

MMi Iron Ore Review

August 2020



MMi Iron Ore Review

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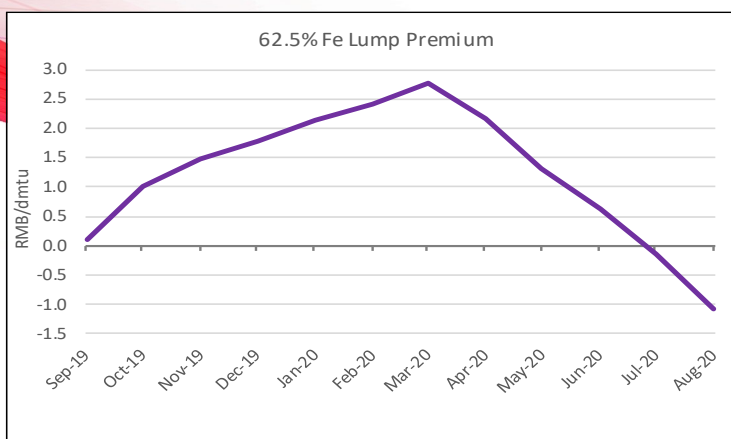
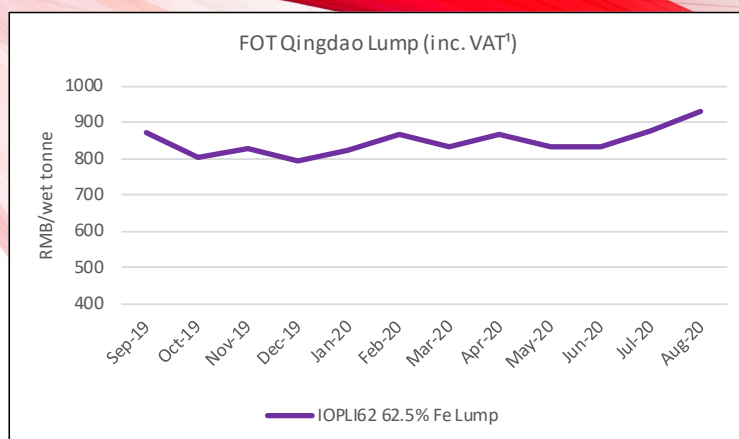
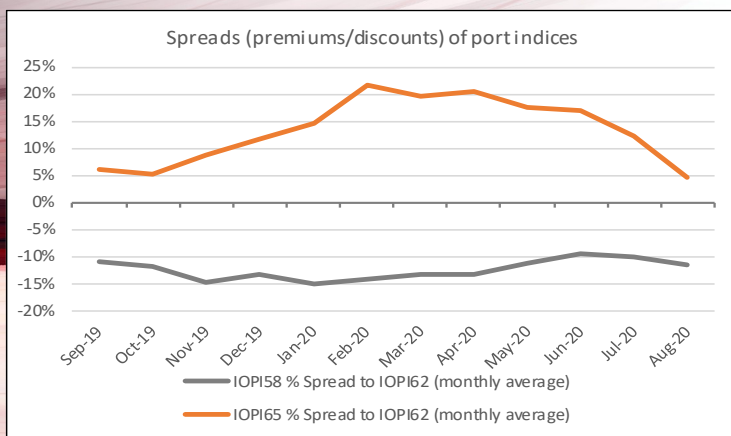
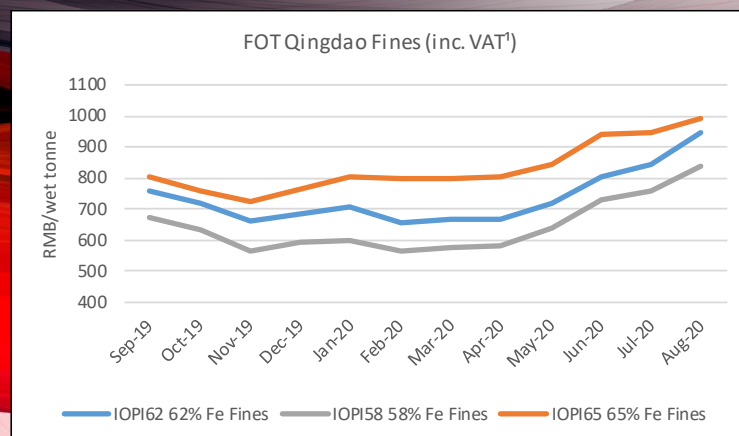
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Iron Ore Review—August Update

IRON ORE PORT PRICE INDEX MONTHLY AVERAGES

FOT Qingdao (inc. VAT ¹), RMB/wet tonne														
Index	Fe Content	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	YTD 2020
IOPI62	62% Fe Fines	758	721	665	683	706	655	667	668	720	807	844	948	755
IOPI58	58% Fe Fines	674	636	567	592	600	563	577	580	638	730	758	838	664
IOPI65	65% Fe Fines	803	758	723	764	808	797	798	804	847	943	948	992	870
CFR Qingdao Equivalent (exc. VAT ¹), USD/dry tonne														
IOPI62	62% Fe Fines	100.18	99.15	94.29	87.30	89.84	94.23	86.23	87.61	87.15	93.74	112.05	127.65	99.68
IOPI58	58% Fe Fines	91.86	88.77	83.57	74.67	78.18	80.46	74.33	76.20	75.96	83.6	101.29	113.63	88.16
IOPI65	65% Fe Fines	108.92	105.38	99.32	95.29	100.90	108.54	105.84	105.60	105.61	110.98	126.22	133.70	115.45
FOT Qingdao (inc. VAT ¹), RMB/wet tonne														
Index	Fe Content	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	YTD 2020
IOPLI62	62.5% Fe Lump	870	804	829	794	825	868	834	868	832	832	875	932	865
CFR Qingdao Equivalent (exc. VAT ¹), USD/dry tonne														
		Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	YTD 2020
IOPLI62	62.5% Fe Lump	108.08	98.44	101.74	97.89	102.01	108.99	106.19	110.46	104.89	104.46	111.35	120.08	109.69

