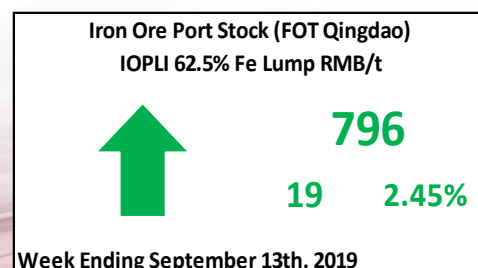
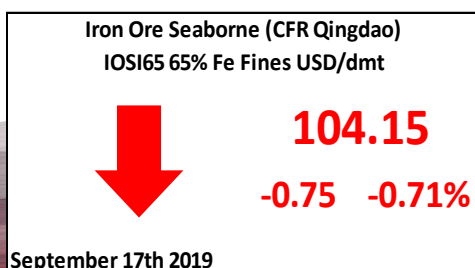
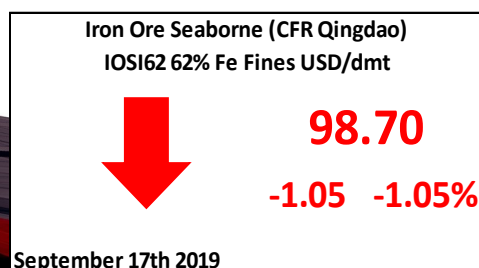
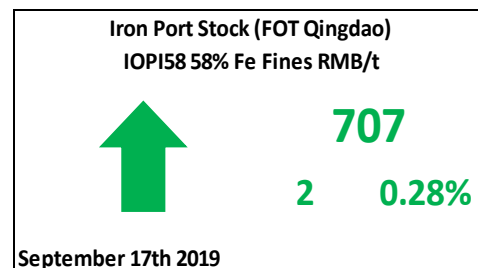
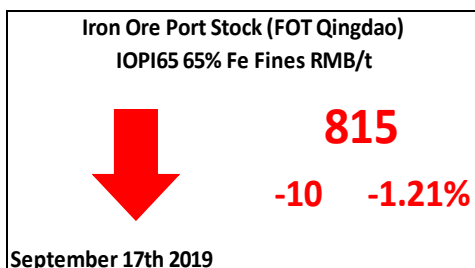
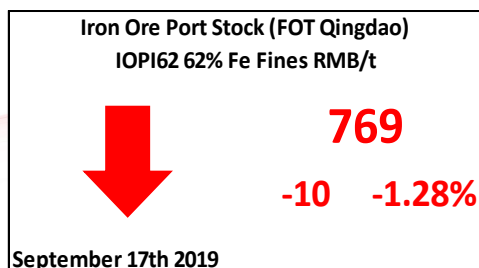


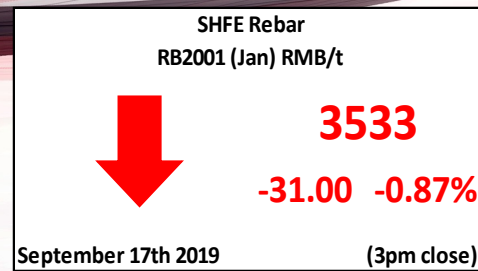
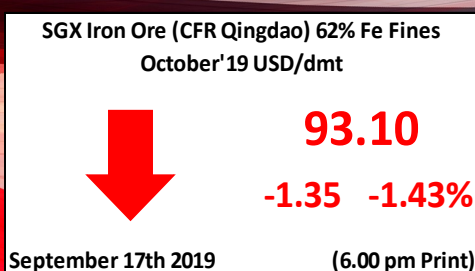
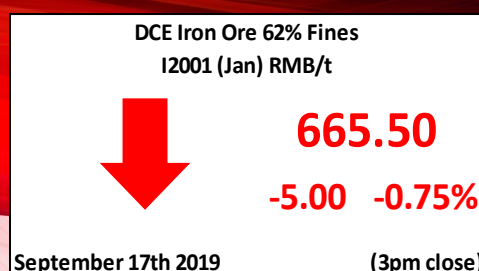


