Development & Outlook for China's Nonferrous Metals Futures Market



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Development of China's nonferrous metals futures market

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Outlook for China's nonferrous metals futures market





Development of China's nonferrous metals futures market



Shanghai Futures Exchange: listed products

Nonferrous metals

Ferrous metals







Precious metals





Energy & chemical







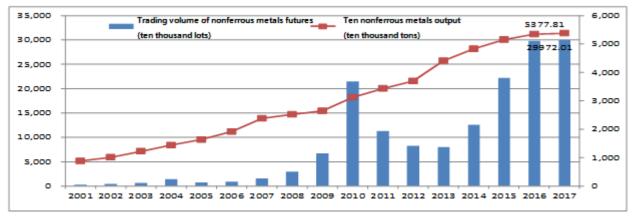
- There are currently 15 futures products in 4 categories available for trading
 - Nonferrous metals category (6): Cu, Al, Pb, Zn, Ni, Sn
 - Precious metals category (2): Au, Ag

- Ferrous metals category (3): Rb, Wr, Hc
- Energy & chemical category (4): Ru, Bu, Fu,Sc



Concerted development of nonferrous metals industry and futures

Trading volume of nonferrous metals futures & ten nonferrous metals output (2000-2017)



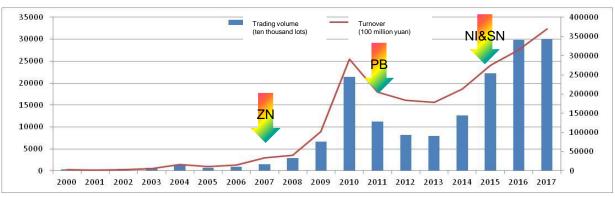
Data source: SHFE, NBS

- > China is recognized as the globally-largest producer and consumer of nonferrous metals
 - The output of ten nonferrous metals including copper and aluminum reached 53.7781 million tons in 2017.
 - The percentage represented by each of the 6 nonferrous metals output is 36.57%, 50.73%, 44.11%, 46.3%, 29% and 48.21%.
- Nonferrous metals futures product is China's most mature futures product.



Steady development of nonferrous metals futures market

Transactions of nonferrous metals futures (2000-2017)



Data source: SHFE

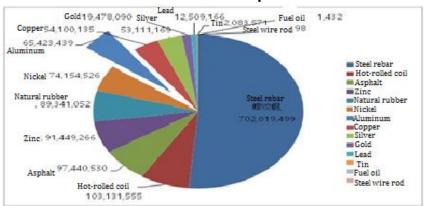
- Futures product category has been improved
 - Zn futures (2007), Pb futures (2011), Ni & Sn (2015) had been listed for trading
- Rapid growth and steady development of the market
 - The continuous trading of nonferrous metals futures was achieved in 2013.
 - As for the 6 nonferrous metals futures products, 299 million lots were traded in 2017 with the turnover reaching 36.98 trillion RMB yuan.

Overall transactions of nonferrous metals futures

Transactions of China's nonferrous metals futures products in 2017

			•	
Product	Trading volume (ten thousand lots)	YoY %	Turnover (100 million RMB yuan)	YoY %
Copper	5410.01	-25.27	13.39	-3.60
Aluminum	6542.34	47.38	4.93	78.83
Zinc	9144.93	25.16	10.70	69.92
Lead	1250.92	174.25	1.16	190.25
Nickel	7415.45	-26.03	6.50	-16.12
Tin	208.36	-34.24	0.30	-20.04
Nonferrous metals in total	29972.01	0.63	36.98	17.5

Transactions of China's nonferrous metals futures products in 2017



Data source: SHFE Data source: SHFE

- From the perspective of trading volume: zinc>nickel>aluminum>copper>lead>tin;
 From the perspective of turnover: copper>zinc>nickel>aluminum>lead>tin
- > Tin futures products in 2017
 - 2.0836 million lots were traded, representing 0.69% of nonferrous futures. Turnover reached 30 million yuan, only representing 0.81%.



