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#### **Iron Ore Futures Weekly Report**

(Near term: Trading Buy)

LIANG Haikuan & WANG Jun, Research Institute of Founder CIFCO Futures

#### **Market Outlook and Trading Advice:**

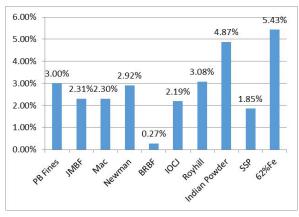
Iron ore led the rise in the entire commodity market this week, the resilience of the demand side was unexpected greatly boosted the short-term bullish market sentiment, long orders appear large increase into the market. The factory warehouse still maintained a fast destocking speed, the social inventory fell by 1 million tons on a weekly basis. Under the condition of reasonable profits, the production enthusiasm of long-process steel mills was still high, and the acceptance of premium of high-grade iron ore was improved to some extent, so they began to favor low-grade aluminum ore. In the case of tight supply of Brazilian mines, they increased the procurement of domestic mines and the production of molten iron increased further, reaching a record high in the same period. The departing port volume is still vigorous, the port inventory further went to a new low, it can be said that this week's iron ore futures market was significantly increased by high demand, low inventory and high basis, as well as the driving force from fund inflow. In the short term, the resilience of iron ore supply and demand can still be maintained. The shipment volume of the Australian Brazil mine has fallen back to below 20 million tons again. Mainstream miners represented by Rio Tinto are still carrying out the maintenance. About 1.7 million tons of shipments are expected to be affected. The inflection point of iron ore supply and demand is expected to appear around the end of May. When the external mine maintenance is completed and with the expectation of annual report, the shipping volume of Australian ore will once again show a sharp rise. At the same time, the south will be ushered in the rainy season, the high demand for finished materials will be unsustainable, and the production of molten iron will peak. The profit margin of steel mills will gradually narrow with the fall of finished material price, which will form a negative feedback to the price of iron ore and then transfer to the raw material. Overall, the short-term market sentiment will still be relatively strong, but the downside risks are gradually cumulative. We think it is not easy to catch up the high currently but there might be an arbitrage opportunity of long iron ore and short rebar.



#### 1. Iron Ore Market Review

As of May 15, 62% Fe traded at 93.25 USD per dry ton, a sharp increase of 5.43% from last week. The price of imported ore varieties also rose this week. In terms of Australian ore, the price increase of Australian ore this week is positively correlated with its own grade, and the price trend of medium and high quality Australian fins is generally stronger than the low quality Australian fines. Specifically, the price difference between PB fines and JMBF, and the price difference between FB fines and SS fines all expanded in this week. Under the current profit, the acceptance of the premium from high grade ore for steel mills factory has been improved. The overall price performance of Brazilian mines was still lower than Australian mines. BRBF was the weakest among the imported mainstream mines, with a cumulative increase of only 0.27%. The main reason why the price of Brazilian mines is still relatively weak in the current tight supply situation is that domestic mines have a certain substitution effect on them. At present, the relatively good profit level of steel mills makes them prefer low aluminum ore. However, due to the high premium and relatively tight supply of Brazilian ore, steel mills have correspondingly increased their procurement of domestic ore. The price of domestic refined fines rose strongly this week, among which the price trend of refined fines in Liaoning was stronger than Hebei. Benxi refined fines prices up to 5% and leading the rise in the domestic and foreign mining market this week. In addition to the local steel demand significantly improved, Hebei steel mills went to Liaoning region for cross-regional procurement again is the other main reason for its price increase. The refined fines price in Tangshan also increased significantly, although the increase was less than Liaoning refined fines, but it was still higher than the imported ore, mainly because the price of the same low aluminum resources is higher than the foreign ore. In the short term, steel mill output and profit level is still resilient, the domestic refined fines prices still have further room to be strengthen if the tighteen supply situation did not appear a significant improvement of Brazil mines.

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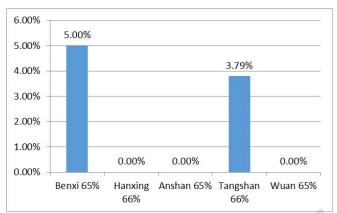


Chart: Up or down of weekly offshore ore prices

Source: Mysteel, Founder CIFCO Futures

Chart: Up or down of weekly onshore ore prices

			X						
	PB Fines	JMBF	Mac	Newman	BRBF	IOCJ	Royhill	Indian Powder	SSP
2020/5/8	666.0	607.0	651.0	686.0	743.0	822.0	649.0	616.0	540.0
2020/5/15	686.0	621.0	666.0	706.0	745.0	840.0	669.0	646.0	550.0
Weekly Up or Down	20.0	14.0	15.0	20.0	2.0	18.0	20.0	30.0	10.0
	3.00%	2.31%	2.30%	2.92%	0.27%	2.19%	3.08%	4.87%	1.85%

