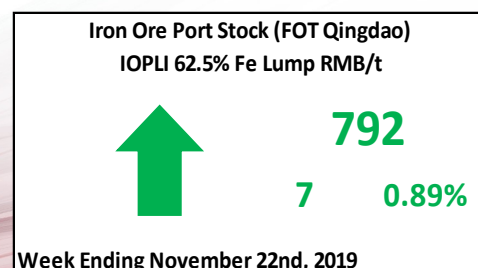
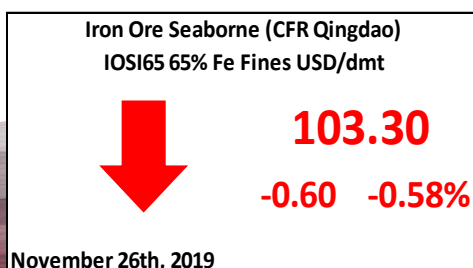
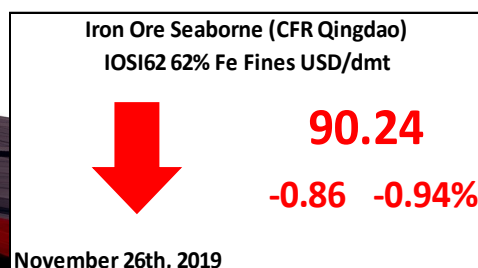
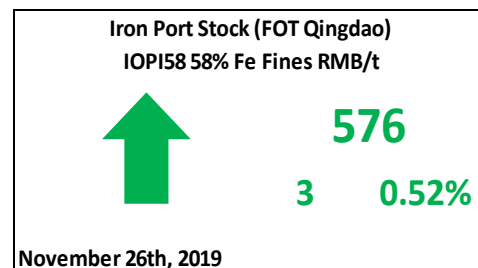
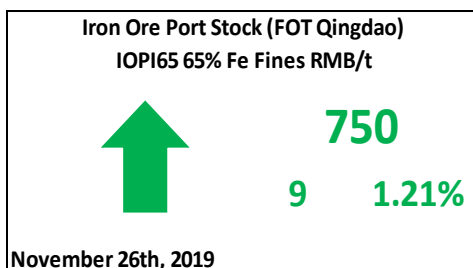
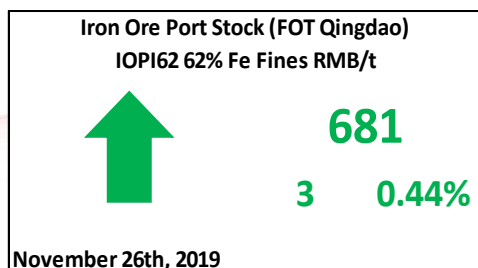


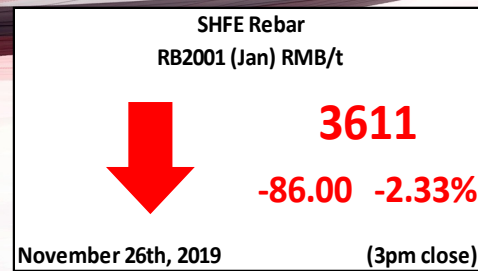
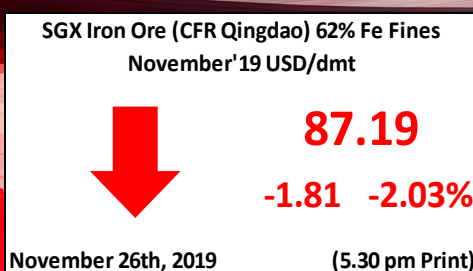
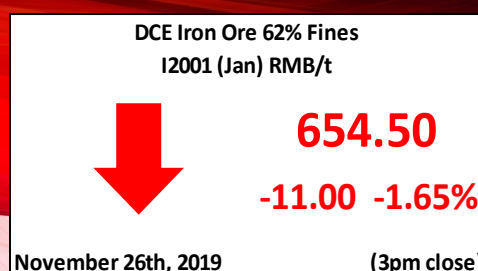


