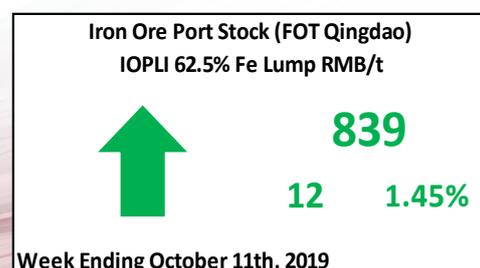
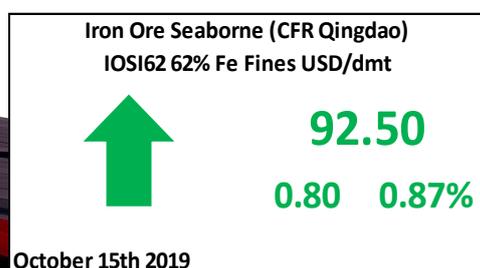
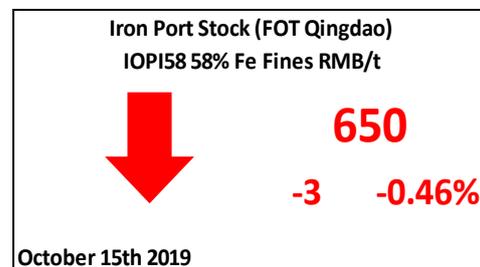
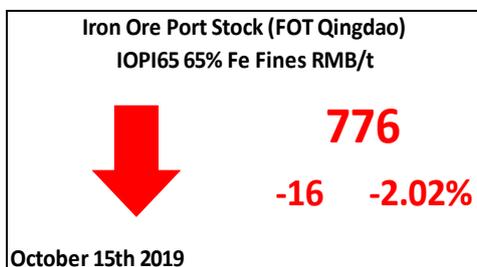
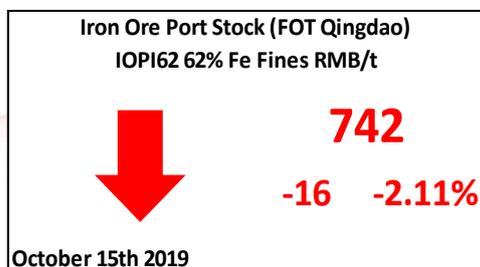


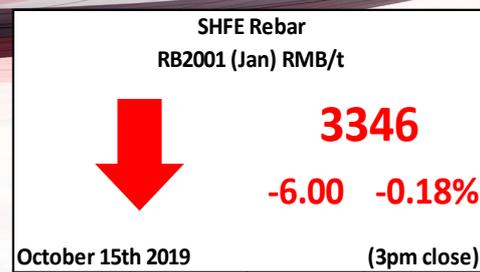
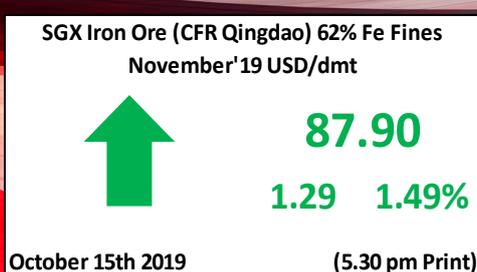
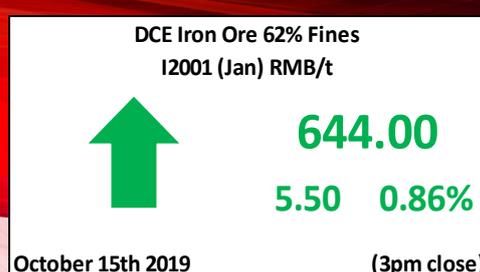


MMi Dashboard

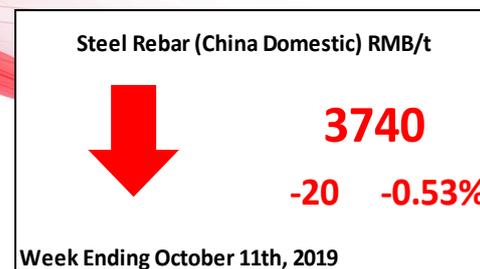
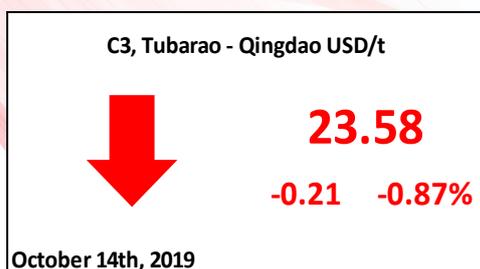
Iron Ore Price Indices



