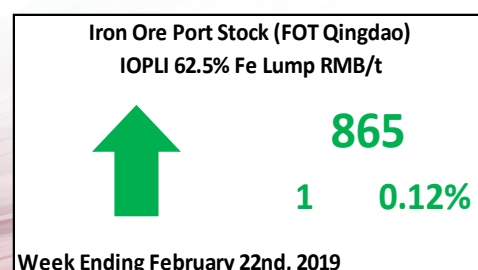
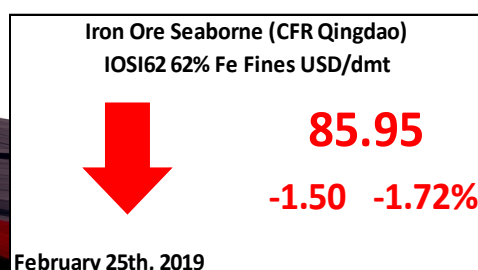
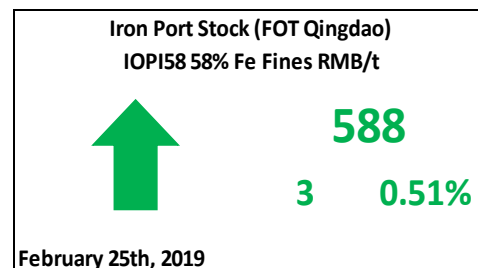
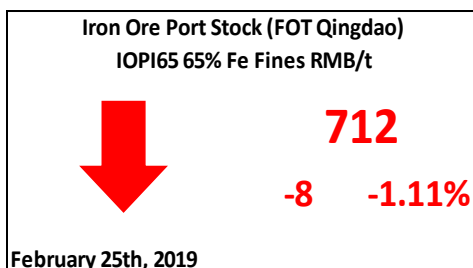
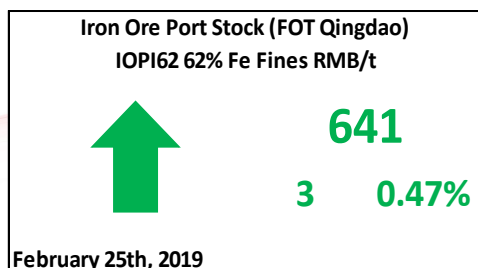


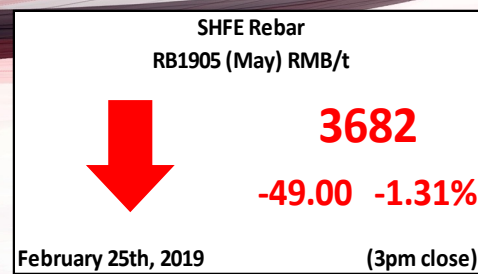
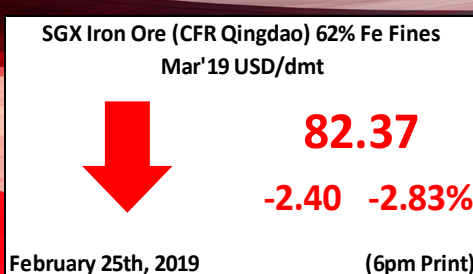
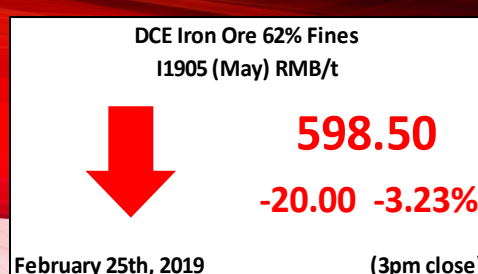


# MMi Dashboard

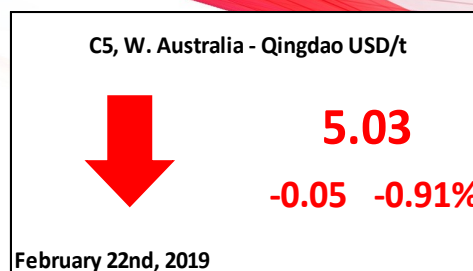
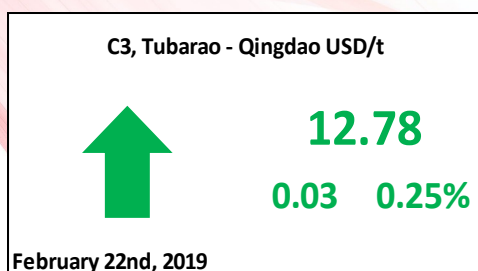
## Iron Ore Price Indices



