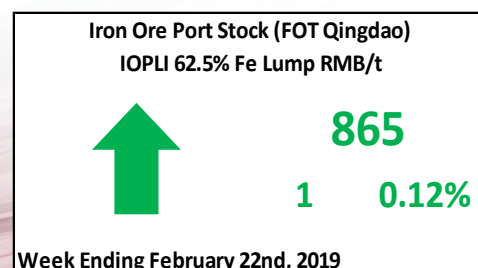
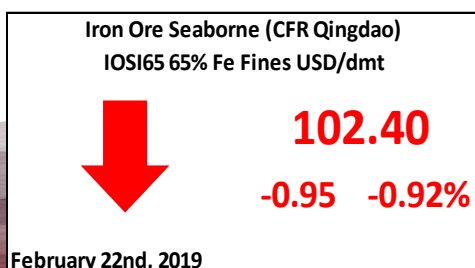
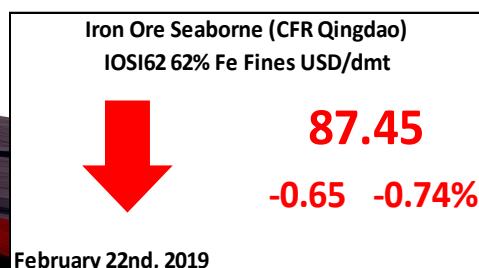
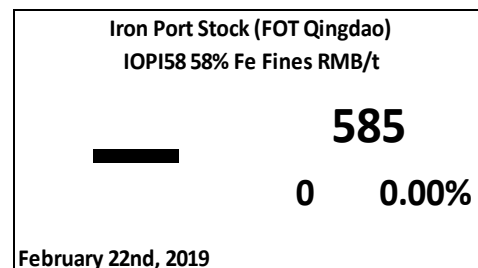
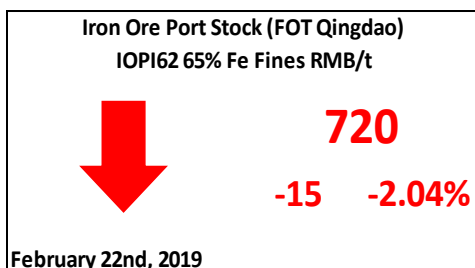
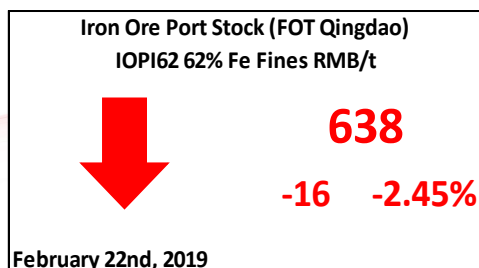


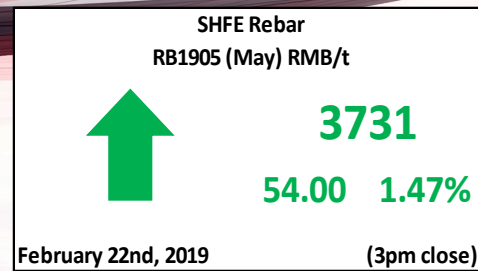
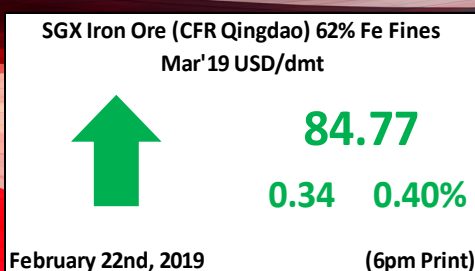
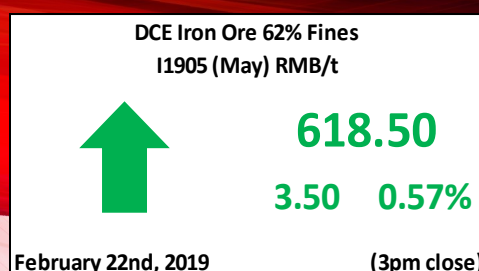


