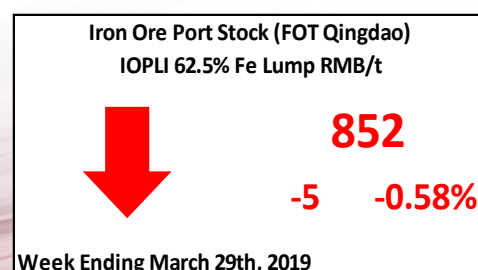
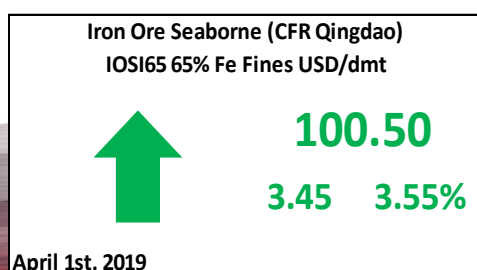
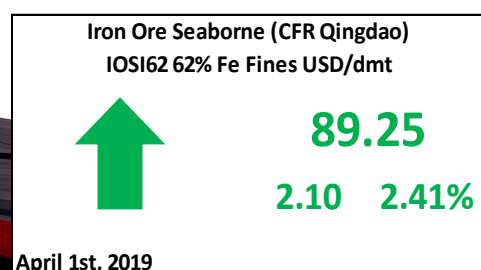
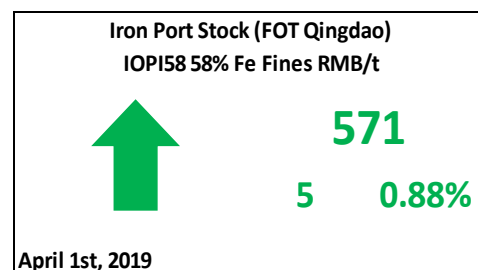
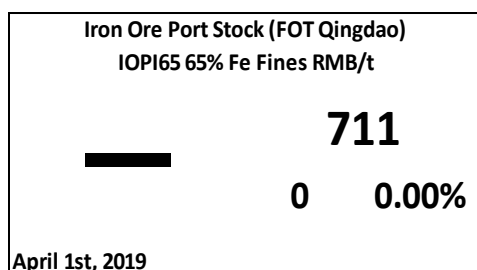
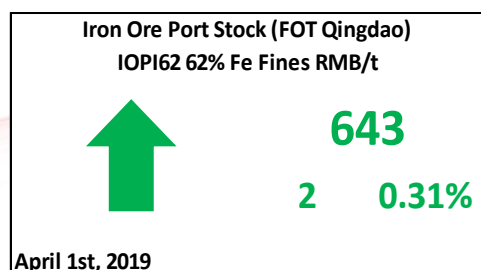


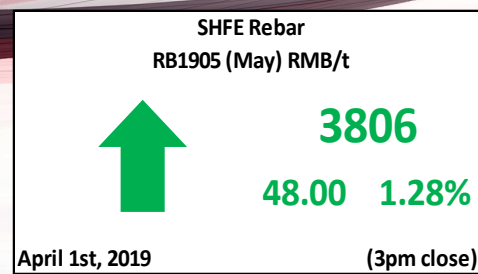
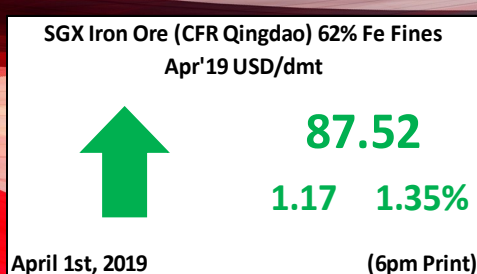
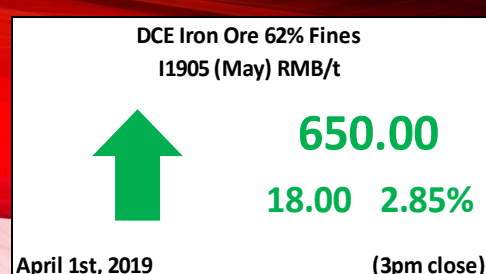


