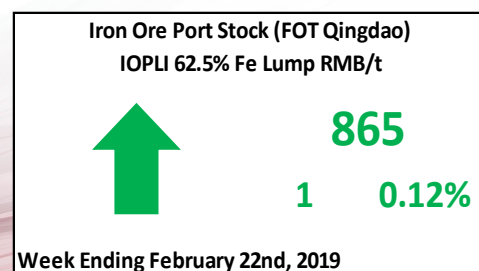
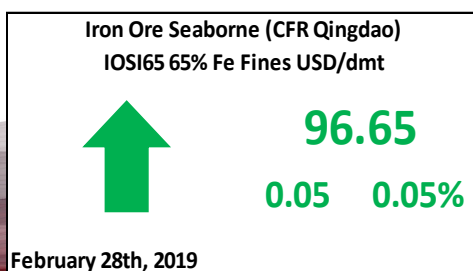
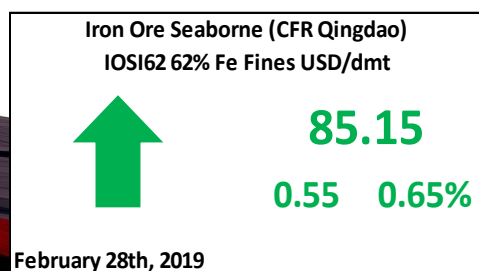
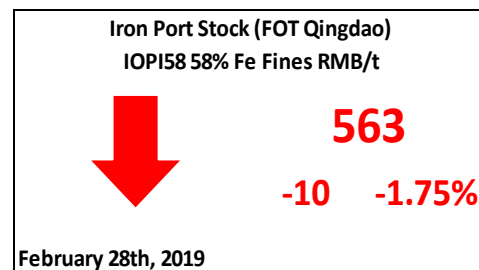
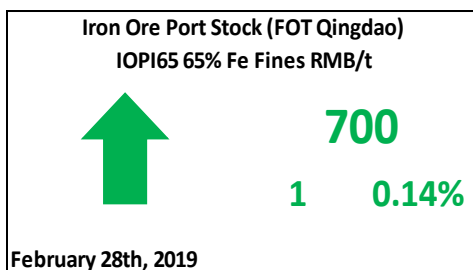
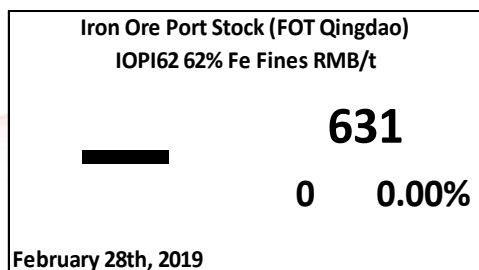


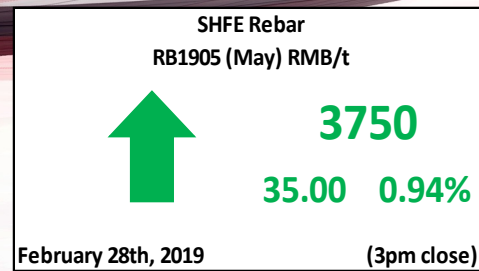
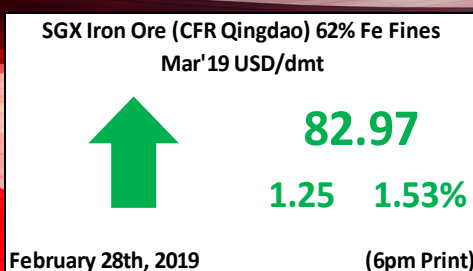
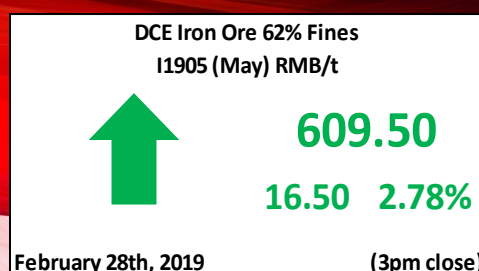