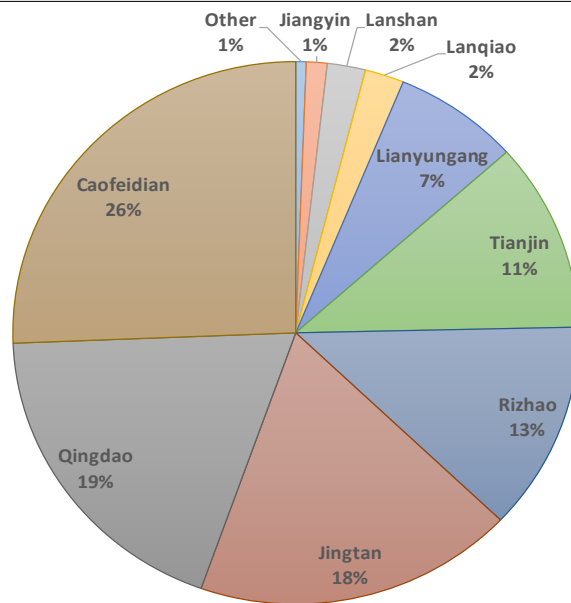
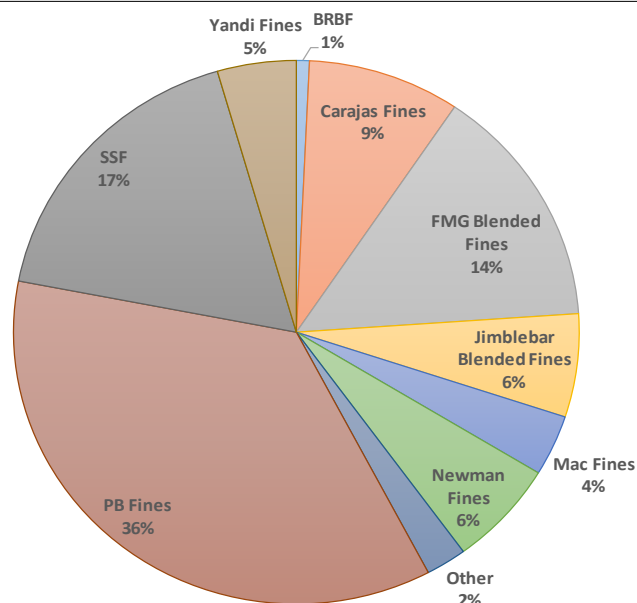


PORT PRICE DIFFERENTIALS TO QINGDAO PORT FOR PB FINES

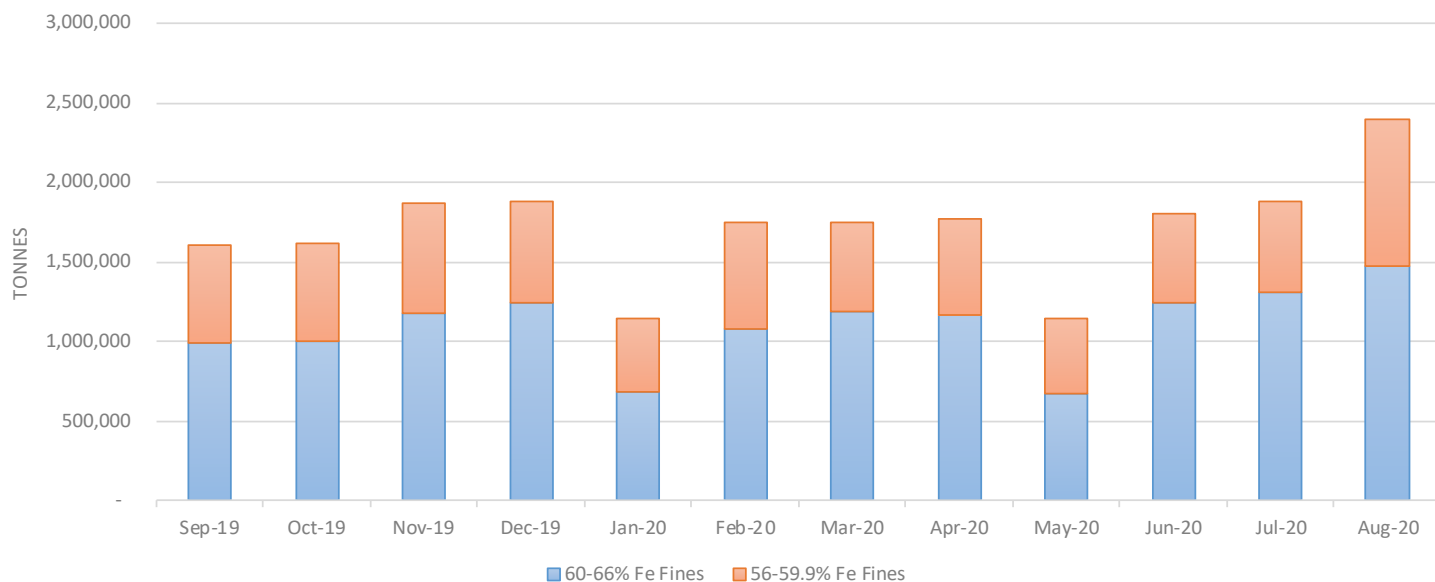
Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne) - August 2020 Average values

Port		Port		Port		Port	
Bayuquan	-15.24	Fangcheng	-5.00	Lanshan	0.00	Rizhao	0.00
Beilun	1.67	Jiangyin	-15.24	Lianyungang	3.33	Shekou	0.00
Caofeidian	6.43	Jingtang	6.43	Majishan	0.00	Taicang	-10.00
Dalian	-16.90	Lanqiao	0.00	Qingdao	0.00	Tianjin	-3.57

