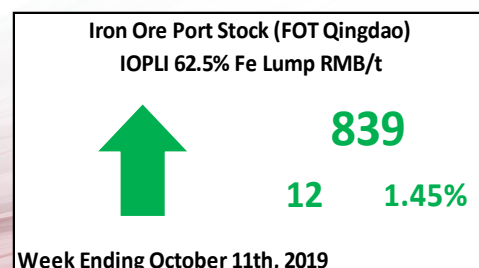
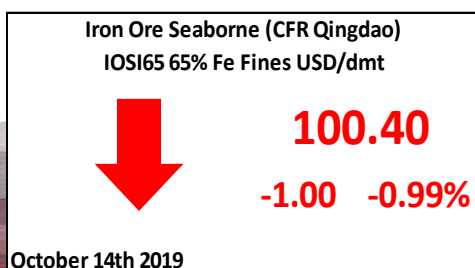
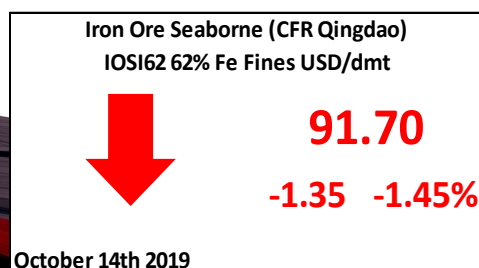
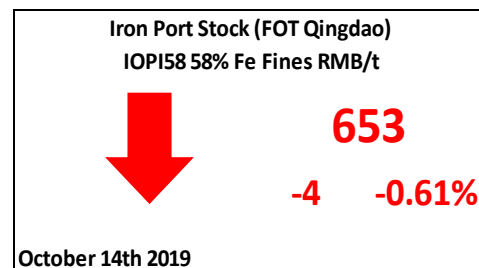
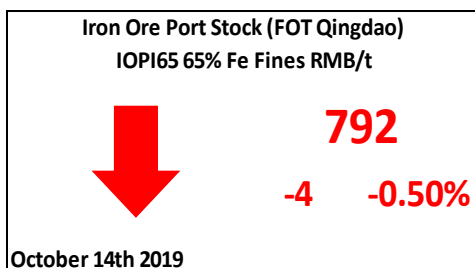
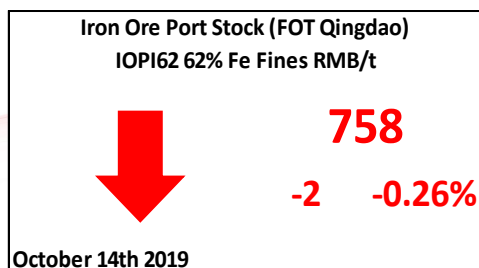


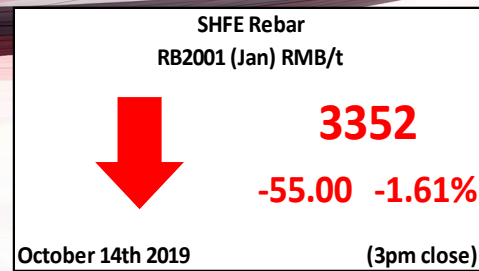
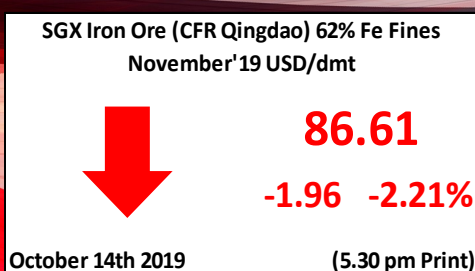
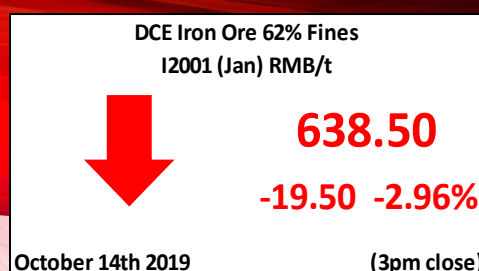