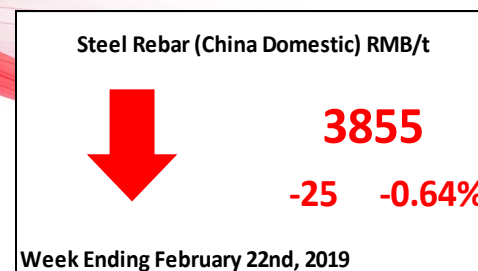
## Exchange Traded Contracts



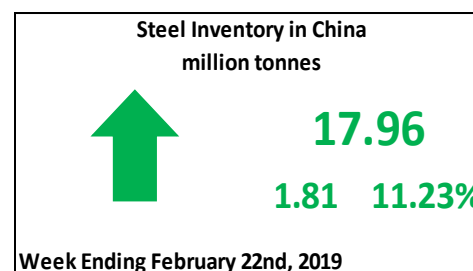
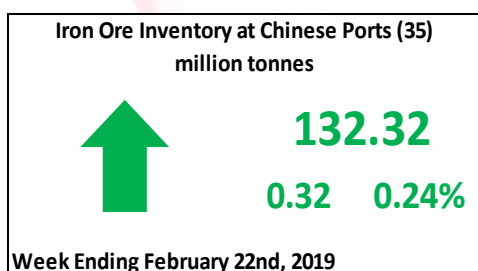
## Freight Rates



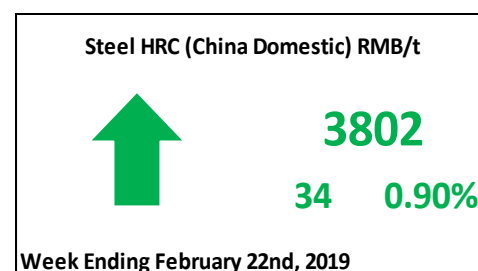
## Steel Price



## Inventory Levels



## Steel Price



## IRON ORE PORT STOCK INDEX (IOPI)

February 25th, 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	641	3	0.5%	660	608	443	681	85.56	0.44	0.5%	87.71	80.24	61.36	90.41
IOPI58	58% Fe Fines	588	3	0.5%	568	490	304	588	78.17	0.45	0.6%	74.95	63.98	40.67	78.17
IOPI65	65% Fe Fines	712	-8	-1.1%	741	695	541	784	95.47	-1.09	-1.1%	99.01	92.30	75.83	101.79

## IRON ORE SEABORNE INDEX (IOSI)

## MARKET COMMENTARY

February 25th, 2019		CFR Qingdao, USD/dry tonne							A volatile trading day in the physical iron ore port stock market, lacking any real direction. Increasing coke prices and the shrinking steel profits are proving to further add to a bearish flavour in the market. Mills keep reducing their iron ore inventory due to their higher-than-expected steel inventories. Traders complained that there were few enquiries from buyers, hence the few transacted cargoes today at the port. The seaborne market had a touch more activity today, with a larger variety of material on offer.							
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low <sup>3</sup>	High <sup>3</sup>								
IOSI62	62% Fe Fines	85.95	-1.50	-1.7%	87.83	80.84	62.95	89.20								
IOSI65	65% Fe Fines	100.50	-1.90	-1.9%	103.53	95.44	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 %	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	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

