Metals Market Index

# MMi Dashboard

## Iron Ore Price Indices

**Iron Ore Port Stock (FOT Qingdao)**
**IOPI62 62% Fe Fines RMB/t**
⬆ 931
3 0.32%
Mar 2nd, 2023

**Iron Ore Port Stock (FOT Qingdao)**
**IOPI65 65% Fe Fines RMB/t**
⬆ 1042
2.00 0.19%
Mar 2nd, 2023

**Iron Port Stock (FOT Qingdao)**
**IOPI58 58% Fe Fines RMB/t**
⬆ 832
1 0.12%
Mar 2nd, 2023

**Iron Ore Seaborne (CFR Qingdao)**
**IOSI62 62% Fe Fines USD/dmt**
— 128.45
0.00 0.00%
Mar 2nd, 2023

**Iron Ore Seaborne (CFR Qingdao)**
**IOSI65 65% Fe Fines USD/dmt**
— 143.20
0.00 0.00%
Mar 2nd, 2023

**Iron Ore Port Stock (FOT Qingdao)**
**IOPLI 62.5% Fe Lump RMB/t**
⬆ 1010
20 2.02%
Week Ending Feb 24th, 2023

## Exchange Traded Contracts

**DCE Iron Ore 62% Fines**
**I2305 (Jan) RMB/t (3pm close)**
⬆ 912.50
4.00 0.44%
Mar 2nd, 2023 (3pm close)

**SGX Iron Ore (CFR Qingdao) 62% Fe Fines**
**March 23 USD/dmt**
⬆ 126.45
0.20 0.16%
Mar 2nd, 2023 (5.30 pm Print)

**SHFE Rebar**
**RB2305 (Jan) RMB/t**
⬆ 4225
9 0.21%
Mar 2nd, 2023 (3pm close)

## Freight Rates

**C3, Tubarao - Qingdao USD/t**
⬆ 17.83
0.68 3.97%
Mar 1st, 2023

**C5, W. Australia - Qingdao USD/t**
⬆ 7.45
0.38 5.33%
Mar 1st, 2023

## Steel Price

**Steel Rebar (China Domestic) RMB/t**
⬆ 4260
80 1.91%
Week Ending Feb 24th, 2023

## Inventory Levels

**Iron Ore Inventory at Chinese Ports (35)**
**million tonnes**
⬆ 138.11
1.00 0.73%
Week Ending Feb 24th, 2023

**Steel Inventory in China**
**million tonnes**
⬇ 19.48
-0.40 -1.99%
Week Ending Feb 24th, 2023

## Steel Price

**Steel HRC (China Domestic) RMB/t**
⬆ 4300
60 1.42%
Week Ending Feb 24th, 2023

## IRON ORE PORT STOCK INDEX (IOPI)

| Mar 2nd, 2023 | | 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 | **931** | **3** | **0.3%** | 869 | 880 | 858 | 892 | **126.25** | **1.51** | **1.2%** | 120.06 | 120.58 | 117.93 | 122.93 |
| **IOPI58** | 58% Fe Fines | **832** | **1** | **0.1%** | 813 | 798 | 761 | 793 | **113.64** | **1.12** | **1.0%** | 113.29 | 110.17 | 105.29 | 110.04 |
| **IOPI65** | 65% Fe Fines | **1042** | **2** | **0.2%** | 981 | 992 | 970 | 1003 | **141.77** | **1.50** | **1.1%** | 136.05 | 136.43 | 133.84 | 138.73 |

## IRON ORE SEABORNE INDEX (IOSI)

| Mar 2nd, 2023 | | CFR Qingdao, USD/dry tonne | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Index** | **Fe Content** | **Price** | **Change** | **Change %** | **MTD** | **YTD** | **Low [2]** | **High [2]** |
| **IOSI62** | 62% Fe Fines | **128.45** | **0.00** | **0.00%** | 108.46 | 122.50 | 83.90 | 159.45 |
| **IOSI65** | 65% Fe Fines | **143.20** | **0.00** | **0.00%** | 118.92 | 139.50 | 94.45 | 185.82 |

## MARKET COMMENTARY

DCE iron ore futures tight by 1.56%. the main contract closed 912.5. some traders were active to sell, steel mills purchased on demand. Today the overall market transaction atmosphere is acceptable. PBF at Shandong port dealt 913-917 yuan/mt; increased 2-5 yuan/mt over yesterday. PBF at Tangshan port dealt 929-930 yuan/mt; the same as yesterday. According to SMM's tracking statistics, the inventory of the top ten ports of iron ore by category declined slightly. This is mainly due to the recovery period of molten iron production in steel mills, which drives the overall demand for iron ore. From the perspective of varieties, except for the increase of lump ore inventory, others have declined slightly. However, the limited production of environmental protection in the north ended, the demand for lump ore decreased, and the inventory began to accumulate. In addition, the steel inventory continued to go out of stock this week, the apparent demand continued to rise, and the demand for finished products was expected to be strong, supporting the strong volatility of the ore price.