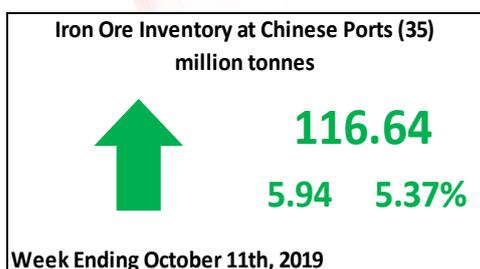
Exchange Traded Contracts



Freight Rates



Inventory Levels



IRON ORE PORT STOCK INDEX (IOPI)

October 15th 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	742	-16	-2.1%	757	729	535	928	97.13	-2.15	-2.2%	99.13	97.48	68.50	126.12
IOPI58	58% Fe Fines	650	-3	-0.5%	656	640	375	823	85.55	-0.39	-0.5%	86.37	85.78	46.88	112.44
IOPI65	65% Fe Fines	776	-16	-2.0%	792	798	654	992	101.76	-2.15	-2.1%	103.96	107.09	85.47	135.34

IRON ORE SEABORNE INDEX (IOSI)

MARKET COMMENTARY

October 15th 2019		CFR Qingdao, USD/dry tonne							SMM estimates that 80 vessels carrying 12.68 million mt of iron ore arrived at major Chinese ports during October 6-12, down 1.12 million mt from the week ended October 5. But arrivals at ports in the major steelmaking hub of Tangshan increased significantly. Last week, iron ore deliveries leaving Australian ports rose 1.07 million mt from the prior week to 13.36 million mt. Shipments that departed Brazilian ports were estimated to fall 1.73 million mt to stand at 6.23 million mt. During October 6-12, iron ore shipments from ports in both Australia and Brazil shrank from that in the previous week. Physical port quotes fell by 10 -15 yuan/mt despite heavy buying interest from mills. A new round of production cuts for Tangshan, starting October 15 was announced this afternoon, with an unknown end.							
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low ²	High ²								
IOSI62	62% Fe Fines	92.50	0.80	0.87%	93.51	95.34	62.95	127.50								
IOSI65	65% Fe Fines	101.15	0.75	0.75%	99.62	107.05	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 = 7.0708 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 15th 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	757	757	729	98.40	111.42	123.29	100.18	99.13	99.13	97.48
IOPI58	58% Fe Fines	726	809	691	674	656	656	640	86.39	98.60	110.47	91.86	86.37	86.37	85.78
IOPI65	65% Fe Fines	901	954	823	803	792	792	798	110.00	121.97	129.53	108.92	103.96	103.96	107.09

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

FREIGHT RATES

October 15th 2019		CFR Qingdao, USD/dry tonne							October 14th, 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	93.51	93.51	95.34	W. Australia - Qingdao		C5	9.16	-0.06	-0.68%	4.39	11.42
IOSI65	65% Fe Fines	124.49	129.53	101.34	99.42	99.62	99.62	107.05	Tubarao - Qingdao		C3	23.58	-0.21	-0.87%	11.61	29.10

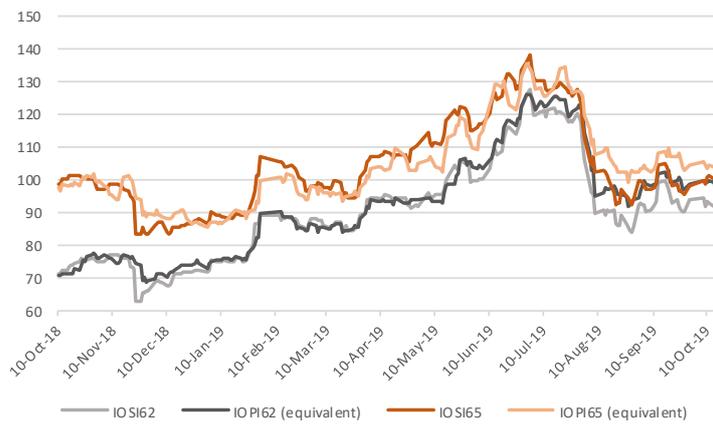
IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

