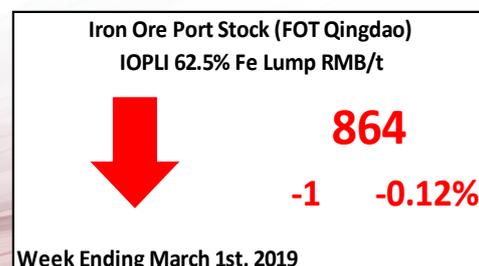
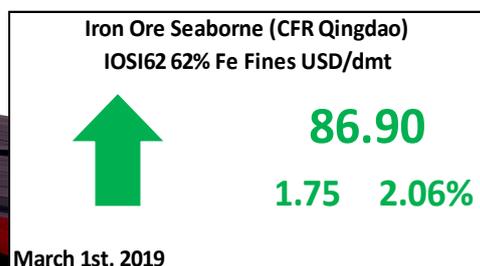
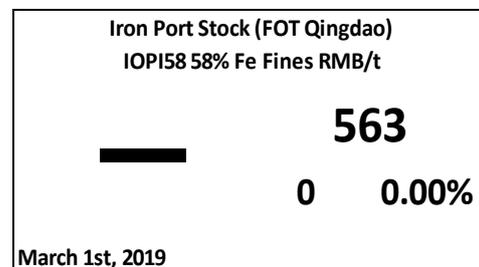
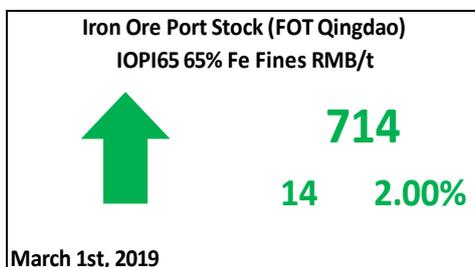
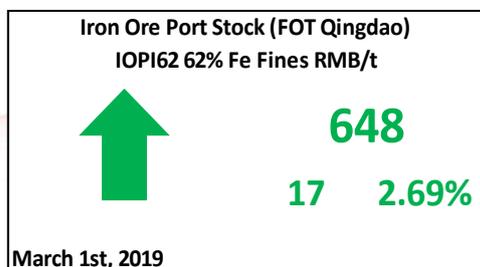


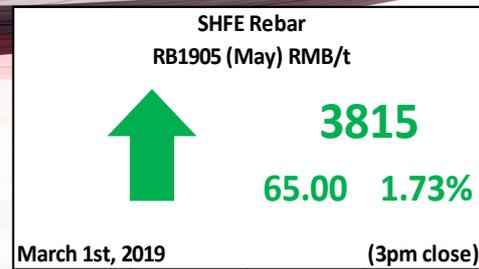
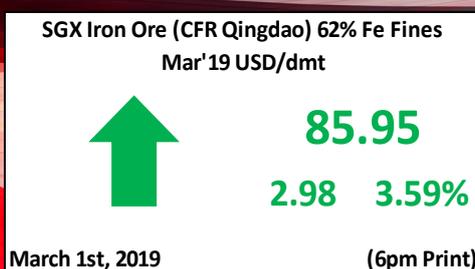
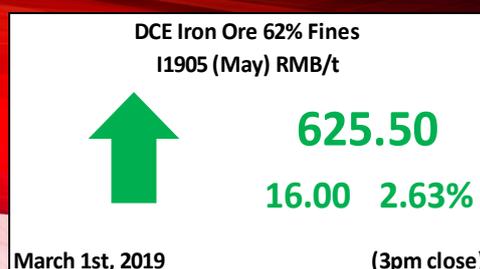


## MMi Dashboard

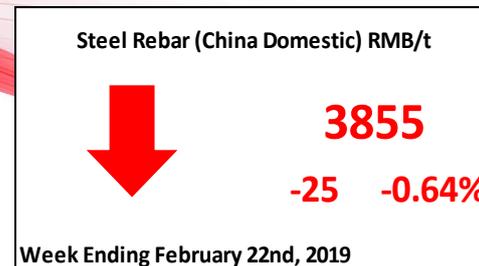
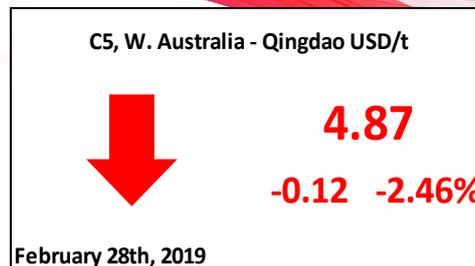
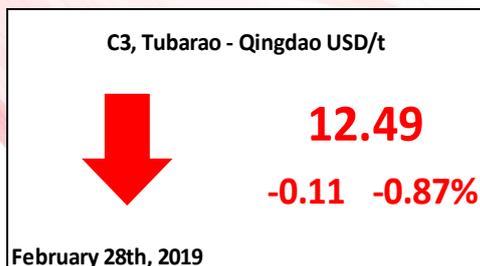
## Iron Ore Price Indices



