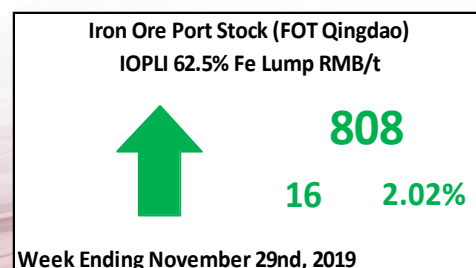
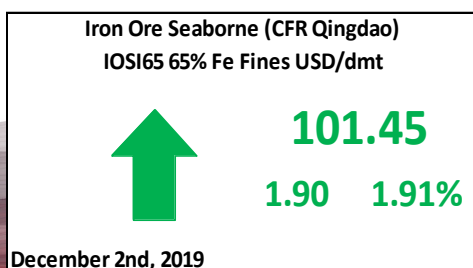
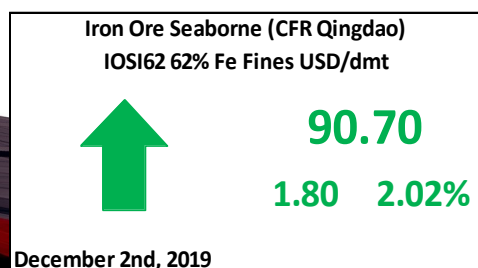
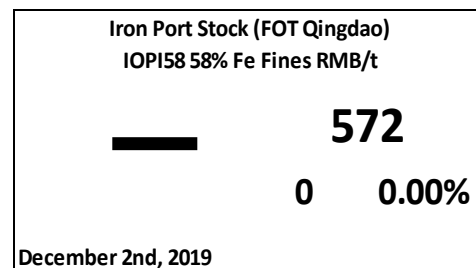
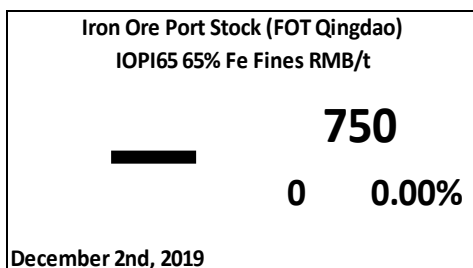
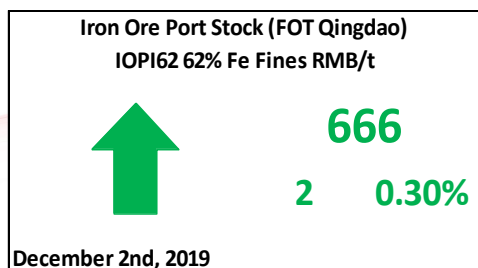


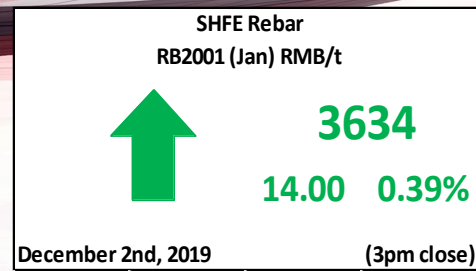
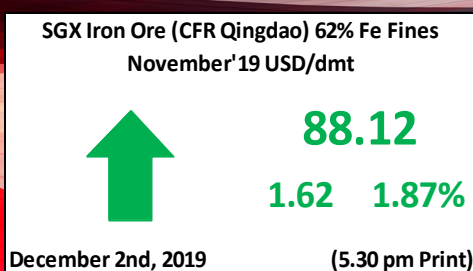
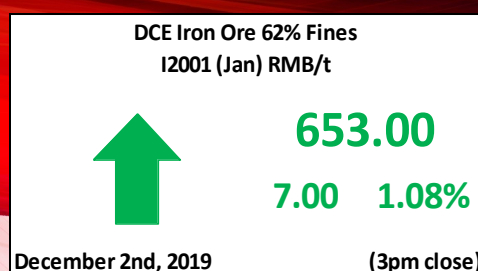