## IRON ORE PORT LUMP INDEX (IOPLI)

| Week Ending Feb 24th, 2023 | | FOT Qingdao (inc. 13% VAT), RMB/wet tonne | | | | | | | CFR Qingdao Equivalent (exc. 13% 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 | **1010** | **20** | **2.0%** | 903 | 1035 | 770 | 1405 | **131.53** | **1.79** | **1.38%** | 116.26 | 138.76 | 94.72 | 199.13 |

## IRON ORE DOMESTIC CONCENTRATE SPOT PRICE ASSESSMENTS AND COMPOSITE INDEX

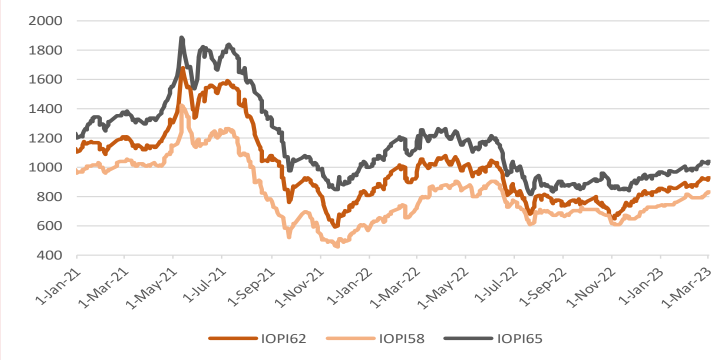
| Week Ending Feb 24th, 2023 | | | | RMB/tonne (excluding tax) [3] | | | | USD/tonne (excluding tax) [3] | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Province** | **Region** | **Product** | **Basis** | **This week** | **Change %** | **Low [2]** | **High [2]** | **This week** | **Change %** | **Low [2]** | **High [2]** |
| **Hebei** | **Hanxing** | 66% Fe Concentrate | Dry | **1043** | **0.7%** | 779 | 1645 | **151.63** | **0.01%** | 110.31 | 255.69 |
| **Hebei** | **Qian'an** | 65% Fe Concentrate | Dry | **1075** | **1.9%** | 780 | 1630 | **156.28** | **1.22%** | 110.51 | 251.57 |
| **Liaoning** | **Anshan** | 65% Fe Concentrate | Wet | **810** | **2.5%** | 620 | 1310 | **117.76** | **1.85%** | 87.40 | 202.32 |
| **Shandong** | **Zibo** | 65% Fe Concentrate | Dry | **1066** | **0.7%** | 800 | 1752 | **154.97** | **-0.01%** | 117.19 | 272.32 |

| **Week Ending Feb 24th, 2023** | **This week** | **Change %** | **Low [2]** | **High [2]** |
|---|---|---|---|---|
| **China Mines Concentrate Composite Index RMB/WT** | **949.64** | **1.27%** | 706.36 | 1511.22 |

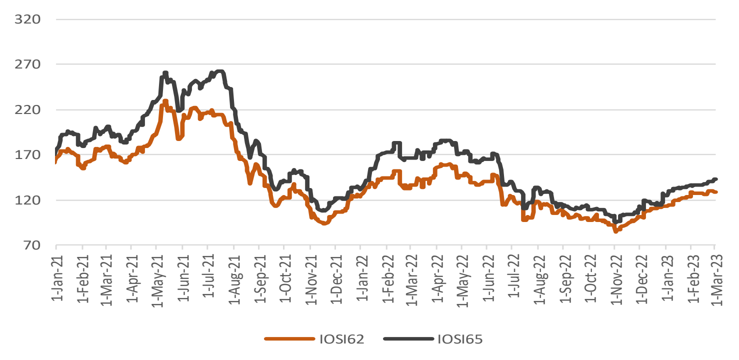
[1] Exchange rate applied: RMB/USD = 6.7522 [2]Last 12 months

[3] Weekly exchange rate applied: RMB/USD =6.7849

## 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

| Mar 2nd, 2023 | | FOT Qingdao (inc. 13% VAT), RMB/wet tonne | | | | | | | CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Index** | **Fe Content** | **November** | **December** | **January** | **February** | **MTD** | **QTD** | **YTD** | **November** | **December** | **January** | **February** | **MTD** | **QTD** | **YTD** |
| **IOPI62** | 62% Fe Fines | 714 | 822 | 856 | 892 | **869** | 881 | 880 | 92.18 | 109.43 | 117.00 | 121.64 | **120.06** | 120.90 | 120.58 |
| **IOPI58** | 58% Fe Fines | 635 | 711 | 751 | 799 | **813** | 792 | 798 | 82.39 | 95.17 | 103.34 | 109.79 | **113.29** | 109.35 | 110.17 |
| **IOPI65** | 65% Fe Fines | 865 | 935 | 968 | 1003 | **981** | 993 | 992 | 112.37 | 124.90 | 132.80 | 137.36 | **136.05** | 136.72 | 136.43 |

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

| Mar 2nd, 2023 | | CFR Qingdao, USD/dry tonne | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Index** | **Fe Content** | **November** | **December** | **January** | **February** | **MTD** | **QTD** | **YTD** |
| **IOSI62** | 62% Fe Fines | 93.05 | 108.92 | 119.76 | 127.73 | **108.46** | 108.65 | 122.50 |
| **IOSI65** | 65% Fe Fines | 102.40 | 116.83 | 132.39 | 138.06 | **118.92** | 119.60 | 139.50 |