## MMi Dashboard

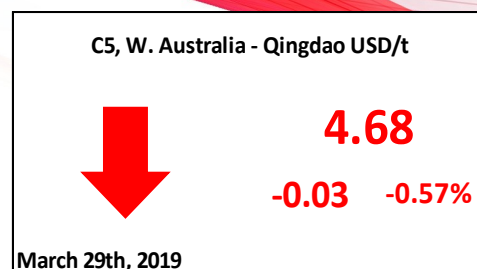
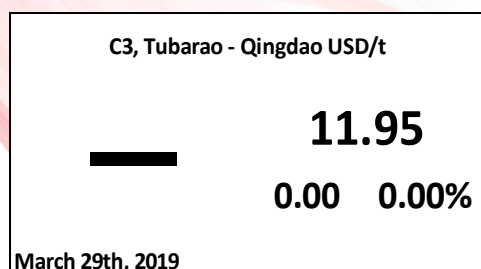
## Iron Ore Price Indices



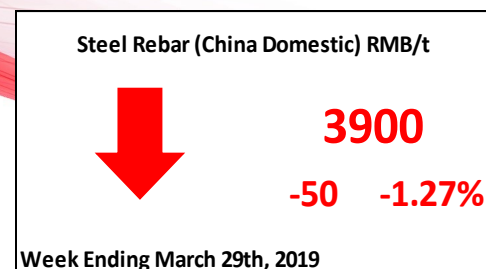
## Exchange Traded Contracts



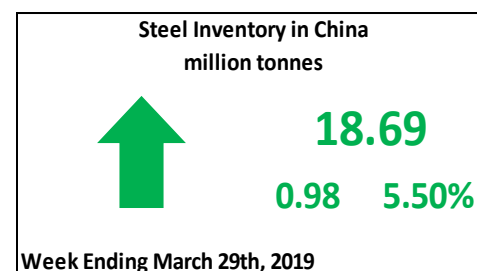
## Freight Rates



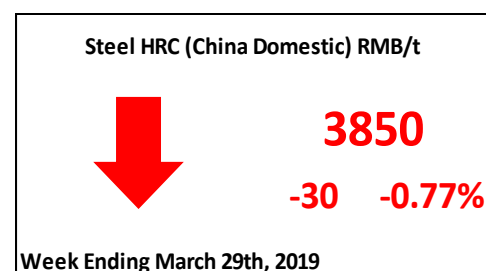
## Steel Price



## Inventory Levels



## Steel Price



## IRON ORE PORT STOCK INDEX (IOPI)

April 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>
631	62% Fe Fines	643	2	0.3%	643	621	443	681	88.04	2.74	3.2%	88.04	82.42	61.36	90.41
598	58% Fe Fines	571	5	0.9%	571	529	308	608	77.73	2.86	3.8%	77.73	69.65	41.40	81.04
706	65% Fe Fines	711	0	0.0%	711	702	541	784	97.78	2.73	2.9%	97.78	93.74	75.83	112.12

## IRON ORE SEABORNE INDEX (IOSI)

## MARKET COMMENTARY

April 1st, 2019		CFR Qingdao, USD/dry tonne							Despite VAT dropping to 13% from 16%, both futures and physical iron ore port stock markets rose throughout today. Vale adjusted their iron ore sales expectation in 2019 down to 307-332 million mt, whilst Rio Tinto declared force majeure on some iron ore shipments due cyclone damage. Rio Tinto also lowered their iron ore sales to 338 million mt in 2019. Thus, iron ore supply is expected to shrink moving forward, while mills now look to buy.						
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low <sup>3</sup>	High <sup>3</sup>							
IOSI62	62% Fe Fines	89.25	2.10	2.41%	89.25	83.00	62.95	89.25							
IOSI65	65% Fe Fines	100.50	3.45	3.55%	100.50	96.23	83.20	106.85							