## MMi Dashboard

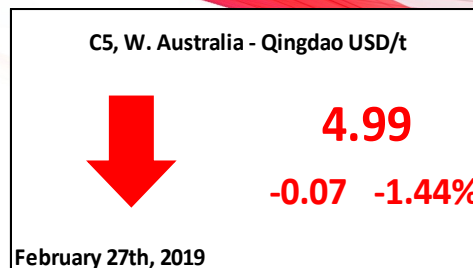
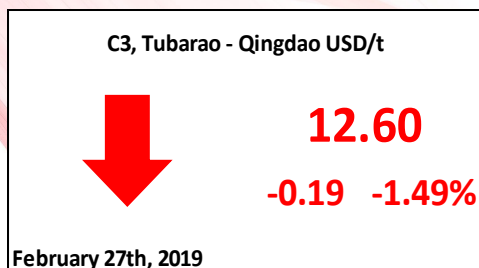
## Iron Ore Price Indices



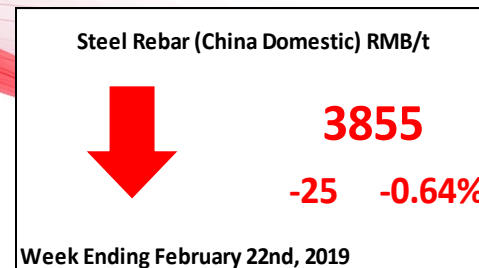
## Exchange Traded Contracts



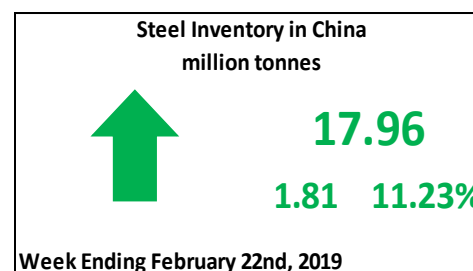
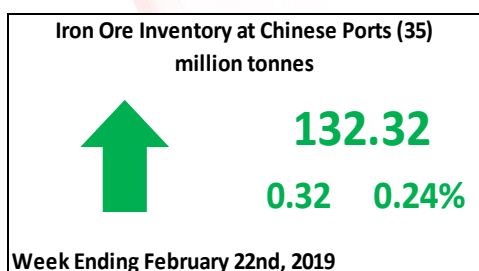
## Freight Rates



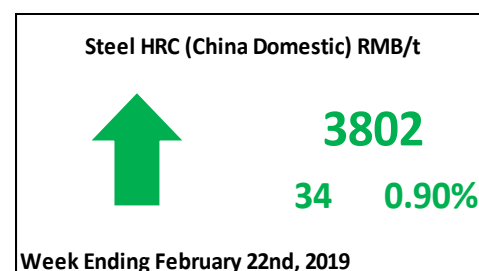
## Steel Price



## Inventory Levels



## Steel Price



## IRON ORE PORT STOCK INDEX (IOPI)

February 28th, 2019		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 %	February	YTD	Low <sup>2</sup>	High <sup>2</sup>	Price	Change	Change %	February	YTD	Low <sup>2</sup>	High <sup>2</sup>
IOPI62	62% Fe Fines	631	0	0.0%	654	610	443	681	84.46	-0.05	-0.1%	87.09	80.59	61.36	90.41
IOPI58	58% Fe Fines	563	-10	-1.7%	569	497	304	588	74.93	-1.45	-1.9%	75.22	64.98	40.67	78.17
IOPI65	65% Fe Fines	700	1	0.1%	733	696	541	784	94.12	0.08	0.1%	98.08	92.47	75.83	101.79

## IRON ORE SEABORNE INDEX (IOSI)

## MARKET COMMENTARY

February 28th, 2019		CFR Qingdao, USD/dry tonne							Seventy-seven vessels carrying 10.75 million mt of iron ore are expected to arrive at major Chinese ports in the week ended Thursday February 28, up 760,000 mt from the previous week, SMM data showed. Seaborne arrivals are likely to increase at major ports in the east and north, as well as at some ports along the Yangtze River. For the same week, iron ore shipments departing Australian ports are expected to grow by 850,000 mt from the prior week to 15.74 million mt. Iron ore leaving Brazilian ports are likely to expand by 810,000 mt to 7.2 million mt. Major ports across Australia and Brazil will see shipment growth.							
Index	Fe Content	Price	Change	Change %	February	YTD	Low <sup>3</sup>	High <sup>3</sup>								
IOSI62	62% Fe Fines	85.15	0.55	0.7%	87.39	81.17	62.95	89.20								
IOSI65	65% Fe Fines	96.65	0.05	0.1%	102.56	95.61	83.20	106.85								

