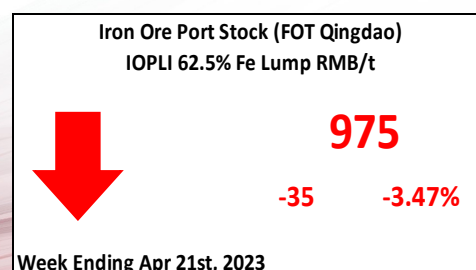
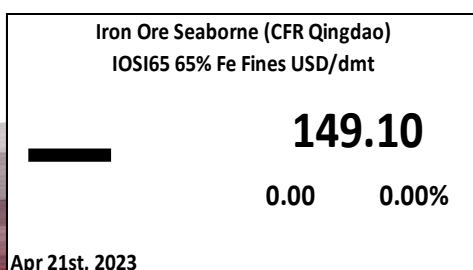
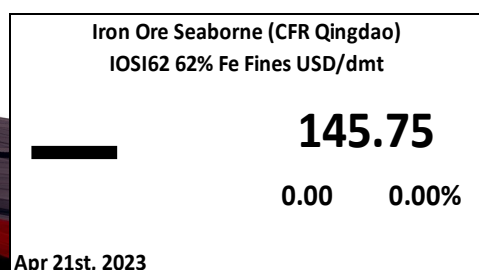
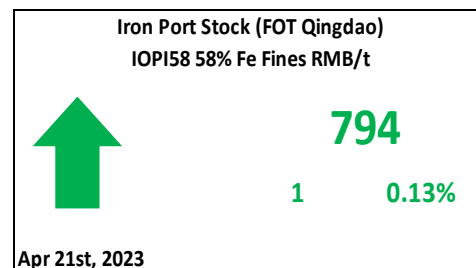
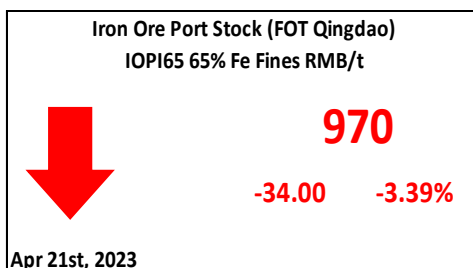
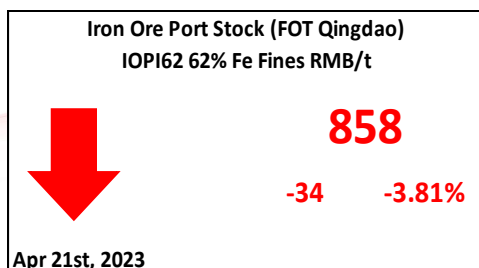


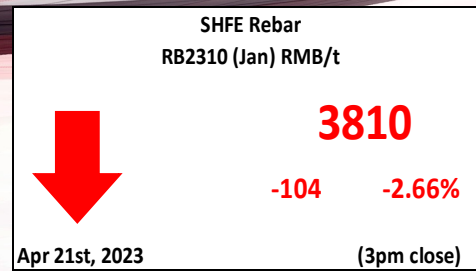
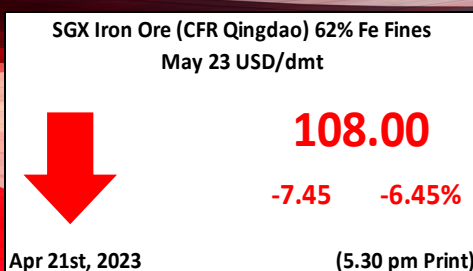
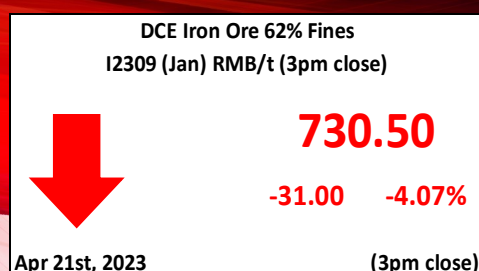


