

## IRON ORE PORT STOCK INDEX (IOPI)

August 14 2018		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% 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	517	1	0.2%	508	481	443	559	66.70	0.07	0.1%	65.70	65.42	61.36	77.89
IOPI58	58% Fe Fines	364	17	4.9%	352	334	304	376	45.83	2.28	5.2%	44.42	44.08	40.67	50.97
IOPI65	65% Fe Fines	708	-1	-0.1%	702	608	541	710	92.76	-0.22	-0.2%	92.31	83.77	75.83	97.10

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

Week Ending August 10, 2018				RMB/tonne (excluding tax)				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	638	1.8%	579	682	93.28	1.4%	84.66	99.72
Hebei	Qian'an	65% Fe Concentrate	Dry	700	1.4%	630	710	102.35	1.1%	92.11	103.81
Liaoning	Anshan	65% Fe Concentrate	Wet	465	0.0%	445	550	67.99	-0.3%	65.06	80.42
Shandong	Zibo	65% Fe Concentrate	Dry	690	1.5%	620	690	100.89	1.1%	90.65	100.89
Week Ending August 10, 2018				This week	Change %	Low <sup>4</sup>	High <sup>4</sup>	<sup>1</sup> Exchange rate applied: RMB/USD = 6.8695 <sup>2</sup> Since March 1 <sup>3</sup> Weekly exchange rate applied: RMB/USD 6.8394 <sup>4</sup> Last 12 months			
China Mines Concentrate Composite Index RMB/WT				574.64	1.3%	534.50	628.33				

## MARKET COMMENTARY

Some 63 vessels with 9.17 million mt of iron ore are expected to arrive at major Chinese ports during August 10-16, up 280,000 mt from 8.89 million mt during August 3-9. For the same period, volumes of iron ore departing Australian ports are likely to increase 920,000 mt to 16.04 million mt and those leaving Brazilian ports are likely to rise by 190,000 mt to 7.86 million mt. While new deliveries during August 10-16 are likely to grow slightly, arrivals from Australia are likely to rise significantly at the end of August based on departing volumes. Iron ore port stock prices remained firm even as the DCE futures market dipped. Most traders were unwilling to lower their offers, and mills purchased as needed.

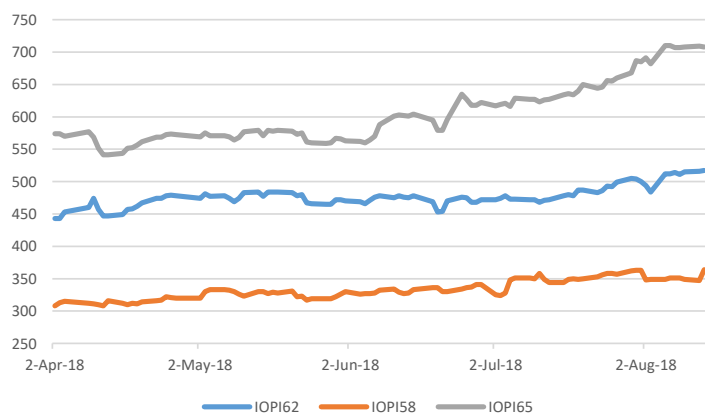
## PLATFORM TRADES AND TENDERS

61% Fe fines trades at USD\$66.13 for 170,000t 29 Aug—7 Sep LAYCAN

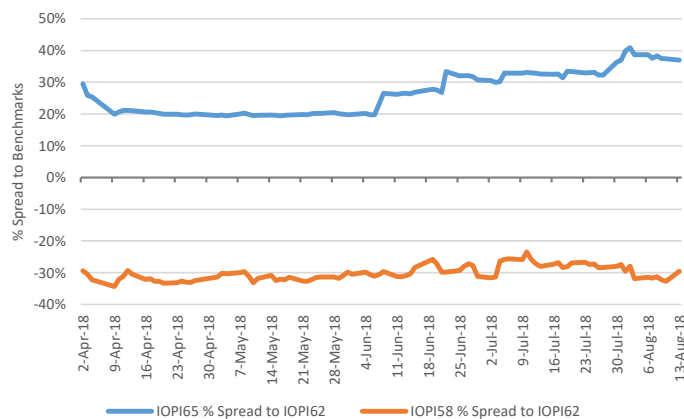
## IRON ORE HIGH/LOW GRADE PREMIUM/DISCOUNT

August 14 2018	PORT STOCK INDEX (RMB/WT)	
Fe Content	Spread to IOPI62	% Spread to IOPI62
58% Fe Fines	-153	-29.59%
65% Fe Fines	191	36.94%

