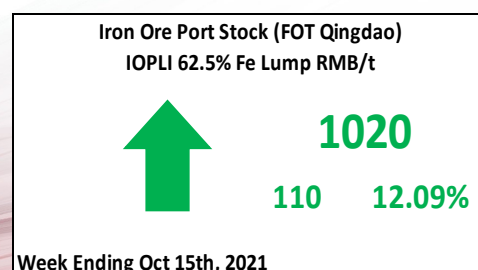
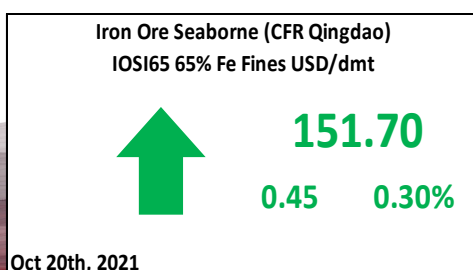
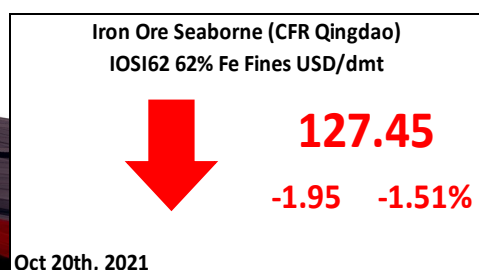
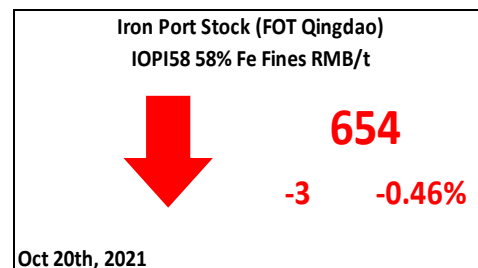
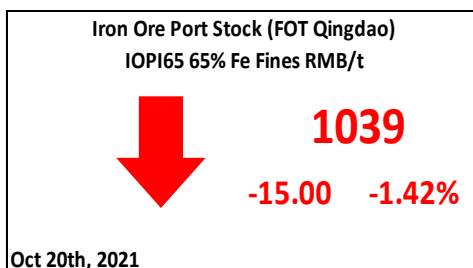
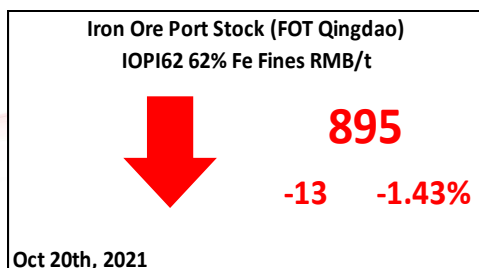


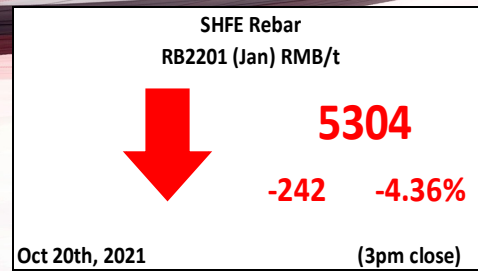
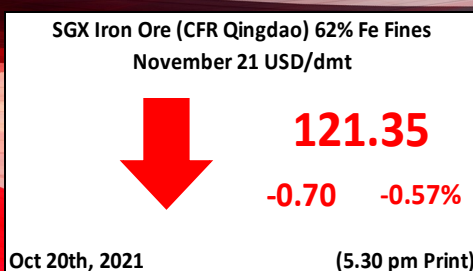
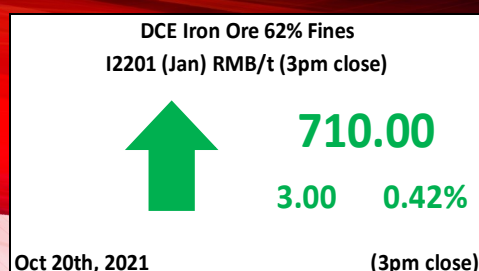