MMi Dashboard

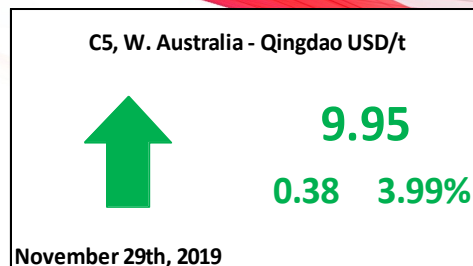
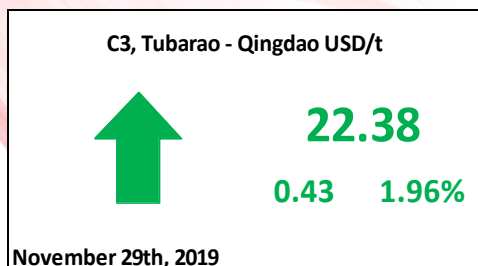
Iron Ore Price Indices



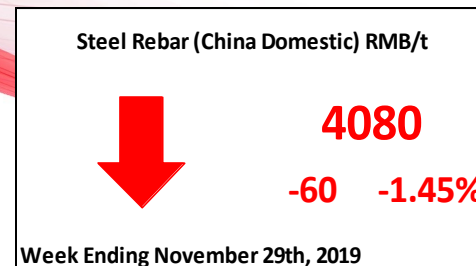
Exchange Traded Contracts



Freight Rates



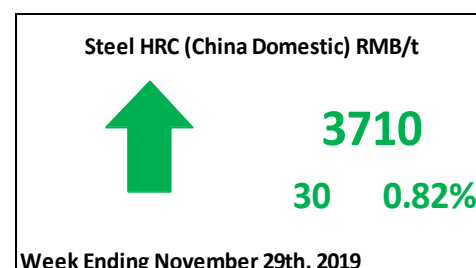
Steel Price



Inventory Levels



Steel Price



IRON ORE PORT STOCK INDEX (IOPI)

December 2nd, 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	666	2	0.3%	666	721	541	928	87.34	0.31	0.4%	87.34	96.17	69.23	126.12
IOPI58	58% Fe Fines	572	0	0.0%	572	632	379	823	75.29	0.03	0.0%	75.29	84.49	47.67	112.44
IOPI65	65% Fe Fines	750	0	0.0%	750	787	654	992	98.84	0.05	0.1%	98.84	105.40	85.47	135.34

IRON ORE SEABORNE INDEX (IOSI)

MARKET COMMENTARY

December 2nd, 2019		CFR Qingdao, USD/dry tonne							Traders raised their quotes as the physical market became buoyed by increased activity in the futures market. Mills were actively enquiring however did not seem to be enthusiastically closing deals as a weak steel market tempered much of the early morning activity. According to SMM, some traders are still relatively optimistic on mill restocking, and iron ore port stock prices may be bullish due to increasing demand on medium-grade iron ore product. However, as mentioned, downstream demand for steel products will decrease leading up to the Lunar New Year holiday, which, longer term, will provide a ceiling for physical iron ore prices.							
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low ²	High ²								
IOSI62	62% Fe Fines	90.70	1.80	2.02%	90.70	94.11	65.75	127.50								
IOSI65	65% Fe Fines	101.45	1.90	1.91%	101.45	105.50	83.50	137.95								

IRON ORE PORT LUMP INDEX (IOPLI)

Week Ending November 29nd, 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	808	16	2.0%	794	875	743	1051	99.51	1.70	1.74%	97.89	110.63	93.24	133.81

IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

Week Ending November 29th, 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	800	4.4%	644	1032	113.75	4.16%	93.58	150.03
Hebei	Qian'an	65% Fe Concentrate	Dry	830	0.6%	690	960	118.01	0.33%	100.26	139.35
Liaoning	Anshan	65% Fe Concentrate	Wet	650	0.0%	535	745	92.42	-0.27%	77.39	104.66
Shandong	Zibo	65% Fe Concentrate	Dry	810	1.9%	740	1040	115.17	1.61%	106.55	151.33