## IRON ORE PORT LUMP INDEX (IOPLI)

Week Ending February 22nd, 2019		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% VAT), USD/dry tonne <sup>1</sup>						
Index	Fe Content	Price	W-o-W	Change %	February	YTD	Low <sup>3</sup>	High <sup>3</sup>	Price	W-o-W	Change %	February	YTD	Low <sup>3</sup>	High <sup>3</sup>
IOPLI62	62.5% Fe Lump	865	1	0.1%	842	808	565	865	111.93	0.91	0.8%	108.63	103.45	76.63	111.93

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

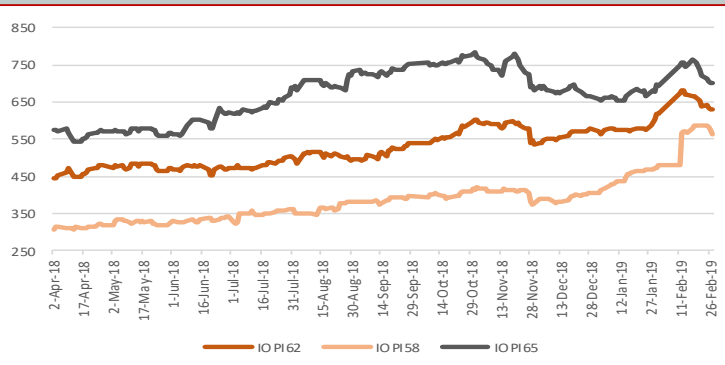
Week Ending February 22nd, 2019				RMB/tonne (excluding tax) <sup>4</sup>				USD/tonne (excluding tax) <sup>4</sup>			
Province	Region	Product	Basis	This week	Change %	Low <sup>2</sup>	High <sup>2</sup>	This week	Change %	Low <sup>2</sup>	High <sup>2</sup>
Hebei	Hanxing	66% Fe Concentrate	Dry	788	-1.7%	579	802	116.83	-1.43%	91.97	118.53
Hebei	Qian'an	65% Fe Concentrate	Dry	775	0.0%	630	815	114.91	0.32%	100.26	117.34
Liaoning	Anshan	65% Fe Concentrate	Wet	595	3.5%	445	745	88.22	3.81%	68.21	88.22
Shandong	Zibo	65% Fe Concentrate	Dry	840	-2.3%	620	860	124.54	-2.02%	99.75	127.11

Week Ending February 22nd, 2019

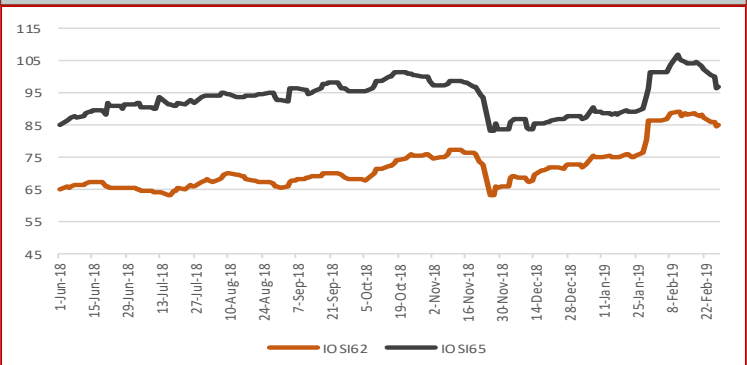
This week	Change %	Low <sup>5</sup>	High <sup>5</sup>
685.87	0.6%	534.50	685.87

<sup>1</sup> Exchange rate applied: RMB/USD = 6.6901 <sup>2</sup> Since March 1 <sup>3</sup> Since June 1  
<sup>4</sup> Weekly exchange rate applied: RMB/USD 6.7446 <sup>5</sup> Last 12 months

## 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

February 28th, 2019		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% VAT), USD/dry tonne <sup>1</sup>						
Index	Fe Content	October	November	December	January	February	QTD	YTD	October	November	December	January	February	QTD	YTD
IOPI62	62% Fe Fines	564	564	559	580	654	610	610	63.41	65.25	72.55	76.16	87.09	80.59	80.59
IOPI58	58% Fe Fines	401	401	392	448	569	497	497	44.86	45.84	50.47	57.99	75.22	64.98	64.98
IOPI65	65% Fe Fines	760	760	681	670	733	696	696	85.29	92.13	99.05	88.65	98.08	92.47	92.47