MMi Dashboard

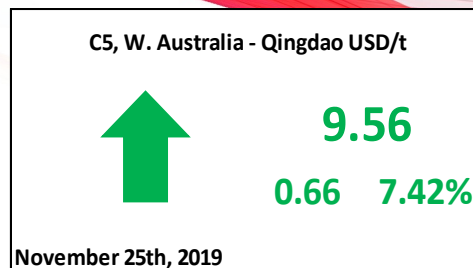
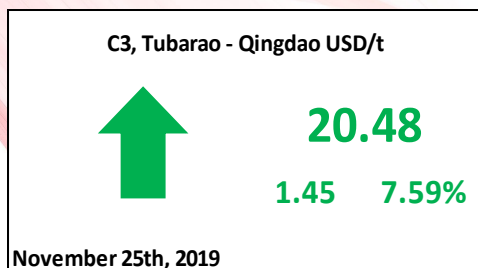
Iron Ore Price Indices



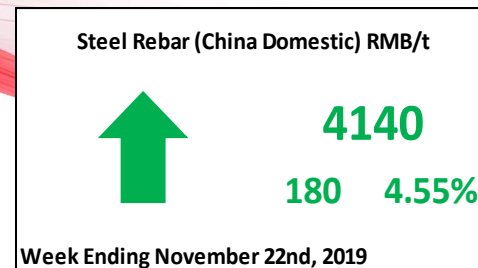
Exchange Traded Contracts



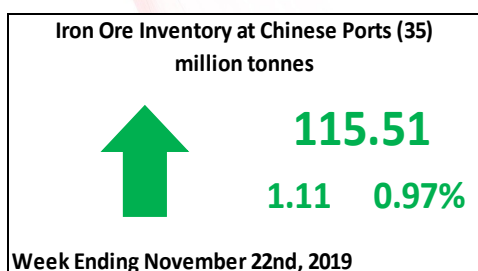
Freight Rates



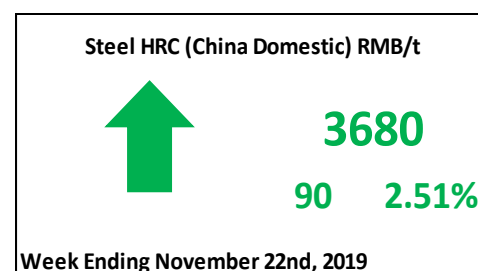
Steel Price



Inventory Levels



Steel Price



IRON ORE PORT STOCK INDEX (IOPI)

November 26th, 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	681	3	0.4%	664	722	535	928	89.29	0.47	0.5%	87.18	96.32	68.50	126.12
IOPI58	58% Fe Fines	576	3	0.5%	565	633	375	823	75.76	0.47	0.6%	74.49	84.66	46.88	112.44
IOPI65	65% Fe Fines	750	9	1.2%	718	788	654	992	98.73	1.31	1.3%	94.63	105.51	85.47	135.34

IRON ORE SEABORNE INDEX (IOSI)

MARKET COMMENTARY

November 26th, 2019		CFR Qingdao, USD/dry tonne							Port stock quotes were still firm this morning, as traders took advantage of the recent market bullishness. Most held their prices firm while mills backed away from the market as rebar futures plunged. SMM estimates that 91 vessels carrying 12.19 million mt of iron ore arrived at major Chinese ports during November 17-23, up 380,000 mt from the week ended November 16. This marked the second straight week of increase. Meanwhile, iron ore deliveries leaving Australian ports fell 1.98 million mt from the prior week to 13 million mt; shipments that departed Brazilian ports were estimated to shrink 160,000 mt on the week to 6.92 million mt. The combined volumes of iron ore leaving Australian and Brazilian ports during November 17-23 were 3.37 million mt, or 14.5% lower than the same period a year earlier.							
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low ²	High ²	Price	Change	Change %	MTD	YTD	Low ²	High ²	
IOSI62	62% Fe Fines	90.24	-0.86	-0.94%	85.33	94.19	62.95	127.50								
IOSI65	65% Fe Fines	103.30	-0.60	-0.58%	95.86	105.59	83.20	137.95								

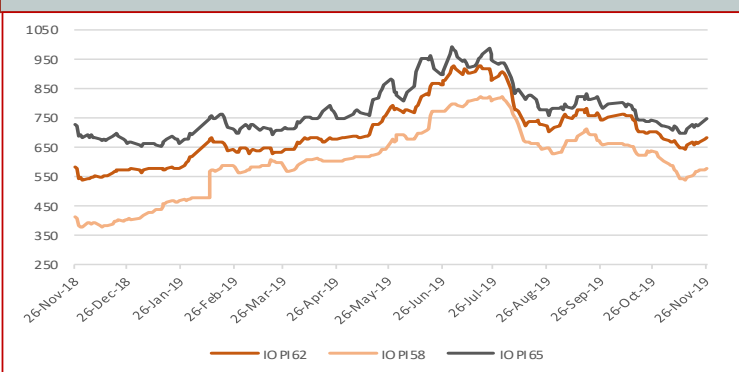
IRON ORE PORT LUMP INDEX (IOPLI)