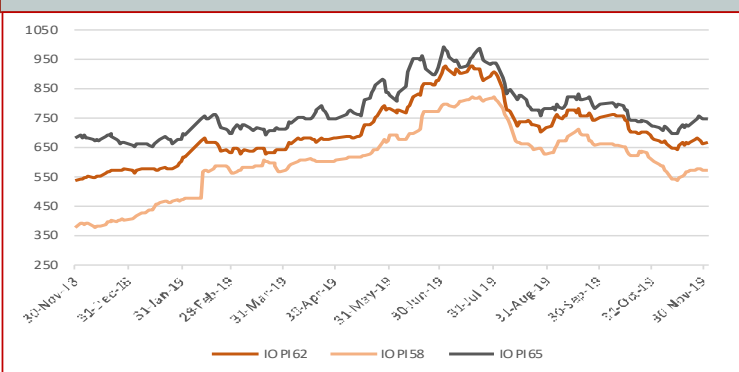
Week Ending November 29th, 2019

This week	Change %	Low ²	High ²
713.20	1.3%	609.04	859.50

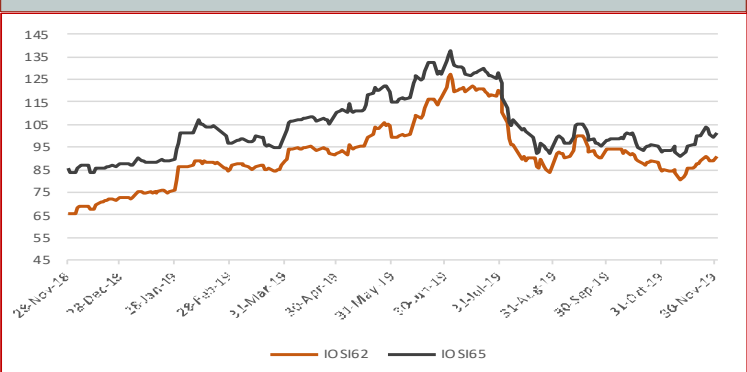
China Mines Concentrate Composite Index RMB/WT

¹ Exchange rate applied: RMB/USD = 7.0262 ² Last 12 months
³ Weekly exchange rate applied: RMB/USD 7.0332

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

December 2nd, 2019		FOT Qingdao (inc. 13% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne						
Index	Fe Content	August	September	October	November	MTD	QTD	YTD	August	September	October	November	MTD	QTD	YTD
IOPI62	62% Fe Fines	759	758	721	665	666	690	721	123.29	100.18	94.29	87.30	87.34	90.45	96.17
IOPI58	58% Fe Fines	691	674	636	567	572	598	632	110.47	91.86	83.57	74.67	75.29	78.69	84.49
IOPI65	65% Fe Fines	823	803	758	723	750	740	787	129.53	108.92	99.32	95.29	98.84	97.19	105.40

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

FREIGHT RATES

December 2nd, 2019		CFR Qingdao, USD/dry tonne							November 29th, 2019							
Index	Fe Content	August	September	October	November	MTD	QTD	YTD	Route		Designation	Change	Change %	Low ²	High ²	
IOSI62	62% Fe Fines	92.61	93.76	90.81	85.83	90.70	88.43	94.11	W. Australia - Qingdao		C5	9.95	0.38	3.99%	4.39	11.42
IOSI65	65% Fe Fines	101.34	99.42	97.45	96.49	101.45	97.08	105.50	Tubarao - Qingdao		C3	22.38	0.43	1.96%	11.61	29.10

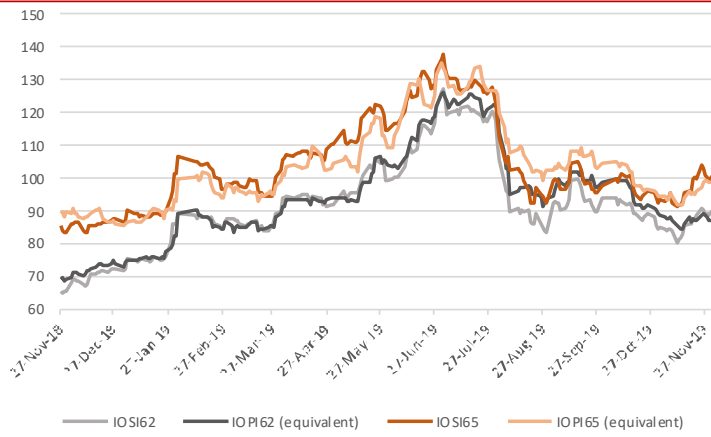
IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending November 29nd, 2019		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% VAT), USD/dry tonne ¹						
Index	Fe Content	August	September	October	November	MTD	QTD	YTD	May	June	July	November	MTD	QTD	YTD
IOPLI62	62.5% Fe Lump	870	803	829	794	794	807	875	132.99	108.80	98.44	97.89	97.89	99.34	110.63

