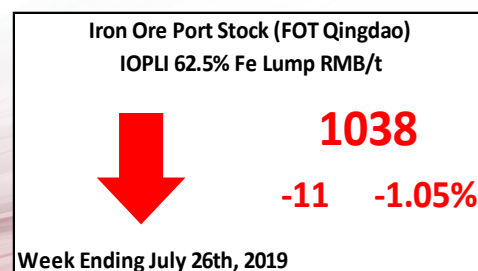
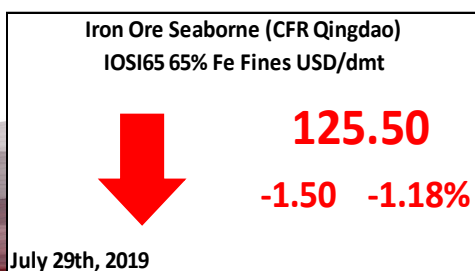
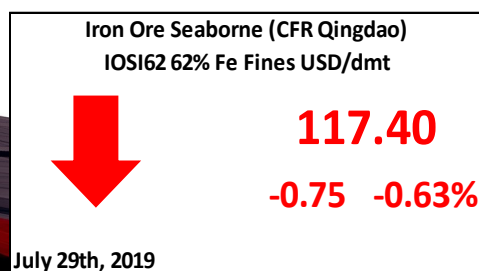
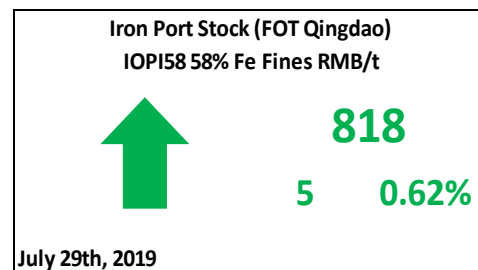
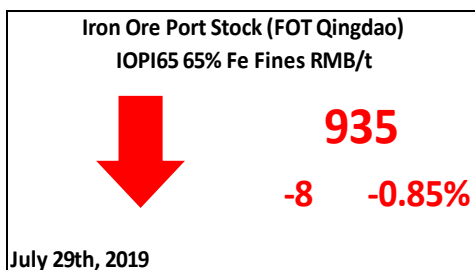
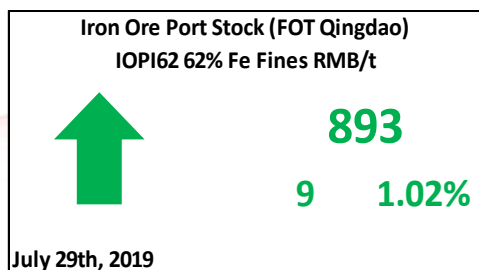


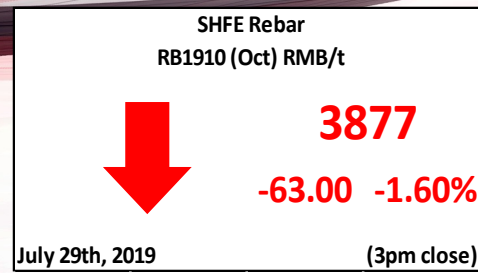
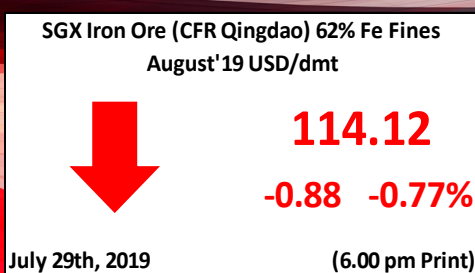
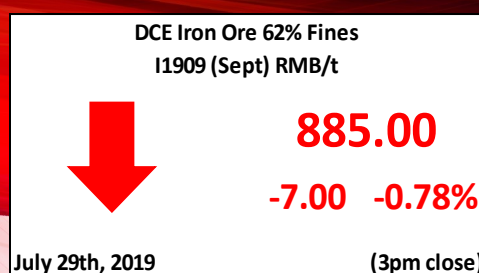


