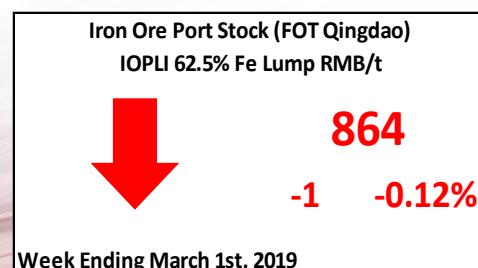
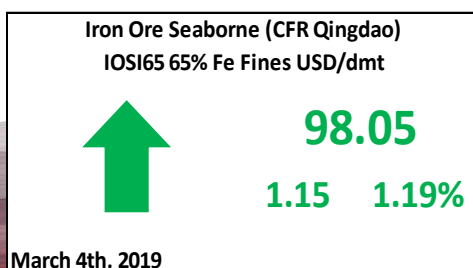
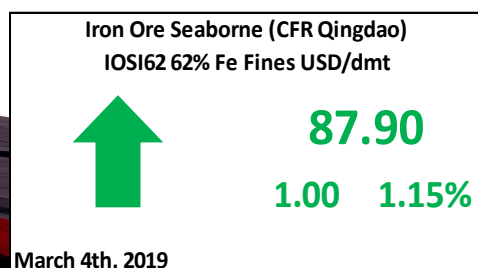
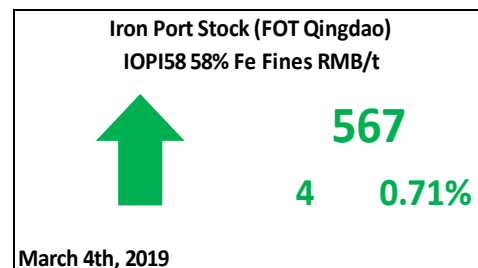
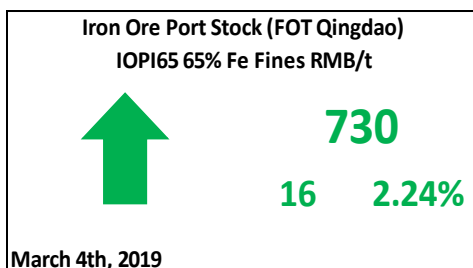
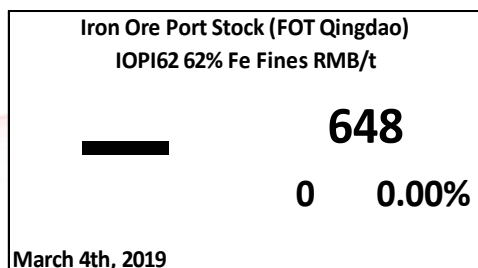


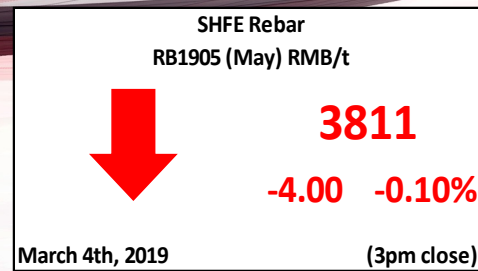
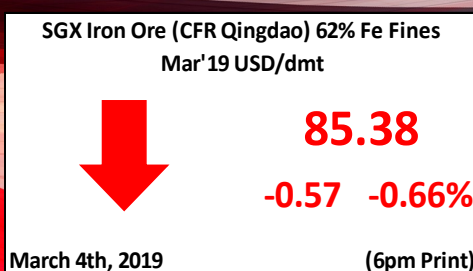
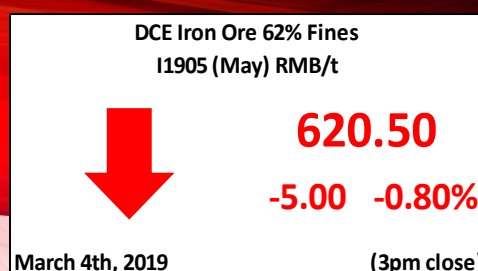