MMi Dashboard

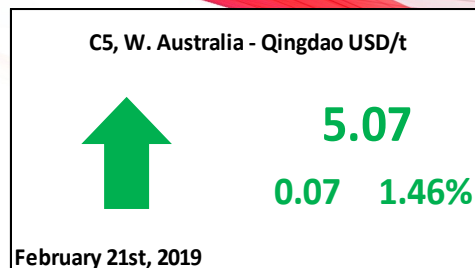
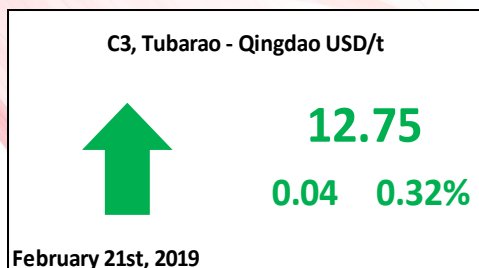
Iron Ore Price Indices



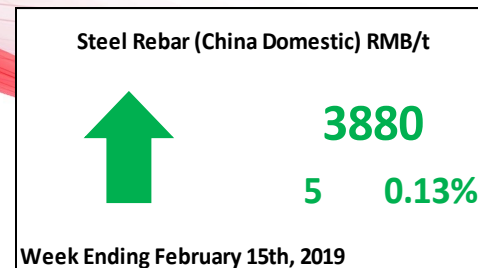
Exchange Traded Contracts



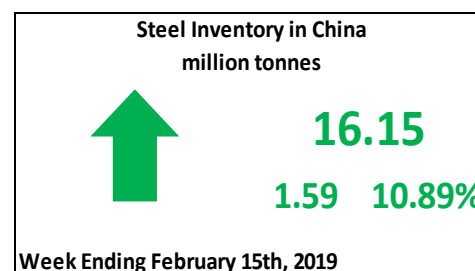
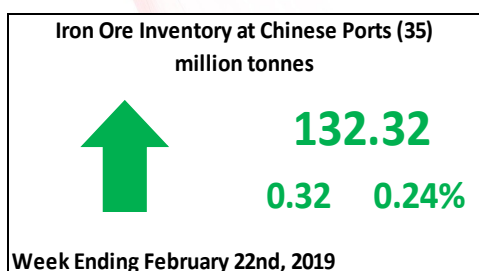
Freight Rates



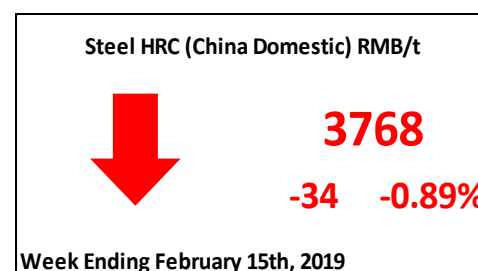
Steel Price



Inventory Levels



Steel Price



IRON ORE PORT STOCK INDEX (IOPI)

February 22nd, 2019		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% 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	638	-16	-2.4%	661	607	443	681	85.12	-2.14	-2.5%	87.90	80.08	61.36	90.41
IOPI58	58% Fe Fines	585	0	0.0%	566	487	304	585	77.72	0.08	0.1%	74.66	63.55	40.67	77.72
IOPI65	65% Fe Fines	720	-15	-2.0%	744	695	541	784	96.56	-1.99	-2.0%	99.33	92.20	75.83	101.79

IRON ORE SEABORNE INDEX (IOSI)

MARKET COMMENTARY

February 22nd, 2019		CFR Qingdao, USD/dry tonne							Iron ore deliveries leaving 35 major Chinese ports averaged 2.62 million mt per day in the week ended February 22, up 197,000 mt from the previous week, reflecting recovering demand, SMM data showed. For the same week, stocks of iron ore across those ports gained 320,000 mt to stand at 132.32 million mt as Caofeidian, Rizhao ports and major ports along the Yangtze River saw more seaborne arrivals. Chinese ports are expected to see more iron ore leave for steel mills next week amid restocking demand. Chinese ports are expected to see more iron ore leave for steel mills next week amid restocking demand whilst PB fines prices dipped 10-20 RMB/wt today.							
Index	Fe Content	Price	Change	Change %	MTD	YTD	Low ³	High ³								
IOSI62	62% Fe Fines	87.45	-0.65	-0.7%	87.97	80.70	62.95	89.20								
IOSI65	65% Fe Fines	102.40	-0.95	-0.9%	103.75	95.30	83.20	106.85								

IRON ORE PORT LUMP INDEX (IOPLI)

Week Ending February 22nd, 2019		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% VAT), USD/dry tonne ¹						
Index	Fe Content	Price	W-o-W	Change %	MTD	YTD	Low ³	High ³	Price	W-o-W	Change %	MTD	YTD	Low ³	High ³
IOPLI62	62.5% Fe Lump	865	1	0.1%	842	808	565	865	111.93	0.91	0.8%	108.63	103.45	76.63	111.93

IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

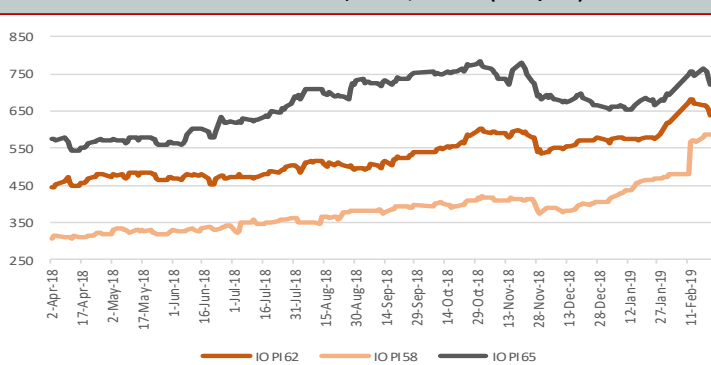
Week Ending February 15th, 2019				RMB/tonne (excluding tax) ⁴				USD/tonne (excluding tax) ⁴			
Province	Region	Product	Basis	This week	Change %	Low ²	High ²	This week	Change %	Low ²	High ²
Hebei	Hanxing	66% Fe Concentrate	Dry	802	13.9%	579	802	118.53	13.24%	91.97	118.53
Hebei	Qian'an	65% Fe Concentrate	Dry	775	3.3%	630	815	114.54	2.71%	100.26	117.34
Liaoning	Anshan	65% Fe Concentrate	Wet	575	5.5%	445	745	84.98	4.87%	68.21	84.98
Shandong	Zibo	65% Fe Concentrate	Dry	860	12.4%	620	860	127.11	11.74%	99.75	127.11

Week Ending February 15th, 2019

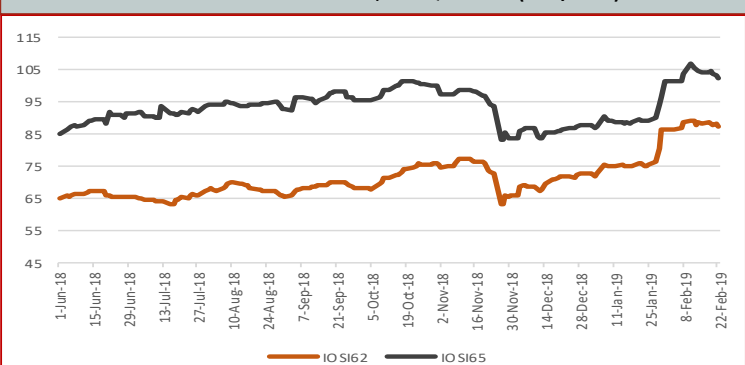
China Mines Concentrate Composite Index RMB/WT	This week	Change %	Low ⁵	High ⁵
	681.52	7.0%	534.50	685.87

¹ Exchange rate applied: RMB/USD = 6.7151 ² Since March 1 ³ Since June 1
⁴ Weekly exchange rate applied: RMB/USD 6.7660 ⁵ Last 12 months

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

February 22nd, 2019		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% VAT), USD/dry tonne ¹						
Index	Fe Content	October	November	December	January	MTD	QTD	YTD	October	November	December	January	MTD	QTD	YTD
IOPI62	62% Fe Fines	564	564	559	580	661	607	607	63.41	65.25	72.55	76.16	87.90	80.08	80.08
IOPI58	58% Fe Fines	401	401	392	448	566	487	487	44.86	45.84	50.47	57.99	74.66	63.55	63.55
IOPI65	65% Fe Fines	760	760	681	670	744	695	695	85.29	92.13	99.05	88.65	99.33	92.20	92.20

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

FREIGHT RATES

February 22nd, 2019		CFR Qingdao, USD/dry tonne							February 21st, 2019		FREIGHT RATES - DRY BULK US\$/wet tonne				
Index	Fe Content	October	November	December	January	MTD	QTD	YTD	Route	Designation	Change	Change %	Low ⁵	High ⁵	
IOSI62	62% Fe Fines	72.31	72.91	69.96	76.09	87.97	80.70	80.70	W. Australia - Qingdao	C5	5.07	0.07	1.46%	4.814	10.002
IOSI65	65% Fe Fines	98.97	94.05	85.95	89.92	103.75	95.30	95.30	Tubarao - Qingdao	C3	12.75	0.04	0.32%	12.705	24.760