## MMi Dashboard

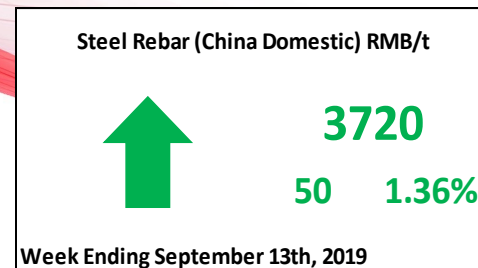
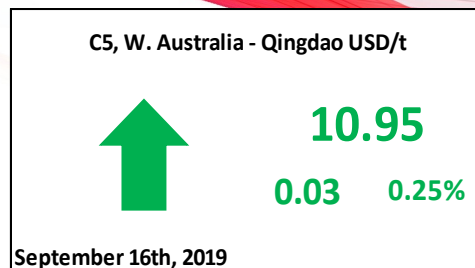
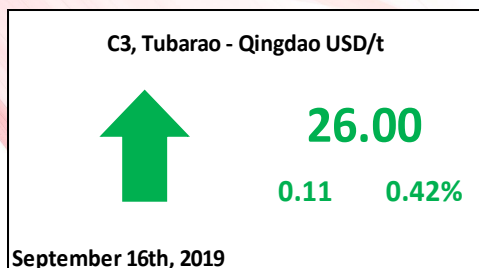
## Iron Ore Price Indices



## Exchange Traded Contracts



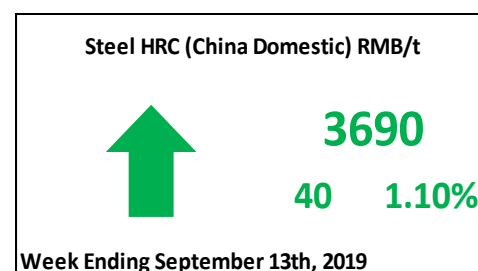
## Freight Rates



## Inventory Levels



## Steel Price



## IRON ORE PORT STOCK INDEX (IOPI)

September 17th 2019		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% 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	769	-10	-1.3%	757	726	504	928	100.77	-1.47	-1.4%	98.95	97.32	65.13	126.12
IOPI58	58% Fe Fines	707	2	0.3%	669	637	374	823	93.36	0.18	0.2%	88.02	85.56	46.88	112.44
IOPI65	65% Fe Fines	815	-10	-1.2%	799	797	654	992	107.03	-1.47	-1.4%	104.70	107.24	85.47	135.34

## IRON ORE SEABORNE INDEX (IOSI)

## MARKET COMMENTARY

September 17th 2019		CFR Qingdao, USD/dry tonne							Physical port stock quotes held firm, though concluded transactions were down on yesterday. As the day progressed, a lack of enthusiasm meant traders were happy to concede some ground, following the DCE lower. Lump demand is relatively good, due to limited domestic concentrates due to restricted supply of explosives. Major Chinese ports saw arrivals of seaborne iron ore increasing for the first time in three weeks. SMM estimates that 89 vessels carrying 13.93 million mt of iron ore arrived at major Chinese ports during September 8-14, down 3.08 million mt from the week ended September 7. Last week, iron ore deliveries leaving Australian ports up 660,000 mt from the prior week to 14.33 million mt. Shipments that departed Brazilian ports were estimated to grow by 60,000 mt on the week to 6.09 million mt.							
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low <sup>2</sup>	High <sup>2</sup>								
IOSI62	62% Fe Fines	98.70	-1.05	-1.05%	94.15	95.59	62.95	127.50								
IOSI65	65% Fe Fines	104.15	-0.75	-0.71%	100.53	107.97	83.20	137.95								

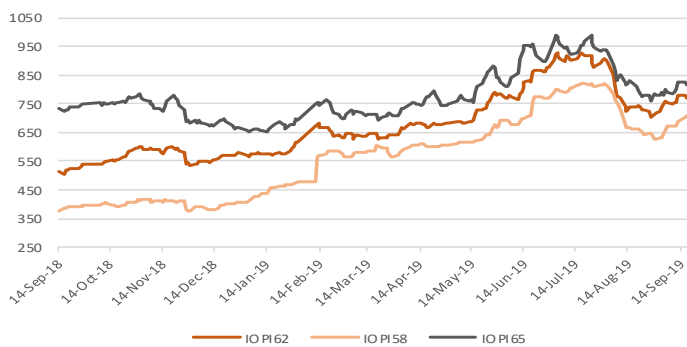
## IRON ORE PORT LUMP INDEX (IOPLI)

Week Ending September 13th, 2019		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% VAT), USD/dry tonne <sup>3</sup>						
Index	Fe Content	Price	W-o-W	Change %	MTD	YTD	Low <sup>2</sup>	High <sup>2</sup>	Price	W-o-W	Change %	MTD	YTD	Low <sup>2</sup>	High <sup>2</sup>
IOPLI62	62.5% Fe Lump	796	19	2.4%	787	894	694	1051	97.34	2.44	2.57%	96.12	113.69	87.48	133.81