## FREIGHT RATES

| Mar 1st, 2023 | | FREIGHT RATES - DRY BULK US$/wet tonne | | | | |
|---|---|---|---|---|---|---|
| **Route** | **Designation** | | **Change** | **Change %** | **Low [2]** | **High [2]** |
| **W. Australia - Qingdao** | C5 | **7.45** | **0.38** | **5.33%** | 3.57 | 16.77 |
| **Tubarao - Qingdao** | C3 | **17.83** | **0.68** | **3.97%** | 6.70 | 36.40 |

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

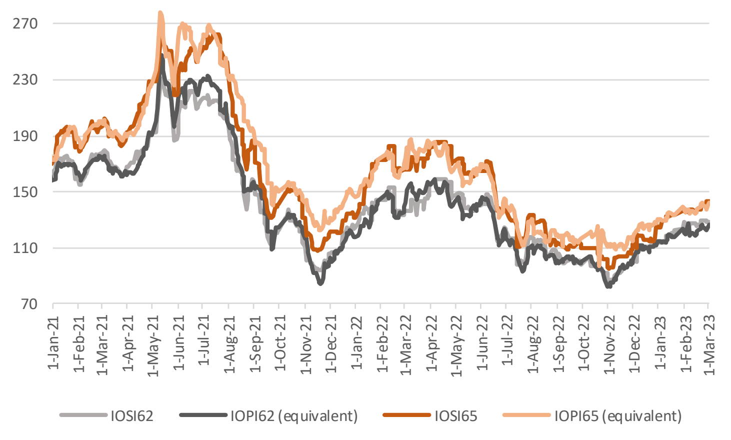
| Week Ending Feb 24th, 2023 | | FOT Qingdao (inc. 13% VAT), RMB/wet tonne | | | | | | | CFR Qingdao Equivalent (exc. 13% VAT), USD/dry tonne [1] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Index** | **Fe Content** | **November** | **December** | **January** | **February** | **MTD** | **QTD** | **YTD** | **November** | **December** | **January** | **February** | **MTD** | **QTD** | **YTD** |
| **IOPLI62** | 62.5% Fe Lump | 811 | 922 | 964 | 988 | **903** | 904 | 1035 | 100.83 | 117.06 | 126.47 | 129.95 | **116.26** | 116.88 | 138.76 |

## IRON ORE INDEX PREMIUMS/DISCOUNTS

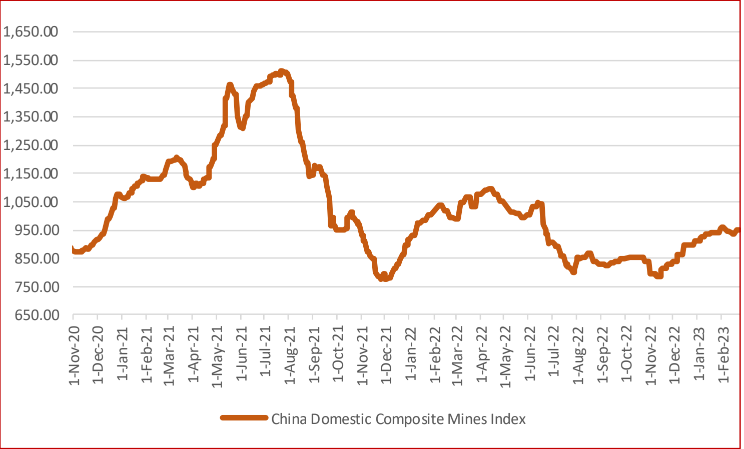
| Mar 2nd, 2023 | | PORT STOCK INDEX (RMB/WT) | |
|---|---|---|---|
| Index | **Fe Content** | **Spread to IOPI62** | **% Spread to IOPI62** |
| IOPI58 | 58% Fe Fines | **-99** | -10.63% |
| IOPI65 | 65% Fe Fines | **111** | 11.92% |

| Mar 2nd, 2023 | | SEABORNE INDEX (USD/DMT) | |
|---|---|---|---|
| **Index** | **Fe Content** | **Spread to IOSI62** | **% Spread to IOSI62** |
| **IOSI65** | 65% Fe Fines | **14.75** | 11.48% |

## IRON ORE INDEX COMPARISONS (USD/DMT)



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



## IRON ORE BRAND SPOT PRICE ASSESMENTS

| Mar 2nd, 2023 | PORT STOCK INDEX (RMB/WT) | | |
|---|---|---|---|
| | Price | Change | Diff to IOPI62 |
| Roy Hill | 874 | 3 | -57 |
| SIMEC Fines | 805 | 3 | -126 |
| PB Fines | 898 | 3 | -33 |
| Newman Fines | 900 | 3 | -31 |
| MAC Fines | 881 | 3 | -50 |
| Jimblebar Blended Fines | 796 | 3 | -135 |
| Carajas Fines | 1112 | 3 | 181 |
| Brazilian SSF | 896 | 3 | -35 |
| Brazilian Blend Fines | 912 | 3 | -19 |
| RTX Fines | 814 | 3 | -117 |
| West Pilbara Fines | 842 | 3 | -89 |