Week Ending November 22nd, 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	792	7	0.9%	790	877	743	1051	97.81	0.73	0.75%	97.47	110.88	93.24	133.81

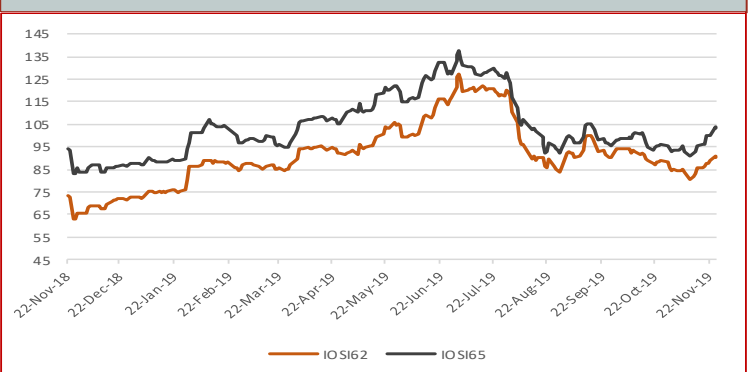
IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

Week Ending November 22nd, 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	766	-0.6%	644	1032	109.21	-0.82%	93.58	150.03
Hebei	Qian'an	65% Fe Concentrate	Dry	825	-1.2%	690	960	117.62	-1.36%	100.26	139.35
Liaoning	Anshan	65% Fe Concentrate	Wet	650	0.0%	535	745	92.67	-0.17%	77.39	104.66
Shandong	Zibo	65% Fe Concentrate	Dry	795	-1.9%	740	1040	113.34	-2.02%	106.55	151.33
Week Ending November 22nd, 2019				This week	Change %	Low ²	High ²	1 Exchange rate applied: RMB/USD = 7.0344 ² Last 12 months ³ Weekly exchange rate applied: RMB/USD 7.0142			
China Mines Concentrate Composite Index RMB/WT				704.27	-1.5%	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

November 26th, 2019		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne						
Index	Fe Content	July	August	September	October	MTD	QTD	YTD	July	August	September	October	MTD	QTD	YTD
IOPI62	62% Fe Fines	909	759	758	721	664	692	722	111.42	123.29	100.18	94.29	87.18	90.73	96.32
IOPI58	58% Fe Fines	809	691	674	636	565	600	633	98.60	110.47	91.86	83.57	74.49	79.03	84.66
IOPI65	65% Fe Fines	954	823	803	758	718	738	788	121.97	129.53	108.92	99.32	94.63	96.97	105.51

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

FREIGHT RATES

November 26th, 2019		CFR Qingdao, USD/dry tonne							November 25th, 2019							
Index	Fe Content	July	August	September	October	MTD	QTD	YTD	Route		Designation	Change	Change %	Low ²	High ²	
IOSI62	62% Fe Fines	120.82	92.61	93.76	90.81	85.33	88.34	94.19	W. Australia - Qingdao		C5	9.56	0.66	7.42%	4.39	11.42
IOSI65	65% Fe Fines	129.53	101.34	99.42	97.45	95.86	96.74	105.59	Tubarao - Qingdao		C3	20.48	1.45	7.59%	11.61	29.10

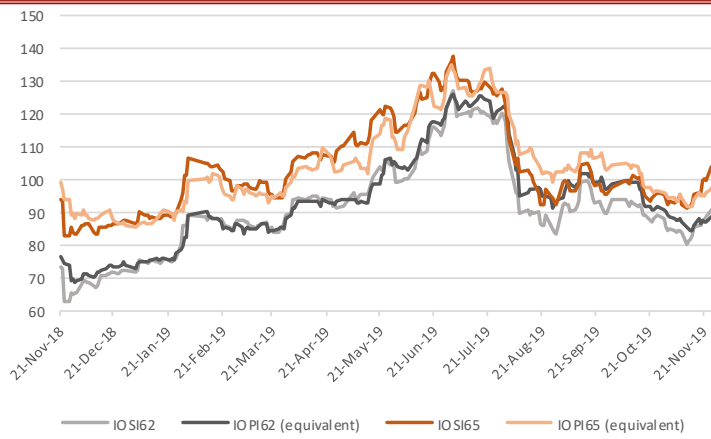
IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending November 22nd, 2019		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% VAT), USD/dry tonne ¹						
Index	Fe Content	July	August	September	October	MTD	QTD	YTD	May	June	July	October	MTD	QTD	YTD
IOPLI62	62.5% Fe Lump	1046	870	803	829	790	807	877	128.00	132.99	108.80	98.44	97.47	99.30	110.88

