

Daily Iron Ore Index Report

August 28, 2018

IRON ORE PORT STOCK INDEX (IOPI)

August 28 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	502	3	0.6%	506	483	443	559	65.27	0.85	1.3%	65.44	65.40	61.36	77.89
IOPI58	58% Fe Fines	383	7	1.9%	360	337	304	376	48.88	1.28	2.7%	45.40	44.28	40.67	50.97
IOPI65	65% Fe Fines	707	24	3.5%	697	615	541	710	93.49	3.90	4.4%	91.55	84.32	75.83	97.10

IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

Week Ending August 24, 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	646	-1.2%	579	682	94.33	-0.8%	84.54	99.58
Hebei	Qian'an	65% Fe Concentrate	Dry	765	8.5%	630	765	111.70	9.0%	91.99	111.70
Liaoning	Anshan	65% Fe Concentrate	Wet	495	2.1%	445	550	72.28	2.5%	64.98	80.31
Shandong	Zibo	65% Fe Concentrate	Dry	725	0.0%	620	725	105.86	0.5%	90.53	105.86
Week Ending August 24, 2018				This week	Change %	Low ⁴	High ⁴				
China Mines Concentrate Composite Index RMB/WT				607.33	3.0%	534.50	628.33				

¹ Exchange rate applied: RMB/USD = 6.8052 ² Since March 1
³ Weekly exchange rate applied: RMB/USD 6.8485 ⁴ Last 12 months

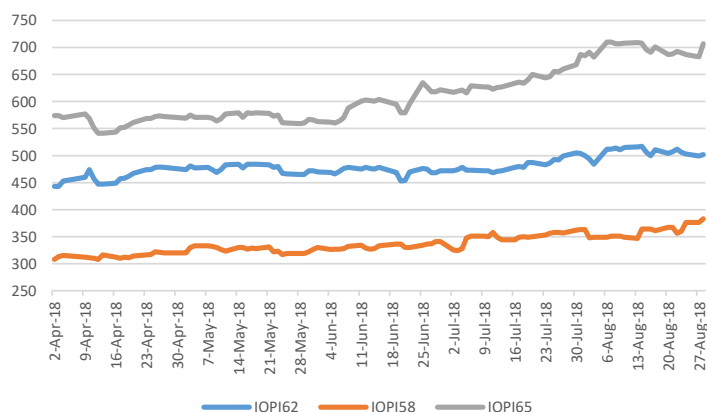
MARKET COMMENTARY

Physical spot iron ore quotes for 62% fines were relatively stable this morning, and firmed up as the DCE closed. Traders in Shandong refused to sell PB Fines with prices below 475 yuan/mt. In Tangshan, PB Fines traded around 505 yuan/mt. Most traders said that, though iron ore prices do not appear bullish, growing prices of rebar could provide some support. Iron ore prices could remain volatile in the short term

PLATFORM TRADES AND TENDERS

61% Fe Fines trades at US\$64.05 for 170,000t 11—20 Sep LAYCAN
62% Fe Fines trades at US\$65.20 for 190,000t 20—29 Sep LAYCAN
61% Fe Fines trades at US\$64.15 for 190,000t 23 Sept —02 Oct LAYCAN

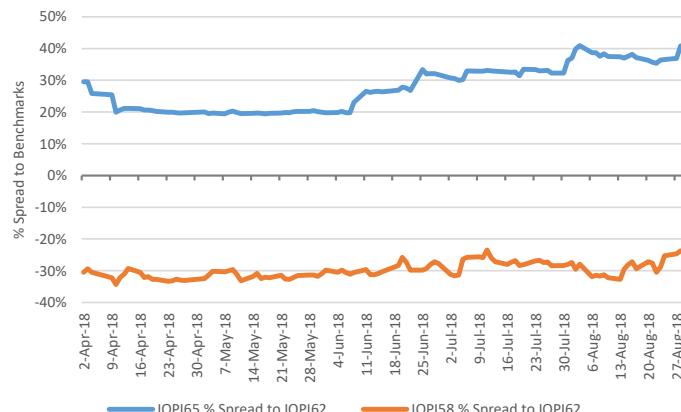
IRON ORE PORT INDEX, FOT QINGDAO (RMB/WT)



IRON ORE HIGH/LOW GRADE PREMIUM/DISCOUNT

August 28 2018		PORT STOCK INDEX (RMB/WT)	
Fe Content		Spread to IOPI62	% Spread to IOPI62
58% Fe Fines		-119	-23.71%
65% Fe Fines		205	40.84%