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 15th 2019				PORT STOCK INDEX (RMB/WT)				October 15th 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	-92		-12.40%		IOSI65	65% Fe Fines	8.65		9.35%					
IOPI65	65% Fe Fines	34		4.58%											

IRON ORE INDEX COMPARISONS (USD/DMT)



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



IRON ORE BRAND SPOT PRICE ASSESSMENTS

October 15th 2019				October 15th 2019			
PORT STOCK INDEX (RMB/WT)				SEABORNE INDEX (USD/DMT)			
	Price	Change	Diff to IOPI62		Price	Change	Diff to IO SI62
Roy Hill	708	-15	-34	Roy Hill	89.71	-0.01	-2.79
SIMEC Fines	681	-16	-61	SIMEC Fines	86.91	-0.89	-5.59
PB Fines	717	-15	-25	PB Fines	91.09	0.39	-1.41
Newman Fines	747	-17	5	Newman Fines	92.89	0.84	0.39
MAC Fines	718	-16	-24	MAC Fines	89.21	0.36	-3.29
Jimblebar Blended Fines	657	-15	-85	Jimblebar Blended Fines	79.81	-1.19	-12.69
Carajas Fines	777	-16	35	Carajas Fines	100.04	-0.23	7.54
Brazilian SSF	707	-16	-35	Brazilian SSF	89.69	-0.76	-2.81
Brazilian Blend Fines	740	-16	-2	Brazilian Blend Fines	92.06	0.24	-0.44
RTX Fines	678	-12	-64	RTX Fines	84.91	0.29	-7.59
West Pilbara Fines	696	-16	-46	West Pilbara Fines	89.41	-0.06	-3.09

October 15th 2019			
PORT STOCK INDEX (RMB/WT)			
	Price	Change	Diff to IOPI58
SSF	626	-1	-24
FMG Blended Fines	661	-2	11
Robe River	627	-2	-23
Western Fines	623	-2	-27
Atlas Fines	611	-2	-39
Yandi	630	-3	-20

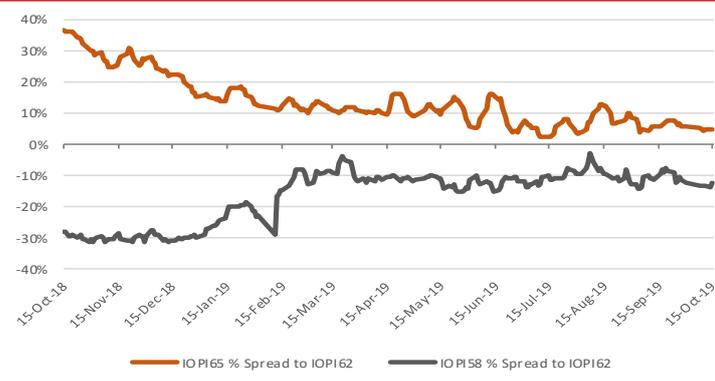
IRON ORE INDEX NORMALISATION DIFFERENTIALS

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%	1.00	0.25	
	High Grade Fe 63 - 64%	5.00	0.00		High Grade Fe 63 - 64%	1.75	-0.25	
	High Grade Fe 64 - 65%	5.00	0.00		High Grade Fe 64 - 65%	1.75	-0.25	
	High Grade Fe 65 - 65.5%	5.00	0.00		High Grade Fe 65 - 65.5%	1.75	-0.25	
	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%	0.75	-0.25	
	High Fe Grade Al 2.25-4%	30.00	0.00		High Fe Grade Al 2.25-4%	2.75	0.75	
	Low Fe Grade Al <2.25%	2.00	0.00					
	Low Fe Grade Al 2.25-4%	3.00	-2.00					
1% Silica	High Fe Grade Si <4%	4.00	0.00	1% Silica	High Fe Grade Si <4%	1.00	-0.25	
	High Fe Grade Si 4-6.5%	20.00	0.00		High Fe Grade Si 4 - 6.5%	1.50	0.50	
0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	5.00	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%	3.00	-2.00		High Fe Grade 0.115%<P<0.15%	1.75	0.00	
	Low Fe Grade 0.09<P<0.1%	0.00	0.00					

