

Daily Iron Ore Index Report

August 22, 2018

IRON ORE PORT STOCK INDEX (IOPI)

August 22 2018		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% VAT), USD/dry tonne ¹						
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low ²	High ²	Price	Change	Change %	MTD	YTD	Low ²	High ²
IOPI62	62% Fe Fines	512	5	1.0%	507	482	443	559	66.43	0.77	1.2%	65.50	65.41	61.36	77.89
IOPI58	58% Fe Fines	356	-11	-3.0%	356	335	304	376	45.02	-1.45	-3.1%	44.91	44.16	40.67	50.97
IOPI65	65% Fe Fines	693	5	0.7%	698	612	541	710	91.27	0.80	0.9%	91.73	84.04	75.83	97.10

IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

Week Ending August 17, 2018				RMB/tonne (excluding tax)				USD/tonne (excluding tax) ³			
Province	Region	Product	Basis	This week	Change %	Low ²	High ²	This week	Change %	Low ²	High ²
Hebei	Hanxing	66% Fe Concentrate	Dry	654	2.5%	579	682	95.05	1.9%	84.15	99.12
Hebei	Qian'an	65% Fe Concentrate	Dry	705	0.7%	630	710	102.46	0.1%	91.56	103.19
Liaoning	Anshan	65% Fe Concentrate	Wet	485	4.3%	445	550	70.49	3.7%	64.68	79.94
Shandong	Zibo	65% Fe Concentrate	Dry	725	5.1%	620	725	105.37	4.4%	90.11	105.37
Week Ending August 17, 2018				This week	Change %	Low ⁴	High ⁴	¹ Exchange rate applied: RMB/USD = 6.8271 ² Since March 1			
China Mines Concentrate Composite Index RMB/WT				589.76	2.6%	534.50	628.33	³ Weekly exchange rate applied: RMB/USD 6.8804 ⁴ Last 12 months			

MARKET COMMENTARY

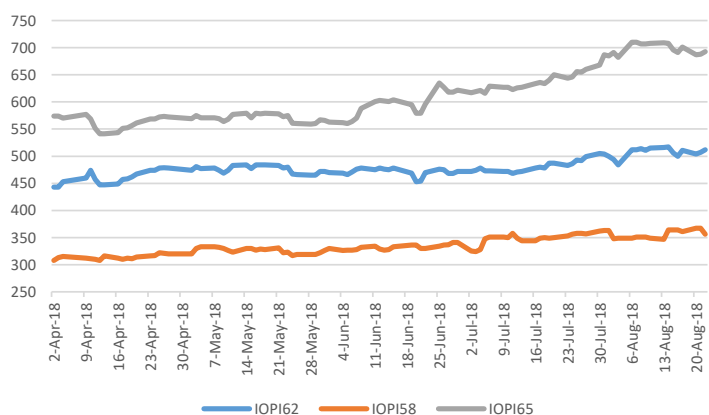
The iron ore DCE futures market closed lower at 3pm with declining physical enquiries. Trades slowed as mills purchased as required. Production cuts for the 2018-2019 winter season in Tangshan may be brought forward to September 1, 2018, and this weighed on purchasing enthusiasm across mills. Seaborne iron ore arrivals in Tangshan continued to fall, especially of high grade, and this could continue to support iron ore prices in Tangshan.

PLATFORM TRADES AND TENDERS

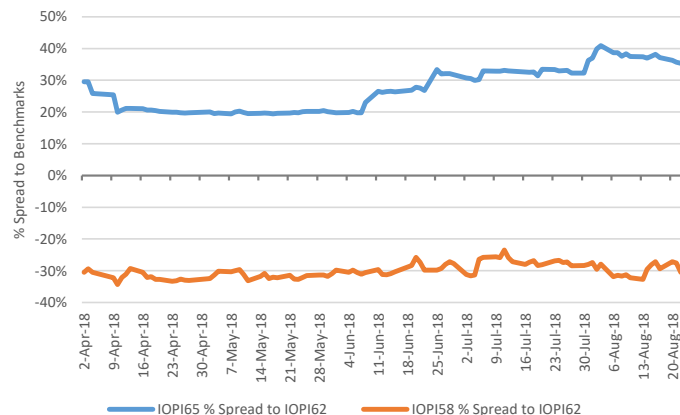
IRON ORE HIGH/LOW GRADE PREMIUM/DISCOUNT

