

# MMi Iron Ore Review

**December 2020**



# MMi Iron Ore Review

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## Iron Ore Review—December Edition

## IRON ORE PORT PRICE INDEX MONTHLY AVERAGES

FOT Qingdao (inc. VAT<sup>1</sup>), RMB/wet tonne

Index	Fe Content	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	2020
IOPI62	62% Fe Fines	706	655	667	668	720	807	844	948	946	892	888	1050	821
IOPI58	58% Fe Fines	600	563	577	580	638	730	758	838	870	828	799	916	729
IOPI65	65% Fe Fines	808	797	798	804	847	943	948	992	998	982	996	1142	926

CFR Qingdao Equivalent (exc. VAT<sup>1</sup>), USD/dry tonne

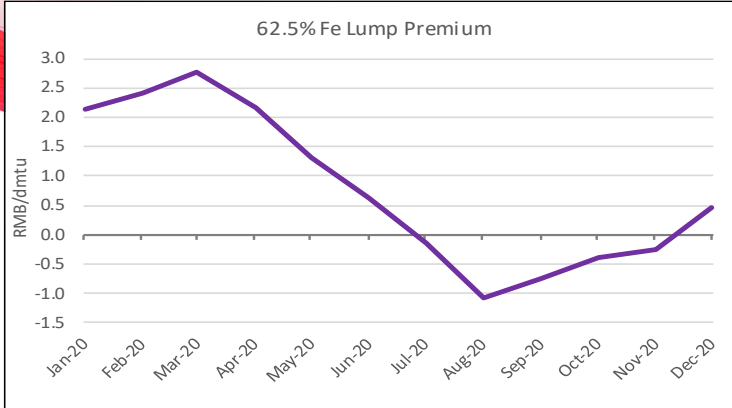
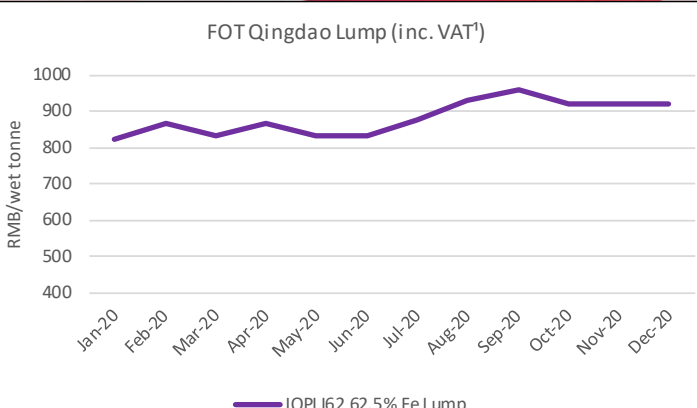
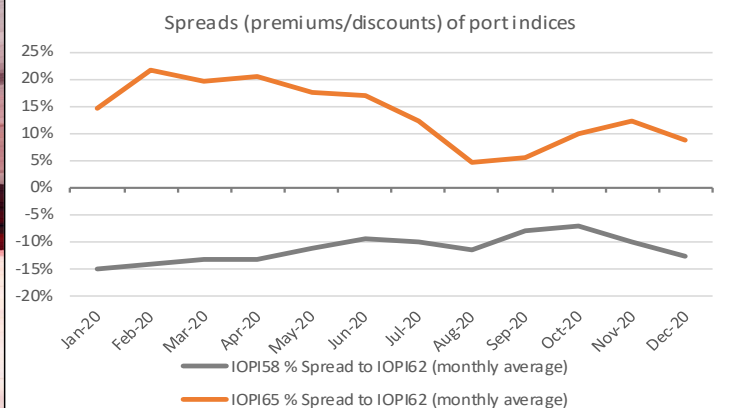
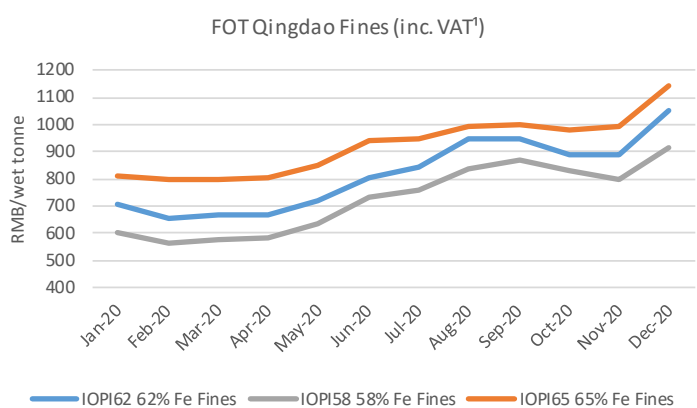
IOPI62	62% Fe Fines	89.84	94.23	86.23	87.61	87.15	93.74	112.05	127.65	129.64	123.88	125.18	150.28	110.98
IOPI58	58% Fe Fines	78.18	80.46	74.33	76.20	75.96	83.60	101.29	113.63	120.14	115.94	113.43	131.97	99.22
IOPI65	65% Fe Fines	100.90	108.54	105.84	105.60	105.61	110.98	126.22	133.70	136.85	136.68	140.93	163.81	125.57

FOT Qingdao (inc. VAT<sup>1</sup>), RMB/wet tonne

Index	Fe Content	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	2020
IOPLI62	62.5% Fe Lump	825	868	834	868	832	832	875	932	959	919	919	919	1128

CFR Qingdao Equivalent (exc. VAT<sup>1</sup>), USD/dry tonne

IOPLI62	62.5% Fe Lump	102.01	108.99	106.19	110.46	104.89	104.46	111.35	120.08	125.87	121.97	124.21	124.21	117.51
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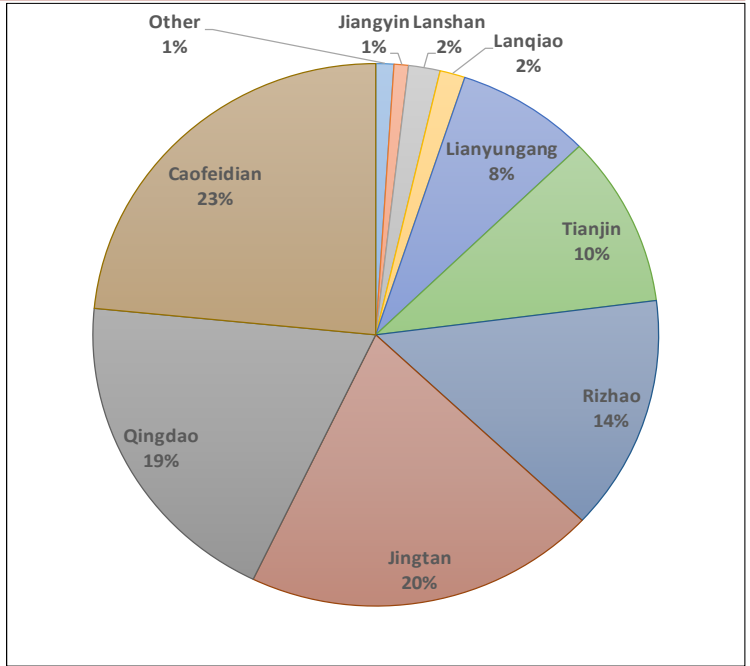
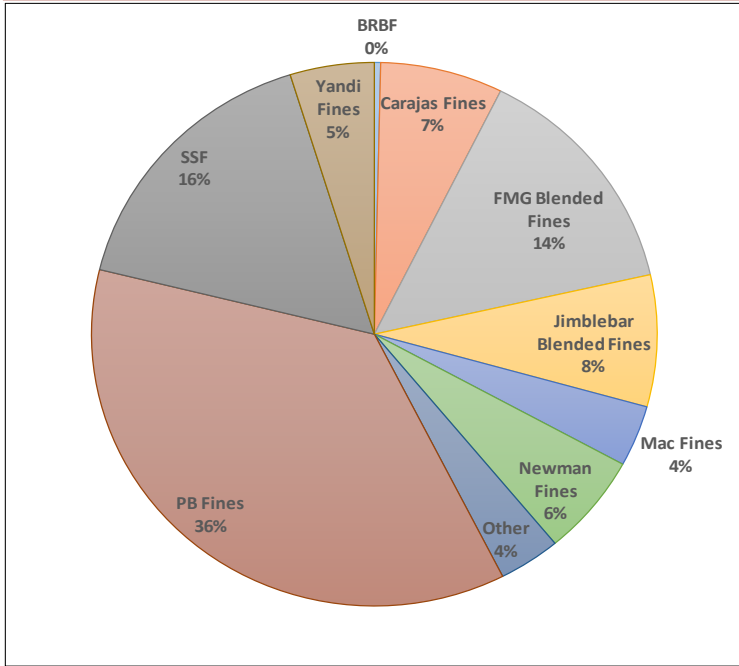


