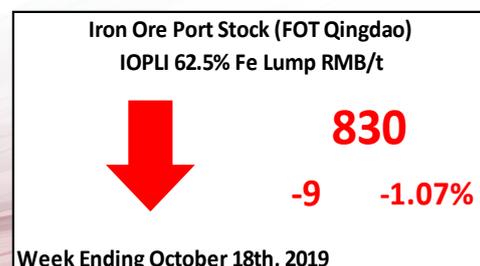
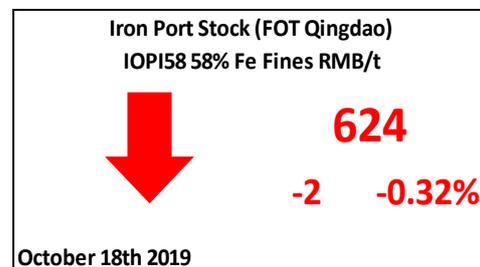
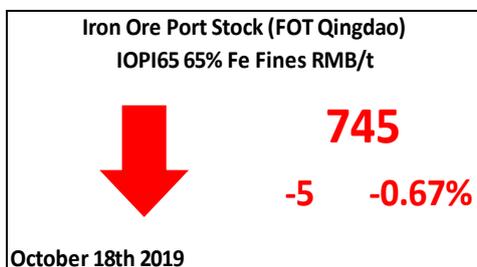
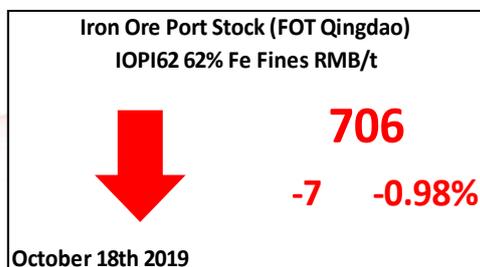


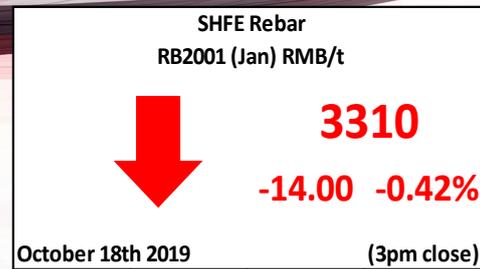
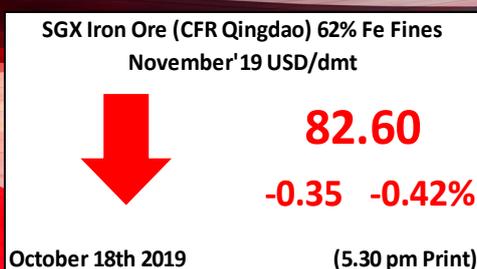


MMi Dashboard

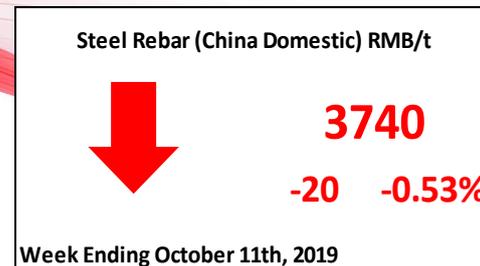
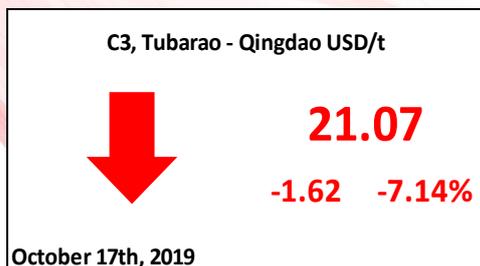
Iron Ore Price Indices



Exchange Traded Contracts



Freight Rates



Inventory Levels



IRON ORE PORT STOCK INDEX (IOPI)

October 18th 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	706	-7	-1.0%	744	729	535	928	92.12	-0.96	-1.0%	97.43	97.42	68.50	126.12
IOPI58	58% Fe Fines	624	-2	-0.3%	647	640	375	823	81.99	-0.16	-0.2%	85.09	85.73	46.88	112.44
IOPI65	65% Fe Fines	745	-5	-0.7%	781	797	654	992	97.57	-0.54	-0.6%	102.38	106.96	85.47	135.34