MMi Dashboard

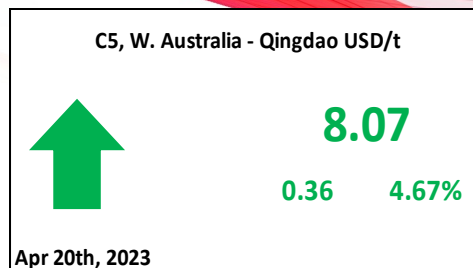
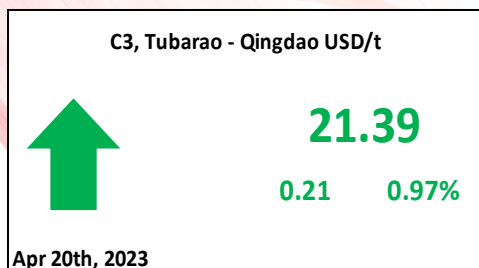
Iron Ore Price Indices



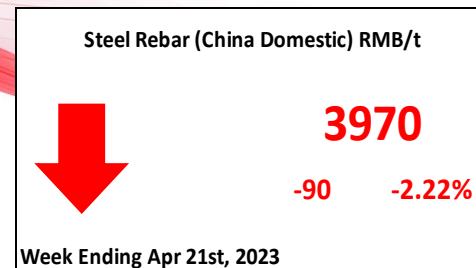
Exchange Traded Contracts



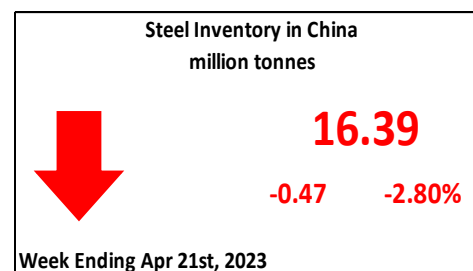
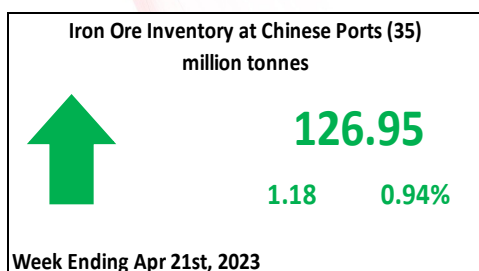
Freight Rates



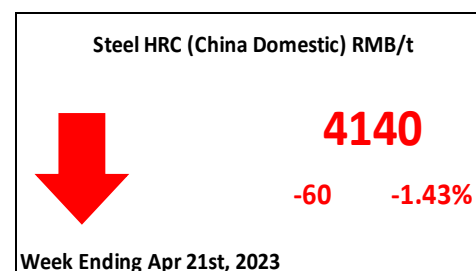
Steel Price



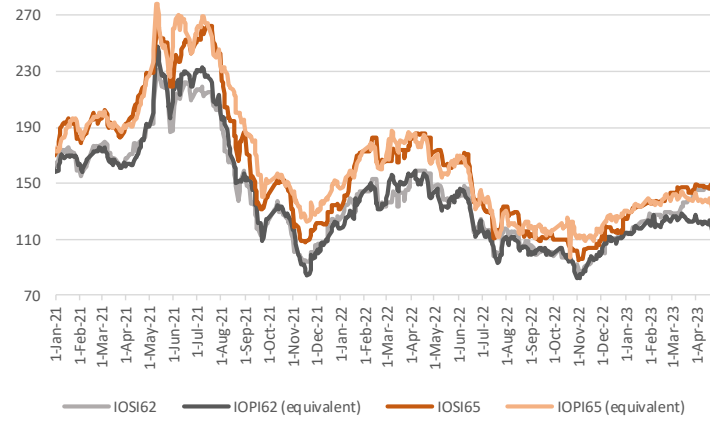
Inventory Levels



Steel Price



IRON ORE INDEX COMPARISONS (USD/DMT)