## PORT PRICE DIFFERENTIALS TO QINGDAO PORT FOR PB FINES

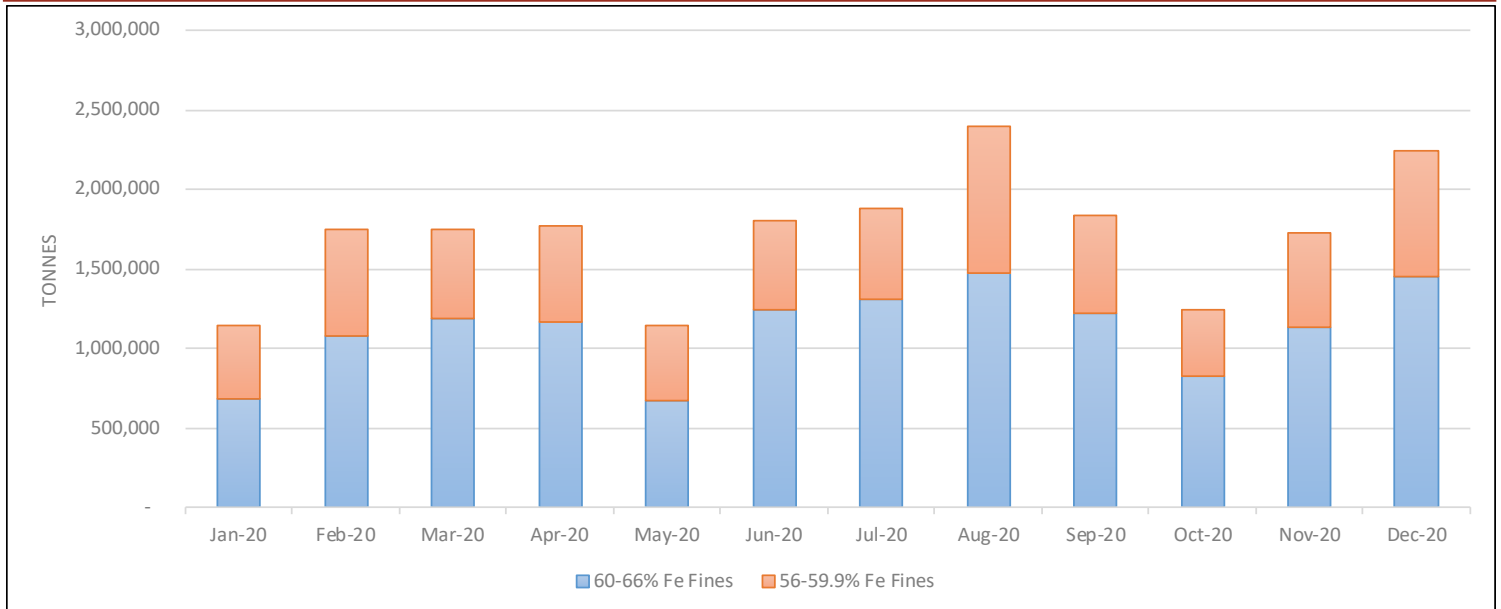
## Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne) - December 2020 Average values

Port	Differential	Port	Differential	Port	Differential	Port	Differential
Bayuquan	-44.13	Fangcheng	-6.52	Lanshan	0.00	Rizhao	0.00
Beilun	-6.52	Jiangyin	-30.00	Lianyungang	0.00	Shekou	0.00
Caofeidian	-3.48	Jingtang	-3.48	Majishan	0.00	Taicang	-30.00
Dalian	-42.61	Lanqiao	0.00	Qingdao	0.00	Tianjin	-11.52

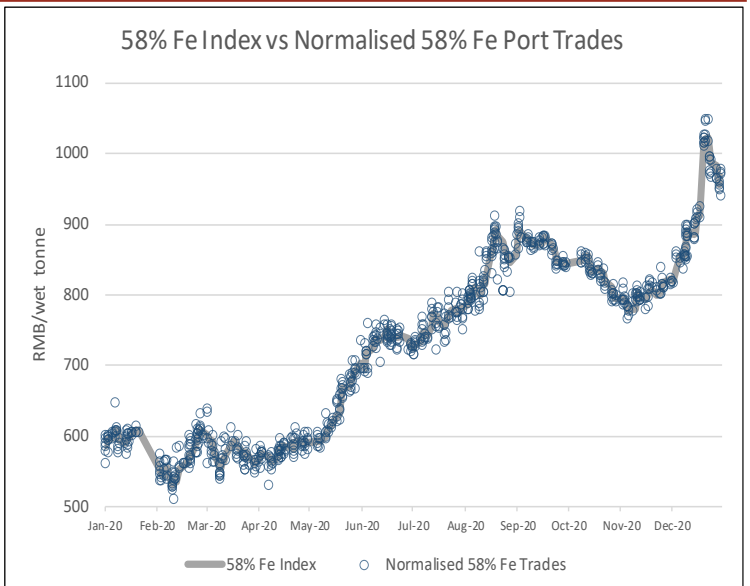
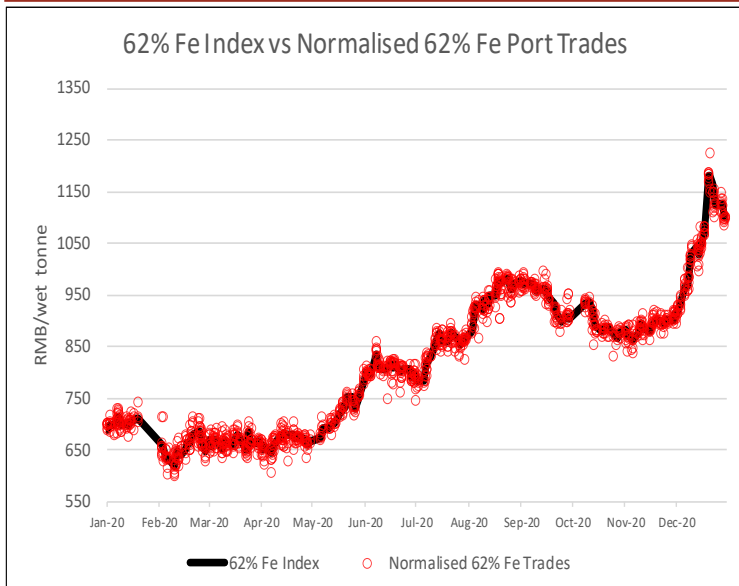
IRON ORE PORT PRICE INDEX BRAND AND PORT MAKEUP—LAST 12 MONTHS