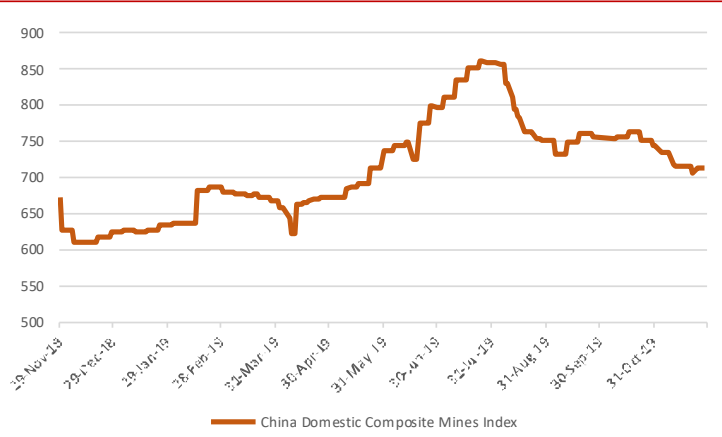
IRON ORE INDEX PREMIUMS/DISCOUNTS

December 2nd, 2019				PORT STOCK INDEX (RMB/WT)		December 2nd, 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	-94		-14.11%		IOSI65	65% Fe Fines	10.75		11.85%	
IOPI65	65% Fe Fines	84		12.61%							

IRON ORE INDEX COMPARISONS (USD/DMT)



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



IRON ORE BRAND SPOT PRICE ASSESSMENTS

December 2nd, 2019				December 2nd, 2019			
PORT STOCK INDEX (RMB/WT)				SEABORNE INDEX (USD/DMT)			
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOPI62
Roy Hill	625	3	-41	Roy Hill	87.35	1.24	-3.35
SIMEC Fines	589	1	-77	SIMEC Fines	83.32	0.71	-7.38
PB Fines	646	3	-20	PB Fines	89.07	1.63	-1.63
Newman Fines	668	1	2	Newman Fines	90.64	1.93	-0.06
MAC Fines	635	3	-31	MAC Fines	85.57	1.76	-5.13
Jimblebar Blended Fines	570	1	-96	Jimblebar Blended Fines	76.32	0.48	-14.38
Carajas Fines	759	0	93	Carajas Fines	101.09	2.05	10.39
Brazilian SSF	640	-3	-26	Brazilian SSF	86.64	1.18	-4.06
Brazilian Blend Fines	677	-4	11	Brazilian Blend Fines	89.89	1.68	-0.81
RTX Fines	598	0	-68	RTX Fines	82.20	1.34	-8.50
West Pilbara Fines	625	4	-41	West Pilbara Fines	87.40	1.14	-3.30

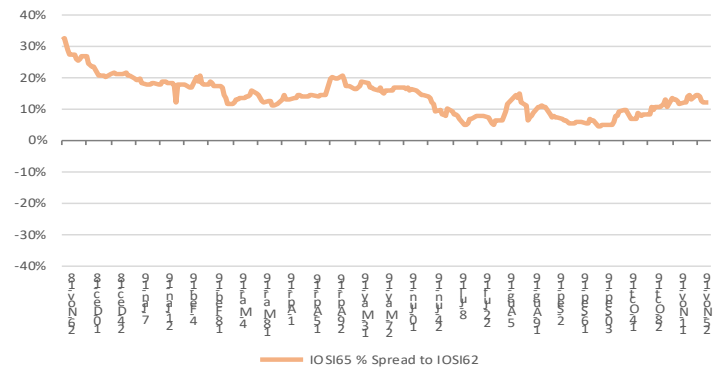
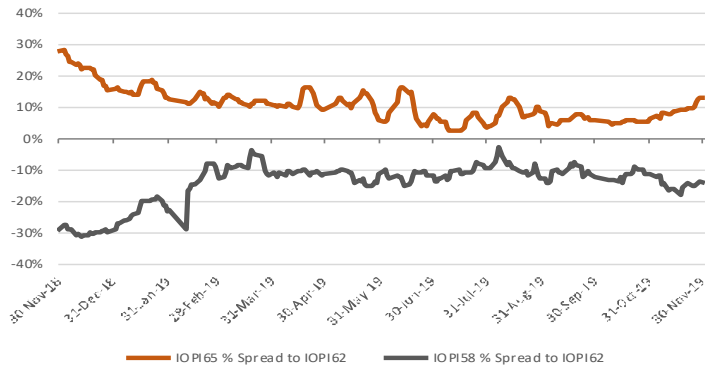
December 2nd, 2019			
PORT STOCK INDEX (RMB/WT)			
	Price	Change	Diff to IOPI58
SSF	539	1	-33
FMG Blended Fines	580	2	8
Robe River	545	2	-27
Western Fines	530	-4	-42
Atlas Fines	518	-4	-54
Yandi	547	-2	-25

