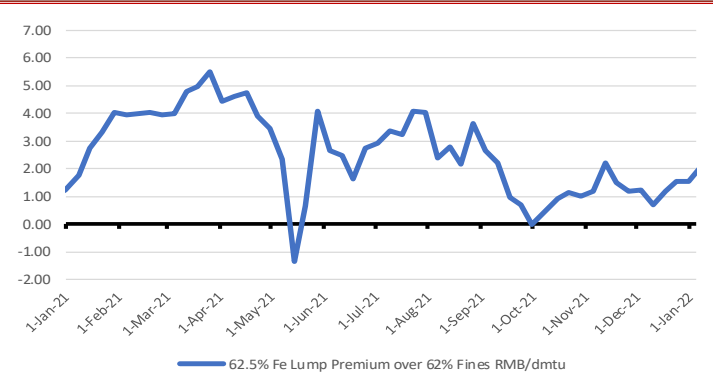
## Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

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	0.00	0.00	Jingtang	0.00	0.00	Majishan	0.00	0.00	Taicang	-40.00	0.00
Dalian	0.00	0.00	Lanqiao	0.00	0.00	Qingdao	0.00	0.00	Tianjin	-20.00	0.00

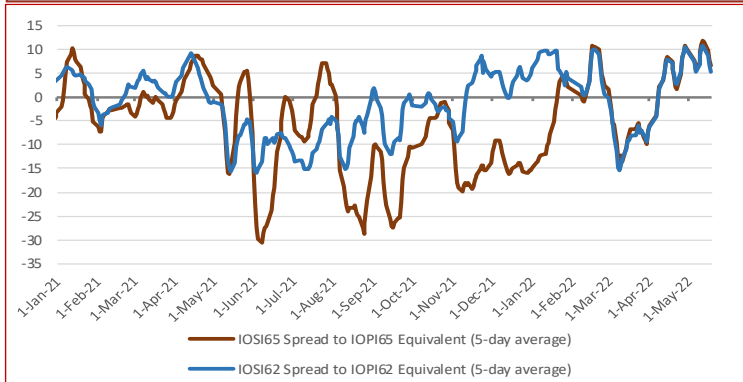
IRON ORE INDEX PREMIUMS/DISCOUNTS



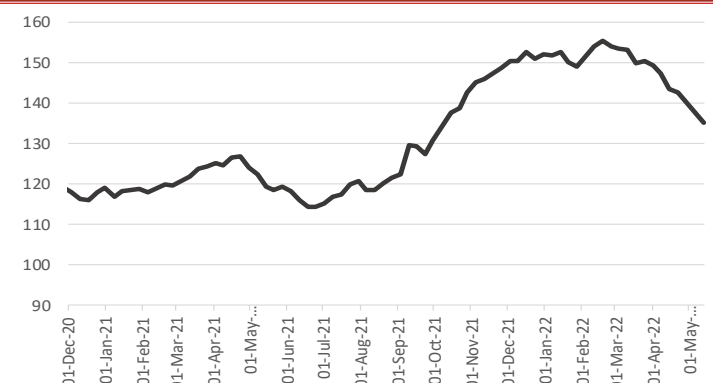
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



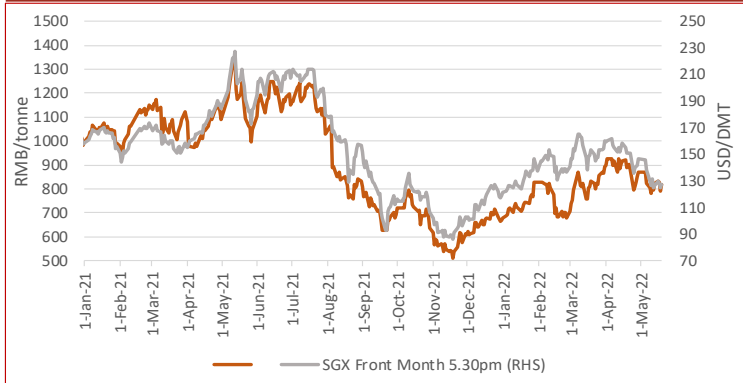
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