## MMi Dashboard

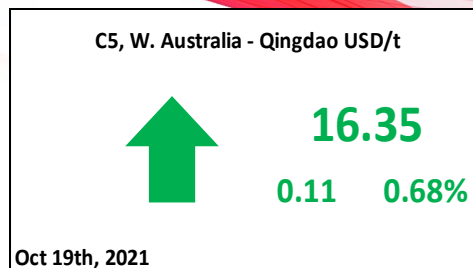
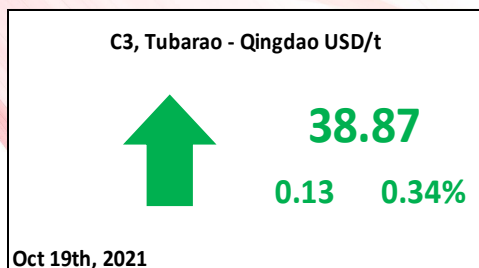
## Iron Ore Price Indices



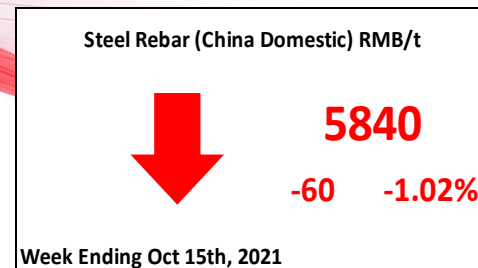
## Exchange Traded Contracts



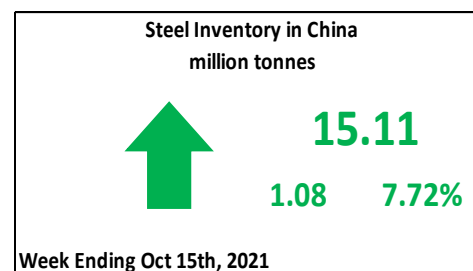
## Freight Rates



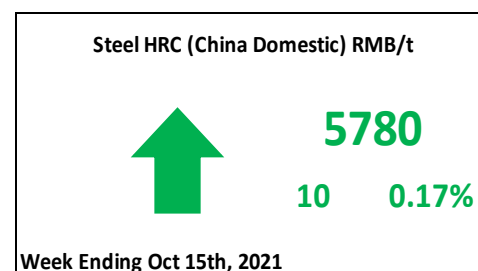
## Steel Price



## Inventory Levels



## Steel Price



## IRON ORE PORT STOCK INDEX (IOPI)

Oct 20th, 2021		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	895	-13	-1.4%	913	1245	762	1680	130.17	-1.46	-1.1%	132.18	181.03	109.14	247.30
IOPI58	58% Fe Fines	654	-3	-0.5%	682	1014	518	1421	95.02	-0.10	-0.1%	98.68	148.18	73.66	210.83
IOPI65	65% Fe Fines	1039	-15	-1.4%	1065	1449	952	1894	151.79	-1.68	-1.1%	154.83	211.27	133.20	278.61

## IRON ORE SEABORNE INDEX (IOSI)

## MARKET COMMENTARY

Oct 20th, 2021		CFR Qingdao, USD/dry tonne						
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low <sup>2</sup>	High <sup>2</sup>
IOSI62	62% Fe Fines	127.45	-1.95	-1.51%	127.86	175.07	112.75	230.50
IOSI65	65% Fe Fines	151.70	0.45	0.30%	147.34	202.28	131.15	262.95

DCE iron ore futures continued to fluctuate in a day, main contract closed 710. The spot quotation in the morning almost kept steady. Some steel mills tended to be wait-and-see, and procurement more cautious; and purchased quite cautiously. While some traders gave narrow bargain space, which resulted in the general deal atmosphere today. PBF at Shandong port dealt 865 yuan/mt, the same as yesterday; PBF at Tangshan port dealt 870-890 yuan/mt, the same as yesterday. According to SMM research, SMM's blast furnace operating rate was 78% on Oct. 20, down 1.3% month-on-month and up 1.4% month-on-month. In the second half of October, the production limit policy has been tightened compared with the first half, and the winter heating season production limit is coming. It is expected that the blast furnace operation rate will continue to decline next week. In addition, SMM tracks the import ore port inventory is still accumulating, iron ore prices are still weak volatility. In addition, according to some market participants, because coke prices began to fall, steel profit support strength increased, so as to produce short-term support for the mine price.