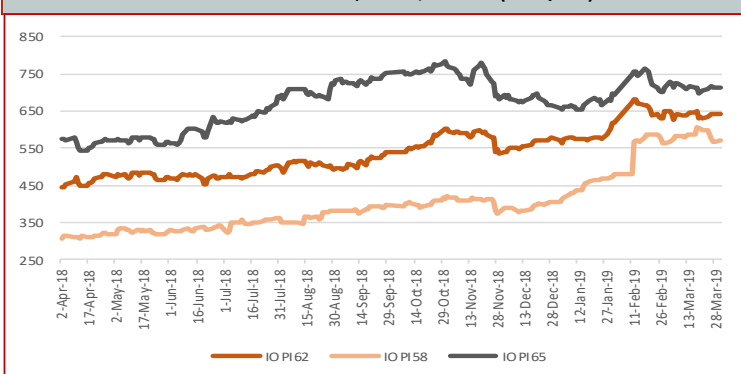
## IRON ORE PORT LUMP INDEX (IOPLI)

Week Ending March 29th, 2019		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% VAT), USD/dry tonne <sup>4</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	852	-5	-0.6%	858	829	565	865	109.89	-1.31	-1.18%	111.03	106.61	76.63	112.12

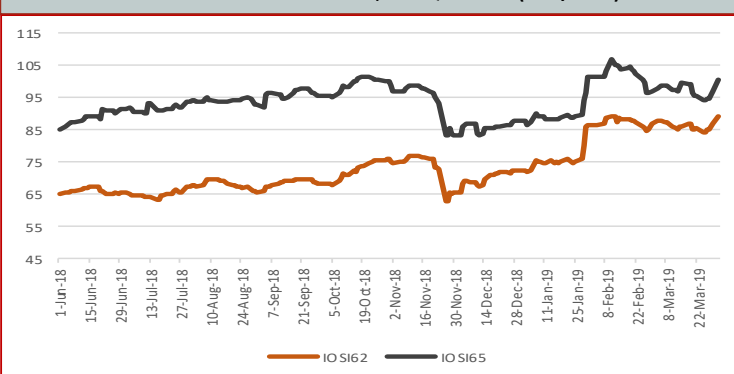
## IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

Week Ending March 29th, 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	770	0.7%	579	802	114.62	0.40%	91.97	118.53
Hebei	Qian'an	65% Fe Concentrate	Dry	755	0.0%	630	815	112.39	-0.25%	100.26	117.34
Liaoning	Anshan	65% Fe Concentrate	Wet	595	0.0%	445	745	88.57	-0.25%	68.21	88.86
Shandong	Zibo	65% Fe Concentrate	Dry	785	-2.5%	620	860	116.86	-2.73%	99.75	127.11
Week Ending March 29th, 2019				This week	Change %	Low <sup>2</sup>	High <sup>2</sup>	<sup>1</sup> Exchange rate applied: RMB/USD = 6.7193 <sup>2</sup> Last 12 months <sup>3</sup> Since June 1 <sup>4</sup> Weekly exchange rate applied: RMB/USD 6.7009			
China Mines Concentrate Composite Index RMB/WT				668.04	-0.7%	534.50	685.87				

## 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

April 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	643	643	621	65.25	72.55	76.16	87.09	88.04	88.04	82.42
IOPI58	58% Fe Fines	401	392	448	569	571	571	529	45.84	50.47	57.99	75.22	77.73	77.73	69.65
IOPI65	65% Fe Fines	760	681	670	733	711	711	702	92.13	99.05	88.65	98.08	97.78	97.78	93.74

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

## FREIGHT RATES

April 1st, 2019		CFR Qingdao, USD/dry tonne							March 29th, 2019		FREIGHT RATES - DRY BULK US\$/wet tonne				
Index	Fe Content	November	December	January	February	MTD	QTD	YTD	Route	Designation	Change	Change %	Low <sup>2</sup>	High <sup>2</sup>	
IOSI62	62% Fe Fines	72.91	69.96	76.09	87.39	89.25	89.25	83.00	W. Australia - Qingdao	C5	4.68	-0.03	-0.57%	4.68	10.00
IOSI65	65% Fe Fines	94.05	85.95	89.92	102.56	100.50	100.50	96.23	Tubarao - Qingdao	C3	11.95	0.00	0.00%	11.61	24.76