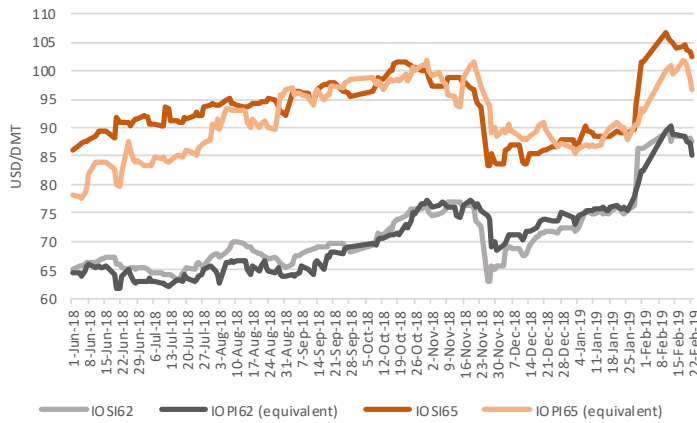
IRON ORE PORT LUMP INDEX MONTHLY, QUARTERLY AND YEAR-TO-DATE AVERAGES

Week Ending February 22nd, 2019		FOT Qingdao (inc. 16% VAT), RMB/wet tonne							CFR Qingdao Equivalent (exc. 16% VAT), USD/dry tonne ¹						
Index	Fe Content	October	November	December	January	MTD	QTD	YTD	October	November	December	January	MTD	QTD	YTD
IOPLI62	62.5% Fe Lump	720	771	749	782	842	798	808	89.65	96.21	94.22	99.57	108.63	102.04	103.45

IRON ORE INDEX PREMIUMS/DISCOUNTS

February 22nd, 2019			PORT STOCK INDEX (RMB/WT)		February 22nd, 2019			SEABORNE INDEX (USD/DMT)	
Fe Content	Spread to IOPI62	% Spread to IOPI62	Fe Content	Spread to IOSI62	% Spread to IOSI62				
58% Fe Fines	-53	-8.31%	65% Fe Fines	15	17.10%				
65% Fe Fines	82	12.85%							

IRON ORE INDEX COMPARISONS



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



IRON ORE BRAND SPOT PRICE ASSESSMENTS

February 22nd, 2019				February 22nd, 2019			
PORT STOCK INDEX (RMB/WT)				SEABORNE INDEX (USD/DMT)			
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	613	-16	-25	Roy Hill	81.39	-0.65	-6.06
SIMEC Fines	589	-16	-49	SIMEC Fines	76.84	-0.65	-10.61
PB Fines	621	-16	-17	PB Fines	85.86	-0.65	-1.59
Newman Fines	650	-16	12	Newman Fines	89.91	-0.68	2.46
MAC Fines	615	-16	-23	MAC Fines	80.44	-0.15	-7.01
Jimblebar Blended Fines	589	-16	-49	Jimblebar Blended Fines	73.59	-0.02	-13.86
Carajas Fines	732	-16	94	Carajas Fines	101.34	-1.60	13.89
Brazilian SSF	639	-16	1	Brazilian SSF	86.51	-1.28	-0.94
Brazilian Blend Fines	642	-16	4	Brazilian Blend Fines	89.39	-1.02	1.94
RTX Fines	596	-16	-42	RTX Fines	76.19	-0.02	-11.26

February 22nd, 2019			
PORT STOCK INDEX (RMB/WT)			
	Price	Change	Diff to IOPI58
SSF	510	0	-75
FMG Blended Fines	584	0	-1
Robe River	530	0	-55
Western Fines	522	0	-63
Atlas Fines	518	0	-67
Yandi	599	0	14