## IRON ORE PORT INDEX, FOT QINGDAO (RMB/WT)



## IRON ORE HIGH/LOW GRADE PREMIUM/DISCOUNT



## IRON ORE FUTURES CONTRACTS

Closing Date	DCE			SGX		
	14 Aug 3pm close			14 Aug 6pm		
Contract	I1901	Change	Change %	Sep'18	Change	Change %
Closing Price	506.5	-10.5	-2.03%	67.85	-1.15	-1.67%
Vol traded ('000 lots)	125.44	10.2	8.81%	9.65	0.60	6.68%
Open positions ('000 lots)	83.76	-1.7	-2.01%	114.16	2.97	2.68%
Day Low	502.0	-6.0	-1.18%	67.69	-0.42	-0.62%
Day High	514.0	-3.0	-0.58%	69.04	-0.20	-0.29%

## IRON ORE PORT INVENTORIES

Week Ending August 10, 2018 (million tonnes)				
Province	This week	Change %	Low <sup>4</sup>	High <sup>4</sup>
Jingtang	16.70	1.21%	14.11	19.00
Qingdao	18.70	-1.06%	15.60	19.97
Caofeidian	18.20	-2.78%	16.62	25.30
Tianjin	10.10	-3.63%	8.35	11.00
Rizhao	17.39	-0.34%	13.10	19.00
Total (35 Ports)	140.16	-0.41%	123.49	150.04

## FREIGHT RATES

August 13, 2018		FREIGHT RATES - DRY BULK US\$/wet tonne				
Route	Designation	Change	Change %	Low <sup>4</sup>	High <sup>4</sup>	
W. Australia - Qingdao	C5	9.69	0.17	1.82%	5.109	10.002
Tubarao - Qingdao	C3	24.52	0.24	0.97%	12.705	24.76

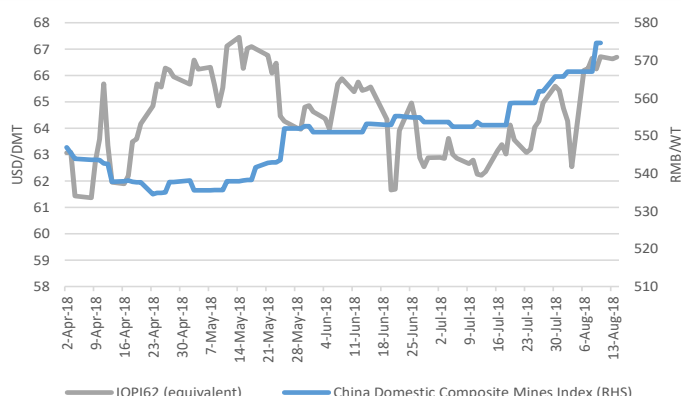
## BLOOMBERG

BLOOMBERG TICKERS		
	FOT Qingdao (RMB/wet tonne)	CFR Qingdao Equivalent (USD/dry tonne)
IOPI62	IRCNQ001	IRCNQ004
IOPI58	IRCNQ002	IRCNQ005
IOPI65	IRCNQ003	IRCNQ006

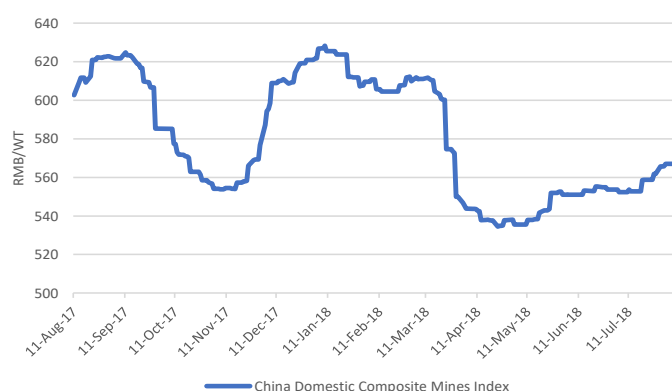
## Daily Iron Ore Index Report

August 14, 2018

### MMi BENCHMARK IRON ORE PRICES



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



### IRON ORE BRAND SPOT PRICE ASSESSMENTS

August 14 2018	PORT STOCK INDEX (RMB/WT)		
	Price	Change	Diff to IOPI62
Roy Hill	499	1	-18
SIMEC Fines	481	1	-36
PB Fines	500	1	-17
Newman Fines	525	-1	8
MAC Fines	502	-1	-15
Jimblebar Blended Fines	467	4	-50
Carajas Fines	764	-3	247
Brazilian SSF	565	5	48
Brazilian Blend Fines	557	3	40
RTX Fines	481	4	-36