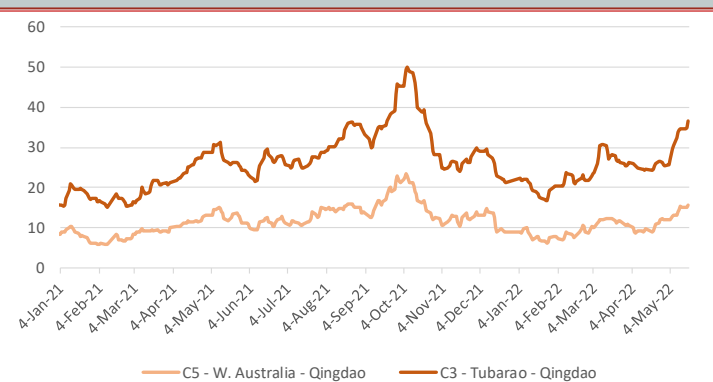
IRON ORE PORT INVENTORIES (MILLION TONNES)

Week Ending May 13th, 2022				
Province	This week	Change %	Low <sup>2</sup>	High <sup>2</sup>
Jingtang	13.92	-3.93%	12.26	19.20
Qingdao	22.28	-4.62%	9.41	26.24
Caofeidian	14.43	-11.42%	11.25	16.29
Tianjin	10.08	5.22%	7.14	12.97
Rizhao	16.01	-2.08%	9.44	19.26
<b>Total (35 Ports)</b>	<b>135.11</b>	<b>-3.55%</b>	<b>98.80</b>	<b>155.39</b>

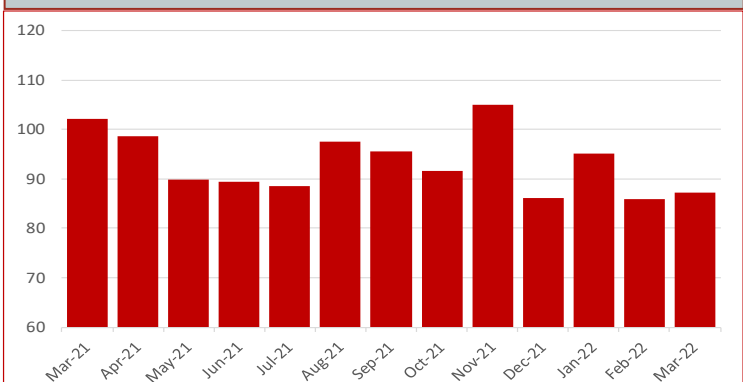
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	May 19th, 3pm close			May 19th, 5:30pm		
Contract	12209	Change	Change %	Nov. 21	Change	Change %
Closing Price	818.00	27.00	3.41%	127.00	2.00	1.60%
Vol traded ('000 lots)	64.86	8.91	15.93%	3.92	0.15	4.11%
Open positions ('000 lots)	67.40	0.99	1.50%	21.18	-0.71	-3.23%
Day Low	777.0	-13.00	-1.65%	119.80	-4.20	-3.39%
Day High	821.5	-18.50	-2.20%	127.05	-2.70	-2.08%

DRY BULK FREIGHT RATES (USD/MT)



TOTAL CHINA IRON ORE IMPORT VOLUMES (MILLION TONNES)