| Mar 2nd, 2023 | SEABORNE INDEX (USD/DMT) | | |
|---|---|---|---|
| | Price | Change | Diff to IOSI62 |
| Roy Hill | 123.95 | 0.00 | -4.50 |
| SIMEC Fines | 120.45 | 0.00 | -8.00 |
| PB Fines | 124.70 | 0.00 | -3.75 |
| Newman Fines | 127.60 | 0.00 | -0.85 |
| MAC Fines | 124.70 | 0.00 | -3.75 |
| Jimblebar Blended Fines | 117.10 | 0.00 | -11.35 |
| Carajas Fines | 158.00 | 0.00 | 29.55 |
| Brazilian SSF | 132.20 | 0.00 | 3.75 |
| Brazilian Blend Fines | 133.85 | 0.00 | 5.40 |
| RTX Fines | 118.35 | 0.00 | -10.10 |
| West Pilbara Fines | 122.70 | 0.00 | -5.75 |

| Mar 2nd, 2023 | PORT STOCK INDEX (RMB/WT) | | |
|---|---|---|---|
| | Price | Change | Diff to IOPI58 |
| SSF | 832 | 1 | 0 |
| FMG Blended Fines | 843 | 2 | 11 |
| Robe River | 843 | 1 | 11 |
| Western Fines | 846 | 1 | 14 |
| Atlas Fines | 840 | 1 | 8 |
| Yandi | 824 | 1 | -8 |

## IRON ORE INDEX NORMALISATION DIFFERENTIALS

### Port Stock Index Product Differentials (RMB/wet tonne)

| | Applicable range | Value | Change |
|---|---|---|---|
| 1% Fe | High Grade Fe 60 - 63% | 5.00 | 0.00 |
| | High Grade Fe 63 - 64% | 6.00 | 1.00 |
| | High Grade Fe 64 - 65% | 6.00 | 1.00 |
| | High Grade Fe 65 - 65.5% | 6.00 | 1.00 |
| | Low Grade Fe | 40.00 | -1.00 |
| 1% Alumina | High Fe Grade Al <2.25% | 84.00 | 0.00 |
| | High Fe Grade Al 2.25-4% | 5.00 | 0.00 |
| | Low Fe Grade Al <2.25% | 20.00 | -5.00 |
| | Low Fe Grade Al 2.25-4% | 15.00 | 0.00 |
| 1% Silica | High Fe Grade Si <4% | 26.00 | 0.00 |
| | High Fe Grade Si 4-6.5% | 7.00 | 2.00 |
| | Low Fe Grade | 49.00 | 0.00 |
| 0.01% Phosphorus | High Fe Grade 0.09%<P<0.115% | 12.00 | 2.00 |
| | High Fe Grade 0.115%<P<0.15% | 12.00 | 2.00 |
| | Low Fe Grade 0.09<P<0.1% | 5.00 | 0.00 |

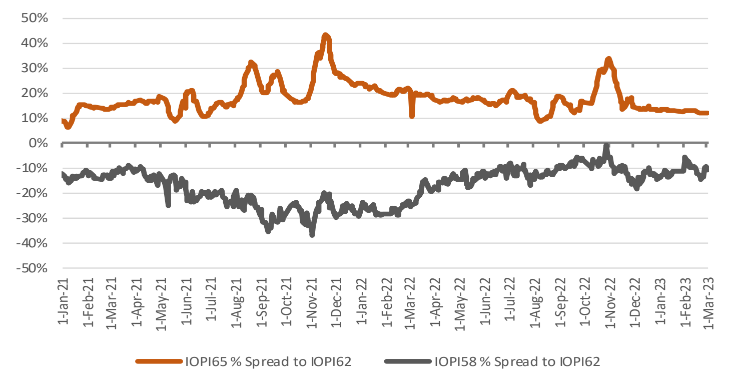
### Seaborne Index Product Differentials (USD/dry tonne)

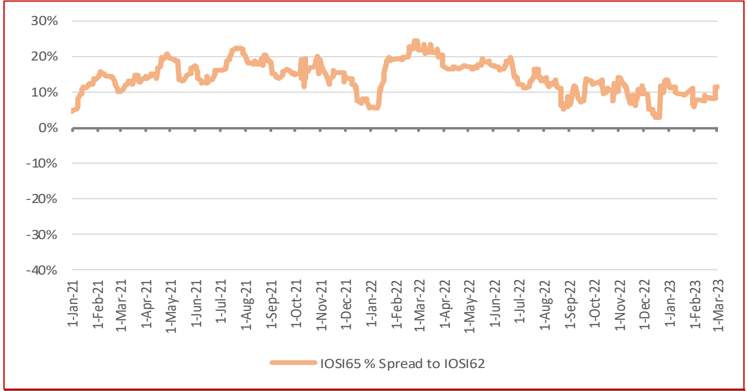
| | Applicable range | Value | Change |
|---|---|---|---|
| 1% Fe | High Grade Fe 60 - 63% | 3.00 | 0.00 |
| | High Grade Fe 63 - 64% | 4.00 | 0.00 |
| | High Grade Fe 64 - 65% | 4.00 | 0.00 |
| | High Grade Fe 65 - 65.5% | 4.00 | 0.00 |
| 1% Alumina | High Fe Grade Al <2.25% | 3.50 | 0.00 |
| | High Fe Grade Al 2.25-4% | 3.25 | 0.00 |
| 1% Silica | High Fe Grade Si <4% | 3.50 | 0.00 |
| | High Fe Grade Si 4 - 6.5% | 0.50 | 0.00 |
| 0.01% Phosphorus | High Fe Grade 0.09%<P<0.115% | 2.75 | 0.00 |
| | High Fe Grade 0.115%<P<0.15% | 4.75 | 0.00 |

