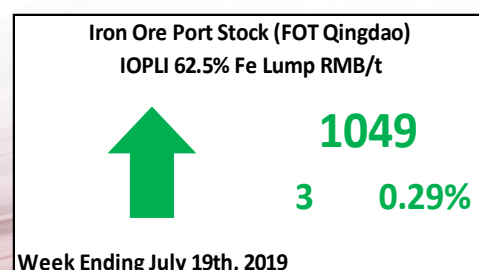
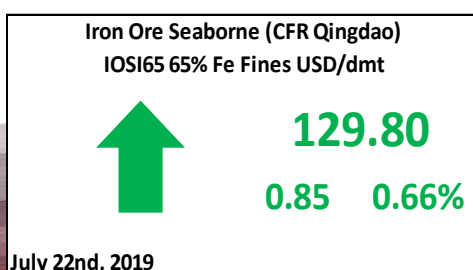
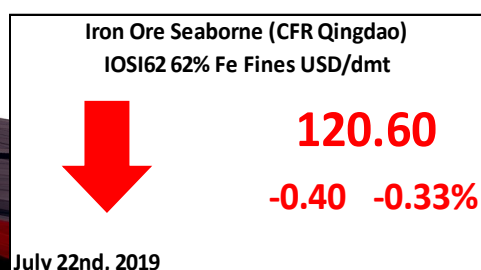
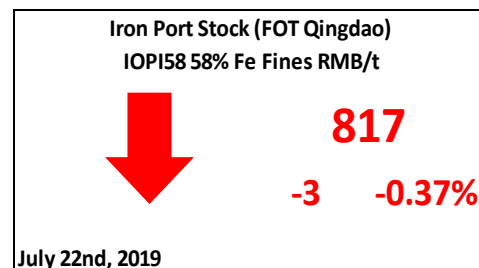
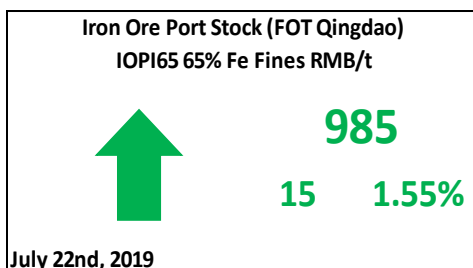
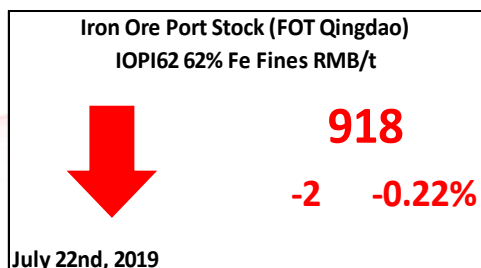


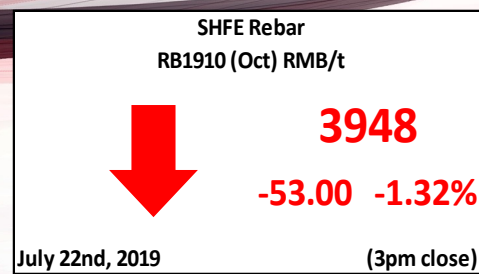
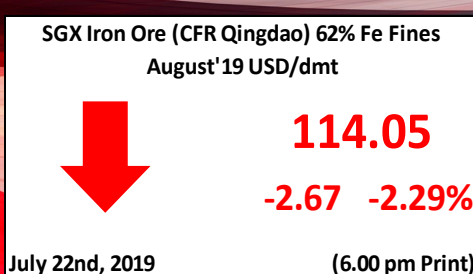
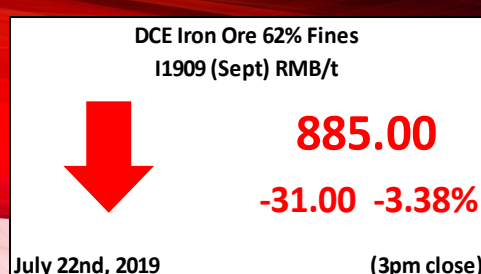


## MMi Dashboard

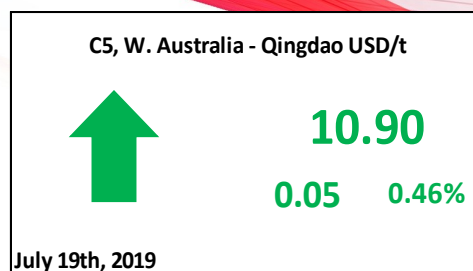
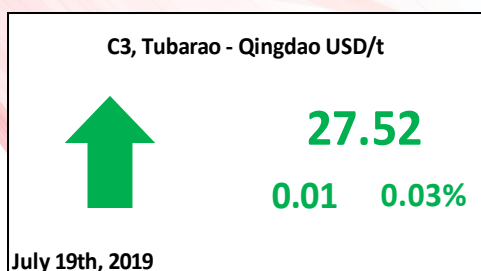
## Iron Ore Price Indices