## MMi Dashboard

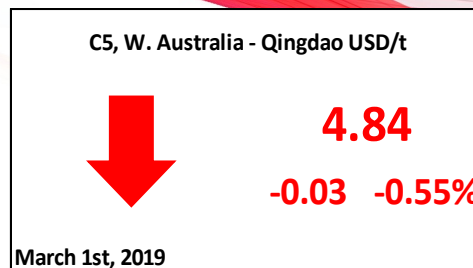
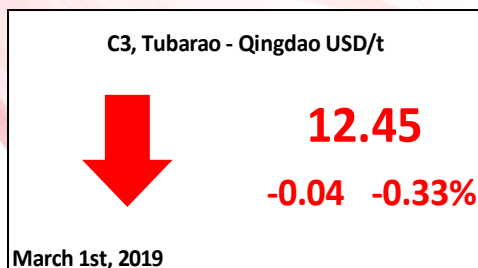
## Iron Ore Price Indices



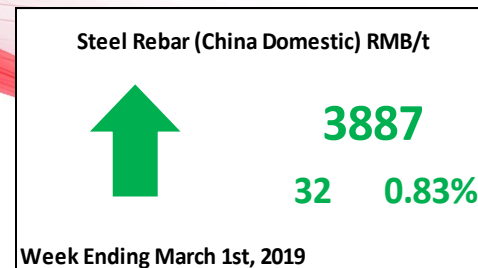
## Exchange Traded Contracts



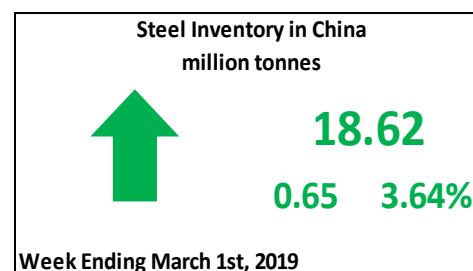
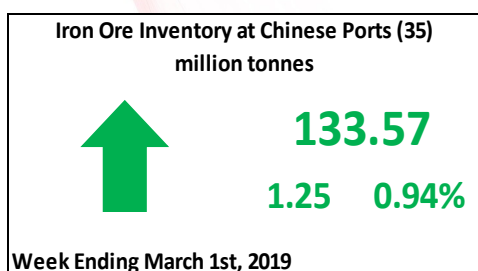
## Freight Rates



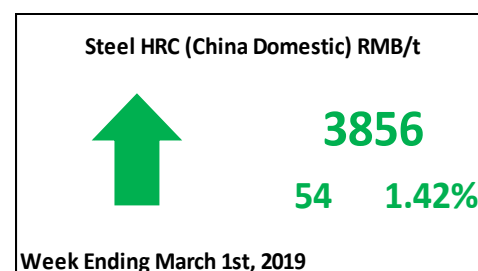
## Steel Price



## Inventory Levels



## Steel Price



## IRON ORE PORT STOCK INDEX (IOPI)

March 4th, 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 %	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	648	0	0.0%	648	612	443	681	86.65	-0.12	-0.1%	86.71	80.91	61.36	90.41
IOPI58	58% Fe Fines	567	4	0.7%	565	500	304	588	75.33	0.46	0.6%	75.10	65.50	40.67	78.17
IOPI65	65% Fe Fines	730	16	2.2%	722	697	541	784	98.11	2.11	2.2%	97.05	92.70	75.83	101.79

## IRON ORE SEABORNE INDEX (IOSI)

## MARKET COMMENTARY

March 4th, 2019		CFR Qingdao, USD/dry tonne							MARKET COMMENTARY							
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low <sup>3</sup>	High <sup>3</sup>	Iron ore DCE Futures market dropped following an early morning move higher though the mid-grade physical port stock transaction prices kept stable, although quotes early in the morning pulled rose by 10-15yuan/mt. Traders say the majority mills made tentative inquiries and there were few concluded transaction. According to SMM, from Mar.3 to Mar.31, about 14 mills with 22 blast furnaces were told to shut down. Mill demand for iron ore may drop off, which could cause a drag iron ore prices. However, as a production cut is beneficial to steel prices, the slow down in prices may prove to be temporary.							
IOSI62	62% Fe Fines	87.90	1.00	1.15%	87.40	81.46	62.95	89.20								
IOSI65	65% Fe Fines	98.05	1.15	1.19%	97.48	95.70	83.20	106.85								