Chart: Weekly offshore ore prices in Rizhao port

Source: Mysteel, Founder CIFCO Futures

Onshore Ore Prices										
	Benxi 65%	Hanxing 66%	Anshan 65%	Tangshan 66%	Wuan 65%					
2020/5/8	600.0	797.0	620.0	633.0	700.0					
2020/5/15	630.0	797.0	620.0	657.0	700.0					
Weekly Up or Down	30.0	0.0	0.0	24.0	0.0					
	5.00%	0.00%	0.00%	3.79%	0.00%					

Chart: Weekly onshore ore prices

Source: Mysteel, Founder CIFCO Futures

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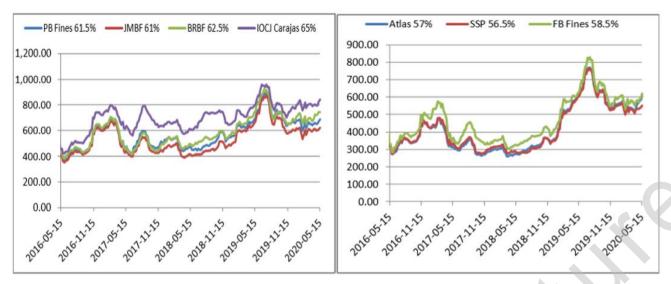
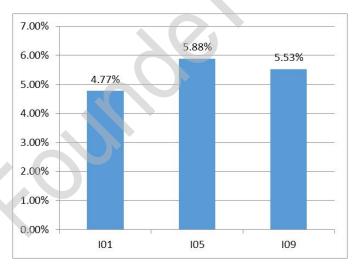


Chart: Medium and high-grade iron ore spot price

Source: Mysteel, Founder CIFCO Futures

Chart: Low-grade iron ore spot price

In futures market, the prices of iron ore contracts in the near and forward months all rose significantly this week. Specifically, the increase of each contract increased gradually from the forward month to the nearby month. Due to the near delivery of the i2005, it converged significantly to the spot price. The i2009 is up 5.53% this week. From the trading volume prespetieve, the i2005 is close to the delivery, this week's decline further increased to about 75%. The average daily volume have increased significantly of i2009 and i2101, among which the increase of forward month contract was more obvious. In terms of open interest, the i2005 continue to reduce its positions, the i2009 and 2101 have different degrees of increased its positions. In general, the market showed an increase in the trading volume with the ideal momentum and price combination, the market enter into a bullish mood.



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Chart: Up or down of weekly futures prices Source: Wind, Founder CIFCO Futures

Contract	0 pen	Cbse	Settle	Chg	Vol (10,000 bts)	Vo 1Chg	Tumover (10,000 RM B)	0 I (10,000 bts)	0 IChg
2005	688.5	729	724.5	5.88%	0.04624	-0.755430183	3197.676	0.5273	-13.12%
2009	633	668	656	5.53%	86.2225	0.104838279	5539717.36	86.8507	26.43%
<b>2</b> 101	586.5	614.5	603.5	4.77%	4.34648	0.533420356	258218.106	9.8332	2.74%

Chart: Weekly data of iron ore futures Source: Wind, Founder CIFCO Futures



Chart: Technical chart of i2005 Source: Wind, Founder CIFCO Futures

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Chart: Price of contract 05 and price forecast Source: Wind, Founder CIFCO Futures

#### II. Basis and Spread

In this week, futures price was generally stronger than spot price, the basis of the contract fell collectively. As of May 15, the basis difference of the i2005 was 27.7 RMB/ton, down 18.7 RMB/ton from last week. The i2009 contract basis was significantly repaired this week, down 13.2 RMB/ton to 88.7 RMB/ton. In terms of price difference between varieties, the IOCJ Carajas and PB fines narrowed slightly by 2 RMB/ton to 154 RMB/ton. The PB fines and JMBF was increasing by 6 RMB/ton to 65 RMB/ton. The PB fines and SS fines was increasing by 10 RMB/ton to 136 RMB/ton. In general, PB's premium has strengthened significantly this week. As of the end of this week, the 09-01 contract spread widened 7 RMB/ton to 53.5 RMB/ton. The 05-09 contract spread widened 5.5 RMB/ton to 61 RMB/ton. The trend of strong nearby contract and weak forward contract is still occurring between contracts.