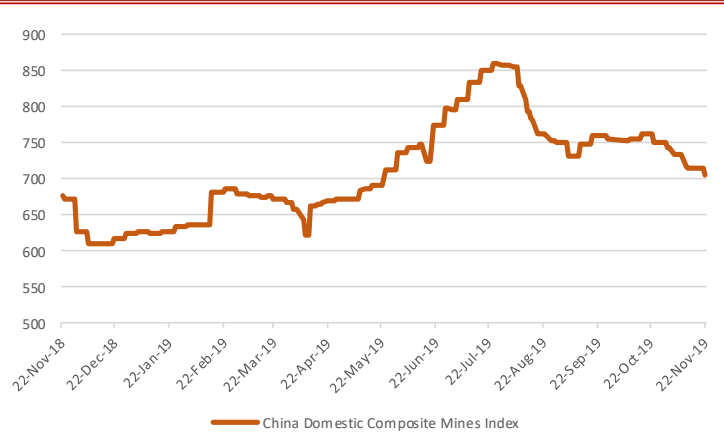
IRON ORE INDEX PREMIUMS/DISCOUNTS

November 26th, 2019				PORT STOCK INDEX (RMB/WT)				November 26th, 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		-15.42%		IOSI65	65% Fe Fines	13.06		14.47%					
IOPI65	65% Fe Fines	69		10.13%											

IRON ORE INDEX COMPARISONS (USD/DMT)



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



IRON ORE BRAND SPOT PRICE ASSESSMENTS

November 26th, 2019				November 26th, 2019			
PORT STOCK INDEX (RMB/WT)				SEABORNE INDEX (USD/DMT)			
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	636	5	-45	Roy Hill	87.14	-0.85	-3.10
SIMEC Fines	599	8	-82	SIMEC Fines	83.46	-0.85	-6.78
PB Fines	660	4	-21	PB Fines	88.79	-0.85	-1.45
Newman Fines	685	3	4	Newman Fines	90.29	-0.86	0.05
MAC Fines	646	5	-35	MAC Fines	84.41	-0.85	-5.83
Jimblebar Blended Fines	586	4	-95	Jimblebar Blended Fines	75.94	-0.85	-14.30
Carajas Fines	757	8	76	Carajas Fines	102.11	-1.56	11.87
Brazilian SSF	643	12	-38	Brazilian SSF	87.44	-1.16	-2.80
Brazilian Blend Fines	690	7	9	Brazilian Blend Fines	90.06	-1.04	-0.18
RTX Fines	616	6	-65	RTX Fines	81.34	-0.85	-8.90
West Pilbara Fines	633	4	-48	West Pilbara Fines	87.14	-0.85	-3.10

November 26th, 2019			
PORT STOCK INDEX (RMB/WT)			
	Price	Change	Diff to IOPI58
SSF	542	1	-34
FMG Blended Fines	582	3	6
Robe River	542	1	-34
Western Fines	548	-1	-28
Atlas Fines	533	0	-43
Yandi	556	0	-20

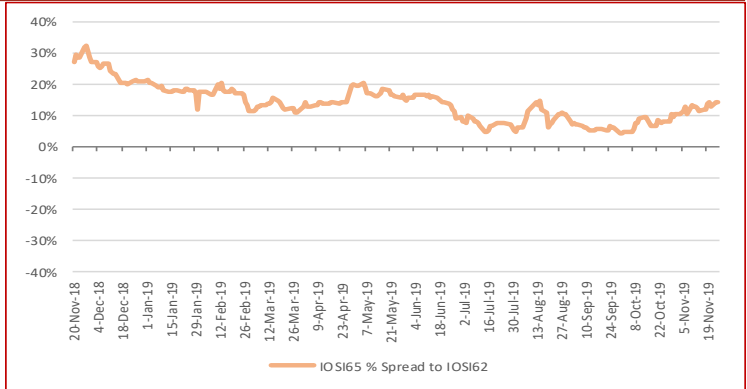
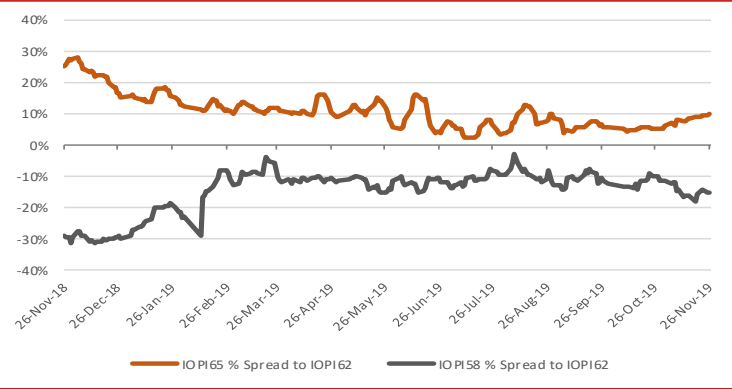
IRON ORE INDEX NORMALISATION DIFFERENTIALS