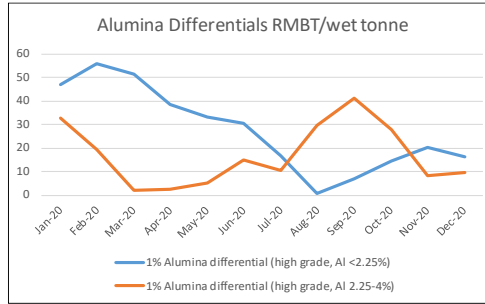
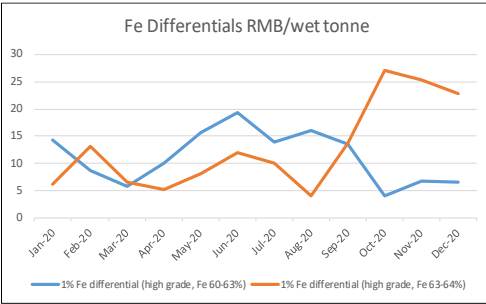
IRON ORE PORT PRICE INDEX COMPILATION VOLUME



IRON ORE PORT PRICE INDEX COMPILATION



62% FE AND 65% FE PORT PRICE INDEX NORMALISATION DIFFERENTIALS (MONTHLY AVERAGES)



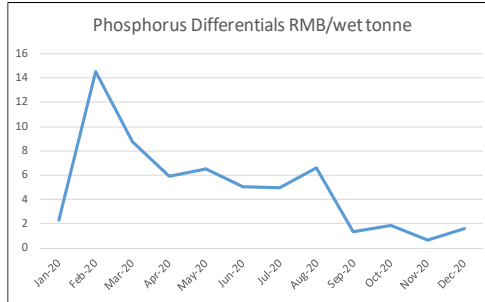
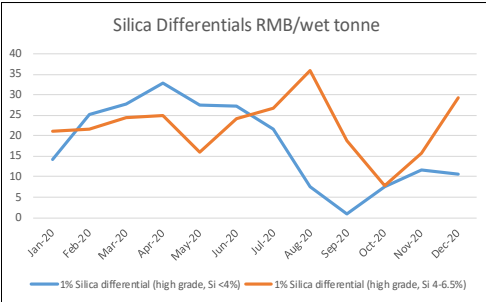
According to Chinese government planning, the top ten steel group will account for no less than 60% of China's crude steel output by 2025, with the goal to be competitive globally. The key to the integration is private steel companies as they currently account for 63% of the country's crude steel output.

Tight run-of-mine supply due to mine closures meant that domestic concentrate prices remained high. High operating rates at mills meant that domestic concentrates remained cost-effective vis-à-vis imported iron ore. Prices did dip towards the end of December due to larger macro-economic fears on the escalating COVID situation and a large cold-front hitting China.

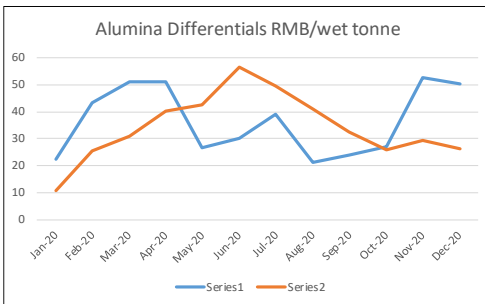
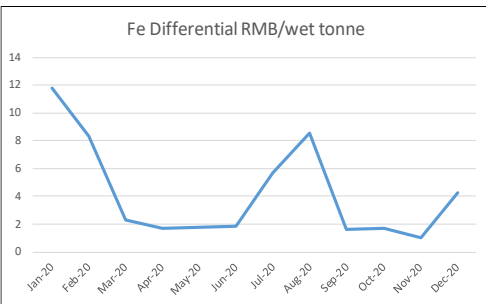
Strong profit margins of upward 300 yuan/mt for blast furnace and EAF producers meant that despite strong iron ore prices, steel mills remained incentivised to keep production high.

The anticipation of stricter pollution controls meant that lump and pellet premiums have enjoyed somewhat better prices of late, with inventory levels at the ports running lower on the increased demand.

Vale shifted some fines production away from IOJC and into BRBF.



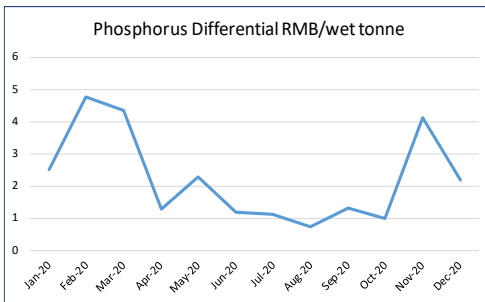
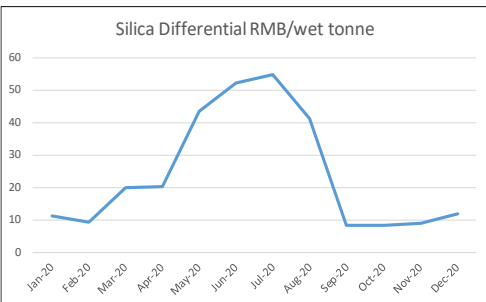
58% FE PORT PRICE INDEX NORMALISATION DIFFERENTIALS (MONTHLY AVERAGES)