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

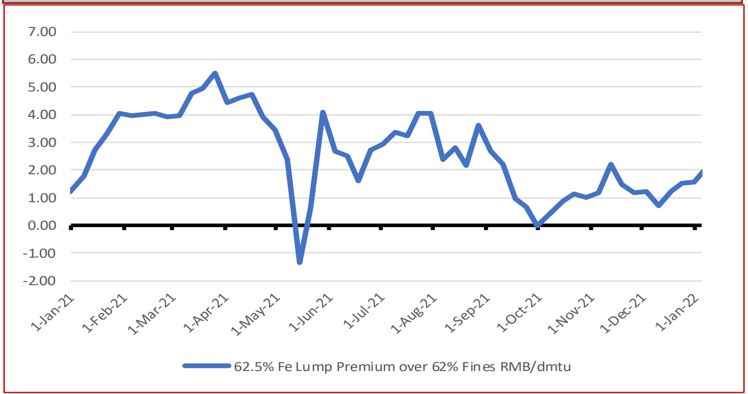
| Port | Value | Change | Port | Value | Change | Port | Value | Change | Port | Value | Change |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bayuquan | -100.00 | 0.00 | Fangcheng | -25.00 | 0.00 | Lanshan | 0.00 | 0.00 | Rizhao | 0.00 | 0.00 |
| Beilun | 0.00 | 0.00 | Jiangyin | -30.00 | 0.00 | Lianyungang | 0.00 | 0.00 | Shekou | 0.00 | 0.00 |
| Caofeidian | -10.00 | -5.00 | Jingtang | -10.00 | -5.00 | Majishan | 0.00 | 0.00 | Taicang | -30.00 | 0.00 |
| Dalian | 0.00 | 0.00 | Lanqiao | 0.00 | 0.00 | Qingdao | 0.00 | 0.00 | Tianjin | 0.00 | 0.00 |

## IRON ORE INDEX PREMIUMS/DISCOUNTS

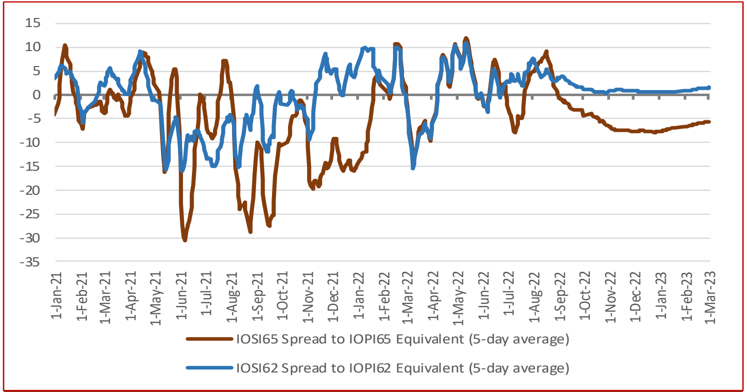




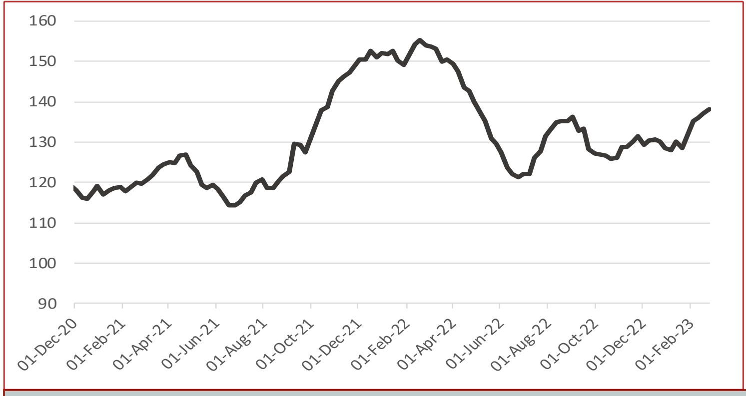
## WEEKLY IRON ORE PORT STOCK LUMP PREMIUM (RMB/DMTU)



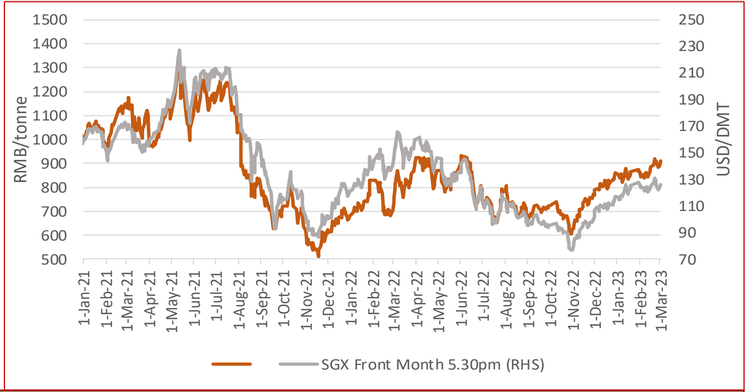
## IRON ORE SEABORNE TO PORT STOCK PRICE SPREADS (USD/DMT)