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

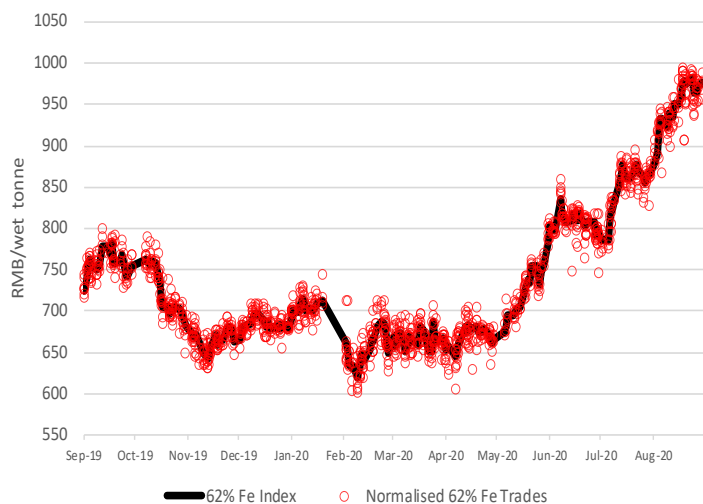


IRON ORE PORT PRICE INDEX COMPILATION VOLUME

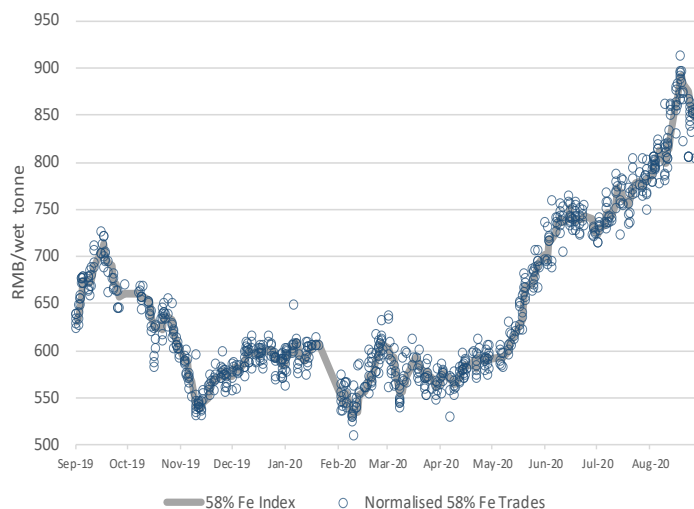


IRON ORE PORT PRICE INDEX COMPILATION

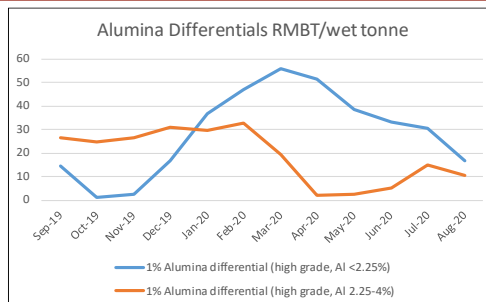
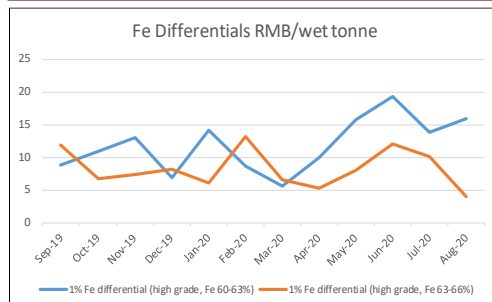
62% Fe Index vs Normalised 62% Fe Port Trades



58% Fe Index vs Normalised 58% Fe Port Trades



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

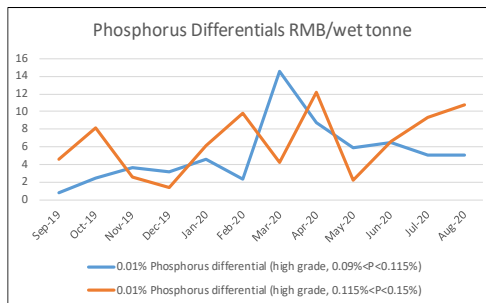
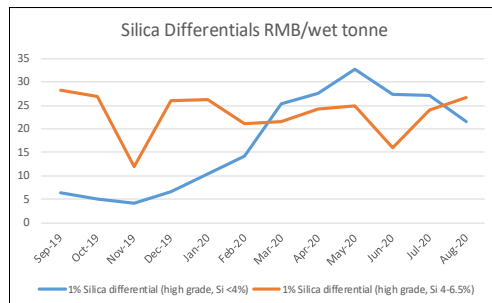


Profits at steel mills rose slightly in August as raw material prices rose at a slower rate than the prices of finished steel products.

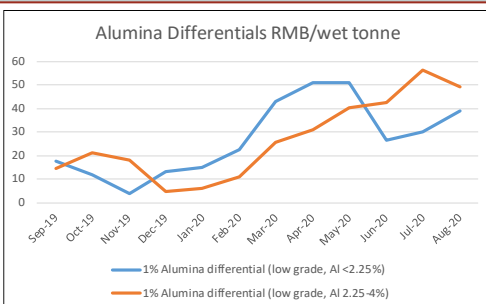
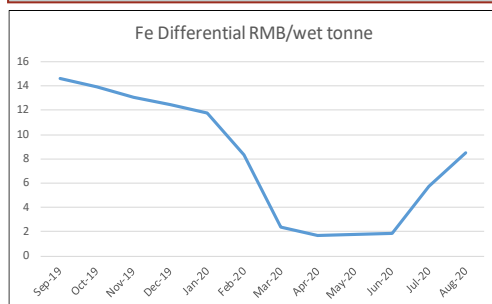
High Fe (63%+ fe) product differentials suffered in August, narrowing the spread between mid-grade and high-grade brands. Much of this was due to the low inventory levels of brands such as PB fines, JMBF, Newmans and MAC at the port, driving the mid-grade prices higher.

Steel mills were still nonetheless careful of increasing their gangue loads, with rising penalties for phos and silica.

Newman's fines were the greatest beneficiaries in August, pricing at a premium to index for the first time since March, whilst high fe and low alumina products contract, with the 62—65% premium falling below 5% for the first time in 12 months.



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



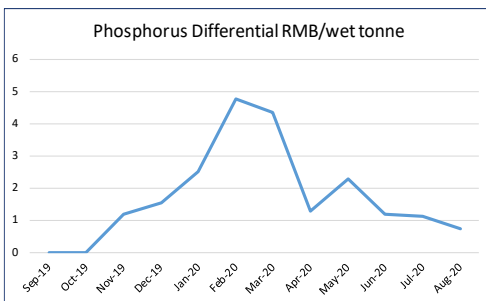
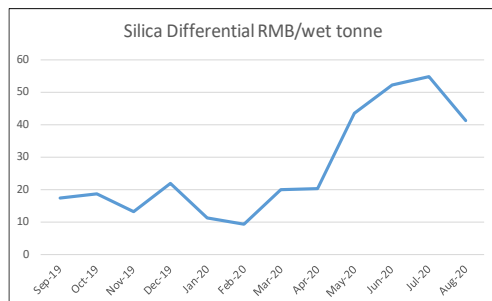
SSF and FMG blended fines products continued their recovery in August, rising demand for iron units contributing to their improving performance against the 58% indices.

Low alumina products such as Yandi also showed marked improvement, as steel mills looked to better narrow profit margins by blending in some lower cost products.

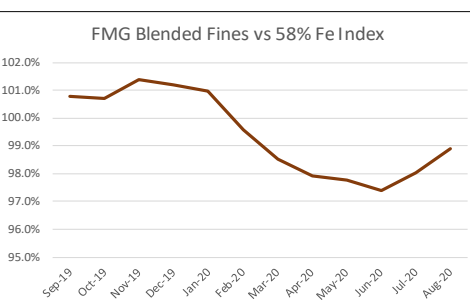
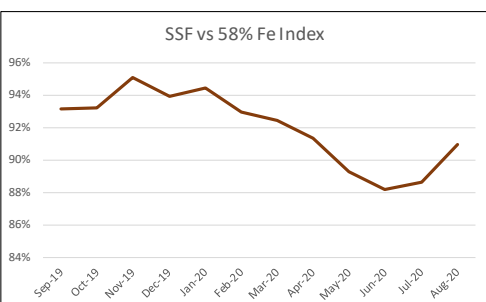
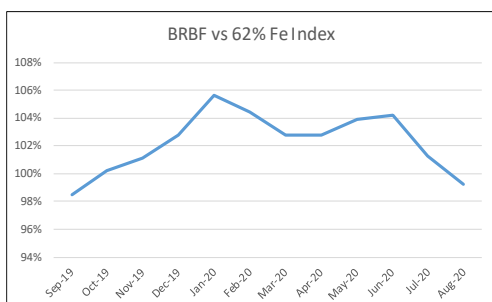
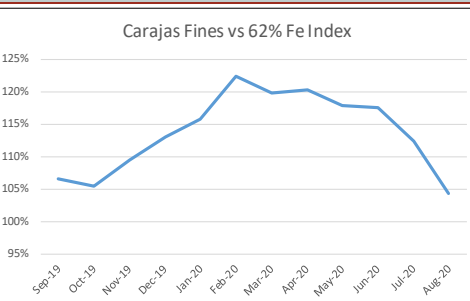
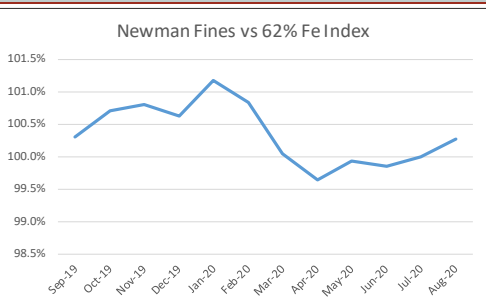
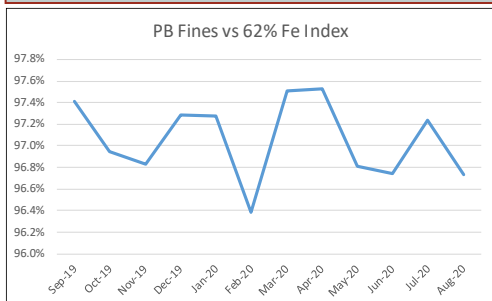
High silica penalties, peaking in July, have now eased, helping improve the relative price performance of high silica, low-fe products.