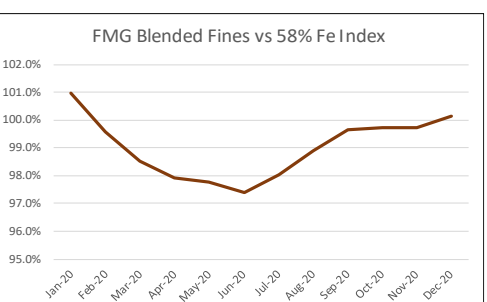
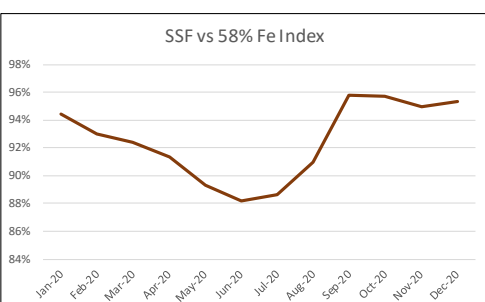
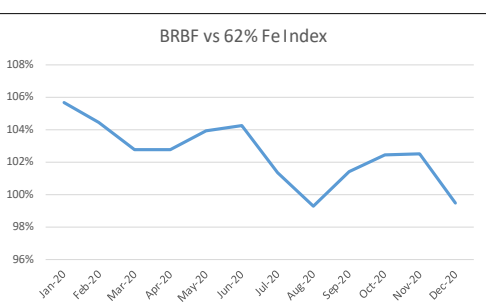
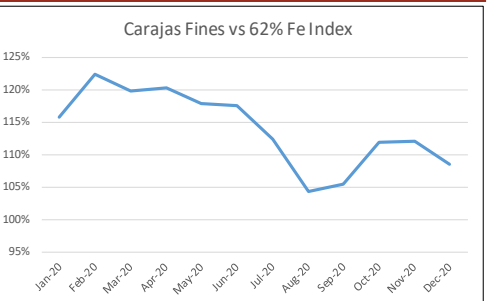
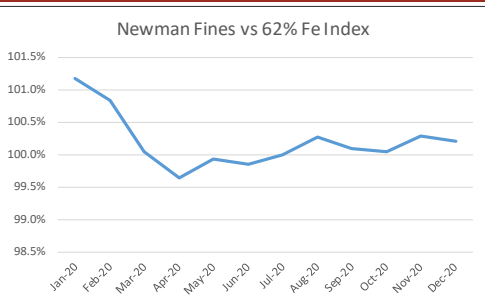
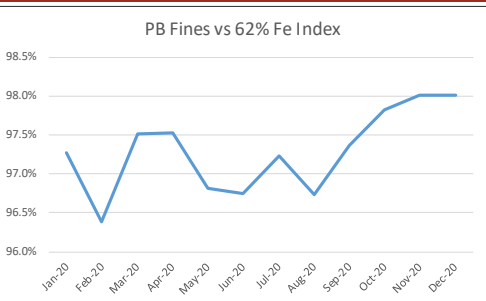
Demand for low-grade iron ore has been weak due to increasing coke prices, mills preferring medium-grade products. As such, inventory levels of low-grade iron ore has been growing at the domestic Chinese ports.

Port inventories overall have grown due to limited deliveries in Shandong and Tangshan due to rain and snow. Steel mills are likely to increase purchases after the New Year holiday as the impact from inclement weather weakens, allowing deliveries to rise.

Stockpiling for the Chinese New Year holiday will mean that inventory levels medium-grade iron ore products may come under pressure despite the increased shipments from Australia in the second half of December.



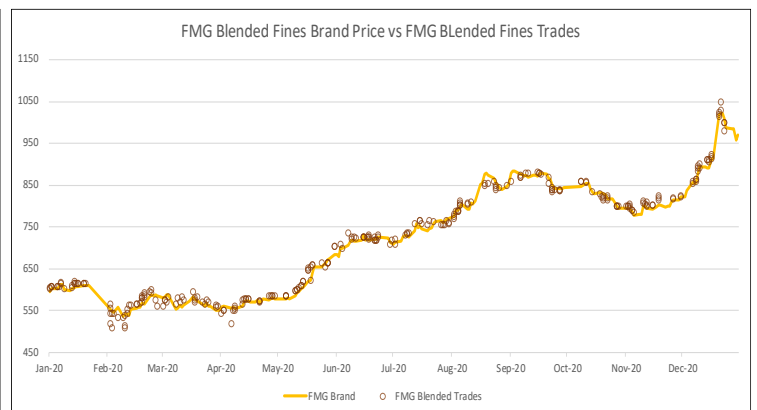
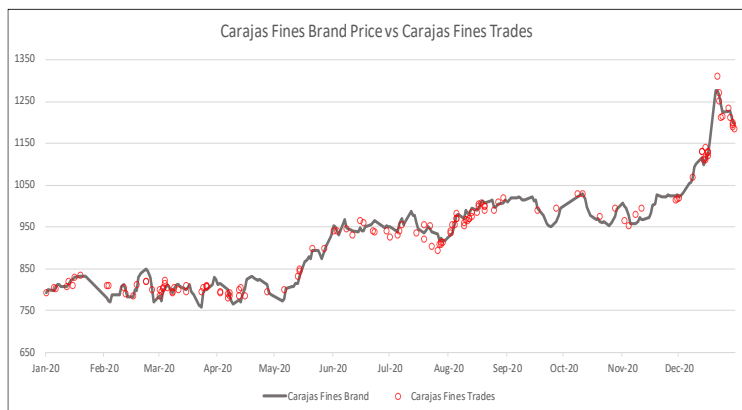
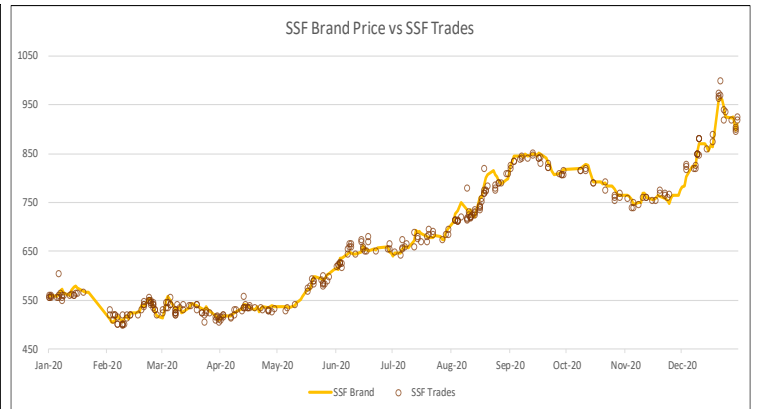
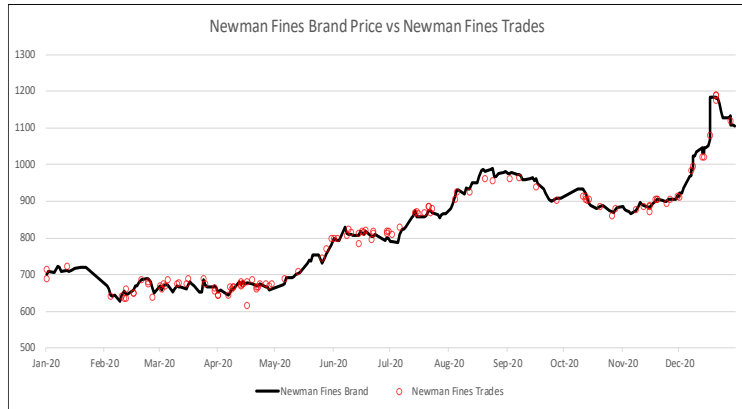
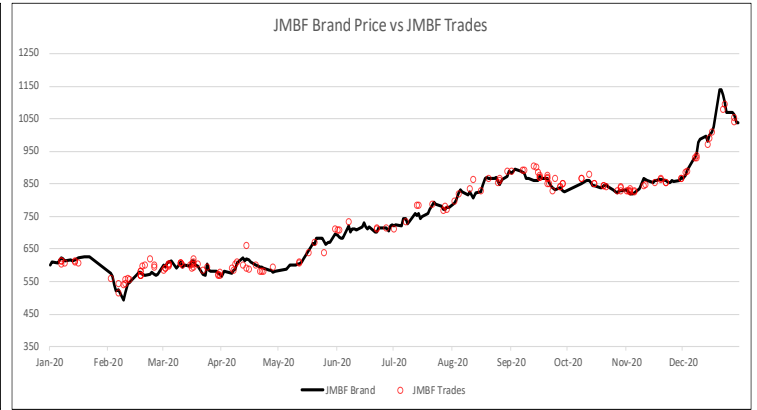
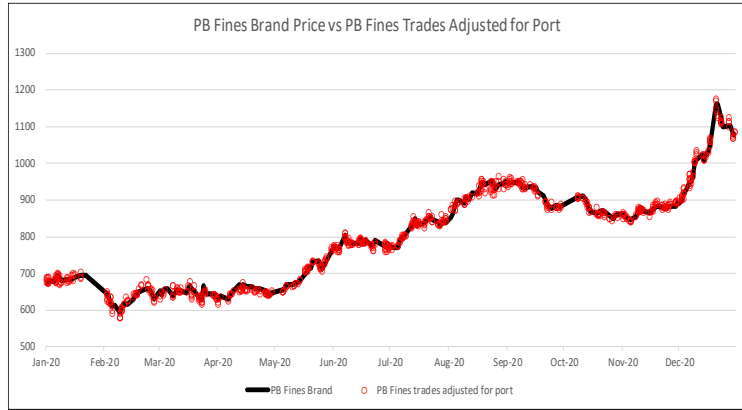
KEY PORT BRAND PRICE ASSESSMENTS VERSUS INDEX (MONTHLY AVERAGES)



