

## Iron Ore Futures Weekly Report

(Near term: Trading Buy)

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### Market Outlook and Trading Advice:

Iron ore futures price was basically following the factory warehouse price this week. Affected by the fall of the coke and coal prices in the week, the futures price broke the 600 mark. Towards the end of the week, the global stock market recovery, the rise in crude oil prices, together with better raw materials data, iron ore future price was soon to recover from previous decline. The factory warehouse continued to substantially destocking this week and the demand remained strong, the overall valuation of iron elements to form a support. In the last week before the festival, steel mills were more active in replenishing iron ore stocks, with an obvious increase in the daily departing port volume and an obvious increase in the factory inventory level. But from the actual transaction situation, steel mills procurement is still mainly concentrated in the low-grade ore, FB fines is still relatively strong, high-grade ore procurement enthusiasm is not high. Iron ore short term still maintain the situation of prosperity on both supply and demand after the festival, but the room for further increase in the production of molten iron has been limited, the factory warehouse production has started to fall this week. The profit margin of steel mills is also difficult to further expand, the demand is lack of driving the current relatively high iron ore prices further upward momentum. With the gradual accumulation of iron elements from overseas to China, the subsequent pressure on iron ore price will become more obvious. Once the domestic demand for steel for end user declines, the negative feedback transmission to the price of raw materials will be relatively rapid. The downside risk of iron ore after the festival will gradually accumulate, the main idea will be short on high of i2009 and we think the safety margin of shorting above 610 is appropriate. However, considering the short-term iron ore demand is still resilient, so i2009 is still appropriate to find short selling opportunities in the rebound, we maintain the idea of shorting above 620. We also recommend a selling of slightly OTM call in order to obtain premium.

### 1. Iron Ore Market Review

As of April 30, Platts 62% Fe traded at 83.95 USD per dry ton, up slightly by 0.06% from last week. The prices of imported ore varieties also rose in different degrees in the last week before the festival. In terms of Australian mines, the price of medium and high-quality Australian fines shows a collective strengthening. The NHGF with a big price correction last week has the largest increase of more than 1% this week, while PB fines fell last week has the smallest increase this week. The overall trend of low-quality Australian fines is still relatively strong, SS fines is still the main force of steel mills replenish stock before the festival, but due to difference degree of the inventory level and the concentration of inventory rights make its price trend in Tangshan and Shandong region differentiation. The price of different ports will continue in the short-term. The overall price performance of Brazilian ore is less than Australian ore this week, in which the IOCG Carajas is the weakest variety in the mainstream of imported ore, the cumulative increase is only 0.25%. Domestic ore prices also presented a stable rising situation in the last week before the festival, Hebei fines price is generally stronger than Liaoning. Tangshan, Qianxi, Qianan and other places of dry base tax prices have increased, mainly because the current domestic fines is more cost-effective compared with the oversea ore, so that the steel mills are more favorable to it. In addition to the approach of May festival, the intention to supplement the warehouse has been further enhanced. The northeast fines price in China is still stable before the festival, the competition between the mine and the steel mill is more intense. Compared with other major producing areas, the current price of Liaoning fines has been low, so the intention of increasing the mine price will be obvious. Although the long agreement of the steel mill's supply has begun to tighten, but due to their own profit level restrictions on the price of raw materials is still more sensitive and the price still maintain unchanged.

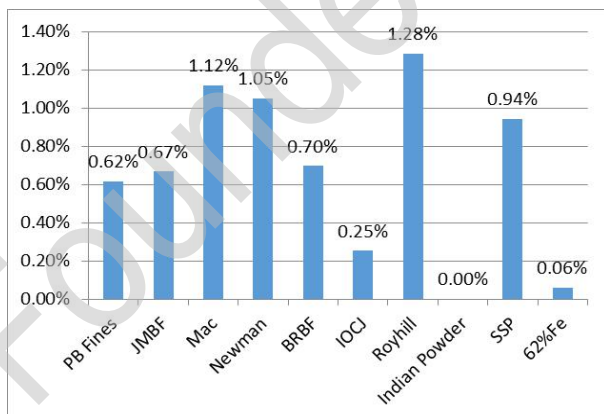


Chart: Up or down of weekly offshore ore prices

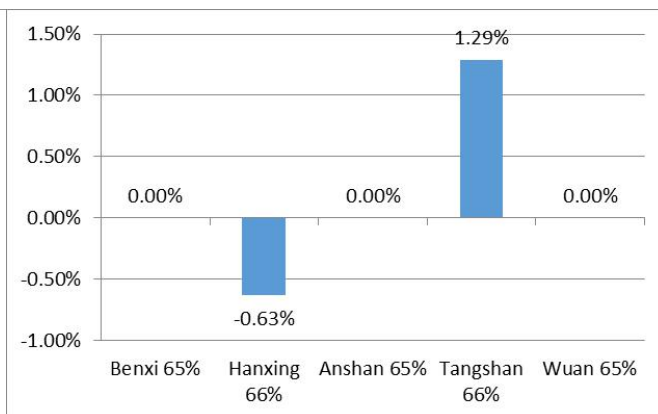


Chart: Up or down of weekly onshore ore prices

Source: Mysteel, Founder CIFCO Futures

		Offshore Ore Prices								
		PB Fines	JMBF	Mac	Newman	BRBF	IOCJ	Royhill	Indian Powder	SSP
2020/4/24		649.0	600.0	626.0	666.0	719.0	793.0	623.0	604.0	530.0
2020/4/30		653.0	604.0	633.0	673.0	724.0	795.0	631.0	604.0	535.0
Weekly Up or Down		4.0	4.0	7.0	7.0	5.0	2.0	8.0	0.0	5.0
		0.62%	0.67%	1.12%	1.05%	0.70%	0.25%	1.28%	0.00%	0.94%

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%
2020/4/24		610.0	796.0	630.0	621.0	680.0
2020/4/30		610.0	791.0	630.0	629.0	680.0
Weekly Up or Down		0.0	-5.0	0.0	8.0	0.0
		0.00%	-0.63%	0.00%	1.29%	0.00%

Chart: Weekly onshore ore prices

Source: Mysteel, Founder CIFCO Futures

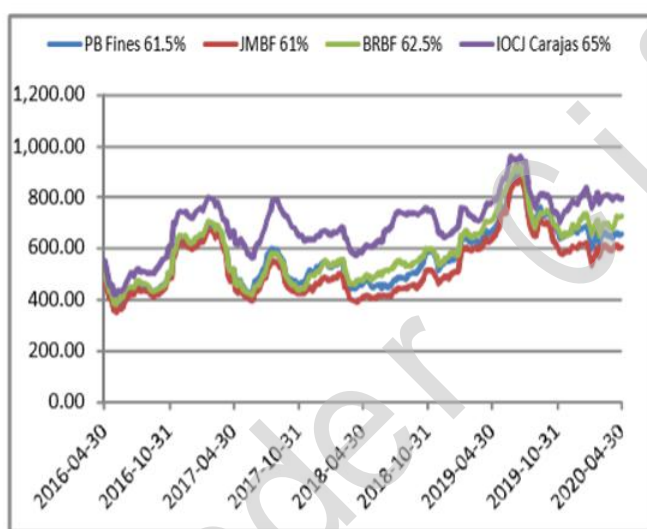


Chart: Medium and high-grade iron ore spot price

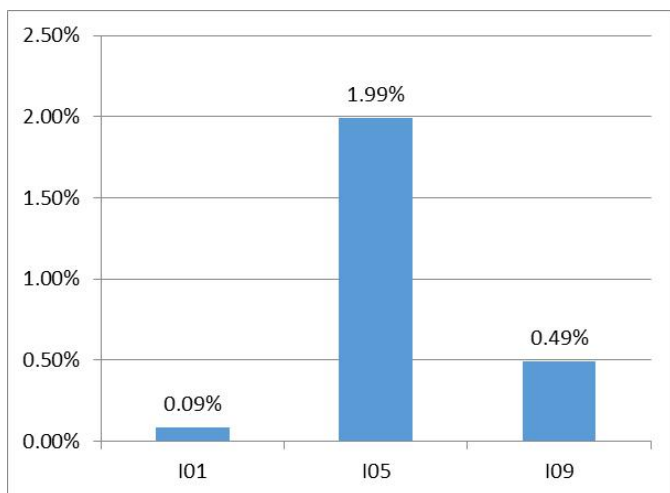
Source: Mysteel, Founder CIFCO Futures



Chart: Low-grade iron ore spot price

In futures market, the prices of iron ore contracts in the near and forward months all rose in different degrees this week, with the increase gradually expanding from the forward to the near months. Due to the near delivery of the i2005, the convergence to the spot price is obvious and the gains are the most this week. The

i2009 was up 0.49% this week. From the trading volume perspective, the i2005 is close to delivery and the trading volume was still maintained the decline in the vicinity of 50%. The i2009 daily average trading volume has shrunk, the market sentiment was strong on the sidelines before the holiday. In terms of open interest, i2005 was substantially reduce its positions before the holiday and the i2009 and i2101 also showed different degrees of decline in positions, short-term funds temporarily left the market.