58—62% price spread has widened however as mid-grade products had demand outstrip supply at port.

Likely winter pollution controls may drive gangue penalties higher in the coming months, however low profit margins remain a concern for steel mills and winter stockpiling may offset some of the price pressure for low fe grades.



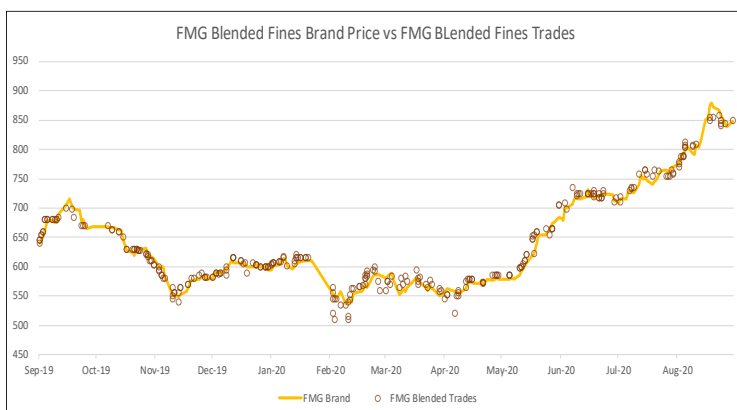
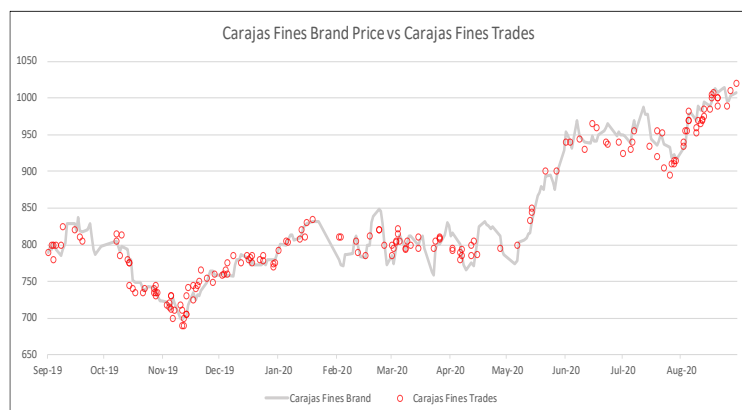
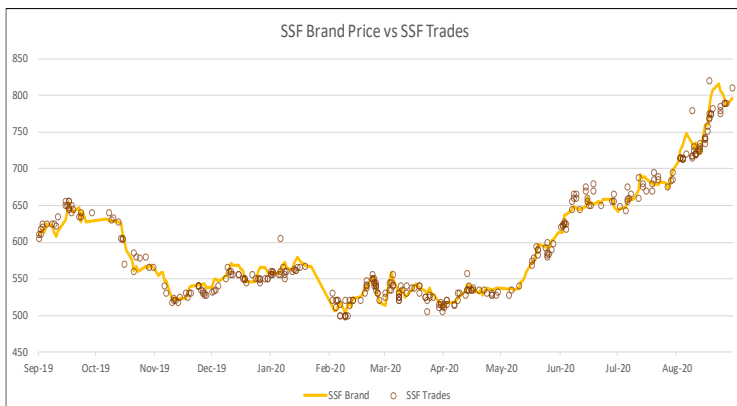
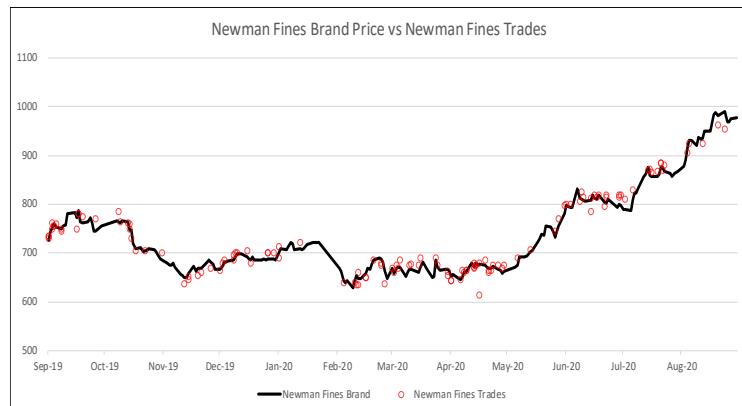
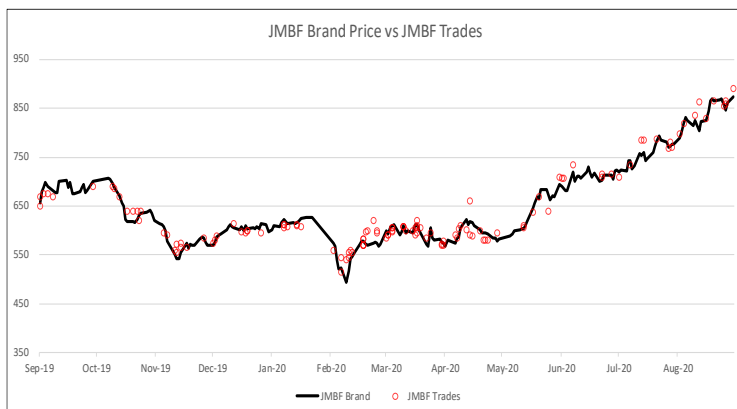
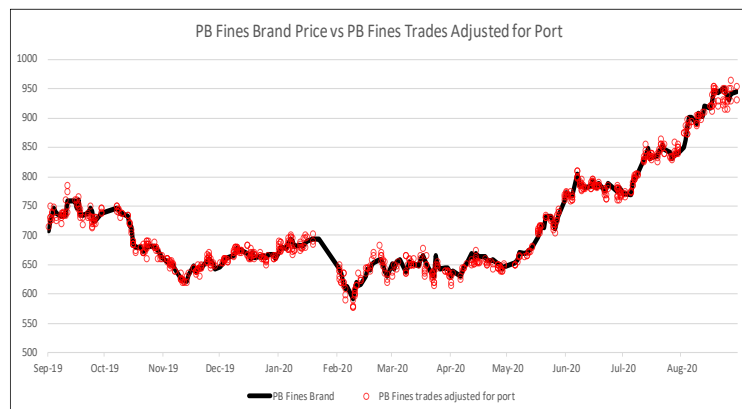
KEY PORT BRAND PRICE ASSESSMENTS VERSUS INDEX (MONTHLY AVERAGES)