IRON ORE INDEX NORMALISATION DIFFERENTIALS

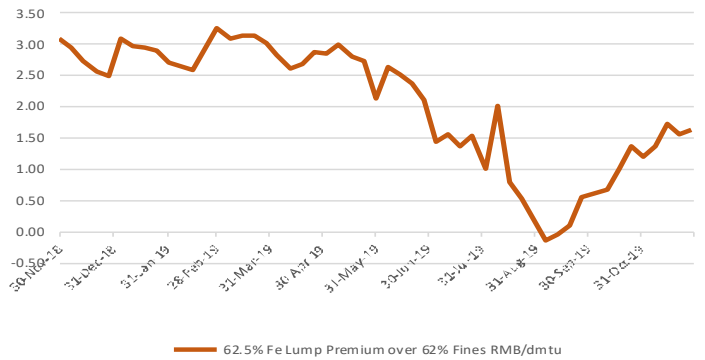
Port Stock Index Product Differentials (RMB/wet tonne)				Seaborne Index Product Differentials (USD/dry tonne)			
	Applicable range	Value	Change		Applicable range	Value	Change
1% Fe	High Grade Fe 60 - 63%	7.00	-2.00	1% Fe	High Grade Fe 60 - 63%	0.75	0.25
	High Grade Fe 63 - 64%	12.00	0.00		High Grade 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	12.00	0.00				
1% Alumina	High Fe Grade Al <2.25%	32.00	0.00	1% Alumina	High Fe Grade Al <2.25%	1.75	0.00
	High Fe Grade Al 2.25-4%	42.00	3.00		High Fe Grade Al 2.25-4%	2.50	0.25
	Low Fe Grade Al <2.25%	12.00	1.00				
	Low Fe Grade Al 2.25-4%	3.00	-3.00				
1% Silica	High Fe Grade Si <4%	10.00	0.00	1% Silica	High Fe Grade Si <4%	2.25	0.00
	High Fe Grade Si 4-6.5%	32.00	2.00		High Fe Grade Si 4 - 6.5%	2.50	0.25
0.01% Phosphorus	Low Fe Grade	24.00	3.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	0.75	-0.25
	High Fe Grade 0.09%<P<0.115%	5.00	0.00		High Fe Grade 0.115%<P<0.15%	1.25	0.25
	High Fe Grade 0.115%<P<0.15%	0.00	0.00				
	Low Fe Grade 0.09%<P<0.1%	3.00	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	-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	-50.00	0.00	Lanqiao	0.00	0.00	Nantong	-15.00	0.00	Tianjin	0.00	0.00