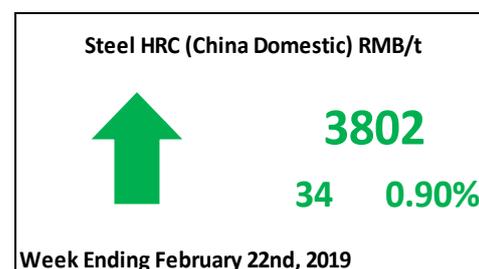
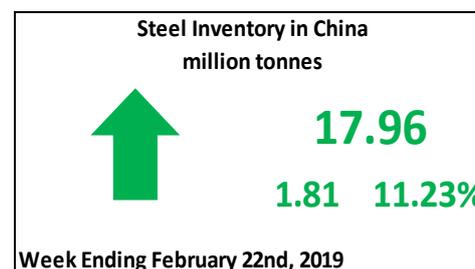
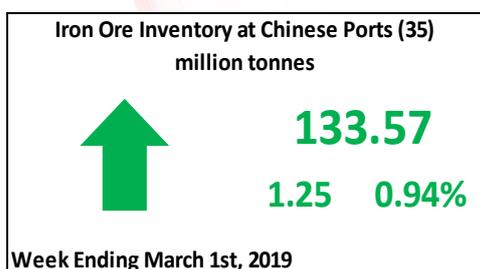
## Exchange Traded Contracts



## Freight Rates



## Inventory Levels



## Steel Price

## Steel Price

## IRON ORE PORT STOCK INDEX (IOPI)

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	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	17	2.7%	648	611	443	681	86.77	2.31	2.7%	86.77	80.76	61.36	90.41
IOPI58	58% Fe Fines	563	0	0.0%	563	499	304	588	74.87	-0.06	-0.1%	74.87	65.24	40.67	78.17
IOPI65	65% Fe Fines	714	14	2.0%	714	696	541	784	96.00	1.88	2.0%	96.00	92.56	75.83	101.79

## IRON ORE SEABORNE INDEX (IOSI)

## MARKET COMMENTARY

March 1st, 2019		CFR Qingdao, USD/dry tonne							Daily iron ore deliveries leaving Chinese ports are unlikely to extend their gains next week as the upcoming two political sessions in Beijing and ongoing level 1 emergency measures against heavy pollution in Tangshan would erode demand and impact transportation. Iron ore deliveries leaving 35 major Chinese ports averaged 2.69 million mt per day in the week ended March 1, up some 70,000 mt from the previous week, SMM data showed. Steel mills stepped up iron ore procurement after prices of futures rallied slightly in the second half of the week. This bolstered deliveries leaving major ports. SMM data also showed that stocks of iron ore across those ports expanded 1.25 million mt from a week ago to stand at 133.57 million mt as of March 1, down 14.43 million mt from the same period after 2018's Lunar New Year holiday.							
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low <sup>3</sup>	High <sup>3</sup>								
IOSI62	62% Fe Fines	86.90	1.75	2.06%	86.90	81.31	62.95	89.20								
IOSI65	65% Fe Fines	96.90	0.25	0.26%	96.90	95.64	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 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>	
China Mines Concentrate Composite Index RMB/WT	685.87	0.6%	534.50	685.87

<sup>1</sup> Exchange rate applied: RMB/USD = 6.6957 <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

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	November	December	January	February	MTD	QTD	YTD	November	December	January	February	MTD	QTD	YTD
IOPI62	62% Fe Fines	564	559	580	654	648	611	611	65.25	72.55	76.16	87.09	86.77	80.76	80.76
IOPI58	58% Fe Fines	401	392	448	569	563	499	499	45.84	50.47	57.99	75.22	74.87	65.24	65.24
IOPI65	65% Fe Fines	760	681	670	733	714	696	696	92.13	99.05	88.65	98.08	96.00	92.56	92.56

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

## FREIGHT RATES

March 1st, 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	86.90	81.31	81.31	W. Australia - Qingdao	C5	4.87	-0.12	-2.46%	4.81	10.00
IOSI65	65% Fe Fines	94.05	85.95	89.92	102.56	96.90	95.64	95.64	Tubarao - Qingdao	C3	12.49	-0.11	-0.87%	12.49	24.76