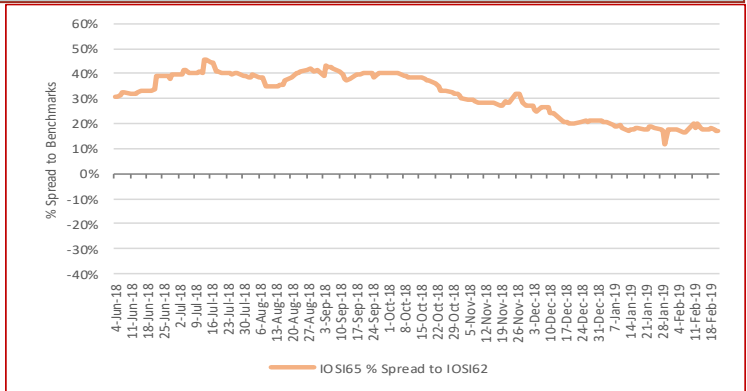
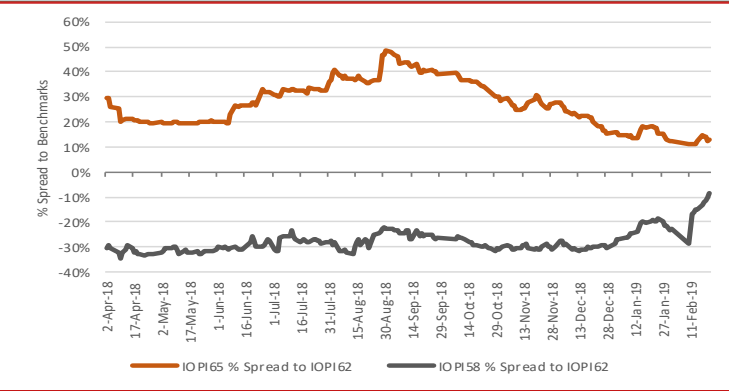
IRON ORE INDEX NORMALISATION DIFFERENTIALS

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%	12.00	0.00	1% Fe	High Grade Fe 60 - 63%	3.50	0.00
	High Grade Fe 63 - 64%	23.00	0.00		High Grade Fe 63 - 64%	2.50	0.00
	High Grade Fe 64 - 65%	23.00	0.00		High Grade Fe 64 - 65%	2.50	0.00
	High Grade Fe 65 - 65.5%	23.00	0.00		High Grade Fe 65 - 65.5%	2.50	0.00
1% Alumina	Low Grade Fe	21.00	0.00	1% Alumina	High Fe Grade Al <2.25%	2.25	-0.50
	High Fe Grade Al <2.25%	22.00	0.00		High Fe Grade Al 2.25-4%	3.25	0.00
	High Fe Grade Al 2.25-4%	17.00	0.00				
	Low Fe Grade Al <2.25%	57.00	0.00				
1% Silica	Low Fe Grade Al 2.25-4%	35.00	0.00	1% Silica	High Fe Grade Si <4%	1.50	-0.25
	High Fe Grade Si <4%	2.00	0.00		High Fe Grade Si 4 - 6.5%	1.50	0.00
0.01% Phosphorus	High Fe Grade Si 4-6.5%	16.00	0.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	0.50	-0.25
	Low Fe Grade	18.00	0.00		High Fe Grade 0.115%<P<0.15%	1.50	0.00
	High Fe Grade 0.09%<P<0.115%	2.00	0.00				
	High Fe Grade 0.115%<P<0.15%	3.00	0.00				
	Low Fe Grade 0.09%<P<0.1%	3.00	0.00				

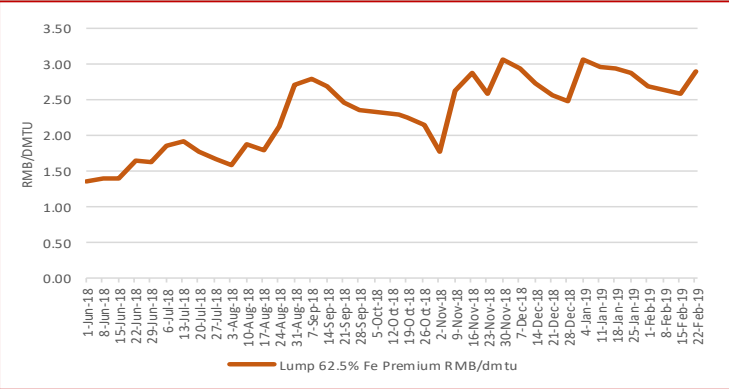
Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

Port	Value	Change	Port	Value	Change	Port	Value	Change	Port	Value	Change
Bayuquan	-35.00	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	-15.00	0.00	Lanqiao	0.00	0.00	Nantong	-15.00	0.00	Tianjin	-15.00	0.00