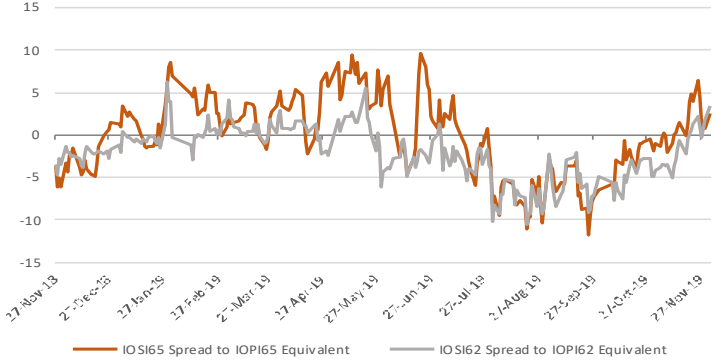
IRON ORE INDEX PREMIUMS/DISCOUNTS



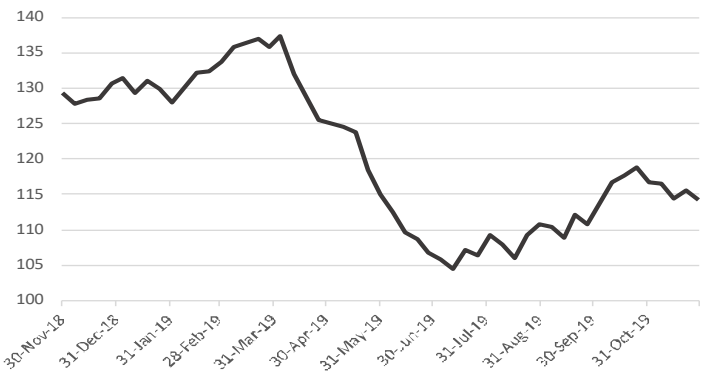
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



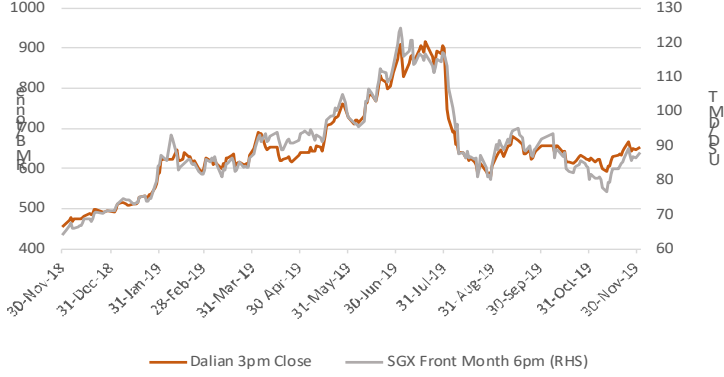
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



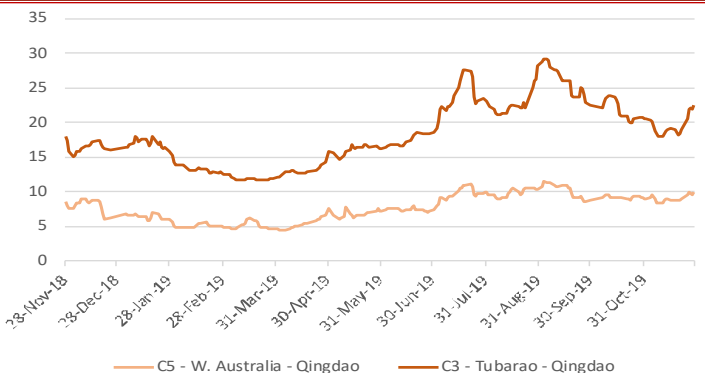
IRON ORE PORT INVENTORIES (MILLION TONNES)

Week Ending November 29nd, 2019				
Province	This week	Change %	Low ²	High ²
Jingtang	14.57	-4.96%	10.80	17.00
Qingdao	13.60	0.74%	12.38	19.01
Caofeidian	13.97	-0.21%	13.97	19.30
Tianjin	7.04	-1.68%	6.37	9.90
Rizhao	13.45	-2.96%	11.41	17.10
Total (35 Ports)	114.17	-1.16%	104.40	137.30