# 2021 IFO ONDER CONFORDES

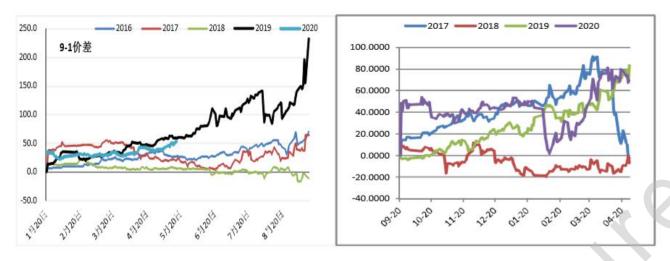


Chart: Spread of contract 09 and 01 Source: Wind, Founder CIFCO Futures Chart: Spread of contract 05 and 09 Source: Wind, Founder CIFCO Futures

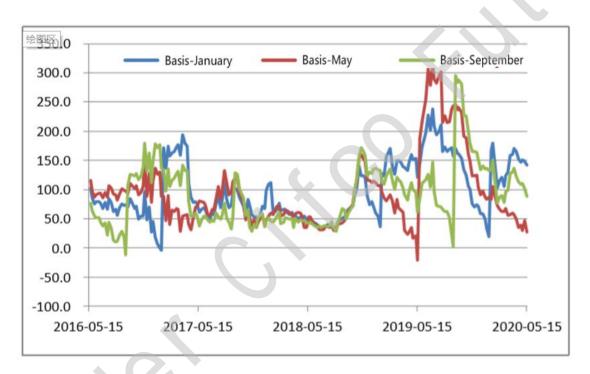


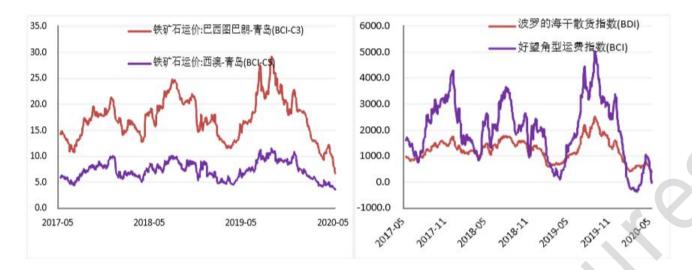
Chart: Basis of spot iron ore (PB fines 61.5%) in Rizhao port

Source: Wind, Founder CIFCO Futures

#### III. Shipping Market Review

BDI and BCI continued the previous downward trend this week. As of May 14, BDI was at 393, with a weekly decrease of 121 (23.54%). BCI turned negative again this week, with a decrease of 509. Freight prices also fell further this week. The freight from Tubalang to Qingdao was 6.7 USD/ton, down 1.50 USD/ton (17.85%). Western Australia to Qingdao dropped 0.30 USD/ton (7.97%) to 3.63 USD/ton.

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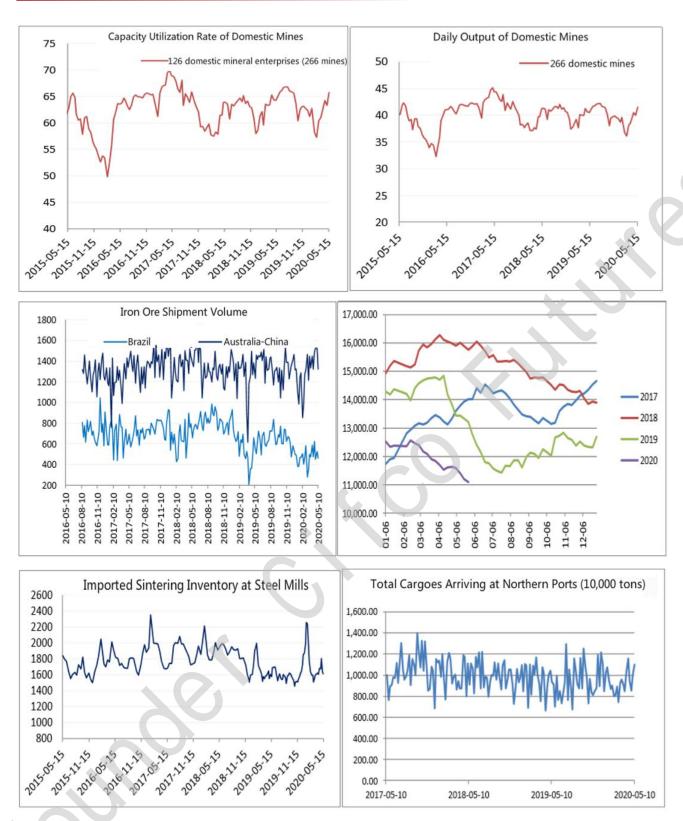