MMi Dashboard

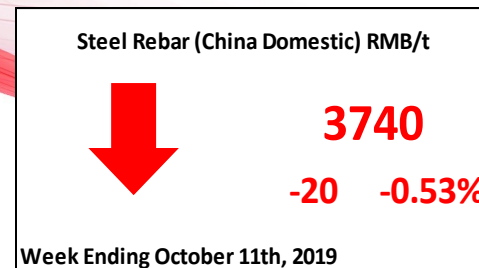
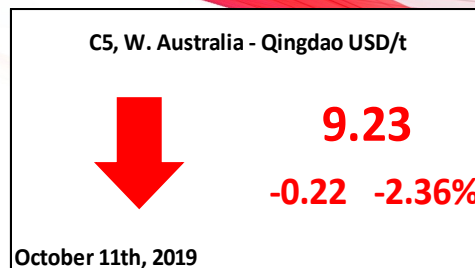
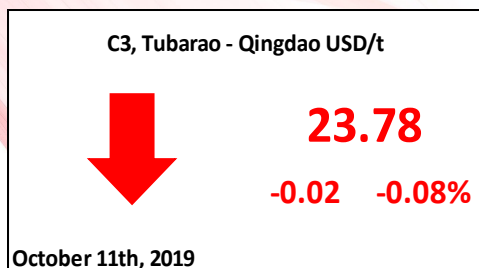
Iron Ore Price Indices



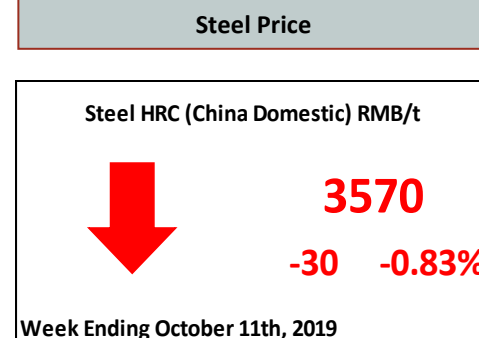
Exchange Traded Contracts



Freight Rates



Inventory Levels



IRON ORE PORT STOCK INDEX (IOPI)

October 14th 2019		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne ¹						
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low ²	High ²	Price	Change	Change %	MTD	YTD	Low ²	High ²
IOPI62	62% Fe Fines	758	-2	-0.3%	760	729	535	928	99.28	-0.27	-0.3%	99.53	97.48	68.50	126.12
IOPI58	58% Fe Fines	653	-4	-0.6%	657	640	375	823	85.94	-0.55	-0.6%	86.54	85.78	46.88	112.44
IOPI65	65% Fe Fines	792	-4	-0.5%	796	798	654	992	103.91	-0.54	-0.5%	104.40	107.11	85.47	135.34

IRON ORE SEABORNE INDEX (IOSI)

MARKET COMMENTARY

October 14th 2019		CFR Qingdao, USD/dry tonne							MARKET COMMENTARY							
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low ²	High ²	Customs data show that China imported 99.35 million mt of iron ore in September, recording a new 19 month high. DCE iron ore futures dived prior to closing, and physical port stock market activity was brisk. Some traders were relatively cautious and they chose to stay on the side-lines, hoping for better pricing in the coming days. According to SMM, as some mills recovered production following the holiday, operating rates at the blast furnaces have increased slightly, and mill demand for iron ore may slowly grow. As scrap prices have recently risen, this may further stimulate demand for iron ore.							
IOSI62	62% Fe Fines	91.70	-1.35	-1.45%	93.61	95.36	62.95	127.50								
IOSI65	65% Fe Fines	100.40	-1.00	-0.99%	99.47	107.08	83.20	137.95								

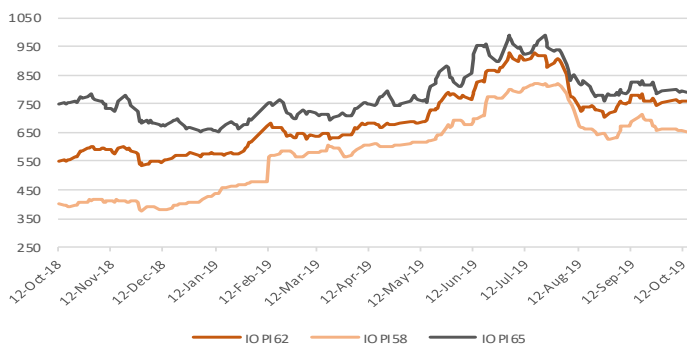
IRON ORE PORT LUMP INDEX (IOPLI)

Week Ending October 11th, 2019		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% VAT), USD/dry tonne ³						
Index	Fe Content	Price	W-o-W	Change %	MTD	YTD	Low ²	High ²	Price	W-o-W	Change %	MTD	YTD	Low ²	High ²
IOPLI62	62.5% Fe Lump	839	12	1.5%	839	889	710	1051	102.97	1.53	1.51%	102.97	112.75	88.56	133.81