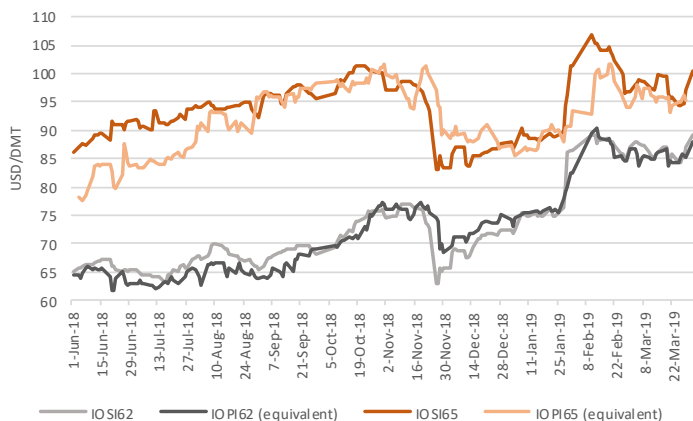
## IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

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	858	829	829	96.21	94.22	99.57	108.63	111.03	106.61	106.61

## IRON ORE INDEX PREMIUMS/DISCOUNTS

April 1st, 2019			PORT STOCK INDEX (RMB/WT)		April 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			-72	-11.20%					
65% Fe Fines			68	10.58%	65% Fe Fines			11	12.61%

## IRON ORE INDEX COMPARISONS



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



## IRON ORE BRAND SPOT PRICE ASSESSMENTS

April 1st, 2019	PORT STOCK INDEX (RMB/WT)			April 1st, 2019	SEABORNE INDEX (USD/DMT)		
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	614	3	-29	Roy Hill	86.75	2.10	-2.50
SIMEC Fines	581	9	-62	SIMEC Fines	85.17	2.10	-4.08
PB Fines	626	2	-17	PB Fines	89.17	2.10	-0.08
Newman Fines	648	3	5	Newman Fines	90.70	2.11	1.45
MAC Fines	617	4	-26	MAC Fines	85.82	1.60	-3.43
Jimblebar Blended Fines	597	3	-46	Jimblebar Blended Fines	85.17	1.47	-4.08
Carajas Fines	716	-1	73	Carajas Fines	100.95	3.39	11.70
Brazilian SSF	635	6	-8	Brazilian SSF	91.75	2.41	2.50
Brazilian Blend Fines	647	2	4	Brazilian Blend Fines	91.75	2.29	2.50
RTX Fines	595	4	-48	RTX Fines	85.50	1.48	-3.75

April 1st, 2019	PORT STOCK INDEX (RMB/WT)		
	Price	Change	Diff to IOPI58
SSF	528	2	-43
FMG Blended Fines	577	4	6
Robe River	531	3	-40
Western Fines	553	3	-18
Atlas Fines	530	4	-41
Yandi	563	3	-8

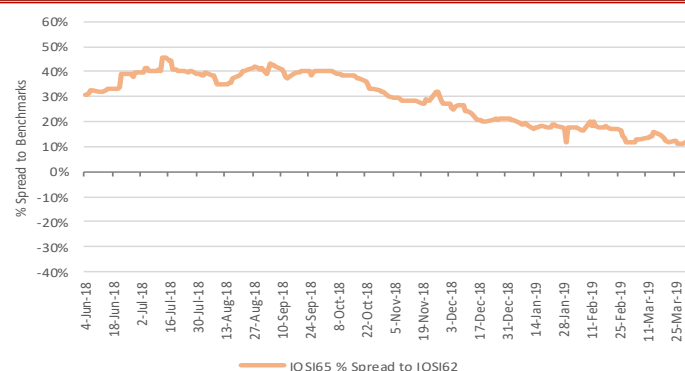
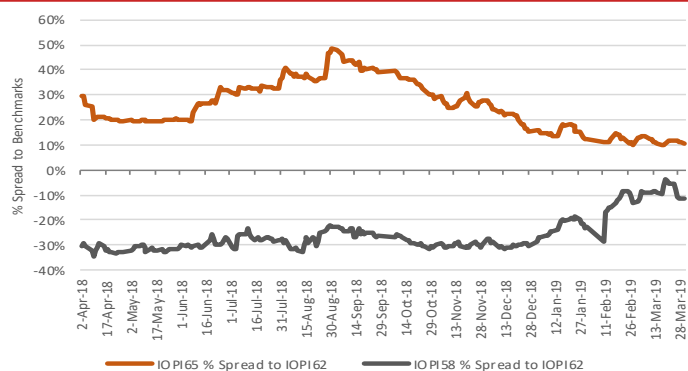
## IRON ORE INDEX NORMALISATION DIFFERENTIALS