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



IRON ORE BRAND SPOT PRICE ASSESSMENTS

Apr 21st, 2023	PORT STOCK INDEX (RMB/WT)			Apr 21st, 2023	SEABORNE INDEX (USD/DMT)		
	Price	Change	Diff to IOPI62		Price	Change	Diff to IOSI62
Roy Hill	801	-34	-57	Roy Hill	141.25	0.00	-4.50
SIMEC Fines	730	-35	-128	SIMEC Fines	137.75	0.00	-8.00
PB Fines	826	-34	-32	PB Fines	142.00	0.00	-3.75
Newman Fines	827	-34	-31	Newman Fines	144.90	0.00	-0.85
MAC Fines	808	-34	-50	MAC Fines	142.00	0.00	-3.75
Jimblebar Blended Fines	723	-34	-135	Jimblebar Blended Fines	134.40	0.00	-11.35
Carajas Fines	1038	-35	180	Carajas Fines	175.30	0.00	29.55
Brazilian SSF	822	-34	-36	Brazilian SSF	149.50	0.00	3.75
Brazilian Blend Fines	840	-33	-18	Brazilian Blend Fines	151.15	0.00	5.40
RTX Fines	741	-34	-117	RTX Fines	135.65	0.00	-10.10
West Pilbara Fines	769	-34	-89	West Pilbara Fines	140.00	0.00	-5.75

Apr 21st, 2023	PORT STOCK INDEX (RMB/WT)		
	Price	Change	Diff to IOPI58
SSF	794	1	0
FMG Blended Fines	804	1	10
Robe River	805	1	11
Western Fines	808	1	14
Atlas Fines	801	1	7
Yandi	787	1	-7

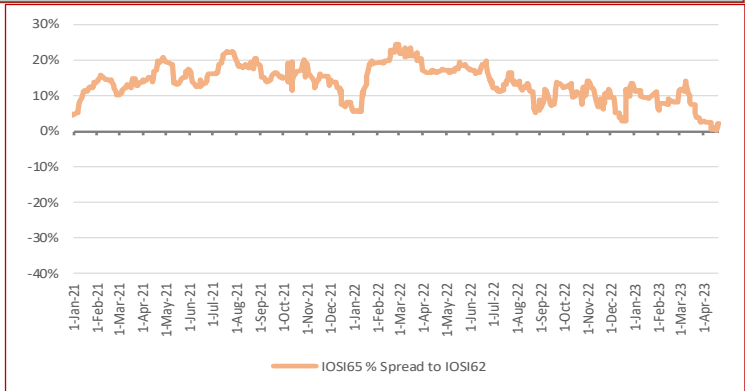
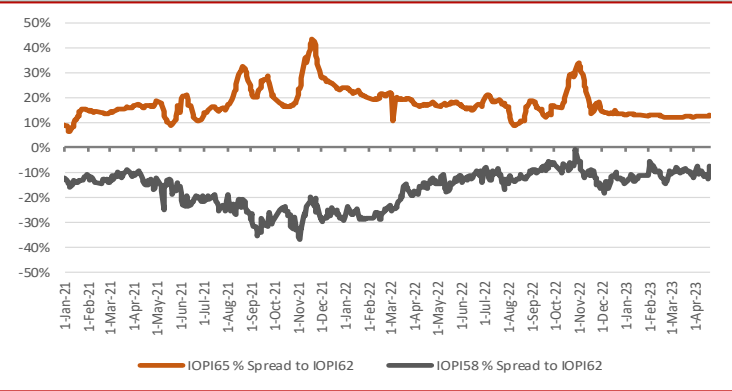
IRON ORE INDEX NORMALISATION DIFFERENTIALS