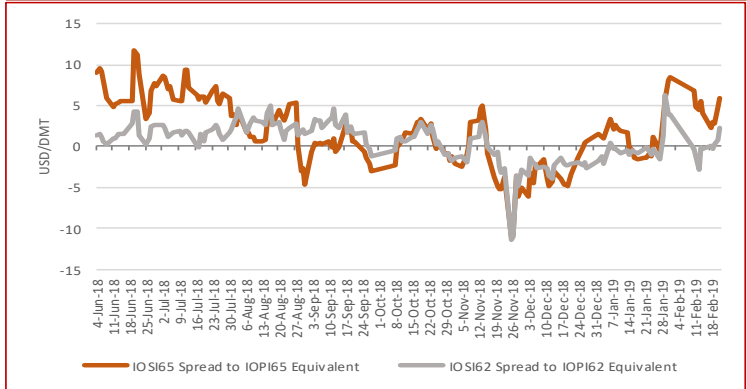
IRON ORE INDEX PREMIUMS/DISCOUNTS



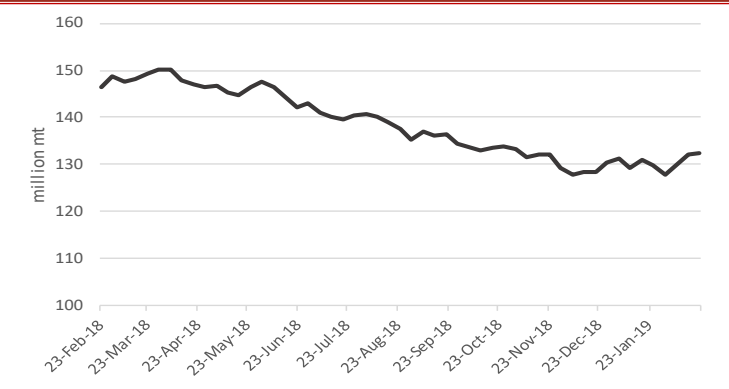
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (62.5% FE LUMP—62% FE FINES)



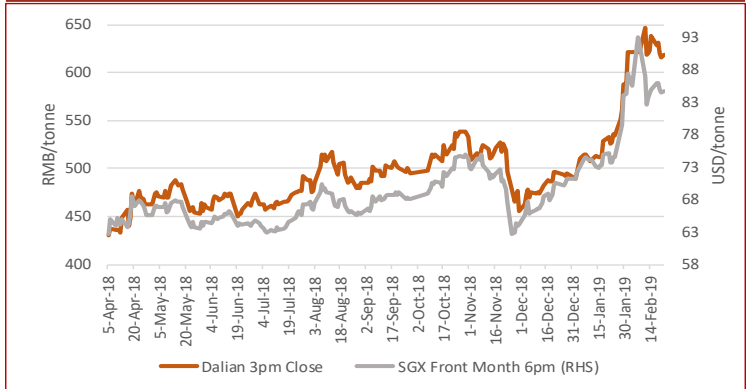
IRON ORE SEABORNE TO PORT STOCK SPREADS



TOTAL IRON ORE INVENTORIES AT CHINA PORTS



FUTURE TRADING—FRONT MONTH CLOSING PRICE



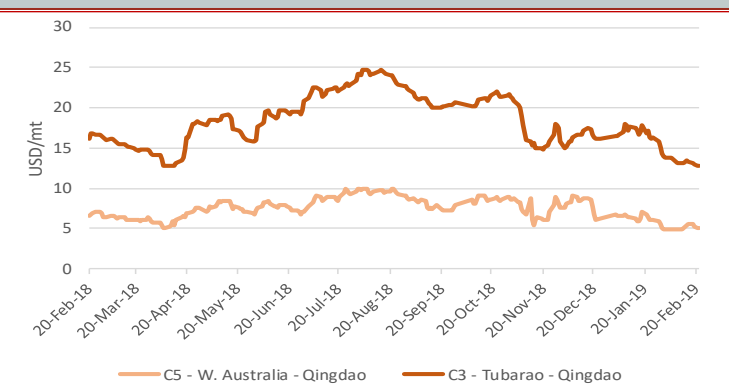
IRON ORE PORT INVENTORIES

Week Ending February 22nd, 2019 (million tonnes)				
Province	This week	Change %	Low ⁴	High ⁴
Jingtang	14.50	-0.48%	13.29	19.00
Qingdao	17.87	-0.72%	16.09	19.97
Caofeidian	17.60	4.76%	16.30	25.30
Tianjin	9.08	-2.37%	8.50	11.00
Rizhao	16.45	3.13%	14.00	19.00
Total (35 Ports)	132.32	0.24%	127.72	150.04