IRON ORE HIGH/LOW GRADE PREMIUM/DISCOUNT



IRON ORE FUTURES CONTRACTS

Closing Date	DCE			SGX		
	28 Aug 3pm close			28 Aug 6pm		
Contract	I1901	Change	Change %	Sep'18	Change	Change %
Closing Price	482.0	3.0	0.63%	66.03	0.32	0.49%
Vol traded ('000 lots)	48.56	-51.1	-51.25%	6.58	-6.18	-48.42%
Open positions ('000 lots)	70.17	-6.6	-8.61%	100.29	-0.75	-0.74%
Day Low	481.0	4.0	0.84%	65.59	0.00	0.00%
Day High	484.5	-5.5	-1.12%	67.15	0.40	0.60%

FREIGHT RATES

August 24, 2018		FREIGHT RATES - DRY BULK US\$/wet tonne				
Route	Designation	Change	Change %	Low ⁴	High ⁴	
W. Australia - Qingdao	C5	9.34	-0.09	-0.91%	5.109	10.002
Tubarao - Qingdao	C3	22.89	-0.21	-0.89%	12.705	24.76

IRON ORE PORT INVENTORIES

Week Ending August 24, 2018 (million tonnes)				
Province	This week	Change %	Low ⁴	High ⁴
Jingtang	15.75	-2.17%	14.11	157.50
Qingdao	18.90	-0.53%	15.60	19.97
Caofeidian	18.00	0.00%	16.62	25.30
Tianjin	10.40	6.12%	8.60	11.00
Rizhao	16.70	-2.05%	13.10	19.00
Total (35 Ports)	137.48	-0.97%	123.49	150.04

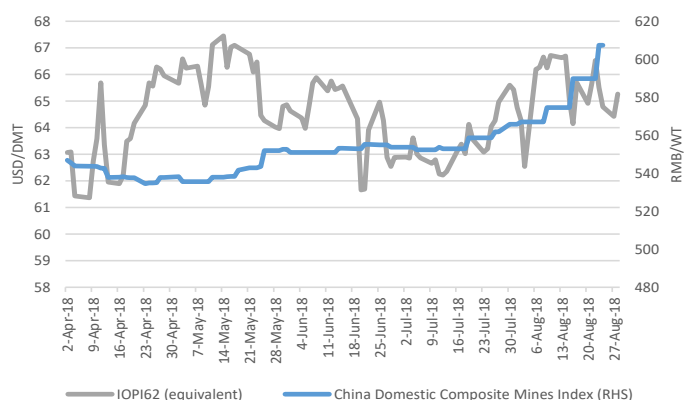
BLOOMBERG

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

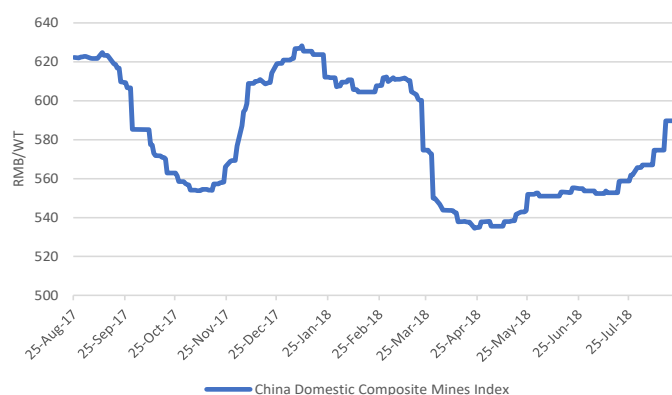
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MMi BENCHMARK IRON ORE PRICES