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%	11.00	0.00	1% Fe	High Grade Fe 60 - 63%	0.75	0.00
	High Grade Fe 63 - 64%	10.00	0.00		High Grade Fe 63 - 64%	1.75	-0.25
	High Grade Fe 64 - 65%	10.00	0.00		High Grade Fe 64 - 65%	1.75	-0.25
	High Grade Fe 65 - 65.5%	10.00	0.00		High Grade Fe 65 - 65.5%	1.75	-0.25
1% Alumina	Low Grade Fe	13.00	0.00	1% Alumina	High Fe Grade Al <2.25%	2.25	-0.25
	High Fe Grade Al <2.25%	21.00	3.00		High Fe Grade Al 2.25-4%	2.25	0.00
	High Fe Grade Al 2.25-4%	37.00	0.00				
	Low Fe Grade Al <2.25%	9.00	-1.00				
1% Silica	Low Fe Grade Al 2.25-4%	10.00	0.00	1% Silica	High Fe Grade Si <4%	2.50	0.00
	High Fe Grade Si <4%	8.00	1.00		High Fe Grade Si 4 - 6.5%	2.25	0.00
	High Fe Grade Si 4-6.5%	31.00	-2.00				
0.01% Phosphorus	Low Fe Grade	15.00	2.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%		-1.25
	High Fe Grade 0.09%<P<0.115%	4.00	0.00		High Fe Grade 0.115%<P<0.15%	1.25	0.25
	High Fe Grade 0.115%<P<0.15%	0.00	-1.00		Low Fe Grade 0.09<P<0.1%	1.00	

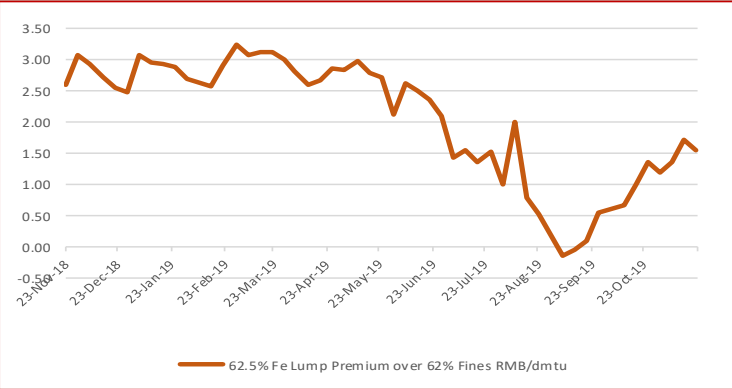
Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

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	-15.00	0.00	Lianyungang	0.00	0.00	Rizhao	0.00	0.00
Caofeidian	0.00	0.00	Jingtang	0.00	0.00	Majishan	0.00	0.00	Shekou	0.00	0.00
Dalian	-50.00	0.00	Lanqiao	0.00	0.00	Nantong	-15.00	0.00	Tianjin	0.00	0.00