IRON ORE PORT BRAND PRICE ASSESSMENTS MONTHLY AVERAGES

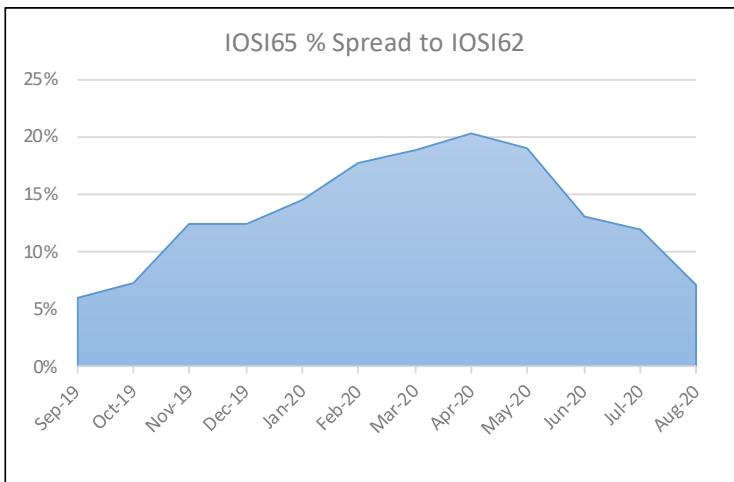
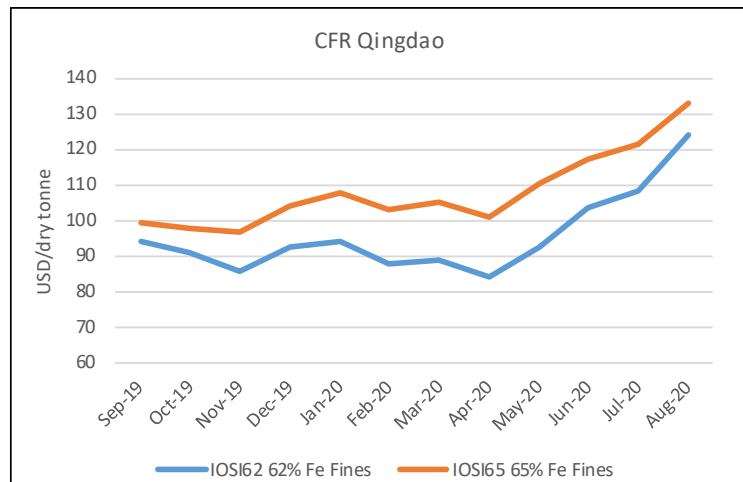
FOT Qingdao (inc VAT ¹), RMB/wet tonne													
Brand	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	YTD 2020
PB Fines	743	738	699	644	664	686	631	650	652	697	821	917	732
Newman Fines	761	760	726	670	687	714	660	667	666	719	844	951	756
MAC Fines	742	735	705	633	657	671	628	645	639	688	808	905	722
Jimblebar Blended Fines	676	689	631	571	606	618	555	596	593	639	755	838	665
Carajas Fines	832	807	760	728	772	816	802	798	804	848	948	988	872
Brazilian Blend Fines	754	746	722	672	702	745	684	685	687	748	855	941	775
SSF	660	628	593	539	556	567	523	534	530	570	672	763	603
FMG Blended Fines	699	679	640	575	599	606	560	569	568	624	743	829	654
Yandi Fines	688	658	612	553	570	596	576	593	594	610	722	803	652

KEY PORT BRAND PRICE ASSESSMENTS AND TRADED PRICES

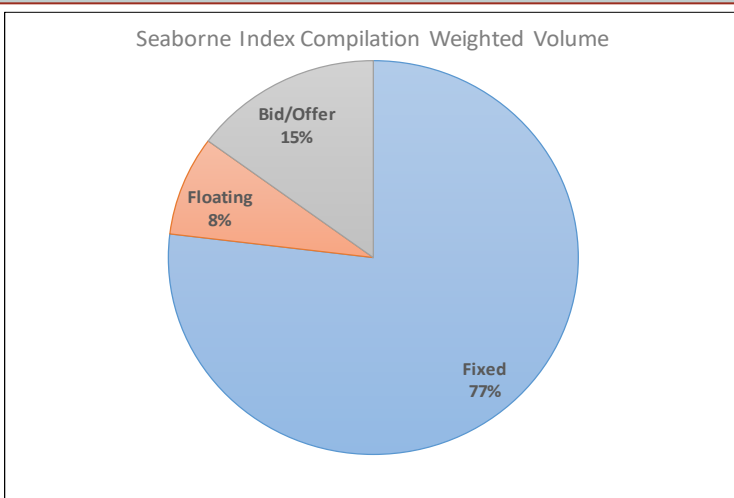
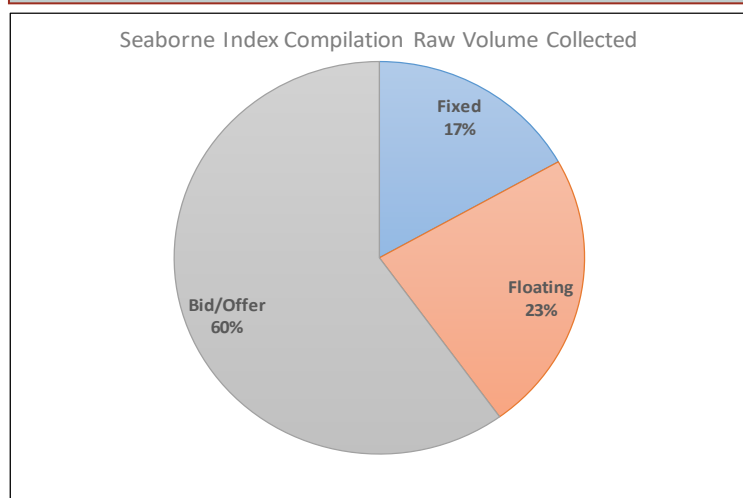