## IRON ORE PORT LUMP INDEX (IOPLI)

Week Ending Oct 15th, 2021		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	1020	110	12.1%	1020	1493	886	1868	141.85	16.19	12.89%	141.85	207.70	118.00	262.00

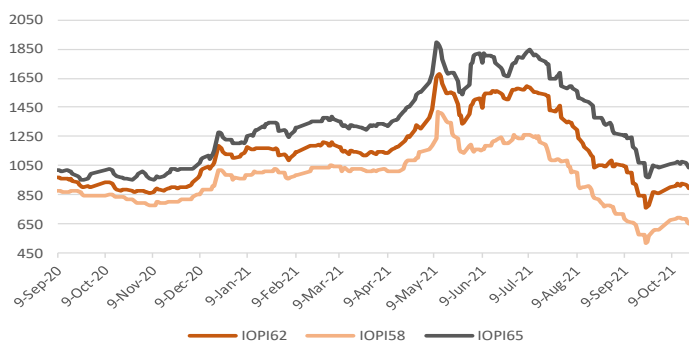
## IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

Week Ending Oct 15th, 2021				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	995	11.8%	779	1645	154.34	12.03%	110.31	255.69
Hebei	Qian'an	65% Fe Concentrate	Dry	1140	6.5%	780	1630	176.83	6.77%	110.51	251.57
Liaoning	Anshan	65% Fe Concentrate	Wet	850	-3.4%	620	1310	131.85	-3.21%	87.40	202.32
Shandong	Zibo	65% Fe Concentrate	Dry	1005	12.9%	865	1752	155.89	13.16%	122.55	272.32

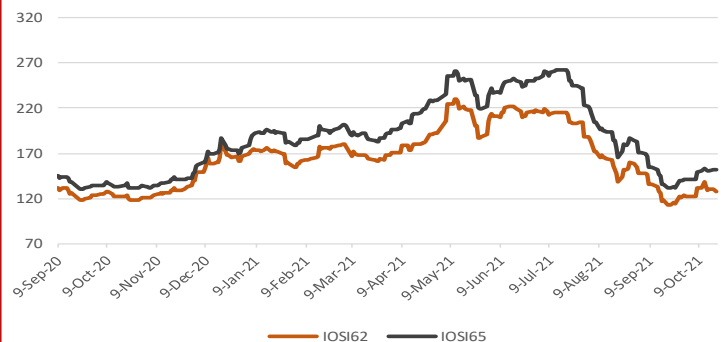
Week Ending Oct 15th, 2021	This week	Change %	Low <sup>2</sup>	High <sup>2</sup>
China Mines Concentrate Composite Index RMB/WT	969.66	0.14%	706.36	1511.22

<sup>1</sup> Exchange rate applied: RMB/USD = 6.4934 <sup>2</sup>Last 12 months  
<sup>3</sup> Weekly exchange rate applied: RMB/USD 6.5044

## 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, 2021		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	1524	1519	1174	937	913	913	1245	221.54	170.18	135.90	135.31	132.18	132.18	181.03
IOPI58	58% Fe Fines	1199	1186	894	648	682	682	1014	173.94	130.00	93.62	93.31	98.68	98.68	148.18
IOPI65	65% Fe Fines	1756	1750	1466	1152	1065	1065	1449	255.79	213.59	214.41	214.06	211.27	154.83	211.27

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

## FREIGHT RATES

Oct 20th, 2021		CFR Qingdao, USD/dry tonne							Oct 19th, 2021						
Index	Fe Content	June	July	August	September	MTD	QTD	YTD	FREIGHT RATES - DRY BULK US\$/wet tonne						
Index	Fe Content	June	July	August	September	MTD	QTD	YTD	Route	Designation	Change	Change %	Low <sup>2</sup>	High <sup>2</sup>	
IOSI62	62% Fe Fines	213.90	211.65	162.80	128.43	127.86	127.86	175.07	W. Australia - Qingdao	C5	16.35	0.11	0.68%	3.57	16.77
IOSI65	65% Fe Fines	244.31	254.36	192.73	148.09	147.34	147.34	202.28	Tubarao - Qingdao	C3	38.87	0.13	0.34%	6.70	36.40

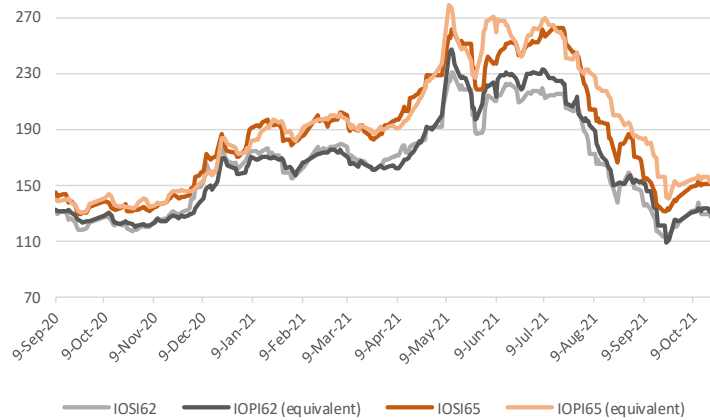
## IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending Oct 15th, 2021		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne <sup>1</sup>						
Index	Fe Content	June	July	August	September	MTD	QTD	YTD	June	July	August	September	MTD	QTD	YTD
IOPLI62	62.5% Fe Lump	1735	1816	1409	1065	1020	1020	1493	245.23	254.64	196.49	147.90	141.85	141.85	207.70