## TOTAL IRON ORE INVENTORIES AT CHINA PORTS (MILLION TONNES)



## FUTURE TRADING—FRONT MONTH CLOSING PRICE



## IRON ORE PORT INVENTORIES (MILLION TONNES)

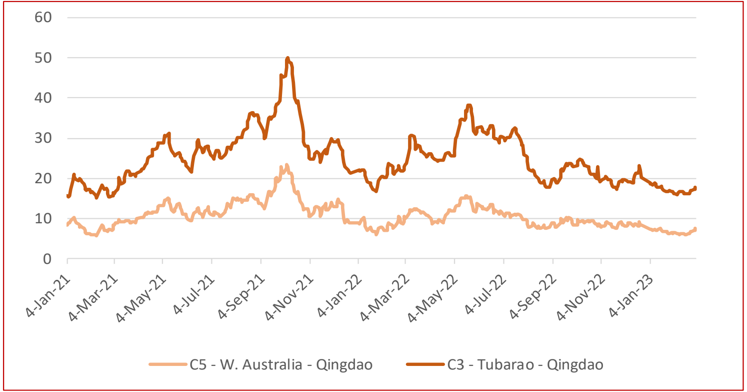
**Week Ending Feb 24th, 2023**

| Province | This week | Change % | Low [2] | High [2] |
|---|---|---|---|---|
| **Jingtang** | 12.04 | -0.82% | 9.84 | 19.20 |
| **Qingdao** | 25.94 | -1.14% | 9.41 | 26.24 |
| **Caofeidian** | 11.95 | 2.75% | 9.05 | 16.29 |
| **Tianjin** | 12.13 | 2.10% | 7.14 | 12.97 |
| **Rizhao** | 19.02 | -0.68% | 9.44 | 19.26 |
| **Total (35 Ports)** | 138.11 | 0.73% | 98.80 | 155.39 |

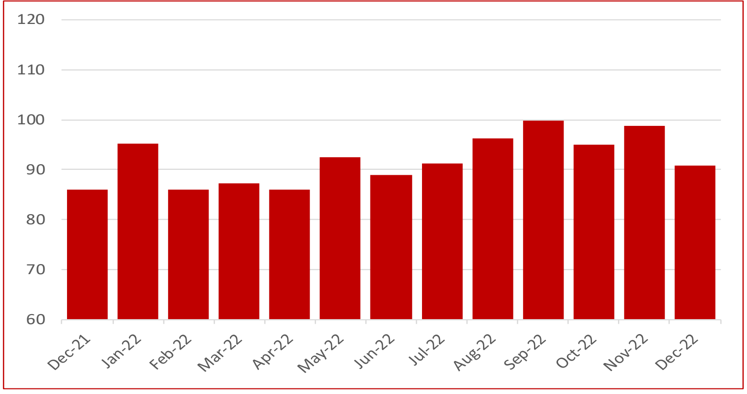
## IRON ORE FUTURES CONTRACTS

| | DCE (RMB/WMT) | | | SGX (USD/DMT) | | |
|---|---|---|---|---|---|---|
| **Closing Date** | Mar 2nd, 3pm close | | | Mar 2nd, 5:30pm | | |
| **Contract** | I2305 | Change | Change % | Mar. 23 | Change | Change % |
| Closing Price | 912.50 | 4.00 | 0.44% | 126.45 | 0.20 | 0.16% |
| Vol traded ('000 lots) | 37.94 | -15.55 | -29.07% | 3.52 | -0.14 | -3.89% |
| Open positions ('000 lots) | 85.57 | 0.88 | 1.04% | 26.34 | -1.15 | -4.17% |
| Day Low | 905.0 | 19.50 | 2.20% | 126.05 | 2.55 | 2.06% |
| Day High | 914.5 | 4.00 | 0.44% | 127.55 | 0.60 | 0.47% |

## 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 | 2023/2/24 | Change | Change % |
|---|---|---|---|
| ReBar HRB400 ϕ18mm | **4,260** | **80** | **1.91%** |
| Wirerod Q300 ϕ6.5mm | **4,510** | **80** | **1.81%** |
| HRC Q235/SS400 5.5mm*1500*C | **4,300** | **60** | **1.42%** |
| CRC SPCC/ST12 1.0mm*1250*2500 | **4,730** | **110** | **2.38%** |
| Medium & Heavy Plate Q235B 20mm | **4,370** | **70** | **1.63%** |
| GI ST02Z 1.0mm*1000*C | **4,960** | **90** | **1.85%** |
| Colour Coated Plate | **7,550** | **-30** | **-0.40%** |

## CHINESE STEEL MILL PROFITABILITY

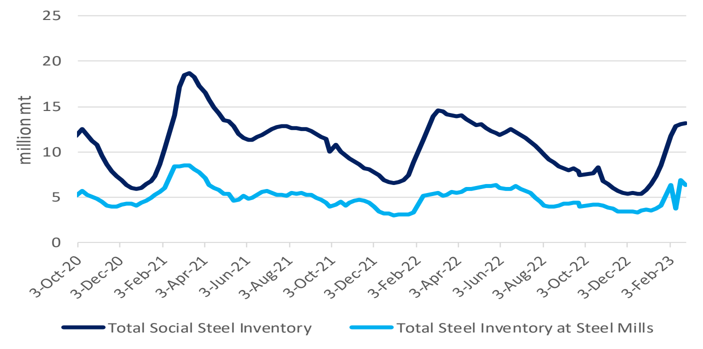
SMM Tracking of Steel Mill P&L - Rebar and Hot-rolled Coil (RMB/tonne)