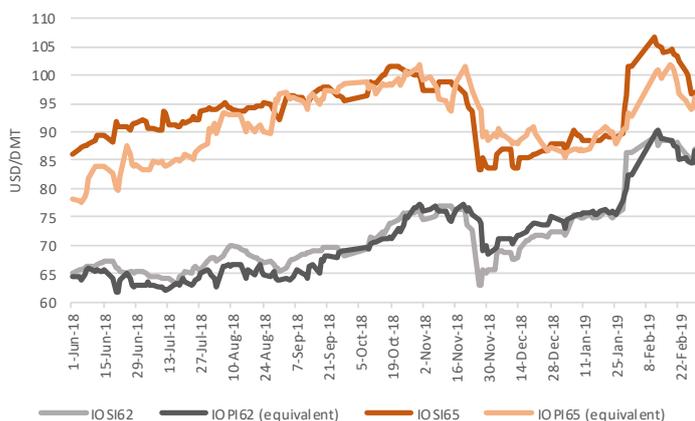
## IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

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

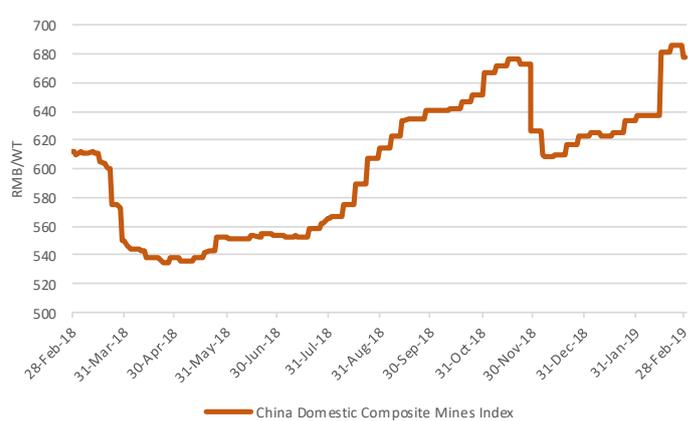
## IRON ORE INDEX PREMIUMS/DISCOUNTS

March 1st, 2019			PORT STOCK INDEX (RMB/WT)		March 1st, 2019			SEABORNE INDEX (USD/DMT)		
Fe Content	Spread to IOPI62	% Spread to IOPI62	Fe Content	Spread to IOSI62	% Spread to IOSI62					
58% Fe Fines	-85	-13.12%	65% Fe Fines	10	11.51%					
65% Fe Fines	66	10.19%								

## IRON ORE INDEX COMPARISONS



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



## IRON ORE BRAND SPOT PRICE ASSESSMENTS

March 1st, 2019				March 1st, 2019			
PORT STOCK INDEX (RMB/WT)				SEABORNE INDEX (USD/DMT)			
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	626	18	-22	Roy Hill	82.26	2.32	-4.64
SIMEC Fines	606	25	-42	SIMEC Fines	79.11	2.85	-7.79
PB Fines	632	16	-16	PB Fines	86.24	2.00	-0.66
Newman Fines	661	17	13	Newman Fines	89.15	1.63	2.25
MAC Fines	627	20	-21	MAC Fines	82.81	2.40	-4.09
Jimblebar Blended Fines	601	17	-47	Jimblebar Blended Fines	79.24	2.98	-7.66
Carajas Fines	724	14	76	Carajas Fines	96.95	0.98	10.05
Brazilian SSF	640	21	-8	Brazilian SSF	86.90	2.38	0.00
Brazilian Blend Fines	646	18	-2	Brazilian Blend Fines	88.77	1.87	1.87
RTX Fines	612	19	-36	RTX Fines	80.16	2.25	-6.74

March 1st, 2019			
PORT STOCK INDEX (RMB/WT)			
	Price	Change	Diff to IOPI58
SSF	493	1	-70
FMG Blended Fines	563	0	0
Robe River	512	0	-51
Western Fines	497	0	-66
Atlas Fines	496	0	-67
Yandi	559	-5	-4