IRON ORE SEABORNE PRICE INDEX MONTHLY AVERAGES

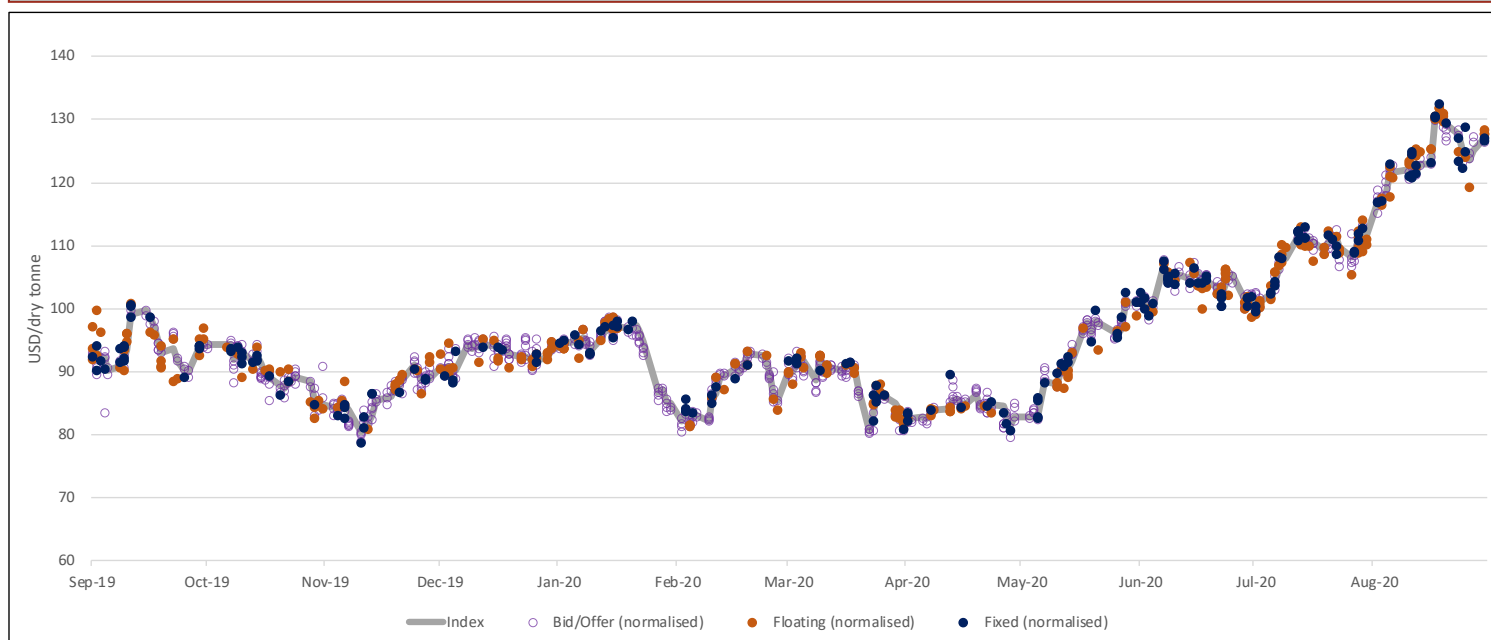
CFR Qingdao, USD/dry tonne														
Index	Fe Content	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	YTD 2020
IOSI62	62% Fe Fines	93.76	90.81	85.83	92.64	93.85	87.46	88.60	83.89	92.47	103.49	108.23	124.02	97.72
IOSI65	65% Fe Fines	99.42	97.45	96.49	104.14	107.56	102.94	105.31	100.97	110.12	117.06	121.21	132.95	112.22



IRON ORE SEABORNE PRICE INDEX COMPILATION—LAST 12 MONTHS

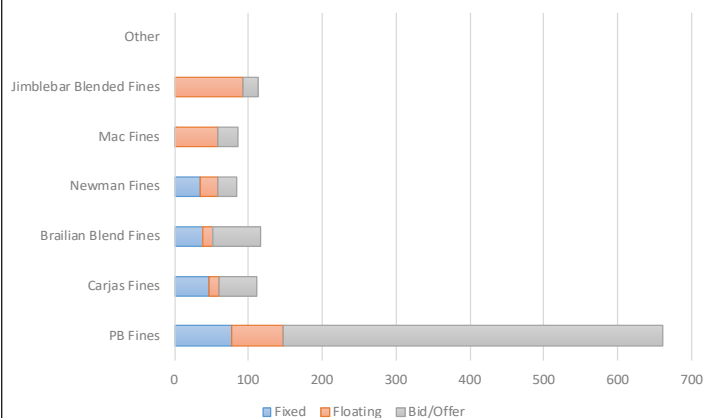


IRON ORE SEABORNE PRICE INDEX COMPILATION

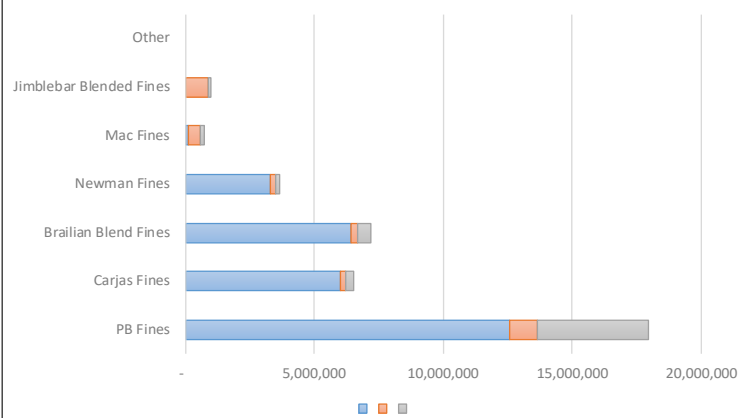


IRON ORE SEABORNE PRICE INDEX COMPILATION—LAST 12 MONTHS

Key Seaborne Index Brand Volumes

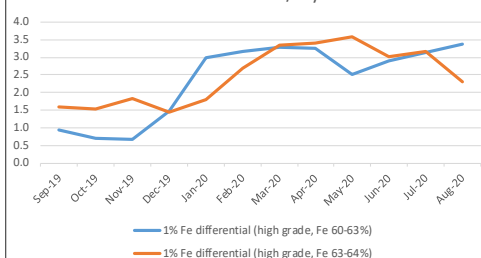


Key Seaborne Index Weighted Brand Volumes

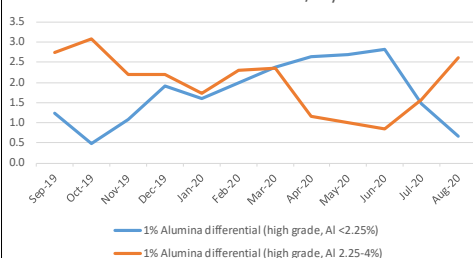


SEABORNE PRICE INDEX NORMALISATION DIFFERENTIALS (MONTHLY AVERAGES)

FE Differentials USD/dry tonne



Alumina Differentials USD/dry tonne



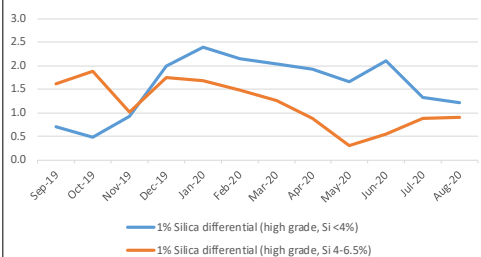
Alumina penalties (<2.25%) for high grade products fall, dropping Carajas fines performance against the 62% index. The 62-65% index spread has thus narrowed down to 12 month lows. Falling Fe premiums and <2.25% alumina penalties the main drivers for this occurrence.