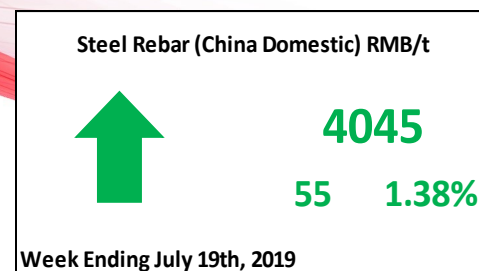
## Exchange Traded Contracts



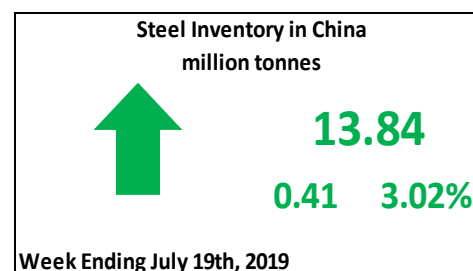
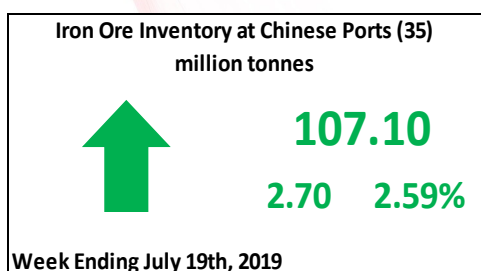
## Freight Rates



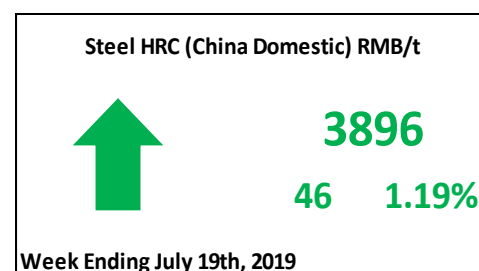
## Steel Price



## Inventory Levels



## Steel Price



## IRON ORE PORT STOCK INDEX (IOPI)

July 22nd, 2019		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	918	-2	-0.2%	915	709	483	928	124.51	-0.50	-0.4%	124.11	95.46	62.54	126.12
IOPI58	58% Fe Fines	817	-3	-0.4%	806	617	347	823	111.59	-0.53	-0.5%	110.05	82.97	43.55	112.44
IOPI65	65% Fe Fines	985	15	1.5%	955	785	640	992	133.88	1.86	1.4%	129.77	106.04	85.30	135.34

## IRON ORE SEABORNE INDEX (IOSI)

## MARKET COMMENTARY

July 22nd, 2019		CFR Qingdao, USD/dry tonne							The Tangshan government over the weekend announced new, reinforced control measures lasting from July 21 to 31, 2019. "A" classified mills require production cuts of 20% to their sintering and shaft furnace equipment. During the period of July 21 to July 25, mills with sinters and shaft furnace production in Fengnan, Guye, Kaiping, Lubei, Luanzhou, Luannan and QJ'an will be under production cuts of 70%. From July 29 to 31, 2019, mills in Fengrun, Qianxi and Zunhua will be required sintering and shaft furnace production cuts of 50%. These additional production cuts are expected to further restrain iron ore demand.							
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low <sup>3</sup>	High <sup>3</sup>								
IOSI62	62% Fe Fines	120.60	-0.40	-0.33%	121.73	94.94	62.95	127.50								
IOSI65	65% Fe Fines	129.80	0.85	0.66%	130.67	108.62	83.20	137.95								

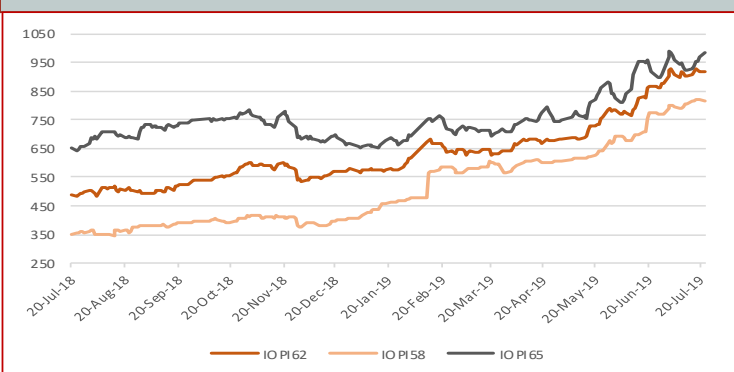
## IRON ORE PORT LUMP INDEX (IOPLI)