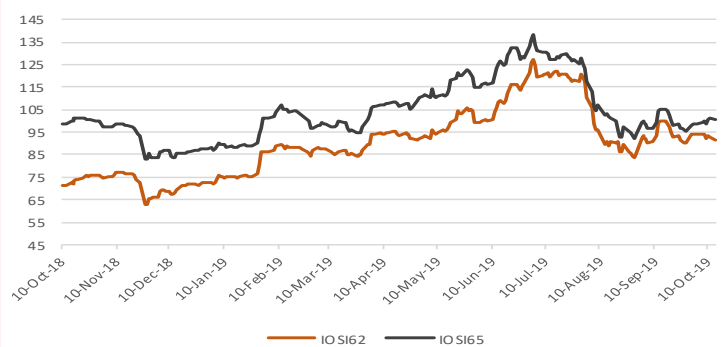
IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

Week Ending October 11th, 2019				RMB/tonne (excluding tax) ³				USD/tonne (excluding tax) ³			
Province	Region	Product	Basis	This week	Change %	Low ²	High ²	This week	Change %	Low ²	High ²
Hebei	Hanxing	66% Fe Concentrate	Dry	857	-0.8%	644	1032	121.17	-0.81%	93.58	150.03
Hebei	Qian'an	65% Fe Concentrate	Dry	905	-0.5%	690	960	127.95	-0.55%	100.26	139.35
Liaoning	Anshan	65% Fe Concentrate	Wet	650	0.0%	535	745	91.90	0.00%	77.39	104.66
Shandong	Zibo	65% Fe Concentrate	Dry	895	0.0%	740	1040	126.54	0.00%	106.55	151.33
Week Ending October 11th, 2019				This week	Change %	Low ²	High ²	¹ Exchange rate applied: RMB/USD = 7.0725 ² Last 12 months ³ Weekly exchange rate applied: RMB/USD 7.0728			
China Mines Concentrate Composite Index RMB/WT				754.76	0.0%	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

October 14th 2019		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne						
Index	Fe Content	June	July	August	September	MTD	QTD	YTD	June	July	August	September	MTD	QTD	YTD
IOPI62	62% Fe Fines	825	909	759	758	760	760	729	98.40	111.42	123.29	100.18	99.53	99.53	97.48
IOPI58	58% Fe Fines	726	809	691	674	657	657	640	86.39	98.60	110.47	91.86	86.54	86.54	85.78
IOPI65	65% Fe Fines	901	954	823	803	796	796	798	110.00	121.97	129.53	108.92	104.40	104.40	107.11

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

FREIGHT RATES

October 14th 2019		CFR Qingdao, USD/dry tonne							October 11th, 2019							
Index	Fe Content	June	July	August	September	MTD	QTD	YTD	Route		Designation	Change	Change %	Low ²	High ²	
IOSI62	62% Fe Fines	108.57	120.82	92.61	93.76	93.61	93.61	95.36	W. Australia - Qingdao		C5	9.23	-0.22	-2.36%	4.39	11.42
IOSI65	65% Fe Fines	124.49	129.53	101.34	99.42	99.47	99.47	107.08	Tubarao - Qingdao		C3	23.78	-0.02	-0.08%	11.61	29.10

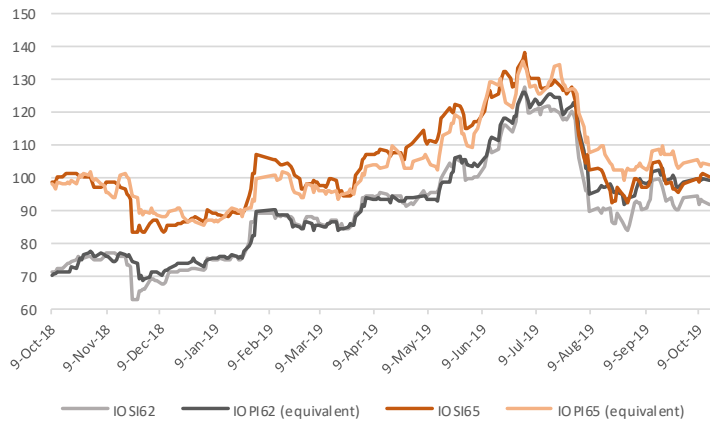
IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending October 11th, 2019		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% VAT), USD/dry tonne ¹						
Index	Fe Content	June	July	August	September	MTD	QTD	YTD	May	June	July	September	MTD	QTD	YTD
IOPLI62	62.5% Fe Lump	1009	1046	870	803	839	839	889	128.00	132.99	108.80	98.44	102.97	102.97	112.75

