

## Table of Contents

- China Copper Supply & Demand Balance and Price Forecast.....P1
- Effects from Macroeconomic News on Copper Prices .....P2
- Hot Topics .....P3
- Refined Copper Output .....P4
- Refined Copper Import and Export Volume .....P9
- Refined Copper Consumption.....P12
- Refined Copper Inventories .....P16
- Industry News .....P17

## China Copper Supply & Demand Balance

Unit: mt

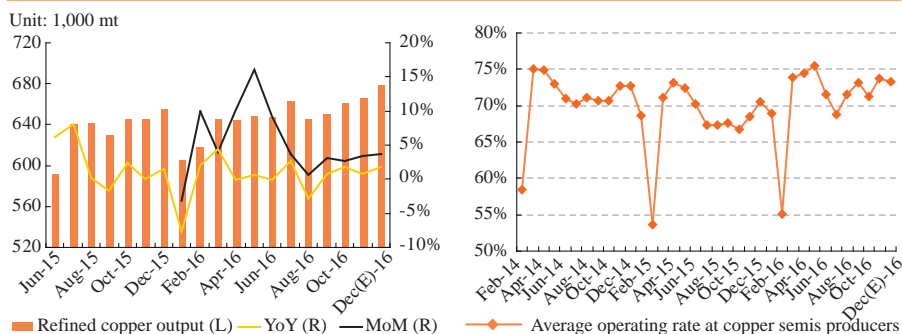
Copper	Sep. 2016	Oct. 2016	Nov. 2016	Jan.-Nov. 2016	YTD YoY(%)
Output	650000	662000	667000	7095000	5.22%
Imports	242792	189812	278000	3270683	0.47%
Exports	27824	22892	25000	411032	115.63%
Apparent Consumption	864968	828920	920000	9954651	1.50%
Changes in Inventories	-22212	-80556	26165	-24626	-81.12%
Actual Consumption	887180	909476	893835	9979277	0.41%

Sources: NBS, China Customs, SMM, CNIA

Note: Changes in inventories refer to changes in copper inventories in Shanghai's bonded zone, as well as trading markets of Shanghai and Guangdong.

### SMM Exclusive: Refined Copper Output

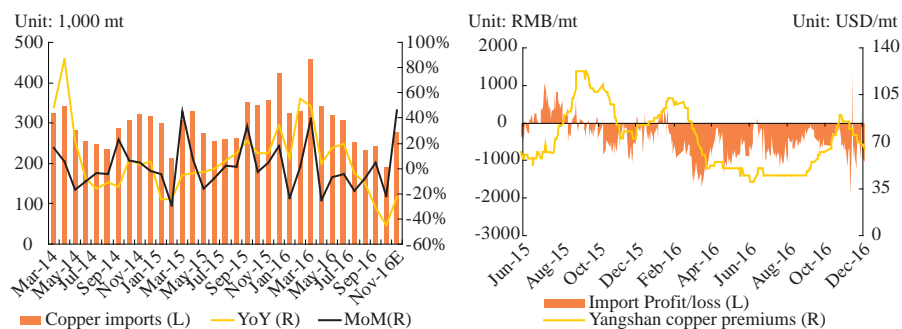
### Average Operating Rate at Copper Semis Producers



Source: SMM

### Copper Imports

### Yangshan Copper Premiums VS Import Profit/Loss



Sources: SMM, China Customs

## Contact us

### Hotline:

+86-21-5155-0322

### Mail:

service.en@smm.cn

### Fax:

+86-21-5155-0345

### Address:

8th FL in North Section, Building 9, Lujiazui Software Park, No. 20, Lane 91, E'Shan Road, Pudong New Area, Shanghai, 200127, China.

**Copper Prices:** LME copper will trade between USD 5,500 -5,850/mt.

**Copper Supply:** China's refined copper output is expected to reach 679,000 mt in December, with YTD output at 7.77 million mt, up 5.08% YoY.

**Copper Inventories:** Inventories of refined copper at major domestic copper smelters were 2.33 days in November, up from October's level.

# China Copper Supply & Demand Balance and Price Forecast

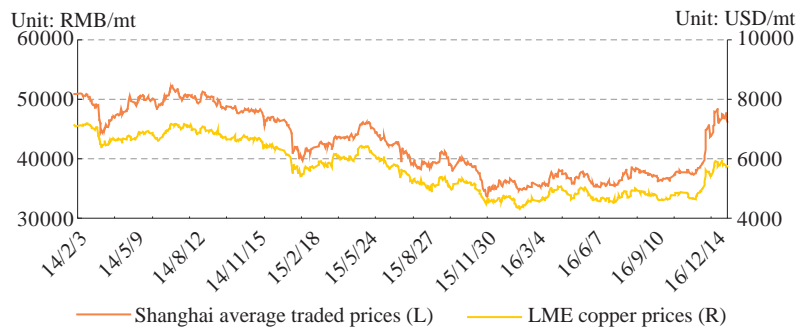
China Copper Supply & Demand Balance

Unit: mt

Copper	Sep. 2016	Oct. 2016	Nov. 2016(E)	MoM
Output	650000	662000	667000	0.76%
Imports	242,792	189,812	278,000	46.46%
Exports	27824	22,892	25000	9.21%
Apparent Consumption	864,968	828,920	920,000	10.99%
Changes in Inventories	-22212	-80556	26165	-132.48%
Actual Consumption	887180	909476	893835	-1.72%