IRON ORE PORT BRAND PRICE ASSESSMENTS MONTHLY AVERAGES

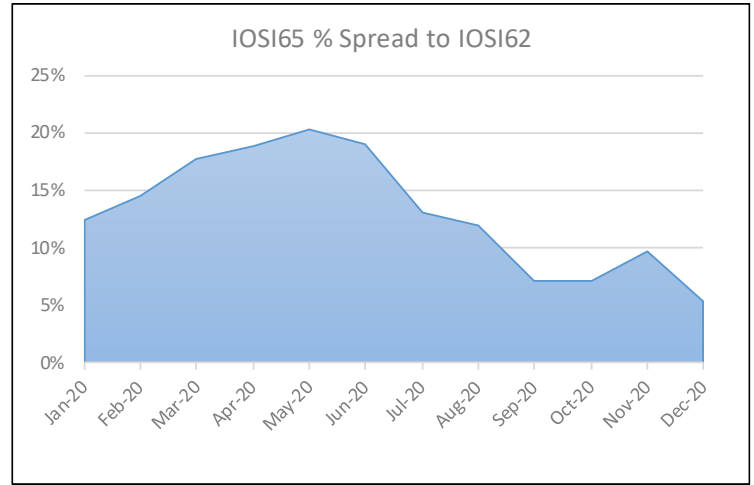
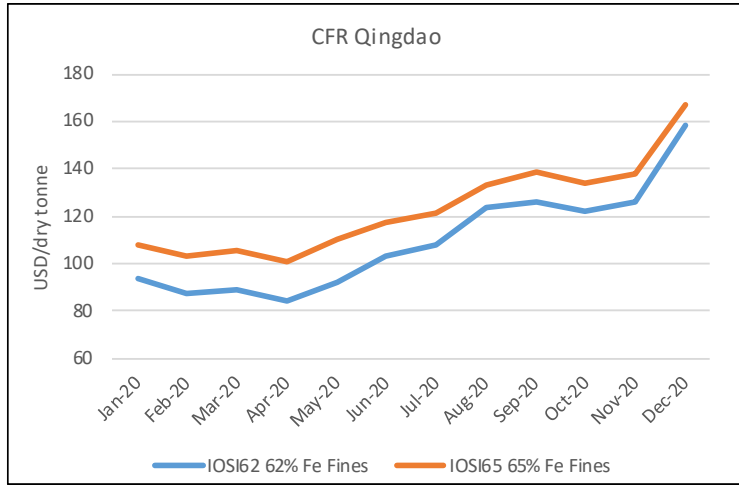
FOT Qingdao (inc VAT <sup>1</sup> ), RMB/wet tonne													
Brand	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	2020
PB Fines	664	686	631	650	652	697	821	917	922	873	870	1029	799
Newman Fines	687	714	660	667	666	719	844	951	947	893	890	1052	822
MAC Fines	657	671	628	645	639	688	808	905	915	877	868	1025	791
Jimlebar Blended Fines	606	618	555	596	593	639	755	838	863	841	849	1002	743
Carajas Fines	772	816	802	798	804	848	948	988	998	981	996	1140	926
Brazilian Blend Fines	702	745	684	685	687	748	855	941	959	914	910	1044	838
SSF	556	567	523	534	530	570	672	763	834	793	759	873	675
FMG Blended Fines	599	606	560	569	568	624	743	829	867	826	797	917	722
Yandi Fines	570	596	576	593	594	610	722	803	874	833	820	929	725

KEY PORT BRAND PRICE ASSESSMENTS AND TRADED PRICES

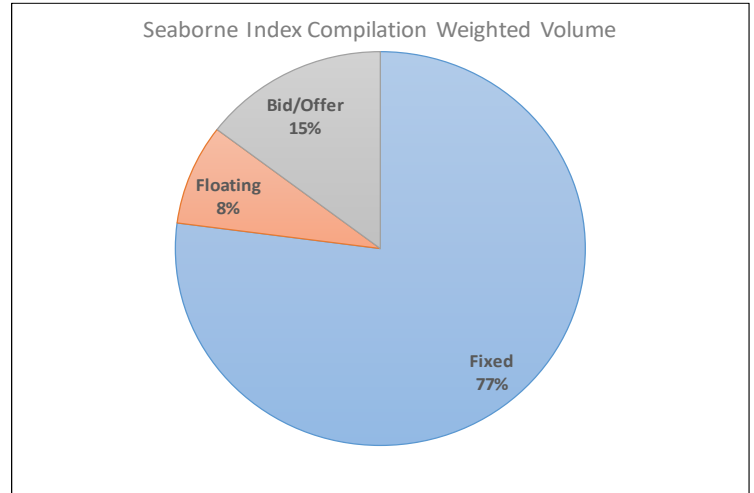
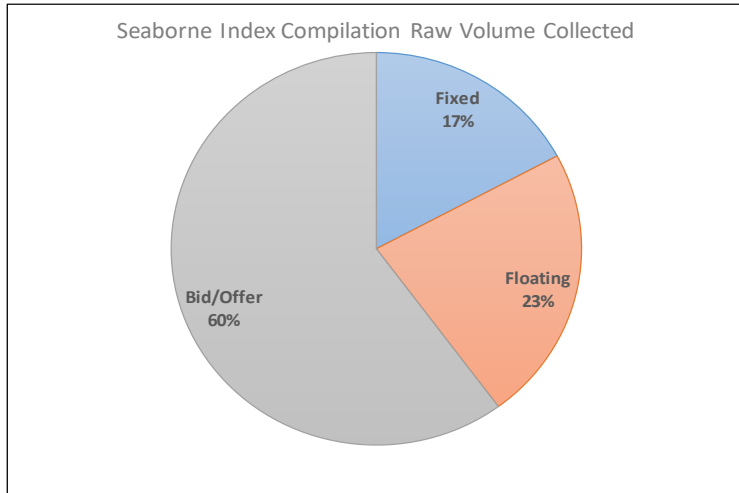