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%	15.00	0.00	1% Fe	High Grade Fe 60 - 63%	1.75	0.00
	High Grade Fe 63 - 64%	15.00	0.00		High Grade Fe 63 - 64%	2.75	0.25
	High Grade Fe 64 - 65%	15.00	0.00		High Grade Fe 64 - 65%	2.75	0.25
	High Grade Fe 65 - 65.5%	15.00	0.00		High Grade Fe 65 - 65.5%	2.75	0.25
	Low Grade Fe	19.00	0.00	1% Alumina	High Fe Grade Al <2.25%	2.50	0.25
1% Alumina	High Fe Grade Al <2.25%	21.00	-3.00		High Fe Grade Al 2.25-4%	0.00	0.00
	High Fe Grade Al 2.25-4%	7.00	0.00		High Fe Grade Si <4%	1.00	0.25
	Low Fe Grade Al <2.25%	18.00	-3.00		High Fe Grade Si 4 - 6.5%	0.25	0.00
	Low Fe Grade Al 2.25-4%	18.00	3.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	0.75	0.25
1% Silica	High Fe Grade Si <4%	2.00	0.00		High Fe Grade 0.115%<P<0.15%	0.00	0.00
	High Fe Grade Si 4-6.5%	19.00	-3.00				
0.01% Phosphorus	Low Fe Grade	7.00	0.00				
	High Fe Grade 0.09%<P<0.115%	2.00	0.00				
	High Fe Grade 0.115%<P<0.15%	8.00	0.00				
	Low Fe Grade 0.09%<P<0.1%	0.00	0.00				

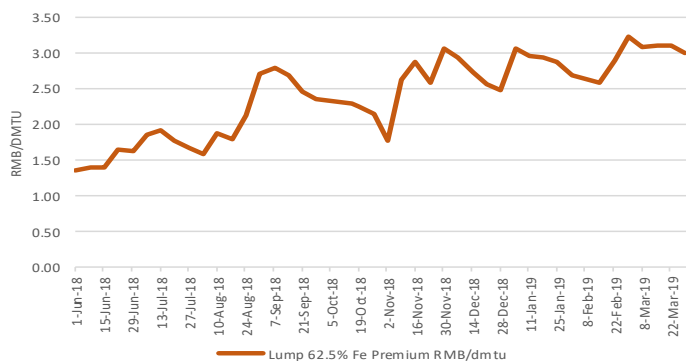
## Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

Port	Value	Change	Port	Value	Change	Port	Value	Change	Port	Value	Change
Bayuquan	-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	-20.00	0.00	Lianyungang	0.00	0.00	Rizhao	0.00	0.00
Caofeidian	-5.00	0.00	Jingtang	-5.00	0.00	Majishan	0.00	0.00	Shekou	0.00	0.00
Dalian	-10.00	0.00	Lanqiao	0.00	0.00	Nantong	-20.00	0.00	Tianjin	-20.00	0.00

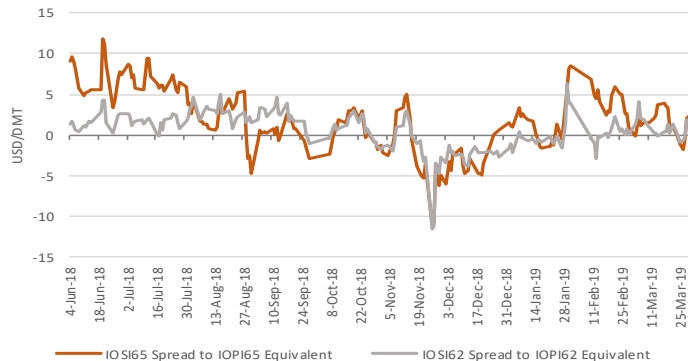
## IRON ORE INDEX PREMIUMS/DISCOUNTS



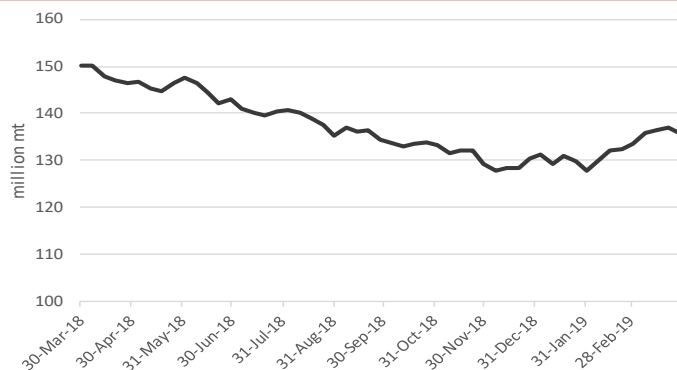
## WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (62.5% FE LUMP—62% FE FINES)