August 22 2018		PORT STOCK INDEX (RMB/WT)	
Fe Content		Spread to IOPI62	% Spread to IOPI62
58% Fe Fines		-156	-30.47%
65% Fe Fines		181	35.35%

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



IRON ORE HIGH/LOW GRADE PREMIUM/DISCOUNT



IRON ORE FUTURES CONTRACTS

	DCE			SGX		
	22 Aug 3pm close			22 Aug 6pm		
Closing Date	I1901			Sep'18		
Contract		Change	Change %		Change	Change %
Closing Price	485.0	-9.0	-1.82%	66.31	-0.68	-1.02%
Vol traded ('000 lots)	111.47	-49.3	-30.69%	10.74	1.47	15.84%
Open positions ('000 lots)	78.62	-7.0	-8.22%	104.90	-1.12	-1.05%
Day Low	485.0	-5.0	-1.02%	66.31	-0.59	-0.88%
Day High	499.0	1.0	0.20%	67.27	-0.15	-0.22%

IRON ORE PORT INVENTORIES

Week Ending August 17, 2018 (million tonnes)				
Province	This week	Change %	Low ⁴	High ⁴
Jingtang	16.10	-3.59%	14.11	19.00
Qingdao	19.00	1.60%	15.60	19.97
Caofeidian	18.00	-1.10%	16.62	25.30
Tianjin	9.80	-2.97%	8.60	11.00
Rizhao	17.05	-1.96%	13.10	19.00
Total (35 Ports)	138.82	-0.96%	123.49	150.04

FREIGHT RATES

August 21, 2018		FREIGHT RATES - DRY BULK US\$/wet tonne				
Route	Designation	Change	Change %	Low ⁴	High ⁴	
W. Australia - Qingdao	C5	9.86	0.23	2.36%	5.109	10.002
Tubarao - Qingdao	C3	23.99	-0.11	-0.44%	12.705	24.76

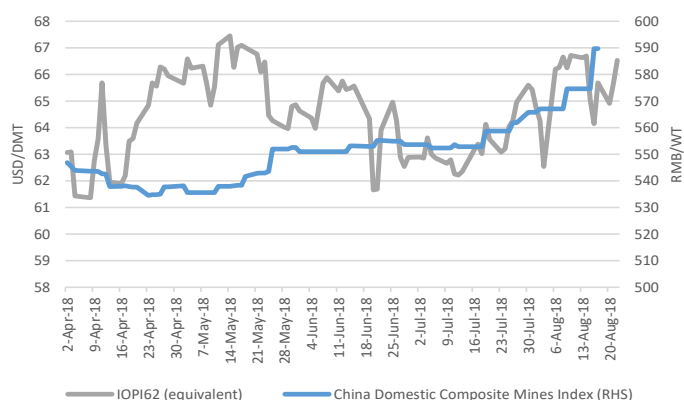
BLOOMBERG

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

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MMi BENCHMARK IRON ORE PRICES



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



IRON ORE BRAND SPOT PRICE ASSESSMENTS

August 22 2018	PORT STOCK INDEX (RMB/WT)		
	Price	Change	Diff to IOPI62
Newman Fines	489	5	-23
SIMEC Fines	444	5	-68
PB Fines	496	4	-16
Newman Fines	515	5	3
MAC Fines	489	5	-23
Jimblebar Blended Fines	456	4	-56
Carajas Fines	748	5	236
Brazilian SSF	519	5	7
Brazilian Blend Fines	539	5	27
RTX Fines	466	5	-46

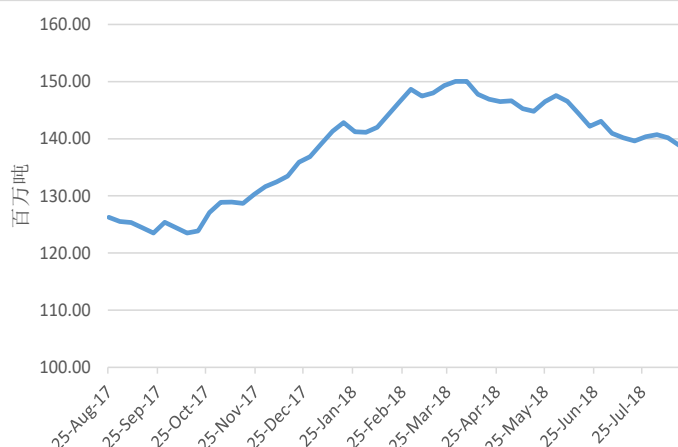
August 22 2018	PORT STOCK INDEX (RMB/WT)		
	Price	Change	Diff to IOPI58
SSF	296	-21	-60
FMG Blended Fines	350	-11	-6
Robe River	332	-23	-24
Western Fines	301	-11	-55
Atlas Fines	283	-15	-73
Yandi	336	-11	-20