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%	5.00	0.00	1% Fe	High Grade Fe 60 - 63%	1.25	-0.75
	High Grade Fe 63 - 64%	5.00	0.00		High Grade Fe 63 - 64%	2.75	0.75
	High Grade Fe 64 - 65%	5.00	0.00		High Grade Fe 64 - 65%	2.75	0.75
	High Grade Fe 65 - 65.5%	5.00	0.00		High Grade Fe 65 - 65.5%	2.75	0.75
1% Alumina	Low Grade Fe	20.00	1.00	1% Alumina	High Fe Grade Al <2.25%	0.25	0.00
	High Fe Grade Al <2.25%	41.00	0.00		High Fe Grade Al 2.25-4%	0.25	0.00
	High Fe Grade Al 2.25-4%	5.00	0.00				
	Low Fe Grade Al <2.25%	82.00	-8.00				
1% Silica	Low Fe Grade Al 2.25-4%	18.00	0.00	1% Silica	High Fe Grade Si <4%	1.75	0.25
	High Fe Grade Si <4%	13.00	0.00		High Fe Grade Si 4 - 6.5%	4.25	0.00
	High Fe Grade Si 4 - 6.5%	13.00	-1.00				
0.01% Phosphorus	Low Fe Grade	17.00	0.00	0.01% Phosphorus	High Fe Grade 0.09%<P<0.115%	0.75	0.25
	High Fe Grade 0.09%<P<0.115%	9.00	0.00		High Fe Grade 0.115%<P<0.15%	7.25	0.75
	High Fe Grade 0.115%<P<0.15%	9.00	0.00		Low Fe Grade 0.09<P<0.1%	5.00	0.00

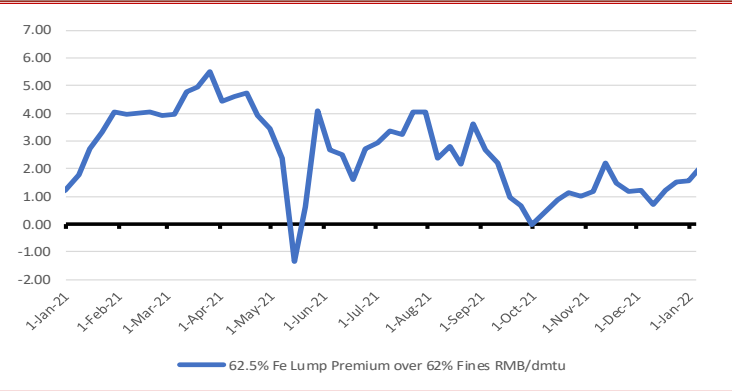
Port Stock Price Differentials to Qingdao Port for PB Fines (RMB/wet tonne)

Port	Value	Change	Port	Value	Change	Port	Value	Change	Port	Value	Change
Bayuquan	-100.00	0.00	Fangcheng	-25.00	0.00	Lanshan	0.00	0.00	Rizhao	0.00	0.00
Beilun	0.00	0.00	Jiangyin	-30.00	0.00	Lianyungang	0.00	0.00	Shekou	0.00	0.00
Caofeidian	-10.00	0.00	Jingtang	-10.00	0.00	Majishan	0.00	0.00	Taichang	-30.00	0.00
Dalian	0.00	0.00	Lanqiao	0.00	0.00	Qingdao	0.00	0.00	Tianjin	-15.00	0.00