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

## FREIGHT RATES

February 28th, 2019		CFR Qingdao, USD/dry tonne							February 27th, 2019							
Index	Fe Content	October	November	December	January	February	QTD	YTD	Route		Designation	Change	Change %	Low <sup>5</sup>	High <sup>5</sup>	
IOSI62	62% Fe Fines	72.31	72.91	69.96	76.09	87.39	81.17	81.17	W. Australia - Qingdao		C5	4.99	-0.07	-1.44%	4.814	10.002
IOSI65	65% Fe Fines	98.97	94.05	85.95	89.92	102.56	95.61	95.61	Tubarao - Qingdao		C3	12.60	-0.19	-1.49%	12.595	24.760

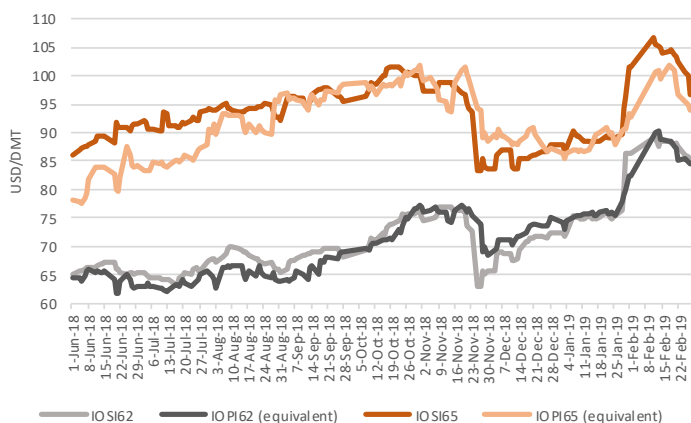
## IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending February 22nd, 2019		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% VAT), USD/dry tonne <sup>1</sup>						
Index	Fe Content	October	November	December	January	February	QTD	YTD	October	November	December	January	February	QTD	YTD
IOPLI62	62.5% Fe Lump	720	771	749	782	842	798	808	89.65	96.21	94.22	99.57	108.63	102.04	103.45

## IRON ORE INDEX PREMIUMS/DISCOUNTS

February 28th, 2019			February 28th, 2019		
PORT STOCK INDEX (RMB/WT)			SEABORNE INDEX (USD/DMT)		
Fe Content	Spread to IOPI62	% Spread to IOPI62	Fe Content	Spread to IOSI62	% Spread to IOSI62
58% Fe Fines	-68	-10.78%	65% Fe Fines	12	13.51%
65% Fe Fines	69	10.94%			

## IRON ORE INDEX COMPARISONS



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



## IRON ORE BRAND SPOT PRICE ASSESSMENTS

February 28th, 2019	PORT STOCK INDEX (RMB/WT)			February 28th, 2019	SEABORNE INDEX (USD/DMT)		
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	608	0	-23	Roy Hill	79.94	1.13	-5.21
SIMEC Fines	581	0	-50	SIMEC Fines	76.26	1.65	-8.89
PB Fines	616	0	-15	PB Fines	84.24	0.80	-0.91
Newman Fines	644	-5	13	Newman Fines	87.52	0.41	2.37
MAC Fines	607	0	-24	MAC Fines	80.41	1.20	-4.74
Jimblebar Blended Fines	584	0	-47	Jimblebar Blended Fines	76.26	1.77	-8.89
Carajas Fines	710	0	79	Carajas Fines	95.97	-0.47	10.82
Brazilian SSF	619	0	-12	Brazilian SSF	84.52	0.86	-0.63
Brazilian Blend Fines	628	0	-3	Brazilian Blend Fines	86.90	0.49	1.75
RTX Fines	593	0	-38	RTX Fines	77.91	1.35	-7.24

February 28th, 2019	PORT STOCK INDEX (RMB/WT)		
	Price	Change	Diff to IOPI58
SSF	492	-10	-71
FMG Blended Fines	563	-11	0
Robe River	512	-10	-51
Western Fines	497	-10	-66
Atlas Fines	496	-11	-67
Yandi	564	-14	1