## IRON ORE PORT LUMP INDEX (IOPLI)

Week Ending March 1st, 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 %	MTD	YTD	Low <sup>3</sup>	High <sup>3</sup>	Price	W-o-W	Change %	MTD	YTD	Low <sup>3</sup>	High <sup>3</sup>
IOPLI62	62.5% Fe Lump	864	-1	-0.1%	864	815	565	865	112.12	0.19	0.2%	112.12	104.54	76.63	112.12

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

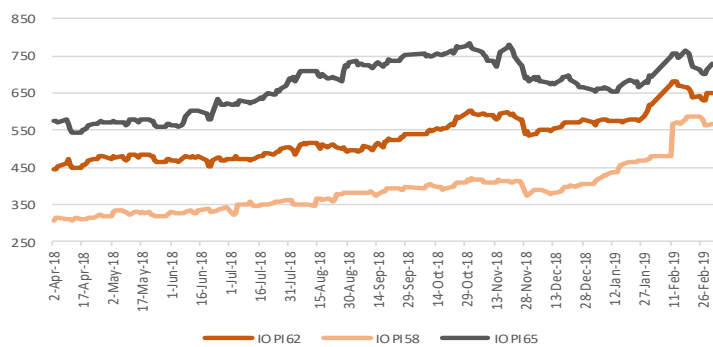
Week Ending March 1st, 2019				RMB/tonne (excluding tax) <sup>4</sup>				USD/tonne (excluding tax) <sup>4</sup>			
Province	Region	Product	Basis	This week	Change %	Low <sup>2</sup>	High <sup>2</sup>	This week	Change %	Low <sup>2</sup>	High <sup>2</sup>
Hebei	Hanxing	66% Fe Concentrate	Dry	785	-0.4%	579	802	117.23	0.34%	11.23	118.53
Hebei	Qian'an	65% Fe Concentrate	Dry	765	-1.3%	630	815	114.25	-0.57%	100.26	117.34
Liaoning	Anshan	65% Fe Concentrate	Wet	595	0.0%	445	745	88.86	0.73%	68.21	88.86
Shandong	Zibo	65% Fe Concentrate	Dry	815	-3.0%	620	860	121.71	-2.27%	99.75	127.11

Week Ending March 1st, 2019

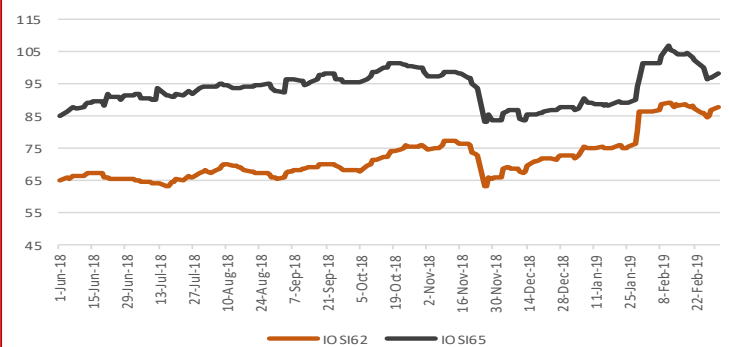
This week	Change %	Low <sup>5</sup>	High <sup>5</sup>
677.83	-1.2%	534.50	685.87

<sup>1</sup> Exchange rate applied: RMB/USD = 6.7049 <sup>2</sup> Since March 1 <sup>3</sup> Since June 1  
<sup>4</sup> Weekly exchange rate applied: RMB/USD 6.6960 <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

March 4th, 2019		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% VAT), USD/dry tonne <sup>1</sup>						
Index	Fe Content	November	December	January	February	MTD	QTD	YTD	November	December	January	February	MTD	QTD	YTD
IOPI62	62% Fe Fines	564	559	580	654	648	612	612	65.25	72.55	76.16	87.09	86.71	80.91	80.91
IOPI58	58% Fe Fines	401	392	448	569	565	500	500	45.84	50.47	57.99	75.22	75.10	65.50	65.50
IOPI65	65% Fe Fines	760	681	670	733	722	697	697	92.13	99.05	88.65	98.08	97.05	92.70	92.70