Week Ending July 19th, 2019		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% VAT), USD/dry tonne <sup>4</sup>						
Index	Fe Content	Price	W-o-W	Change %	MTD	YTD	Low <sup>3</sup>	High <sup>3</sup>	Price	W-o-W	Change %	MTD	YTD	Low <sup>3</sup>	High <sup>3</sup>
IOPLI62	62.5% Fe Lump	1049	3	0.3%	1049	900	613	1051	133.41	0.51	0.38%	133.37	115.30	77.55	133.81

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

Week Ending July 19th, 2019				RMB/tonne (excluding tax) <sup>4</sup>				USD/tonne (excluding tax) <sup>4</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	1019	-1.3%	601	1032	148.28	-1.17%	91.97	150.03
Hebei	Qian'an	65% Fe Concentrate	Dry	950	2.7%	680	950	138.24	2.80%	100.26	138.24
Liaoning	Anshan	65% Fe Concentrate	Wet	705	0.0%	465	745	102.59	0.09%	68.21	102.59
Shandong	Zibo	65% Fe Concentrate	Dry	1040	3.0%	660	1040	151.33	3.07%	99.75	151.33
Week Ending July 19th, 2019				This week	Change %	Low <sup>2</sup>	High <sup>2</sup>	<sup>1</sup> Exchange rate applied: RMB/USD = 6.8759 <sup>2</sup> Last 12 months <sup>3</sup> Since June 1 <sup>4</sup> Weekly exchange rate applied: RMB/USD 6.8722			
China Mines Concentrate Composite Index RMB/WT				850.71	1.9%	552.82	850.71				

## 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

July 22nd, 2019		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne						
Index	Fe Content	March	April	May	June	MTD	QTD	YTD	March	April	May	June	MTD	QTD	YTD
IOPI62	62% Fe Fines	639	675	729	825	915	915	709	87.09	85.37	98.40	111.42	124.11	124.11	95.46
IOPI58	58% Fe Fines	583	600	637	726	806	806	617	75.22	77.49	86.39	98.60	110.05	110.05	82.97
IOPI65	65% Fe Fines	714	753	812	901	955	955	785	98.08	95.78	110.00	121.97	129.77	129.77	106.04

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

## FREIGHT RATES

July 22nd, 2019		CFR Qingdao, USD/dry tonne							July 19th, 2019							
Index	Fe Content	March	April	May	June	MTD	QTD	YTD	Route		Designation	Change	Change %	Low <sup>2</sup>	High <sup>2</sup>	
IOSI62	62% Fe Fines	86.18	93.42	98.68	108.57	121.73	121.73	94.94	W. Australia - Qingdao		C5	10.90	0.05	0.46%	4.39	10.90
IOSI65	65% Fe Fines	97.22	106.75	115.53	124.49	130.67	130.67	108.62	Tubarao - Qingdao		C3	27.52	0.01	0.03%	11.61	27.52

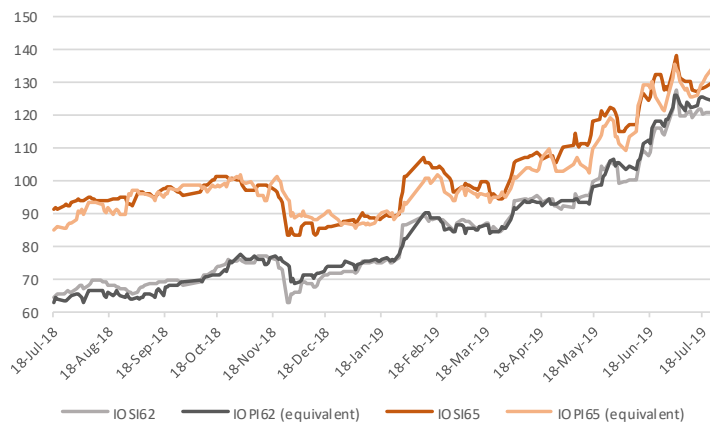
## IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending July 19th, 2019		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% VAT), USD/dry tonne <sup>1</sup>						
Index	Fe Content	March	April	May	June	MTD	QTD	YTD	March	April	May	June	MTD	QTD	YTD
IOPLI62	62.5% Fe Lump	858	872	919	1009	1049	1049	900	99.57	111.03	117.12	128.00	133.37	133.37	115.30