World ranking of nonferrous metals futures

World ranking of metal futures products in 2017

Rank	Contract	Jan-Dec 2017 Vol	Jan-Dec 2016 Vol	Vol % Change
1	Steel Rebar Futures, Shanghai Futures Exchange	702,019,499	934,148,409	-24.8%
2	Iron Ore Futures, Dalian Commodity Exchange	328,743,737	342,265,309	-4.0%
3	Hot Rolled Coil Futures, Shanghai Futures Exchange	103,131,555	43,281,751	138.3%
4	Zinc Futures, Shanghai Futures Exchange	91,449,266	73,065,922	25.2%
5	Nickel Futures, Shanghai Futures Exchange	74,154,526	100,249,941	-26.0%
6	Gold (GC) Futures, Commodity Exchange (COMEX)	72,802,171	57,564,840	26.5%
7	Aluminum Futures, Shanghai Futures Exchange	65,423,439	44,391,785	47.4%
8	Copper Futures, Shanghai Futures Exchange	54,100,135	72,394,915	-25.3%
9	Silver Futures, Shanghai Futures Exchange	53,111,169	86,501,561	-38.6%
10	Aluminium Futures, London Metal Exchange	51,429,383	53,073,441	-3.1%
11	SPDR Gold Shares ETF Options *	33,418,599	52,017,471	-35.8%
12	Copper Grade A Futures, London Metal Exchange	33,885,113	36,947,881	-8.3%
13	Special High Grade Zinc Futures, London Metal Exchange	29,642,124	26,942,407	10.0%
14	Copper (HG) Futures, Commodity Exchange (COMEX)	27,051,503	21,524,547	25.7%
15	Silicon Manganese (SM) Futures, Zhengzhou Commodity Exchange	24,921,207	1,364,525	1726.4%

Data source: FIA

> SHFE futures on zinc, nickel, aluminum and copper rank, respectively, fourth, fifth, seventh and eighth among the metals futures products worldwide.



Registration of nonferrous metals brands

Registered delivery brands on SHFE (as of end-2017)

	Copper	Aluminum	Lead	Zinc	Nickel	Tin
Domestic brand	28	39	20	23	6	7
Overseas brand	30	3	0	3	3	0
Total	58	42	20	26	9	7
Output of registered brands (10,000 tons)	600.9	903.2	220.6	361.5	21.9	18.2
Ratio of domestic total output (%)	67.6	28.3	46.8	58.1	66.2	63.6

Data source: SHFE

The output of SHFE-registered nonferrous metals brands reached 21.263 million tons in 2017, with 123 registered Chinese companies and 39 registered foreign companies.



Designated delivery warehouses of nonferrous metals futures

Distribution of SHFE-designated nonferrous metals delivery warehouses (as of end-2017)



	East China	South China	North China	Central China	Southwest	Total
Copper	21	2	-	0	-	23
Aluminum	29	5	3	6	2	45
Zinc	18	4	-	-	-	22
Lead	10	3	3	-	-	16
Nickel	16	-	-	-	-	16
Tin	4	2	-	-	-	6
Total	97	16	6	7	2	128

Data source: SHFE

Data source: SHFF

- > The national distribution of aluminum futures delivery warehouse is preliminarily realized. Tin delivery warehouse is distributed in East China and South China.
- Along with the execution of "One Belt One Road" strategy and the opening-up of futures market, the delivery warehouses will be distributed worldwide.



Transactions of China's tin futures

Transactions of China's tin futures



- Tin futures contract was listed for trading on March 27, 2015.
- Tin futures had operated stably with active market transactions during the period from listing to the end of 2017.
 - Unilateral statistics: 5.7666 million lots were traded in total; turnover reached 734.49 billion yuan.
 - Daily average open interest: 13,654 lots (bilateral)