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

## FREIGHT RATES

March 4th, 2019		CFR Qingdao, USD/dry tonne							FREIGHT RATES - DRY BULK US\$/wet tonne						
Index	Fe Content	November	December	January	February	MTD	QTD	YTD	Route	Designation	Change	Change %	Low <sup>5</sup>	High <sup>5</sup>	
IOSI62	62% Fe Fines	72.91	69.96	76.09	87.39	87.40	81.46	81.46	W. Australia - Qingdao	C5	4.84	-0.03	-0.55%	4.81	10.00
IOSI65	65% Fe Fines	94.05	85.95	89.92	102.56	97.48	95.70	95.70	Tubarao - Qingdao	C3	12.45	-0.04	-0.33%	12.45	24.76

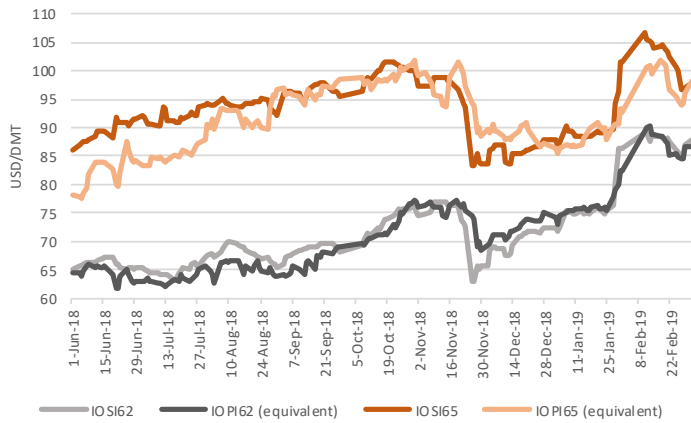
## IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

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	November	December	January	February	MTD	QTD	YTD	November	December	January	February	MTD	QTD	YTD
IOPLI62	62.5% Fe Lump	771	749	782	842	864	815	815	96.21	94.22	99.57	108.63	112.12	104.54	104.54

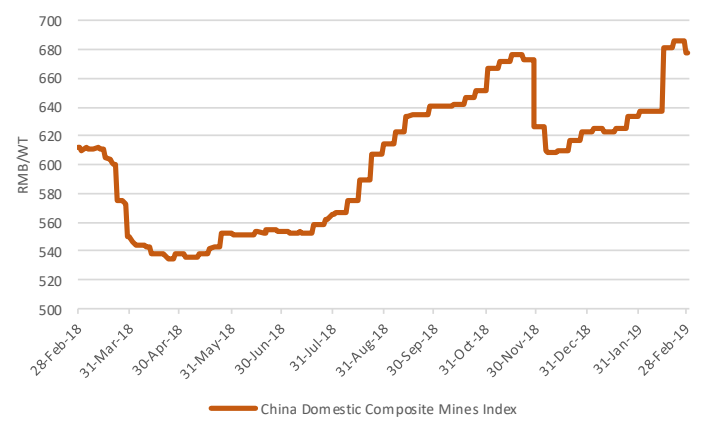
## IRON ORE INDEX PREMIUMS/DISCOUNTS

March 4th, 2019			PORT STOCK INDEX (RMB/WT)		March 4th, 2019			SEABORNE INDEX (USD/DMT)	
Fe Content	Spread to IOPI62	% Spread to IOPI62	Fe Content	Spread to IOSI62	% Spread to IOSI62				
58% Fe Fines	-81	-12.50%	65% Fe Fines	10	11.55%				

## IRON ORE INDEX COMPARISONS



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



## IRON ORE BRAND SPOT PRICE ASSESSMENTS

March 4th, 2019	PORT STOCK INDEX (RMB/WT)			March 4th, 2019	SEABORNE INDEX (USD/DMT)		
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	627	1	-21	Roy Hill	82.26	0.00	-5.64
SIMEC Fines	618	12	-30	SIMEC Fines	79.11	0.00	-8.79
PB Fines	633	1	-15	PB Fines	86.24	0.00	-1.66
Newman Fines	662	1	14	Newman Fines	89.15	0.00	1.25
MAC Fines	632	5	-16	MAC Fines	82.81	0.00	-5.09
Jimblebar Blended Fines	606	5	-42	Jimblebar Blended Fines	79.24	0.00	-8.66
Carajas Fines	742	18	94	Carajas Fines	96.95	0.00	9.05
Brazilian SSF	666	26	18	Brazilian SSF	86.90	0.00	-1.00
Brazilian Blend Fines	657	11	9	Brazilian Blend Fines	88.77	0.00	0.87
RTX Fines	617	5	-31	RTX Fines	80.16	0.00	-7.74

