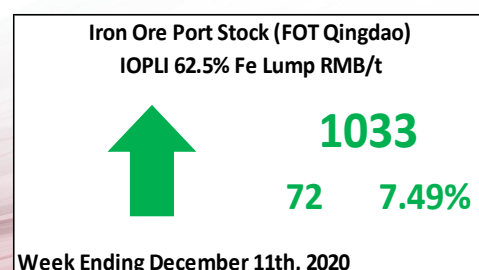
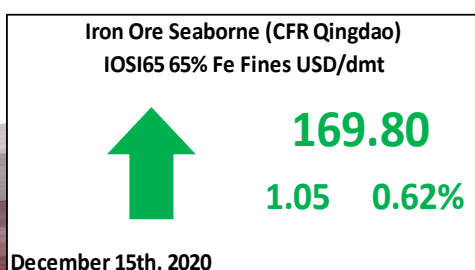
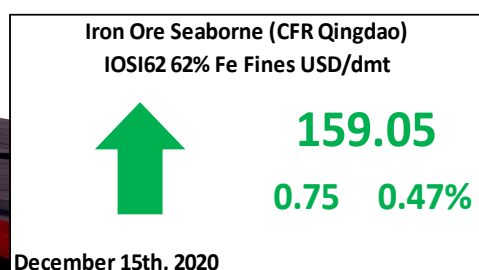
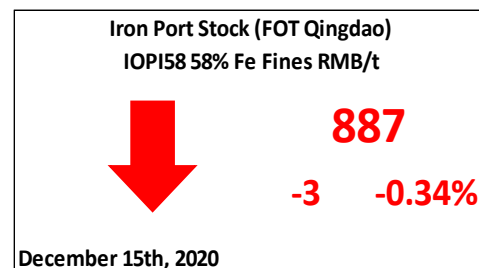
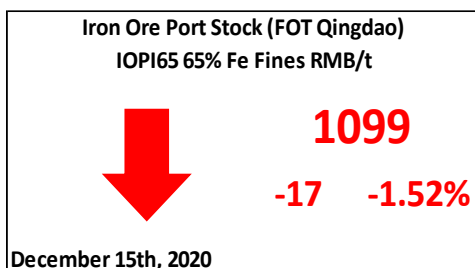
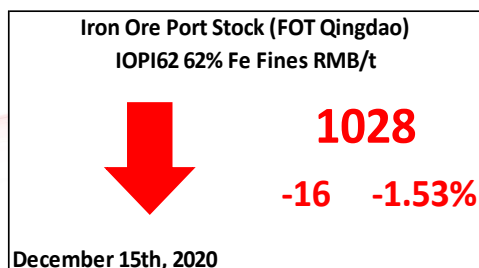


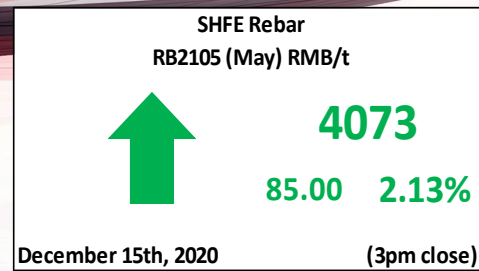
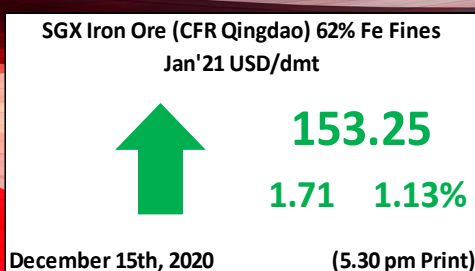
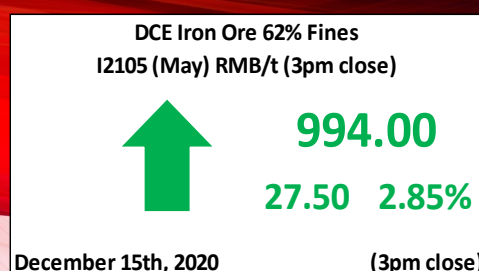


# MMi Dashboard

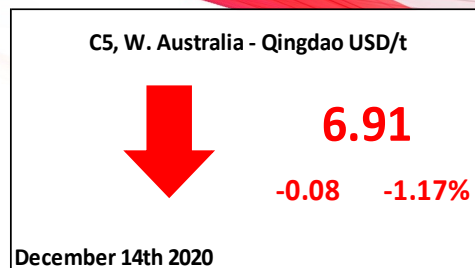
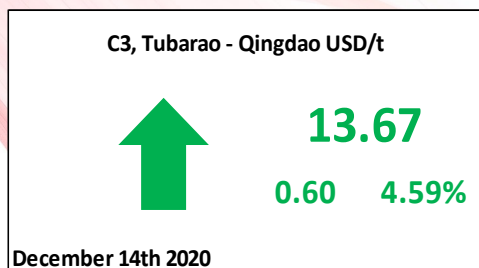
## Iron Ore Price Indices