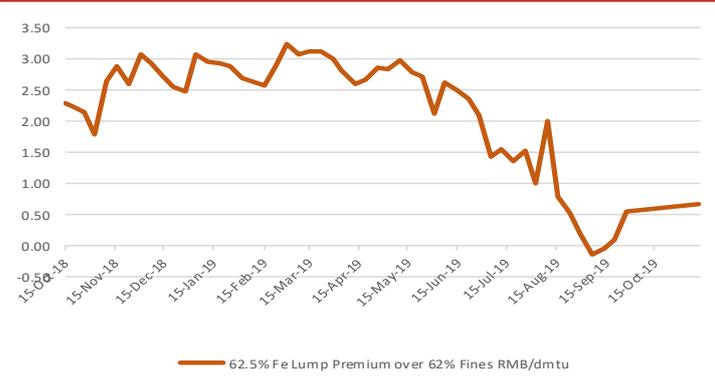
Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

Port	Value	Change	Port	Value	Change	Port	Value	Change	Port	Value	Change
Bayuquan	-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	-15.00	-5.00	Jingtang	-15.00	-5.00	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

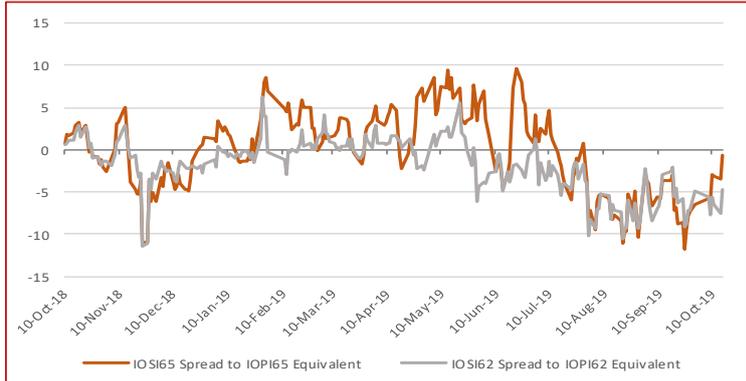
IRON ORE INDEX PREMIUMS/DISCOUNTS



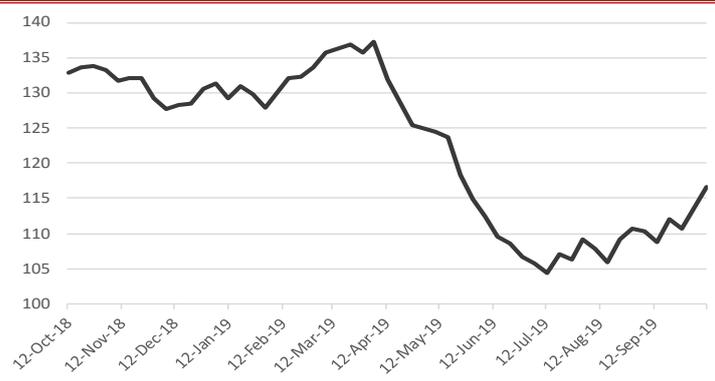
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



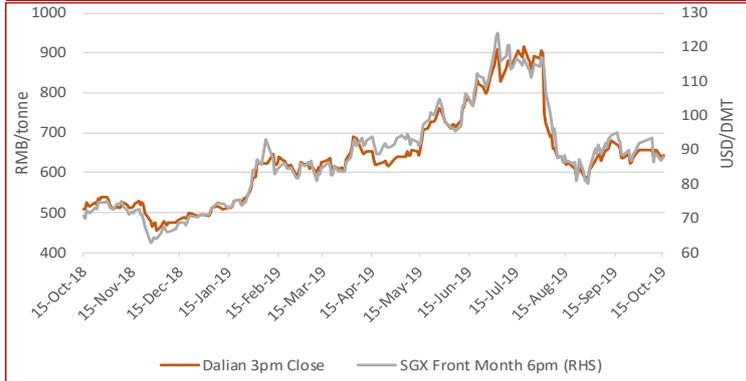
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