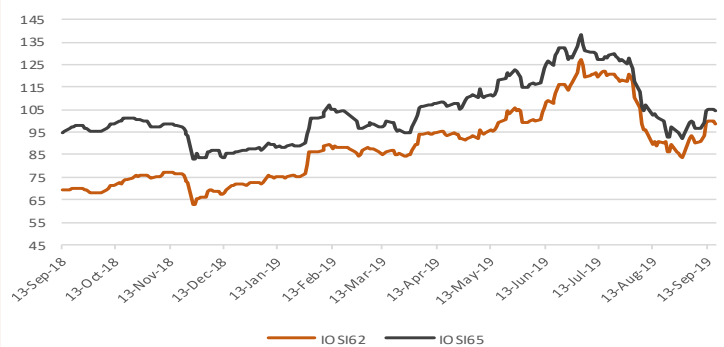
## IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

Week Ending September 13th, 2019				RMB/tonne (excluding tax) <sup>3</sup>				USD/tonne (excluding tax) <sup>3</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	832	5.6%	640	1032	117.44	5.62%	93.49	150.03
Hebei	Qian'an	65% Fe Concentrate	Dry	880	4.8%	690	960	124.21	4.80%	100.26	139.35
Liaoning	Anshan	65% Fe Concentrate	Wet	660	0.0%	535	745	93.16	0.03%	77.39	104.66
Shandong	Zibo	65% Fe Concentrate	Dry	880	4.8%	735	1040	124.21	4.80%	106.55	151.33
Week Ending September 13th, 2019				This week	Change %	Low <sup>2</sup>	High <sup>2</sup>	<sup>1</sup> Exchange rate applied: RMB/USD = 7.0730 <sup>2</sup> Last 12 months <sup>3</sup> Weekly exchange rate applied: RMB/USD 7.0870			
China Mines Concentrate Composite Index RMB/WT				748.08	2.2%	609.04	859.50				

## 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

September 17th 2019		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne						
Index	Fe Content	May	June	July	August	MTD	QTD	YTD	May	June	July	August	MTD	QTD	YTD
IOPI62	62% Fe Fines	729	825	909	759	757	820	726	98.40	111.42	123.29	100.18	98.95	109.43	97.32
IOPI58	58% Fe Fines	637	726	809	691	669	735	637	86.39	98.60	110.47	91.86	88.02	98.75	85.56
IOPI65	65% Fe Fines	812	901	954	823	799	872	797	110.00	121.97	129.53	108.92	104.70	116.56	107.24

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

## FREIGHT RATES

September 17th 2019		CFR Qingdao, USD/dry tonne							September 16th, 2019		FREIGHT RATES - DRY BULK US\$/wet tonne				
Index	Fe Content	May	June	July	August	MTD	QTD	YTD	Route	Designation	Change	Change %	Low <sup>2</sup>	High <sup>2</sup>	
IOSI62	62% Fe Fines	98.68	108.57	120.82	92.61	94.15	104.82	95.59	W. Australia - Qingdao	C5	10.95	0.03	0.25%	4.39	11.42
IOSI65	65% Fe Fines	115.53	124.49	129.53	101.34	100.53	112.95	107.97	Tubarao - Qingdao	C3	26.00	0.11	0.42%	11.61	29.10

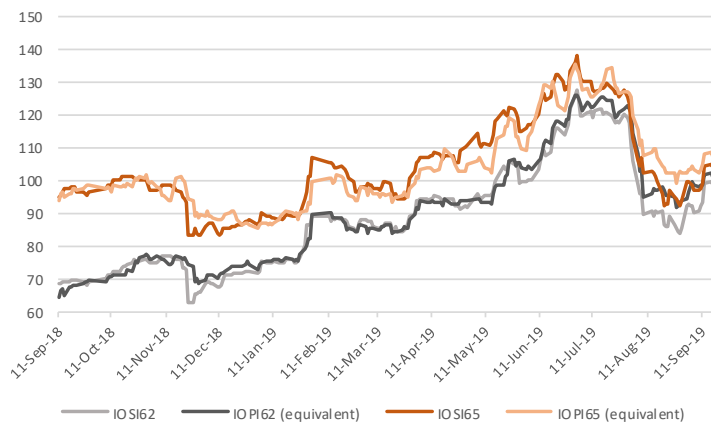
## IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending September 13th, 2019		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% VAT), USD/dry tonne <sup>1</sup>						
Index	Fe Content	May	June	July	August	MTD	QTD	YTD	May	June	July	August	MTD	QTD	YTD
IOPLI62	62.5% Fe Lump	919	1009	1046	870	787	919	894	117.12	128.00	132.99	108.80	96.12	114.97	113.69