Source: Wind, Founder CIFCO Futures

#### IV. Supply

After a short period of decline before the May holiday, the supply of domestic mines returned to the upward trend after the holiday. The latest data (May 15) showed that the operating rate of 126 mining enterprises in China was 65.77%, up 2.46% higher before the holiday. The average daily output of domestic mines was 415,000 tons, an increase of 15,600 tons/day. In terms of foreign mining, the total shipment volume of Australian Brazil mines was decreased by 286,000 tons to 22.989 million tons, while the shipment volume of Australian mines increased by 1.477 million tons to 18.508 million tons. Among them, the shipment volume to China was 15.250 million tons, increasing by 335,000 tons. The volume of Brazilian mine shipments fell significantly by 1.763 million tons to 4.481 million tons and the short-term fluctuations are still large. The latest northern import mines number was 10.99 million tons, an increase of 990,000 tons. As of May 15, the imported mine inventory of 45 ports in China was 110.949 million tons, dropped 0.9406 million tons. The inventory of Australian mine was 63.9519 million tons, an increase of 1.6756 million tons (weekly); the inventory of Brazil mine was 22.5935 million tons, dropped 2.7025 million tons (weekly). The inventory of trade mine was increased by 262700 tons to 53.8917 million tons, pellets increased by 315800 tons to 6.4526 million tons, lump ore increased by 163300 tons to 20.7034 million tons. In terms of steel mill inventory, the total inventory of imported ore sintering fines of 64 sample steel mills was 16.1332 million tons with a weekly increase of 118,500 tons.

### 2021 IFO ONDER CINCOIF REPORES



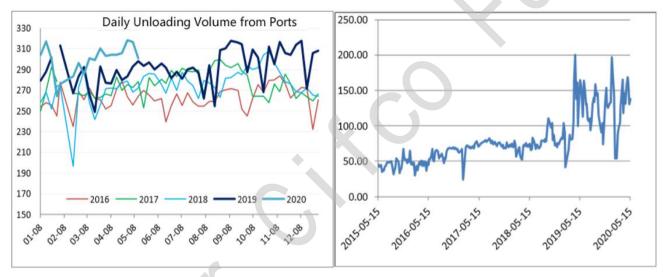
Source: Wind, Founder CIFCO Futures

#### 2021 IFOUNDER CINCOIF BEPURES

#### V. Demand

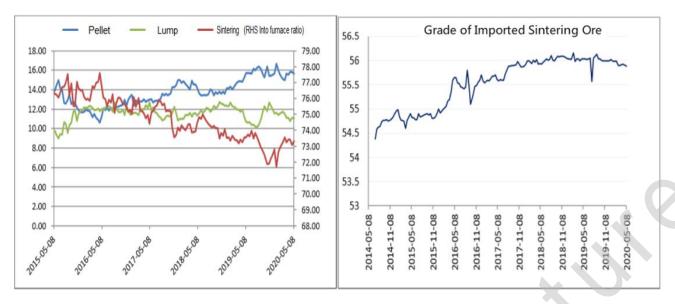
The latest phase (May 8) steel mill sinter ore into the furnace grade was 55.88%, down 0.03%. The ratio of pellets, sinter and lump ore into furnace was 15.63%, 73.32% and 11.04%, compared with 15.82%, 73.06% and 11.12% respectively in the previous period. Due to the recent small contraction in the profit margin of the long process, the steel mill further reduced the ratio of pellets into furnace, and the amount of sintering increased.

After the resumption of high speed charging after May holiday, the steel mill's willingness of replenishment fell, with the average daily departing port volume decreasing by 158,300 tons to 3,060,100 tons. After the holiday, the average daily spot trading volume of major ports in China also showed a significant decline. The average daily trading volume after the holiday was around 1.3 million tons/day, which was significantly lower than the level around 1.6 million tons/day before the holiday



Source: Wind, Founder CIFCO Futures

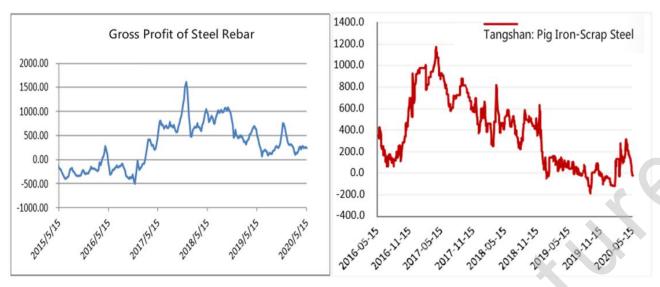
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Source: Mysteel, Founder CIFCO Futures