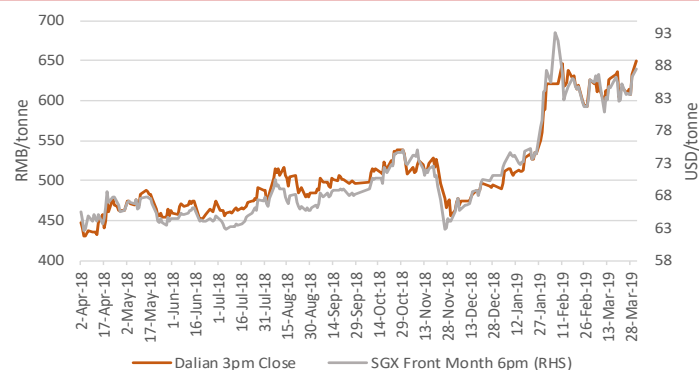
## IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS



## TOTAL IRON ORE INVENTORIES AT CHINA PORTS



## FUTURE TRADING—FRONT MONTH CLOSING PRICE



## IRON ORE PORT INVENTORIES

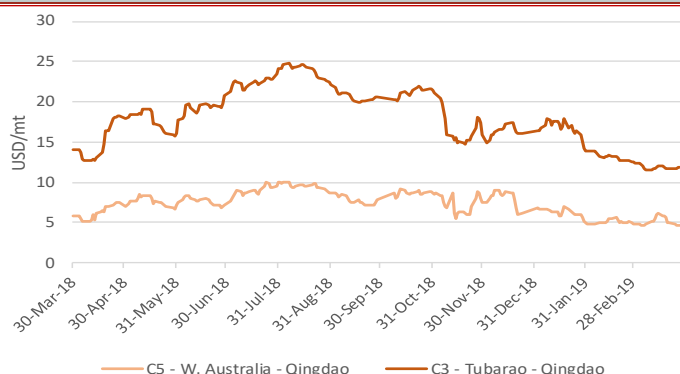
Week Ending March 29th, 2019 (million tonnes)

Province	This week	Change %	Low <sup>2</sup>	High <sup>2</sup>
Jingtang	16.11	0.81%	13.29	19.00
Qingdao	17.85	-2.57%	16.09	19.97
Caofeidian	18.98	2.04%	16.30	25.30
Tianjin	8.28	-2.36%	8.48	11.00
Rizhao	16.73	-2.16%	14.00	19.00
Total (35 Ports)	135.75	-0.79%	127.72	150.04

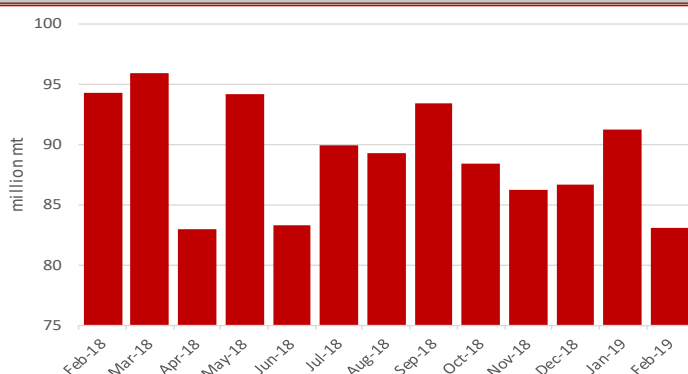
## IRON ORE FUTURES CONTRACTS

Closing Date	DCE			SGX		
	1st Apr 3pm close			1st Apr Feb 6 pm		
Contract	I1905	Change	Change %	Apr'19	Change	Change %
Closing Price	650.00	18.0	2.85%	87.52	1.17	1.35%
Vol traded ('000 lots)	118.89	-60.4	-33.70%	15.80	-2.56	-13.94%
Open positions ('000 lots)	91.29	3.9	4.45%	92.63	-3.10	-3.24%
Day Low	628.5	26.0	4.32%	86.70	2.51	2.98%
Day High	654.0	15.0	2.35%	88.30	1.15	1.32%