## IRON ORE INDEX PREMIUMS/DISCOUNTS

Oct 20th, 2021		PORT STOCK INDEX (RMB/WT)		Oct 20th, 2021		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	-241	-26.93%	IOSI65	65% Fe Fines	24.25	19.03%
IOPI65	65% Fe Fines	144	16.09%				

## IRON ORE INDEX COMPARISONS (USD/DMT)



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



## IRON ORE BRAND SPOT PRICE ASSESSMENTS

Oct 20th, 2021	PORT STOCK INDEX (RMB/WT)			Oct 20th, 2021	SEABORNE INDEX (USD/DMT)		
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	844	-10	-51	Roy Hill	122.95	-1.95	-4.50
SIMEC Fines	831	-9	-64	SIMEC Fines	119.45	-1.95	-8.00
PB Fines	864	-12	-31	PB Fines	126.20	-1.95	-1.25
Newman Fines	908	-14	13	Newman Fines	127.35	-1.95	-0.10
MAC Fines	845	-9	-50	MAC Fines	123.35	-1.95	-4.10
Jimblebar Blended Fines	795	-7	-100	Jimblebar Blended Fines	116.70	-1.95	-10.75
Carajas Fines	1030	-15	135	Carajas Fines	157.00	-1.95	29.55
Brazilian SSF	890	-14	-5	Brazilian SSF	131.20	-1.95	3.75
Brazilian Blend Fines	896	-14	1	Brazilian Blend Fines	132.85	-1.95	5.40
RTX Fines	789	-6	-106	RTX Fines	117.35	-1.95	-10.10
West Pilbara Fines	830	-9	-65	West Pilbara Fines	121.70	-1.95	-5.75

Oct 20th, 2021	PORT STOCK INDEX (RMB/WT)		
	Price	Change	Diff to IOPI58
SSF	653	-3	-1
FMG Blended Fines	659	-3	5
Robe River	658	-3	4
Western Fines	665	-3	11
Atlas Fines	654	-3	0
Yandi	650	-3	-4

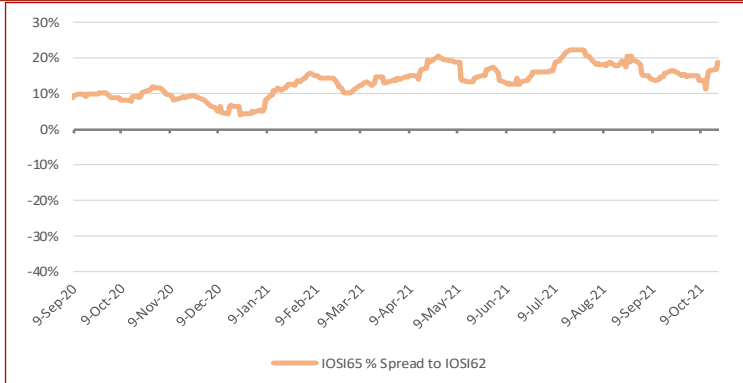
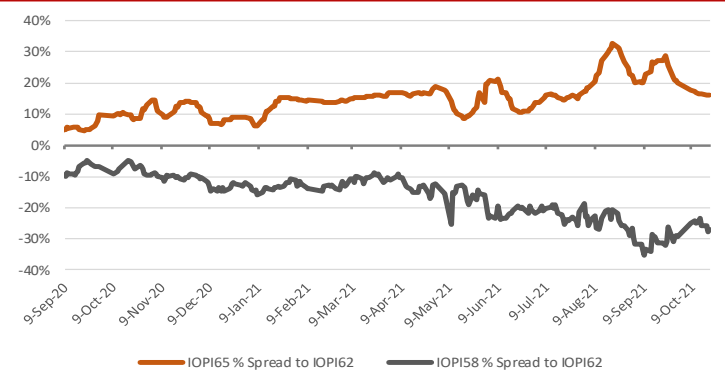
## IRON ORE INDEX NORMALISATION DIFFERENTIALS