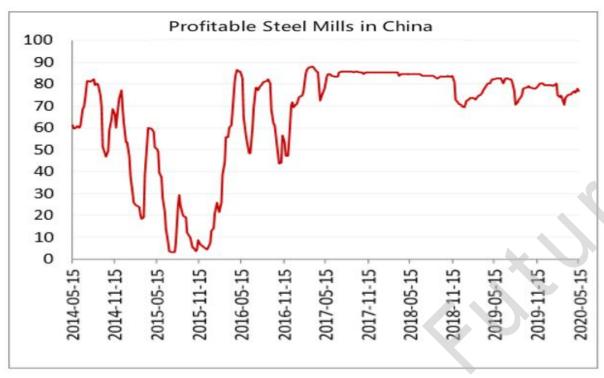
Due to the stronger-than-expected demand, the price of finished steel continued to rise slightly this week, but the price of scrap steel, coke and iron ore were increased more obviously, making the profit level of the long-process steel mill narrow slightly, but the gross profit of rebar still maintained in the range of 200-250 RMB/ton. At present, the inventory of finished products was still high and the production was still continued to rebound. With the approaching of the southern rainy season, the room for further improvement of the apparent consumption of finished products is limited, and the profit level of the long-process steel mills is difficult to further expand. In the near future, the long process steel plant has a strong desire to increase production, which is mainly realized by increasing the amount of scrap steel added, which leads to the continuous rise of scrap steel price. The continuous narrowing of the rebar and steel scrap price makes the profit of the short process electric furnace compressed obviously. It is basically near the break-even point currently, but the production enthusiasm is still high. The average operating rate of 71 electric arc furnace steel mills nationwide was 67.30%, up 4.02% and the weekly crude steel output rose 3.8%. In general, the growth rate of electric furnace output has recovered to a high level, although there is still a certain gap compared with the same period last year, but in the case of a relatively strong scrap price in the short term, the room for further growth will be limited. The increase in the cost of molten iron was slightly larger than that of scrap steel. The price difference between pig iron and scrap steel increased slightly, and the marginal effect of scrap steel on the replacement of molten iron was strengthened. The proportion of profitable steel mills in China was 76.69%, unchanged from last week.

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Source: Wind, Founder CIFCO Futures

The operating rate of blast furnace in 163 steel mills nationwide was 70.44%, up 0.69% from last week. The steel demand continued to be strong and the inventory reduction of finished steel was still relatively smooth. The five major social steel inventories fell by 1 million tons. The production enthusiasm of steel mills is still high, and the production of finished steel increases significantly. On this Friday, the output of five major steel varieties rose by 292,800 tons weekly, among which the weekly output of rebar exceeded 3.8 million tons at once. When the current output has recovered to the level of the same period last year, it is also at the highest level of the same period in history. The average daily production of molten iron also continued to rise this week, increasing by 21,600 tons to 2,394,100 tons, which continued to refresh the highest weekly output so far this year. The current output has exceeded that of the same period last year, which is the highest in the history of the same period, and the growth rate of output will gradually slow down. Steel mills maintain high consumption of imported ore and domestic refined fines, but the procurement is still based on demand, and the willingness to actively replenish stock is not strong. The imported sintering inventory of sample steel mills continued to fall this week, dropping by 118,500 tons to 16.1332 million tons. Overall, there is still room for further improvement in the output of steel mills, and the toughness of iron ore demand will continue in the short term. However, the production of molten iron has gradually approached the peak, so the room for further improvement in iron ore demand may be limited.



Output (10,000 tons)	Steel Rebar	Wire Rod	Hot Rolling	Cold Rolling	Medium Plate
2020. 05. 07	368. 98	153. 28	293.83	74.11	136.8
2020. 05. 14	381. 31	157. 56	307.51	72.87	137. 03
Weekly Up or Down	12 <b>.</b> 33	4. 28	13.68	-1.24	0. 23

Source: Mysteel, Founder CIFCO Futures

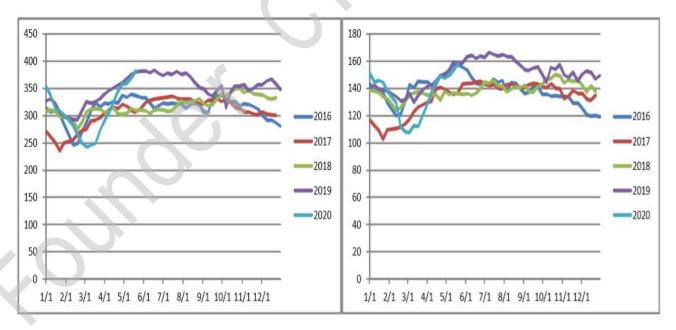


Chart: Weekly output of steel rebar (10,000 tons)

Chart: Weekly output of wire rod (10,000 tons)

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Source: Mysteel, Founder CIFCO Futures