IRON ORE SEABORNE INDEX (IOSI)

MARKET COMMENTARY

October 18th 2019		CFR Qingdao, USD/dry tonne							SMM statistics showed that iron ore stocks across 35 Chinese ports grew 870,000 mt from a week ago to 117.51 million mt as of October 18 as environmental controls lowered daily average deliveries from ports by 44,000 mt to 2.78 million mt this week. Lower ore prices kept steel mills restocking only as needed. Production restrictions and port transport ban affected purchases in Tangshan. However, inventories fell 15.21 million mt and daily average deliveries increased 107,000 mt compared to the same period last year. Stocks are expected to increase further with more cargoes arriving. Traders in the port stock market adjusted their quotes higher as the DCE iron ore futures recovered the afternoon and total concluded transactions slowed down before the weekend.							
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low ²	High ²								
IOSI62	62% Fe Fines	89.20	-0.30	-0.34%	92.76	95.26	62.95	127.50								
IOSI65	65% Fe Fines	95.05	-1.40	-1.45%	99.03	106.90	83.20	137.95								

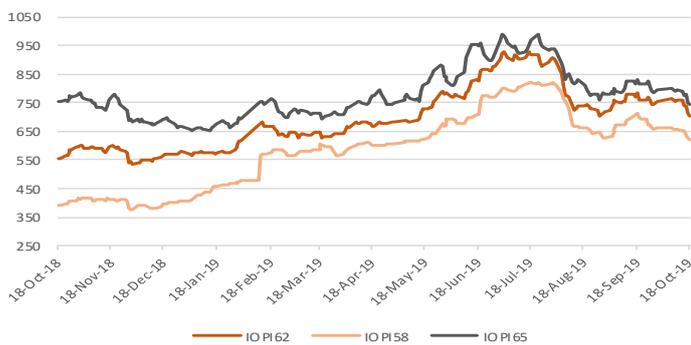
IRON ORE PORT LUMP INDEX (IOPLI)

Week Ending October 18th, 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	830	-9	-1.1%	835	887	710	1051	101.82	-1.15	-1.12%	102.39	112.48	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 = 7.0690 ² Last 12 months ³ Weekly exchange rate applied: RMB/USD 7.0732			
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 18th 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	744	744	729	98.40	111.42	123.29	100.18	97.43	97.43	97.42
IOPI58	58% Fe Fines	726	809	691	674	647	647	640	86.39	98.60	110.47	91.86	85.09	85.09	85.73
IOPI65	65% Fe Fines	901	954	823	803	781	781	797	110.00	121.97	129.53	108.92	102.38	102.38	106.96

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

FREIGHT RATES

October 18th 2019		CFR Qingdao, USD/dry tonne							October 17th, 2019						
Index	Fe Content	June	July	August	September	MTD	QTD	YTD	FREIGHT RATES - DRY BULK US\$/wet tonne						
									Route	Designation	Change	Change %	Low ²	High ²	
IOSI62	62% Fe Fines	108.57	120.82	92.61	93.76	92.76	92.76	95.26	W. Australia - Qingdao	C5	9.04	-0.07	-0.75%	4.39	11.42
IOSI65	65% Fe Fines	124.49	129.53	101.34	99.42	99.03	99.03	106.90	Tubarao - Qingdao	C3	21.07	-1.62	-7.14%	11.61	29.10