MMi Dashboard

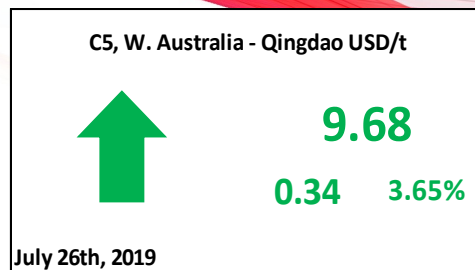
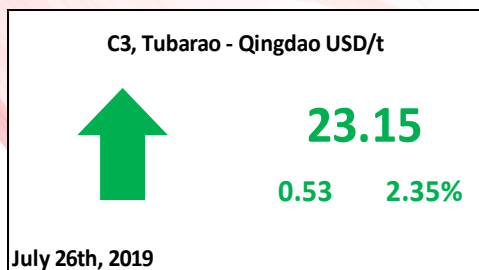
Iron Ore Price Indices



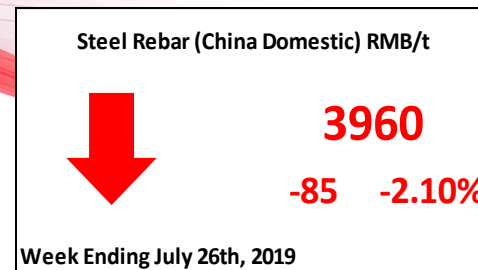
Exchange Traded Contracts



Freight Rates



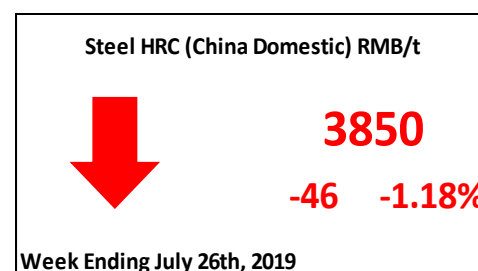
Steel Price



Inventory Levels



Steel Price



IRON ORE PORT STOCK INDEX (IOPI)

July 29th, 2019		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% 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	893	9	1.0%	910	716	484	928	120.90	1.21	1.0%	123.37	96.38	62.54	126.12
IOPI58	58% Fe Fines	818	5	0.6%	808	624	347	823	111.63	0.66	0.6%	110.34	83.99	43.55	112.44
IOPI65	65% Fe Fines	935	-8	-0.8%	955	791	654	992	126.77	-1.17	-0.9%	129.77	106.89	85.47	135.34

IRON ORE SEABORNE INDEX (IOSI)

July 29th, 2019		CFR Qingdao, USD/dry tonne							MARKET COMMENTARY			
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low ³	High ³				
IOSI62	62% Fe Fines	117.40	-0.75	-0.63%	120.92	95.75	62.95	127.50				
IOSI65	65% Fe Fines	125.50	-1.50	-1.18%	129.80	109.26	83.20	137.95				

SMM reports that the banning of iron ore deliveries from Jingtang and Caofeidian ports will be lifted today at 20:00PM, so it is believed that mills from Tangshan will be looking to buy this week. Physical iron ore port stock quotes rose 5-10yuan/mt, but total transactions were low due to the uncertainty of August production cuts. PB Fines between Shandong and Tangshan market have a price spread of 15yuan/mt, while port stock inventory and the recent arrivals in Tangshan were unlikely to fall. However PB Fines inventory from these two ports are down on June. In the Shandong market, according to SMM, PB Fines inventory, especially that in Rizhao, increased 92.8% or 470,000 mt from late June.

IRON ORE PORT LUMP INDEX (IOPLI)

Week Ending July 26th, 2019		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% VAT), USD/dry tonne ⁴						
Index	Fe Content	Price	W-o-W	Change %	MTD	YTD	Low ³	High ³	Price	W-o-W	Change %	MTD	YTD	Low ³	High ³
IOPLI62	62.5% Fe Lump	1038	-11	-1.0%	1046	905	617	1051	131.84	-1.57	-1.18%	132.99	115.87	77.55	133.81

IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

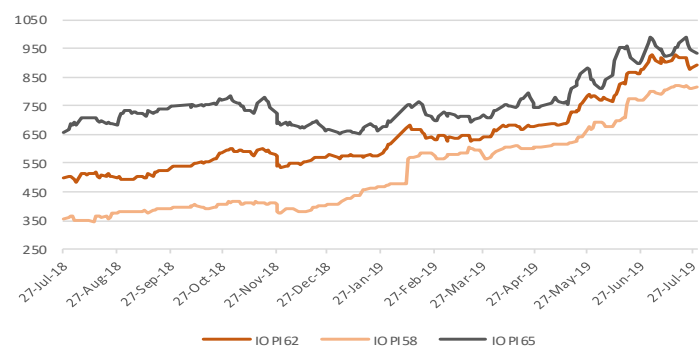
Week Ending July 26th, 2019				RMB/tonne (excluding tax) ⁴				USD/tonne (excluding tax) ⁴			
Province	Region	Product	Basis	This week	Change %	Low ²	High ²	This week	Change %	Low ²	High ²
Hebei	Hanxing	66% Fe Concentrate	Dry	1026	0.7%	610	1032	149.14	0.58%	91.97	150.03
Hebei	Qian'an	65% Fe Concentrate	Dry	950	0.0%	690	950	138.09	-0.10%	100.26	138.24
Liaoning	Anshan	65% Fe Concentrate	Wet	720	2.1%	465	745	104.66	2.02%	68.21	104.66
Shandong	Zibo	65% Fe Concentrate	Dry	1040	0.0%	660	1040	151.18	-0.10%	99.75	151.33

Week Ending July 26th, 2019

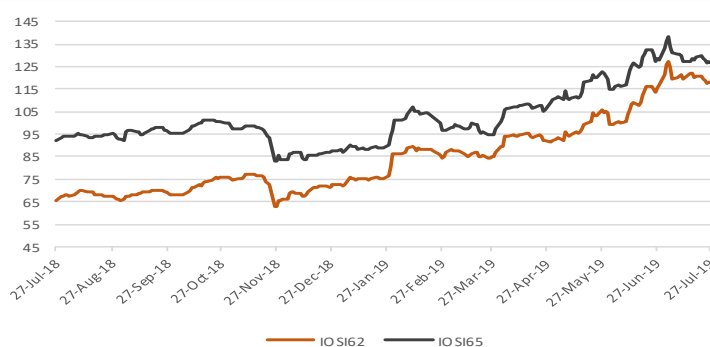
	This week	Change %	Low ²	High ²
China Mines Concentrate Composite Index RMB/WT	859.50	1.0%	558.71	859.50

¹ Exchange rate applied: RMB/USD = 6.8821 ² Last 12 months ³ Since June 1
⁴ Weekly exchange rate applied: RMB/USD 6.8794

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 29th, 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	910	910	716	87.09	85.37	98.40	111.42	123.37	123.37	96.38
IOPI58	58% Fe Fines	583	600	637	726	808	808	624	75.22	77.49	86.39	98.60	110.34	110.34	83.99
IOPI65	65% Fe Fines	714	753	812	901	955	955	791	98.08	95.78	110.00	121.97	129.77	129.77	106.89

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

July 29th, 2019		CFR Qingdao, USD/dry tonne							FREIGHT RATES						
Index	Fe Content	March	April	May	June	MTD	QTD	YTD	FREIGHT RATES - DRY BULK US\$/wet tonne						
									Route	Designation	Change	Change %	Low ²	High ²	
IOSI62	62% Fe Fines	86.18	93.42	98.68	108.57	120.92	120.92	95.75	W. Australia - Qingdao	C5	9.68	0.34	3.65%	4.39	11.15
IOSI65	65% Fe Fines	97.22	106.75	115.53	124.49	129.80	129.80	109.26	Tubarao - Qingdao	C3	23.15	0.53	2.35%	11.61	27.52