IRON ORE SEABORNE PRICE INDEX MONTHLY AVERAGES

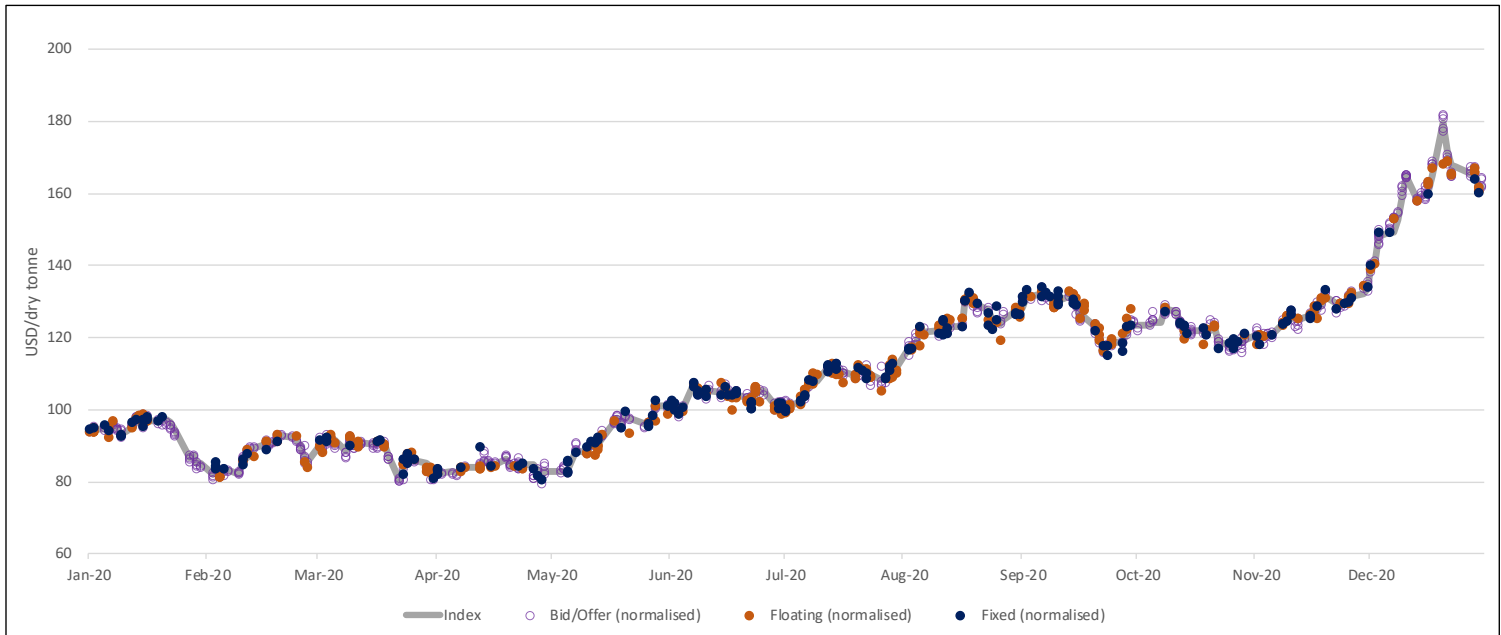
		CFR Qingdao, USD/dry tonne												
Index	Fe Content	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	2020
IOSI62	62% Fe Fines	93.85	87.46	88.60	83.89	92.47	103.49	108.23	124.02	126.26	122.16	126.25	158.24	110.01
IOSI65	65% Fe Fines	107.56	102.94	105.31	100.97	110.12	117.06	121.21	132.95	138.39	133.94	137.65	166.75	123.28



IRON ORE SEABORNE PRICE INDEX COMPILATION—LAST 12 MONTHS

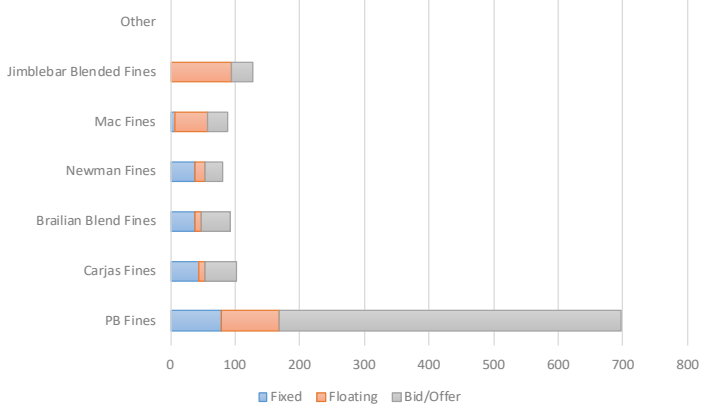


IRON ORE SEABORNE PRICE INDEX COMPILATION

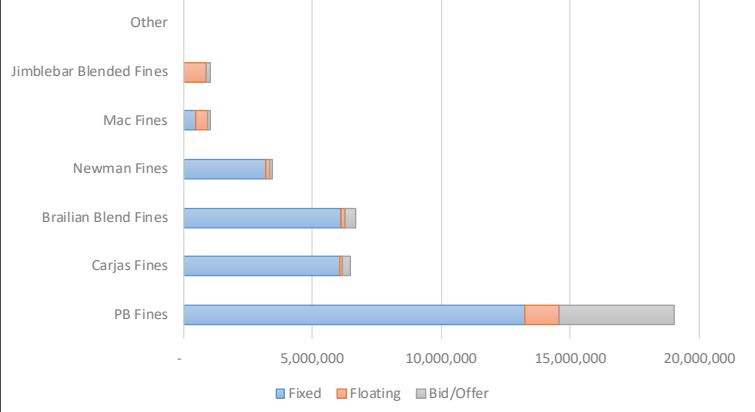


IRON ORE SEABORNE PRICE INDEX COMPILATION—LAST 12 MONTHS

Key Seaborne Index Brand Volumes

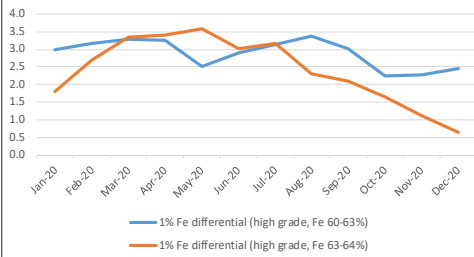


Key Seaborne Index Weighted Brand Volumes

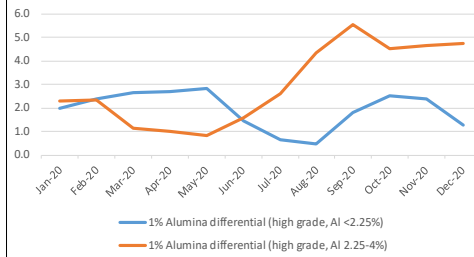


SEABORNE PRICE INDEX NORMALISATION DIFFERENTIALS (MONTHLY AVERAGES)

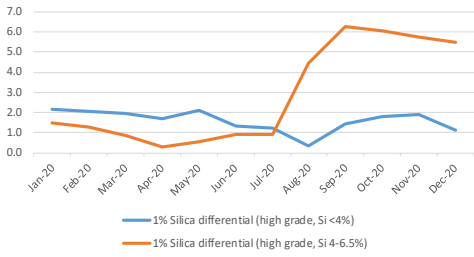
FE Differentials USD/dry tonne



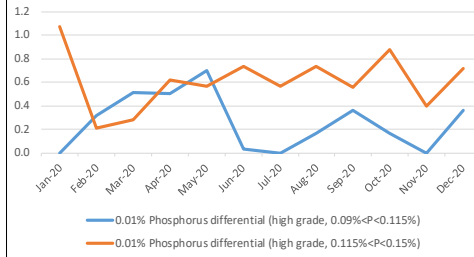
Alumina Differentials USD/dry tonne



Silica Differentials USD/dry tonne



Phos Differentials USD/dry tonne



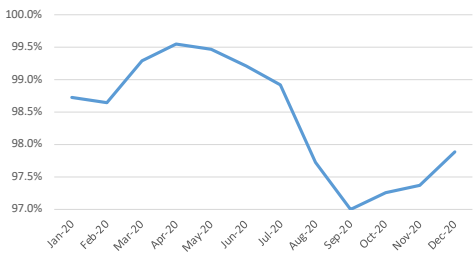
There were attempts by the China Iron and Steel Association, and the Dalian Commodity Exchange to cool the iron ore markets. This seemed to have had a limited impact despite the reduced trading volumes.