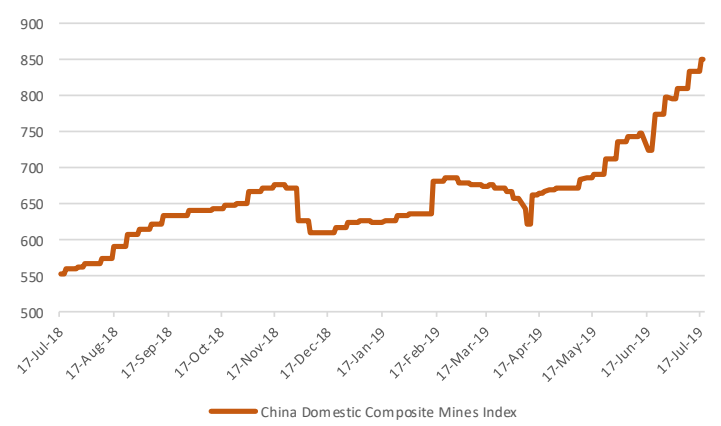
## IRON ORE INDEX PREMIUMS/DISCOUNTS

July 22nd, 2019				PORT STOCK INDEX (RMB/WT)				July 22nd, 2019				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	-101		-11.00%		IOSI65	65% Fe Fines	9.20		7.63%					
IOPI65	65% Fe Fines	67		7.30%											

## IRON ORE INDEX COMPARISONS (USD/DMT)



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



## IRON ORE BRAND SPOT PRICE ASSESSMENTS

July 22nd, 2019				July 22nd, 2019			
PORT STOCK INDEX (RMB/WT)				SEABORNE INDEX (USD/DMT)			
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	870	-4	-48	Roy Hill	117.55	-0.41	-3.05
SIMEC Fines	810	-9	-108	SIMEC Fines	115.27	-0.42	-5.33
PB Fines	900	-2	-18	PB Fines	119.67	-0.49	-0.93
Newman Fines	923	-2	5	Newman Fines	121.85	-0.40	1.25
MAC Fines	884	-4	-34	MAC Fines	114.92	-0.02	-5.68
Jimblebar Blended Fines	868	-5	-50	Jimblebar Blended Fines	106.35	-0.64	-14.25
Carajas Fines	994	19	76	Carajas Fines	129.40	-0.40	8.80
Brazilian SSF	841	-3	-77	Brazilian SSF	120.60	-0.40	0.00
Brazilian Blend Fines	899	0	-19	Brazilian Blend Fines	121.85	-0.40	1.25
RTX Fines	870	-6	-48	RTX Fines	111.15	-0.49	-9.45
West Pilbara Fines	867	-4	-51	West Pilbara Fines	116.65	-0.41	-3.95

July 22nd, 2019			
PORT STOCK INDEX (RMB/WT)			
	Price	Change	Diff to IOPI58
SSF	759	-3	-58
FMG Blended Fines	820	-3	3
Robe River	753	-3	-64
Western Fines	792	-3	-25
Atlas Fines	774	-3	-43
Yandi	845	-5	28

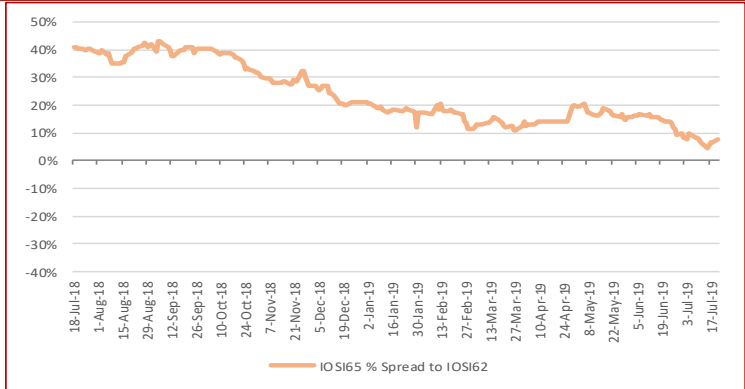
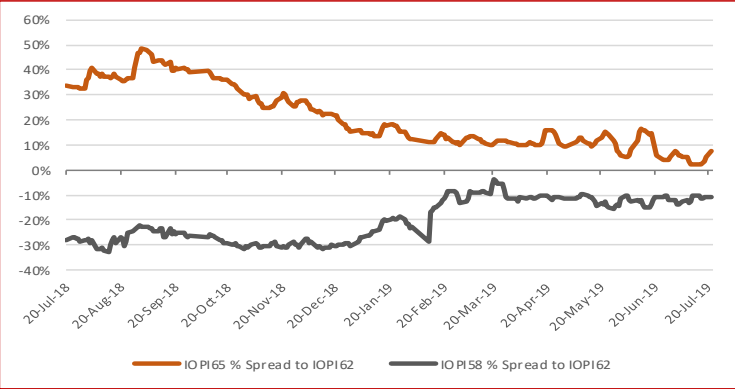
## IRON ORE INDEX NORMALISATION DIFFERENTIALS