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%	26.00	-2.00	1% Fe	High Grade Fe 60 - 63%	4.25	0.25
	High Grade Fe 63 - 64%	23.00	0.00		High Grade Fe 63 - 64%	3.50	0.00
	High Grade Fe 64 - 65%	23.00	0.00		High Grade Fe 64 - 65%	3.50	0.00
	High Grade Fe 65 - 65.5%	23.00	0.00		High Grade Fe 65 - 65.5%	3.50	0.00
1% Alumina	Low Grade Fe	26.00	0.00	1% Alumina	High Fe Grade Al <2.25%	2.25	0.25
	High Fe Grade Al <2.25%	5.00	0.00		High Fe Grade Al 2.25-4%	1.50	0.00
	High Fe Grade Al 2.25-4%	45.00	-5.00				
	Low Fe Grade Al <2.25%	40.00	-5.00				
1% Silica	Low Fe Grade Al 2.25-4%	50.00	-6.00	1% Silica	High Fe Grade Si <4%	4.00	0.00
	High Fe Grade Si <4%	27.00	0.00		High Fe Grade Si 4 - 6.5%	8.25	0.00
0.01% Phosphorus	High Fe Grade Si <4%	27.00	0.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	0.25	0.00
	High Fe Grade Si 4 - 6.5%	12.00	0.00		High Fe Grade 0.115%<P<0.15%	0.25	0.00
	Low Fe Grade	42.00	0.00		Low Fe Grade 0.09%<P<0.1%	5.00	0.00

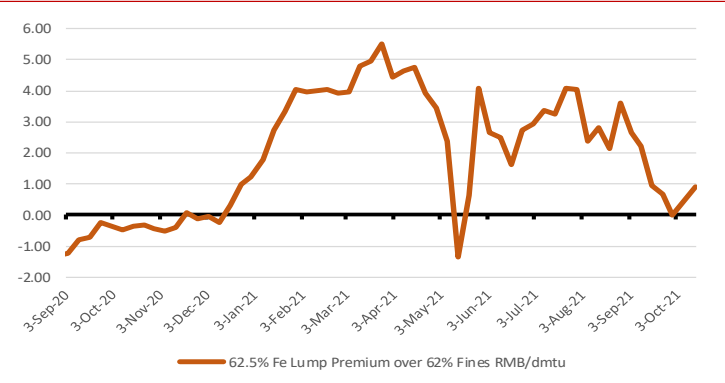
## Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

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	-95.00	0.00	Lianyungang	0.00	0.00	Shekou	0.00	0.00
Caofeidian	-20.00	0.00	Jingtang	-20.00	0.00	Majishan	0.00	0.00	Taicang	-95.00	0.00
Dalian	0.00	0.00	Lanqiao	0.00	0.00	Qingdao	0.00	0.00	Tianjin	-40.00	0.00

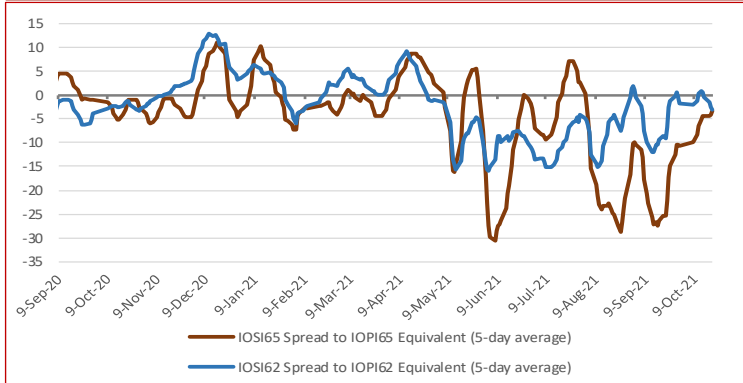
IRON ORE INDEX PREMIUMS/DISCOUNTS



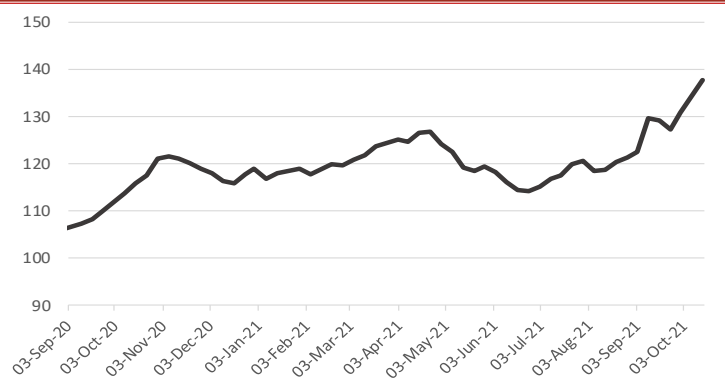
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