Source: Mysteel, Founder CIFCO Futures

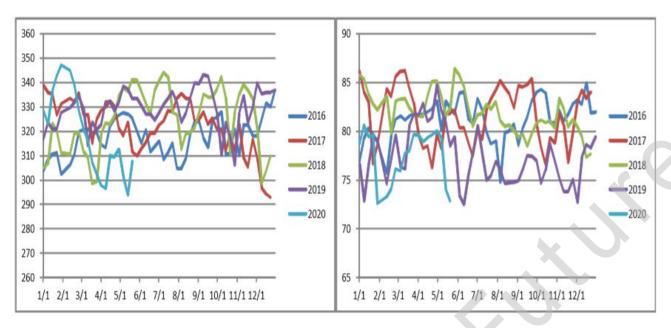


Chart: Weekly output of hot rolling (10,000 tons)

Source: Mysteel, Founder CIFCO Futures

Chart: Weekly output of cold rolling (10,000 tons)

Source: Mysteel, Founder CIFCO Futures

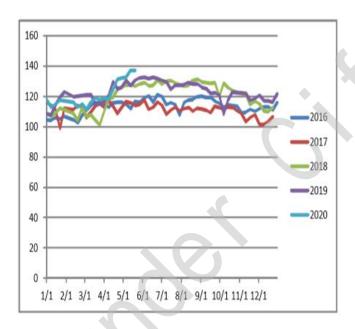


Chart: Weekly output of steel plate (10,000 tons)

Source: Mysteel, Founder CIFCO Futures

Output (10,000 tons)	Steel Rebar	Hot Rolling	Medium Plate	Wire Rod	Cold Rolling
2020. 05. 07	949. 22	325.63	107.09	293. 76	134. 81
2020. 05. 14	893. 2	305.96	103.33	274. 42	133. 53
Weekly Up or Down	-56. 02	-19.67	-3.76	-19.34	-1. 28

Chart: Social inventory (10,000 tons) Source: Mysteel, Founder CIFCO Futures

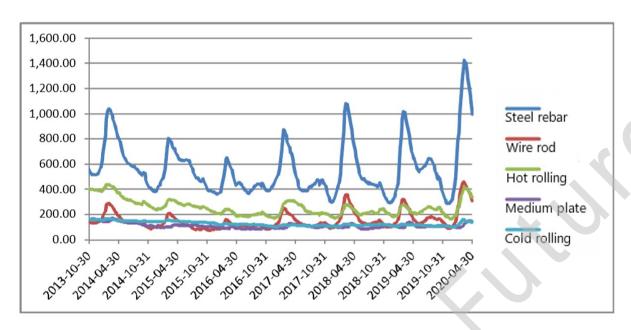


Chart: Weekly social inventory of five steel products

Source: Wind, Founder CIFCO Futures

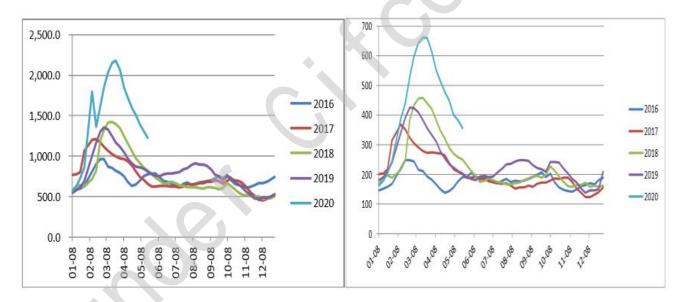


Chart: Total inventory of steel rebar (10,000 tons)

Chart: Total inventory of wire rod (10,000 tons)

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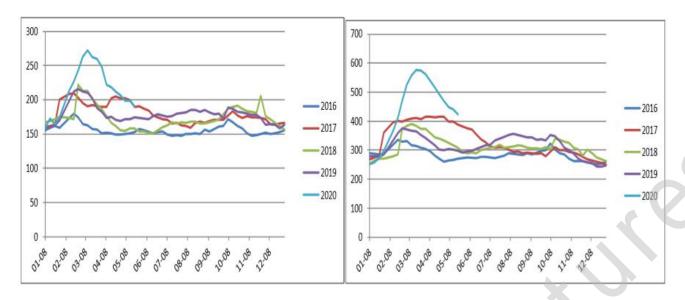


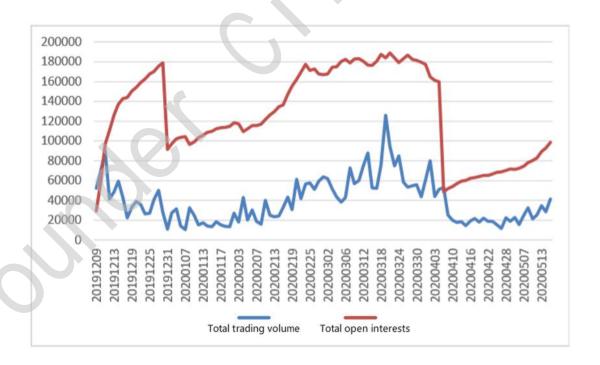
Chart: Total inventory of steel plate (10,000 tons)