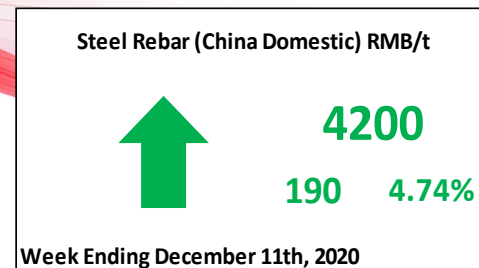
## Exchange Traded Contracts



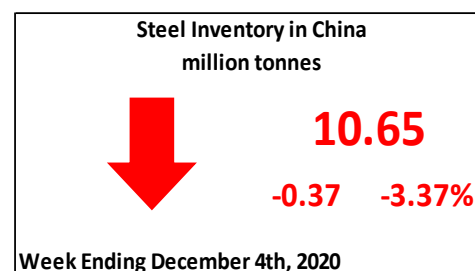
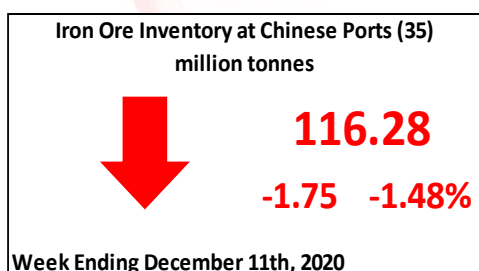
## Freight Rates



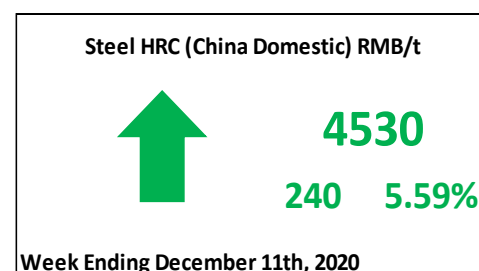
## Steel Price



## Inventory Levels



## Steel Price



## IRON ORE PORT STOCK INDEX (IOPI)

December 15th, 2020		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	1028	-16	-1.5%	975	805	619	1044	147.00	-2.52	-1.7%	139.11	108.41	81.37	149.52
IOPI58	58% Fe Fines	887	-3	-0.3%	855	716	531	892	127.66	-0.59	-0.5%	122.76	97.08	70.02	128.25
IOPI65	65% Fe Fines	1099	-17	-1.5%	1064	911	759	1116	157.44	-2.68	-1.7%	152.22	123.03	99.04	160.12

## IRON ORE SEABORNE INDEX (IOSI)

December 15th, 2020		CFR Qingdao, USD/dry tonne							MARKET COMMENTARY			
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low <sup>2</sup>	High <sup>2</sup>	A total of 89 vessels carrying 14.65 million mt of iron ore arrived at major Chinese ports during December 6-12, SMM estimates. This was up 1.5 million mt from the previous week but down 1.61 million mt from the same period last year. For the same week, iron ore deliveries leaving Australian ports declined 1.22 million mt on a weekly basis to 14.46 million mt, barely changed on the year. Shipments from Port Hedland shrank compared with the prior week due to impact of hurricane. Shipments that departed Brazilian ports were estimated to increase 800,000 mt week on week to 7.29 million mt. This was 1.14 million mt higher than the same period last year. PBF concluded at 1010-1020yuan/mt in Shandong and Tangshan dropping around 10-15yuan/mt over yesterday.			
IOSI62	62% Fe Fines	159.05	0.75	0.47%	150.40	107.45	80.65	165.00				
IOSI65	65% Fe Fines	169.80	1.05	0.62%	158.97	120.94	97.05	172.35				

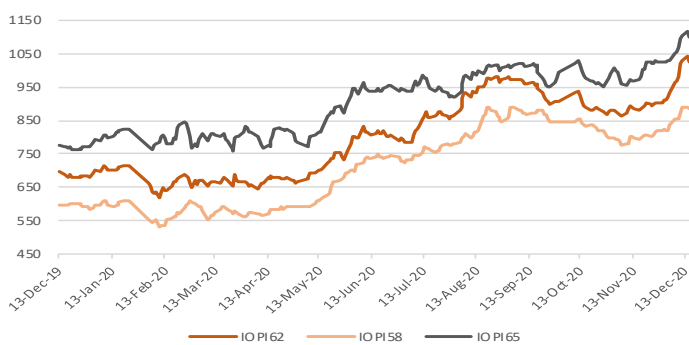
## IRON ORE PORT LUMP INDEX (IOPLI)