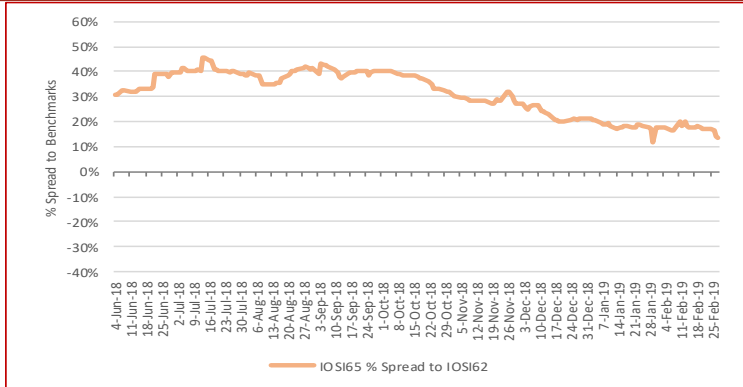
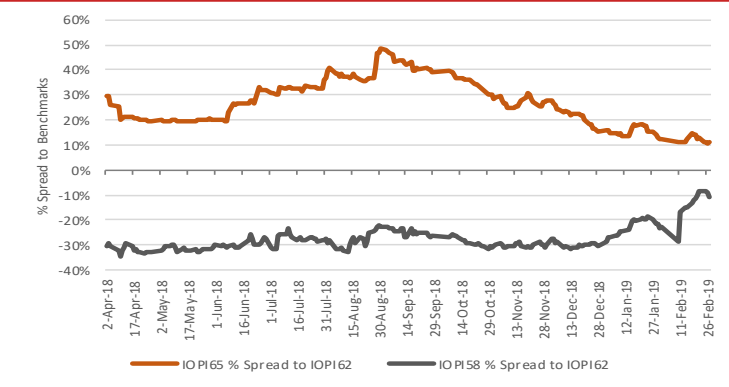
## IRON ORE INDEX NORMALISATION DIFFERENTIALS

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%	10.00	0.00	1% Fe	High Grade Fe 60 - 63%	3.25	-0.25	
	High Grade Fe 63 - 64%	20.00	0.00		High Grade Fe 63 - 64%	2.25	0.00	
	High Grade Fe 64 - 65%	20.00	0.00		High Grade Fe 64 - 65%	2.25	0.00	
	High Grade Fe 65 - 65.5%	20.00	0.00		High Grade Fe 65 - 65.5%	2.25	0.00	
	Low Grade Fe	19.00	0.00					
1% Alumina	High Fe Grade Al <2.25%	16.00	0.00	1% Alumina	High Fe Grade Al <2.25%	1.50	-0.25	
	High Fe Grade Al 2.25-4%	15.00	0.00		High Fe Grade Al 2.25-4%	1.75	-0.50	
	Low Fe Grade Al <2.25%	45.00	-5.00					
	Low Fe Grade Al 2.25-4%	33.00	0.00					
1% Silica	High Fe Grade Si <4%	2.00	0.00	1% Silica	High Fe Grade Si <4%	0.75	-0.25	
	High Fe Grade Si 4-6.5%	18.00	0.00		High Fe Grade Si 4 - 6.5%	1.00	-0.25	
0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	2.00	0.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	0.00	0.00	
	High Fe Grade 0.115%<P<0.15%	2.00	0.00		High Fe Grade 0.115%<P<0.15%	1.00	0.00	
	Low Fe Grade 0.09<P<0.1%	2.00	0.00					

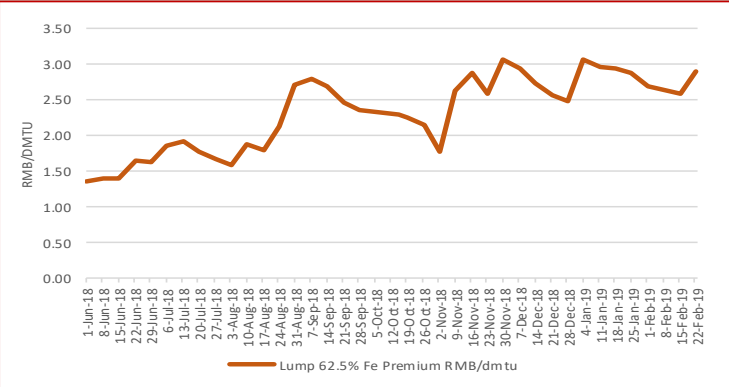
## Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

Port	Value	Change	Port	Value	Change	Port	Value	Change	Port	Value	Change
Bayuquan	-35.00	0.00	Fangcheng	-5.00	0.00	Lanshan	0.00	0.00	Qingdao	0.00	0.00
Beilun	5.00	0.00	Jiangyin	-15.00	0.00	Lianyungang	0.00	0.00	Rizhao	0.00	0.00
Caofeidian	-5.00	0.00	Jingtang	0.00	0.00	Majishan	0.00	0.00	Shekou	0.00	0.00
Dalian	-15.00	0.00	Lanqiao	-5.00	0.00	Nantong	-15.00	0.00	Tianjin	-15.00	0.00