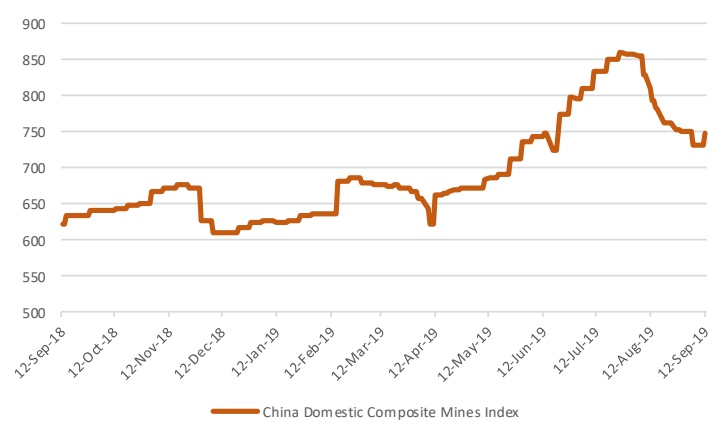
## IRON ORE INDEX PREMIUMS/DISCOUNTS

September 17th 2019		PORT STOCK INDEX (RMB/WT)		September 17th 2019		SEABORNE INDEX (USD/DMT)	
Index	Fe Content	Spread to IOPI62	% Spread to IOPI62	Index	Fe Content	Spread to IOSI62	% Spread to IOSI62
IOPI58	58% Fe Fines	-62	-8.06%	IOSI65	65% Fe Fines	5.45	5.52%
IOPI65	65% Fe Fines	46	5.98%				

## IRON ORE INDEX COMPARISONS (USD/DMT)



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



## IRON ORE BRAND SPOT PRICE ASSESSMENTS

September 17th 2019				September 17th 2019			
PORT STOCK INDEX (RMB/WT)				SEABORNE INDEX (USD/DMT)			
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	737	-8	-32	Roy Hill	96.22	-1.05	-2.48
SIMEC Fines	714	-6	-55	SIMEC Fines	93.60	-1.05	-5.10
PB Fines	746	-12	-23	PB Fines	97.20	-1.05	-1.50
Newman Fines	773	-10	4	Newman Fines	98.87	-1.05	0.17
MAC Fines	748	-9	-21	MAC Fines	95.55	-1.05	-3.15
Jimblebar Blended Fines	687	-15	-82	Jimblebar Blended Fines	85.27	-1.05	-13.43
Carajas Fines	819	-10	50	Carajas Fines	104.12	-1.05	5.42
Brazilian SSF	732	-5	-37	Brazilian SSF	95.57	-1.05	-3.13
Brazilian Blend Fines	761	-9	-8	Brazilian Blend Fines	97.95	-1.05	-0.75
RTX Fines	696	-18	-73	RTX Fines	90.15	-1.05	-8.55
West Pilbara Fines	730	-8	-39	West Pilbara Fines	96.07	-1.05	-2.63

September 17th 2019			
PORT STOCK INDEX (RMB/WT)			
	Price	Change	Diff to IOPI58
SSF	641	10	-66
FMG Blended Fines	710	5	3
Robe River	649	7	-58
Western Fines	649	12	-58
Atlas Fines	636	8	-71
Yandi	683	5	-24

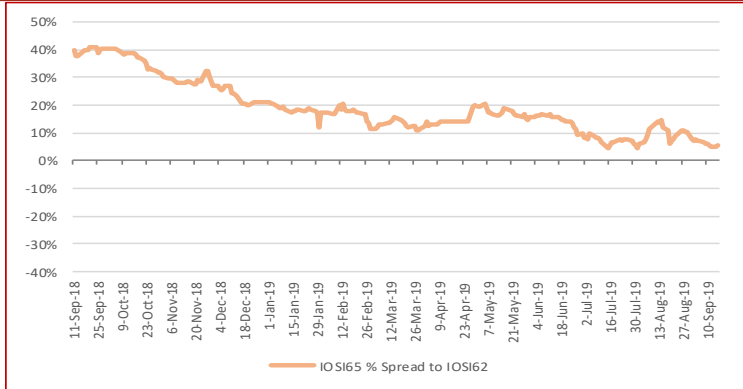
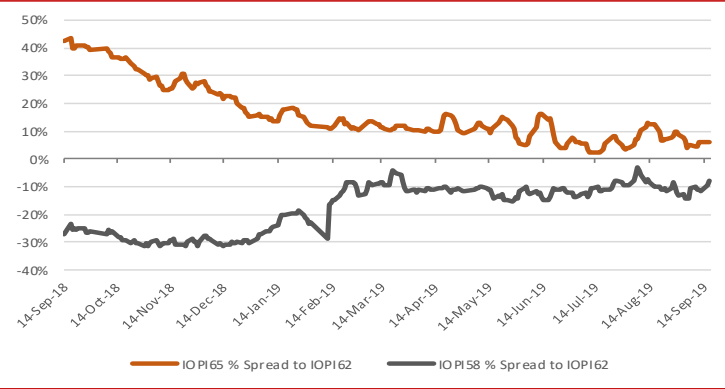
## IRON ORE INDEX NORMALISATION DIFFERENTIALS