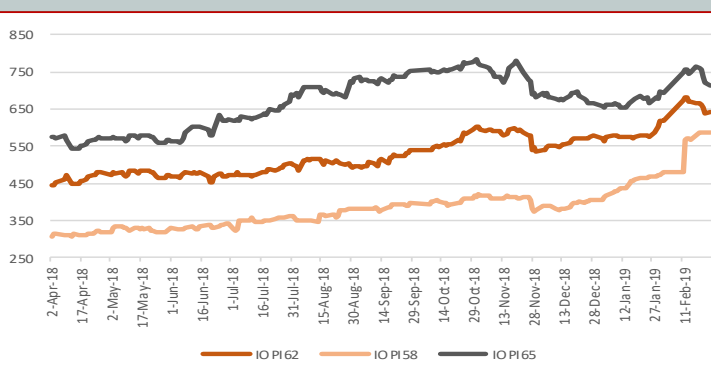
Week Ending February 22nd, 2019				RMB/tonne (excluding tax) <sup>4</sup>				USD/tonne (excluding tax) <sup>4</sup>			
Province	Region	Product	Basis	This week	Change %	Low <sup>2</sup>	High <sup>2</sup>	This week	Change %	Low <sup>2</sup>	High <sup>2</sup>
Hebei	Hanxing	66% Fe Concentrate	Dry	788	-1.7%	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

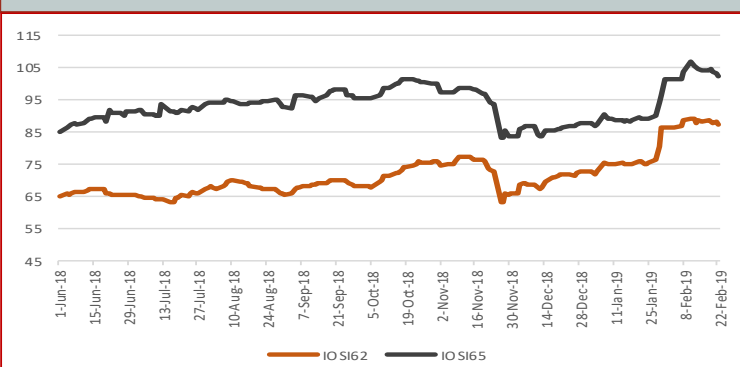
This week	Change %	Low <sup>5</sup>	High <sup>5</sup>	
China Mines Concentrate Composite Index RMB/WT	685.87	0.6%	534.50	685.87

<sup>1</sup> Exchange rate applied: RMB/USD = 6.7131 <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 25th, 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	MTD	QTD	YTD	October	November	December	January	MTD	QTD	YTD
IOPI62	62% Fe Fines	564	564	559	580	660	608	608	63.41	65.25	72.55	76.16	87.71	80.24	80.24
IOPI58	58% Fe Fines	401	401	392	448	568	490	490	44.86	45.84	50.47	57.99	74.95	63.98	63.98
IOPI65	65% Fe Fines	760	760	681	670	741	695	695	85.29	92.13	99.05	88.65	99.01	92.30	92.30

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

## FREIGHT RATES

February 25th, 2019		CFR Qingdao, USD/dry tonne							February 22nd, 2019		FREIGHT RATES - DRY BULK US\$/wet tonne				
Index	Fe Content	October	November	December	January	MTD	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	87.83	80.84	80.84	W. Australia - Qingdao	C5	5.03	-0.05	-0.91%	4.814	10.002
IOSI65	65% Fe Fines	98.97	94.05	85.95	89.92	103.53	95.44	95.44	Tubarao - Qingdao	C3	12.78	0.03	0.25%	12.705	24.760

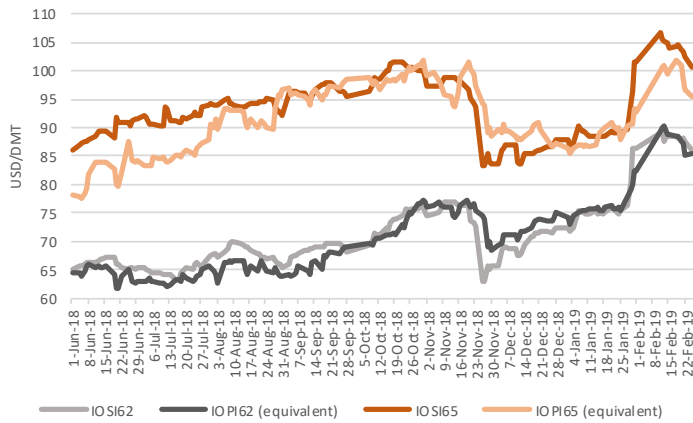
## IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