Week Ending December 11th, 2020		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	1033	72	7.5%	997	888	804	1033	141.71	10.77	8.23%	136.33	114.38	101.03	141.71

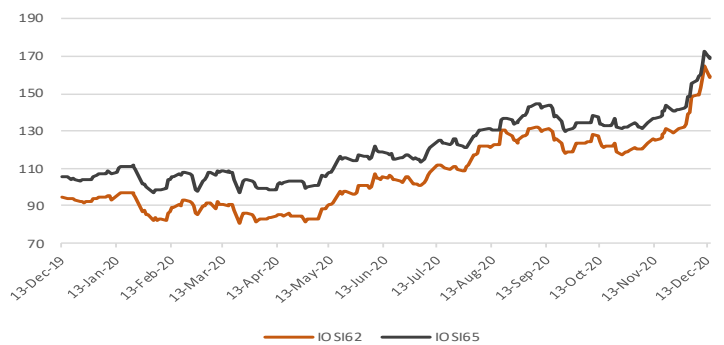
## IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

Week Ending December 11th, 2020				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	1094	5.2%	763	1094	167.34	5.69%	109.28	167.34
Hebei	Qian'an	65% Fe Concentrate	Dry	1059	2.6%	780	1059	161.99	3.10%	110.51	161.99
Liaoning	Anshan	65% Fe Concentrate	Wet	830	1.8%	620	830	126.96	2.32%	87.40	126.96
Shandong	Zibo	65% Fe Concentrate	Dry	1130	3.7%	810	1130	172.85	4.16%	115.13	172.85
Week Ending December 11th, 2020				This week	Change %	Low <sup>2</sup>	High <sup>2</sup>	<sup>1</sup> Exchange rate applied: RMB/USD = 6.5434 <sup>2</sup> Last 12 months <sup>3</sup> Weekly exchange rate applied: RMB/USD 6.5683			
China Mines Concentrate Composite Index RMB/WT				923.51	0.00%	702.47	947.97				

## 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

December 15th, 2020		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne						
Index	Fe Content	August	September	October	November	MTD	QTD	YTD	August	September	October	November	MTD	QTD	YTD
IOPI62	62% Fe Fines	948	946	892	888	975	909	805	127.65	129.64	123.88	125.18	139.11	125.01	108.41
IOPI58	58% Fe Fines	838	870	828	799	855	821	716	113.63	120.14	115.94	113.43	122.76	113.57	97.08
IOPI65	65% Fe Fines	992	998	982	996	1064	1007	911	133.70	136.85	136.68	140.93	152.22	136.34	123.03

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

December 15th, 2020		CFR Qingdao, USD/dry tonne							FREIGHT RATES - DRY BULK US\$/wet tonne						
Index	Fe Content	August	September	October	November	MTD	QTD	YTD	Route	Designation	Change	Change %	Low <sup>2</sup>	High <sup>2</sup>	
IOSI62	62% Fe Fines	124.02	126.26	122.16	126.25	150.40	129.50	107.45	W. Australia - Qingdao	C5	6.91	-0.08	-1.17%	3.57	10.80
IOSI65	65% Fe Fines	132.95	138.39	133.94	137.65	158.97	140.48	120.94	Tubarao - Qingdao	C3	13.67	0.60	4.59%	6.70	22.78

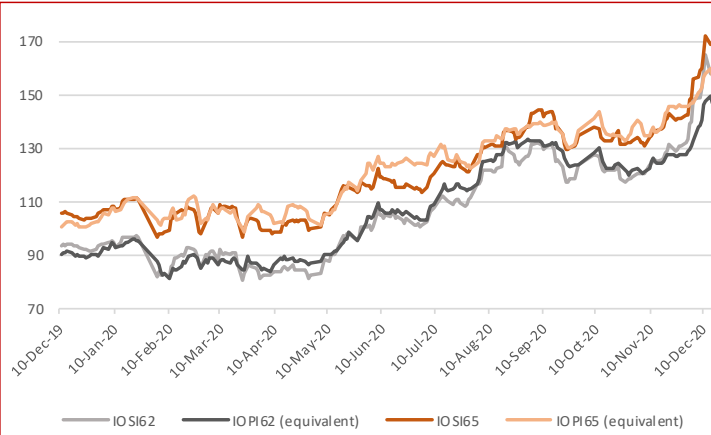
## IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending December 11th, 2020		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne <sup>1</sup>						
Index	Fe Content	August	September	October	November	MTD	QTD	YTD	August	September	October	November	MTD	QTD	YTD
IOPLI62	62.5% Fe Lump	932	959	919	919	997	934	888	120.08	125.87	121.91	124.21	136.33	121.65	114.38