| Category | Price | Change (WoW) | Note |
|---|---|---|---|
| MMi (Fe 62%), USD/mt exluding tax | **129.65** | **3** | Mmi CFR Equivalent index for 1st Feb |
| Coke | **2,960** | **0** | 2nd grade met coke, Tangshan, incl. tax |
| Steel Scrap | **3,200** | **50** | steel scrap (6mm) in Zhangjiagang, exl. tax |
| Billet Cost | **3,677** | **64** | Q234, incl. tax |
| Rebar cost - Blast furnace | **4,189** | **62** | calculated based on theoretical weight, incl. tax |
| Rebar profit - Blast furnace | **-19** | **-82** | based on Shanghai prices, incl. tax |
| Hot-rolled coil cost - Blast furnace | **4,190** | **61** | based on actual weight, incl. tax |
| Hot-rolled coil proft - Blast furnace | **100** | **-11** | based on Shanghai prices, incl. tax |

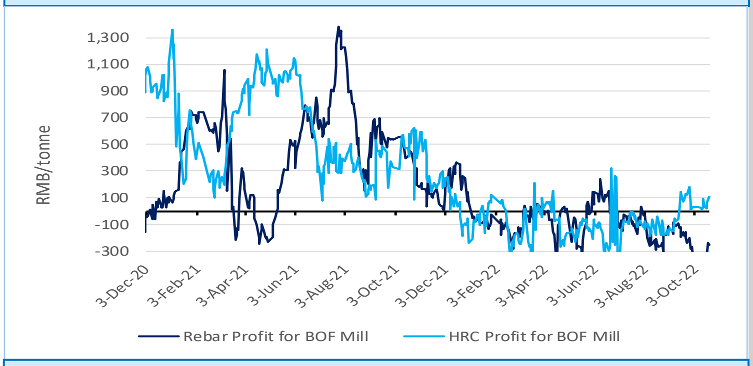
Note: 1. Costs in the table are caluclated based on todays market prices and facout our management, sales, financial and depreciations fe

2. The cost refers to average cost in the industry based on SMM's survey of small, medium and large mills in China

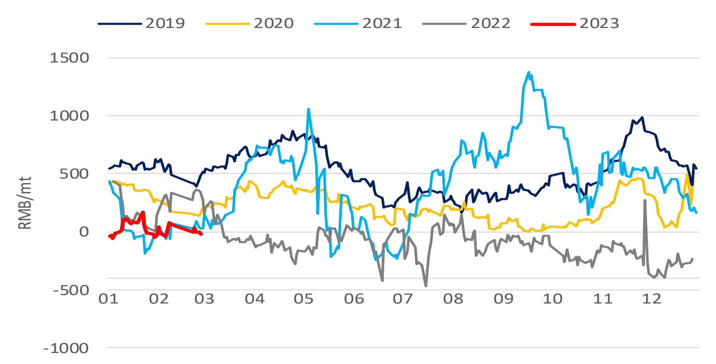
## CHINESE STEEL INVENTORIES



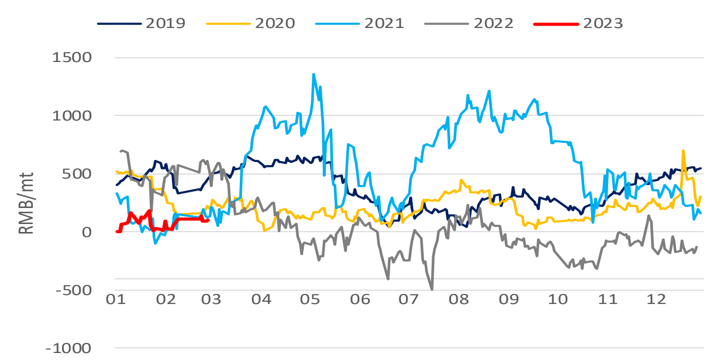
## CHINESE STEEL MILL PROFITABILITY



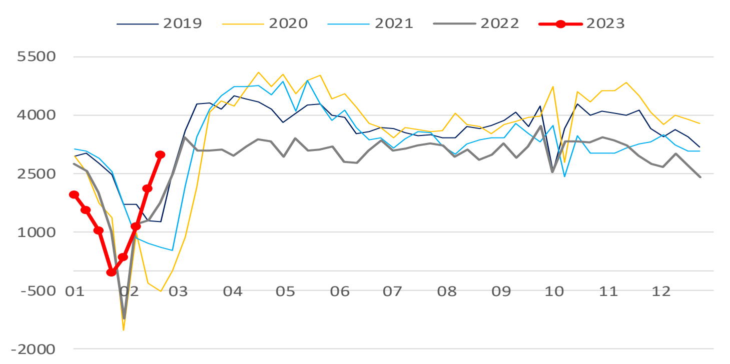
## CHINESE STEEL MILL PROFITABILITY—Rebar