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	MTD	QTD	YTD	October	November	December	January	MTD	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 25th, 2019			PORT STOCK INDEX (RMB/WT)		February 25th, 2019			SEABORNE INDEX (USD/DMT)	
Fe Content	Spread to IOPI62	% Spread to IOPI62	Fe Content	Spread to IOSI62	% Spread to IOSI62				
58% Fe Fines	-53	-8.27%	65% Fe Fines	15	16.93%				
65% Fe Fines	71	11.08%							

## IRON ORE INDEX COMPARISONS



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



## IRON ORE BRAND SPOT PRICE ASSESSMENTS

February 25th, 2019				February 25th, 2019			
PORT STOCK INDEX (RMB/WT)				SEABORNE INDEX (USD/DMT)			
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	618	5	-23	Roy Hill	79.89	-1.50	-6.06
SIMEC Fines	596	7	-45	SIMEC Fines	75.34	-1.50	-10.61
PB Fines	625	4	-16	PB Fines	84.36	-1.50	-1.59
Newman Fines	651	1	10	Newman Fines	88.41	-1.50	2.46
MAC Fines	622	7	-19	MAC Fines	78.94	-1.50	-7.01
Jimblebar Blended Fines	594	5	-47	Jimblebar Blended Fines	72.09	-1.50	-13.86
Carajas Fines	723	-9	82	Carajas Fines	99.84	-1.50	13.89
Brazilian SSF	638	-1	-3	Brazilian SSF	85.01	-1.50	-0.94
Brazilian Blend Fines	642	0	1	Brazilian Blend Fines	87.89	-1.50	1.94
RTX Fines	601	5	-40	RTX Fines	74.69	-1.50	-11.26

February 25th, 2019			
PORT STOCK INDEX (RMB/WT)			
	Price	Change	Diff to IOPI58
SSF	508	-2	-80
FMG Blended Fines	586	2	-2
Robe River	531	1	-57
Western Fines	518	-4	-70
Atlas Fines	517	-1	-71
Yandi	600	1	12

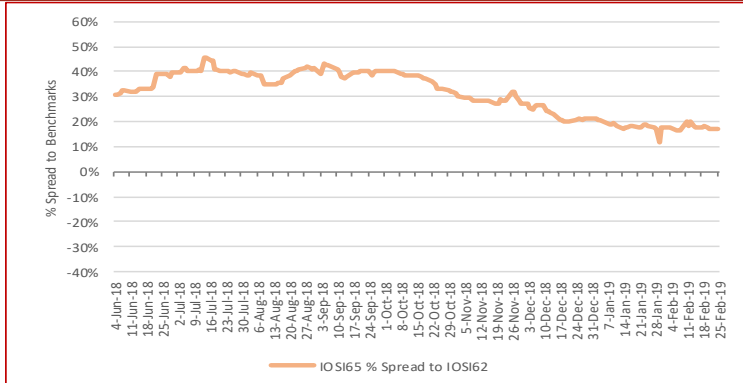
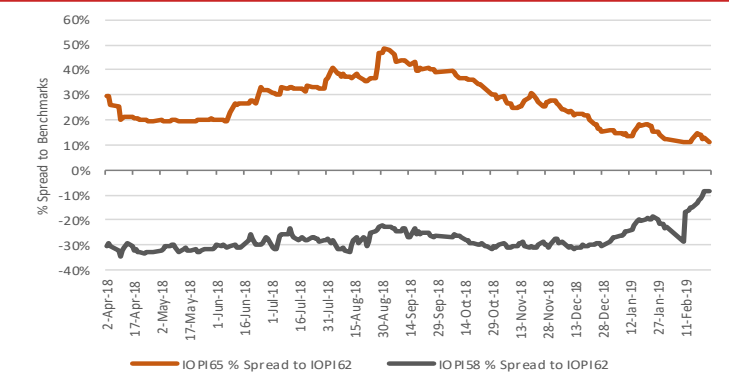
## IRON ORE INDEX NORMALISATION DIFFERENTIALS