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%	6.00	0.00	1% Fe	High Grade Fe 60 - 63%	1.75	0.00	
	High Grade Fe 63 - 64%	15.00	4.00		High Grade Fe 63 - 64%	2.00	0.00	
	High Grade Fe 64 - 65%	15.00	4.00		High Grade Fe 64 - 65%	2.00	0.00	
	High Grade Fe 65 - 65.5%	15.00	4.00		High Grade Fe 65 - 65.5%	2.00	0.00	
	Low Grade Fe	19.00	0.00					
1% Alumina	High Fe Grade Al <2.25%	22.00	5.00	1% Alumina	High Fe Grade Al <2.25%	1.50	0.00	
	High Fe Grade Al 2.25-4%	9.00	3.00		High Fe Grade Al 2.25-4%	2.00	0.25	
	Low Fe Grade Al <2.25%	57.00	-3.00					
	Low Fe Grade Al 2.25-4%	43.00	0.00					
1% Silica	High Fe Grade Si <4%	5.00	2.00	1% Silica	High Fe Grade Si <4%	0.75	0.00	
	High Fe Grade Si 4-6.5%	49.00	3.00		High Fe Grade Si 4 - 6.5%	0.75	0.00	
0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	1.00	0.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	1.25	-0.25	
	High Fe Grade 0.115%<P<0.15%	6.00	0.00		High Fe Grade 0.115%<P<0.15%	1.25	0.25	
	Low Fe Grade 0.09<P<0.1%	1.00	0.00					

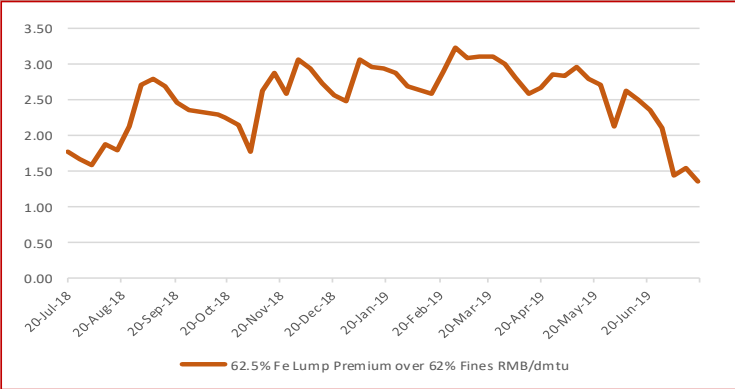
## Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

Port	Value	Change	Port	Value	Change	Port	Value	Change	Port	Value	Change
Bayuquan	-15.00	0.00	Fangcheng	-5.00	0.00	Lanshan	0.00	0.00	Qingdao	0.00	0.00
Beilun	5.00	0.00	Jiangyin	-20.00	0.00	Lianyungang	-10.00	0.00	Rizhao	0.00	0.00
Caofeidian	-15.00	0.00	Jingtang	-15.00	0.00	Majishan	0.00	0.00	Shekou	0.00	0.00
Dalian	-15.00	0.00	Lanqiao	0.00	0.00	Nantong	-20.00	0.00	Tianjin	0.00	0.00