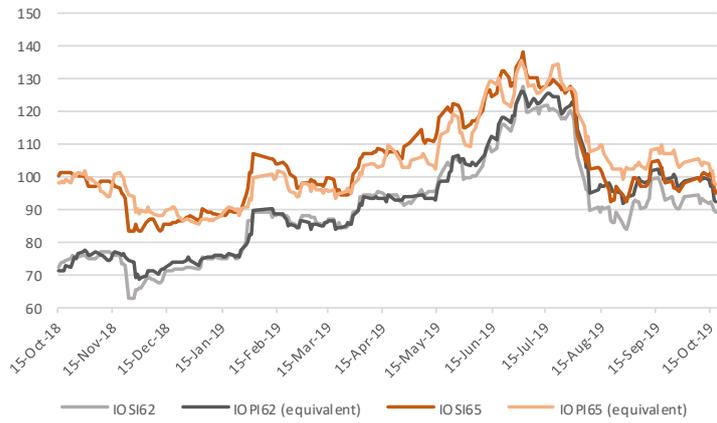
IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending October 18th, 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	835	835	887	128.00	132.99	108.80	98.44	102.39	102.39	112.48

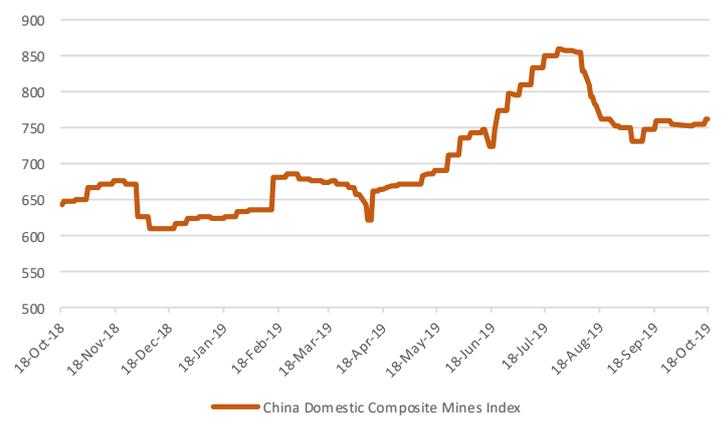
IRON ORE INDEX PREMIUMS/DISCOUNTS

October 18th 2019				PORT STOCK INDEX (RMB/WT)				October 18th 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	-82		-11.61%		IOSI65	65% Fe Fines	5.85		6.56%					
IOPI65	65% Fe Fines	39		5.52%											

IRON ORE INDEX COMPARISONS (USD/DMT)



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



IRON ORE BRAND SPOT PRICE ASSESSMENTS

October 18th 2019				October 18th 2019			
PORT STOCK INDEX (RMB/WT)				SEABORNE INDEX (USD/DMT)			
	Price	Change	Diff to IOPI62		Price	Change	Diff to IO SI62
Roy Hill	675	-4	-31	Roy Hill	86.16	-0.30	-3.04
SIMEC Fines	657	3	-49	SIMEC Fines	83.01	-0.30	-6.19
PB Fines	679	-8	-27	PB Fines	87.54	-0.30	-1.66
Newman Fines	710	-9	4	Newman Fines	89.50	-0.30	0.30
MAC Fines	685	-4	-21	MAC Fines	85.51	-0.30	-3.69
Jimblebar Blended Fines	619	-4	-87	Jimblebar Blended Fines	74.34	-0.80	-14.86
Carajas Fines	748	-3	42	Carajas Fines	94.92	-1.40	5.72
Brazilian SSF	687	2	-19	Brazilian SSF	85.45	-0.30	-3.75
Brazilian Blend Fines	708	-6	2	Brazilian Blend Fines	88.32	-0.30	-0.88
RTX Fines	645	-3	-61	RTX Fines	80.06	-0.80	-9.14
West Pilbara Fines	665	-2	-41	West Pilbara Fines	85.91	-0.30	-3.29

October 18th 2019			
PORT STOCK INDEX (RMB/WT)			
	Price	Change	Diff to IOPI58
SSF	589	-13	-35
FMG Blended Fines	628	-8	4
Robe River	590	-14	-34
Western Fines	595	-4	-29
Atlas Fines	583	-4	-41
Yandi	604	-1	-20