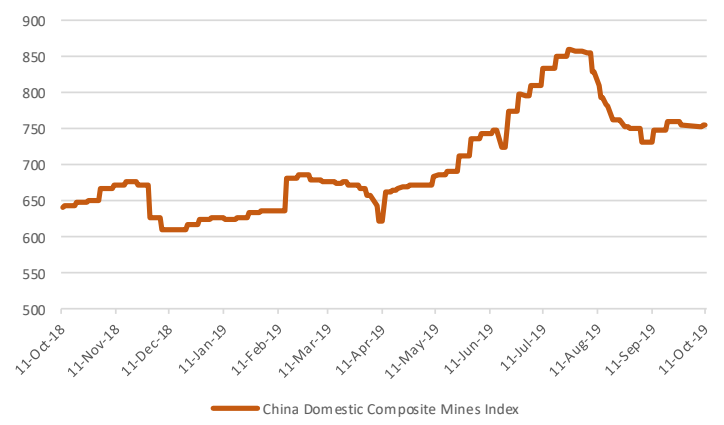
IRON ORE INDEX PREMIUMS/DISCOUNTS

October 14th 2019				PORT STOCK INDEX (RMB/WT)		October 14th 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	-105	-13.85%	IOSI65	65% Fe Fines	8.70	9.49%		
IOPI65	65% Fe Fines	34	4.49%						

IRON ORE INDEX COMPARISONS (USD/DMT)



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



IRON ORE BRAND SPOT PRICE ASSESSMENTS

October 14th 2019				October 14th 2019			
PORT STOCK INDEX (RMB/WT)				SEABORNE INDEX (USD/DMT)			
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	723	-2	-35	Roy Hill	89.72	-2.15	-1.98
SIMEC Fines	697	-3	-61	SIMEC Fines	87.80	-3.02	-3.90
PB Fines	732	-6	-26	PB Fines	90.70	-1.67	-1.00
Newman Fines	764	-2	6	Newman Fines	92.05	-1.31	0.35
MAC Fines	734	-2	-24	MAC Fines	88.85	-2.67	-2.85
Jimblebar Blended Fines	672	-17	-86	Jimblebar Blended Fines	81.00	-4.72	-10.70
Carajas Fines	793	-5	35	Carajas Fines	100.27	-1.29	8.57
Brazilian SSF	723	-2	-35	Brazilian SSF	90.45	-2.91	-1.25
Brazilian Blend Fines	756	-2	-2	Brazilian Blend Fines	91.82	-1.92	0.12
RTX Fines	690	-11	-68	RTX Fines	84.62	-3.40	-7.08
West Pilbara Fines	712	-2	-46	West Pilbara Fines	89.47	-2.20	-2.23

October 14th 2019			
PORT STOCK INDEX (RMB/WT)			
	Price	Change	Diff to IOPI58
SSF	627	-2	-26
FMG Blended Fines	663	-3	10
Robe River	629	-2	-24
Western Fines	625	-2	-28
Atlas Fines	613	-3	-40
Yandi	633	-6	-20

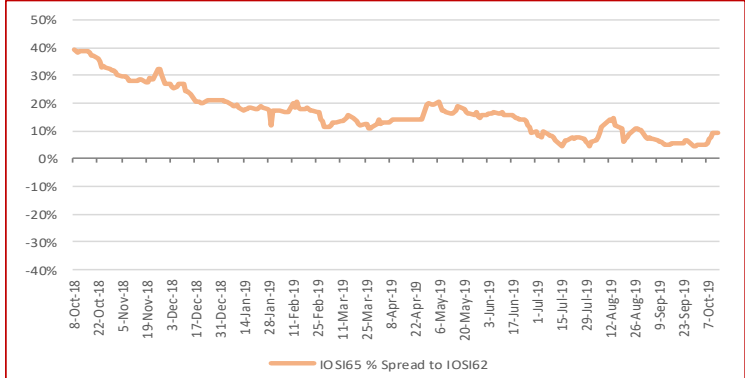
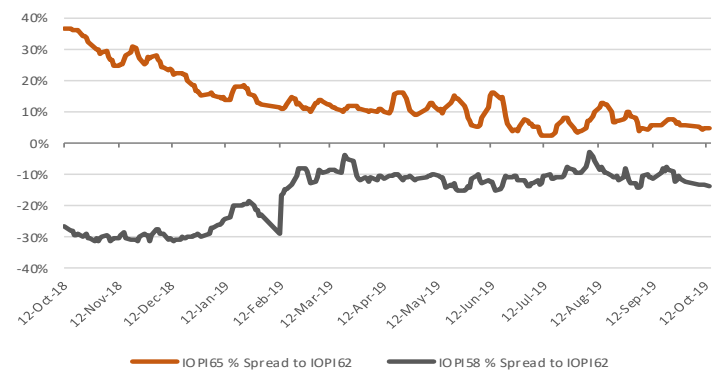
IRON ORE INDEX NORMALISATION DIFFERENTIALS