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%	0.75	0.00	
	High Grade Fe 63 - 64%	12.00	0.00		High Grade Fe 63 - 64%	1.50	0.00	
	High Grade Fe 64 - 65%	12.00	0.00		High Grade Fe 64 - 65%	1.50	0.00	
	High Grade Fe 65 - 65.5%	12.00	0.00		High Grade Fe 65 - 65.5%	1.50	0.00	
	Low Grade Fe	19.00	0.00					
1% Alumina	High Fe Grade Al <2.25%	0.00	0.00	1% Alumina	High Fe Grade Al <2.25%	0.50	0.00	
	High Fe Grade Al 2.25-4%	30.00	0.00		High Fe Grade Al 2.25-4%	3.00	0.00	
	Low Fe Grade Al <2.25%	10.00	0.00					
	Low Fe Grade Al 2.25-4%	33.00	-6.00					
1% Silica	High Fe Grade Si <4%	5.00	0.00	1% Silica	High Fe Grade Si <4%	0.50	0.00	
	High Fe Grade Si 4-6.5%	21.00	-2.00		High Fe Grade Si 4 - 6.5%	1.50	0.00	
0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	5.00	2.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	0.00	0.00	
	High Fe Grade 0.115%<P<0.15%	9.00	2.00		High Fe Grade 0.115%<P<0.15%	2.25	0.00	
	Low Fe Grade 0.09<P<0.1%	0.00	0.00					

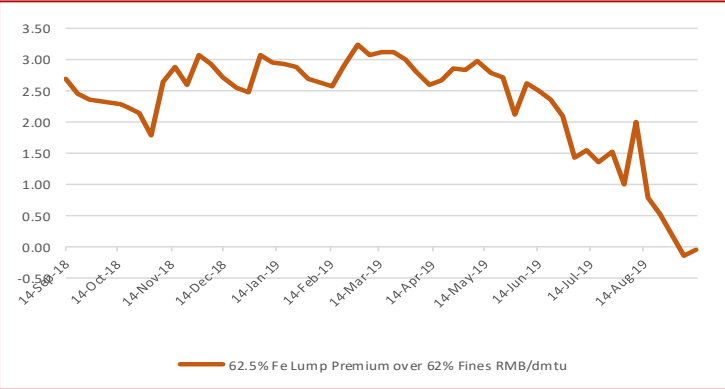
## Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

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	-10.00	0.00	Lianyungang	0.00	0.00	Rizhao	0.00	0.00
Caofeidian	-20.00	0.00	Jingtang	-20.00	0.00	Majishan	0.00	0.00	Shekou	0.00	0.00
Dalian	-35.00	0.00	Lanqiao	0.00	0.00	Nantong	-10.00	0.00	Tianjin	-20.00	0.00