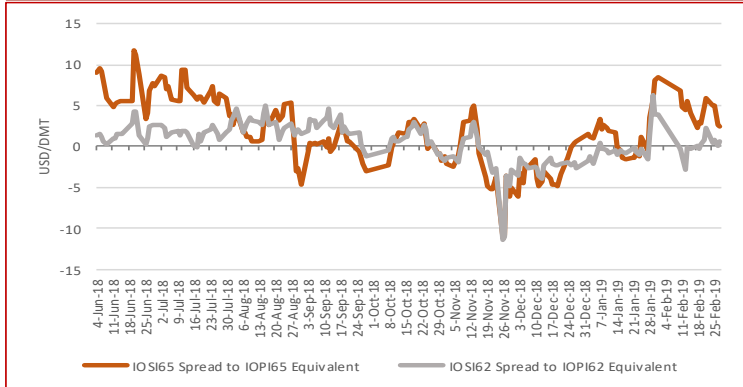
IRON ORE INDEX PREMIUMS/DISCOUNTS



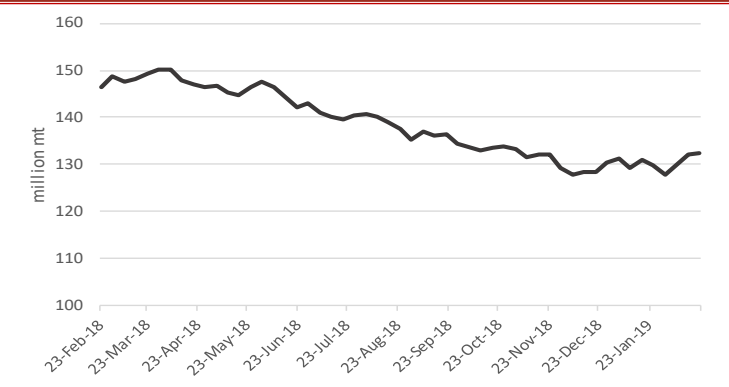
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (62.5% FE LUMP—62% FE FINES)



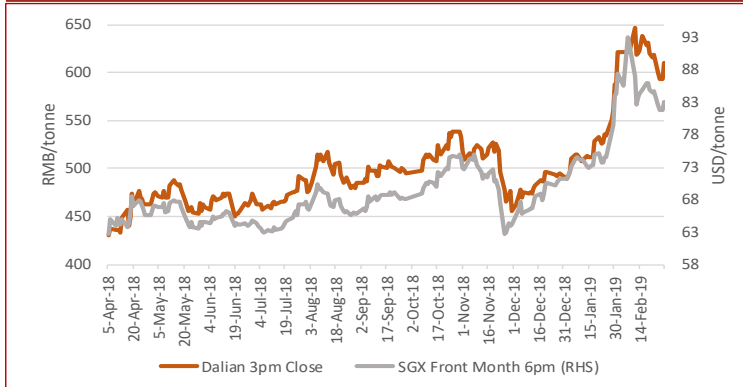
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS



TOTAL IRON ORE INVENTORIES AT CHINA PORTS



FUTURE TRADING—FRONT MONTH CLOSING PRICE



IRON ORE PORT INVENTORIES

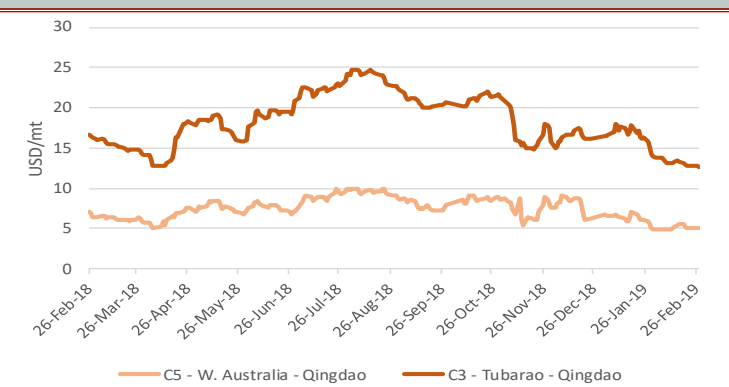
Week Ending February 22nd, 2019 (million tonnes)