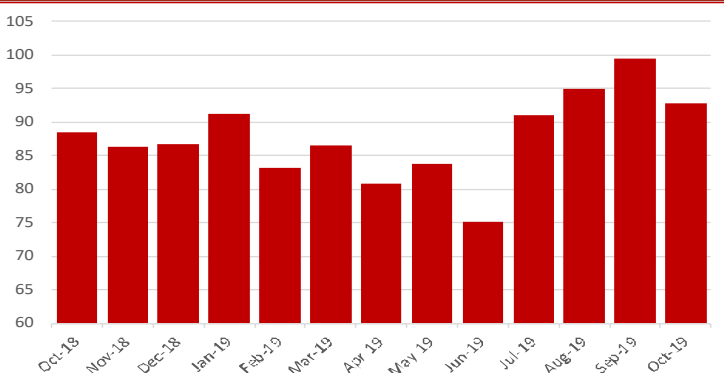
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	Dec 2nd, 3pm close			Dec 2nd, 5:30 pm		
Contract	I2001	Change	Change %	Dec'19	Change	Change %
Closing Price	653.00	7.0	1.08%	88.12	1.62	1.87%
Vol traded ('000 lots)	190.35	89.4	88.58%	7.75	-2.79	-26.48%
Open positions ('000 lots)	112.59	-0.2	-0.16%	142.67	11.91	9.11%
Day Low	630.5	-11.5	-1.79%	84.06	0.73	0.88%
Day High	655.0	4.0	0.61%	88.14	1.60	1.85%

DRY BULK FREIGHT RATES (USD/MT)



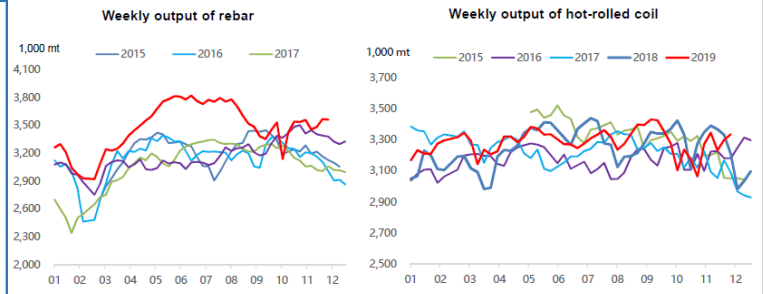
TOTAL CHINA IRON ORE IMPORT VOLUMES (MILLION TONNES)



STEEL SPOT MARKET PRICES—CHINA

Steel Spot Market RMB/tonne

Product	29/11/2019	Change	Change %
ReBar HRB400 ?18mm	4,080.0	-60	-1.45%
Wirerod Q300 ?6.5mm	4,380.0	-130	-2.88%
HRC Q235/SS400 5.5mm*1500°C	3,710.0	30	0.82%
CRC SPPC/ST12 1.0mm*1250*2500	4,280.0	0	0.00%
Medium & Heavy Plate Q235B 20mm	3,730.0	20	0.54%
GI ST02Z 1.0mm*1000°C	4,450.0	50	1.14%
Colour Coated Plate	6,800.0	-50	-0.73%



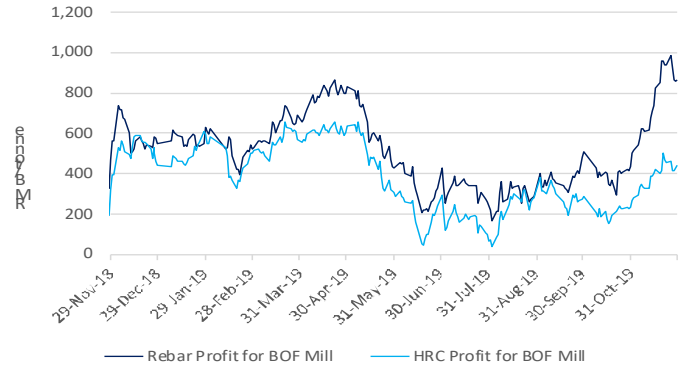
CHINESE STEEL MILL PROFITABILITY

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	89.10	1.30	Mmi CFR Equivalent index for 1st Feb
Coke	1,810	0	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	2,330	-20	steel scrap (6mm) in Zhangjiagang, excl. tax
Billet Cost	2,941	14	Q234, incl. tax
Rebar cost - Blast furnace	3,167	14	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	863	-74	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	3,258	14	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	442	-14	based on Shanghai prices, incl. tax

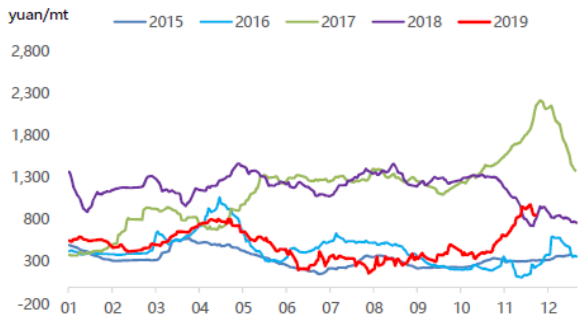
Note: 1. Costs in the table are calculated based on today's market prices and fact of our management, sales, financial and depreciations fees.
2. The cost refers to average cost in the industry based on SMM's survey of small, medium and large mills in China