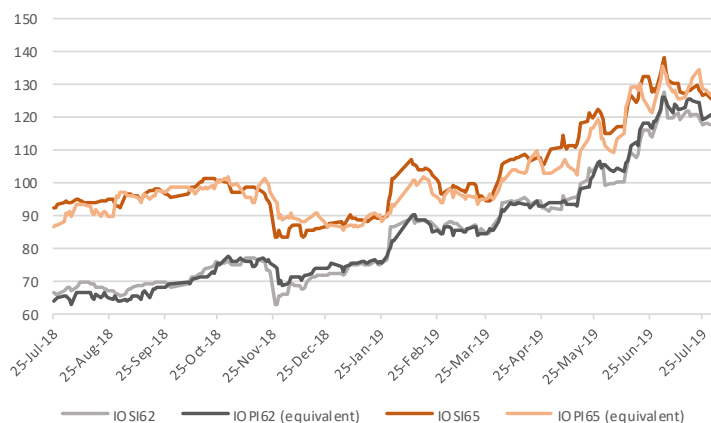
IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending July 26th, 2019		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% VAT), USD/dry tonne ¹						
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	1046	1046	905	99.57	111.03	117.12	128.00	132.99	132.99	115.87

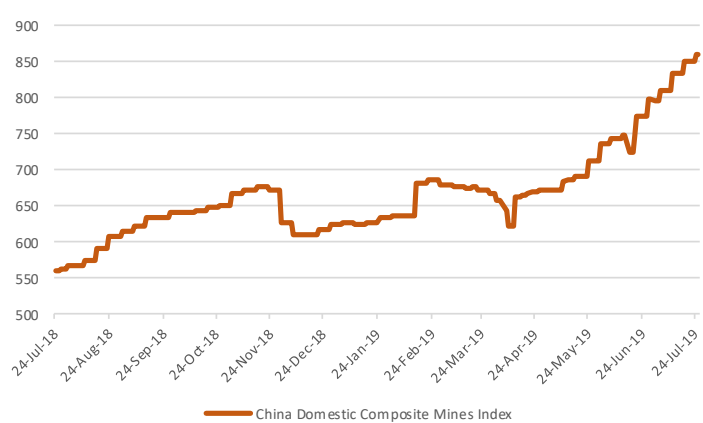
IRON ORE INDEX PREMIUMS/DISCOUNTS

July 29th, 2019				PORT STOCK INDEX (RMB/WT)				July 29th, 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	-75		-8.40%		IOSI65	65% Fe Fines	8.10		6.90%					
IOPI65	65% Fe Fines	42		4.70%											

IRON ORE INDEX COMPARISONS (USD/DMT)



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



IRON ORE BRAND SPOT PRICE ASSESSMENTS

July 29th, 2019	PORT STOCK INDEX (RMB/WT)			July 29th, 2019	SEABORNE INDEX (USD/DMT)		
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	843	9	-50	Roy Hill	114.95	-0.74	-2.45
SIMEC Fines	773	10	-120	SIMEC Fines	113.20	-0.74	-4.20
PB Fines	877	9	-16	PB Fines	116.90	-0.66	-0.50
Newman Fines	898	9	5	Newman Fines	118.51	-0.76	1.11
MAC Fines	856	9	-37	MAC Fines	113.10	-0.64	-4.30
Jimblebar Blended Fines	845	8	-48	Jimblebar Blended Fines	107.30	-0.39	-10.10
Carajas Fines	941	-10	48	Carajas Fines	124.66	-2.04	7.26
Brazilian SSF	785	1	-108	Brazilian SSF	117.71	-1.06	0.31
Brazilian Blend Fines	858	3	-35	Brazilian Blend Fines	118.59	-0.93	1.19
RTX Fines	858	7	-35	RTX Fines	110.80	-0.54	-6.60
West Pilbara Fines	840	9	-53	West Pilbara Fines	114.15	-0.74	-3.25

July 29th, 2019	PORT STOCK INDEX (RMB/WT)		
	Price	Change	Diff to IOPI58
SSF	738	-1	-80
FMG Blended Fines	820	5	2
Robe River	744	5	-74
Western Fines	760	-9	-58
Atlas Fines	746	-6	-72
Yandi	812	-9	-6