## DRY BULK F REIGHT RATES



## TOTAL CHINA IRON ORE IMPORT VOLUMES



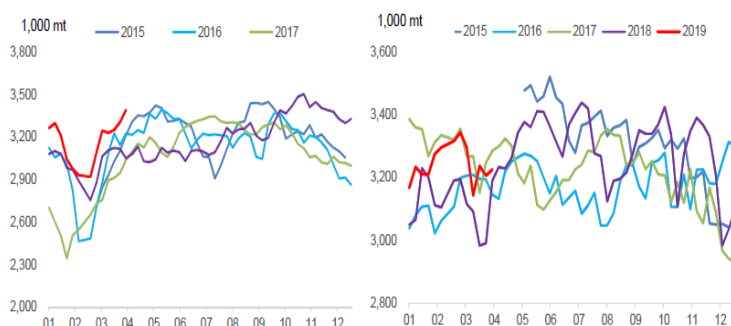
## STEEL SPOT MARKET PRICES—CHINA

## Steel Spot Market RMB/tonne

Product	22/3/2019	Change	Change %
ReBar HRB400 $\phi$ 18mm	3,900.0	-50	-1.27%
Wirerod Q300 $\phi$ 6.5mm	4,080.0	-60	-1.45%
HRC Q235/SS400 5.5mm*1500*C	3,850.0	-30	-0.77%
CRC SPOC/ST12 1.0mm*1250*2500	4,380.0	-20	-0.45%
Medium & Heavy Plate Q235B 20mm	3,980.0	-20	-0.50%
GI ST02Z 1.0mm*1000*C	4,680.0	0	0.00%
Colour Coated Plate	7,200.0	0	0.00%

## Weekly output of rebar

## Weekly output of hot-rolled coil



## CHINESE STEEL MILL PROFITABILITY

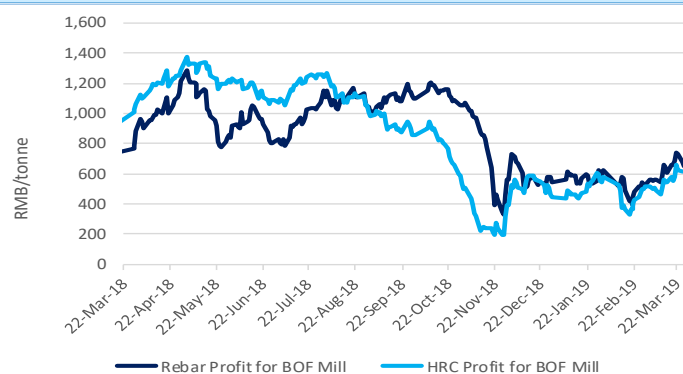
## SMM Tracking of Steel Mill P&amp;L - Rebar and Hot-rolled Coil (RMB/tonne)

Category	Price	Change (WoW)	Note
MMI (Fe 62%), USD/mt excluding tax	85.30	0.90	Mmi CFR Equivalent index for 1st Feb
Coke	1,870	0	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	2,140	-40	steel scrap (6mm) in Zhangjiagang, exl. tax
Billet Cost	2,912	7	Q234, incl. tax
Rebar cost - Blast furnace	3,168	7	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	692	-27	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	3,237	7	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	573	-47	based on Shanghai prices, incl. tax

Note: 1 Costs in the table are calculated based on today's market prices and fact of our management, sales, financial and depreciations fees.