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	-2.00	1% Fe	High Grade Fe 60 - 63%	3.50	0.00
	High Grade Fe 63 - 64%	20.00	-3.00		High Grade Fe 63 - 64%	2.50	0.00
	High Grade Fe 64 - 65%	20.00	-3.00		High Grade Fe 64 - 65%	2.50	0.00
	High Grade Fe 65 - 65.5%	20.00	-3.00		High Grade Fe 65 - 65.5%	2.50	0.00
1% Alumina	Low Grade Fe	21.00	0.00	1% Alumina	High Fe Grade Al <2.25%	2.25	0.00
	High Fe Grade Al <2.25%	19.00	-3.00		High Fe Grade Al 2.25-4%	3.25	0.00
	High Fe Grade Al 2.25-4%	17.00	0.00				
	Low Fe Grade Al <2.25%	57.00	0.00				
1% Silica	Low Fe Grade Al 2.25-4%	38.00	3.00	1% Silica	High Fe Grade Si <4%	1.50	0.00
	High Fe Grade Si <4%	2.00	0.00		High Fe Grade Si 4 - 6.5%	1.50	0.00
0.01% Phosphorus	High Fe Grade Si 4-6.5%	16.00	0.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	0.50	0.00
	Low Fe Grade	20.00	2.00		High Fe Grade 0.115%<P<0.15%	1.50	0.00
	High Fe Grade 0.09%<P<0.115%	2.00	0.00				
	High Fe Grade 0.115%<P<0.15%	3.00	0.00				
	Low Fe Grade 0.09%<P<0.1%	3.00	0.00				

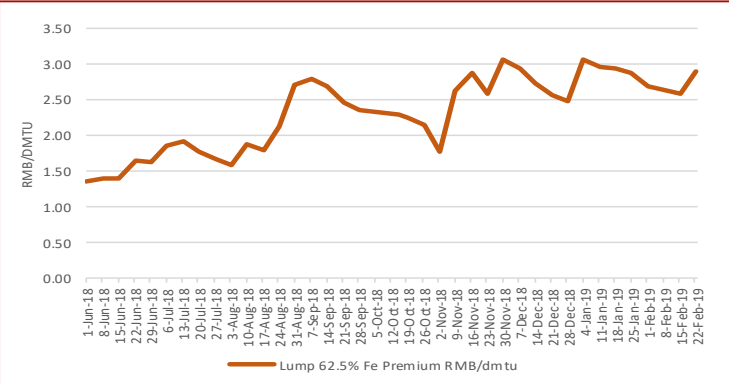
## Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

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

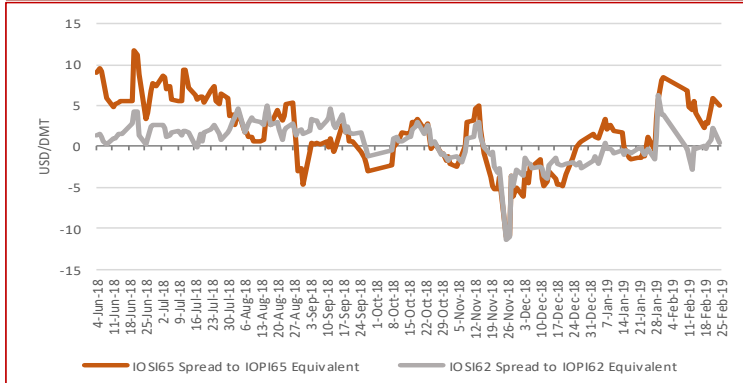
IRON ORE INDEX PREMIUMS/DISCOUNTS



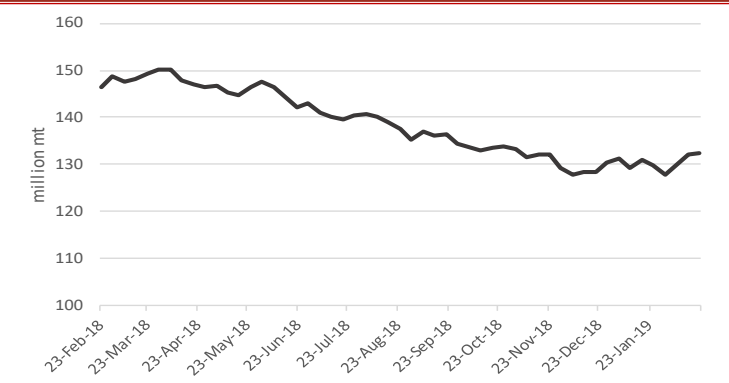
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (62.5% FE LUMP—62% FE FINES)