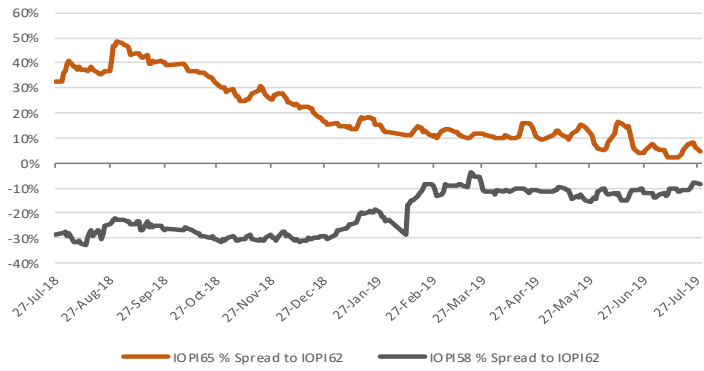
IRON ORE INDEX NORMALISATION DIFFERENTIALS

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%	5.00	0.00	1% Fe	High Grade Fe 60 - 63%	1.50	0.00
	High Grade Fe 63 - 64%	13.00	-2.00		High Grade Fe 63 - 64%	1.75	-0.25
	High Grade Fe 64 - 65%	13.00	-2.00		High Grade Fe 64 - 65%	1.75	-0.25
	High Grade Fe 65 - 65.5%	13.00	-2.00		High Grade Fe 65 - 65.5%	1.75	-0.25
1% Alumina	Low Grade Fe	22.00	0.00	1% Alumina	High Fe Grade Al <2.25%	1.25	-0.25
	High Fe Grade Al <2.25%	10.00	-7.00		High Fe Grade Al 2.25-4%	1.00	-0.25
	High Fe Grade Al 2.25-4%	8.00	2.00				
	Low Fe Grade Al <2.25%	31.00	-10.00				
1% Silica	Low Fe Grade Al 2.25-4%	49.00	0.00	1% Silica	High Fe Grade Si <4%	0.50	-0.25
	High Fe Grade Si <4%	1.00	-3.00		High Fe Grade Si 4 - 6.5%	0.50	0.00
0.01% Phosphorus	High Fe Grade Si 4-6.5%	55.00	0.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	1.00	0.00
	Low Fe Grade	19.00	7.00		High Fe Grade 0.115%<P<0.15%	0.75	0.00
	High Fe Grade 0.09%<P<0.115%	0.00	0.00		Low Fe Grade 0.09%<P<0.1%	0.00	0.00

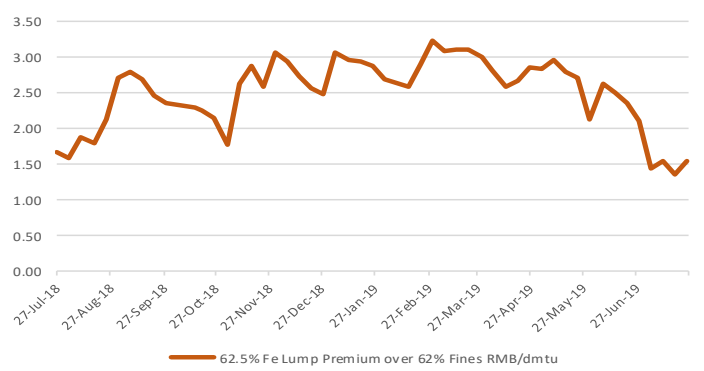
Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

Port	Value	Change	Port	Value	Change	Port	Value	Change	Port	Value	Change
Bayuquan	-45.00	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	-10.00	0.00	Jingtang	-10.00	0.00	Majishan	0.00	0.00	Shekou	0.00	0.00
Dalian	-40.00	0.00	Lanqiao	0.00	0.00	Nantong	-20.00	0.00	Tianjin	-15.00	0.00