IRON ORE PORT INVENTORIES (MILLION TONNES)

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

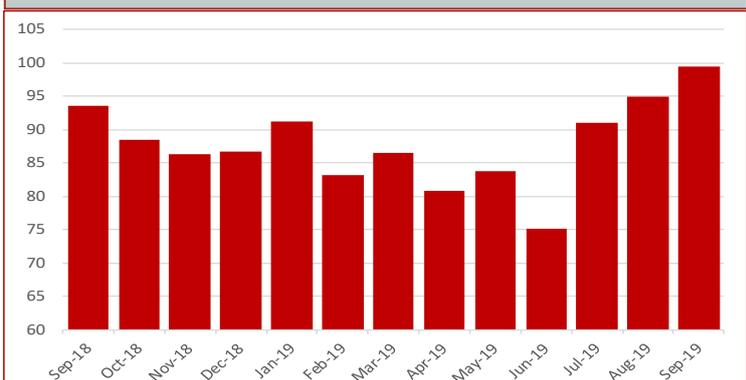
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	Oct 15th 3pm close			Oct 15th 5:30 pm		
Contract	I2001	Change	Change %	Nov'19	Change	Change %
Closing Price	644.00	5.5	0.86%	87.90	1.29	1.49%
Vol traded ('000 lots)	207.21	13.5	6.99%	11.47	-0.84	-6.83%
Open positions ('000 lots)	165.06	-0.2	-0.10%	133.26	3.13	2.41%
Day Low	630.0	-7.5	-1.18%	85.93	-0.68	-0.79%
Day High	646.0	-16.5	-2.49%	87.92	-0.90	-1.01%

DRY BULK FREIGHT RATES (USD/MT)



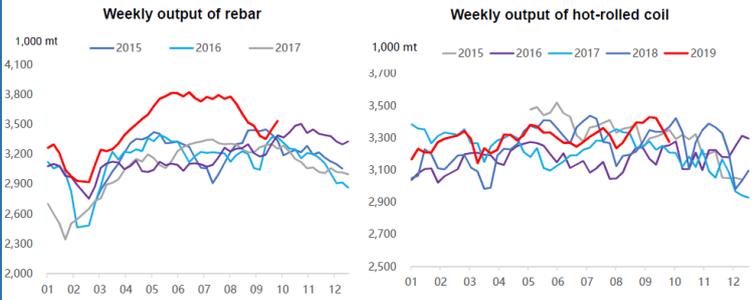
TOTAL CHINA IRON ORE IMPORT VOLUMES (MILLION TONNES)



STEEL SPOT MARKET PRICES—CHINA

Steel Spot Market RMB/tonne

Product	11/10/2019	Change	Change %
[REDACTED]	3,740.0	-20	-0.53%
[REDACTED]	4,100.0	30	0.74%
HRC Q235/SS400 5.5mm*1500*C	3,570.0	-30	-0.83%
CRC SPCC/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%