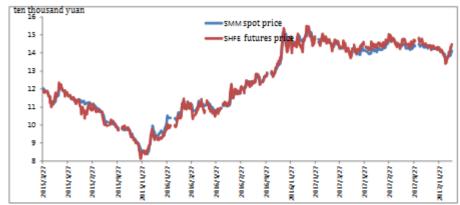
Tin futures: standard contract

Trading product	Tin
Trading unit	1 ton/lot
Price quotation unit	RMB yuan/ton
Minimum price variation	10 yuan/ton
Maximum daily price fluctuation limit	Not over±4% of the closing price on the previous trading day
Contract delivery month	January ~ December
Trading hours	9:00 ~ 11:30 a.m. 1:30 ~ 3:00 p.m. and other time periods as prescribed by the exchange
Last trading day	the15 th day in the contract delivery month (to be postponed in case of legal holidays)
Delivery date	Five consecutive working days after the last trading day
Delivery grade	Standard: tin ingots, in compliance with Sn99.90A grade specifications of national standard GB/T 728-2010, wherein the tin content is no less than 99.90%. Substitutes: tin ingots, in compliance with Sn99.90AA grade specifications of national standard GB/T 728-2010, wherein the tin content is no less than 99.90%; in compliance with Sn99.95A and Sn99.95AA grade specifications, wherein the tin content is no less than 99.95%; in compliance with Sn99.99A grade specifications, wherein the tin content is no less than 99.99%.
Delivery point	Delivery warehouse as designated by the exchange
Minimum trading margin	5% of contract value
Minimum delivery unit	2 tons
Delivery method	Physical delivery



Correlation of tin futures price both domestic and abroad

Domestic tin futures and spot price trends in 2015-2017



Data source: SHFE; Reuters

Domestic and overseas tin futures price trends in 2015-2017



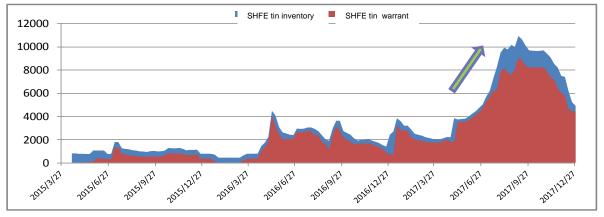
Data source: SHFE; Reuters

- Domestic tin futures is highly consistent with the price trend on the spot market
 - Price correlation coefficient was 0.995 in 2015-2017
- Domestic tin futures is highly consistent with the overseas futures price trend
 - Price correlation coefficient was 0.934 in 2015-2017; China abolished the 10% tariff on tin ingot export in 2017.



Inventory becomes an important indicator to reflect supply and demand

SHFE tin inventory and warrant in 2015-2017



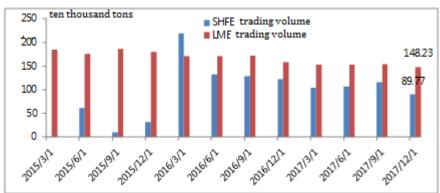
Data source: SHFE

- ➤ The delivery warehouse inventory of SHFE tin futures reached 5,468 tons and futures warrant reached 4,774 tons as of the end-2017.
- The inventory of domestic tin market is gradually becoming visible and transparent.

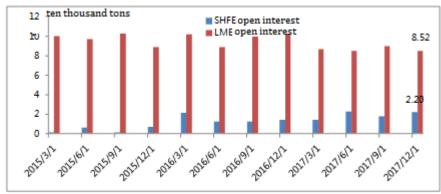


Comparison of tin futures both at home and abroad

Comparison of quarterly trading volume between SHFE and LME tin futures



Comparison of quarterly open interest between SHFE and LME tin futures



Data source: SHFE; Reuters

Data source: SHFE; Reuters

- From the perspective of trading volume, the trading volume of SHFE tin futures is tending towards stability, which is close to LME.
- From the perspective of open interest, the open interest of SHFE tin futures is always not high.
 - Quarterly open interest (converted into tonnage) represents 20% of LME. Only a few entity enterprises
 participate in tin futures trading business, and contract liquidity still needs to be improved.