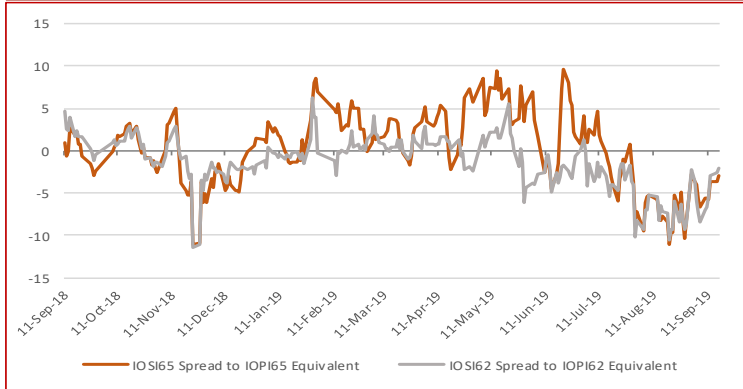
IRON ORE INDEX PREMIUMS/DISCOUNTS



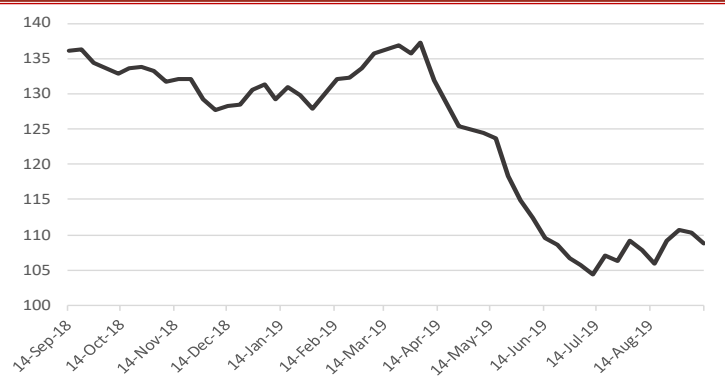
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



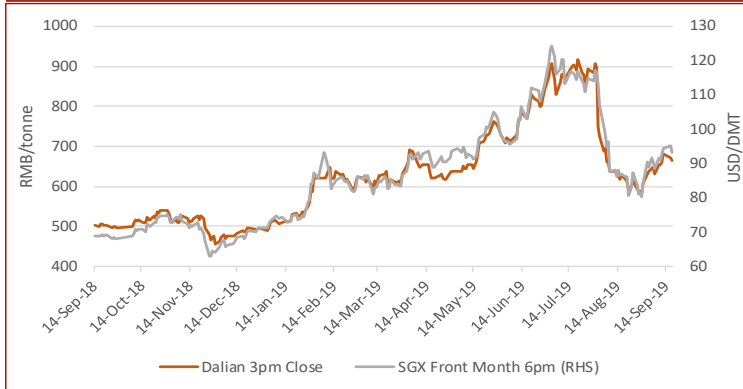
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



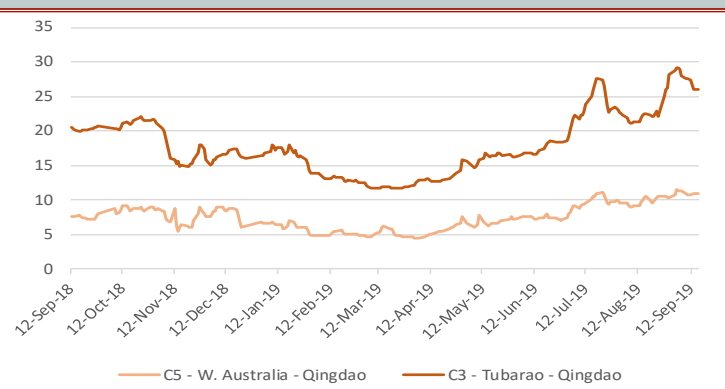
IRON ORE PORT INVENTORIES (MILLION TONNES)

Week Ending September 13th, 2019				
Province	This week	Change %	Low <sup>2</sup>	High <sup>2</sup>
Jingtang	12.38	-3.66%	10.80	16.37
Qingdao	12.97	-1.52%	12.38	19.01
Caofeidian	14.50	-1.69%	14.32	20.10
Tianjin	7.15	0.85%	6.39	10.05
Rizhao	11.44	-5.69%	11.44	17.10
<b>Total (35 Ports)</b>	<b>108.75</b>	<b>-1.41%</b>	<b>104.40</b>	<b>137.30</b>

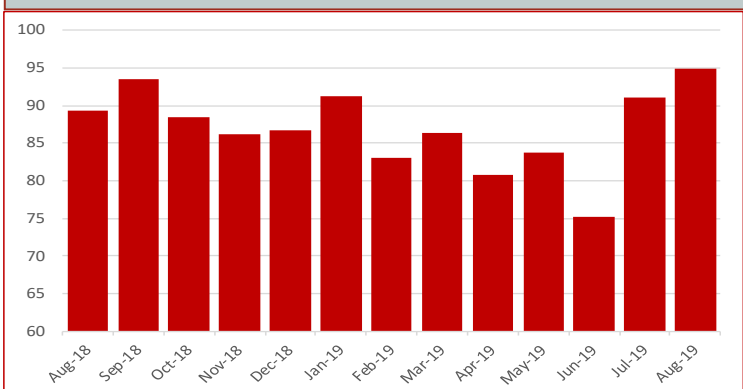
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	Sept 16th 3pm close			Sep 16th 5.30 pm		
Contract	I2001	Change	Change %	Oct'19	Change	Change %
Closing Price	665.50	-5.0	-0.75%	93.10	-1.35	-1.43%
Vol traded ('000 lots)	181.86	31.3	20.79%	18.60	-7.36	-28.35%
Open positions ('000 lots)	155.32	8.7	5.97%	133.47	-1.31	-0.97%
Day Low	655.5	-14.0	-2.09%	91.64	-2.25	-2.40%
Day High	676.0	-14.0	-2.03%	94.20	-3.00	-3.09%