AVERAGE IRON ORE BRAND SPECIFICATIONS FOR PORT STOCK SALES

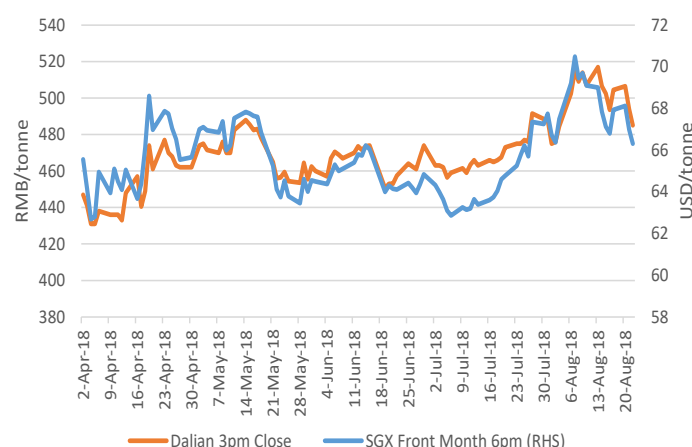
August 22 2018	SPECIFICATIONS APPLIED FOR 62% BRAND ASSESSMENTS				
	Fe	Alumina	Silica	Phos	Moisture
Roy Hill	61.00%	2.20%	4.50%	0.055%	8.00%
SIMEC Fines	60.00%	2.30%	6.30%	0.060%	6.00%
PB Fines	61.63%	2.39%	3.62%	0.100%	9.05%
Newman Fines	62.43%	2.38%	4.19%	0.080%	7.51%
MAC Fines	61.28%	2.25%	4.67%	0.090%	7.81%
Jimblebar Blended Fines	61.30%	2.83%	4.61%	0.100%	6.92%
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	62.94%	1.38%	4.82%	0.070%	8.55%
RTX Fines	61.00%	3.10%	4.50%	0.135%	7.50%

August 22 2018	SPECIFICATIONS APPLIED FOR 58% BRAND ASSESSMENTS				
	Fe	Alumina	Silica	Phos	Moisture
SSF	56.52%	3.05%	6.25%	0.050%	9.13%
FMG Blended Fines	58.34%	2.70%	5.82%	0.070%	7.17%
Robe River	56.71%	3.11%	5.11%	0.030%	8.69%
Western Fines	57.61%	2.92%	6.90%	0.060%	7.55%
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



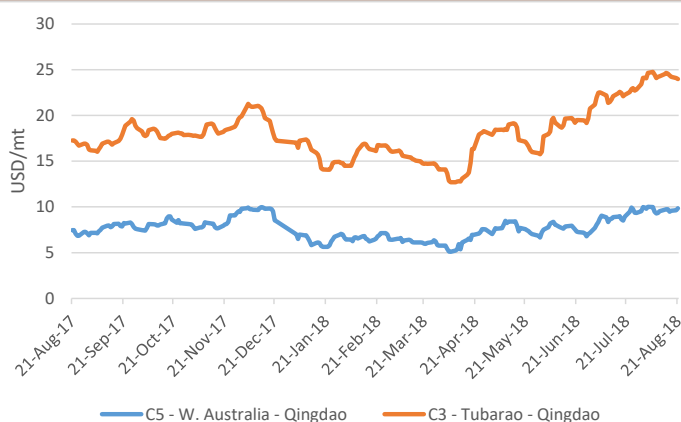
FUTURE TRADING—FRONT MONTH CLOSING PRICE



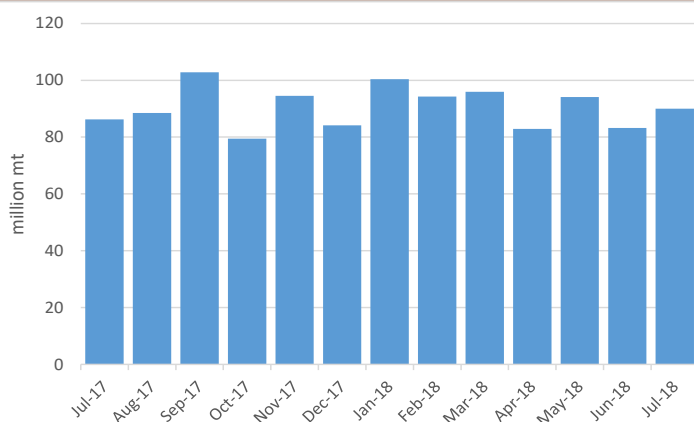
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DRY BULK FREIGHT RATES