CHINESE STEEL MILL PROFITABILITY

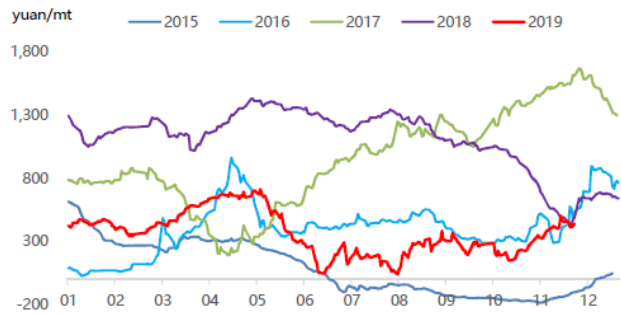


CHINESE STEEL MILL PROFITABILITY

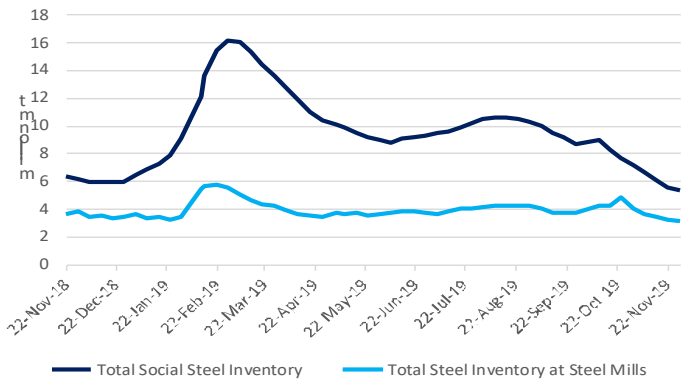
Rebar profits



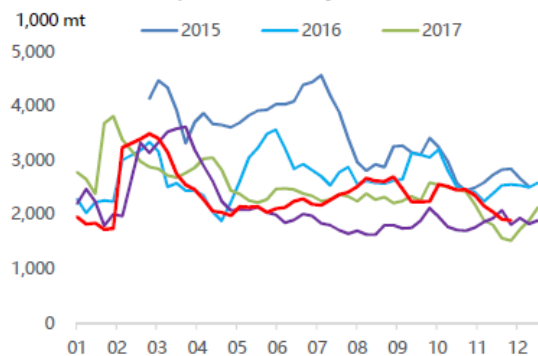
Hot-rolled coil profits



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*			
Port Index	62%	58%	65%
Seaborne Index	0	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					
December 2nd, 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%	9.53%	PB Fines 62%	62.00%	2.60%	4.30%	0.090%	10.00%
Newman Fines	62.48%	2.20%	4.08%	0.092%	7.86%	Newman Fines	62.80%	2.20%	4.30%	0.080%	6.40%
MAC Fines	60.80%	2.29%	4.71%	0.081%	7.75%	MAC Fines	61.00%	2.70%	4.70%	0.110%	9.30%
Jimblebar Blended Fines	60.49%	3.04%	4.62%	0.116%	7.92%	Jimblebar Blended Fines	59.50%	3.70%	5.80%	0.135%	8.30%
Carajas Fines	65.41%	1.27%	1.42%	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	62.98%	1.46%	4.70%	0.073%	7.79%	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%

December 2nd, 2019	Specifications applied for 58% brand assessments				
	Fe	Alumina	Silica	Phos	Moisture
SSF	56.72%	3.03%	6.15%	0.053%	9.00%
FMG Blended Fines	58.26%	2.74%	5.65%	0.063%	7.48%
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	57.11%	1.62%	6.40%	0.041%	9.03%

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		IOSI62	IRCN0034
IOPI58	IRCNQ002	IRCNQ005		IOSI65	IRCN0035
IOPI65	IRCNQ003	IRCNQ006			
IOPLI62	IRCN0036	IRCN0037			

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