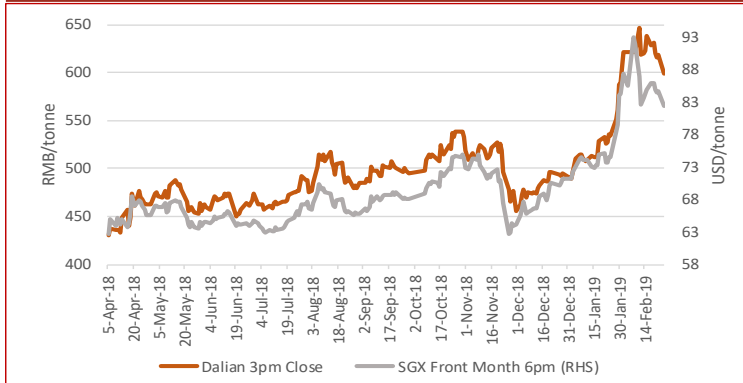
IRON ORE SEABORNE TO PORT STOCK SPREADS



TOTAL IRON ORE INVENTORIES AT CHINA PORTS



FUTURE TRADING—FRONT MONTH CLOSING PRICE



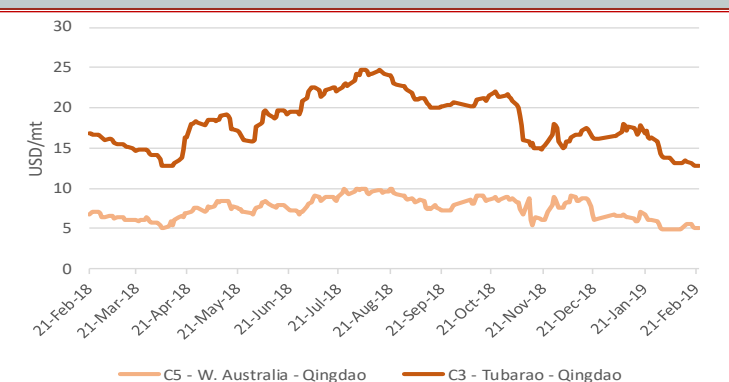
IRON ORE PORT INVENTORIES

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>

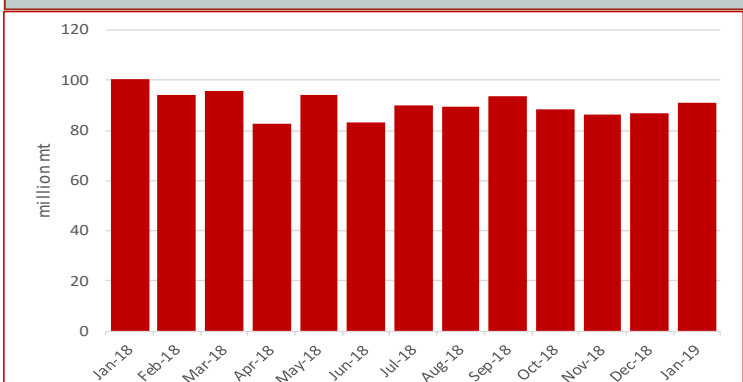
IRON ORE FUTURES CONTRACTS

Closing Date	DCE			SGX		
	25th Feb 3pm close			25th Feb 6 pm		
Contract	I1905	Change	Change %	Mar'19	Change	Change %
Closing Price	598.5	-20.0	-3.23%	82.37	-2.40	-2.83%
Vol traded ('000 lots)	220.30	-24.2	-9.90%	13.65	-1.02	-6.95%
Open positions ('000 lots)	104.60	-0.9	-0.83%	120.08	-4.49	-3.61%
Day Low	598.5	0.0	0.00%	82.37	-0.36	-0.44%
Day High	625.0	6.0	0.97%	85.58	0.68	0.80%