March 4th, 2019	PORT STOCK INDEX (RMB/WT)		
	Price	Change	Diff to IOPI58
SSF	497	4	-70
FMG Blended Fines	567	4	0
Robe River	516	4	-51
Western Fines	501	4	-66
Atlas Fines	500	4	-67
Yandi	559	0	-8

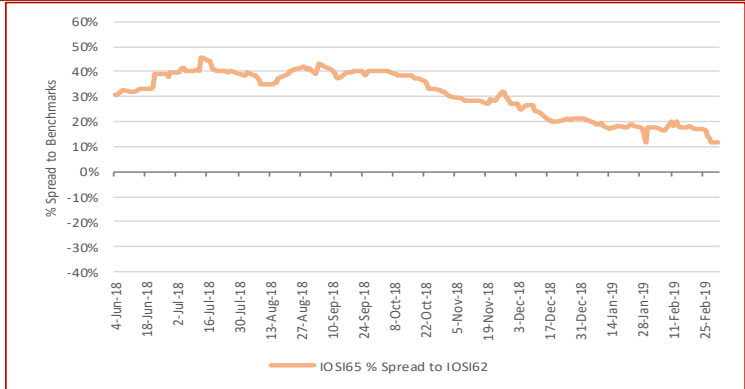
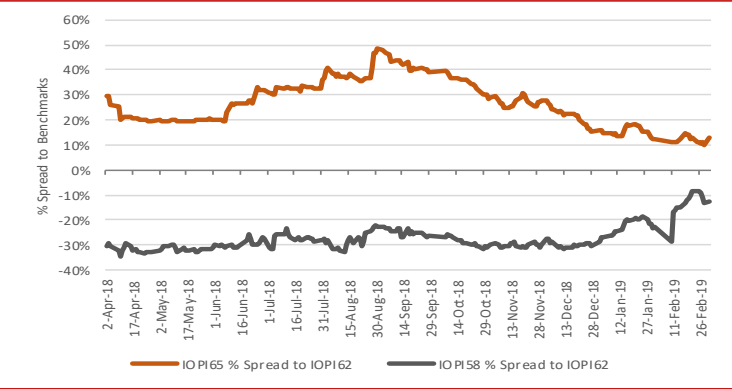
## IRON ORE INDEX NORMALISATION DIFFERENTIALS

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%	3.00	0.00	
	High Grade Fe 63 - 64%	20.00	0.00		High Grade Fe 63 - 64%	2.00	0.00	
	High Grade Fe 64 - 65%	20.00	0.00		High Grade Fe 64 - 65%	2.00	0.00	
	High Grade Fe 65 - 65.5%	20.00	0.00		High Grade Fe 65 - 65.5%	2.00	0.00	
	Low Grade Fe	19.00	0.00					
1% Alumina	High Fe Grade Al <2.25%	23.00	10.00	1% Alumina	High Fe Grade Al <2.25%	1.50	0.00	
	High Fe Grade Al 2.25-4%	12.00	-3.00		High Fe Grade Al 2.25-4%	1.25	0.00	
	Low Fe Grade Al <2.25%	35.00	-5.00					
	Low Fe Grade Al 2.25-4%	33.00	0.00					
1% Silica	High Fe Grade Si <4%	5.00	3.00	1% Silica	High Fe Grade Si <4%	0.75	0.00	
	High Fe Grade Si 4-6.5%	10.00	-5.00		High Fe Grade Si 4 - 6.5%	0.75	0.00	
0.01% Phosphorus	Low Fe Grade	20.00	0.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	0.00	0.00	
	High Fe Grade 0.09%<P<0.115%	2.00	0.00		High Fe Grade 0.115%<P<0.15%	1.00	0.00	
	High Fe Grade 0.115%<P<0.15%	2.00	0.00		Low Fe Grade 0.09<P<0.1%	2.00	0.00	