	Close Price (RMB/ton)		
	IO1	IO5	IO9
2020/4/24	569.5	678.0	607.0
2020/4/30	570.0	691.5	610.0
Weekly Up or Down	0.5	13.5	3.0
	0.09%	1.99%	0.49%

Chart: Up or down of weekly futures prices

Source: Wind, Founder CIFCO Futures

	Trading Volume (Lot)			Open Interest (10,000 lot)		
	IO1	IO5	IO9	IO1	IO5	IO9
2020/4/24	2.54	3.66	91.13	9.32	5.61	63.39
2020/4/30	2.73	1.85	78.18	9.15	1.06	58.77
Weekly Up or Down	0.19	-1.81	-12.95	-0.17	-4.55	-4.62
	7.37%	-49.40%	-14.21%	-1.80%	-81.03%	-7.30%

Chart: Weekly trading volume of iron ore futures

Source: Wind, Founder CIFCO Futures



Chart: Technical chart of i2005

Source: Wind, Founder CIFCO Futures

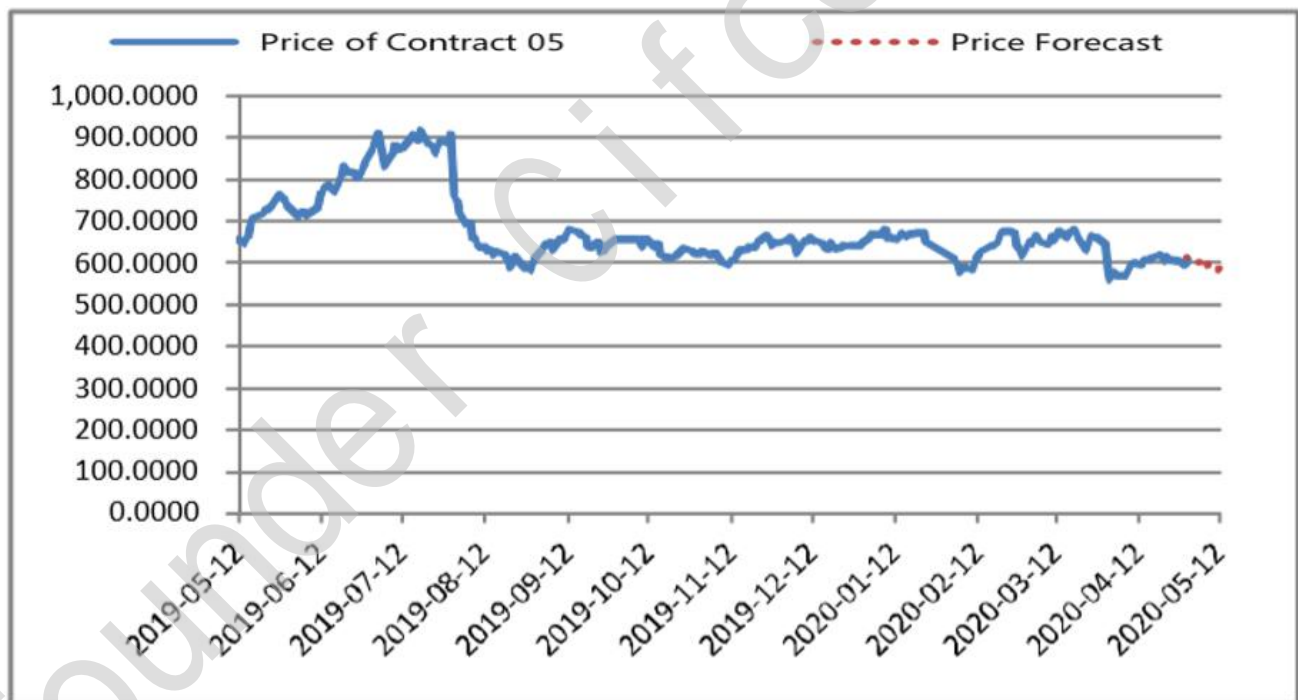


Chart: Price of contract 05 and price forecast

Source: Wind, Founder CIFCO Futures

## II. Basis and Spread

In this week, spot price is generally stronger than futures price, except the i2005, the overall basis showed a small expansion. As of April 30, the basis difference of the i2005 was 29.3 RMB/ton, down 9.1 RMB/ton from last week. The i2009 basis rose slightly by 1.4 RMB/ton this week. In terms of the price difference between varieties, the IOCJ Carajas and PB fines continued to narrow slightly this week, with a weekly decrease of 2 RMB/ton to 142 RMB/ton. PB fines and powder and JMBF was 118 RMB/ton, with a weekly decrease of 1 RMB/ton. In general, the premium of SS fines and PB powder continued to strengthen this week. As of the end of this week, the 09-01 contract spread was 40 RMB/ton, with a weekly expansion of 2.5 RMB/ton.

The 05-09 contract spread widened 10.5 RMB/ton to 81.5 RMB/ton.