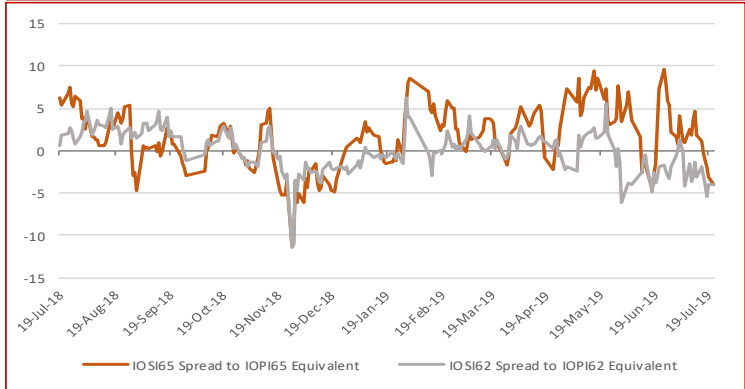
IRON ORE INDEX PREMIUMS/DISCOUNTS



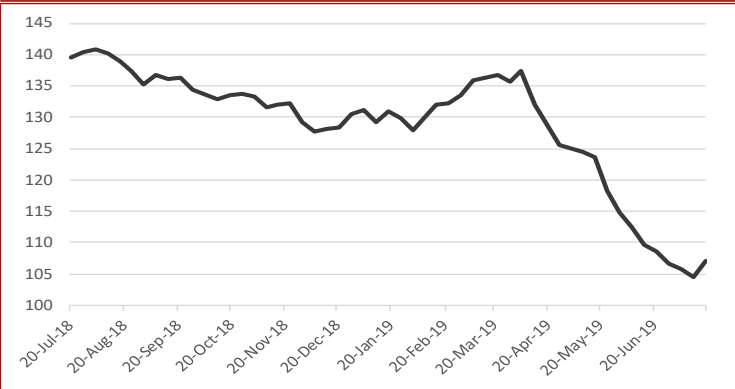
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



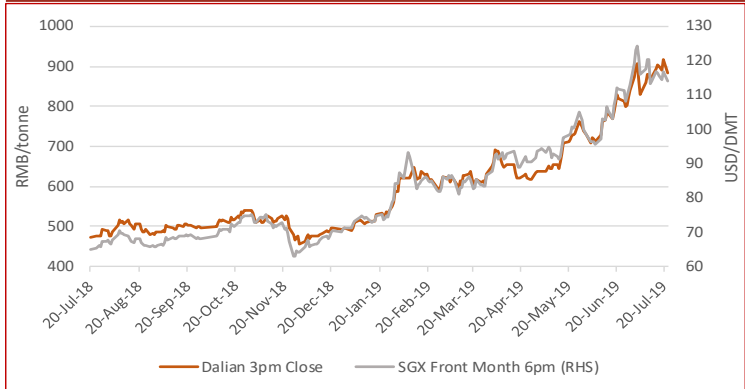
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



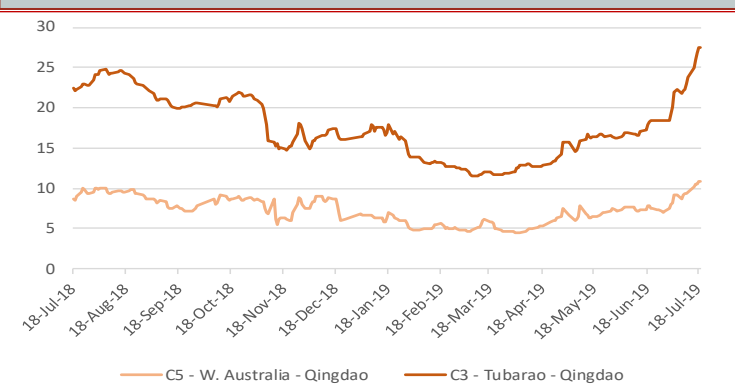
IRON ORE PORT INVENTORIES (MILLION TONNES)

Week Ending July 19th, 2019				
Province	This week	Change %	Low <sup>2</sup>	High <sup>2</sup>
Jingtang	11.52	6.67%	10.80	17.20
Qingdao	12.87	-3.74%	12.87	19.01
Caofeidian	14.95	1.91%	14.48	20.10
Tianjin	6.55	0.61%	6.51	10.48
Rizhao	12.38	5.99%	11.65	18.08
<b>Total (35 Ports)</b>	<b>107.10</b>	<b>2.59%</b>	<b>104.40</b>	<b>140.74</b>

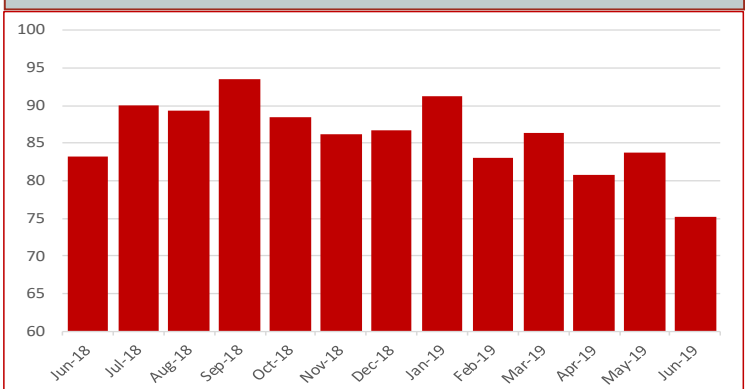
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	July 22nd 3pm close			July 22nd Feb 5.30 pm		
Contract	I1909	Change	Change %	Aug'19	Change	Change %
Closing Price	885.00	-31.0	-3.38%	114.05	-2.67	-2.29%
Vol traded ('000 lots)	99.99	2.4	2.44%	10.31	-3.52	-25.44%
Open positions ('000 lots)	123.80	-10.3	-7.70%	147.02	-5.53	-3.63%
Day Low	885.0	3.0	0.34%	113.57	0.02	0.02%
Day High	911.5	-6.5	-0.71%	114.87	-2.02	-1.73%