DRY BULK FREIGHT RATES (USD/MT)



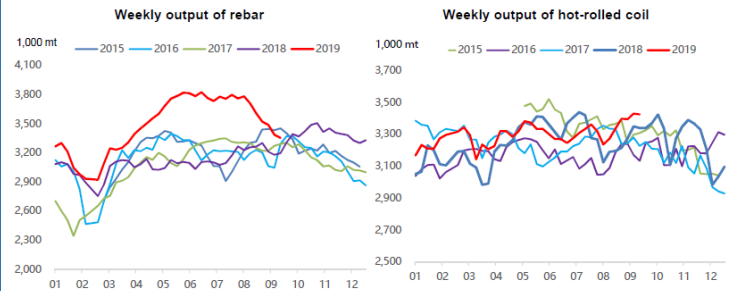
TOTAL CHINA IRON ORE IMPORT VOLUMES (MILLION TONNES)



STEEL SPOT MARKET PRICES—CHINA

Steel Spot Market RMB/tonne

Product	13/9/2019	Change	Change %
ReBar HRB400 φ18mm	3,720.0	50	1.36%
Wirerod Q300 φ6.5mm	4,030.0	60	1.51%
HRC Q235/SS400 5.5mm*1500*C	3,690.0	40	1.10%
CRC SPPC/ST12 1.0mm*1250*2500	4,270.0	20	0.47%
Medium & Heavy Plate Q235B 20mm	3,780.0	20	0.53%
GI ST02Z 1.0mm*1000*C	4,500.0	10	0.22%
Colour Coated Plate	6,950.0	0	0.00%



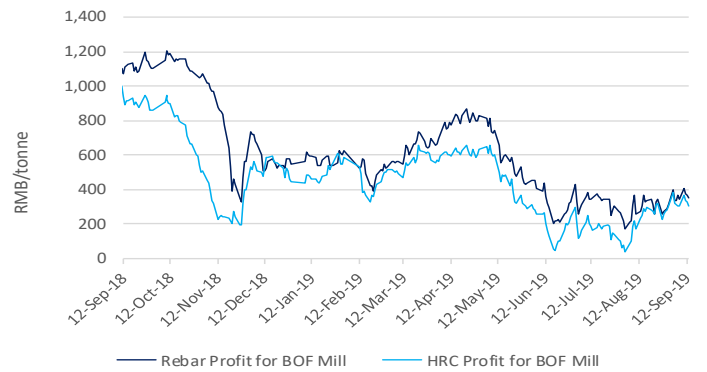
CHINESE STEEL MILL PROFITABILITY

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	93.40	1.10	Mmi CFR Equivalent index for 1st Feb
Coke	1,910	0	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	2,340	70	steel scrap (6mm) in Zhangjiagang, exl. tax
Billet Cost	3,080	18	Q234, incl. tax
Rebar cost - Blast furnace	3,326	20	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	354	10	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	3,396	18	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	304	2	based on Shanghai prices, incl. tax

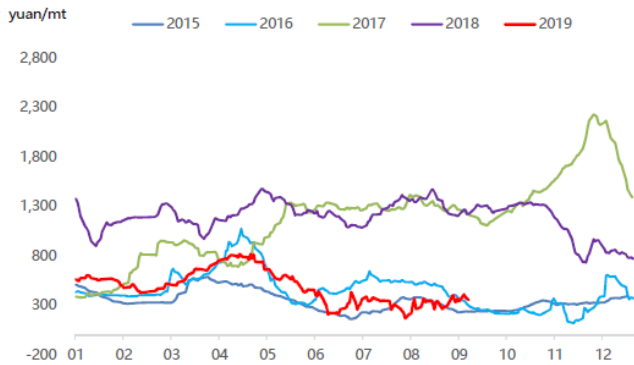
Note: 1. Costs in the table are calculated based on today's market prices and fact our management, sales, financial and depreciations fees.  
2. The cost refers to average cost in the industry based on SMM's survey of small, medium and large mills in China