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%	14.00	0.00	1% Fe	High Grade Fe 60 - 63%	0.75	0.25	
	High Grade Fe 63 - 64%	5.00	-1.00		High Grade Fe 63 - 64%	2.00	0.00	
	High Grade Fe 64 - 65%	5.00	-1.00		High Grade Fe 64 - 65%	2.00	0.00	
	High Grade Fe 65 - 65.5%	5.00	-1.00		High Grade Fe 65 - 65.5%	2.00	0.00	
	Low Grade Fe	10.00	0.00					
1% Alumina	High Fe Grade Al <2.25%	0.00	0.00	1% Alumina	High Fe Grade Al <2.25%	1.00	-0.25	
	High Fe Grade Al 2.25-4%	30.00	5.00		High Fe Grade Al 2.25-4%	2.00	0.50	
	Low Fe Grade Al <2.25%	2.00	-2.00					
	Low Fe Grade Al 2.25-4%	5.00	-3.00					
1% Silica	High Fe Grade Si <4%	4.00	0.00	1% Silica	High Fe Grade Si <4%	1.25	0.00	
	High Fe Grade Si 4-6.5%	20.00	0.00		High Fe Grade Si 4 - 6.5%	1.00	0.50	
0.01% Phosphorus	Low Fe Grade	17.00	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%	5.00	5.00		High Fe Grade 0.115%<P<0.15%	1.75	0.25	
	High Fe Grade 0.115%<P<0.15%	5.00	-4.00					
	Low Fe Grade 0.09<P<0.1%	0.00	0.00					

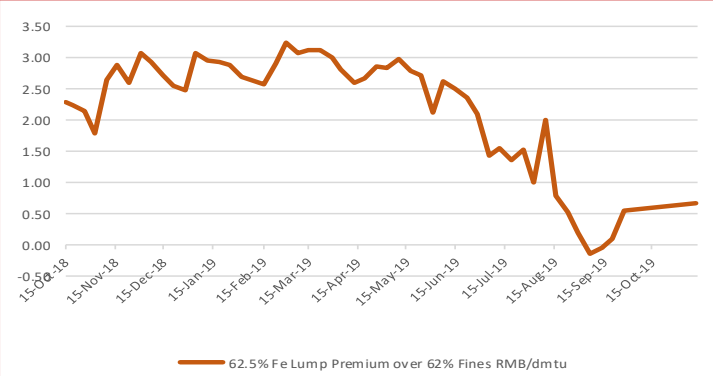
Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

Port	Value	Change	Port	Value	Change	Port	Value	Change	Port	Value	Change
Bayuquan	-40.00	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	-10.00	0.00	Jingtang	-10.00	0.00	Majishan	0.00	0.00	Shekou	0.00	0.00
Dalian	-40.00	0.00	Lanqiao	0.00	0.00	Nantong	-10.00	0.00	Tianjin	-25.00	0.00