Registered delivery brands of tin futures

Registered brands, packaging standard, premium and discount standard for SHFE tin ingots

No.	Country	Registered Product	Place of origin	Registration Date	Trademark	Grade/Speculations	Premium and Discount	Size	Weight (kg)	Set/
		Yunnan	Gejiu,			SN99.90A	Premium			
1001	China	Xiye Co.,	Yunnan	201412	YT	SN99.90AA	RMB	420*105*100	25	40
		Ltd.	Province			SN99.95AA	800/ton			
1002	China	China Tin Group (Guangxi) Co., Ltd.	Laibin, Guangxi Province	201412	Jinhai	SN99.90AA	Premium RMB 300/ton	475*130*85	25	40
1003	China	Yunnan Chengfeng Non- ferrous Metals Co., Ltd.	Gejiu, Yunnan Province	201412	Yunheng	SN99.95AA	Premium RMB 300/ton	400*105*100	25	40
1004	China	Gejiu Kai Meng Industry Co., Ltd.	Gejiu, Yunnan Province	201412	Yunxiang	SN99.95AA	Flat	420*105*100	25	40
1005	China	CNMC (Guangxi) PGMA Co.,LTD	Hezhou, Guangxi Province	201507	PGMA	SN99.90AA	Flat	425*125*90	25	40
1006	China	Maanshan WeiTai Tin Co., Ltd.	Ma'anshan, Anhui Province	201511	ZhenWei	SN99.95AA	Flat	420*105*100	25	40
1007	China	Gejiu Zili Mining and Smelting Co.,Ltd.	Gejiu, Yunnan Province	201512	YS	SN99.95AA	Flat	410*100*100	25	40

- There are 7 registered delivery brands in tin futures as of the end-2017, with the delivery output reaching 101,000 tons, or 63.8% of the national total, which can satisfy the market delivery demand.
- The work of registered delivery brands will continue to be promoted in the next step.



Designated delivery warehouses of tin futures

SHFE-designated delivery warehouse & premium and discount standard

No.	Location	Name	Address
1	Guangdong	Guagndong Branch No.830, State Reserve Bureau	Kaifa Avenue No. 1330, Luogang District, Guangzhou City
2	Guangdong	Nanchu Management Group	Fo-Luo Highway No.166, Chancheng District, Foshan City, Guangdong Province
3	Shanghai	Tianwei Warehousing Co., Ltd., Shanghai Guochu Group	Xingta Road No. 1289, Huangdu Industrial Park, Jiading District, Shanghai Municipality
4	Shanghai	CMST Development Co., Ltd.	Nanda Road No. 137, Baoshan District, Shanghai Municipality
5	Jiangsu	Jinshu Warehousing (Shanghai) Co., Ltd., SIPG	Gangcheng Road No.8, Suzhou National New & Hi-tech Industrial Development Zone(SND), Suzhou City
6	Jiangsu	CMST Development Co., Ltd.	Chengnan Road No. 32-1, Wuxi City, Jiangsu Province

Data source: SHFE

- Principle for establishment of delivery warehouse: principle of consumption and distribution
- Regional premium and discount: temporarily not available
 - Given the relatively higher unit value of tin ingots, the ratio of regional freight difference in the tin value is particularly small.
- Storage method: indoor warehouse
 - as per the national standard GB/T728-2010





Outlook for China's nonferrous metals futures market



Nonferrous metals futures options market

Soybean meal options on Dalian Commodity Exchange

1	m1709c2850	豆粕17年09月购2850	23.0	27.78	0.00	5.0	2688	65.4万	13358
2	m1709c2700	豆粕17年09月购2700	63.5	6.72	0.00	4.0	2586	168万	5036
3	m1709p2650	豆粕17年09月沽2650	50.5	-25.74	0.00	-17.5	2546	133万	7582
4	m1709p2600	豆粕17年09月沽2600	30.5	-34.41	0.00	-16.0	2186	73.2万	7444
5	m1709c2750	豆粕17年09月购2750	46.0	10.84	0.00	4.5	1794	80.7万	6414
6	m1709p2500	豆粕17年09月沽2500	10.0	-45.95	0.00	-8.5	1742	18.7万	5034
7	m1709p2550	豆粕17年09月沽2550	17.5	-41.67	0.00	-12.5	1508	29.7万	4400
8	m1709p2700	豆粕17年09月沽2700	76.0	-19.58	0.00	-18.5	1456	114万	6568
9	m1709c2900	豆粕17年09月购2900	17.0	54.55	0.00	6.0	1286	22.3万	7992
10	m1709c2600	豆粕17年09月购2600	119.0	6.73	0.00	7.5	974	114万	1786