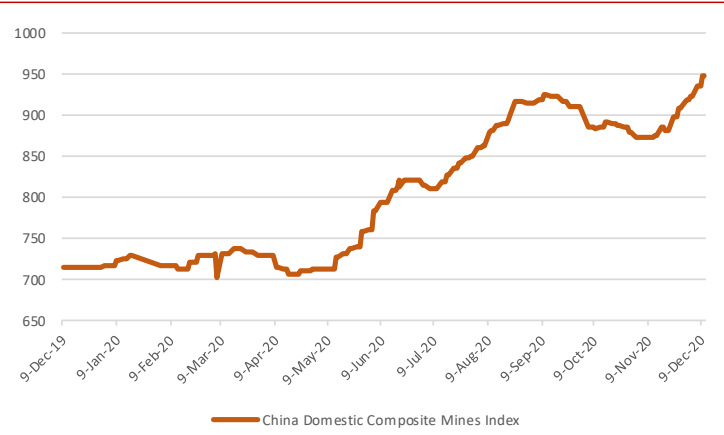
## IRON ORE INDEX PREMIUMS/DISCOUNTS

December 15th, 2020				PORT STOCK INDEX (RMB/WT)		December 15th, 2020				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	-141		-13.72%		IOSI65	65% Fe Fines	10.75		6.76%	
IOPI65	65% Fe Fines	71		6.91%							

## IRON ORE INDEX COMPARISONS (USD/DMT)



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



## IRON ORE BRAND SPOT PRICE ASSESSMENTS

December 15th, 2020				December 15th, 2020			
PORT STOCK INDEX (RMB/WT)				SEABORNE INDEX (USD/DMT)			
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	992	-16	-36	Roy Hill	150.33	0.48	-8.72
SIMEC Fines	958	-15	-70	SIMEC Fines	140.74	0.34	-18.31
PB Fines	1007	-16	-21	PB Fines	155.56	0.66	-3.49
Newman Fines	1031	-16	3	Newman Fines	156.87	0.77	-2.18
MAC Fines	999	-15	-29	MAC Fines	151.43	0.48	-7.62
Jimblebar Blended Fines	982	-16	-46	Jimblebar Blended Fines	146.06	-0.36	-12.99
Carajas Fines	1098	-17	70	Carajas Fines	166.04	0.62	6.99
Brazilian SSF	979	-16	-49	Brazilian SSF	146.86	1.06	-12.19
Brazilian Blend Fines	1014	-17	-14	Brazilian Blend Fines	157.19	1.14	-1.86
RTX Fines	1000	-17	-28	RTX Fines	145.39	-0.66	-13.66
West Pilbara Fines	985	-14	-43	West Pilbara Fines	149.81	0.36	-9.24

December 15th, 2020			
PORT STOCK INDEX (RMB/WT)			
	Price	Change	Diff to IOPI58
SSF	865	-6	-22
FMG Blended Fines	890	-4	3
Robe River	875	-6	-12
Western Fines	881	-7	-6
Atlas Fines	898	-3	11
Yandi	910	-3	23