Province	This week	Change %	Low <sup>4</sup>	High <sup>4</sup>
Jingtang	14.50	-0.48%	13.29	19.00
Qingdao	17.87	-0.72%	16.09	19.97
Caofeidian	17.60	4.76%	16.30	25.30
Tianjin	9.08	-2.37%	8.50	11.00
Rizhao	16.45	3.13%	14.00	19.00
<b>Total (35 Ports)</b>	<b>132.32</b>	<b>0.24%</b>	<b>127.72</b>	<b>150.04</b>

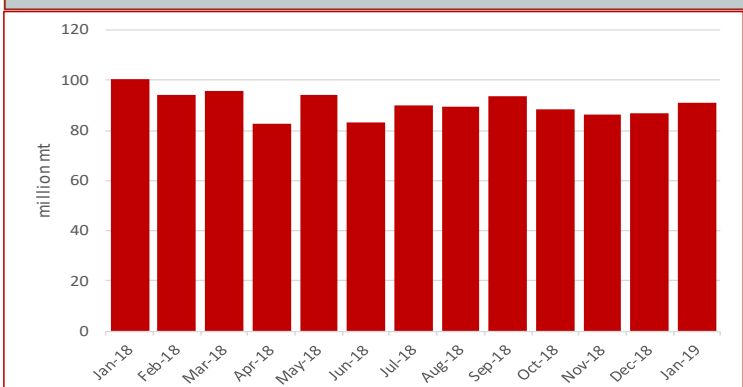
IRON ORE FUTURES CONTRACTS

Closing Date	DCE			SGX		
	28th Feb 3pm close			28th Feb 6 pm		
Contract	I1905	Change	Change %	Mar'19	Change	Change %
Closing Price	609.5	16.5	2.78%	82.97	1.25	1.53%
Vol traded ('000 lots)	178.24	23.0	14.79%	12.96	1.85	16.62%
Open positions ('000 lots)	107.53	5.9	5.78%	122.55	1.57	1.30%
Day Low	596.0	6.0	1.02%	81.94	0.79	0.97%
Day High	611.0	7.0	1.16%	82.98	0.60	0.73%

DRY BULK F REIGHT RATES



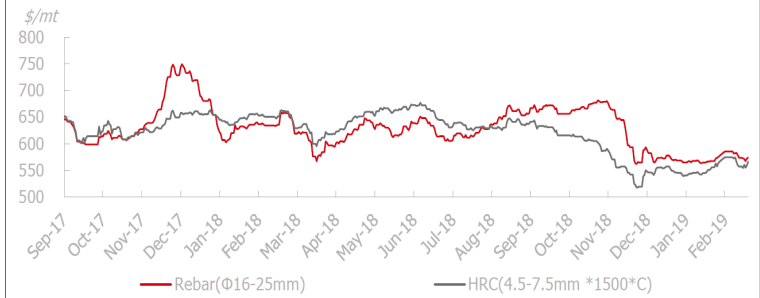
TOTAL CHINA IRON ORE IMPORT VOLUMES



STEEL SPOT MARKET PRICES—CHINA

Steel Spot Market RMB/tonne			
Product	22/2/2019	Change	Change %
ReBar HRB400 φ18mm	3,855.0	-25	-0.64%
Wirerod Q300 φ6.5mm	3,942.0	-34	-0.86%
HRC Q235/SS400 5.5mm*1500*C	3,802.0	34	0.90%
CRC SPCC/ST12 1.0mm*1250*2500	4,326.0	50	1.17%
Medium & Heavy Plate Q235B 20mm	3,966.0	0	0.00%
GI ST02Z 1.0mm*1000*C	4,670.0	40	0.86%
Billet Q235 150*150mm	3,420.0	30	0.88%