Iron ore arrivals increased in December but this had little impact on sentiment as iron ore prices enjoyed one of the best Decembers on record.

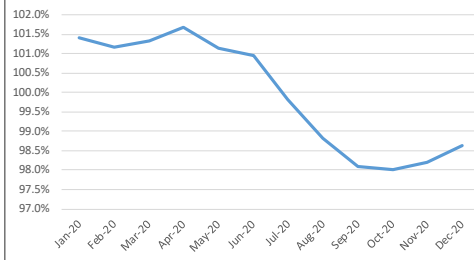
High-grade iron ore differentials eased in December with medium-grade iron ore proving to be in high demand as mills ramp up production in an effort to take advantage of the strong ferrous market. This meant that products such as PBF and JMBF continued their strong performances against the indices, though still some way away from their mid-year peaks.

KEY SEABORNE BRAND PRICE ASSESSMENTS VERSUS 62% FE or 65% FE PRICE INDEX

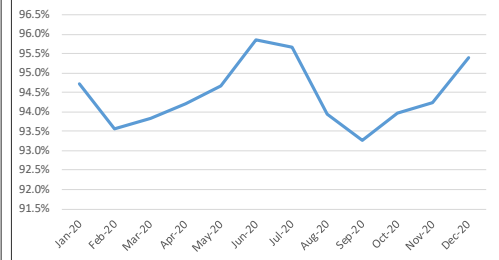
PB Fines vs 62% Fe Index



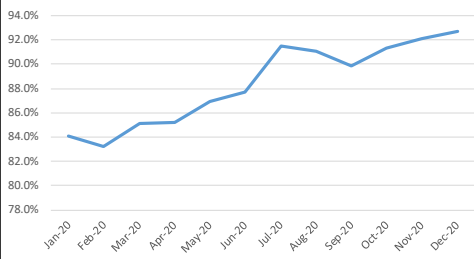
Newman Fines vs 62% Fe Index



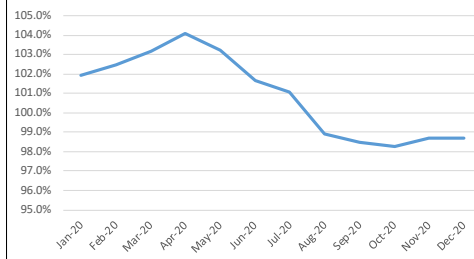
MAC Fines vs 62% Fe Index



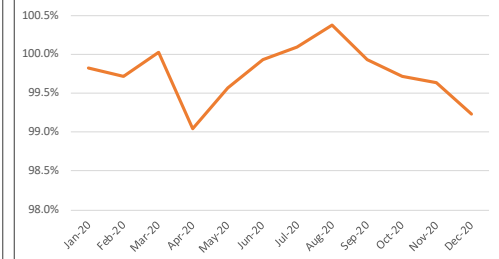
JMBF vs 62% Fe Index



BRBF vs 62% Fe Index



Carajas Fines vs 65% Fe Index



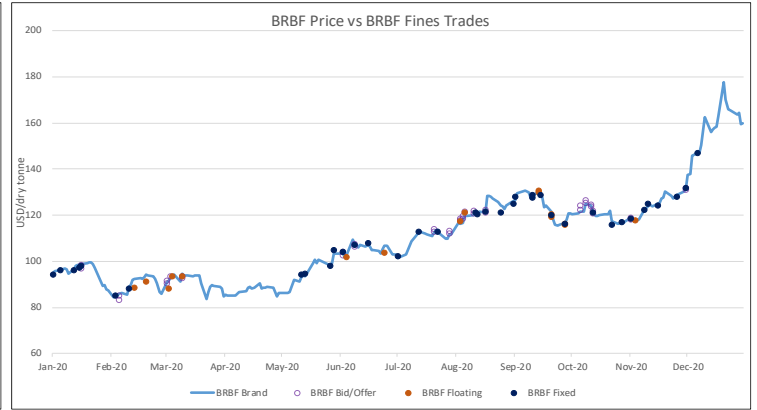
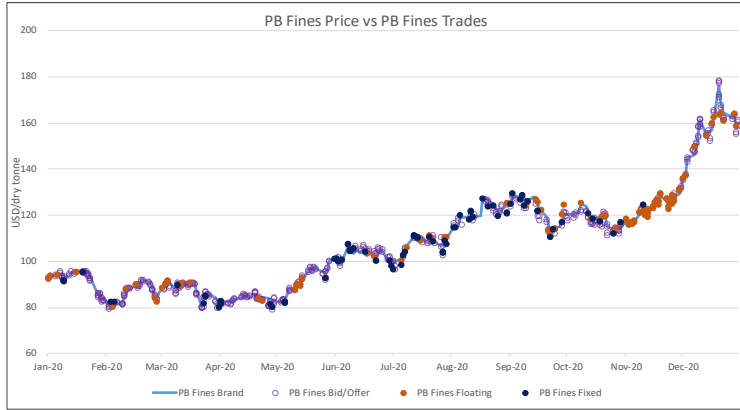


IRON ORE SEABORNE BRAND PRICE ASSESSMENTS

Selected Iron Ore Seaborne Brand Averages, USD/dry tonne

Brand	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	2020
PB Fines	84.49	91.56	82.25	88.65	87.98	83.40	107.05	121.19	122.46	118.79	122.93	154.90	108.10
Newman Fines	85.95	93.38	95.19	88.47	89.79	85.18	108.02	122.56	123.83	119.71	123.99	156.06	109.64
MAC Fines	81.11	88.68	88.90	81.82	83.14	78.92	103.55	116.50	117.75	114.79	118.99	150.94	103.92
Jimblebar Blended Fines	73.07	79.01	78.90	72.80	75.42	71.36	98.98	112.93	113.42	111.58	116.24	146.74	97.90
Carajas Fines	96.34	103.78	107.36	102.65	105.33	100.01	121.32	133.46	138.29	133.56	137.15	165.48	122.98
Brazilian Blend Fines	85.85	92.92	95.65	89.60	91.40	87.19	109.38	122.64	124.34	120.04	124.61	156.18	110.53