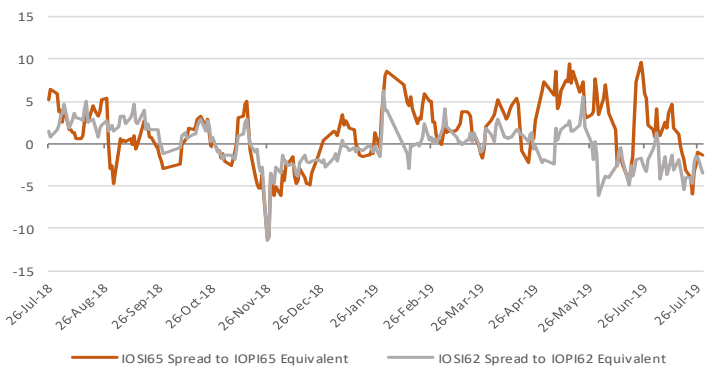
IRON ORE INDEX PREMIUMS/DISCOUNTS



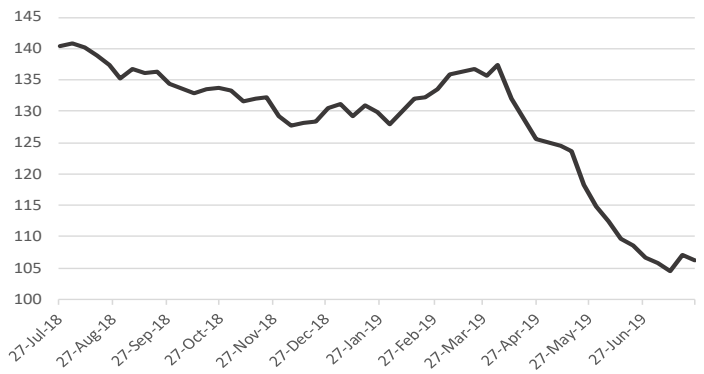
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



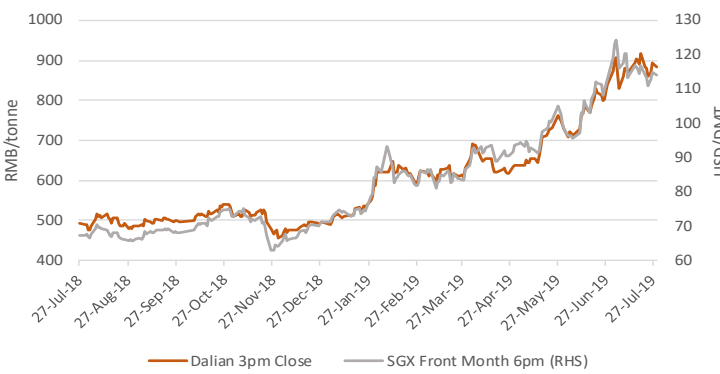
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



IRON ORE PORT INVENTORIES (MILLION TONNES)

Week Ending July 26th, 2019				
Province	This week	Change %	Low ²	High ²
Jingtang	11.70	1.56%	10.80	17.10
Qingdao	12.38	-3.81%	12.38	19.01
Caofeidian	14.60	-2.34%	14.48	20.10
Tianjin	6.39	-2.44%	6.39	10.48
Rizhao	12.72	2.75%	11.65	17.53
Total (35 Ports)	106.30	-0.75%	104.40	140.74

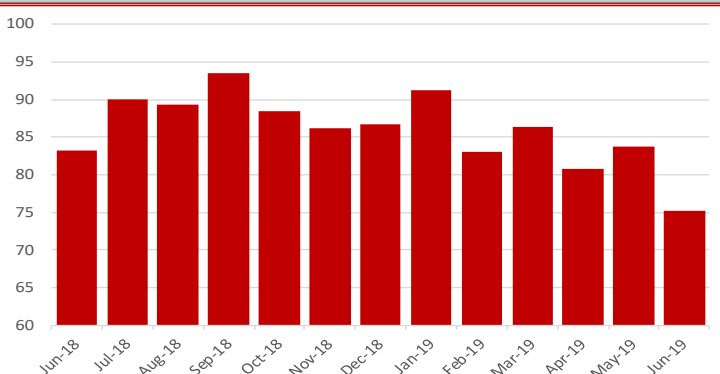
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	July 29th 3pm close			July 29th Feb 5.30 pm		
Contract	I1909	Change	Change %	Aug'19	Change	Change %
Closing Price	885.00	-7.0	-0.78%	114.12	-0.88	-0.77%
Vol traded ('000 lots)	53.75	-33.2	-38.16%	10.43	-2.56	-19.68%
Open positions ('000 lots)	98.86	-7.7	-7.27%	144.52	0.58	0.40%
Day Low	880.5	9.5	1.09%	113.73	1.67	1.49%
Day High	891.5	-0.5	-0.06%	114.80	-0.57	-0.49%