Chart: Spread of contract 09 and 01

Source: Wind, Founder CIFCO Futures

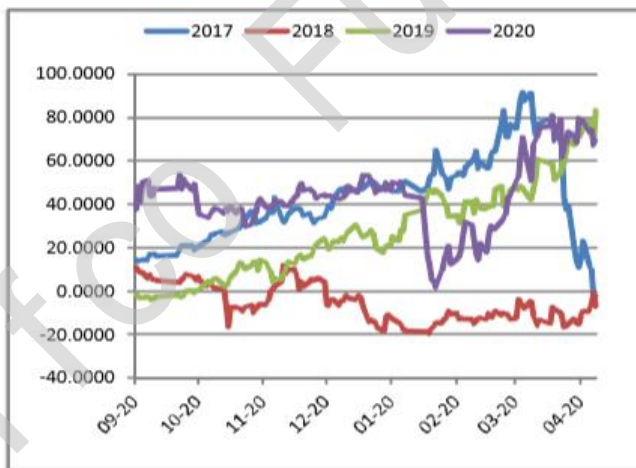


Chart: Spread of contract 05 and 09

Source: Wind, Founder CIFCO Futures

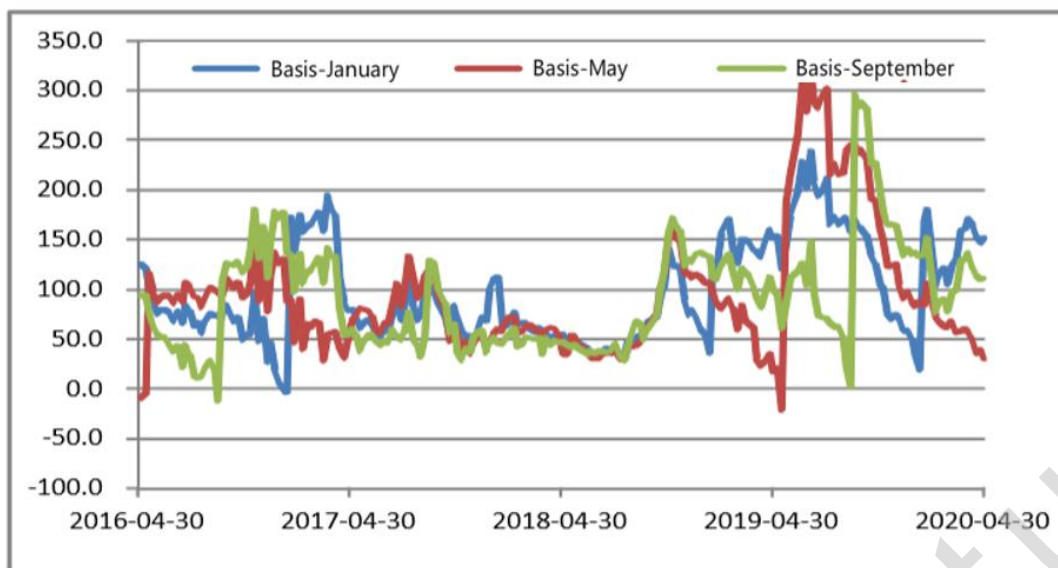


Chart: Basis of spot iron ore (PB fines 61.5%) in Rizhao port

Source: Wind, Founder CIFCO Futures

### III. Shipping Market Review

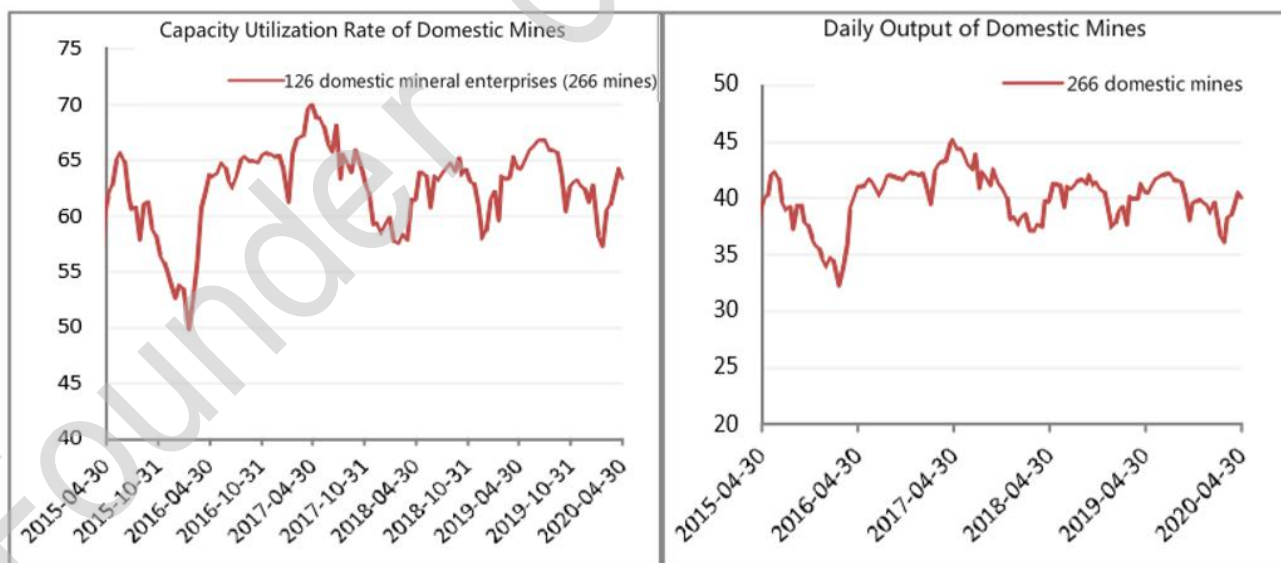
As of April 23, the freight from Tubaro to Qingdao quoted 10.7 USD/ton, down by 1.2 USD/ton (9.84%). Western Australia to Qingdao was quoted 4.1 USD/ton, down by 0.6 USD (12.40%). BDI and BCI continued the previous downward trend. As of April 30, BDI was at 635, down 37 or 5.51% from April 23. BCI dropped more significantly this week, down 75 or 7.73% from April 23. Freight of Brazilian mines also fell sharply this week. As of April 29, the freight from Tubalang to Qingdao was 10.15 USD/ton, down 0.56 USD/ton (5.23%). Western Australia to Qingdao was still at 4.10 USD/ton, unchanged from last week.



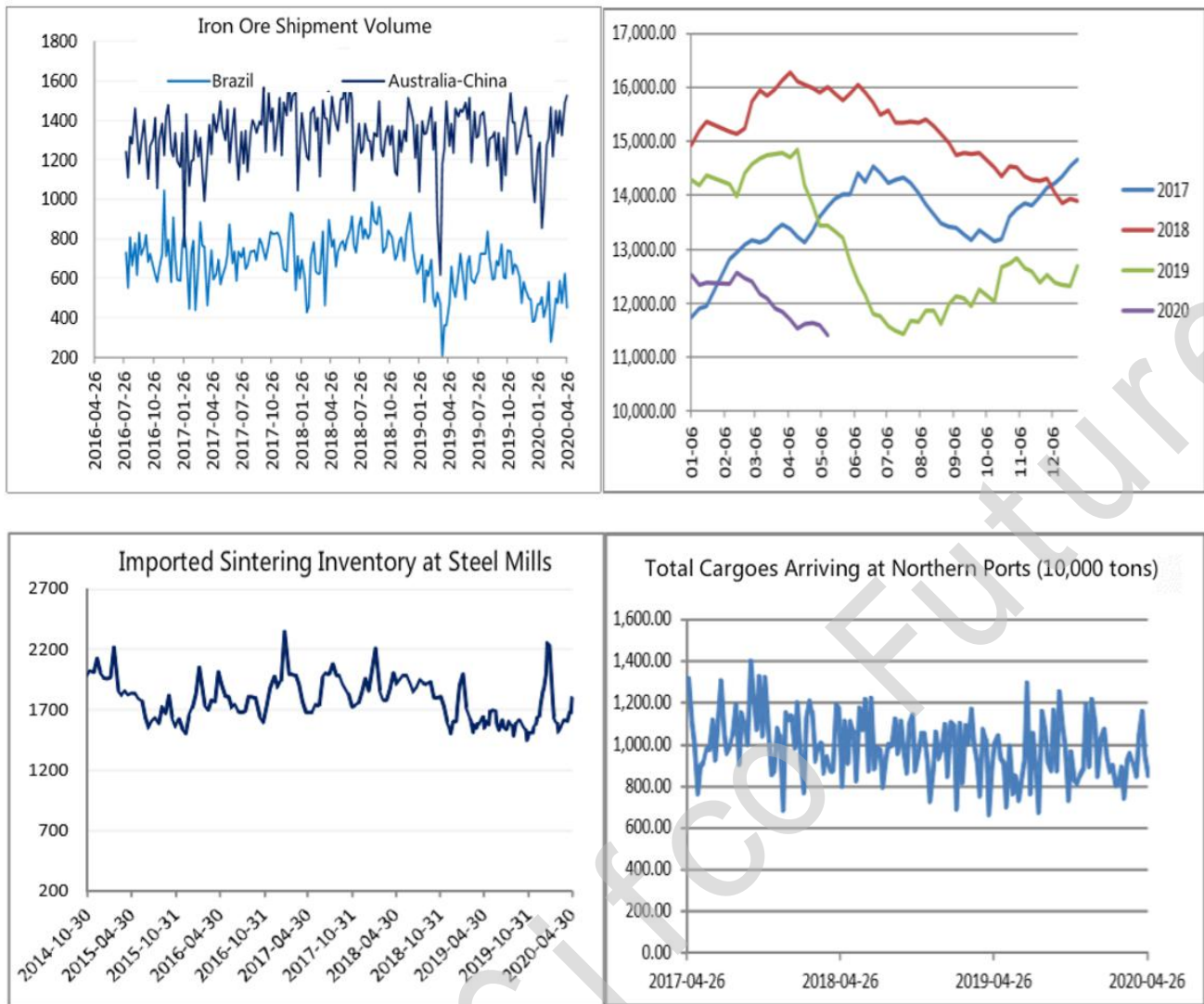
Source: Wind, Founder CIFCO Futures

#### IV. Supply

Domestic mine supply began to appear a turning point, after a sustained rise in the early period, the recent domestic mine output and operating rate have fallen. The latest data (April 30) shows that the operating rate of 126 mining enterprises in China is 63.31%, down 0.98% compared with the previous period. The average daily output of domestic mines is 399,400 tons in the latest period, down 6,200 tons/day. In terms of foreign mining, the total shipment volume of Australian Brazil mine decreased by 286,000 tons to 22.989 million tons, while the shipment volume of the Australian mine increased by 1.477 million tons to 18.58 million tons, among which the shipment volume to China increased by 335,000 tons to 15.250 million tons. Brazilian mine shipments had a significant fell by 1.763 million tons to 4.481 million tons in the current period, but short-term fluctuations are still large. The latest northern import mine number was 8.54 million tons, down 940,000 tons from the previous week. As of April 30, the imported mine inventory of 45 ports in China was 11.39803 million tons, down 1.8733 million tons from previous week. The inventory of Australia mine was 63.7322 million tons, down 335,800 tons (weekly); the inventory of Brazil mine was 26.4567 million tons, down 1.2679 million tons (weekly). The inventory of trade mine totalled 54.1972 million tons, decreased by 1.5988 million tons, pellets increased by 281,300 tons to 5.7866 million tons and lump ore increased by 281,600 tons to 20,469,700 tons. In terms of steel mill inventory, the total inventory of imported ore sintering fines of 64 sample steel mills was 18.0214 million tons with a weekly increase of 1.328 million tons.