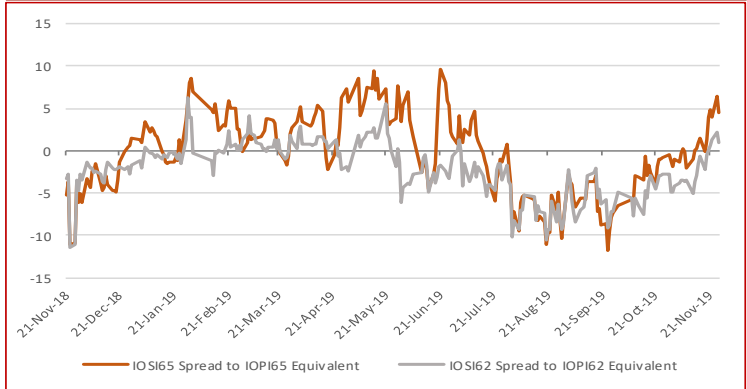
IRON ORE INDEX PREMIUMS/DISCOUNTS



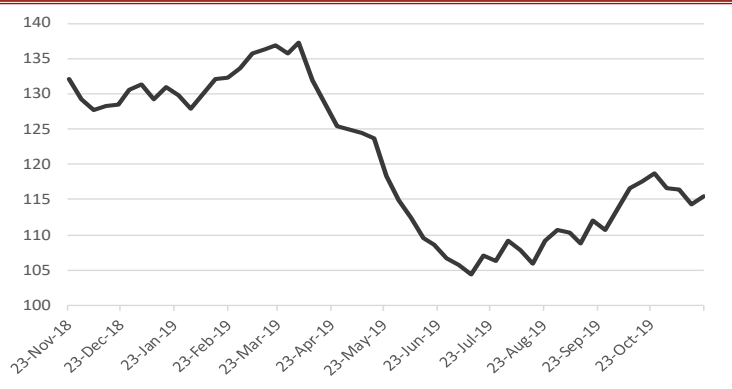
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



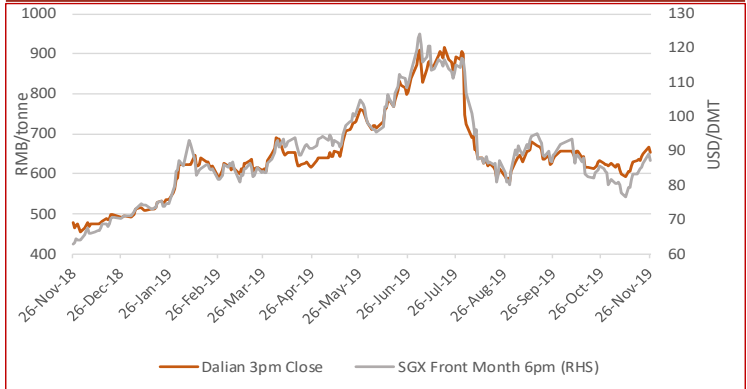
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



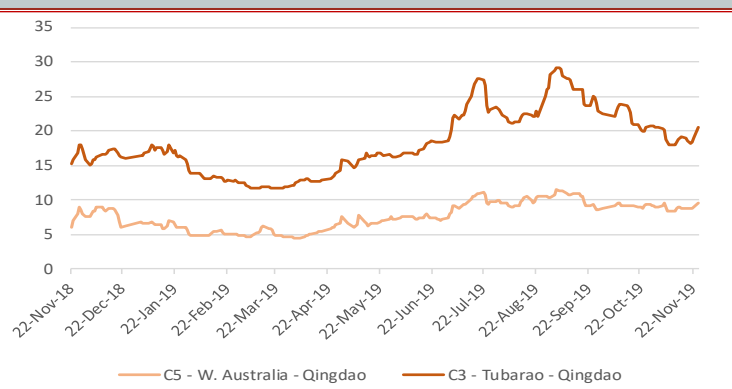
IRON ORE PORT INVENTORIES (MILLION TONNES)

Week Ending November 22nd, 2019				
Province	This week	Change %	Low ²	High ²
Jingtang	15.33	-1.03%	10.80	17.00
Qingdao	13.50	-3.57%	12.38	19.01
Caofeidian	14.00	-6.35%	14.00	19.30
Tianjin	7.16	-1.38%	6.37	10.05
Rizhao	13.86	3.43%	11.41	17.10
Total (35 Ports)	115.51	0.97%	104.40	137.30

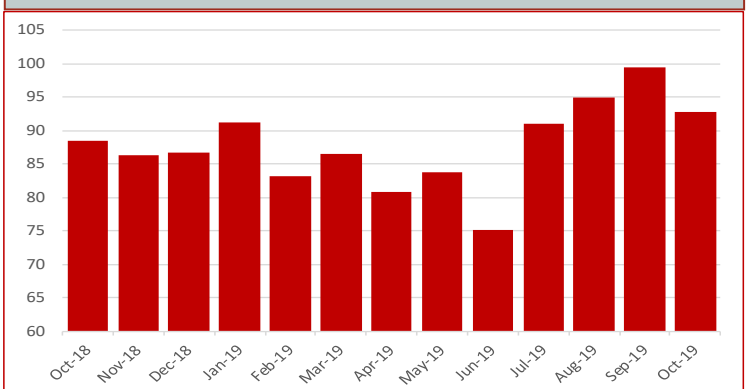
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	Nov 26th, 3pm close			Nov 26th, 5:30 pm		
Contract	I2001	Change	Change %	Dec'19	Change	Change %
Closing Price	654.50	-11.0	-1.65%	87.19	-1.81	-2.03%
Vol traded ('000 lots)	200.10	30.4	17.93%	12.24	-1.33	-9.82%
Open positions ('000 lots)	139.15	-3.8	-2.65%	146.25	-2.97	-1.99%
Day Low	645.5	-2.5	-0.39%	86.66	-0.16	-0.18%
Day High	666.0	-4.0	-0.60%	88.55	-0.75	-0.84%