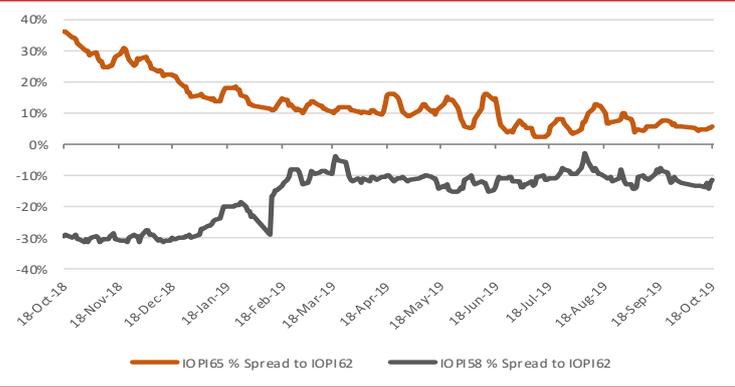
IRON ORE INDEX NORMALISATION DIFFERENTIALS

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%	13.00	-2.00	1% Fe	High Grade Fe 60 - 63%	1.00	0.00
	High Grade Fe 63 - 64%	7.00	1.00		High Grade Fe 63 - 64%	1.25	-0.25
	High Grade Fe 64 - 65%	7.00	1.00		High Grade Fe 64 - 65%	1.25	-0.25
	High Grade Fe 65 - 65.5%	7.00	1.00		High Grade Fe 65 - 65.5%	1.25	-0.25
	Low Grade Fe	12.00	2.00				
1% Alumina	High Fe Grade Al <2.25%	4.00	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%	3.25	0.00
	Low Fe Grade Al <2.25%	2.00	2.00				
	Low Fe Grade Al 2.25-4%	16.00	8.00				
1% Silica	High Fe Grade Si <4%	4.00	0.00	1% Silica	High Fe Grade Si <4%	0.75	-0.25
	High Fe Grade Si 4-6.5%	15.00	-3.00		High Fe Grade Si 4 - 6.5%	1.75	0.00
0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	7.00	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%	0.00	0.00		High Fe Grade 0.115%<P<0.15%	2.25	0.25
	Low Fe Grade 0.09<P<0.1%	0.00	0.00				

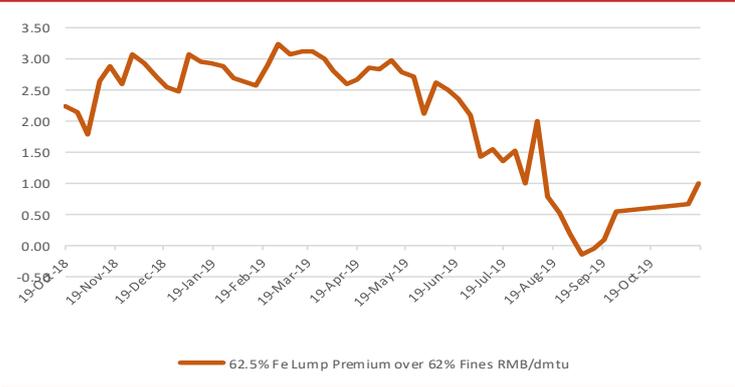
Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

Port	Value	Change	Port	Value	Change	Port	Value	Change	Port	Value	Change
Bayuquan	-50.00	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	-10.00	0.00	Jingtang	-10.00	0.00	Majishan	0.00	0.00	Shekou	0.00	0.00
Dalian	-50.00	0.00	Lanqiao	0.00	0.00	Nantong	-10.00	0.00	Tianjin	-25.00	0.00