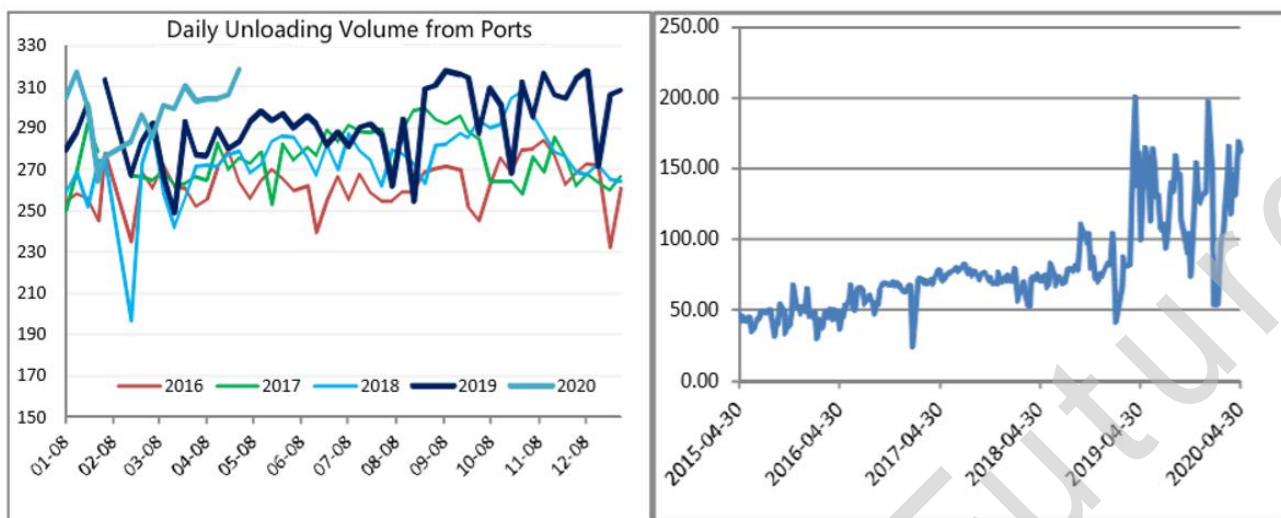


Source: Wind, Founder CIFCO Futures

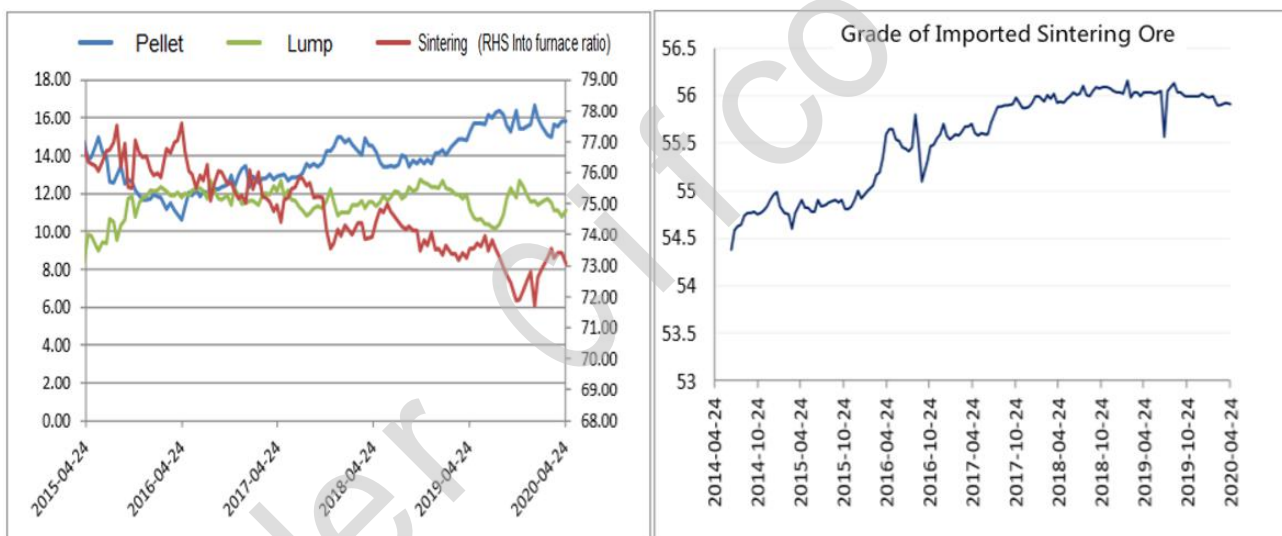
**V. Demand**

The latest phase (April 24) steel mill sinter ore into the furnace grade of 55.91%, down 0.02%. The ratio of pellet, sinter and block ore into furnace was 15.82%, 73.06%, 11.12%, respectively, and 15.84%, 73.4% and 10.76% respectively in the previous period. Due to the lack of further improvement in the long process profit in the recent period, the steel mill appropriately reduced the proportion of pellet and sintering into furnace, and correspondingly increased the amount of lump ore. In the last week before the May holiday, steel mills' replenishment efforts were improved, with the average daily departing port volume increasing by 127,400 tons to 3.184,300 tons. On the other hand, the average daily spot trading volume of major ports in China increased

significantly at the beginning of the week, and decreased significantly before the holiday. The weekly average decreased slightly from the previous week to 1.616,800 million tons per day.



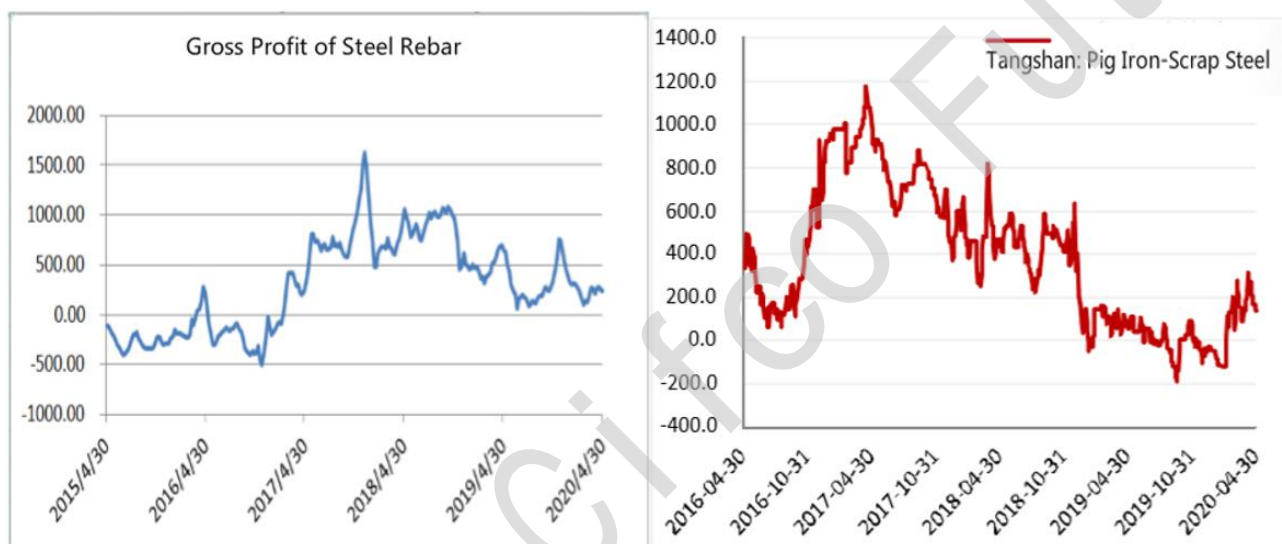
Source: Wind, Founder Cifco Futures



Source: Mysteel, Founder Cifco Futures

The price of finished steel fell slightly and remained stable, while the raw material prices of scrap steel, manganese silicon and iron ore all rose. The profit level of the long-process steel mills was slightly narrowed compared with last week, but the gross profit of rebar was still maintained in the range of 200-250 RMB/ton. The pressure of the factory warehouse is still large and the output is still maintained at a high level. The room for the apparent consumption of rebar to further improve is limited, so the current profit level of the long

process steel plant is difficult to expand. The price of scrap steel continued to rise this week, the spiral rebar spreads was further declined. The short process electric furnace profit was compressed obviously, but the production enthusiasm is still high, the electric furnace operating rate and output continue to rise. The average operating rate of 71 electric arc furnace steel mills nationwide was 59.74%, up 1.41% from last week. The weekly crude steel output was 803,200 tons, up 240 tons from last week. In general, the growth rate of electric furnace output has recently slowed down significantly, the space for further growth is limited, and the output in south China has started to decline. The rise of the scrap prices made the gap between pig iron and scrap steel continue to fall and the replacement effect of scrap steel on molten iron is further weakened. The proportion of profitable steel mills nationwide was 76.07%, down 0.61% this week.



Source: Wind, Founder CIFCO Futures

The operating rate of blast furnace in 163 steel mills nationwide was 69.06%, up 0.41% from last week. The steel demand has further strengthened and the finished products continues to destocking. The factory warehouse and social inventory has expanded the range of destocking process, the high demand of the finished products still continue. The production of finished products began to turn in before the festival, ending the previous rebound. The output of the five major steel varieties decreased by 82,300 tons, but the weekly output of rebar still increased slightly. The output of 3.58 million tons has basically recovered to the same period from last year.

The average daily production of molten iron increasing by 30,500 tons to 2,284,100 tons, creating the highest weekly output since the beginning of the year and gradually approaching the historical high of the same period last year. The room for further improvement has been relatively limited. Steel mills still maintain a high consumption of imported ore and domestic fines. In addition, with the approaching of the May holiday, it is obvious to replenish the stock. The imported sintering inventory of sample steel mills increased significantly this week, rose to 18 million tons, and the available days also rose to 26 days. Overall, steel mills production is in peak season mode currently, iron ore demand is relatively strong. It is expected that the toughness of finished steel demand will continue in the short term after the festival, but there was only a limited space for the molten iron output continues to go up. In addition, considering the possible production limit in May of steel mills in Tangshan area and the concentrated replenishment before the holiday, the iron ore demand may appear slowly weak after holiday.