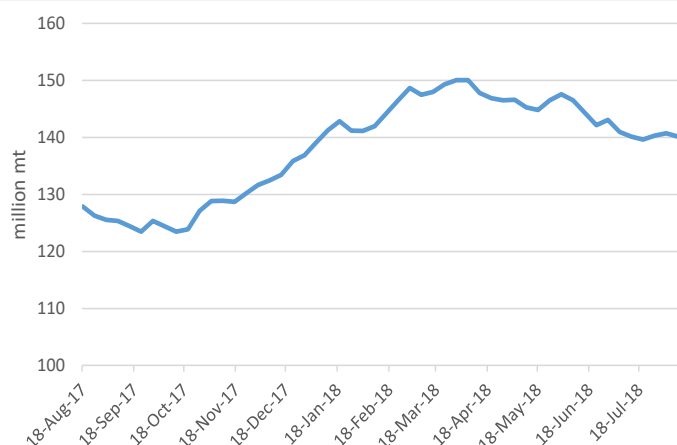
August 14 2018	PORT STOCK INDEX (RMB/WT)		
	Price	Change	Diff to IOPI58
SSF	316	15	-48
FMG Blended Fines	366	18	2
Robe River	355	16	-9
Western Fines	321	17	-43
Atlas Fines	296	16	-68
Yandi	329	16	-35

### AVERAGE IRON ORE BRAND SPECIFICATIONS FOR PORT STOCK SALES

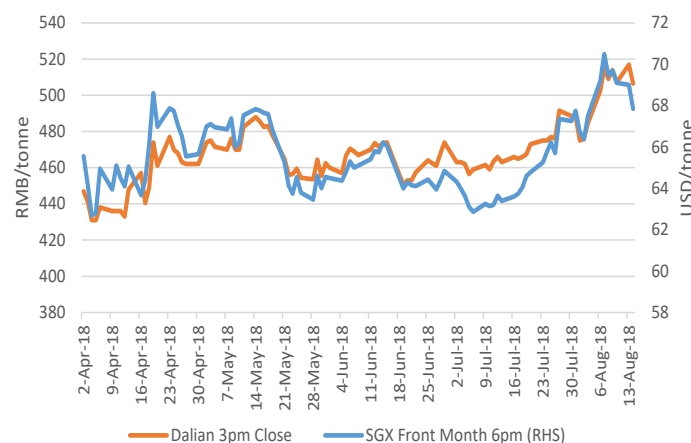
August 14 2018	SPECIFICATIONS APPLIED FOR 62% BRAND ASSESSMENTS				
	Fe	Alumina	Silica	Phos	Moisture
Roy Hill	61.00%	2.20%	4.50%	0.055%	8.00%
SIMEC Fines	60.00%	2.30%	6.30%	0.060%	6.00%
PB Fines	61.57%	2.40%	3.65%	0.100%	9.05%
Newman Fines	62.49%	2.36%	4.11%	0.080%	7.59%
MAC Fines	61.28%	2.25%	4.67%	0.090%	7.81%
Jimblebar Blended Fines	61.10%	2.83%	4.67%	0.090%	6.76%
Carajas Fines	65.61%	0.99%	1.87%	0.060%	8.50%
Brazilian SSF	62.00%	1.00%	6.50%	0.040%	6.00%
Brazilian Blend Fines	62.87%	1.37%	4.91%	0.070%	8.76%
RTX Fines	61.00%	3.10%	4.50%	0.135%	7.50%

August 14 2018	SPECIFICATIONS APPLIED FOR 58% BRAND ASSESSMENTS				
	Fe	Alumina	Silica	Phos	Moisture
SSF	56.50%	3.04%	6.27%	0.050%	9.12%
FMG Blended Fines	58.34%	2.70%	5.81%	0.070%	7.17%
Robe River	56.71%	3.11%	5.11%	0.030%	8.69%
Western Fines	57.61%	2.94%	6.88%	0.070%	7.56%
Atlas Fines	56.59%	2.55%	7.14%	0.080%	8.46%
Yandi	57.19%	1.40%	6.39%	0.040%	8.85%