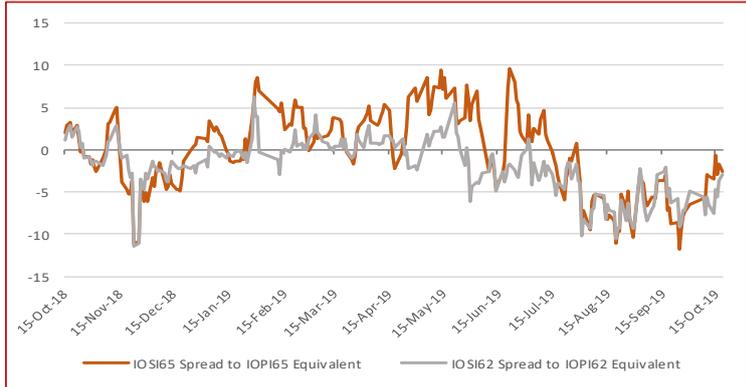
IRON ORE INDEX PREMIUMS/DISCOUNTS



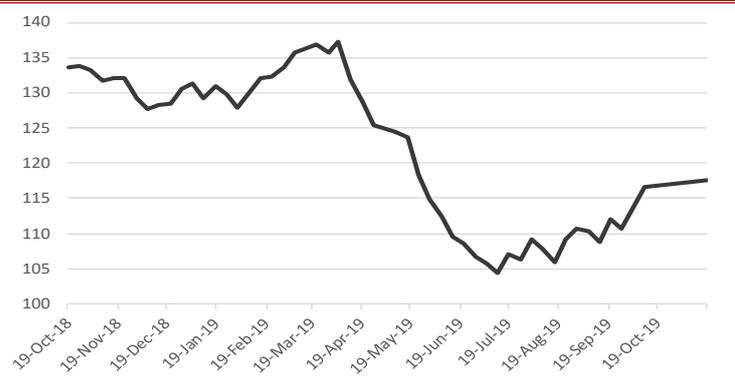
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



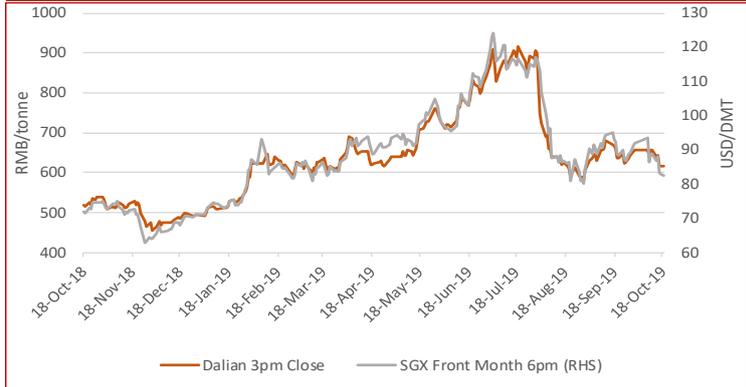
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



IRON ORE PORT INVENTORIES (MILLION TONNES)

Week Ending October 18th, 2019				
Province	This week	Change %	Low ²	High ²
Jingtang	16.68	10.03%	10.80	16.68
Qingdao	13.50	-3.30%	12.38	19.01
Caofeidian	16.72	0.00%	14.32	19.96
Tianjin	7.40	1.79%	6.37	10.05
Rizhao	13.66	4.75%	11.41	17.10
Total (35 Ports)	117.51	0.75%	104.40	137.30

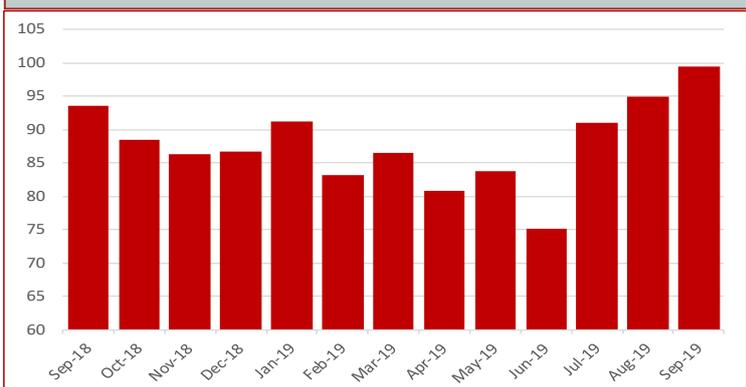
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	Oct 18th 3pm close			Oct 18th 5.30 pm		
Contract	I2001	Change	Change %	Nov'19	Change	Change %
Closing Price	616.00	1.0	0.16%	82.60	-0.35	-0.42%
Vol traded ('000 lots)	231.84	23.0	10.99%	18.27	-3.99	-17.94%
Open positions ('000 lots)	177.02	4.4	2.55%	134.83	0.01	0.01%
Day Low	598.5	-5.5	-0.91%	80.77	-0.83	-1.02%
Day High	619.5	2.0	0.32%	83.15	0.07	0.08%