Output (10,000 tons)	Steel Rebar	Wire Rod	Hot Rolling	Cold Rolling	Medium Plate
2020. 04. 24	357. 47	147. 25	312. 43	79. 99	132. 08
2020. 04. 30	358. 52	149. 25	301. 24	79. 31	132. 67
Weekly Up or Down	1. 05	2	-11. 19	-0. 68	0. 59

Source: Mysteel, Founder CIFCO Futures

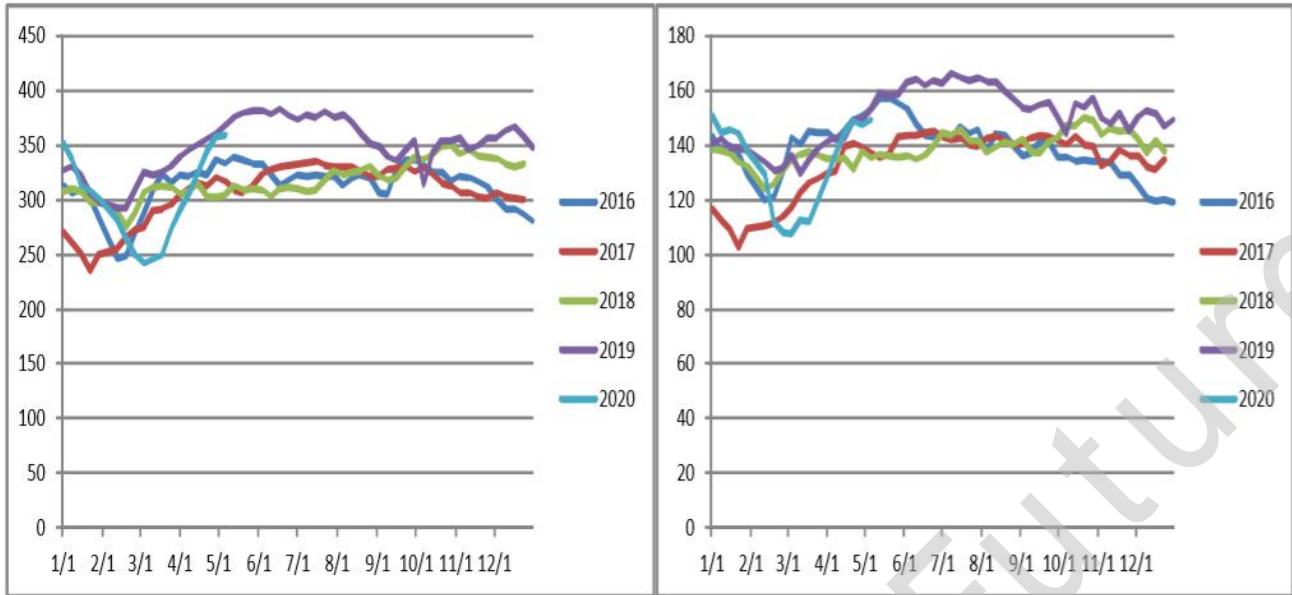


Chart: Weekly output of steel rebar (10,000 tons)

Source: Mysteel, Founder CIFCO Futures

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

Source: Mysteel, Founder CIFCO Futures

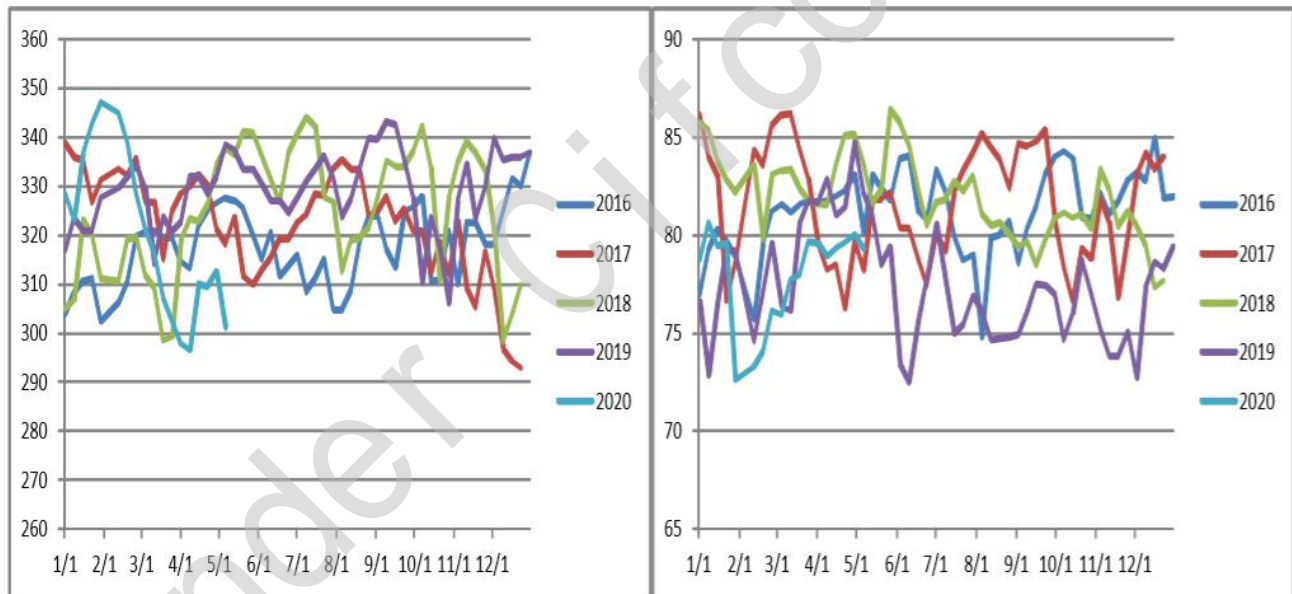


Chart: Weekly output of hot rolling (10,000 tons)

Source: Mysteel, Founder CIFCO Futures

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

Source: Mysteel, Founder CIFCO Futures

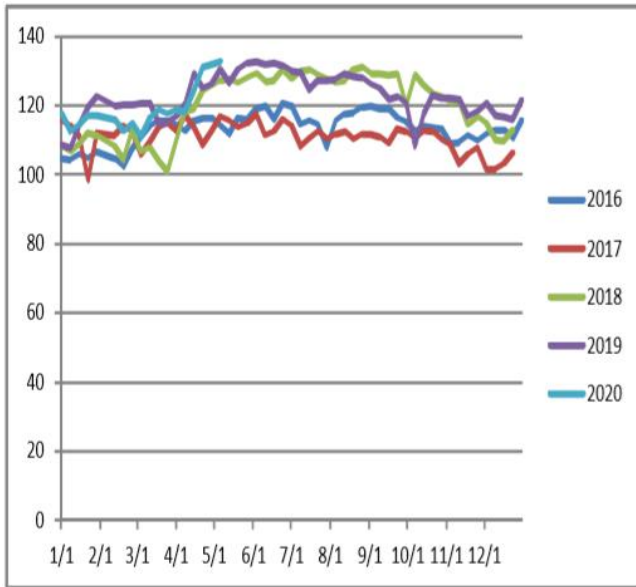


Chart: Weekly output of steel plate (10,000 tons)

Source: Mysteel, Founder CIFCO Futures

Output (10,000 tons)	Steel Rebar	Hot Rolling	Medium Plate	Wire Rod	Cold Rolling
2020. 04. 24	1077. 99	348. 32	109. 33	336. 07	141. 51
2020. 04. 30	995. 67	332. 72	105. 99	303. 08	138. 88
Weekly Up or Down	-82. 32	-15. 6	-3. 34	-32. 99	-2. 63

Chart: Social inventory (10,000 tons)

Source: Mysteel, Founder CIFCO Futures

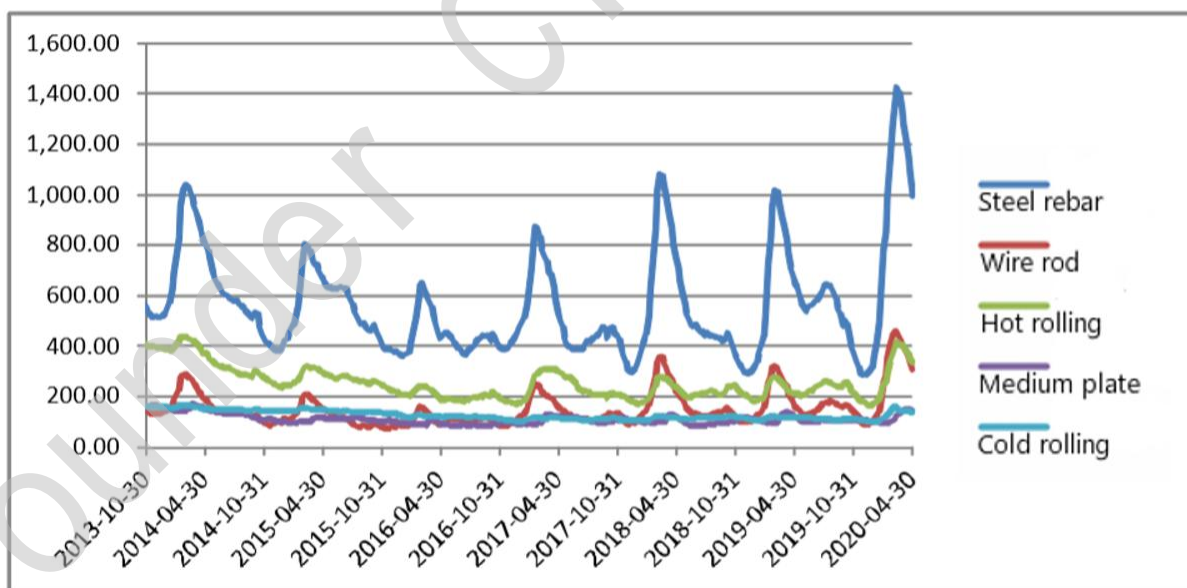


Chart: Weekly social inventory of five steel products

Source: Wind, Founder CIFCO Futures

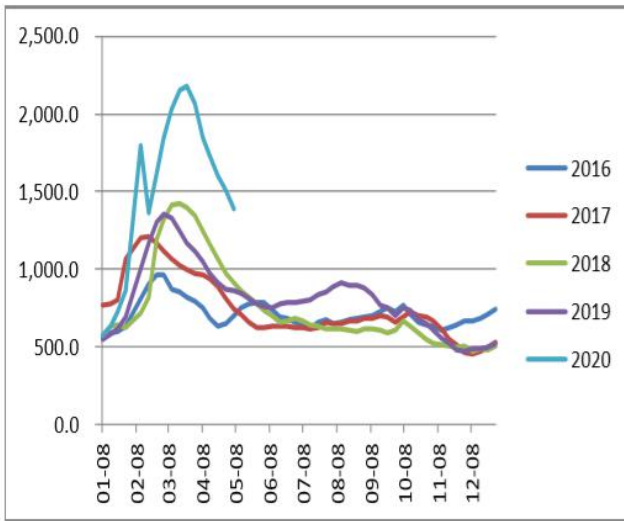


Chart: Total inventory of steel rebar (10,000 tons)