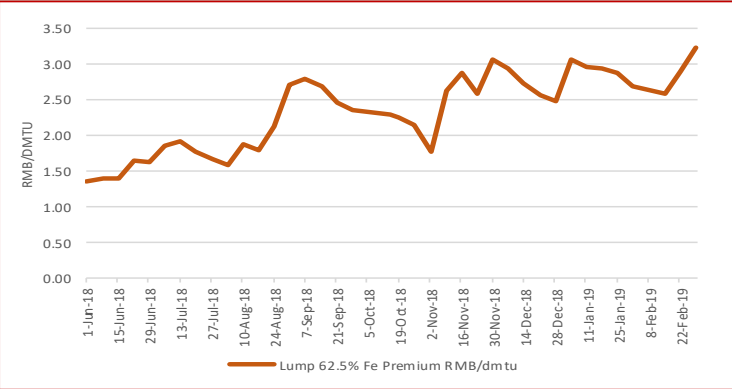
## Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

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	0.00	0.00	Jingtang	0.00	0.00	Majishan	0.00	0.00	Shekou	0.00	0.00
Dalian	-15.00	0.00	Lanqiao	0.00	0.00	Nantong	-15.00	0.00	Tianjin	-15.00	0.00

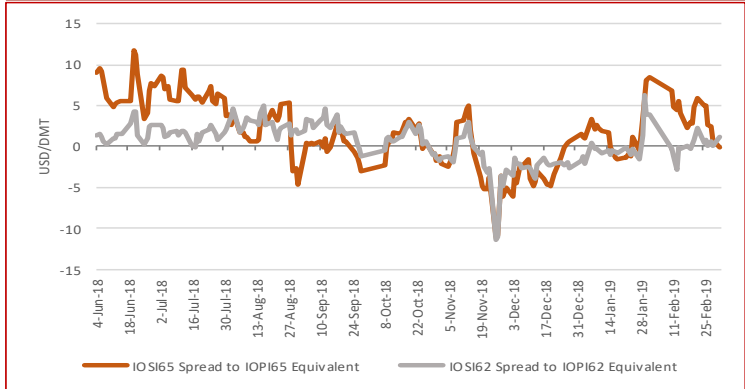
IRON ORE INDEX PREMIUMS/DISCOUNTS



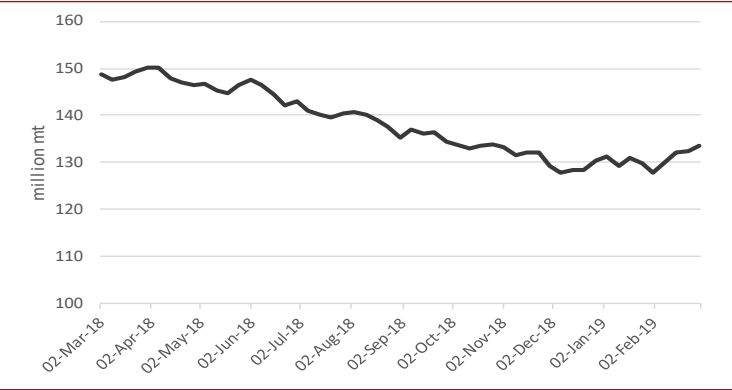
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (62.5% FE LUMP—62% FE FINES)



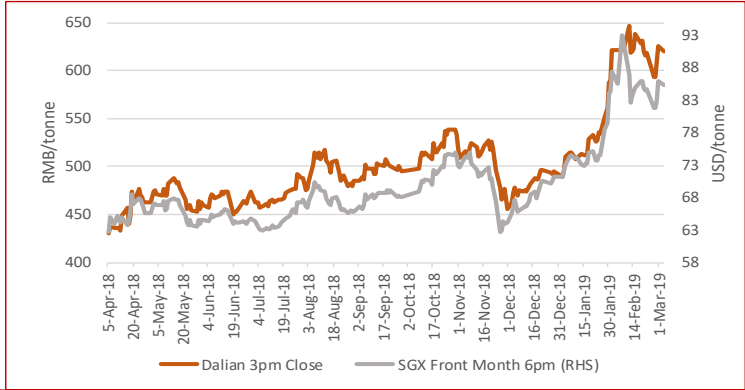
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS



TOTAL IRON ORE INVENTORIES AT CHINA PORTS



FUTURE TRADING—FRONT MONTH CLOSING PRICE



IRON ORE PORT INVENTORIES

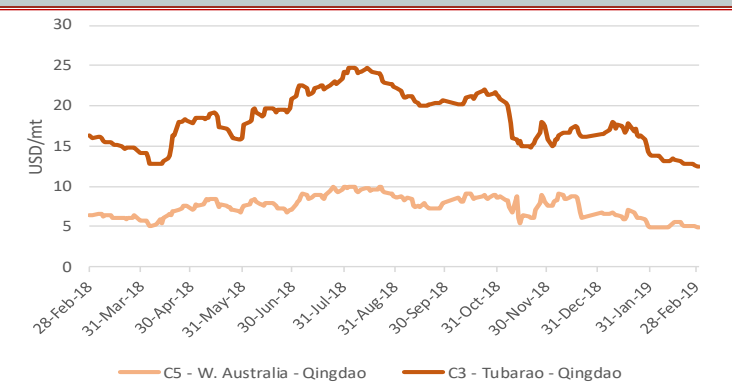
Week Ending March 1st, 2019 (million tonnes)

Province	This week	Change %	Low <sup>4</sup>	High <sup>4</sup>
Jingtang	14.34	-1.10%	13.29	19.00
Qingdao	18.81	5.26%	16.09	19.97
Caofeidian	17.15	-2.56%	16.30	25.30
Tianjin	9.18	1.10%	8.50	11.00
Rizhao	16.68	1.40%	14.00	19.00
<b>Total (35 Ports)</b>	<b>133.57</b>	<b>0.94%</b>	<b>127.72</b>	<b>150.04</b>

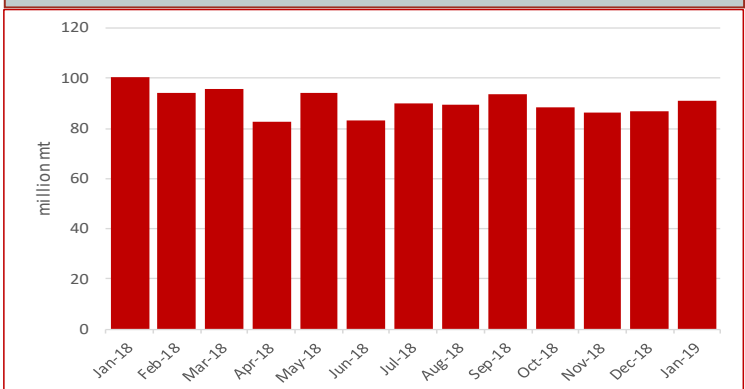
IRON ORE FUTURES CONTRACTS

Closing Date	DCE			SGX		
	4th Mar 3pm close			4th mar Feb 6 pm		
Contract	I1905	Change	Change %	Mar'19	Change	Change %
Closing Price	620.5	-5.0	-0.80%	85.38	-0.57	-0.66%
Vol traded ('000 lots)	284.90	134.7	89.65%	6.41	-3.81	-37.24%
Open positions ('000 lots)	105.33	-4.2	-3.81%	123.83	2.22	1.83%
Day Low	619.0	11.0	1.81%	84.72	1.51	1.81%
Day High	647.0	19.0	3.03%	89.91	3.96	4.61%