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

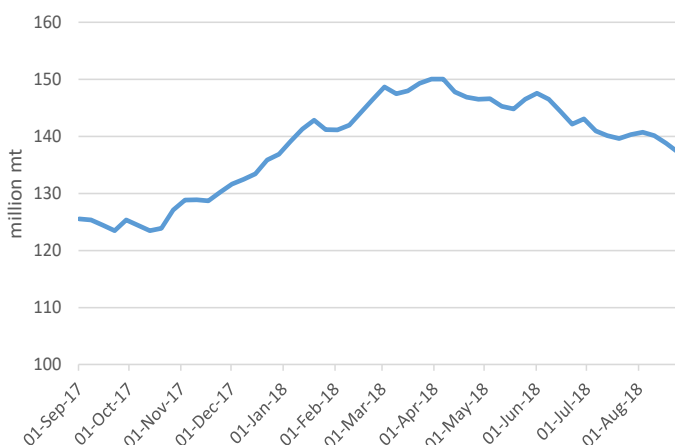


IRON ORE BRAND SPOT PRICE ASSESSMENTS

August 28 2018	PORT STOCK INDEX (RMB/WT)		
	Price	Change	Diff to IOPI62
Newman Fines	479	3	-23
SIMEC Fines	434	3	-68
PB Fines	487	2	-15
Newman Fines	505	3	3
MAC Fines	479	3	-23
Jimblebar Blended Fines	448	3	-54
Carajas Fines	769	30	267
Brazilian SSF	526	16	24
Brazilian Blend Fines	540	12	38
RTX Fines	459	3	-43

August 28 2018	PORT STOCK INDEX (RMB/WT)		
	Price	Change	Diff to IOPI58
SSF	300	6	-83
FMG Blended Fines	373	7	-10
Robe River	340	7	-43
Western Fines	308	7	-75
Atlas Fines	297	7	-86
Yandi	371	7	-12

TOTAL IRON ORE INVENTORIES AT CHINA PORTS

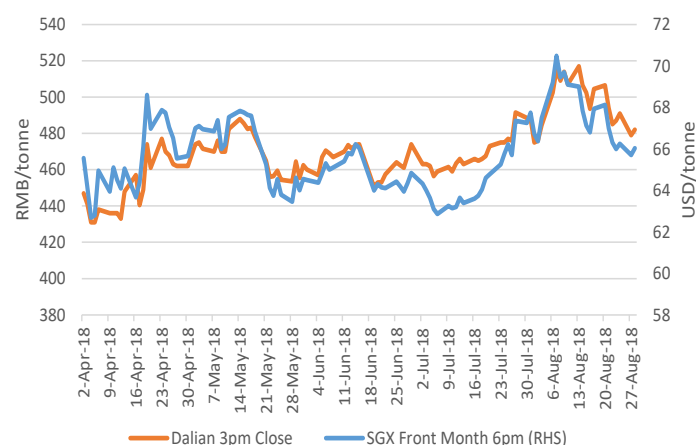


AVERAGE IRON ORE BRAND SPECIFICATIONS FOR PORT STOCK SALES

August 28 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	61.62%	2.39%	3.63%	0.100%	8.99%
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 28 2018	SPECIFICATIONS APPLIED FOR 58% BRAND ASSESSMENTS				
	Fe	Alumina	Silica	Phos	Moisture
SSF	56.49%	3.06%	6.26%	0.050%	9.17%
FMG Blended Fines	58.39%	2.71%	5.83%	0.070%	7.16%
Robe River	56.74%	3.14%	5.05%	0.030%	8.75%
Western Fines	57.70%	2.81%	7.38%	0.060%	7.42%
Atlas Fines	56.59%	2.55%	7.14%	0.080%	8.46%
Yandi	57.19%	1.40%	6.39%	0.040%	8.85%

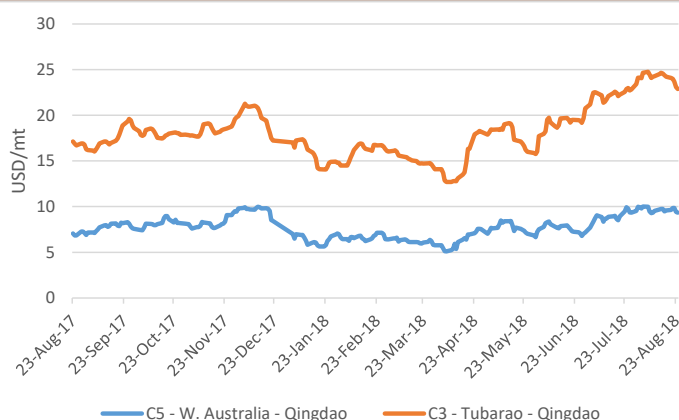
FUTURE TRADING—FRONT MONTH CLOSING PRICE