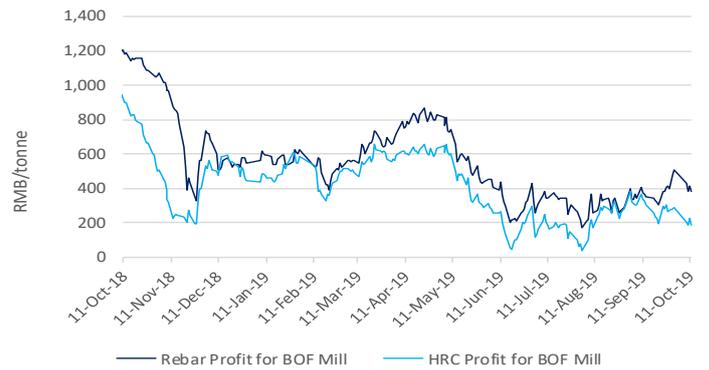
CHINESE STEEL MILL PROFITABILITY

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

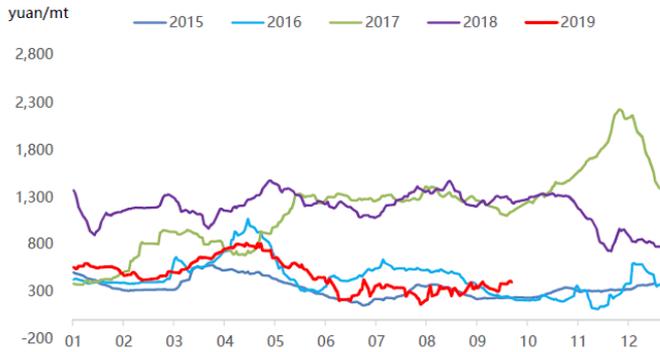
Note: 1.Costs in the table are calculated based on today's market prices and factored our management, sales, financial and depreciations fees.
2.The cost refers to average cost in the industry based on SMM's survey of small, medium and large mills in China

CHINESE STEEL MILL PROFITABILITY

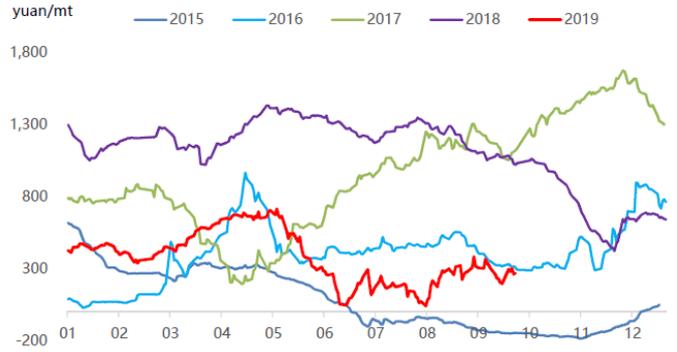


CHINESE STEEL MILL PROFITABILITY

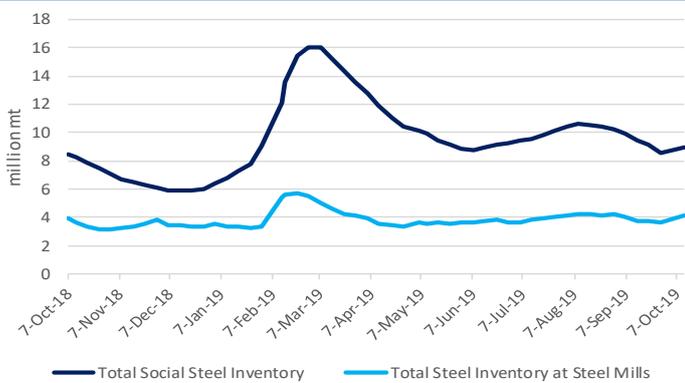
Rebar profits



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	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 15th 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%	0.097%	9.55%	PB Fines 62%	62.00%	2.60%	4.30%	0.090%	10.00%
Newman Fines	62.50%	2.18%	4.14%	0.092%	7.74%	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%	1.30%	1.34%	0.077%	8.19%	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 15th 2019	Specifications applied for 58% brand assessments										
	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		

CONTACT US

MMI Singapore Office Details: Level 28, Manulife Tower, 8 Cross Street Singapore. Tel: + 65 6850 7629 E: jarek@mmiprices.com

SMM Singapore Office Details: Level 28, Manulife Tower, 8 Cross Street Singapore. Tel: + 65 6850 7630 E: service.en@smm.cn

SMM Shanghai Office Details: 9th FL, Building 9, Lujiazui Software Park, No.20, Lane 91, Pudong, Shanghai Tel: +86 021 5155 0306 E: service.en@smm.cn

Visit www.mmiprices.com for full index price histories and archive of daily reports

This information has been prepared by Metals Market Index ("MMI"). Use of the information presented here is at your sole risk, and any content, material and/or data presented or otherwise obtained through your use of the information in this document is at your own discretion and risk and you will be solely responsible for any damage to you personally or your company or organisation or business associates whatsoever which in anyway results from the use, reliance or application of such content material and/or information. Certain data has been obtained from various sources and any copyright existing in such data shall remain the property of the source. Except for the foregoing, MMI retains all copyright within this document. The copying or redistribution of any part of this document without the express written authority of MMI is forbidden.