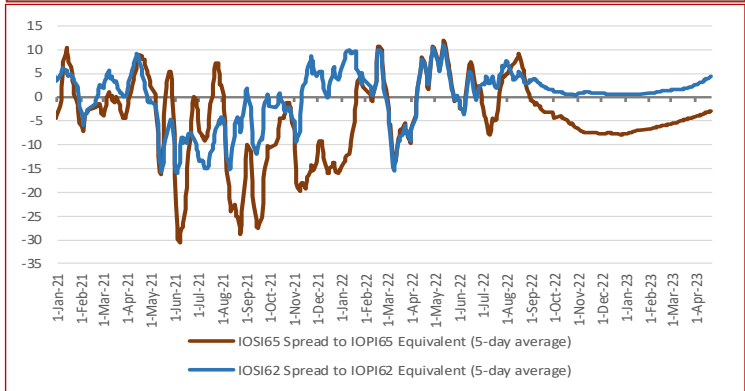
IRON ORE INDEX PREMIUMS/DISCOUNTS



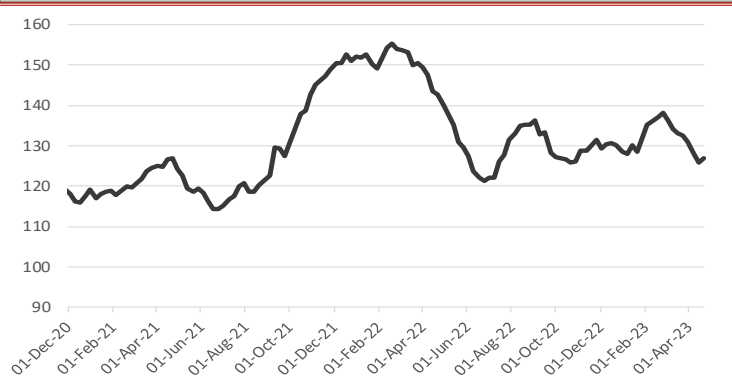
WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



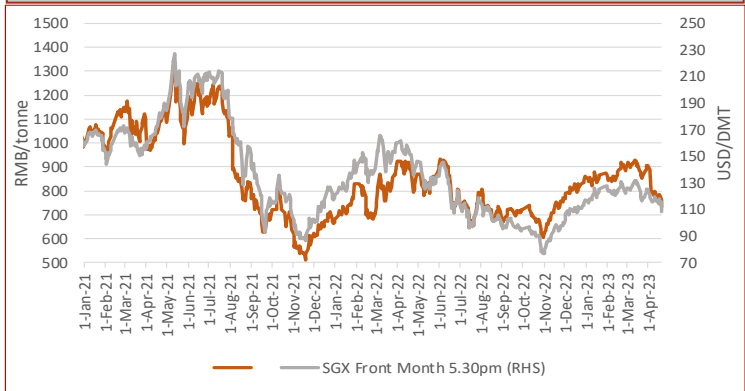
IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



FUTURE TRADING—FRONT MONTH CLOSING PRICE



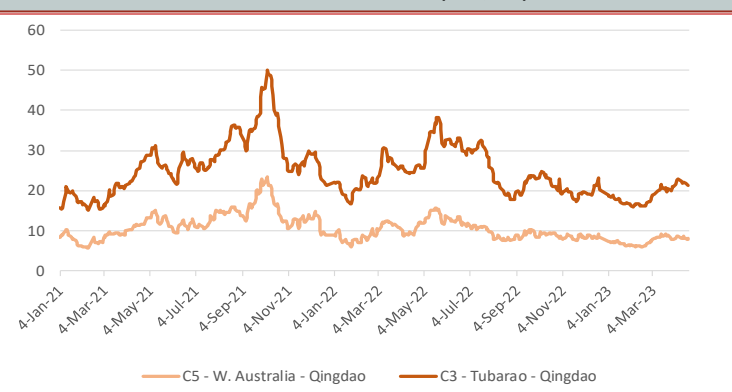
IRON ORE PORT INVENTORIES (MILLION TONNES)

Week Ending Apr 21st, 2023				
Province	This week	Change %	Low ²	High ²
Jingtang	12.23	-2.86%	9.84	19.20
Qingdao	25.10	2.24%	9.41	26.24
Caofeidian	12.98	4.59%	9.05	16.29
Tianjin	9.23	4.53%	7.14	12.97
Rizhao	16.88	-0.88%	9.44	19.26
Total (35 Ports)	126.95	0.94%	98.80	155.39