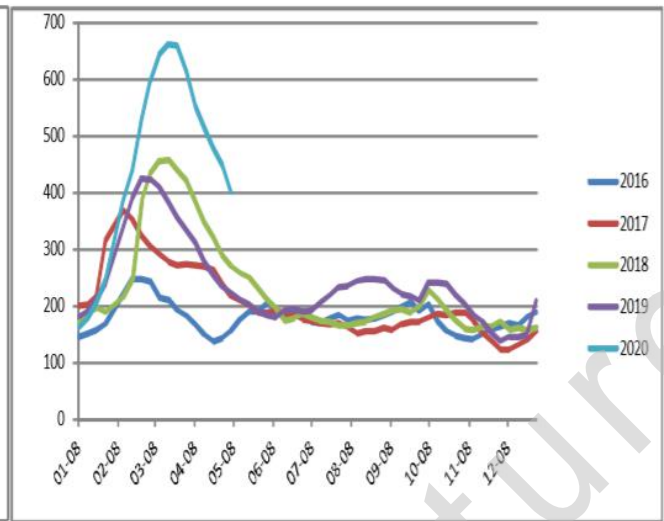


Chart: Total inventory of wire rod (10,000 tons)

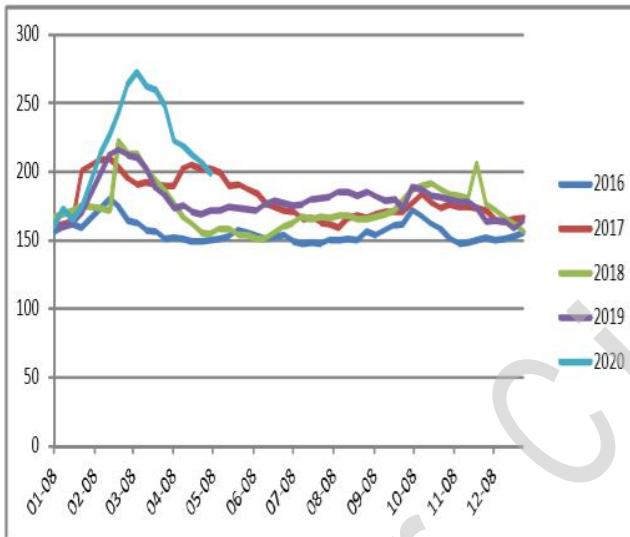


Chart: Total inventory of steel plate (10,000 tons)

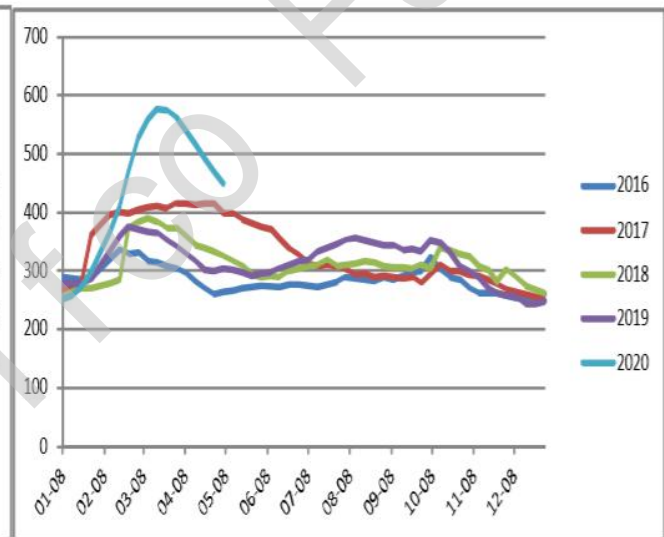
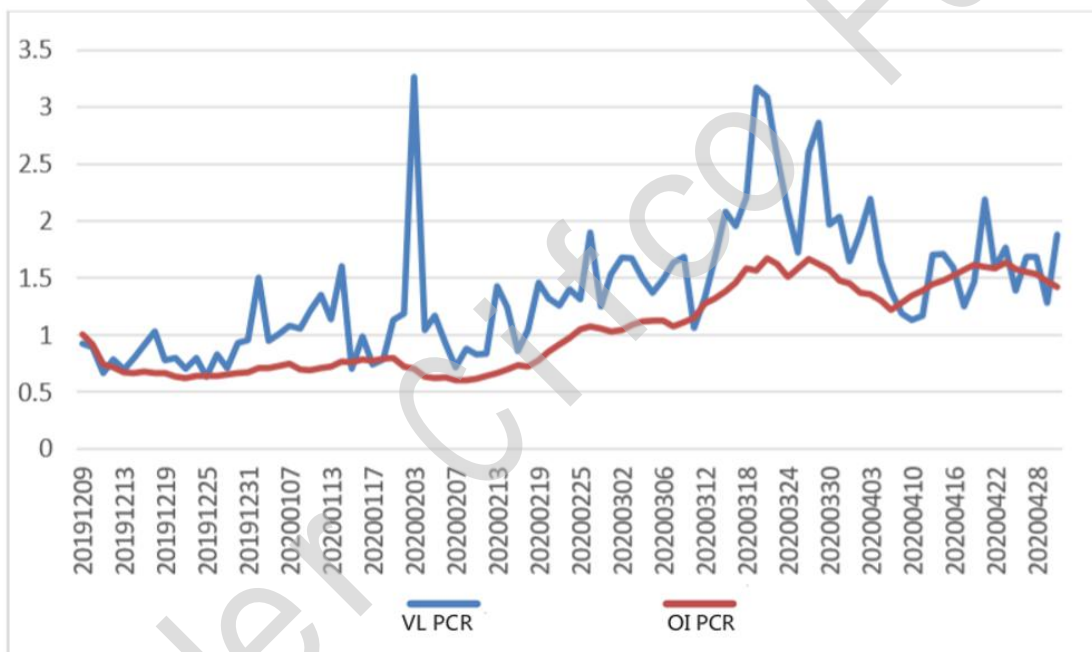
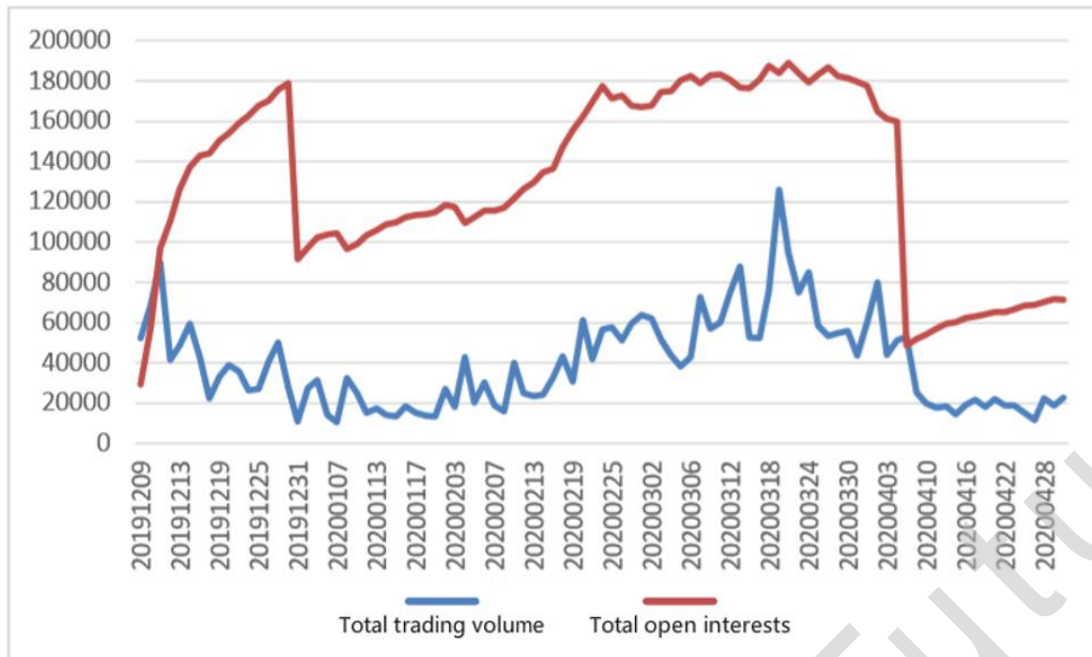


Chart: Total inventory of hot rolling (10,000 tons)

## VI. Iron Ore Options

### 6.1 Options trading and open interest analysis

The daily average trading volume of iron ore options were 18,906 lots, up 291 lots from last week and the daily open interest were 70,499 lots, up 4,570 lots compared with last week. The put-call ratio of daily average trading volume was 1.63, down 0.05 and the daily open interest was 1.50, down 0.11 compared with last week.