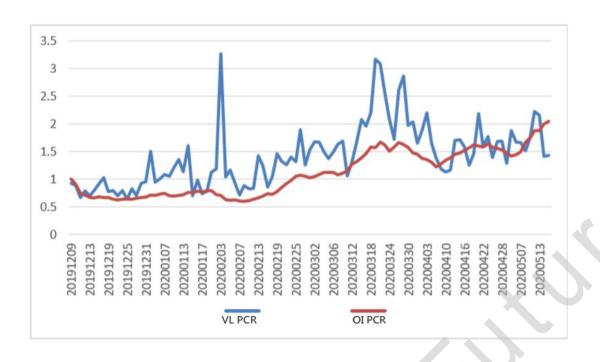
Chart: Total inventory of hot rolling (10,000 tons)

#### VI. Iron Ore Options

#### 6.1 Options trading and open interest analysis

The daily average trading volume of iron ore options were 30,287 lots, up 5,885 lots from last week and the daily average open interest were 88,842 lots, up 13,779 lots compared with last week. The put-call ratio of the daily average trading volume was 1.79, up 0.18 and the average daily open interest was 1.91, up 0.37 from the previous week.





#### 6.2 Volatility analysis

The implied volatility of iron ore options declined this week with daily average of 35.72%, down 1.43%.

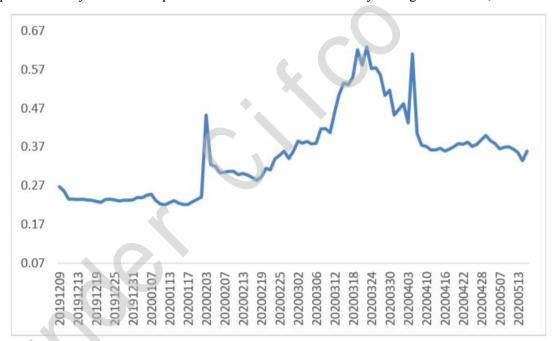


Chart: Implied volatility of iron ore options

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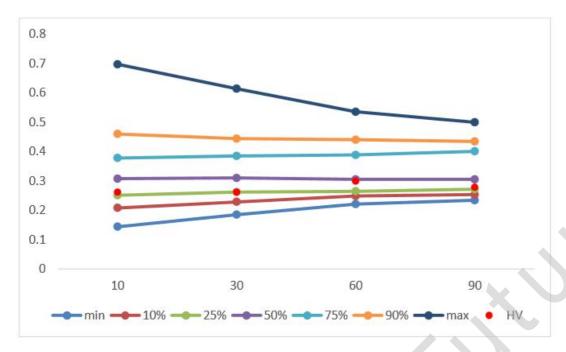


Chart: Volatility cones of iron ore options

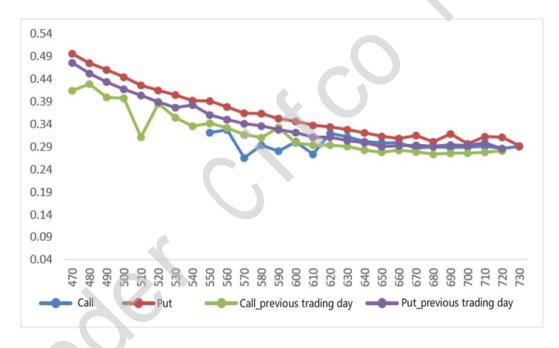


Chart: Implied volatility of nearby contract

### 2021 IFO ONDER CONFORDES

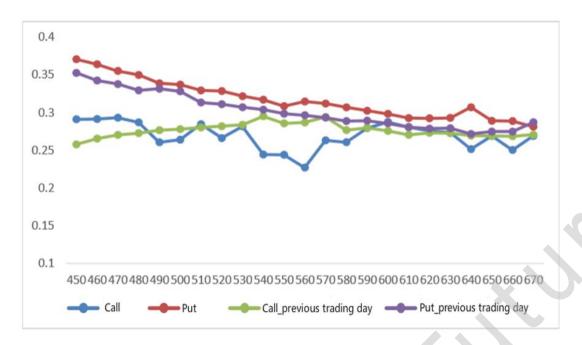


Chart: Implied volatility of forward contract

#### 6.3 Options strategy

The implied volatility of iron ore options has returned to the normal level after the recent gradual decline. The volatility of iron ore futures is likely to rise again in the near future, so we can construct a long straddle strategy. The futures market price will show a high probability of falling from its high. We think the short-term peak will appear, so the strategy of selling OTM call options can be used.