DRY BULK FREIGHT RATES (USD/MT)

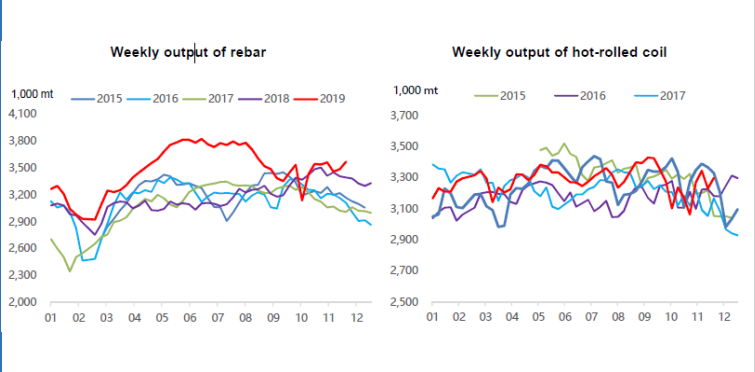


TOTAL CHINA IRON ORE IMPORT VOLUMES (MILLION TONNES)



STEEL SPOT MARKET PRICES—CHINA

Steel Spot Market RMB/tonne			
Product	22/11/2019	Change	Change %
ReBar HRB400 φ18mm	4,140.0	180	4.55%
Wirerod Q300 φ6.5mm	4,510.0	160	3.68%
HRC Q235/SS400 5.5mm*1500*C	3,680.0	90	2.51%
CRC SPPC/ST12 1.0mm*1250*2500	4,280.0	40	0.94%
Medium & Heavy Plate Q235B 20mm	3,710.0	40	1.09%
GI ST02Z 1.0mm*1000*C	4,400.0	40	0.92%
Colour Coated Plate	6,850.0	50	0.74%

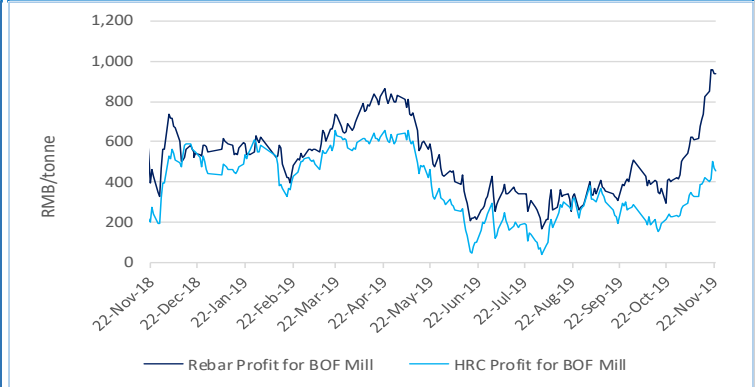


CHINESE STEEL MILL PROFITABILITY

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	87.80	4.80	Mmi CFR Equivalent index for 1st Feb
Coke	1,810	0	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	2,350	70	steel scrap (6mm) in Zhangjiagang, exl. tax
Billet Cost	2,927	66	Q234, incl. tax
Rebar cost - Blast furnace	3,153	69	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	937	111	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	3,244	67	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	456	33	based on Shanghai prices, incl. tax

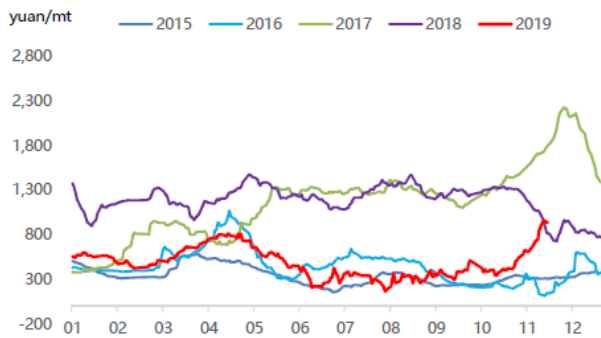
Note: 1. Costs in the table are calculated based on today's market prices and factored our management, sales, financial and depreciations fees.
2. The cost refers to average cost in the industry based on SMM's survey of small, medium and large mills in China