TOTAL CHINA IRON ORE IMPORT VOLUMES



Steel Spot Market Prices - China

Steel Spot Market RMB/tonne

Product	17/8/2018	Change	Change %
ReBar HRB400 φ18mm	4,491.0	126	2.89%
Wirerod Q300 φ6.5mm	4,739.0	120	2.60%
HRC Q235/SS400 5.5mm*1500*C	4,342.0	40	0.93%
CRC SPCC/ST12 1.0mm*1250*2500	4,826.0	26	0.54%
Medium & Heavy Plate Q235B 20mm	4,460.0	20	0.45%
GI ST02Z 1.0mm*1000*C	5,370.0	15	0.28%
Billet Q235 150*150mm	4,040.0	67	1.69%

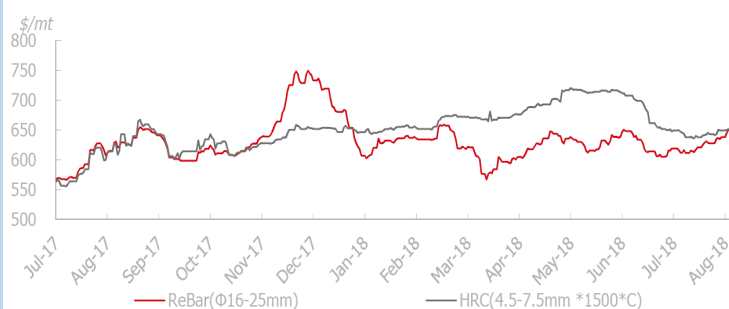
CHINESE STEEL EXPORT PRICES

China Export Prices USD/tonne

Product	Specification	Export tax (+)/Vate rebate (-)	Change
		17/8/2018	
Rebar	BS4449 460B 12-25mm, + chrome	-13%	560 15
Wire Rod	SAE1008 6.5-10mm +chrome	-9%	575 0
Hot-rolled coil	SS400/Q235 4.0-10.0mm	-9%	580 0
Cold-rolled coil	SPCC 1.0mm	-13%	620 0
Medium & Heavy plate	A-level Ship 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 - 0.03); 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

Rebar and HRC spot prices



Source: SMM

CHINESE STEEL INVENTORIES

Steel Inventories³ (unit: 1000 tonnes)

Product	17/8/2018	10/8/2018	Change	Change %
Rebar	4,517	4,531	-14	-0.31%
Wirerod	1,271	1,236	35	2.83%
Hot-rolled Coil	2,238	2,217	21	0.95%
Medium & Thick Plate	972	959	13	1.36%
Cold-rolled Coil	1,179	1,181	-2	-0.17%
Total	10,176	10,124	52	0.51%

³ 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 exluding tax	65.69	-1.03	MMI index for 22nd June
Coke	2,270	100	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	2,280	0	steel scrap (6mm) in Zhangjiagang, exl. tax
Billet Cost	2,936	48	Q234, incl. tax
Rebar cost - Blast furnace	3,207	52	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	1,103	98	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	3,263	47	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	1,077	-7	based on Shanghai prices, incl. tax

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

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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	
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%	15.00	0.00	Bayuquan	-35.00	0.00
	High Grade Fe 63 - 64%	64.00	0.00	Beilun	5.00	0.00
	High Grade Fe 64 - 65%	71.00	0.00	Caofeidian	-20.00	0.00
	High Grade Fe 65 - 65.5%	71.00	0.00	Dalian	-20.00	0.00
	Low Grade Fe	15.00	0.00	Fangcheng	-5.00	0.00
1% Alumina	High Fe Grade Al <2.25%	37.00	0.00	Jiangyin	-30.00	0.00
	High Fe Grade Al 2.25-4%	22.00	0.00	Jingtang	-20.00	0.00
	Low Fe Grade	20.00	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%	20.00	0.00	Lianyungang	0.00	0.00
	High Fe Grade Si <6.5 - 9%	20.00	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%	1.00	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%	4.00	0.00	Tianjin	-25.00	0.00

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