STEEL SPOT MARKET PRICES—CHINA

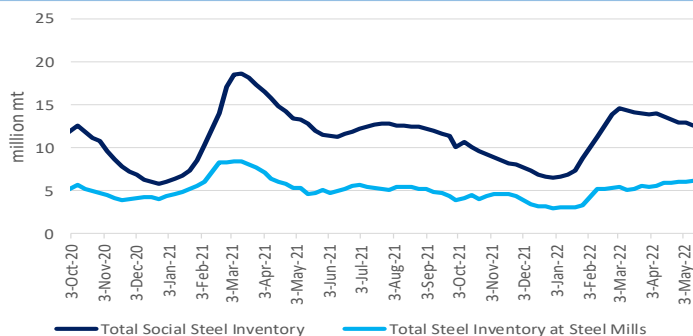
Product	2022/5/13	Change	Change %
ReBar HRB400 φ18mm	4,900	-130	-2.58%
Wirerod Q300 φ6.5mm	5,170	-60	-1.15%
HRC Q235/SS400 5.5mm*1500*C	4,820	-80	-1.63%
CRC SPCC/ST12 1.0mm*1250*2500	5,500	-130	-2.31%
Medium & Heavy Plate Q235B 20mm	5,120	-50	-0.97%
GI ST02Z 1.0mm*1000*C	6,040	-40	-0.66%
Colour Coated Plate	8,300	50	0.61%

CHINESE STEEL MILL PROFITABILITY

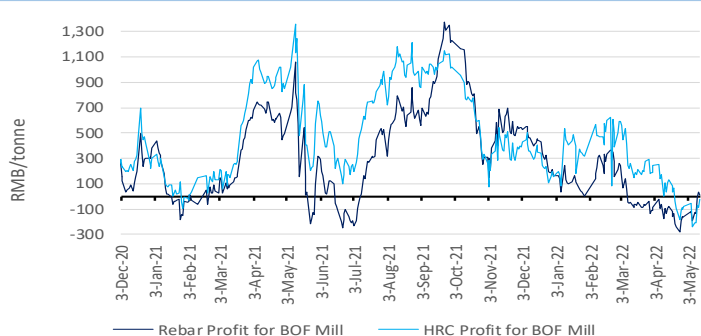
SMM Tracking of Steel Mill P&L - Rebar and Hot-rolled Coil (RMB/tonne)			
Category	Price	Change (WoW)	Note
MMi (Fe 62%), USD/mt excluding tax	138.55	-11	Mmi CFR Equivalent index for 1st Feb
Coke	3,820	-400	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	3,920	-100	steel scrap (6mm) in Zhangjiagang, excl. tax
Billet Cost	4,327	-260	Q234, incl. tax
Rebar cost - Blast furnace	4,923	-294	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	7	204	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	4,845	-287	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	-25	217	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