DRY BULK FREIGHT RATES (USD/MT)



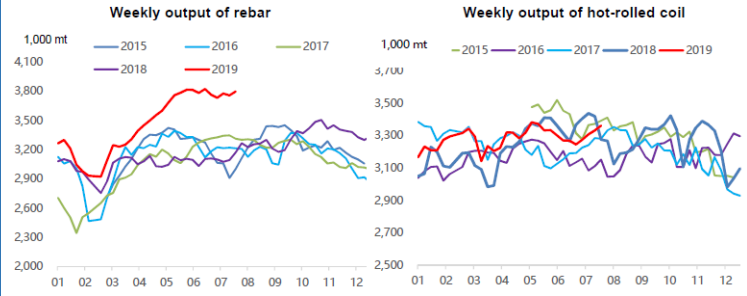
TOTAL CHINA IRON ORE IMPORT VOLUMES (MILLION TONNES)



STEEL SPOT MARKET PRICES—CHINA

Steel Spot Market RMB/tonne

Product	19/7/2019	Change	Change %
ReBar HRB400 φ18mm	4,045.0	55	1.38%
Wirerod Q300 φ6.5mm	4,240.0	0	0.00%
HRC Q235/SS400 5.5mm*1500*C	3,896.0	46	1.19%
CRC SPPC/ST12 1.0mm*1250*2500	4,203.0	3	0.07%
Medium & Heavy Plate Q235B 20mm	3,946.0	16	0.41%
GI ST02Z 1.0mm*1000*C	4,560.0	0	0.00%
Colour Coated Plate	6,900.0	0	0.00%



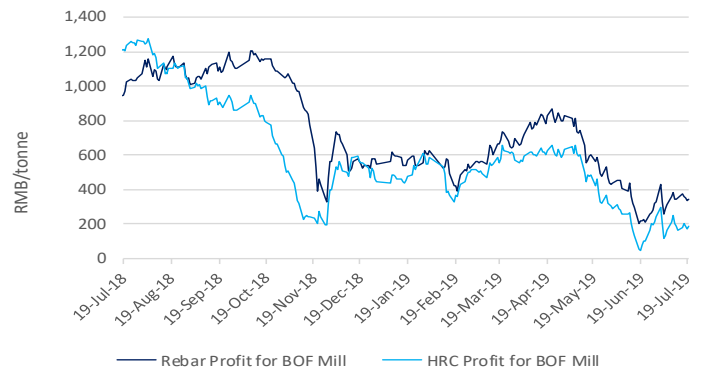
CHINESE STEEL MILL PROFITABILITY

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	120.25	-0.90	Mmi CFR Equivalent index for 1st Feb
Coke	1,910	0	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	2,370	40	steel scrap (6mm) in Zhangjiagang, excl. tax
Billet Cost	3,376	-5	Q234, incl. tax
Rebar cost - Blast furnace	3,627	-4	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	343	-6	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	3,692	-5	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	188	25	based on Shanghai prices, incl. tax

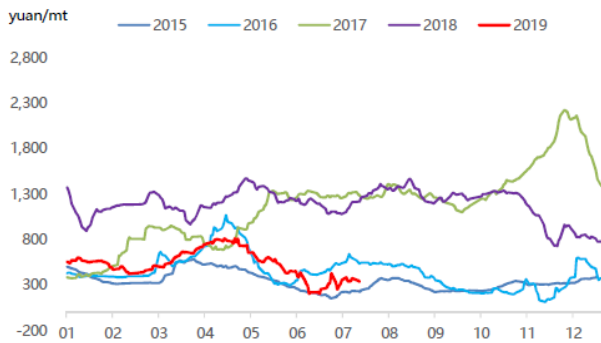
Note: 1. Costs in the table are calculated based on today's market prices and factored our management, sales, financial and depreciations fees.  
2. The cost refers to average cost in the industry based on SMM's survey of small, medium and large mills in China