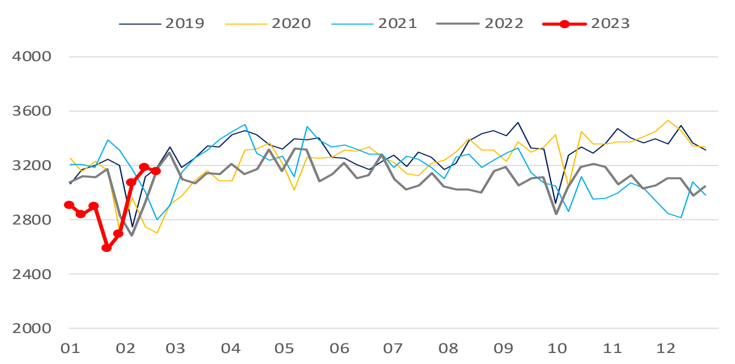
## CHINESE STEEL MILL PROFITABILITY—Hot-rolled Coil



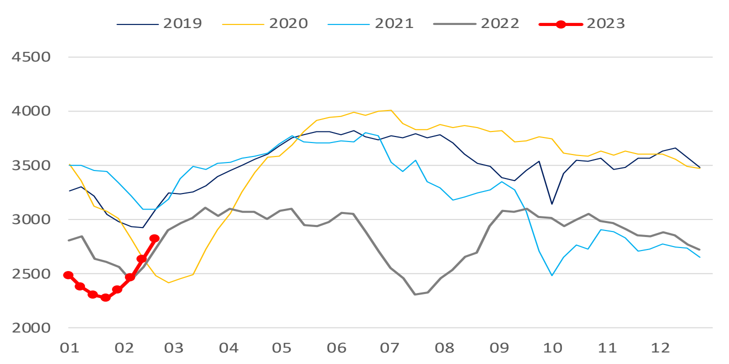
## CHINESE STEEL CONSUMPTION—Rebar



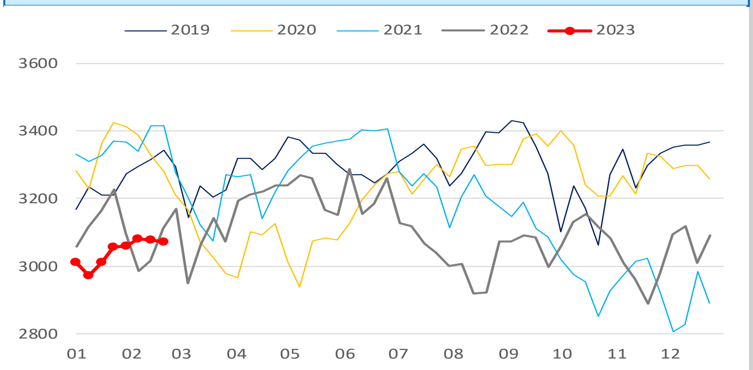
## CHINESE STEEL CONSUMPTION—Hot-rolled Coil



## 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)

| | 65% Fe Fines | 62% Fe Fines | 58% Fe Fines | 62.5% Fe Lump |
|---|---|---|---|---|
| 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%<br>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 |

### Iron Ore Index Compilation Rationale and Data Exclusions

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

**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

| Mar 2nd, 2023 | Specifications applied for 62% brand assessments | | | | |
|---|---|---|---|---|---|
| | Fe | Alumina | Silica | Phos | Moisture |
| Roy Hill | 60.88% | 2.35% | 4.45% | 0.055% | 9.26% |
| SIMEC Fines | 60.00% | 2.30% | 6.30% | 0.060% | 6.00% |
| PB Fines | 61.64% | 2.31% | 3.87% | 0.099% | 9.45% |
| Newman Fines | 62.49% | 2.31% | 3.98% | 0.090% | 7.72% |
| MAC Fines | 60.43% | 2.38% | 4.64% | 0.078% | 7.57% |
| Jimblebar Blended Fines | 60.87% | 2.95% | 4.53% | 0.111% | 7.32% |
| Carajas Fines | 64.90% | 1.39% | 1.82% | 0.080% | 7.78% |
| 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% |
| 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% |

| Mar 2nd, 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% |

### SEABORNE BRANDS

| | Specifications applied for 62% brand assessments | | | | |
|---|---|---|---|---|---|
| | Fe | Alumina | Silica | Phos | Moisture |
| Roy Hill | 60.70% | 2.30% | 4.90% | 0.055% | 8.00% |
| SIMEC Fines | 60.00% | 2.30% | 6.30% | 0.060% | 6.00% |
| PB Fines 62% | 62.00% | 2.60% | 4.30% | 0.090% | 9.50% |
| Newman Fines | 62.30% | 2.40% | 4.30% | 0.095% | 8.00% |
| MAC Fines | 60.80% | 2.35% | 4.40% | 0.075% | 7.80% |
| Jimblebar Blended Fines | 60.50% | 3.10% | 4.80% | 0.120% | 7.80% |
| 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 Blend Fines | 63.00% | 1.50% | 5.00% | 0.070% | 7.00% |
| 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% |

## BLOOMBERG TICKERS

| | PORT STOCK INDICES | |
|---|---|---|
| | FOT Qingdao (RMB/wet tonne) | CFR Qingdao Equivalent (USD/dry tonne) |
| IOPI62 | IRCNQ001 | IRCNQ004 |
| IOPI58 | IRCNQ002 | IRCNQ005 |
| IOPI65 | IRCNQ003 | IRCNQ006 |
| IOPLI62 | IRCN0036 | IRCN0037 |

| | SEABORNE INDICES |
|---|---|
| | CFR Qingdao (USD/DMT) |
| IOSI62 | IRCN0034 |
| IOSI65 | IRCN0035 |

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