Rebar and HRC spot prices



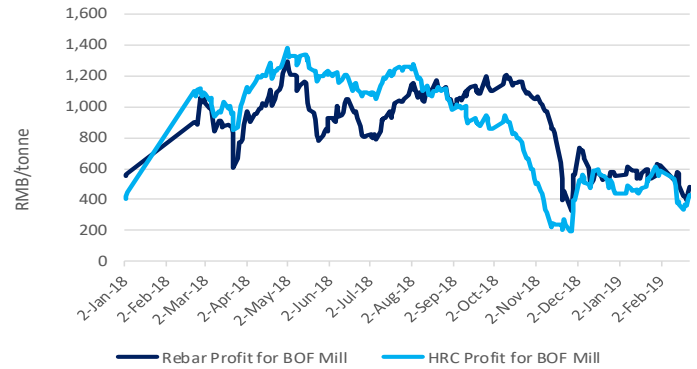
Source: SMM

CHINESE STEEL EXPORT PRICES

China Export Prices USD/tonne			
Product	Specification	Export tax (+)/Vate rebate (-)	Change
			22/2/2019
Rebar	BS4449 460B 12-25mm, + chrome	-13%	525 0
Wire Rod	SAE1008 6.5-10mm +chrome	-9%	535 0
Hot-rolled coil	SS400/Q235 4.0-10.0mm	-9%	525 0
Cold-rolled coil	SPCC 1.0mm	-13%	565 0
Medium & Heavy plate	A-level Shipe plate 12-25mm	0%	530 0
Galvanised	ST02Z/SGCC 1.0mm	-13%	580 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 MILL PROFITABILITY

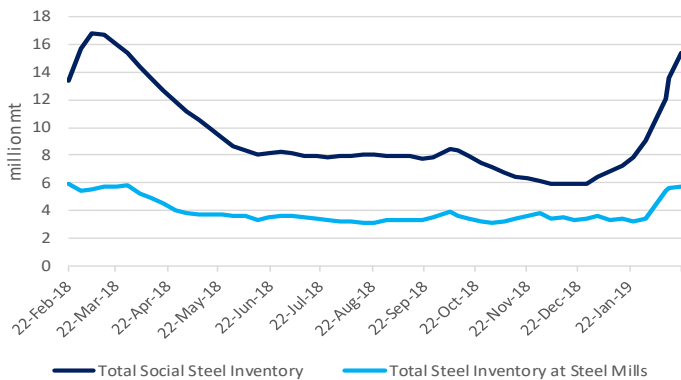


CHINESE STEEL MILL PROFITABILITY

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	85.12	-3.56	Mmi CFR Equivalent index for 1st Feb
Coke	2,070	100	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	2,210	0	steel scrap (6mm) in Zhangjiagang, excl. tax
Billet Cost	3,025	8	Q234, incl. tax
Rebar cost - Blast furnace	3,279	7	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	481	-7	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	3,350	8	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	430	62	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

CHINESE STEEL INVENTORIES



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

Product	22/2/2019	15/2/2019	Change	Change %
Rebar	9,634	8,304	1,330	16.02%
Wirerod	3,052	2,725	327	12.00%
Hot-rolled Coil	2,725	2,588	137	5.29%
Medium & Thick Plate	1,351	1,321	30	2.27%
Cold-rolled Coil	1,201	1,081	120	11.10%
Total	17,964	16,151	1,813	11.23%

<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.

## 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					
February 28th, 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	60.76%	2.35%	4.31%	0.057%	8.58%	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	61.65%	2.35%	3.62%	0.101%	9.30%	PB Fines 62%	62.00%	2.60%	4.30%	0.090%	10.00%
Newman Fines	62.79%	2.15%	3.94%	0.087%	7.50%	Newman Fines	62.80%	2.20%	4.30%	0.080%	6.40%
MAC Fines	60.77%	2.34%	4.93%	0.087%	7.00%	MAC Fines	61.00%	2.70%	4.70%	0.110%	9.30%
Jimblebar Blended Fines	61.01%	3.08%	4.23%	0.118%	7.23%	Jimblebar Blended Fines	61.79%	2.67%	4.08%	0.115%	7.16%
Carajas Fines	65.45%	1.22%	1.54%	0.066%	8.12%	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	62.55%	1.57%	4.86%	0.071%	8.49%	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%
February 28th, 2019	Specifications applied for 58% brand assessments										
	Fe	Alumina	Silica	Phos	Moisture						
SSF	56.62%	3.18%	6.20%	0.052%	9.00%						
FMG Blended Fines	58.18%	2.65%	5.44%	0.060%	7.59%						
Robe River	56.64%	2.91%	5.58%	0.035%	9.29%						
Western Fines	58.00%	3.08%	7.84%	0.070%	7.52%						
Atlas Fines	56.59%	2.55%	7.14%	0.080%	8.46%						
Yandi	57.08%	1.41%	6.58%	0.032%	8.71%						

## 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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