6.2 Volatility analysis

The implied volatility of iron ore options rose slightly this week with daily average of 38.84%, up 1.19%.

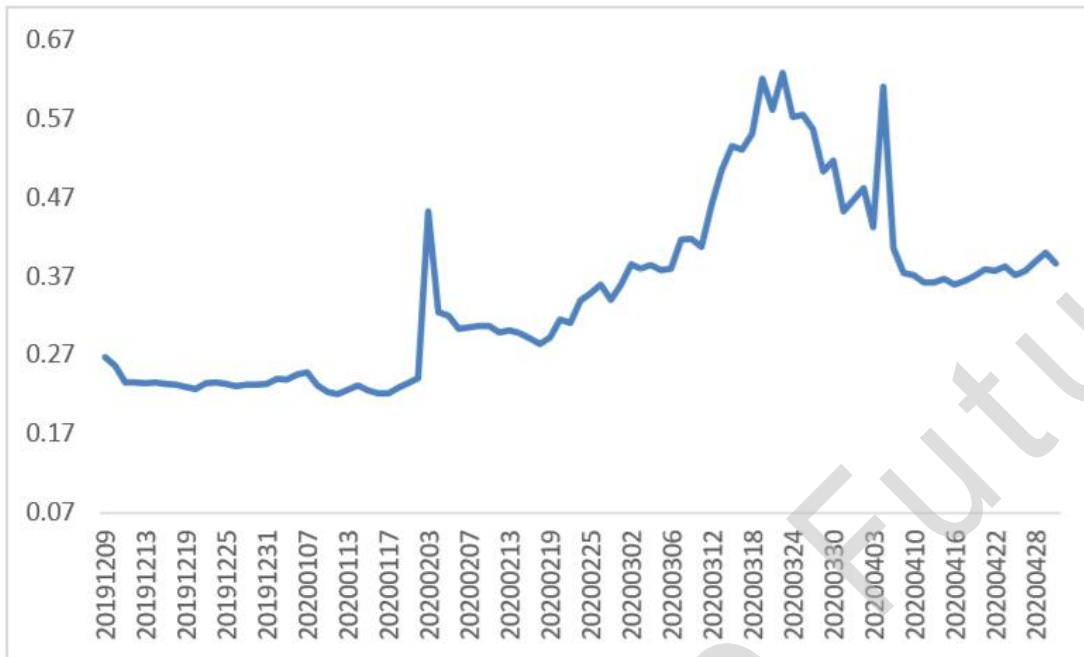


Chart: Implied volatility of iron ore options

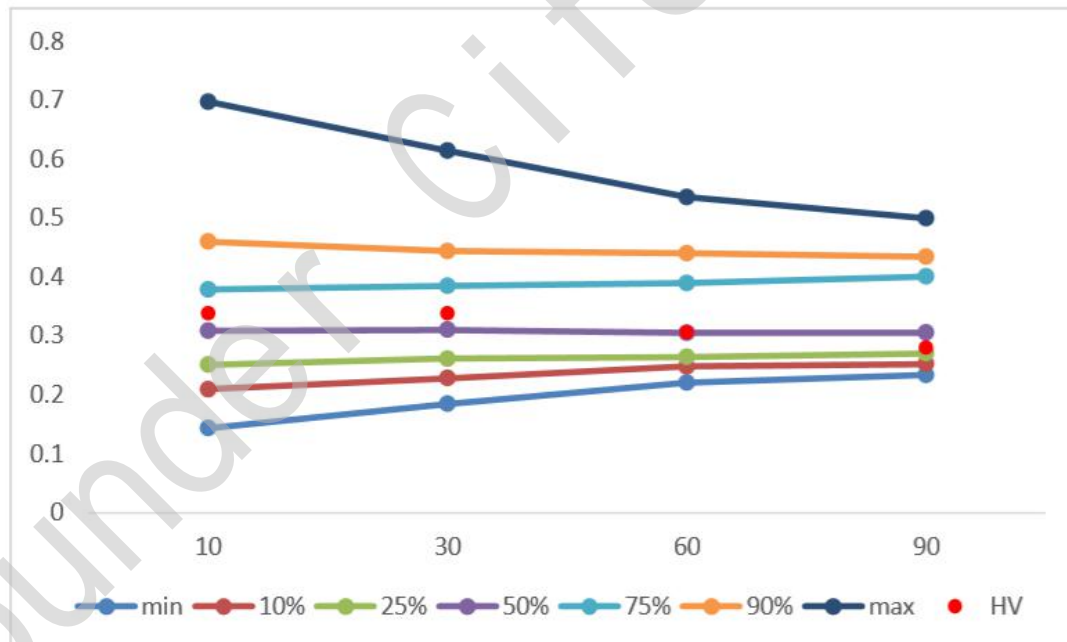


Chart: Volatility cones of iron ore options

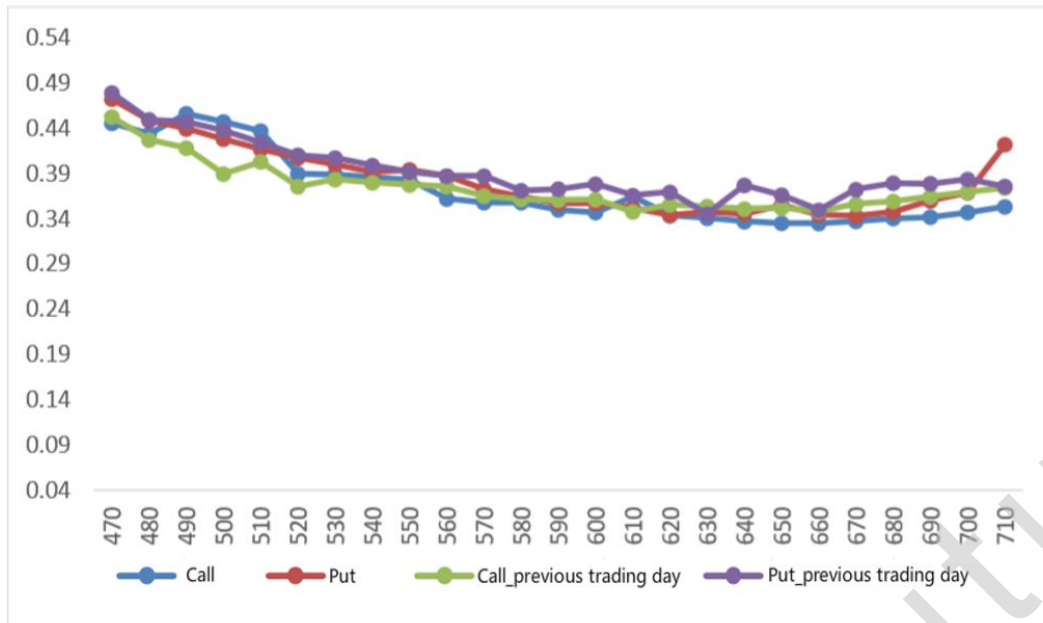


Chart: Implied volatility of nearby contract

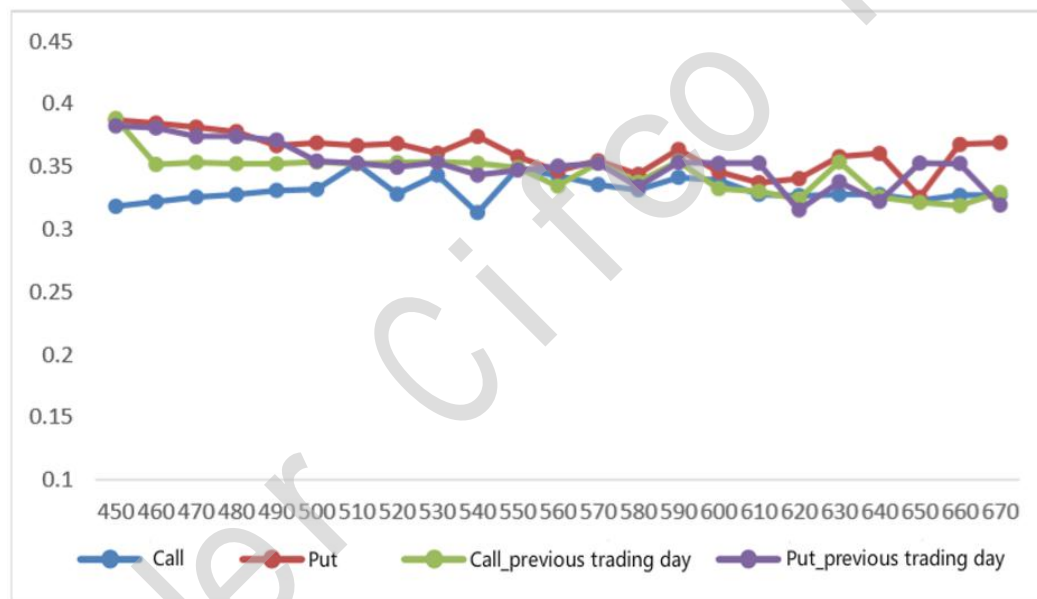


Chart: Implied volatility of forward contract

### 6.3 Options strategy

The implied volatility of iron ore options is at a relatively high level since the listing. The trend will gradually become stable and the volatility has the expectation of narrowing. We can construct the short straddle strategy and short volatility. The probability of short term will show a down turn trend, it is difficult to continue to strengthen, so the strategy of selling OTM call options can be used.