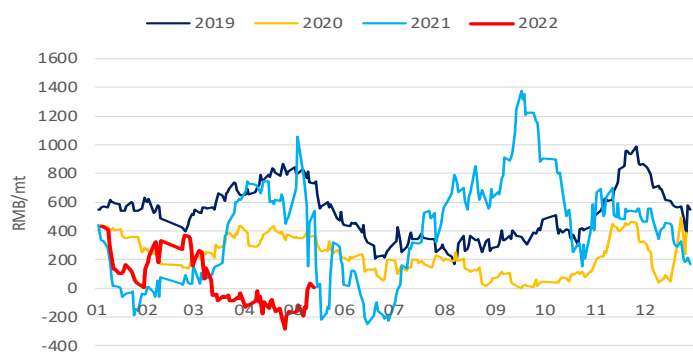
CHINESE STEEL INVENTORIES



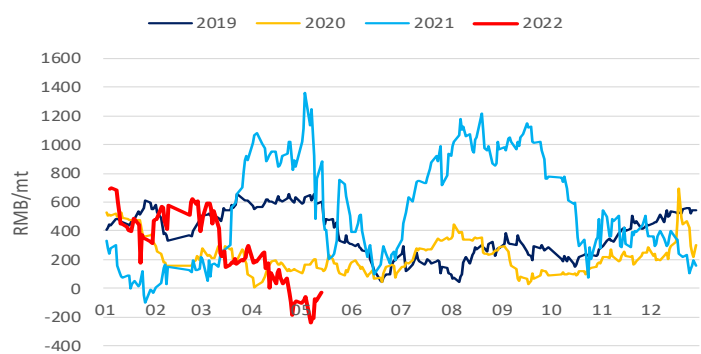
CHINESE STEEL MILL PROFITABILITY



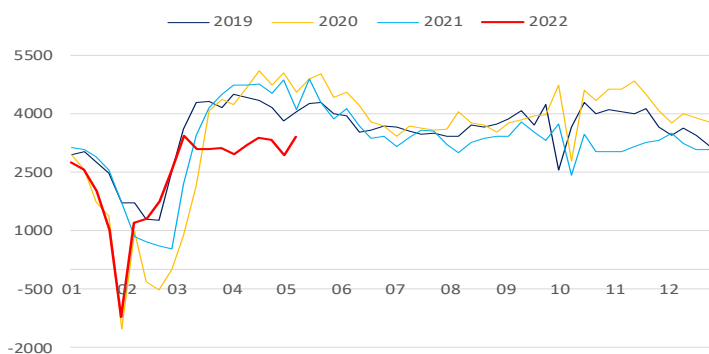
CHINESE STEEL MILL PROFITABILITY—Rebar



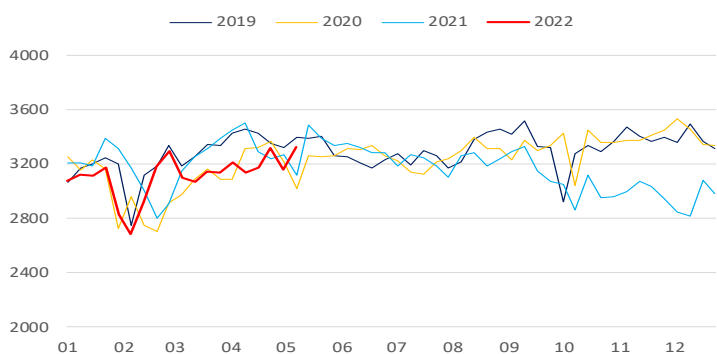
CHINESE STEEL MILL PROFITABILITY—Hot-rolled Coil



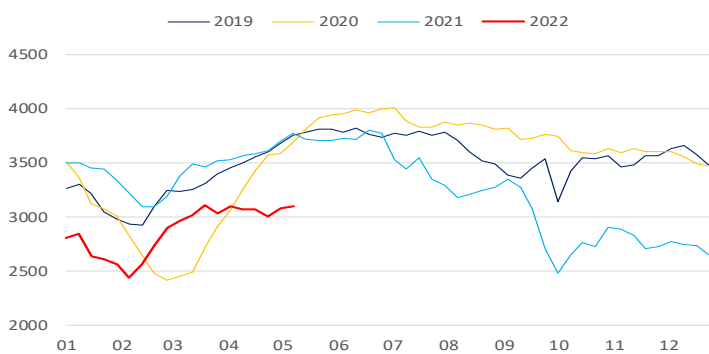
CHINESE STEEL CONSUMPTION—Rebar



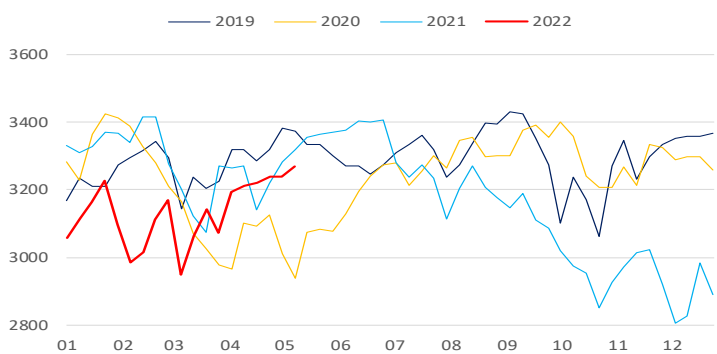
CHINESE STEEL CONSUMPTION—Hot-rolled Coil



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
	<b>65% Fe Fines</b>	<b>62% Fe Fines</b>	<b>58% Fe Fines</b>	<b>62.5% Fe Lump</b>	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: <a href="http://www.mmiprices.com">www.mmiprices.com</a>
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		
<b>Data Exclusions*</b>					
	<b>62%</b>	<b>58%</b>	<b>65%</b>		
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					
May 19th, 2022	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%
May 19th, 2022	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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