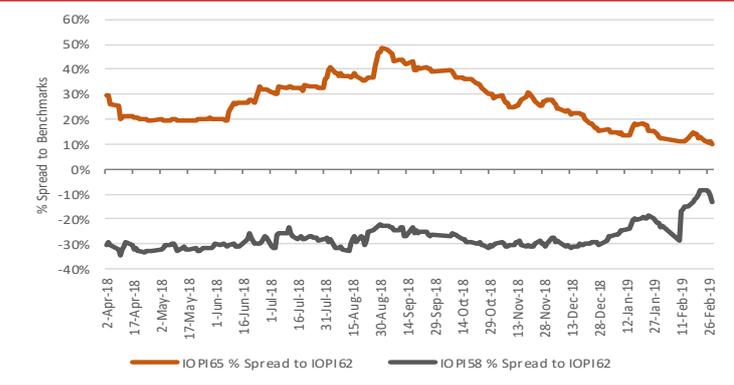
## IRON ORE INDEX NORMALISATION DIFFERENTIALS

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	-0.25	
	High Grade Fe 63 - 64%	20.00	0.00		High Grade Fe 63 - 64%	2.00	-0.25	
	High Grade Fe 64 - 65%	20.00	0.00		High Grade Fe 64 - 65%	2.00	-0.25	
	High Grade Fe 65 - 65.5%	20.00	0.00		High Grade Fe 65 - 65.5%	2.00	-0.25	
	Low Grade Fe	19.00	0.00					
1% Alumina	High Fe Grade Al <2.25%	13.00	-3.00	1% Alumina	High Fe Grade Al <2.25%	1.50	0.00	
	High Fe Grade Al 2.25-4%	15.00	0.00		High Fe Grade Al 2.25-4%	1.25	-0.50	
	Low Fe Grade Al <2.25%	40.00	-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	0.00	
	High Fe Grade Si 4-6.5%	15.00	-3.00		High Fe Grade Si 4 - 6.5%	0.75	-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					

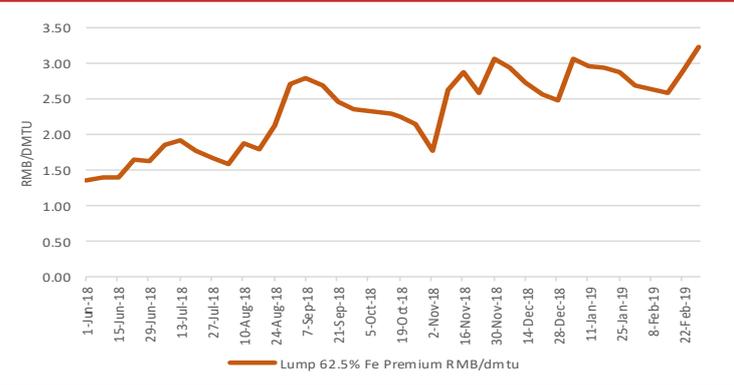
## Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

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

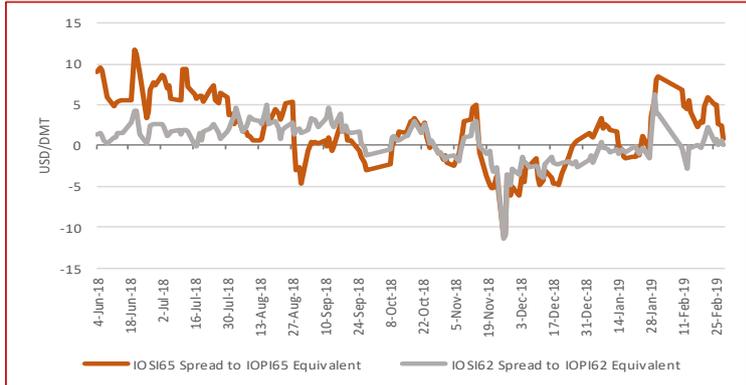
IRON ORE INDEX PREMIUMS/DISCOUNTS



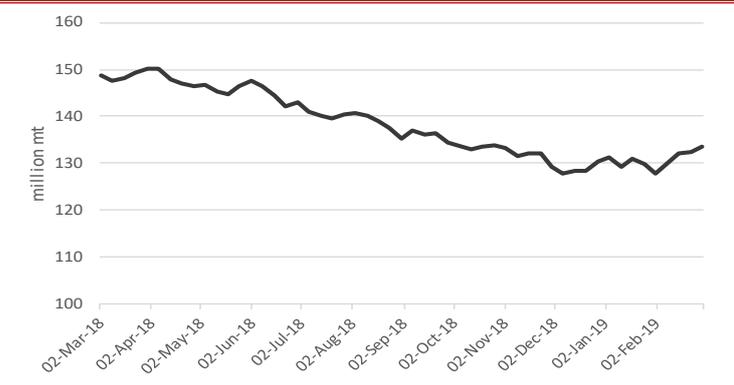
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (62.5% FE LUMP—62% FE FINES)