Most mainstream product performance worsened versus the mid-grade indices, though JMBF has maintained its strong levels.

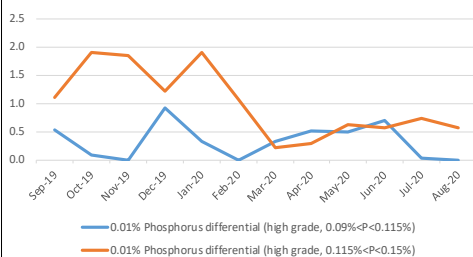
Prices are likely to remain at elevated levels in September due to restocking for the Mid-Autumn festival in October, aided by lower than expected inventories.

Much of this may be offset by weakening fundamentals as finished steel product inventories remain high and are unlikely to see much downward pressure as we move into the winter months.

Silica Differentials USD/dry tonne

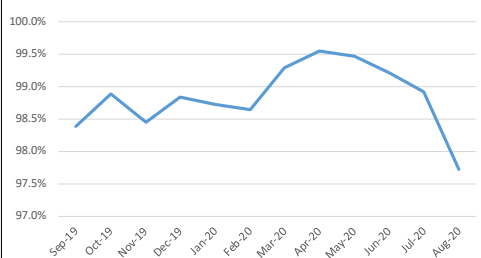


Phos Differentials USD/dry tonne

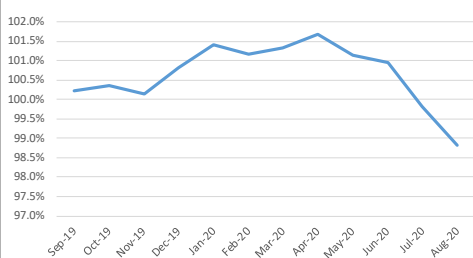


KEY SEABORNE BRAND PRICE ASSESSMENTS VERSUS 62% FE or 65% FE PRICE INDEX

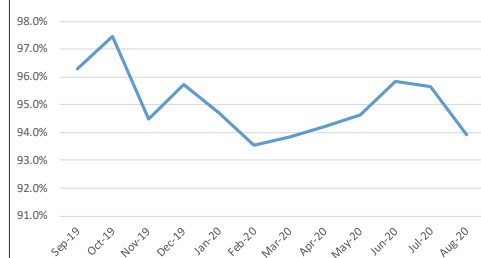
PB Fines vs 62% Fe Index



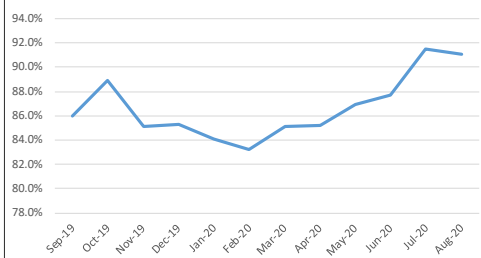
Newman Fines vs 62% Fe Index



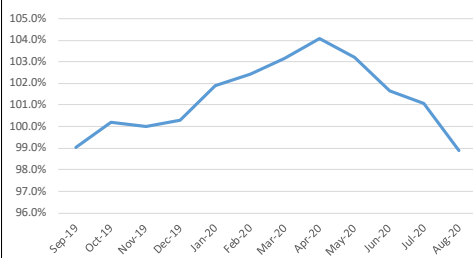
MAC Fines vs 62% Fe Index



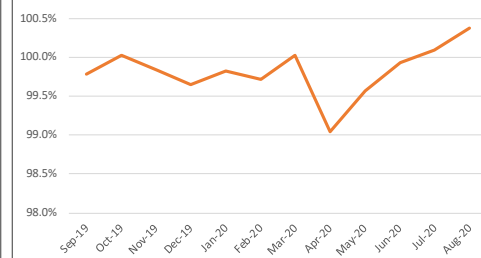
JMBF vs 62% Fe Index



BRBF vs 62% Fe Index



Carajas Fines vs 65% Fe Index

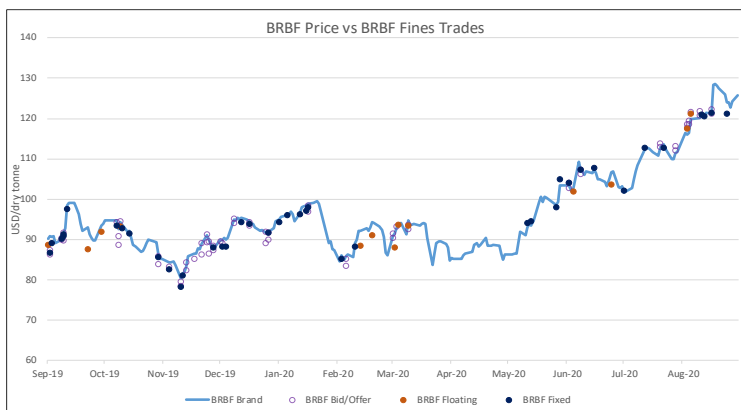
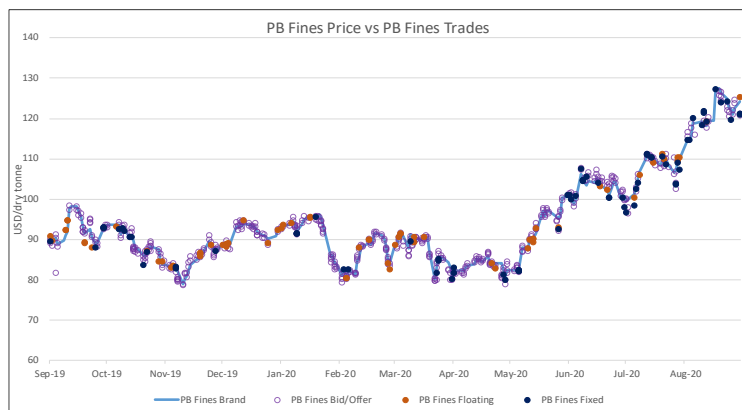