DRY BULK FREIGHT RATES (USD/MT)

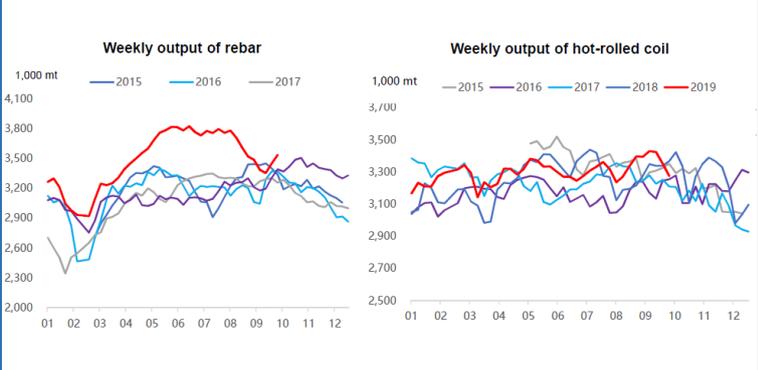


TOTAL CHINA IRON ORE IMPORT VOLUMES (MILLION TONNES)



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%

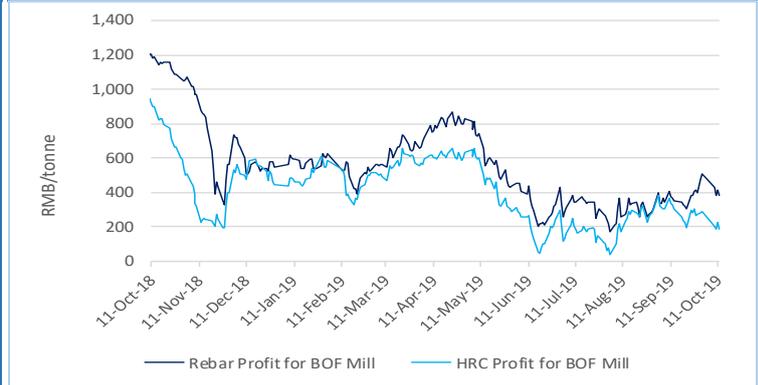


CHINESE STEEL MILL PROFITABILITY

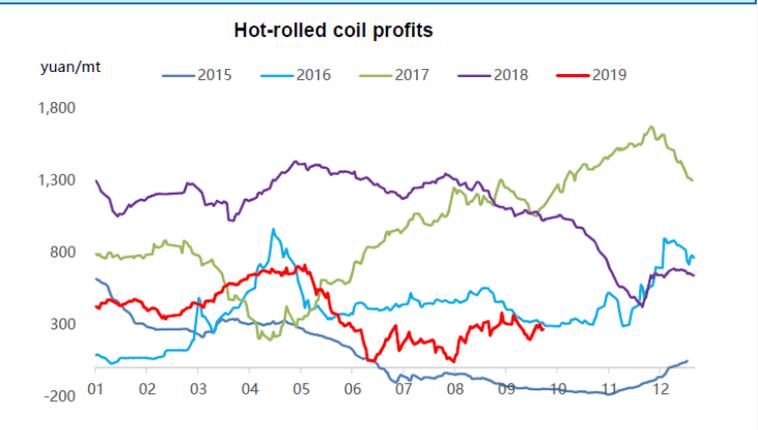
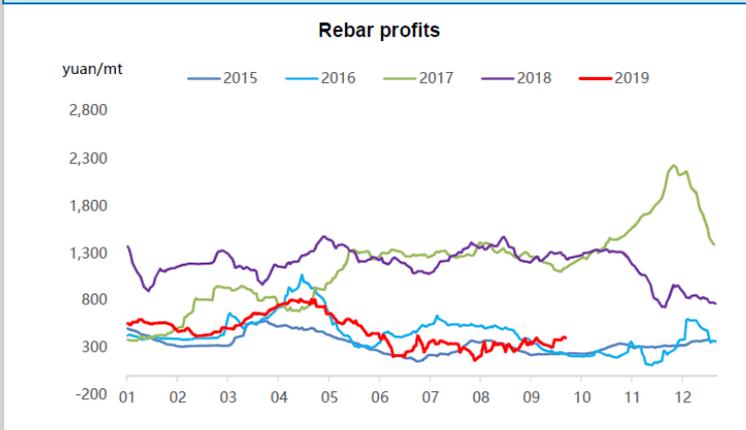
SMM Tracking of Steel Mill P&L - Rebar and Hot-rolled Coil (RMB/tonne)			
Category	Price	Change (WoW)	Note
MMi (Fe 62%), USD/mt excluding tax	93.60	3.50	Mmi CFR Equivalent index for 1st Feb
Coke	1,910	0	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	2,380	80	steel scrap (6mm) in Zhangjiagang, excl. 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 today's market prices and factored our management, sales, financial and depreciation fees.
2. The cost refers to average cost in the industry based on SMM's survey of small, medium and large mills in China