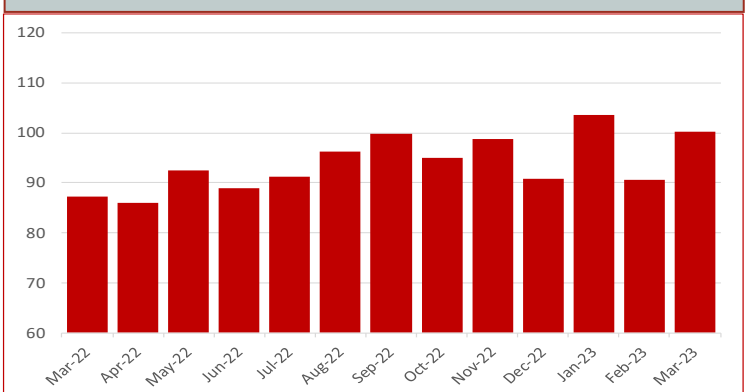
IRON ORE FUTURES CONTRACTS

Closing Date	DCE (RMB/WMT)			SGX (USD/DMT)		
	Apr 21st, 3pm close			Apr 21st, 5:30pm		
Contract	I2309	Change	Change %	May. 23	Change	Change %
Closing Price	730.50	-31.00	-4.07%	108.00	-7.45	-6.45%
Vol traded ('000 lots)	83.35	3.19	3.98%	8.95	4.56	103.67%
Open positions ('000 lots)	78.94	1.86	2.41%	26.77	-0.04	-0.16%
Day Low	730.0	-27.00	-3.57%	107.40	-7.25	-6.32%
Day High	759.5	-17.00	-2.19%	115.20	-2.35	-2.00%

DRY BULK FREIGHT RATES (USD/MT)



TOTAL CHINA IRON ORE IMPORT VOLUMES (MILLION TONNES)



STEEL SPOT MARKET PRICES—CHINA

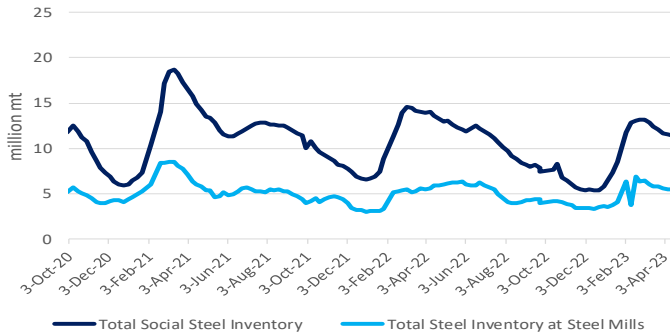
Product	2023/4/21	Change	Change %
ReBar HRB400 φ18mm	3,970	-90	-2.22%
Wirerod Q300 φ6.5mm	4,180	-90	-2.11%
HRC Q235/SS400 5.5mm*1500*C	4,140	-60	-1.43%
CRC SPCC/ST12 1.0mm*1250*2500	4,610	-60	-1.28%
Medium & Heavy Plate Q235B 20mm	4,350	-30	-0.68%
GI ST02Z 1.0mm*1000*C	4,990	-10	-0.20%
Colour Coated Plate	7,400	-50	-0.67%

CHINESE STEEL MILL PROFITABILITY

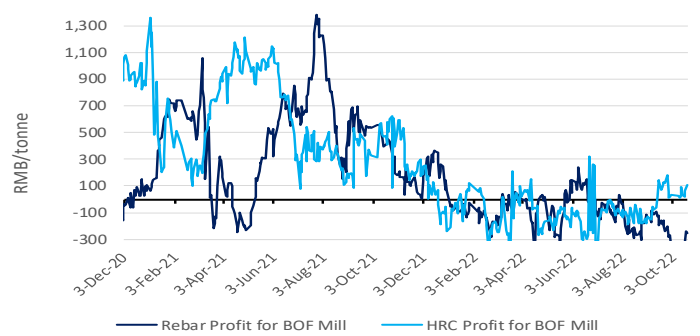
SMM Tracking of Steel Mill P&L - Rebar and Hot-rolled Coil (RMB/tonne)			
Category	Price	Change (WoW)	Note
MMi (Fe 62%), USD/mt excluding tax	145.75	-1	Mmi CFR Equivalent index for 1st Feb
Coke	2,710	-100	2nd grade met coke, Tangshan, incl. tax
Steel Scrap	3,020	-50	steel scrap (6mm) in Zhangjiagang, excl. tax
Billet Cost	3,478	-59	Q234, incl. tax
Rebar cost - Blast furnace	3,964	-100	calculated based on theoretical weight, incl. tax
Rebar profit - Blast furnace	-54	-3	based on Shanghai prices, incl. tax
Hot-rolled coil cost - Blast furnace	3,977	-65	based on actual weight, incl. tax
Hot-rolled coil profit - Blast furnace	103	-65	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