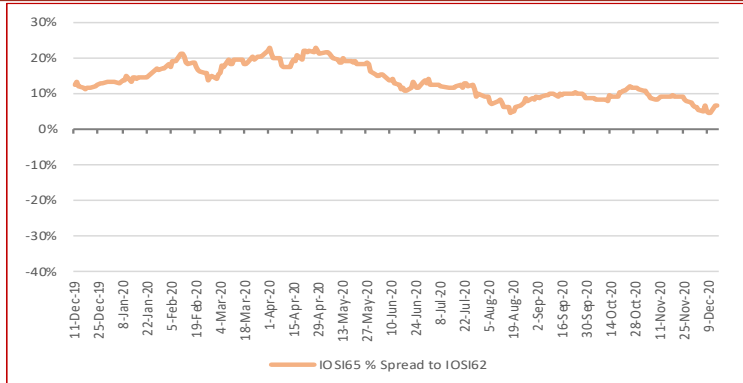
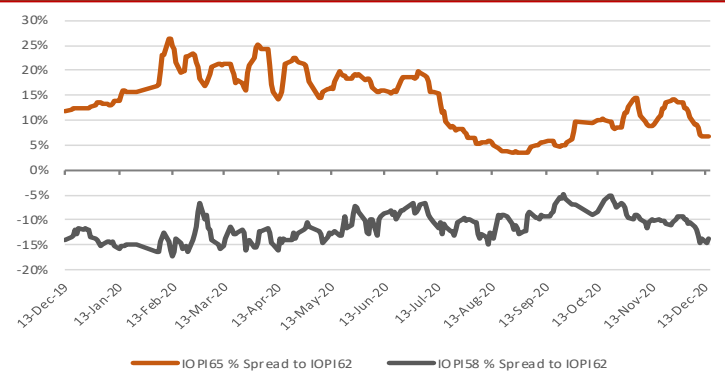
## IRON ORE INDEX NORMALISATION DIFFERENTIALS

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%	8.00	-1.00	1% Fe	High Grade Fe 60 - 63%	2.70	0.20
	High Grade Fe 63 - 64%	19.00	0.00		High Grade Fe 63 - 64%	0.50	-0.25
	High Grade Fe 64 - 65%	19.00	0.00		High Grade Fe 64 - 65%	0.50	-0.25
	High Grade Fe 65 - 65.5%	19.00	0.00		High Grade Fe 65 - 65.5%	0.50	-0.25
1% Alumina	Low Grade Fe	0.00	0.00	1% Alumina	High Fe Grade Al <2.25%	1.25	0.25
	High Fe Grade Al <2.25%	8.00	0.00		High Fe Grade Al 2.25-4%	5.25	0.25
	High Fe Grade Al 2.25-4%	6.00	2.00				
	Low Fe Grade Al <2.25%	48.00	1.00				
1% Silica	Low Fe Grade Al 2.25-4%	17.00	3.00	1% Silica	High Fe Grade Si <4%	1.00	0.00
	High Fe Grade Si <4%	7.00	0.00		High Fe Grade Si 4 - 6.5%	5.50	0.00
0.01% Phosphorus	High Fe Grade Si 4-6.5%	32.00	0.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	0.75	0.25
	Low Fe Grade	5.00	1.00		High Fe Grade 0.115%<P<0.15%	1.00	0.25
	High Fe Grade 0.09%<P<0.115%	1.00	0.00				
	High Fe Grade 0.115%<P<0.15%	1.00	0.00				
	Low Fe Grade 0.09<P<0.1%	2.00	0.00				

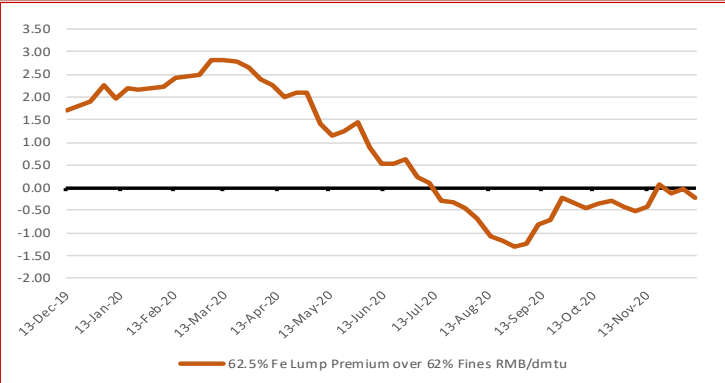
## Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

Port	Value	Change	Port	Value	Change	Port	Value	Change	Port	Value	Change
Bayuquan	-35.00	0.00	Fangcheng	-5.00	0.00	Lanshan	0.00	0.00	Rizhao	0.00	0.00
Beilun	-5.00	0.00	Jiangyin	-30.00	0.00	Lianyungang	0.00	0.00	Shekou	0.00	0.00
Caofeidian	-5.00	0.00	Jingtang	-5.00	0.00	Majishan	0.00	0.00	Taichang	-30.00	0.00
Dalian	-35.00	0.00	Lanqiao	0.00	0.00	Qingdao	0.00	0.00	Tianjin	-10.00	0.00