DRY BULK FREIGHT RATES (USD/MT)



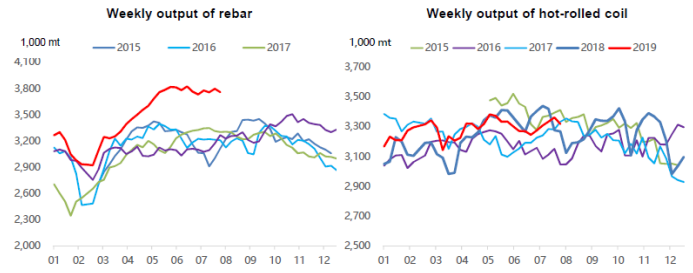
TOTAL CHINA IRON ORE IMPORT VOLUMES (MILLION TONNES)



STEEL SPOT MARKET PRICES—CHINA

Steel Spot Market RMB/tonne

Product	26/7/2019	Change	Change %
ReBar HRB400 φ18mm	3,960.0	-85	-2.10%
Wirerod Q300 φ6.5mm	4,220.0	-20	-0.47%
HRC Q235/SS400 5.5mm*1500*C	3,850.0	-46	-1.18%
CRC SPCC/ST12 1.0mm*1250*2500	4,240.0	37	0.88%
Medium & Heavy Plate Q235B 20mm	3,920.0	-26	-0.66%
GI ST02Z 1.0mm*1000*C	4,570.0	10	0.22%
Colour Coated Plate	7,000.0	100	1.45%



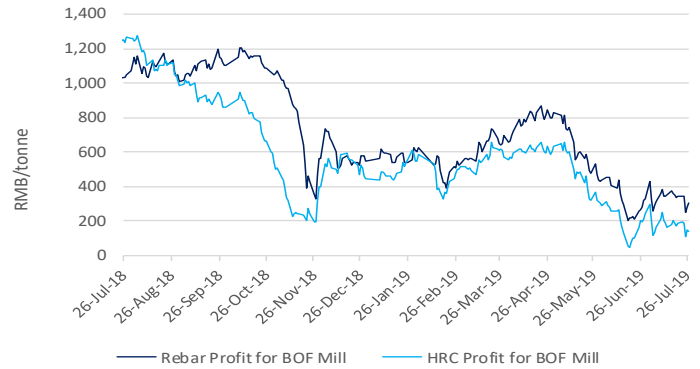
CHINESE STEEL MILL PROFITABILITY

SMM Tracking of Steel Mill P&L - Rebar and Hot-rolled Coil (RMB/tonne)

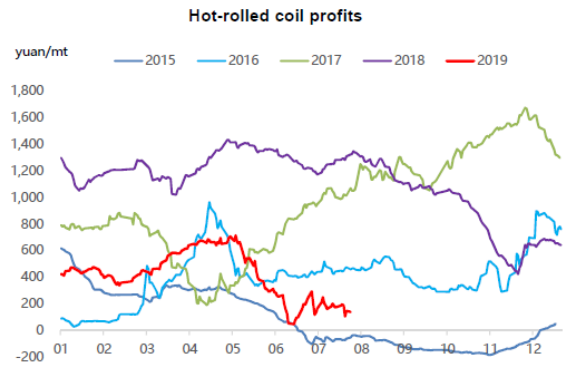
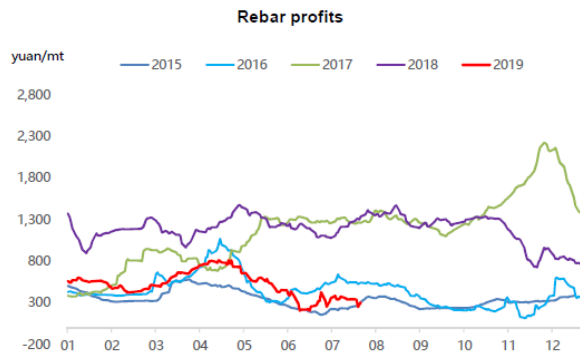
Category	Price	Change (WoW)	Note
MMi (Fe 62%), USD/mt excluding tax	117.50	-2.75	Mmi CFR Equivalent index for 1st Feb
Coke	2,010	100	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	2,370	0	steel scrap (6mm) in Zhangjiagang, excl. tax
Billet Cost	3,394	18	Q234, incl. tax
Rebar cost - Blast furnace	3,644	17	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	306	-37	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	3,710	18	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	122	-66	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