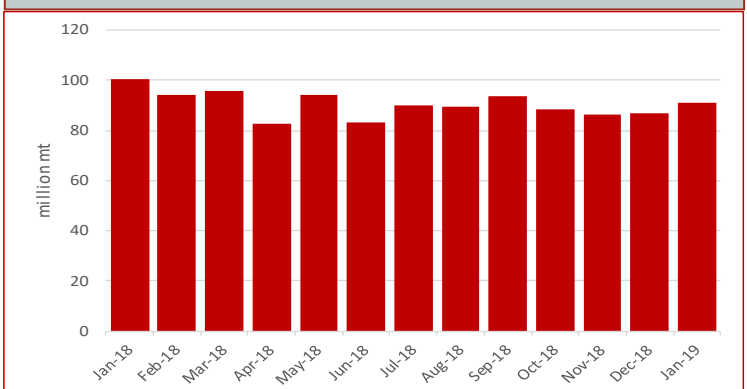
IRON ORE FUTURES CONTRACTS

Closing Date	DCE			SGX		
	22nd Feb 3pm close			22nd Feb 6 pm		
Contract	I1905	Change	Change %	Mar'19	Change	Change %
Closing Price	618.5	3.5	0.57%	84.77	0.34	0.40%
Vol traded ('000 lots)	244.50	66.4	37.28%	14.67	5.66	62.75%
Open positions ('000 lots)	105.48	-5.9	-5.32%	124.57	0.24	0.19%
Day Low	598.5	-13.0	-2.13%	82.73	-1.59	-1.89%
Day High	619.0	-6.0	-0.96%	84.90	-0.30	-0.35%

DRY BULK F REIGHT RATES



TOTAL CHINA IRON ORE IMPORT VOLUMES



STEEL SPOT MARKET PRICES—CHINA

Steel Spot Market RMB/tonne

Product	15/2/2019	Change	Change %
ReBar HRB400 ϕ 18mm	3,880.0	5	0.13%
Wirerod Q300 ϕ 6.5mm	3,976.0	36	0.91%
HRC Q235/SS400 5.5mm*1500*C	3,768.0	-34	-0.89%
CRC SPCC/ST12 1.0mm*1250*2500	4,276.0	33	0.78%
Medium & Heavy Plate Q235B 20mm	3,966.0	40	1.02%
GI ST02Z 1.0mm*1000*C	4,630.0	50	1.09%
Billet Q235 150*150mm	3,390.0	-40	-1.17%

Rebar and HRC spot prices



Source: SMM

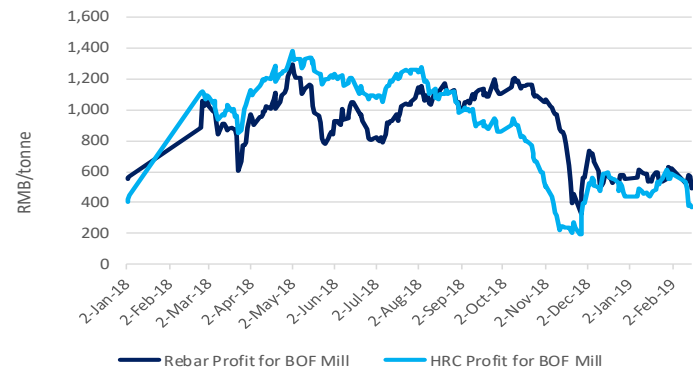
CHINESE STEEL EXPORT PRICES

China Export Prices USD/tonne

Product	Specification	Export tax (+)/Vate rebate (-)	Change	
			15/2/2019	
Rebar	BS4449 460B 12-25mm, + chrome	-13%	525	40
Wire Rod	SAE1008 6.5-10mm +chrome	-9%	535	40
Hot-rolled coil	SS400/Q235 4.0-10.0mm	-9%	525	30
Cold-rolled coil	SPCC 1.0mm	-13%	565	30
Medium & Heavy plate	A-level Shipe plate 12-25mm	0%	530	30
Galvanised	ST02Z/SGCC 1.0mm	-13%	580	30

Note: Calculation formula for converting export prices of rebar, cold-rolled steel and galvanizing into prices in China's spot market = FOB * exchange rate * 1.16 / (1.16 - 0.13); Calculation formula for converting export prices of wire rod and hot-rolled steel into prices in China's spot market = FOB * exchange rate * 1.16 / (1.16 - 0.09); Calculation formula for converting export prices of medium-thick plate into prices in China's spot market = FOB * exchange rate