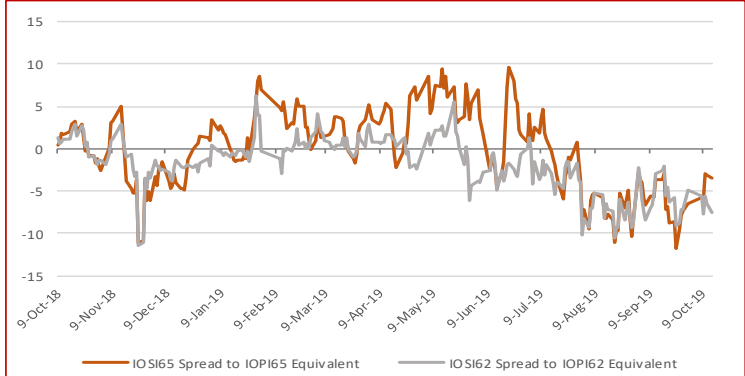
IRON ORE INDEX PREMIUMS/DISCOUNTS



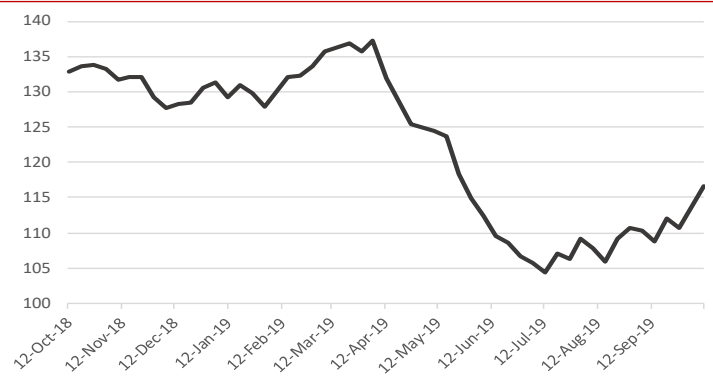
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



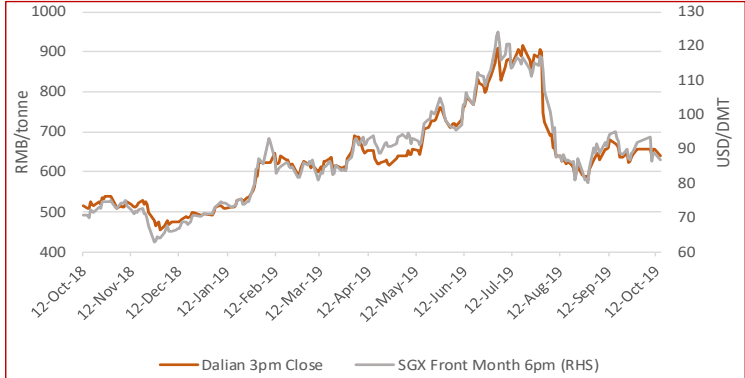
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



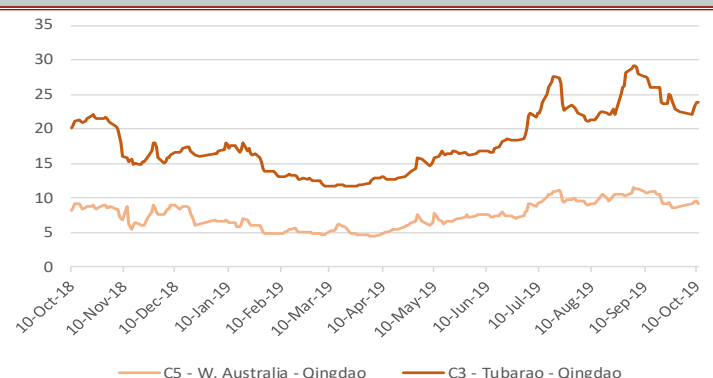
IRON ORE PORT INVENTORIES (MILLION TONNES)

Week Ending October 11th, 2019				
Province	This week	Change %	Low ²	High ²
Jingtang	15.16	14.24%	10.80	16.37
Qingdao	13.96	6.00%	12.38	19.01
Caofeidian	16.72	12.21%	14.32	19.96
Tianjin	7.27	14.13%	6.37	10.05
Rizhao	13.04	14.29%	11.41	17.10
Total (35 Ports)	116.64	5.37%	104.40	137.30

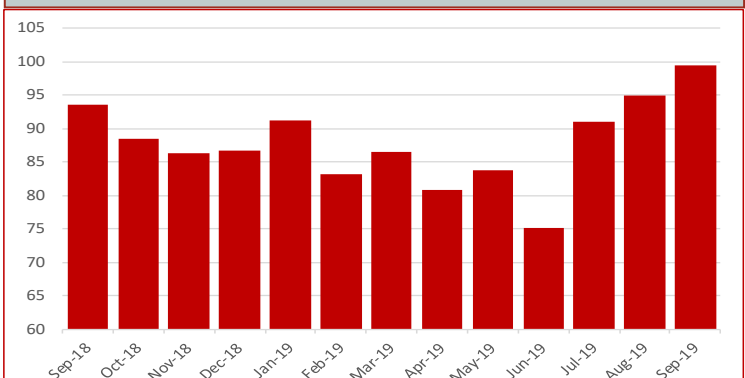
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	Oct 14th 3pm close			Oct 14th 5:30 pm		
	Contract	Change	Change %	Nov'19	Change	Change %
Closing Price	638.50	-19.5	-2.96%	86.61	-1.96	-2.21%
Vol traded ('000 lots)	193.67	-3.7	-1.88%	12.31	-3.93	-24.18%
Open positions ('000 lots)	165.23	-4.1	-2.41%	130.13	2.57	2.02%
Day Low	637.5	-7.5	-1.16%	86.61	-0.57	-0.65%
Day High	662.5	1.0	0.15%	88.82	0.25	0.28%