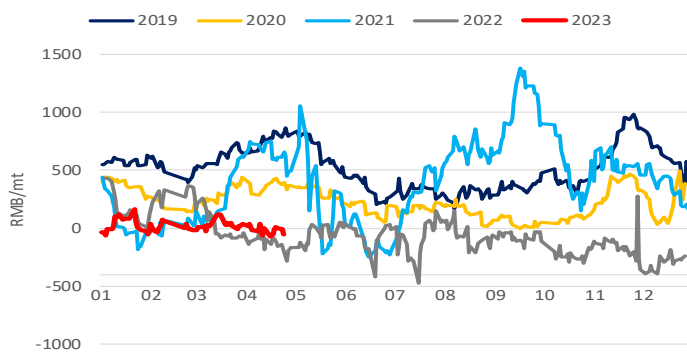
CHINESE STEEL INVENTORIES



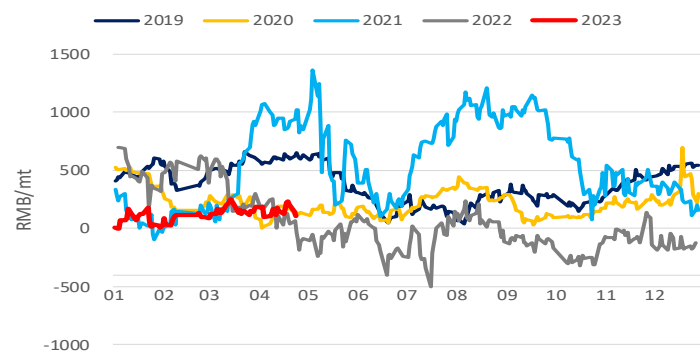
CHINESE STEEL MILL PROFITABILITY



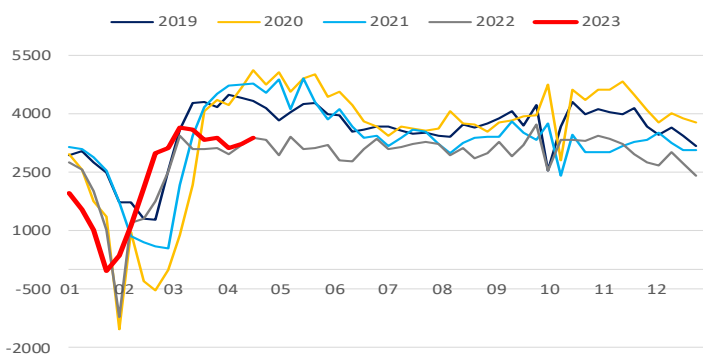
CHINESE STEEL MILL PROFITABILITY—Rebar



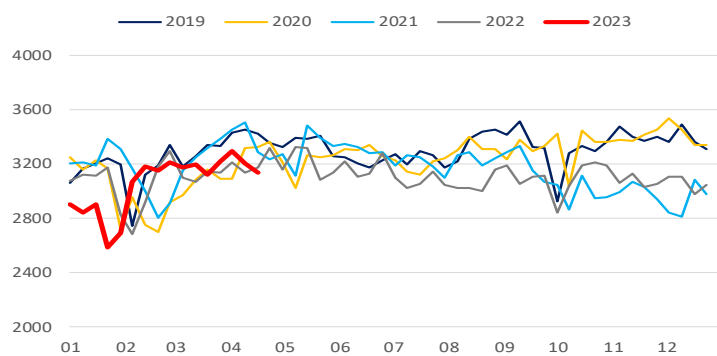
CHINESE STEEL MILL PROFITABILITY—Hot-rolled Coil