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 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>

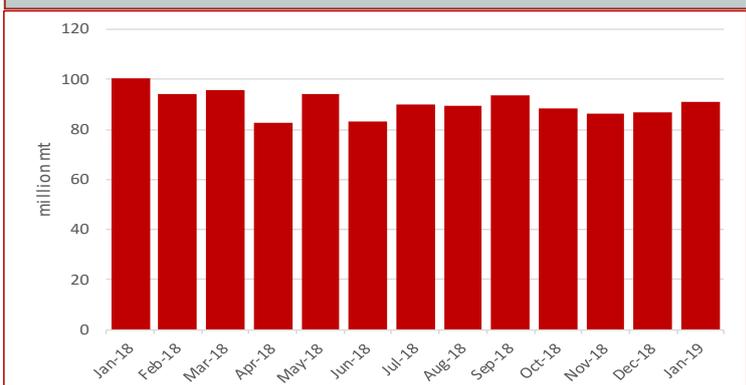
IRON ORE FUTURES CONTRACTS

Closing Date	DCE			SGX		
	1st Mar 3pm close			1st mar Feb 6 pm		
Contract	I1905	Change	Change %	Mar'19	Change	Change %
Closing Price	625.5	16.0	2.63%	85.95	2.98	3.59%
Vol traded ('000 lots)	150.22	-28.0	-15.72%	10.22	-2.74	-21.17%
Open positions ('000 lots)	109.50	2.0	1.83%	121.60	-0.95	-0.78%
Day Low	608.0	12.0	2.01%	83.21	1.27	1.55%
Day High	628.0	17.0	2.78%	85.95	2.97	3.58%

DRY BULK F REIGHT RATES



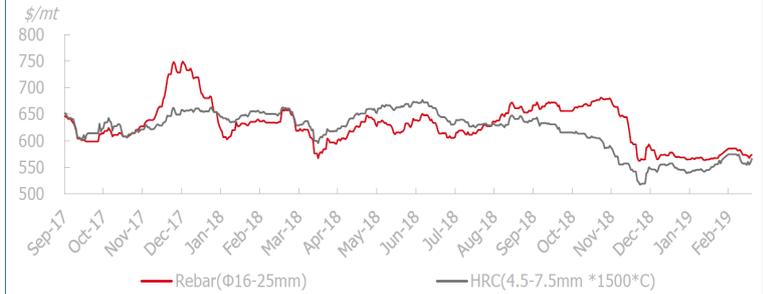
TOTAL CHINA IRON ORE IMPORT VOLUMES



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



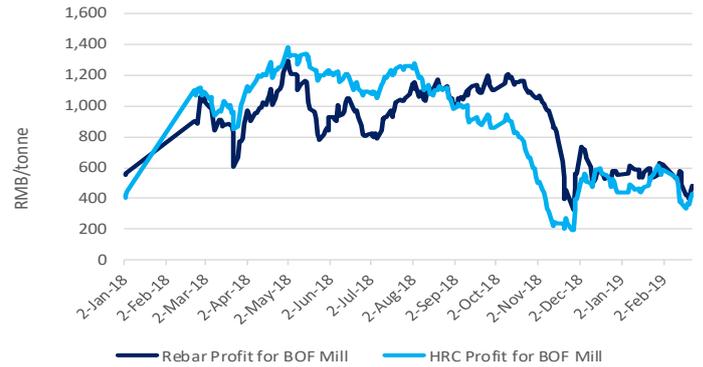
Source: SMM

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

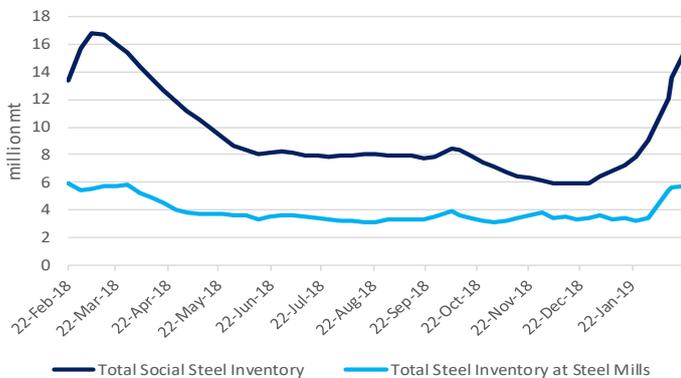


CHINESE STEEL MILL PROFITABILITY

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					
March 1st, 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 1st, 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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