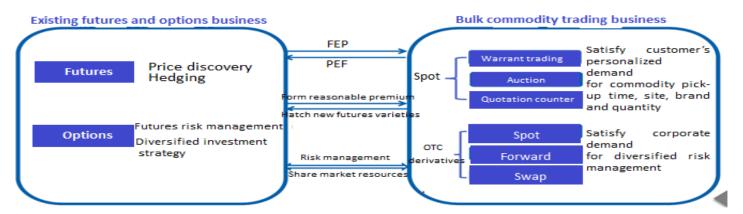
Sugar options on Zhengzhou Commodity Exchange

SR709P6500	白糖17年09月沽6500	57.0	25.27	0.00	11.5	1166	63.0万	3938
SR709C6600	白糖17年09月购6600	74.0	-22.51	0.00	-21.5	1118	81.6万	1672
SR709P6600	白糖17年09月沽6600	100.5	20.36	0.00	17.0	1052	104万	4306
SR801P6600	白糖18年01月沽6600	161.5	28.69	0.00	36.0	774	118万	1460
SR709C6700	白糖17年09月购6700	40.5	-22.86	0.00	-12.0	690	27.3万	3104
SR801P6400	白糖18年01月沽6400	91.5	30.71	0.00	21.5	552	48.0万	1402
SR709C6800	白糖17年09月购6800	20.5	-25.45	0.00	-7.0	552	10.5万	3122
SR801C6700	白糖18年01月购6700	169.0	-17.96	0.00	-37.0	524	88.3万	736
SR709P6300	白糖17年09月沽6300	16.5	32.00	0.00	4.0	490	7.59万	4064
SR709P6400	白糖17年09月沽6400	32.0	36.17	0.00	8.5	474	13.5万	3440

- > SHFE is proactively promoting the listing work of copper futures options
- Copper futures options
 - Leveraged transactions, risk transfer, simple fund management, respond to the market and diversify strategies
- Supervisory authority is now promoting the "option + insurance" mode strongly.



OTC market of nonferrous metals futures



- Address the conflict between the standardization of futures market trading and the diversification of customer demand
 - Relatively-concentrated delivery sites vs. relatively-scattered industrial layout; Fixed delivery time vs. flexible spot trading time
 - Standardization of delivery specifications vs. diversity of spot trade quality; Single transaction mode of centralized bidding vs. various demand such as inquiry transaction
- Development of the bulk commodity trading platform is underway
 - Develop in advance the warrant trading, warrant swap, warrant bidding, EFP and warrant quotation system
 - Gradually launch the spot contracts, mid-forward contract, swap and other transactions



Optimization and deepening of nonferrous metals futures market

	Discontinuous problem of contract											
237	沪锡主力	144620	144610	144660	-0.41	19578	21428	-784				
238	沪锡1801	145220	145090	145340	-0.19	154	784	-26				
239	沪锡1802		143140	147180		0	4	0				
240	沪锡1803		144550	147930		0	0	0				
241	沪锡1804		143980	147130		0	0	0				
242	沪锡1805	146350	146410	147010	-0.55	6	48	4				
243	沪锡1706					0	0	0				
244	沪锡1707		141170	147020		0	2	0				
245	沪锡1708		143680	145880		0	0	0				
246	沪锡1709	144620	144610	144660	-0.41	19578	21428	-784				
247	沪锡1710		143510	145080		0	4	0				
248	沪锡1711		143380	147610		0	0	0				
249	沪锡1712		143430	147950		0	0	0				

- > Discontinuous problem of tin futures contract: the dominant contract jumps in January-May-September
 - It is not advantageous for futures price to become the pricing benchmark of the spot industry; The hedging target and result of companies via the futures market is influenced.
- > Main reason: relatively lower ratio of industrial clients
 - Ratio of corporate clients in copper and other products transactions is 60-70%, tin merely around 15%.
- Solve by the introduction of systems and measures such as the market-maker system