CHINESE STEEL MILL PROFITABILITY

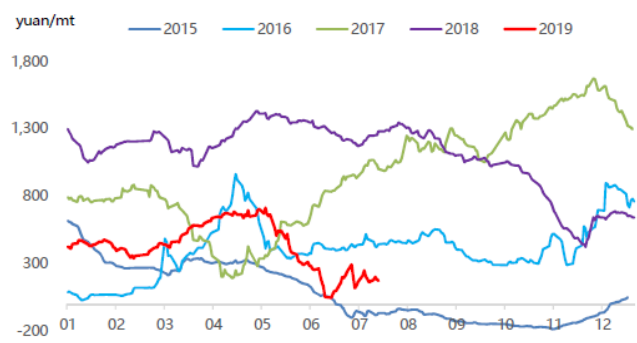


CHINESE STEEL MILL PROFITABILITY

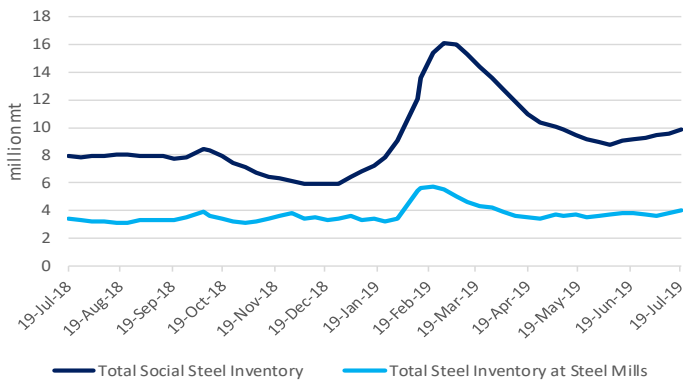
Rebar profits



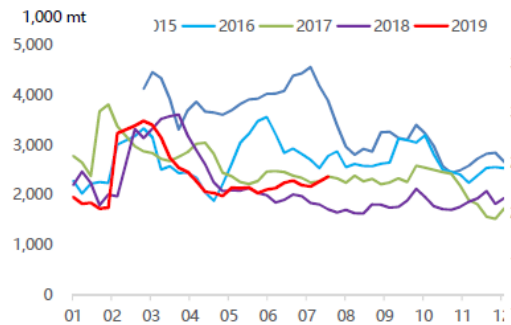
Hot-rolled coil profits



CHINESE STEEL INVENTORIES



In-plant inventory of rebar



## 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					
July 22nd, 2019	Specifications applied for 62% brand assessments						Specifications applied for 62% brand assessments				
	Fe	Alumina	Silica	Phos	Moisture		Fe	Alumina	Silica	Phos	Moisture
Roy Hill	61.16%	2.25%	4.61%	0.052%	9.35%	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	61.50%	2.35%	3.87%	0.101%	9.41%	PB Fines 62%	62.00%	2.60%	4.30%	0.090%	10.00%
Newman Fines	62.56%	2.26%	3.98%	0.084%	7.79%	Newman Fines	62.80%	2.20%	4.30%	0.080%	6.40%
MAC Fines	60.87%	2.24%	4.66%	0.081%	7.55%	MAC Fines	61.00%	2.70%	4.70%	0.110%	9.30%
Jimblebar Blended Fines	60.83%	3.01%	4.41%	0.114%	7.35%	Jimblebar Blended Fines	59.50%	3.70%	5.80%	0.135%	8.30%
Carajas Fines	65.60%	1.23%	1.43%	0.068%	8.42%	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	62.85%	1.45%	4.81%	0.073%	8.28%	Brazilian Blend Fines	62.50%	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%
July 22nd, 2019	Specifications applied for 58% brand assessments						Specifications applied for 58% brand assessments				
	Fe	Alumina	Silica	Phos	Moisture		Fe	Alumina	Silica	Phos	Moisture
SSF	56.73%	3.06%	6.28%	0.058%	8.47%						
FMG Blended Fines	58.20%	2.59%	5.48%	0.063%	7.41%						
Robe River	56.28%	2.91%	5.58%	0.035%	9.29%						
Western Fines	57.88%	2.87%	7.50%	0.062%	7.45%						
Atlas Fines	56.59%	2.55%	7.14%	0.080%	8.46%						
Yandi	57.43%	1.53%	6.23%	0.040%	8.80%						

## BLOOMBERG TICKERS

PORT STOCK INDICES		
	FOT Qingdao (RMB/wet tonne)	CFR Qingdao Equivalent (USD/dry tonne)
IOP162	IRCNQ001	IRCNQ004
IOP158	IRCNQ002	IRCNQ005
IOP165	IRCNQ003	IRCNQ006

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