CHINESE STEEL MILL PROFITABILITY



CHINESE STEEL MILL PROFITABILITY

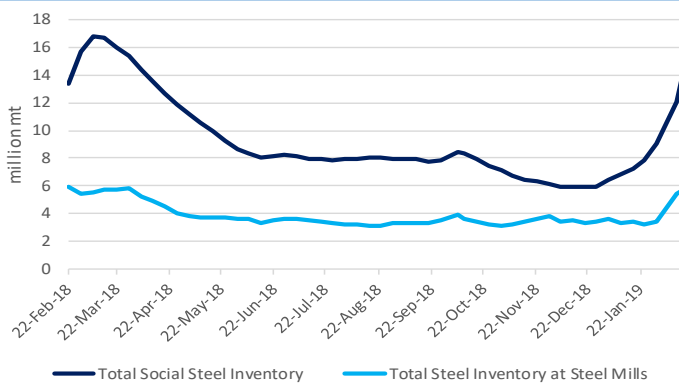
SMM Tracking of Steel Mill P&L - Rebar and Hot-rolled Coil (RMB/tonne)

Category	Price	Change (WoW)	Note
MMi (Fe 62%), USD/mt excluding tax	88.68	12.52	Mmi CFR Equivalent index for 1st Feb
Coke	1,970	0	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	2,210	0	steel scrap (6mm) in Zhangjiagang, excl. tax
Billet Cost	3,017	145	Q234, incl. tax
Rebar cost - Blast furnace	3,272	146	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	488	-136	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	3,342	145	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	368	-215	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 INVENTORIES

Steel Inventories³ (unit: 1000 tonnes)

Product	15/2/2019	7/2/2019	Change	Change %
Rebar	8,304	7,206	1,098	15.24%
Wirerod	2,725	2,394	331	13.83%
Hot-rolled Coil	2,588	2,508	80	3.19%
Medium & Thick Plate	1,321	1,281	40	3.12%
Cold-rolled Coil	1,081	1,176	-95	-8.08%
Total	16,151	14,565	1,586	10.89%

³ SMM statistics cover inventories of major steel products in China's major markets: hot-rolled steel inventories in 33 major cities; rebar and wire inventories in 35 major cities; cold-rolled steel and medium-thick plate inventories in 31 major cities.

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					
February 22nd, 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	60.76%	2.35%	4.31%	0.057%	8.58%	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	61.66%	2.40%	3.55%	0.101%	9.29%	PB Fines 62%	62.00%	2.60%	4.30%	0.090%	10.00%
Newman Fines	62.73%	2.16%	4.11%	0.088%	7.58%	Newman Fines	62.80%	2.20%	4.30%	0.080%	6.40%
MAC Fines	60.87%	2.22%	4.87%	0.082%	7.43%	MAC Fines	61.00%	2.70%	4.70%	0.110%	9.30%
Jimblebar Blended Fines	61.12%	3.03%	4.30%	0.120%	6.98%	Jimblebar Blended Fines	61.79%	2.67%	4.08%	0.115%	7.16%
Carajas Fines	65.41%	1.24%	1.54%	0.068%	8.07%	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	62.65%	1.76%	4.75%	0.070%	8.34%	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%
February 22nd, 2019	SPECIFICATIONS APPLIED FOR 58% BRAND ASSESSMENTS						SPECIFICATIONS APPLIED FOR 58% BRAND ASSESSMENTS				
	Fe	Alumina	Silica	Phos	Moisture		Fe	Alumina	Silica	Phos	Moisture
SSF	56.58%	3.18%	6.21%	0.052%	9.02%						
FMG Blended Fines	58.18%	2.65%	5.50%	0.058%	7.58%						
Robe River	56.64%	2.91%	5.58%	0.035%	9.29%						
Western Fines	58.00%	3.08%	7.84%	0.070%	7.52%						
Atlas Fines	56.59%	2.55%	7.14%	0.080%	8.46%						
Yandi	57.19%	1.39%	6.57%	0.039%	8.85%						

BLOOMBERG TICKERS

PORT STOCK INDICES			
	FOT Qingdao (RMB/wet tonne)		CFR Qingdao Equivalent (USD/dry tonne)
IOP162	IRCNQ001		IRCNQ004
IOP158	IRCNQ002		IRCNQ005
IOP165	IRCNQ003		IRCNQ006

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