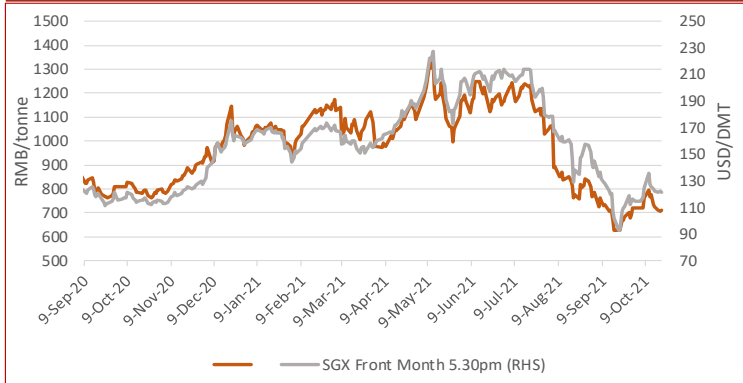
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



IRON ORE PORT INVENTORIES (MILLION TONNES)

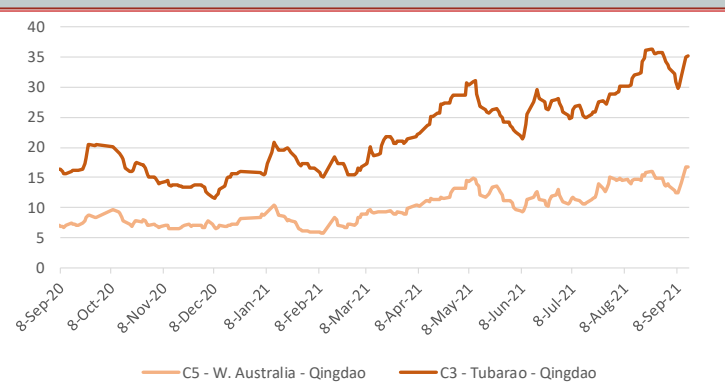
Week Ending Oct 15th, 2021

Province	This week	Change %	Low <sup>2</sup>	High <sup>2</sup>
Jingtang	17.09	1.73%	12.26	19.20
Qingdao	22.77	5.03%	9.41	22.77
Caofeidian	13.41	10.64%	11.25	16.25
Tianjin	10.41	3.27%	7.14	11.28
Rizhao	14.01	6.06%	9.44	14.22
<b>Total (35 Ports)</b>	<b>137.82</b>	<b>5.38%</b>	<b>98.80</b>	<b>137.82</b>

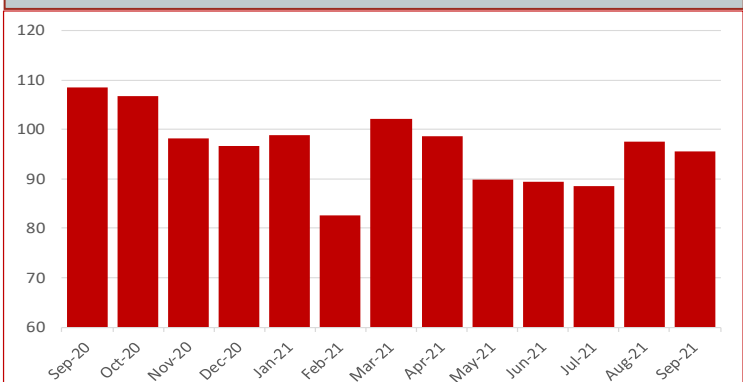
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	Oct 20th, 3pm close			Oct 20th, 5:30pm		
Contract	I2201	Change	Change %	Nov. 21	Change	Change %
Closing Price	710.00	3.00	0.42%	121.35	-0.70	-0.57%
Vol traded ('000 lots)	68.89	8.52	14.12%	1.61	-0.27	-14.24%
Open positions ('000 lots)	48.03	0.91	1.93%	17.81	-0.12	-0.69%
Day Low	698.0	4.50	0.65%	120.35	0.20	0.17%
Day High	733.5	15.50	2.16%	125.30	2.10	1.70%