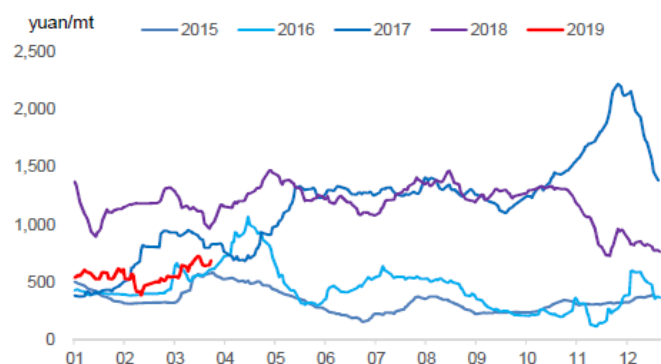
2. The cost refers to average cost in the industry based on SMM's survey of small, medium and large mills in China

## CHINESE STEEL MILL PROFITABILITY



## CHINESE STEEL MILL PROFITABILITY

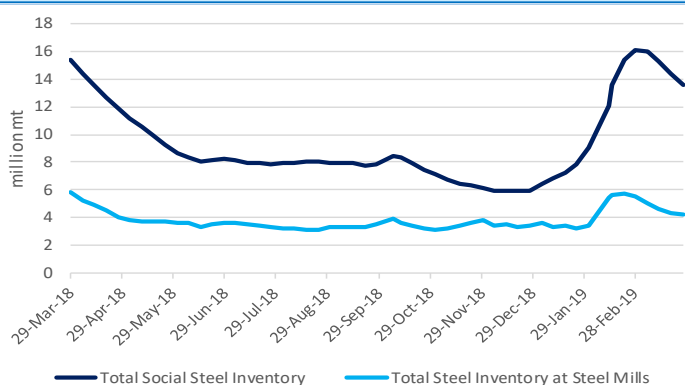
## Rebar profits



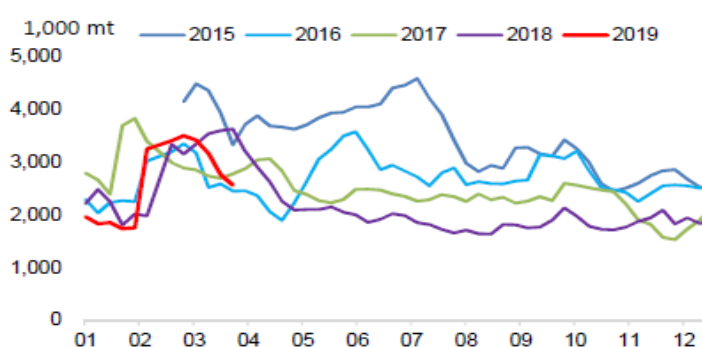
## Hot-rolled coil profits



## CHINESE STEEL INVENTORIES



## In-plant inventory of rebar



IRON ORE INDEX SPECIFICATIONS, COMPILATION RATIONALE AND DATA EXCLUSIONS

Iron Ore Index Specifications (Port and Seaborne)					Iron Ore Index Compilation Rationale and Data Exclusions
Fe %	65% Fe Fines	62% Fe Fines	58% Fe Fines	62.5% Fe Lump	<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>
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					
April 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	61.59%	2.39%	3.66%	0.101%	9.24%	PB Fines 62%	62.00%	2.60%	4.30%	0.090%	10.00%
Newman Fines	62.33%	2.29%	4.14%	0.091%	7.56%	Newman Fines	62.80%	2.20%	4.30%	0.080%	6.40%
MAC Fines	60.89%	2.26%	4.79%	0.087%	7.06%	MAC Fines	61.00%	2.70%	4.70%	0.110%	9.30%
Jimblebar Blended Fines	61.05%	3.01%	4.17%	0.118%	7.37%	Jimblebar Blended Fines	61.79%	2.67%	4.08%	0.115%	7.16%
Carajas Fines	65.30%	1.33%	1.49%	0.074%	8.04%	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%	1.56%	4.90%	0.070%	8.39%	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%

April 1st, 2019	Specifications applied for 58% brand assessments				
	Fe	Alumina	Silica	Phos	Moisture
SSF	56.72%	3.09%	5.99%	0.051%	8.95%
FMG Blended Fines	58.25%	2.71%	5.65%	0.064%	7.37%
Robe River	56.64%	2.91%	5.58%	0.035%	9.29%
Western Fines	57.88%	2.87%	7.50%	0.062%	7.45%
Atlas Fines	56.59%	2.55%	7.14%	0.080%	8.46%
Yandi	57.10%	1.48%	6.52%	0.044%	8.65%

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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