Innovative products of nonferrous metals futures market







- Introduction of alumina and aluminum alloy futures
 - In-depth industrial survey, design of futures contract and relevant rules
 - Product marketing and investors education activity
- Support fund companies to develop ETF or LOF products for the listed nonferrous metals futures
- SHFE nonferrous metals index futures should be listed for trading ASAP



How to participate in China's nonferrous metals futures market (1)

- Register to be a delivery brand (smelter)
 - Basic requirements of SHFE for registered nonferrous metals companies
 - ✓ Annual output reaches the required level (tin: 8,000 tons (primary), 3,000 tons (secondary))
 - ✓ Commodity quality meets the existing national or international standard (GB/T 728-2010)
 - ✓ Production process is in compliance with national industrial policies with environmental compliance; operation lasts for at least one year on a continuous and stable basis
 - Documents to be submitted by companies that apply for registration
 - ✓ Registration statement for application and letter of commitment
 - ✓ Copies of Registration Form of Tin Ingots on Shanghai Futures Exchange, enterprise business license and tax registration certificate
 - ✓ Document capable to prove and distinguish sources of the commodiites which are applied for registration, such as trade mark registration certificate
 - Other documents



How to participate in China's nonferrous metals futures market (2)

- Participate in futures trading
 - Current policy and obstacles
 - Currently the domestic legal persons or clients (settled) in China are allowed to participate in China's futures trading nowadays
 - ✓ China's futures contract is the VAT-included contract (17% VAT)
 - ✓ Regulations and rules with respect to foreign exchange, customs and crossborder joint supervision

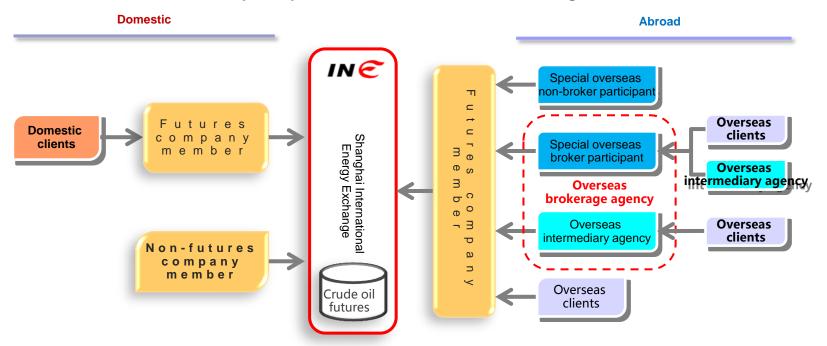
Opening up of China's futures market

- ✓ The crude oil futures was listed for trading in Shanghai International Energy Exchange (INE) on March 26
- Relevant foreign exchange policy and customs as well as other supporting policies are in place
- ✓ Given the dual supervision exercised both by the European Union and their respective regulatory authorities due to the diversity of nations in Europe, it is suggested to consult the energy exchange



How to participate in China's nonferrous metals futures market (3) Four modes for overseas clients to

Four modes for overseas clients to participate in SHFE crude oil futures trading





Conclusion

- The robust development of China's nonferrous metals futures market provides the industry with favorable risk management vehicles and pricing mechanism
 - China's tin futures market operate steadily, but with relatively fewer trading volume and lower participation degree
- China's nonferrous metals futures market is well positioned to develop steadily in the future
 - Introduction of commodity futures options/futures OTC market/alumina futures and nonferrous meals index futures/an increasing number of nonferrous metals ETF and LOF product
- Crude oil futures was listed on March 26 for trading, nonferrous metals futures market will speed up the opening-up process
 - "International product, flat price trading, bonded delivery and RMB-denominated price"
- Expectations for the opening-up of China's nonferrous metals futures market
 - □ To follow the relevant foreign exchange/customs policies of crude oil futures , and adopt the four account opening modes of overseas investors





Thanks!

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