DRY BULK FREIGHT RATES (USD/MT)



TOTAL CHINA IRON ORE IMPORT VOLUMES (MILLION TONNES)



STEEL SPOT MARKET PRICES—CHINA

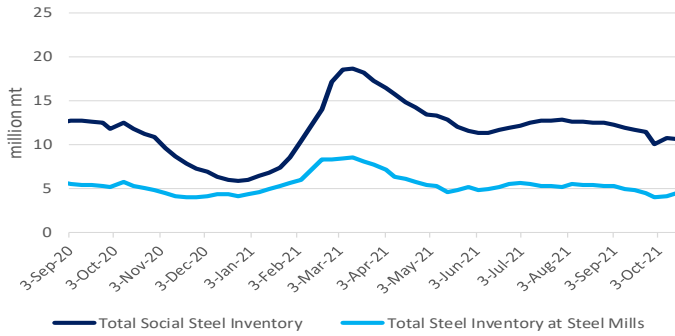
Steel Spot Market RMB/tonne			
Product	2021/10/15	Change	Change %
ReBar HRB400 φ18mm	5,840	-60	-1.02%
Wirerod Q300 φ6.5mm	6,190	-60	-0.96%
HRC Q235/SS400 5.5mm*1500*C	5,780	10	0.17%
CRC SPCC/ST12 1.0mm*1250*2500	6,500	0	0.00%
Medium & Heavy Plate Q235B 20mm	5,790	80	1.40%
GI ST02Z 1.0mm*1000*C	6,740	0	0.00%
Colour Coated Plate	8,900	0	0.00%

CHINESE STEEL MILL PROFITABILITY

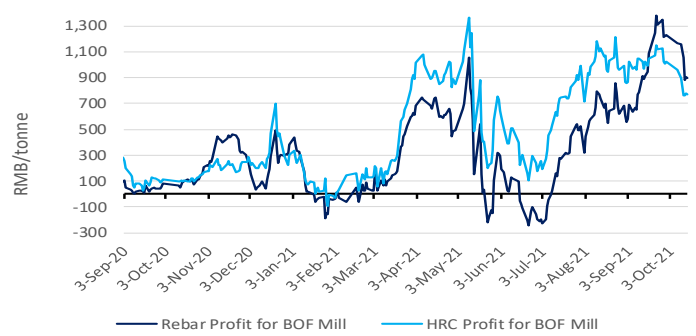
SMM Tracking of Steel Mill P&L - Rebar and Hot-rolled Coil (RMB/tonne)			
Category	Price	Change (WoW)	Note
MMi (Fe 62%), USD/mt excluding tax	123.70	2	Mmi CFR Equivalent index for 1st Feb
Coke	4,210	0	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	3,700	80	steel scrap (6mm) in Zhangjiagang, ext. tax
Billet Cost	4,708	252	Q234, incl. tax
Rebar cost - Blast furnace	5,016	259	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	906	-321	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	4,988	252	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	782	-241	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