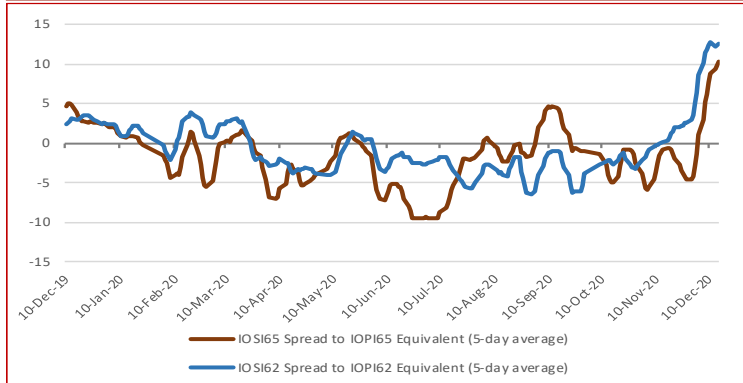
IRON ORE INDEX PREMIUMS/DISCOUNTS



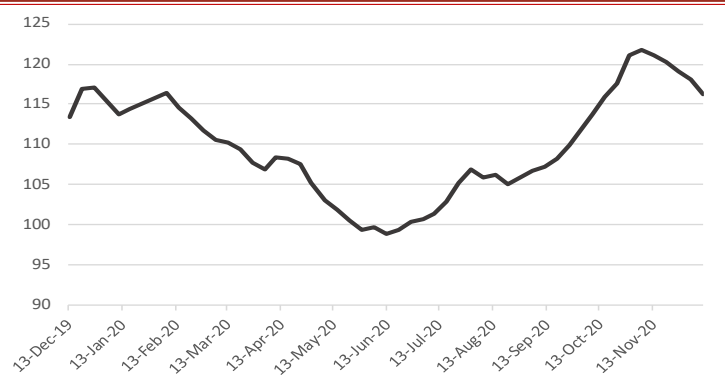
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



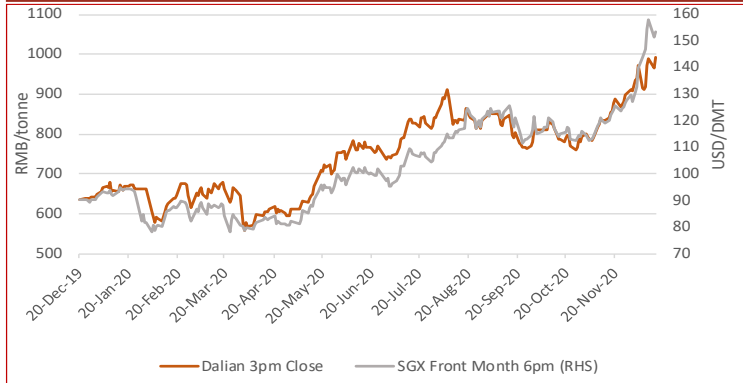
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



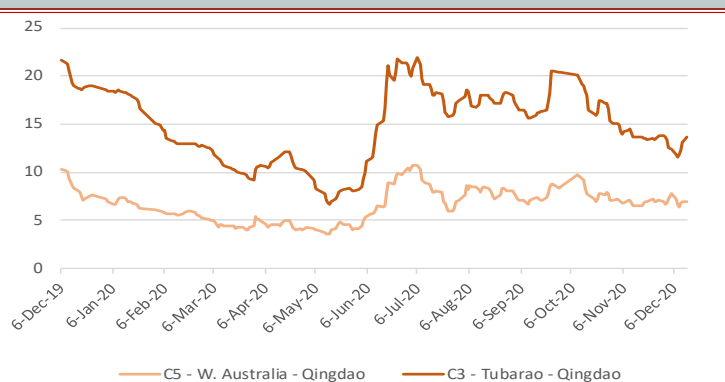
IRON ORE PORT INVENTORIES (MILLION TONNES)

Province	This week	Change %	Low <sup>2</sup>	High <sup>2</sup>
Jingtang	14.43	0.14%	12.26	16.08
Qingdao	14.55	-3.00%	9.41	15.30
Caofeidian	13.64	-4.01%	12.46	16.44
Tianjin	9.78	-2.98%	7.14	10.08
Rizhao	12.68	-4.73%	9.44	14.22
<b>Total (35 Ports)</b>	<b>116.28</b>	<b>-1.48%</b>	<b>98.80</b>	<b>121.69</b>