### TOTAL IRON ORE INVENTORIES AT CHINA PORTS



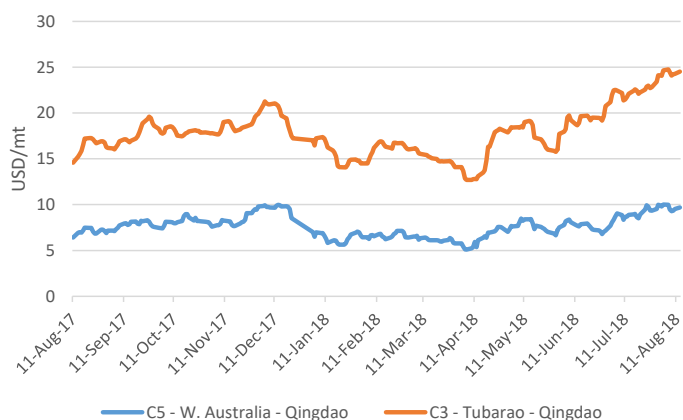
### FUTURE TRADING—FRONT MONTH CLOSING PRICE



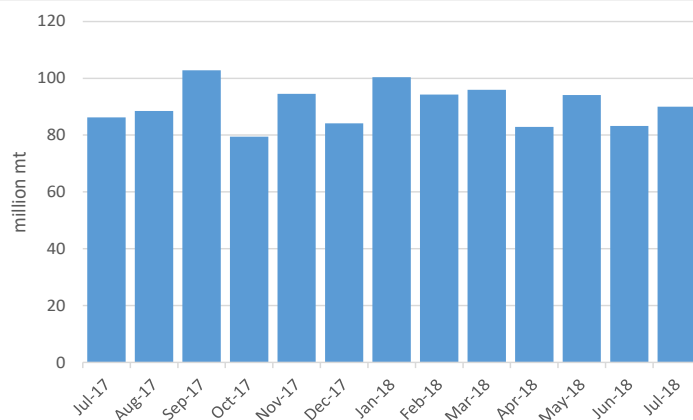
## Daily Iron Ore Index Report

August 14, 2018

### DRY BULK FREIGHT RATES



### TOTAL CHINA IRON ORE IMPORT VOLUMES



### Steel Spot Market Prices - China

#### Steel Spot Market RMB/tonne

Product	10/8/2018	Change	Change %
ReBar HRB400 φ18mm	4,365.0	78	1.82%
Wirerod Q300 φ6.5mm	4,619.0	68	1.49%
HRC Q235/SS400 5.5mm*1500*C	4,302.0	6	0.14%
CRC SPCC/ST12 1.0mm*1250*2500	4,800.0	47	0.99%
Medium & Heavy Plate Q235B 20mm	4,440.0	47	1.07%
GI ST02Z 1.0mm*1000*C	5,355.0	10	0.19%
Billet Q235 150*150mm	3,973.0	123	3.19%

#### Rebar and HRC spot prices



Source: SMM

### CHINESE STEEL EXPORT PRICES

#### China Export Prices USD/tonne

Product	Specification	Export tax (+)/Vate rebate (-)	Change
10/8/2018			
Rebar	BS4449 460B 12-25mm, + chrome	-13%	545 -25
Wire Rod	SAE1008 6.5-10mm +chrome	-9%	575 0
Hot-rolled coil	SS400/Q235 4.0-10.mm	-9%	580 5
Cold-rolled coil	SPCC 1.0mm	-13%	620 0
Medium & Heavy plate	A-level Shipe plate 12-25mm	0%	610 0
Galvanised	ST02Z/SGCC 1.0mm	-13%	690 0

Note: Calculation formula for converting export prices of rebar, cold-rolled steel and galvanizing into prices in China's spot market = FOB \* exchange rate \* 1.16 / (1.16 - 0.13); Calculation formula for converting export prices of wire rod and hot-rolled steel into prices in China's spot market = FOB \* exchange rate \* 1.16 / (1.16 - 0.09); Calculation formula for converting export prices of medium-thick plate into prices in China's spot market = FOB \* exchange rate

### CHINESE STEEL INVENTORIES

#### Steel Inventories<sup>3</sup> (unit: 1000 tonnes)

Product	10/8/2018	3/8/2018	Change	Change %
Rebar	4,531	4,593	-62	-1.35%
Wirerod	1,236	1,195	41	3.43%
Hot-rolled Coil	2,217	2,174	43	1.98%
Medium & Thick Plate	959	948	11	1.16%
Cold-rolled Coil	1,181	1,173	8	0.68%
<b>Total</b>	<b>10,124</b>	<b>10,084</b>	<b>40</b>	<b>0.40%</b>

<sup>3</sup> SMM statistics cover inventories of major steel products in China's major markets: hot-rolled steel inventories in 33 major cities; rebar and wire inventories in 35 major cities; cold-rolled steel and medium-thick plate inventories in 31 major cities.