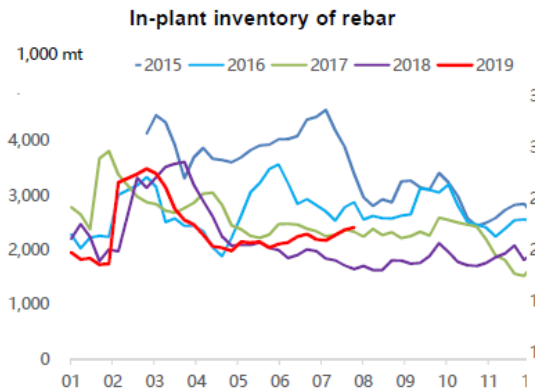
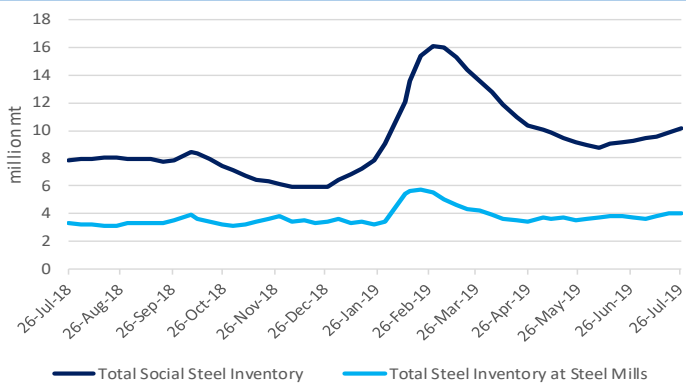
CHINESE STEEL MILL PROFITABILITY



CHINESE STEEL MILL PROFITABILITY



CHINESE STEEL INVENTORIES



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	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: www.mmiprices.com
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	

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					
July 29th, 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	61.49%	2.34%	3.86%	0.100%	9.38%	PB Fines 62%	62.00%	2.60%	4.30%	0.090%	10.00%
Newman Fines	62.57%	2.26%	3.96%	0.083%	7.82%	Newman Fines	62.80%	2.20%	4.30%	0.080%	6.40%
MAC Fines	60.87%	2.24%	4.65%	0.081%	7.57%	MAC Fines	61.00%	2.70%	4.70%	0.110%	9.30%
Jimblebar Blended Fines	60.89%	2.98%	4.42%	0.113%	7.34%	Jimblebar Blended Fines	59.50%	3.70%	5.80%	0.135%	8.30%
Carajas Fines	65.54%	1.23%	1.43%	0.068%	8.31%	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	63.00%	1.40%	4.80%	0.076%	8.44%	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%

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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the 1990s, the number of people in the UK who are employed in the public sector has increased from 10.5 million to 12.5 million, and the number of people in the public sector who are employed in health care has increased from 1.5 million to 2.5 million (Department of Health 2000).

There are a number of reasons for the increase in the number of people employed in the public sector. One reason is that the public sector has become a more important part of the economy. Another reason is that the public sector has become a more attractive place to work. A third reason is that the public sector has become a more important part of the welfare state.

The increase in the number of people employed in the public sector has led to a number of changes in the way that the public sector is organized. One change is that the public sector has become more decentralized. Another change is that the public sector has become more competitive. A third change is that the public sector has become more customer-oriented.

The changes in the way that the public sector is organized have led to a number of challenges for the public sector. One challenge is that the public sector has become more complex. Another challenge is that the public sector has become more expensive. A third challenge is that the public sector has become more difficult to manage.

The challenges facing the public sector have led to a number of reforms. One reform is that the public sector has been reorganized. Another reform is that the public sector has been privatized. A third reform is that the public sector has been restructured.

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