KEY SEABORNE BRAND PRICE ASSESSMENTS AND TRADED PRICES

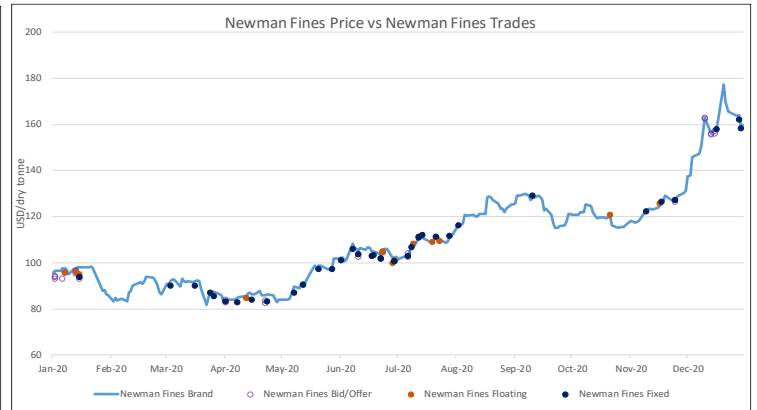
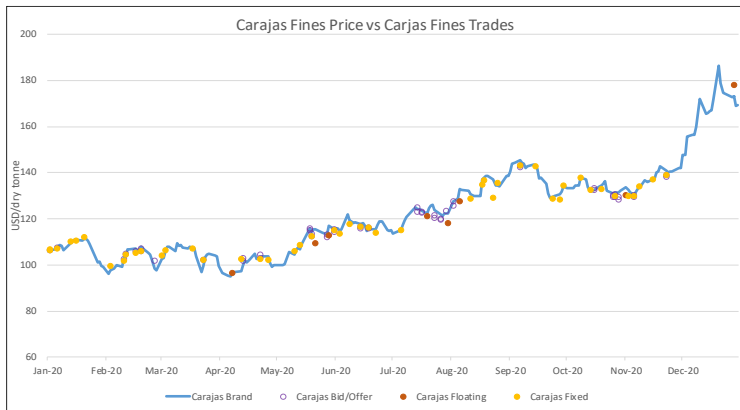


Correlations to PB Fines Brand Assessment

PB Fines Bid/Offer	99.15%
PB Fines Floating trades	97.10%
PB Fines Fixed trades	98.12%

Correlations to BRBF Brand Assessment

BRBF Bid/Offer	98.94%
BRBF Floating trades	98.30%
BRBF Fixed trades	98.13%



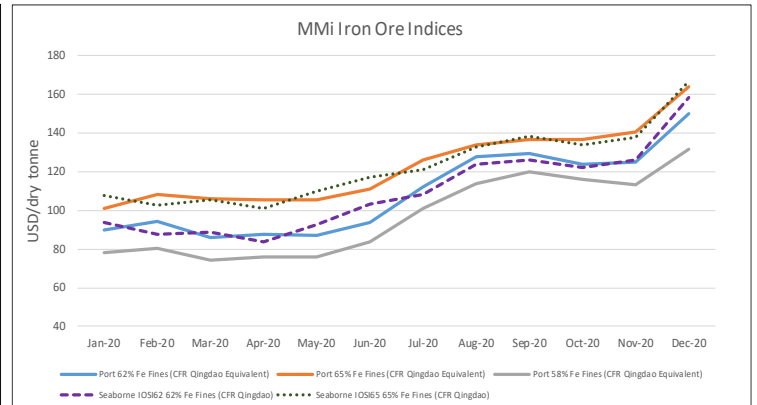
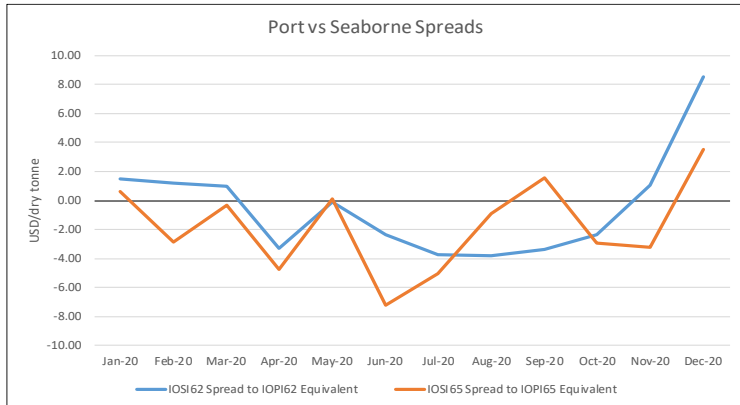
Correlations to Carajas Fines Brand Assessment

Carajas Fines Bid/Offer	97.11%
Carajas Fines Floating trades	99.21%
Carajas Fines Fixed trades	97.22%

Correlations to Newman Fines Brand Assessment

Newman Fines Bid/Offer	98.40%
Newman Fines Floating trades	98.75%
Newman Fines Fixed trades	97.89%

IRON ORE PORT AND SEABORNE PRICE INDEX COMPARISONS



## IRON ORE INDEX SPECIFICATIONS AND COMPILATION RATIONALE

Iron Ore Index Specifications (Port and Seaborne)					Index Compilation Rationale
	65% Fe Fines	62% Fe Fines	58% Fe Fines	62.5% Fe Lump	
Fe %	65.00	62.00	58.00	62.50	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: <a href="http://www.mmiprices.com">www.mmiprices.com</a>
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	

## BLOOMBERG TICKERS

PORT STOCK INDICES				SEABORNE INDICES	
	FOT Qingdao (RMB/wet tonne)	CFR Qingdao Equivalent (USD/dry tonne)		CFR Qingdao (USD/DMT)	
IOP162	IRCNQ001	IRCNQ004	IOSI62	IRCN0034	
IOP158	IRCNQ002	IRCNQ005	IOP165	IRCN0035	
IOP165	IRCNQ003	IRCNQ006			
IOP162	IRCN0036	IRCN0037			

## AVERAGE IRON ORE BRAND SPECIFICATIONS FOR NOVEMBER 2020

PORT STOCK BRANDS						SEABORNE BRANDS					
62% Fe average brand specifications for Dec-20						Specifications applied for 62% brand assessments					
	Fe	Alumina	Silica	Phos	Moisture		Fe	Alumina	Silica	Phos	Moisture
Roy Hill	60.83%	2.31%	4.67%	0.056%	9.15%	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	61.65%	2.31%	3.87%	0.100%	9.56%	PB Fines 62%	62.00%	2.60%	4.30%	0.090%	9.50%
Newman Fines	62.45%	2.33%	4.06%	0.090%	7.83%	Newman Fines	62.30%	2.40%	4.40%	0.090%	8.00%
MAC Fines	60.47%	2.39%	4.60%	0.079%	7.73%	MAC Fines	60.80%	2.35%	4.70%	0.080%	7.80%
Jimblebar Blended Fines	60.87%	2.98%	4.50%	0.012%	7.44%	Jimblebar Blended Fines	60.50%	3.00%	4.50%	0.120%	8.00%
Carajas Fines	64.97%	1.29%	1.83%	0.072%	7.97%	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	63.19%	1.17%	4.78%	0.082%	7.65%	Brazilian Blend Fines	63.00%	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%

58% Fe average brand specifications for Dec-20					
	Fe	Alumina	Silica	Phos	Moisture
SSF	56.49%	3.14%	6.24%	0.063%	9.31%
FMG Blended Fines	58.21%	2.47%	5.64%	0.054%	8.25%
Robe River	56.36%	3.17%	5.70%	0.039%	8.82%
Western Fines	57.88%	2.87%	7.50%	0.062%	7.45%
Atlas Fines	58.00%	1.85%	5.50%	0.090%	9.00%
Yandi	56.98%	1.59%	6.38%	0.042%	9.43%

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