DRY BULK FREIGHT RATES (USD/MT)



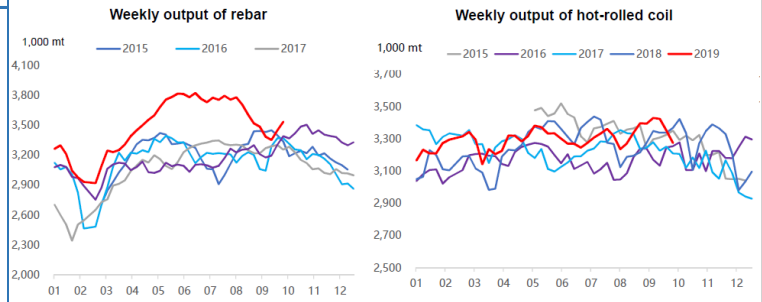
TOTAL CHINA IRON ORE IMPORT VOLUMES (MILLION TONNES)



STEEL SPOT MARKET PRICES—CHINA

Steel Spot Market RMB/tonne

Product	11/10/2019	Change	Change %
ReBar HRB400 φ18mm	3,740.0	-20	-0.53%
Wirerod Q300 φ6.5mm	4,100.0	30	0.74%
HRC Q235/SS400 5.5mm*1500*C	3,570.0	-30	-0.83%
CRC SPPC/ST12 1.0mm*1250*2500	4,270.0	-10	-0.23%
Medium & Heavy Plate Q235B 20mm	3,760.0	-10	-0.27%
GI ST02Z 1.0mm*1000*C	4,490.0	0	0.00%
Colour Coated Plate	6,850.0	0	0.00%



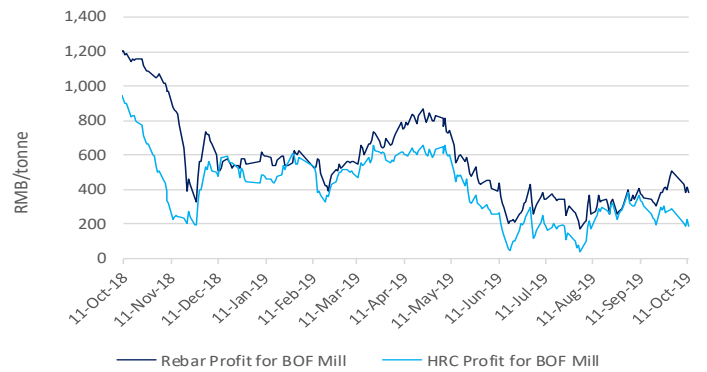
CHINESE STEEL MILL PROFITABILITY

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	93.60	3.50	Mmi CFR Equivalent index for 1st Feb
Coke	1,910	0	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	2,380	80	steel scrap (6mm) in Zhangjiagang, exl. tax
Billet Cost	3,083	49	Q234, incl. tax
Rebar cost - Blast furnace	3,323	44	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	387	-14	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	3,399	48	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	201	-68	based on Shanghai prices, incl. tax

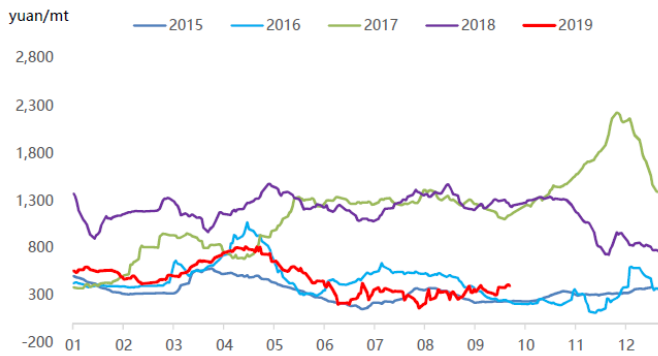
Note: 1.Costs in the table are calculated based on todays market prices and facout our management, sales, financial and depreciations fees.
2.The cost refers to average cost in the industry based on SMM's survey of small, medium and large mills in China