I. Sell strangle options

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2009-P-590 1	1	买价	42.7	42.7	44.4	35.48%	-0.4232	0.0026	1.3414	-0.2483	100
卖	铁矿石期权2009-C-600 1	1	买价	42.0	42.0	45.9	32.44%	0.5477	0.0026	1.3529	-0.2518	100

加入标的     保存策略    最大收益: 8,470.00    最大亏损: -∞  
 总Delta: -12.3853    总Gamma: -0.5205    总Vega: -267.2079    总Theta: 50.4460

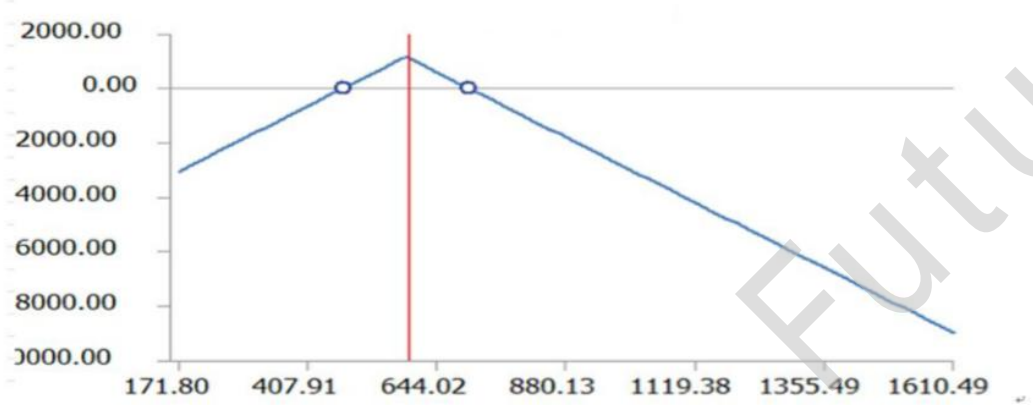


Chart: Break-even balance

II. Sell put options

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2009-C-620 1	1	买价	36.2	36.2	37.6	33.45%	0.4969	0.0026	1.3751	-0.2529	100

加入标的     保存策略    最大收益: 3,620.00    最大亏损: -∞  
 总Delta: -49.6065    总Gamma: -0.2630    总Vega: -136.3724    总Theta: 25.5046

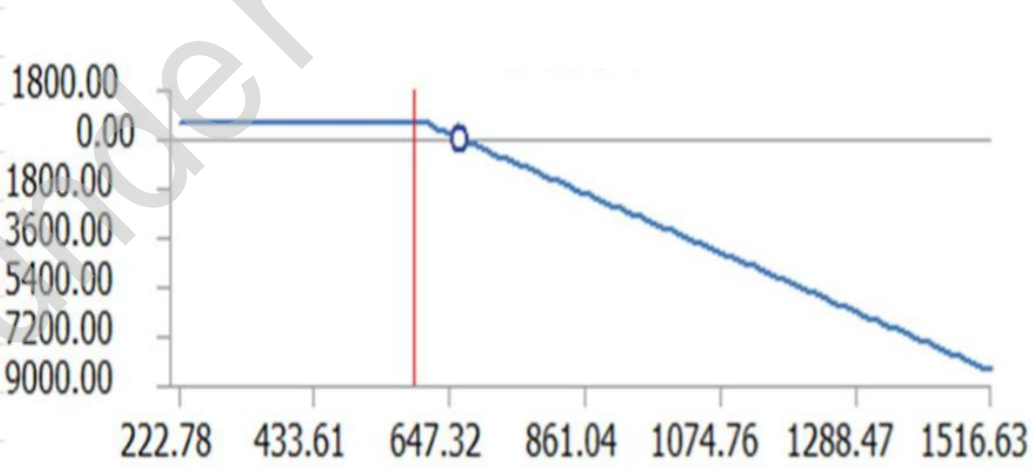


Chart: Break-even balance

VII. Open interests of top futures firms

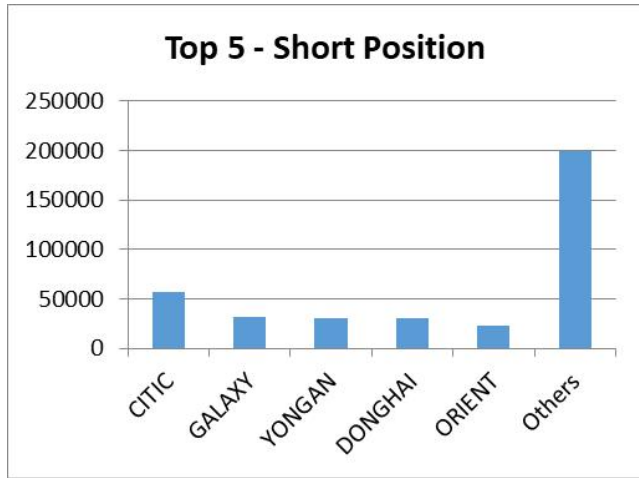


Chart: Top 5 of short positions

Source: Wind, Research Institute of Founder CIFCO Futures

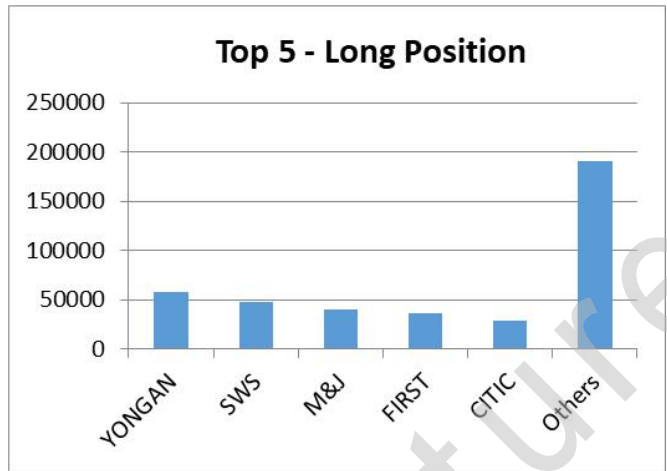


Chart: Top 5 of long positions

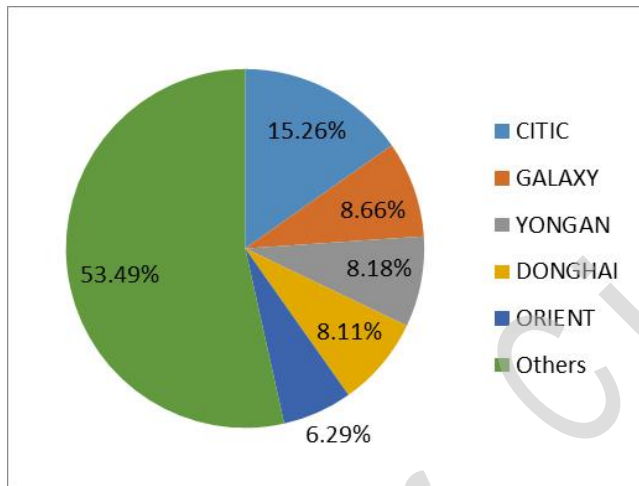


Chart: Short positions proportion

Source: Wind, Research Institute of Founder CIFCO Futures

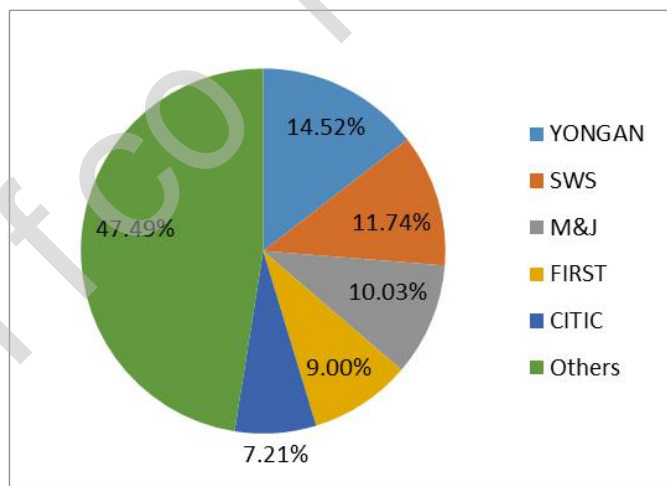


Chart: Long positions proportion

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