#### I. Sell strangle options

# 2021 IFOUNDER CITY COLF REPORTES

分析买卖	名称	手数	价格	型	价格	买价	卖价	IV	Delta	Gamma	Vega	Theta	合约乘数
<b>✓</b> 买	铁矿石期权I2009-C-670	1	卖价	٧	69.7	35.6	69.7	42.43%	0.5326	0.0031	1.2535	-0.3123	100
✓ 买	铁矿石期权I2009-P-670	1	卖价	٧	42.0	21.0	42.0	24.38%	-0.4653	0.0031	1.2535	-0.3122	100
	田保存策略											最大收益: +∞	最大亏损: -11,170.00
									总Delta: 6.	.7096 总Gamm	a: 0.6213	总Vega: 252.217	7 总Theta: -61.5447

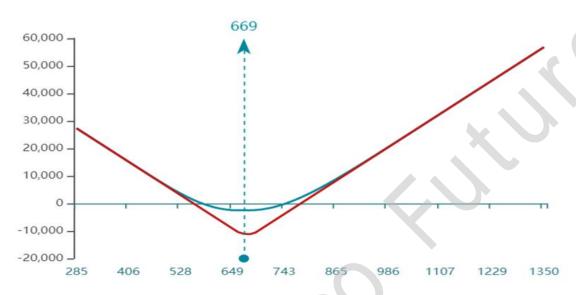


Chart: Break-even balance

#### II. Sell put options

删除分析买卖 名称	手数 价格类型	价格	买价	卖价	IV	Delta	Gamma	Vega	Theta	合约乘数
※ ▼ 卖 铁矿石期权I2009	-C-680 1 🛊 买f	30.8	30.8	58.0	39.21%	0.5022	0.0031	1.2628	-0.3122	100
田加入标的	田保存策略								最大收益	: 3,080.00 最大亏损: -∞

总Delta: -50.2008 总Gamma: -0.3105 总Vega: -127.0380 总Theta: 30.7729

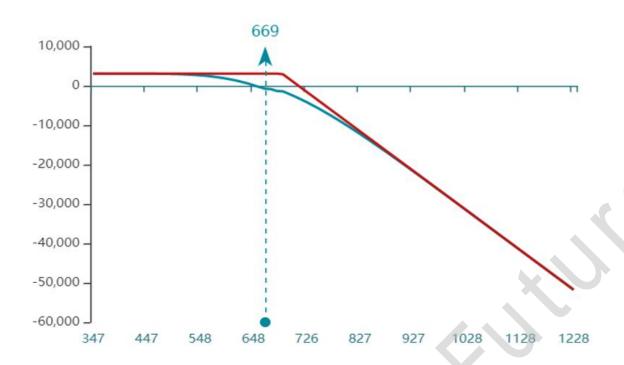


Chart: Break-even balance

VII. Open interests of top futures firms

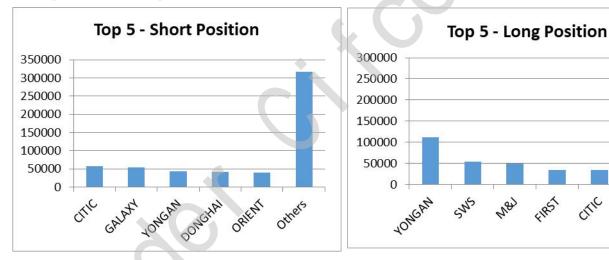
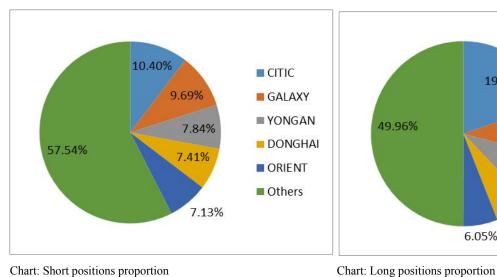


Chart: Top 5 of short positions

Chart: Top 5 of long positions

Source: Wind, Research Institute of Founder CIFCO Futures

# 2021 IFO UNDER CONFORMES



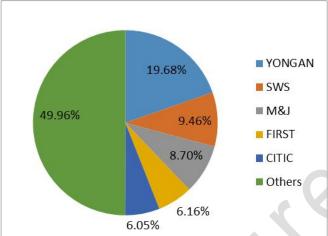


Chart: Short positions proportion

Source: Wind, Research Institute of Founder CIFCO Futures

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