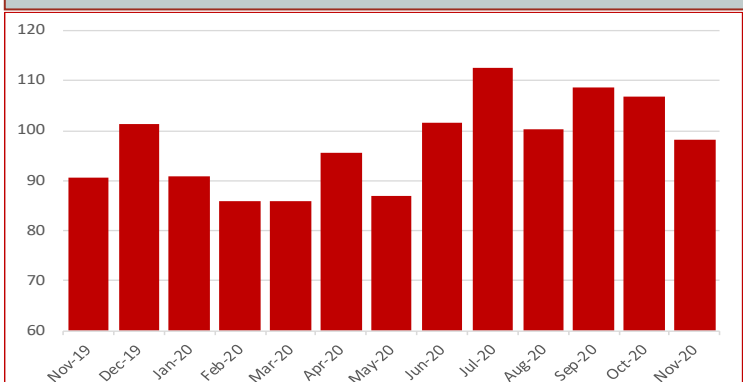
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	Dec 15th, 3.00 pm dose			Dec 15th, 5.30 pm		
Contract	I2105	Change	Change %	Jan '21	Change	Change %
Closing Price	994.00	27.5	2.85%	153.25	1.71	1.13%
Vol traded ('000 lots)	57.69	-15.31	-20.97%	27.60	-2.48	-8.25%
Open positions ('000 lots)	51.62	-0.09	-0.18%	181.96	-4.57	-2.45%
Day Low	958.0	2.0	0.21%	149.08	-1.63	-1.08%
Day High	1001.5	-3.5	-0.35%	153.40	-3.90	-2.48%

DRY BULK FREIGHT RATES (USD/MT)



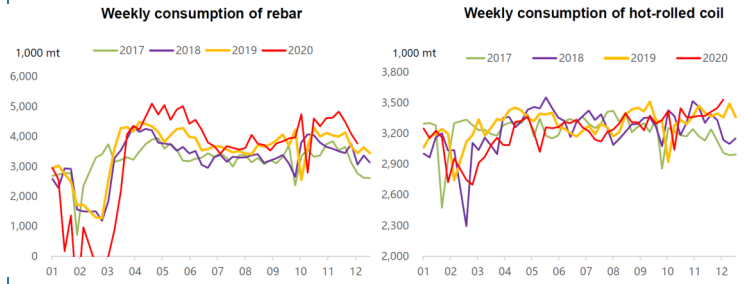
TOTAL CHINA IRON ORE IMPORT VOLUMES (MILLION TONNES)



STEEL SPOT MARKET PRICES—CHINA

Steel Spot Market RMB/tonne			
Product	11/12/2020	Change	Change %
ReBar HRB400 φ18mm	4,200.0	190	4.74%
Wirerod Q300 φ6.5mm	4,570.0	130	2.93%
HRC Q235/SS400 5.5mm*1500*C	4,530.0	240	5.59%
CRC SPCC/ST12 1.0mm*1250*2500	5,640.0	310	5.82%
Medium & Heavy Plate Q235B 20mm	4,370.0	280	6.85%
GI ST02Z 1.0mm*1000*C	5,750.0	260	4.74%
Colour Coated Plate	8,000.0	300	3.90%

CHINESE STEEL CONSUMPTION



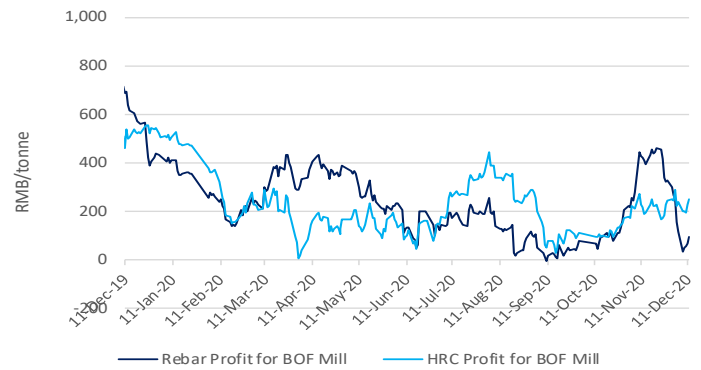
CHINESE STEEL MILL PROFITABILITY

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	158.80	18.55	Mmi CFR Equivalent index for 1st Feb
Coke	2,260	50	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	2,580	20	steel scrap (6mm) in Zhangjiagang, excl. tax
Billet Cost	3,964	220	Q234, incl. tax
Rebar cost - Blast furnace	4,192	222	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	93	-26	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	4,280	219	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	250	11	based on Shanghai prices, incl. tax

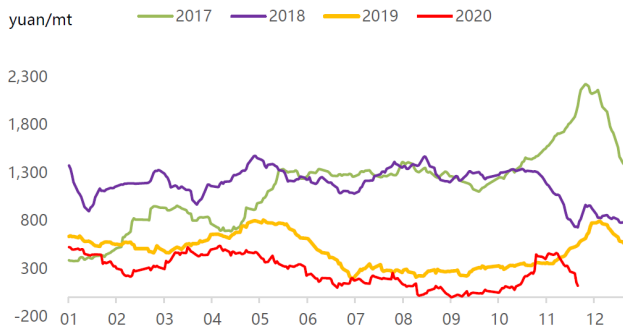
Note: 1. Costs in the table are calculated based on today's market prices and factored our management, sales, financial and depreciations fees.  
2. The cost refers to average cost in the industry based on SMM's survey of small, medium and large mills in China