DRY BULK F REIGHT RATES



TOTAL CHINA IRON ORE IMPORT VOLUMES

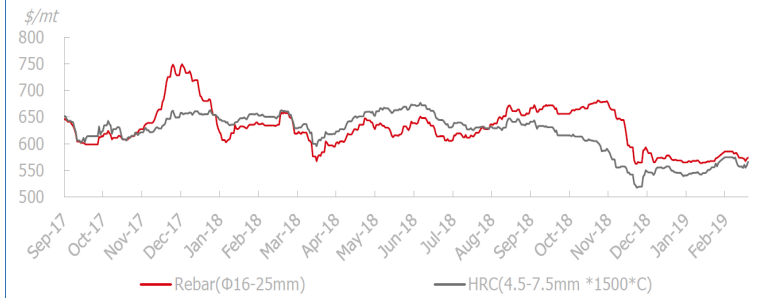


## STEEL SPOT MARKET PRICES—CHINA

## 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

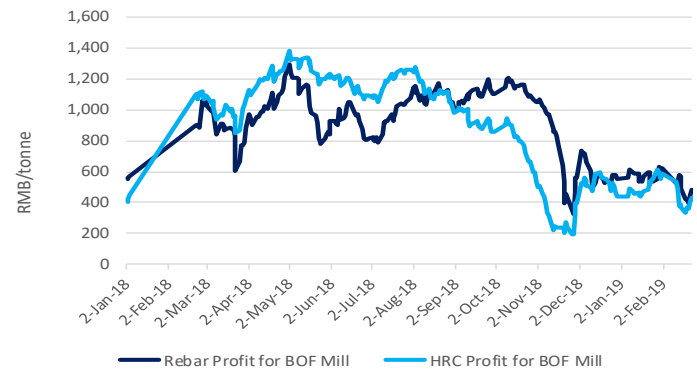
## CHINESE STEEL EXPORT PRICES

## 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

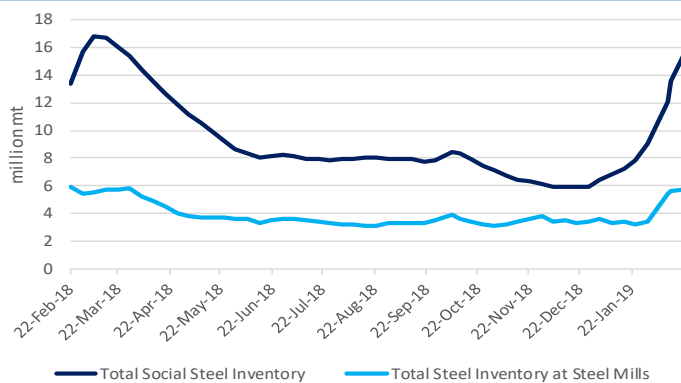
## SMM Tracking of Steel Mill P&amp;L - Rebar and Hot-rolled Coil (RMB/tonne)

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>	<p>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.</p> <p>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></p>
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 25th, 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	61.66%	2.39%	3.57%	0.101%	9.31%	PB Fines 62%	62.00%	2.60%	4.30%	0.090%	10.00%
Newman Fines	62.73%	2.16%	4.11%	0.088%	7.58%	Newman Fines	62.80%	2.20%	4.30%	0.080%	6.40%
MAC Fines	60.90%	2.24%	4.82%	0.083%	7.35%	MAC Fines	61.00%	2.70%	4.70%	0.110%	9.30%
Jimblebar Blended Fines	61.12%	3.03%	4.30%	0.120%	6.98%	Jimblebar Blended Fines	61.79%	2.67%	4.08%	0.115%	7.16%
Carajas Fines	65.42%	1.24%	1.56%	0.067%	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	62.65%	1.76%	4.75%	0.070%	8.34%	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 25th, 2019	SPECIFICATIONS APPLIED FOR 58% BRAND ASSESSMENTS						SPECIFICATIONS APPLIED FOR 58% BRAND ASSESSMENTS				
	Fe	Alumina	Silica	Phos	Moisture		Fe	Alumina	Silica	Phos	Moisture
SSF	56.58%	3.19%	6.20%	0.052%	9.02%						
FMG Blended Fines	58.18%	2.65%	5.50%	0.058%	7.58%						
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	57.19%	1.39%	6.57%	0.039%	8.85%						

## 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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