CHINESE STEEL MILL PROFITABILITY

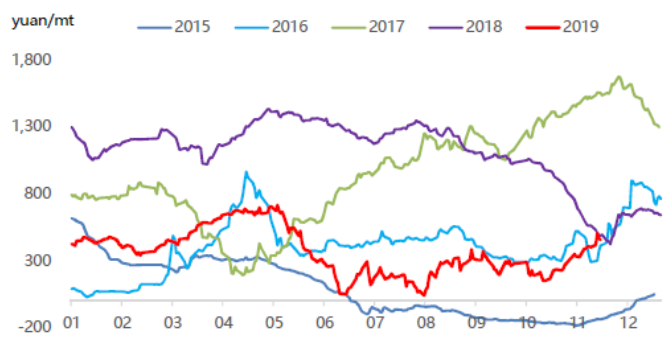


CHINESE STEEL MILL PROFITABILITY

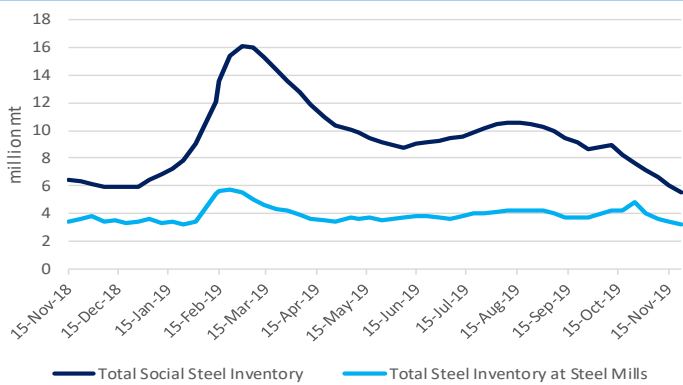
Rebar profits



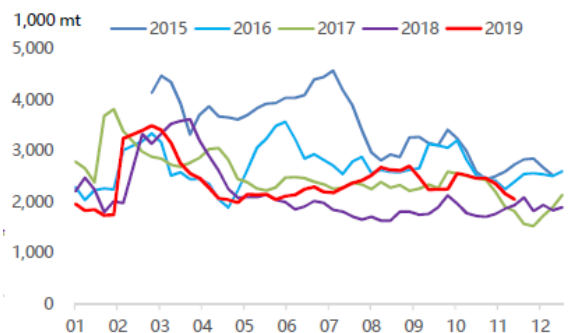
Hot-rolled coil profits



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					
November 26th, 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	60.70%	2.25%	4.70%	0.054%	9.34%	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	61.58%	2.37%	3.70%	0.099%	9.52%	PB Fines 62%	62.00%	2.60%	4.30%	0.090%	10.00%
Newman Fines	62.49%	2.20%	4.07%	0.092%	7.88%	Newman Fines	62.80%	2.20%	4.30%	0.080%	6.40%
MAC Fines	60.82%	2.29%	4.72%	0.081%	7.81%	MAC Fines	61.00%	2.70%	4.70%	0.110%	9.30%
Jimblebar Blended Fines	60.48%	3.05%	4.61%	0.116%	7.96%	Jimblebar Blended Fines	59.50%	3.70%	5.80%	0.135%	8.30%
Carajas Fines	65.41%	1.27%	1.41%	0.081%	8.02%	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	63.03%	1.44%	4.68%	0.074%	7.77%	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%
November 26th, 2019	Specifications applied for 58% brand assessments										
	Fe	Alumina	Silica	Phos	Moisture						
SSF	56.72%	3.04%	6.14%	0.052%	8.94%						
FMG Blended Fines	58.25%	2.75%	5.65%	0.063%	7.46%						
Robe River	56.31%	3.17%	5.64%	0.041%	9.10%						
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%	1.62%	6.40%	0.041%	9.04%						

BLOOMBERG TICKERS

PORT STOCK INDICES				SEABORNE INDICES	
	FOT Qingdao (RMB/wet tonne)		CFR Qingdao Equivalent (USD/dry tonne)		CFR Qingdao (USD/DMT)
IOPI62	IRCNQ001		IRCNQ004		IRCNO034
IOPI58	IRCNQ002		IRCNQ005		IRCNO035
IOPI65	IRCNQ003		IRCNQ006		
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

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