CHINESE STEEL MILL PROFITABILITY

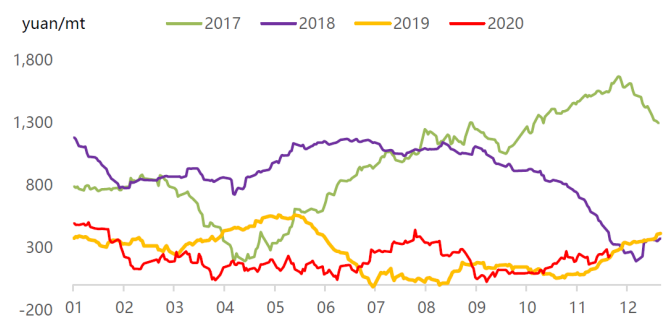


CHINESE STEEL MILL PROFITABILITY

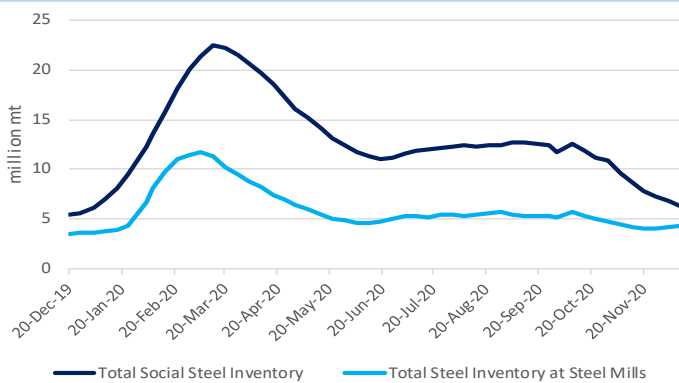
Rebar profits



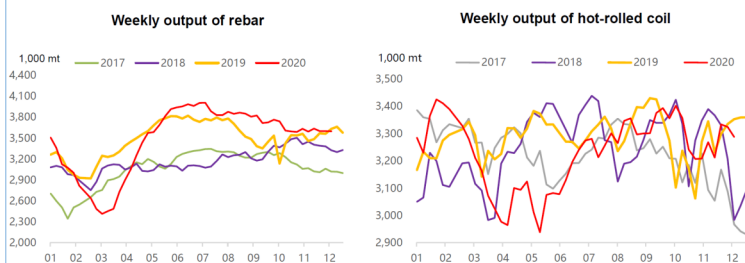
Hot-rolled coil profits



CHINESE STEEL INVENTORIES



CHINESE STEEL PRODUCTION



## 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					
December 15th, 2020	Specifications applied for 62% brand assessments					Specifications applied for 62% brand assessments					
	Fe	Alumina	Silica	Phos	Moisture		Fe	Alumina	Silica	Phos	Moisture
Roy Hill	60.94%	2.40%	4.36%	0.056%	9.34%	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	61.65%	2.32%	3.88%	0.100%	9.55%	PB Fines 62%	62.00%	2.60%	4.30%	0.090%	9.50%
Newman Fines	62.45%	2.33%	4.06%	0.090%	7.87%	Newman Fines	62.30%	2.40%	4.40%	0.090%	8.00%
MAC Fines	60.49%	2.39%	4.58%	0.079%	7.78%	MAC Fines	60.80%	2.35%	4.70%	0.080%	7.80%
Jimblebar Blended Fines	60.84%	2.98%	4.49%	0.112%	7.45%	Jimblebar Blended Fines	60.50%	3.00%	4.50%	0.120%	8.00%
Carajas Fines	65.03%	1.24%	1.82%	0.068%	8.00%	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	62.77%	1.38%	4.79%	0.086%	8.19%	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%

December 15th, 2020	Specifications applied for 58% brand assessments				
	Fe	Alumina	Silica	Phos	Moisture
SSF	56.49%	3.16%	6.25%	0.063%	9.31%
FMG Blended Fines	58.21%	2.47%	5.61%	0.056%	8.22%
Robe River	56.42%	3.17%	5.77%	0.041%	8.50%
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	56.99%	1.59%	6.38%	0.042%	9.43%

## 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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