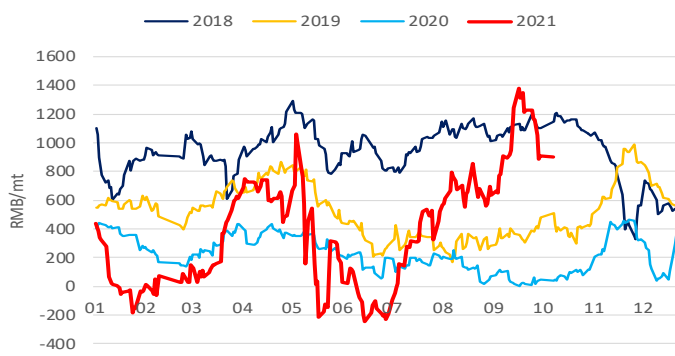
CHINESE STEEL INVENTORIES



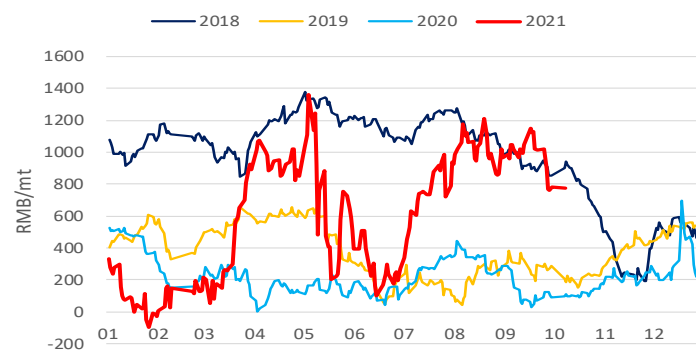
CHINESE STEEL MILL PROFITABILITY



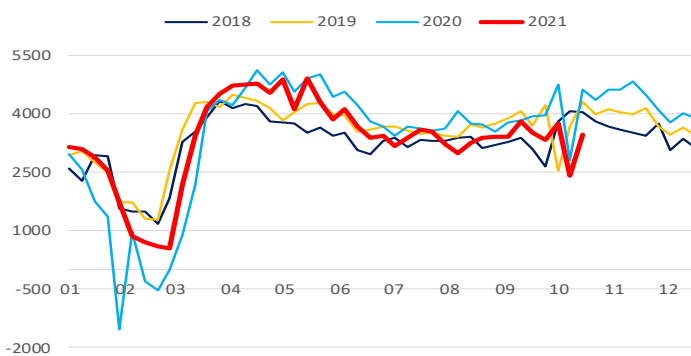
CHINESE STEEL MILL PROFITABILITY—Rebar



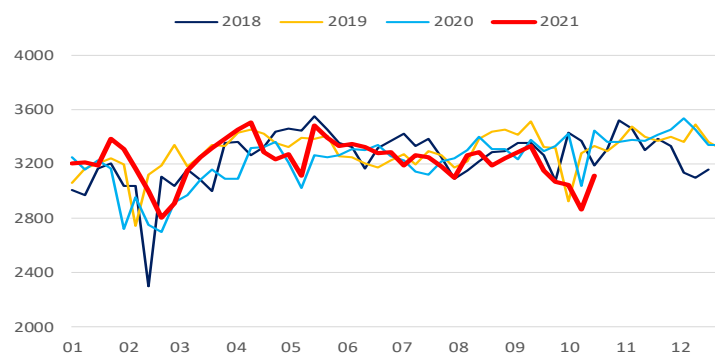
CHINESE STEEL MILL PROFITABILITY—Hot-rolled Coil



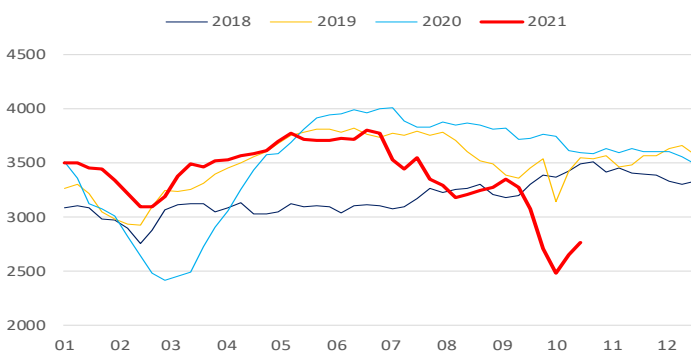
CHINESE STEEL CONSUMPTION—Rebar



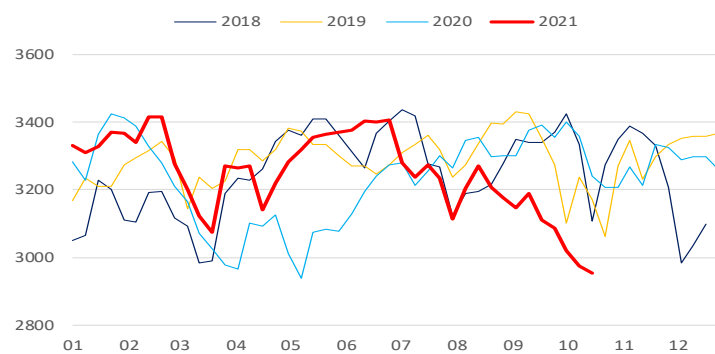
CHINESE STEEL CONSUMPTION—Hot-rolled Coil



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: <a href="http://www.mmiprices.com">www.mmiprices.com</a>
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, 2021	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%	4.40%	0.090%	8.00%
MAC Fines	60.43%	2.38%	4.64%	0.078%	7.57%	MAC Fines	60.80%	2.35%	4.70%	0.080%	7.80%
Jimblebar Blended Fines	60.87%	2.95%	4.53%	0.111%	7.32%	Jimblebar Blended Fines	60.50%	3.00%	4.50%	0.120%	8.00%
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, 2021	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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