CHINESE STEEL MILL PROFITABILITY

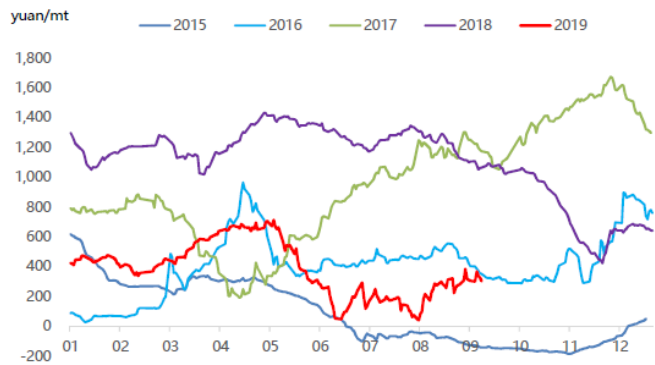


CHINESE STEEL MILL PROFITABILITY

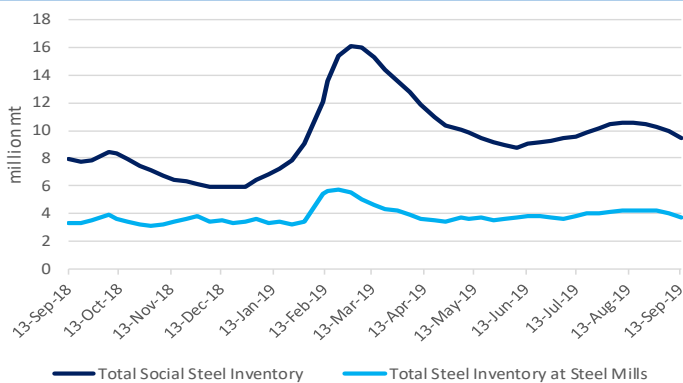
Rebar profits



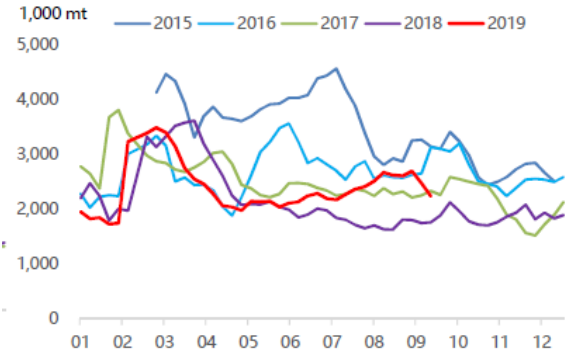
Hot-rolled coil profits



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
	<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					
September 17th 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	61.16%	2.25%	4.61%	0.052%	9.35%	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	61.53%	2.37%	3.75%	0.097%	9.45%	PB Fines 62%	62.00%	2.60%	4.30%	0.090%	10.00%
Newman Fines	62.51%	2.16%	4.16%	0.088%	7.74%	Newman Fines	62.80%	2.20%	4.30%	0.080%	6.40%
MAC Fines	60.82%	2.24%	4.58%	0.079%	7.58%	MAC Fines	61.00%	2.70%	4.70%	0.110%	9.30%
Jimblebar Blended Fines	60.58%	3.04%	4.57%	0.119%	7.51%	Jimblebar Blended Fines	59.50%	3.70%	5.80%	0.135%	8.30%
Carajas Fines	65.46%	1.32%	1.34%	0.076%	8.32%	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	62.90%	1.54%	4.59%	0.070%	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%
West Pilbara Fines	60.10%	2.30%	4.70%	0.075%	8.50%	West Pilbara Fines	60.10%	2.30%	4.70%	0.075%	8.50%
September 17th 2019	Specifications applied for 58% brand assessments						Specifications applied for 58% brand assessments				
	Fe	Alumina	Silica	Phos	Moisture		Fe	Alumina	Silica	Phos	Moisture
SSF	56.59%	3.07%	6.32%	0.056%	8.07%						
FMG Blended Fines	58.19%	2.61%	5.44%	0.058%	7.76%						
Robe River	56.28%	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	57.31%	1.54%	6.33%	0.041%	8.90%						

## BLOOMBERG TICKERS

PORT STOCK INDICES				SEABORNE INDICES	
	FOT Qingdao (RMB/wet tonne)		CFR Qingdao Equivalent (USD/dry tonne)		CFR Qingdao (USD/DMT)
IOPI62	IRCNO001		IRCNO004		IRCNO034
IOPI58	IRCNO002		IRCNO005		IRCNO035
IOPI65	IRCNO003		IRCNO006		
IOPLI62	IRCNO036		IRCNO037		

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