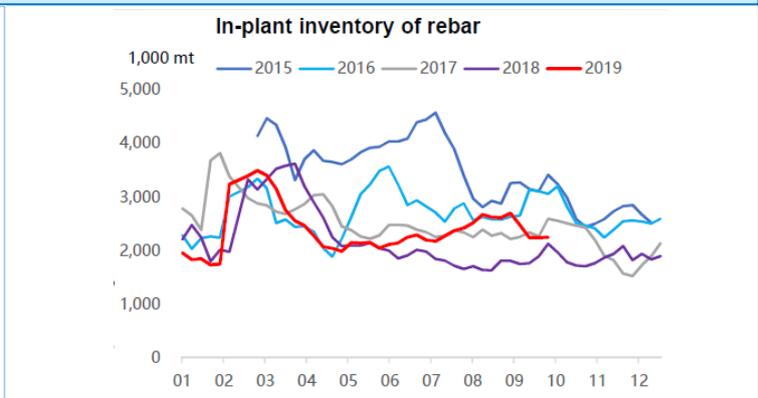
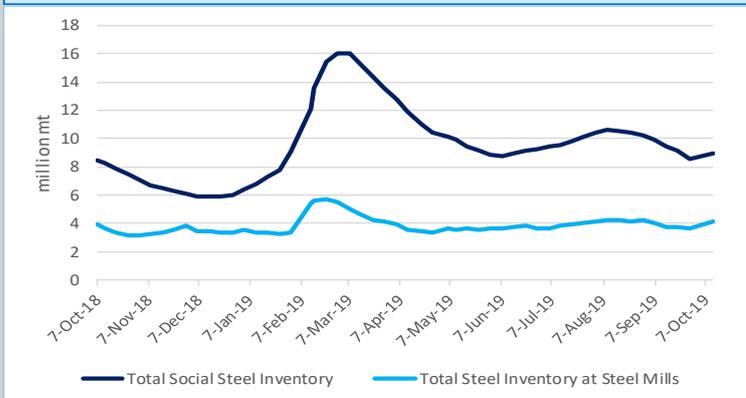
CHINESE STEEL MILL PROFITABILITY



CHINESE STEEL MILL PROFITABILITY



CHINESE STEEL INVENTORIES



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	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
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	
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					
October 18th 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%	2.40%	3.68%	0.097%	9.55%	PB Fines 62%	62.00%	2.60%	4.30%	0.090%	10.00%
Newman Fines	62.50%	2.19%	4.13%	0.092%	7.75%	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	60.52%	3.04%	4.58%	0.118%	7.60%	Jimblebar Blended Fines	59.50%	3.70%	5.80%	0.135%	8.30%
Carajas Fines	65.45%	1.29%	1.35%	0.078%	8.20%	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 18th 2019	Specifications applied for 58% brand assessments										
	Fe	Alumina	Silica	Phos	Moisture						
SSF	56.55%	3.05%	6.25%	0.051%	8.12%						
FMG Blended Fines	58.16%	2.64%	5.42%	0.056%	7.93%						
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	57.25%	1.56%	6.36%	0.041%	9.00%						

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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