IRON ORE SEABORNE BRAND PRICE ASSESSMENTS

Selected Iron Ore Seaborne Brand Averages, USD/dry tonne

Brand	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	YTD 2020
PB Fines	120.41	91.13	92.25	89.79	84.49	91.56	82.25	88.65	87.98	83.40	107.05	121.19	96.63
Newman Fines	122.30	93.78	93.97	91.13	85.95	93.38	95.19	88.47	89.79	85.18	108.02	122.56	98.39
MAC Fines	117.18	87.14	90.29	88.50	81.11	88.68	88.90	81.82	83.14	78.92	103.55	116.50	92.44
Jimblebar Blended Fines	113.27	77.01	80.58	80.72	73.07	79.01	78.90	72.80	75.42	71.36	98.98	112.93	85.16
Carajas Fines	129.18	101.34	99.21	97.48	96.34	103.78	107.36	102.65	105.33	100.01	121.32	133.46	112.06
Brazilian Blend Fines	122.24	92.89	92.87	91.01	85.85	92.92	95.65	89.60	91.40	87.19	109.38	122.64	99.54

KEY SEABORNE BRAND PRICE ASSESSMENTS AND TRADED PRICES

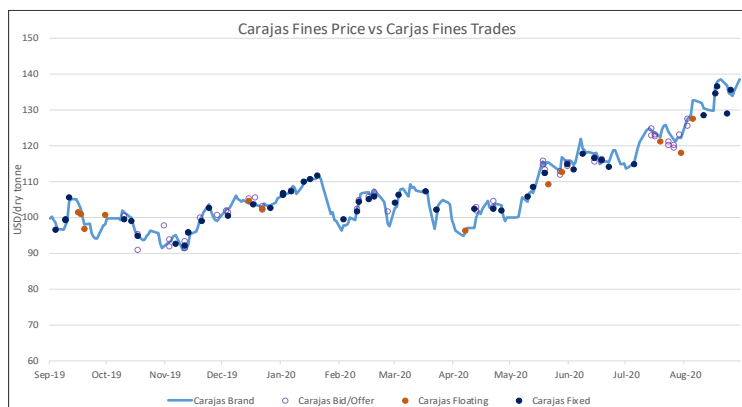


Correlations to PB Fines Brand Assessment

PB Fines Bid/Offer	99.05%
PB Fines Floating trades	97.88%
PB Fines Fixed trades	98.88%

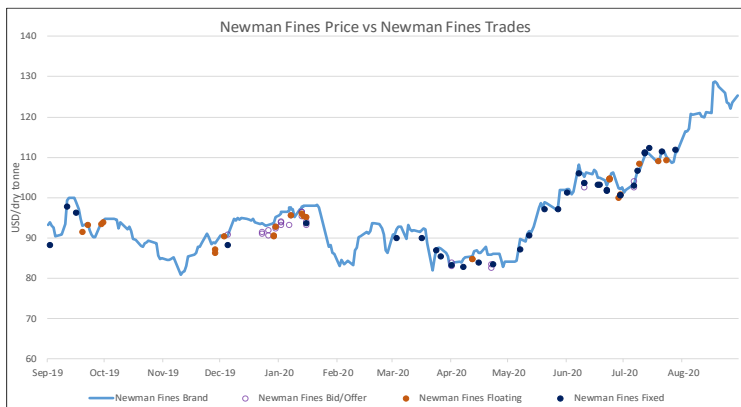
Correlations to BRBF Brand Assessment

BRBF Bid/Offer	99.21%
BRBF Floating trades	98.64%
BRBF Fixed trades	99.43%



Correlations to Carajas Fines Brand Assessment

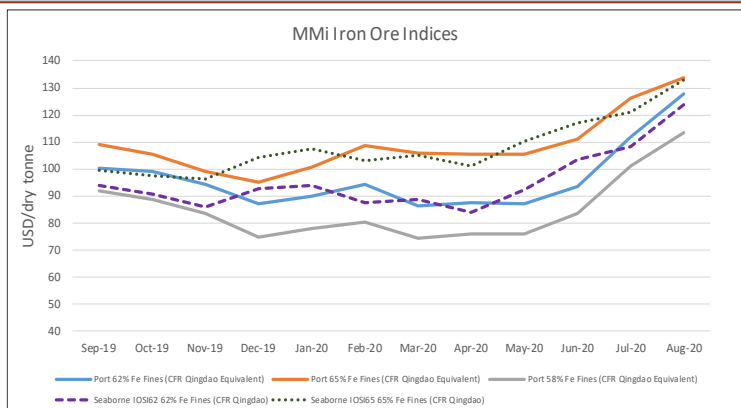
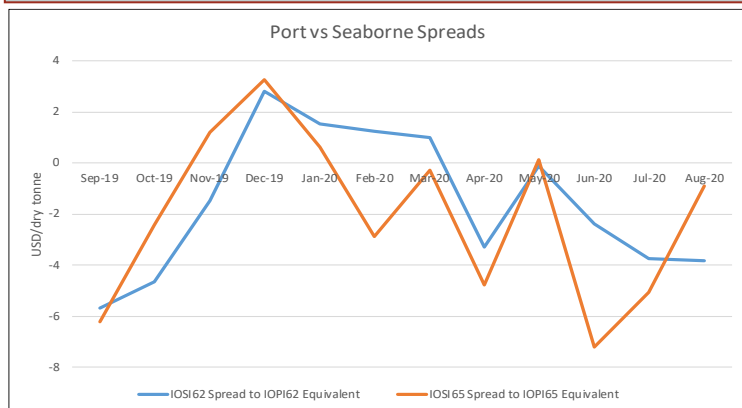
Carajas Fines Bid/Offer	97.23%
Carajas Fines Floating trades	98.41%
Carajas Fines Fixed trades	98.21%



Correlations to Newman Fines Brand Assessment

Newman Fines Bid/Offer	99.50%
Newman Fines Floating trades	99.35%
Newman Fines Fixed trades	98.86%

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.
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	For more details on MMi's iron ore methodology please download the guide published on our website at: www.mmiprices.com
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	IOSI65	IRCN0035
IOP165	IRCNQ003	IRCNQ006		
IOP162	IRCN0036	IRCN0037		

AVERAGE IRON ORE BRAND SPECIFICATIONS FOR AUGUST 2020

PORT STOCK BRANDS						SEABORNE BRANDS					
62% Fe average brand specifications for Aug-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	61.56%	2.33%	3.92%	0.100%	9.50%	PB Fines 62%	62.00%	2.60%	4.30%	0.090%	10.00%
Newman Fines	62.48%	2.34%	3.94%	0.085%	8.19%	Newman Fines	62.30%	2.40%	4.40%	0.090%	8.00%
MAC Fines	60.71%	2.32%	4.57%	0.080%	7.94%	MAC Fines	60.80%	2.35%	4.70%	0.080%	7.80%
Jimblebar Blended Fines	60.45%	3.13%	4.81%	0.115%	7.68%	Jimblebar Blended Fines	60.50%	3.00%	4.50%	0.120%	8.00%
Carajas Fines	65.13%	1.20%	1.81%	0.068%	8.17%	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 Aug-20					
	Fe	Alumina	Silica	Phos	Moisture
SSF	56.55%	3.11%	6.21%	0.058%	9.00%
FMG Blended Fines	58.16%	2.55%	5.62%	0.054%	8.32%
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	57.15%	1.67%	6.43%	0.042%	9.29%

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