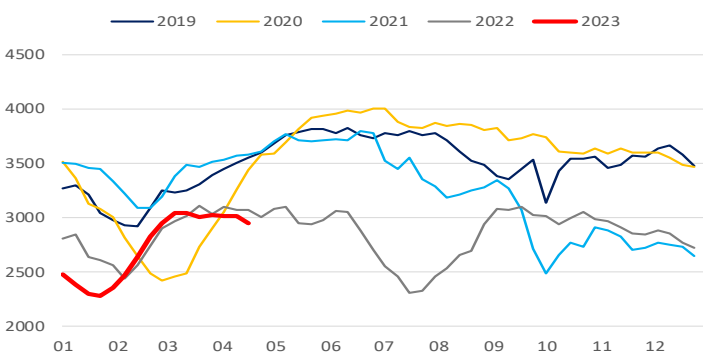
CHINESE STEEL CONSUMPTION—Rebar



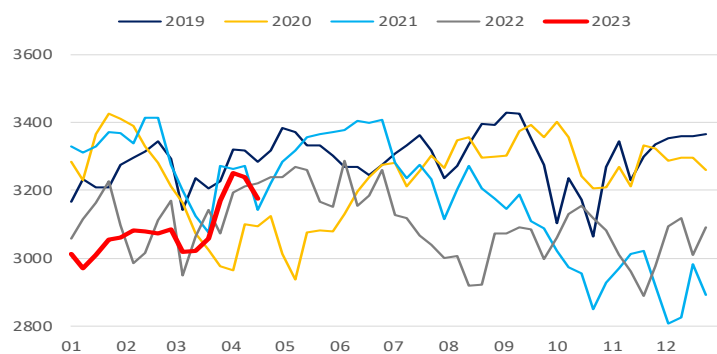
CHINESE STEEL CONSUMPTION—Hot-rolled Coil



CHINESE STEEL PRODUCTION—Rebar



CHINESE STEEL PRODUCTION—Hot-rolled Coil



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	
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: www.mmiprices.com
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	0	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					
Apr 21st, 2023	Specifications applied for 62% brand assessments						Specifications applied for 62% brand assessments				
	Fe	Alumina	Silica	Phos	Moisture		Fe	Alumina	Silica	Phos	Moisture
Roy Hill	60.88%	2.35%	4.45%	0.055%	9.26%	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	61.64%	2.31%	3.87%	0.099%	9.45%	PB Fines 62%	62.00%	2.60%	4.30%	0.090%	9.50%
Newman Fines	62.49%	2.31%	3.98%	0.090%	7.72%	Newman Fines	62.30%	2.40%	4.30%	0.095%	8.00%
MAC Fines	60.43%	2.38%	4.64%	0.078%	7.57%	MAC Fines	60.80%	2.35%	4.40%	0.075%	7.80%
Jimblebar Blended Fines	60.87%	2.95%	4.53%	0.111%	7.32%	Jimblebar Blended Fines	60.50%	3.10%	4.80%	0.120%	7.80%
Carajas Fines	64.90%	1.39%	1.82%	0.080%	7.78%	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	62.56%	1.58%	4.79%	0.091%	8.72%	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%
Apr 21st, 2023	Specifications applied for 58% brand assessments										
	Fe	Alumina	Silica	Phos	Moisture						
SSF	56.49%	3.20%	6.19%	0.065%	9.18%						
FMG Blended Fines	58.20%	2.43%	5.54%	0.057%	8.29%						
Robe River	56.44%	3.16%	5.73%	0.042%	8.44%						
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	56.87%	1.58%	6.41%	0.042%	9.53%						

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	IRCN0034	
IOPI58	IRCNQ002		IRCNQ005	IRCN0035	
IOPI65	IRCNQ003		IRCNQ006		
IOPLI62	IRCN0036		IRCN0037		

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