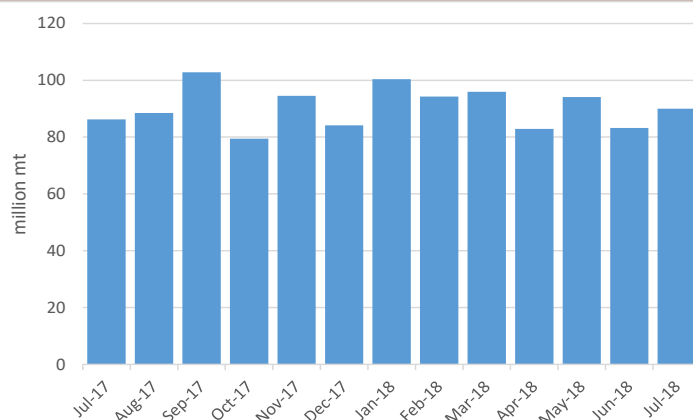
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DRY BULK FREIGHT RATES



TOTAL CHINA IRON ORE IMPORT VOLUMES

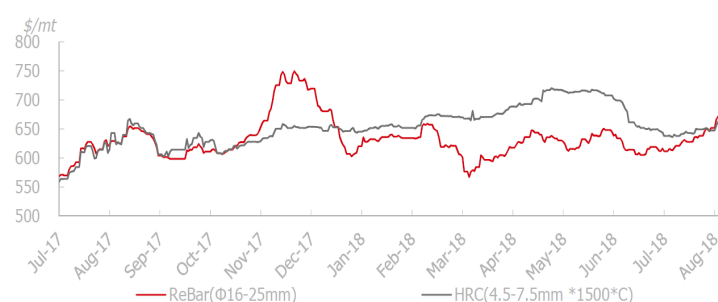


Steel Spot Market Prices - China

Steel Spot Market RMB/tonne

Product	24/8/2018	Change	Change %
ReBar HRB400 φ18mm	4,546.0	55	1.22%
Wirerod Q300 φ6.5mm	4,785.0	46	0.97%
HRC Q235/SS400 5.5mm*1500*C	4,404.0	62	1.43%
CRC SPCC/ST12 1.0mm*1250*2500	4,916.0	90	1.86%
Medium & Heavy Plate Q235B 20mm	4,523.0	63	1.41%
GI ST02Z 1.0mm*1000*C	5,400.0	30	0.56%
Billet Q235 150*150mm	4,050.0	10	0.25%

Rebar and HRC spot prices



Source: SMM

CHINESE STEEL EXPORT PRICES

China Export Prices USD/tonne

Product	Specification	Export tax (+)/Vate rebate (-)	Change
		24/8/2018	
Rebar	BS4449 460B 12-25mm, + chrome	-13%	565 5
Wire Rod	SAE1008 6.5-10mm +chrome	-9%	580 5
Hot-rolled coil	SS400/Q235 4.0-10.0mm	-9%	575 -5
Cold-rolled coil	SPCC 1.0mm	-13%	615 -5
Medium & Heavy plate	A-level Ship plate 12-25mm	0%	610 0
Galvanised	ST02Z/SGCC 1.0mm	-13%	685 -5

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 Inventories³ (unit: 1000 tonnes)

Product	24/8/2018	17/8/2018	Change	Change %
Rebar	4,462	4,517	-55	-1.22%
Wirerod	1,309	1,271	38	2.99%
Hot-rolled Coil	2,221	2,238	-17	-0.76%
Medium & Thick Plate	964	972	-8	-0.82%
Cold-rolled Coil	1,171	1,179	-8	-0.68%
Total	10,127	10,176	-49	-0.48%

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 excluding tax	64.78	-0.91	MMI index for 22nd June
Coke	2,390	120	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	2,380	100	steel scrap (6mm) in Zhangjiagang, excl. tax
Billet Cost	3,000	64	Q234, incl. tax
Rebar cost - Blast furnace	3,274	67	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	1,086	-17	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	3,328	65	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	1,082	5	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

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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	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.
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	For more details on MMi's iron ore methodology please download the guide published on our website at: <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
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%	74.00	10.00	Beilun	5.00	0.00
	High Grade Fe 64 - 65%	74.00	3.00	Caofeidian	-25.00	0.00
	High Grade Fe 65 - 65.5%	74.00	3.00	Dalian	-20.00	0.00
	Low Grade Fe	21.00	0.00	Fangcheng	-5.00	0.00
1% Alumina	High Fe Grade Al <2.25%	50.00	10.00	Jiangyin	-30.00	0.00
	High Fe Grade Al 2.25-4%	19.00	0.00	Jingtang	-25.00	0.00
	Low Fe Grade	35.00	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%	2.00	0.00	Rizhao	0.00	0.00
	Low Fe Grade 0.08 < P < 0.15%	2.00	0.00	Tianjin	-25.00	0.00

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