### 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	66.72	4.18	MMi index for 22nd June
Coke	2,170	200	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	2,280	90	steel scrap (6mm) in Zhangjiagang, excl. tax
Billet Cost	2,888	173	Q234, incl. tax
Rebar cost - Blast furnace	3,155	176	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	1,005	-126	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	3,216	174	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	1,084	-164	based on Shanghai prices, incl. tax

Note: 1. Costs in the table are calculated based on today's market prices and factor 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

IRON ORE INDEX SPECIFICATIONS, COMPILATION RATIONALE AND DATA EXCLUSIONS

Iron Ore Index Specifications (Port)				Iron Ore Index Compilation Rationale and Data Exclusions	
	65% Fe Fines	62% Fe Fines	58% Fe Fines		
Fe %	65.00	62.00	58.00	<p>MMi iron ore port stock 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.</p> <p>For more details on MMI's iron ore methodology please download the guide published on our website at:</p> <p><u>Data Exclusions*</u> Port Index: 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</p>	
Alumina %	1.40	2.25	2.25		
Silica%	1.50	4.00	5.50		
Phosphorus %	0.06	0.09	0.05		
Sulphur %	0.01	0.02	0.02		
Moisture %	8.00	8.00	9.00		
Sizing	Granular size below 10mm for at least 90% of cargo; maximum of 40% below 150 micron				
Pricing Point	Qingdao Port				
Timing (Seaborne)	Loading within 4 weeks, Delivery within 8 weeks				
Payment Terms	L/C at sight				

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.

IRON ORE PORT INDEX NORMALISATION DIFFERENTIALS

Product Differentials (RMB/wet tonne)				Differentials to Qingdao Port (RMB/wet tonne)		
	Applicable range	Value	Change	Port	Value	Change
1% Fe	High Grade Fe 60 - 63%	18.00	0.00	Bayuquan	-35.00	0.00
	High Grade Fe 63 - 64%	67.00	-3.00	Beilun	5.00	0.00
	High Grade Fe 64 - 65%	74.00	-3.00	Caofeidian	-10.00	0.00
	High Grade Fe 65 - 65.5%	74.00	-3.00	Dalian	-20.00	0.00
	Low Grade Fe	15.00	1.00	Fangcheng	-5.00	0.00
1% Alumina	High Fe Grade Al <2.25%	37.00	3.00	Jiangyin	-25.00	0.00
	High Fe Grade Al 2.25-4%	22.00	-3.00	Jingtang	-10.00	0.00
	Low Fe Grade	3.00	0.00	Lanshan	0.00	0.00
1% Silica	High Fe Grade Si <4%	0.00	0.00	Lanqiao	0.00	0.00
	High Fe Grade Si <4 - 6.5%	4.00	0.00	Lianyungang	0.00	0.00
	High Fe Grade Si <6.5 - 9%	11.00	0.00	Majishan	0.00	0.00
	Low Fe Grade	29.00	0.00	Nantong	-30.00	0.00
0.01% Phosphorus	High Fe Grade 0.08%<P<0.115%	0.00	0.00	Qingdao	0.00	0.00
	High Fe grade 0.115%<P<0.15%	4.00	0.00	Rizhao	0.00	0.00
	Low Fe Grade 0.08 < P < 0.15%	7.00	0.00	Tianjin	-25.00	0.00

CONTACT US

MMI Singapore Office Details: Level 28, Manulife Tower, 8 Cross Street Singapore. Tel: + 65 6850 7629 E: [jarek@mmiprices.com](mailto:jarek@mmiprices.com)

SMM Singapore Office Details: Level 28, Manulife Tower, 8 Cross Street Singapore. Tel: + 65 6850 7630 E: [service.en@smm.cn](mailto:service.en@smm.cn)

SMM Shanghai Office Details: 9th FL, Building 9, Lujiazui Software Park, No.20, Lane 91, Pudong, Shanghai Tel: +86 021 5155 0306 E: [service.en@smm.cn](mailto:service.en@smm.cn)

This information has been prepared by Metals Market Index ("MMI"). Use of the information presented here is at your sole risk, and any content, material and/or data presented or otherwise obtained through your use of the information in this document is at your own discretion and risk and you will be solely responsible for any damage to you personally or your company or organisation or business associates whatsoever which in anyway results from the use, reliance or application of such content material and/or information. Certain data has been obtained from various sources and any copyright existing in such data shall remain the property of the source. Except for the foregoing, MMI retains all copyright within this document. The copying or redistribution of any part of this document without the express written authority of MMI is forbidden.