CHINESE STEEL MILL PROFITABILITY

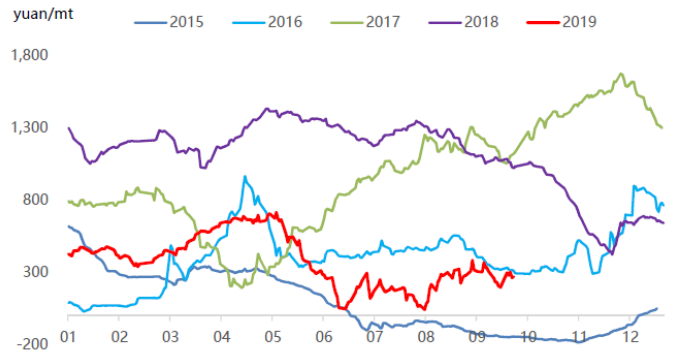


CHINESE STEEL MILL PROFITABILITY

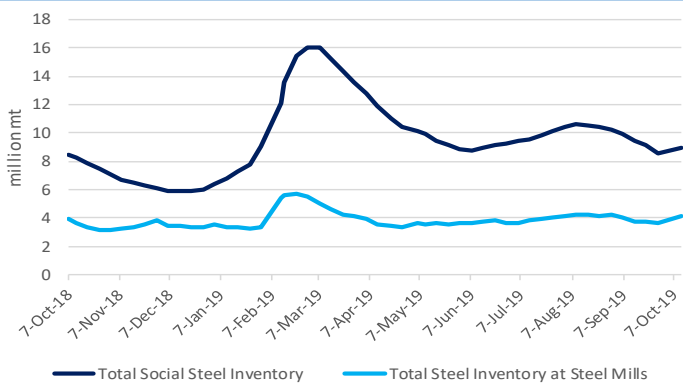
Rebar profits



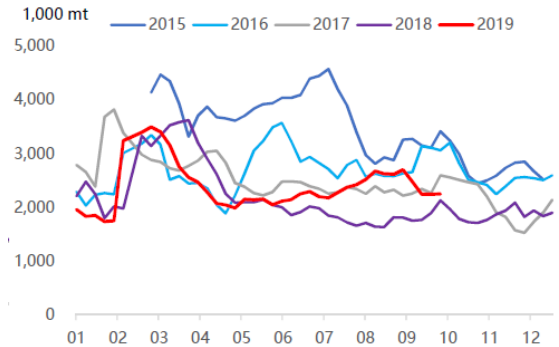
Hot-rolled coil profits



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																				
	65% Fe Fines	62% Fe Fines	58% Fe Fines	62.5% Fe Lump																					
Fe %	65.00	62.00	58.00	62.50	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: www.mmiprices.com																				
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%	<table border="1"> <thead> <tr> <th colspan="4">Data Exclusions*</th> </tr> <tr> <th></th> <th>62%</th> <th>58%</th> <th>65%</th> </tr> </thead> <tbody> <tr> <td>Port Index</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Seaborne Index</td> <td>0</td> <td></td> <td>0</td> </tr> <tr> <td>Lump Index 62.5</td> <td>0</td> <td></td> <td></td> </tr> </tbody> </table>	Data Exclusions*					62%	58%	65%	Port Index	0	0	0	Seaborne Index	0		0	Lump Index 62.5	0		
Data Exclusions*																									
	62%	58%	65%																						
Port Index	0	0	0																						
Seaborne Index	0		0																						
Lump Index 62.5	0																								
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																					

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					
October 14th 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	61.55%	2.41%	3.66%	0.096%	9.55%	PB Fines 62%	62.00%	2.60%	4.30%	0.090%	10.00%
Newman Fines	62.50%	2.17%	4.15%	0.092%	7.72%	Newman Fines	62.80%	2.20%	4.30%	0.080%	6.40%
MAC Fines	60.90%	2.24%	4.60%	0.080%	7.62%	MAC Fines	61.00%	2.70%	4.70%	0.110%	9.30%
Jimblebar Blended Fines	60.55%	3.03%	4.57%	0.118%	7.55%	Jimblebar Blended Fines	59.50%	3.70%	5.80%	0.135%	8.30%
Carajas Fines	65.47%	1.31%	1.34%	0.077%	8.21%	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	62.92%	1.54%	4.60%	0.069%	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%
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%
October 14th 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%	3.08%	6.30%	0.055%	8.08%						
FMG Blended Fines	58.18%	2.62%	5.43%	0.058%	7.77%						
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	57.30%	1.54%	6.34%	0.041%	8.95%						

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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