DRY BULK FREIGHT RATES



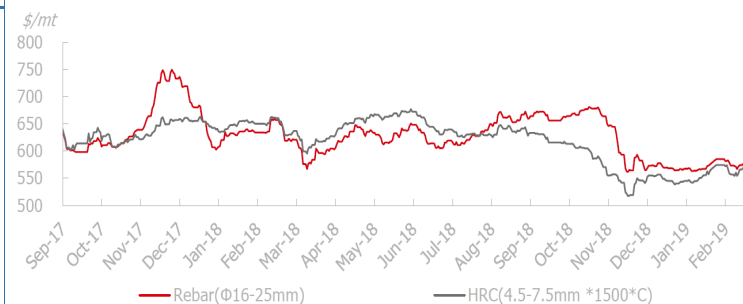
TOTAL CHINA IRON ORE IMPORT VOLUMES



STEEL SPOT MARKET PRICES—CHINA

Steel Spot Market RMB/tonne			
Product	1/3/2019	Change	Change %
ReBar HRB400 φ18mm	3,887.0	32	0.83%
Wirerod Q300 φ6.5mm	3,986.0	44	1.12%
HRC Q235/SS400 5.5mm*1500*C	3,856.0	54	1.42%
CRC SPCC/ST12 1.0mm*1250*2500	4,353.0	27	0.62%
Medium & Heavy Plate Q235B 20mm	3,983.0	17	0.43%
GI ST02Z 1.0mm*1000*C	4,735.0	65	1.39%
Billet Q235 150*150mm	3,490.0	70	2.05%

Rebar and HRC spot prices



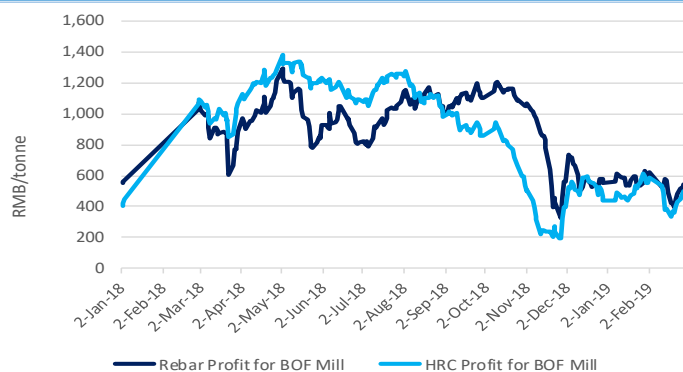
Source: SMM

CHINESE STEEL EXPORT PRICES

China Export Prices USD/tonne			
Product	Specification	Export tax (+)/Vate rebate (-)	Change
			1/3/2019
Rebar	BS4449 460B 12-25mm, + chrome	-13%	530 5
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%	550 20
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

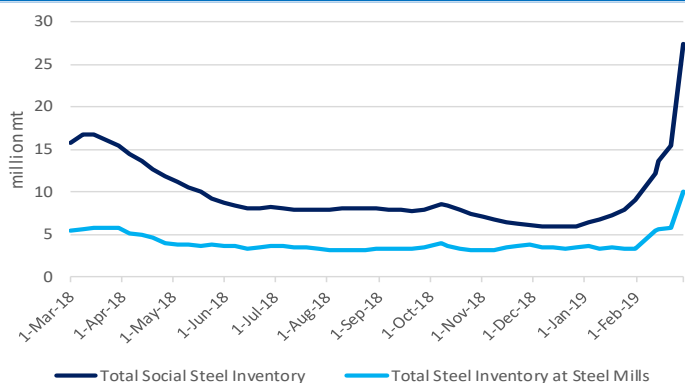


CHINESE STEEL MILL PROFITABILITY

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	86.77	1.65	Mmi CFR Equivalent index for 1st Feb
Coke	2,070	0	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	2,190	-20	steel scrap (6mm) in Zhangjiagang, excl. tax
Billet Cost	3,030	5	Q234, incl. tax
Rebar cost - Blast furnace	3,283	4	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	528	47	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	3,355	5	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	525	95	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 depreciation 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	1/3/2019	22/2/2019	Change	Change %
Rebar	10,206	9,634	572	5.94%
Wirerod	3,134	3,052	82	2.69%
Hot-rolled Coil	2,739	2,725	14	0.51%
Medium & Thick Plate	1,340	1,351	-11	-0.81%
Cold-rolled Coil	1,199	1,201	-2	-0.17%
Total	18,618	17,964	654	3.64%

<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	

Data Exclusions*			
Port Index	62%	58%	65%
Seaborne Index	0	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					
March 4th, 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	61.63%	2.37%	3.62%	0.101%	9.29%	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%

March 4th, 2019	Specifications applied for 58% brand assessments				
	Fe	Alumina	Silica	Phos	Moisture
SSF	56.63%	3.17%	6.19%	0.052%	9.00%
FMG Blended Fines	58.19%	2.66%	5.47%	0.061%	7.57%
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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