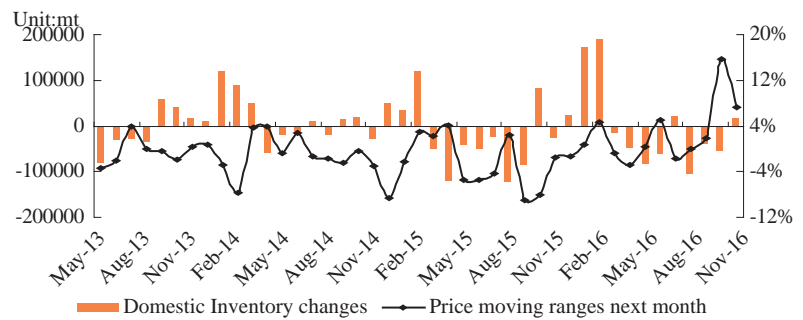
Sources: NBS, China Customs, SMM, CNIA

Domestic Vs LME Copper Price



Sources: SMM, LME

Copper Monthly Average Price Fluctuation Vs Copper Monthly Inventory Change



Source: SMM

Copper prices rallied sharply in November. LME 3-month copper surged by 20%, challenging USD 6,000/mt twice, with monthly highest level at USD 6,045.5/mt. The contract dropped after SHFE raised trading margins. Positions increased 50,000 and trading volumes rose 295,000 lots. Higher-than-expected copper price growth was mainly due to flowing of speculative capitals. Faster depreciation of Chinese yuan and expectation on US's economy improvement after Trump taking office also pushed up the commodities. Chinese yuan dropped to 6.9650 on November 24. Yuan-dominated commodities increased with inflation pressure in China. Trump, winning US presidential election, proposed positive Keynesianism fiscal policy, supporting commodities. LME copper, which trades within a symmetrical triangle, is expected to rally with nearing of bottom of the triangle, in addition to support from positive news.

US's Federal Reserve announced to raise interest rate by 25 basis points on December 15. Fed Chairwoman Yellen delivered hawkish comments and expected to hike the rate three times in 2017. US dollar index thus surged to 103. Negative factors will dominate the market for the foreseeable future. First, US dollar will stay at highs with positive economic data in addition to Fed Chairwoman Yellen's hawkish comments. A strong dollar will weigh down base metals. Second, LME copper inventory is up, which increased 81,975 mt from December 12-15, and is expected to increase further, another negative factor for copper prices. Third, market trading is expected to wane with foreign market players leaving for Christmas. This, combined with tight liquidity in China, will also restrict market trading in December, restricting copper gains. After Fed's rate hike, market will enter a relatively quiet period, and LME copper is expected to trade between USD 5,500-5,850/mt for the foreseeable future.

## Effects from Macroeconomic News on Copper Prices

During the report period from November 15-December 14, SHFE 1702 copper surged to nearly RMB 50,000/mt twice and swung at highs as a whole. Chinese yuan, whose depreciation served as a major price driver behind SHFE copper, also staged big volatility at highs during the report period. People's Bank of China took action through Chinese-funded banks after offshore yuan dropping below 6.96, but this only slowed down decline of Chinese yuan and couldn't reverse market expectation over falling Chinese yuan. Moreover, China's foreign exchange reserves increased to USD 3.05 trillion at the end of November, down USD 500 billion from USD 3.55 trillion, the level seen from the exchange rate reform on August 11, 2015.

China's loose monetary policy introduced in the first half of year kept taking effect in Q4 2016. Fixed-asset investment increased 8.3% in November and private fixed-asset investment growth expanded to 3.1%, both on a yearly basis. Capitals flew into assets, which are at low prices after a slower rising pace, such as copper, after some major cities introduced restriction policies for real estate market. China's PPI growth rose to 3.1% in November as raw material prices surged, and there is a signal that inflation is passing from primary products to terminal products. China's CPI is expected to approach to 3%, the warning line, at the end of 2016.

Despite loose capital liquidity as a whole, signs showed that banks tightened liquidity for seasonal factors at the end of year, weighing down treasury bond futures. The weighed bond index on China Financial Futures Exchange, after dropping below the annual moving average in mid November, fell by a total of 3.75% as of mid December. This was the largest and the fast decline since being listed. Moreover, Shanghai Interbank Offered Rate (Shibor) increased to the year's highs across the aboard with overnight Shibor reaching at 2.3000%, 7-day Shibor at 2.4990% and 14-day Shibor at 2.6994% as of December 14.

US Federal Reserve announced to hike 25 basis points in December's meeting on December 15. Federal Reserve officials were positive toward higher inflation and recovery of labor market, according to Fed Chairwoman Yellen's speech, resulting in faster rate-hiking pace in 2017. This was the US's second rate hike since late 2015, and central banks in other countries, which now chooses to hold ease monetary policy unchanged, will have to introduce responding policies after the US's rate hike. Expectation on outlook for global ease monetary policy is changing.

In other markets, OPEC and non-OPEC countries finally, reached consensus on oil output reduction and so crude oil thus once rose by USD 12/bbl or 7%, the largest growth in the report period.

Falling Chinese yuan, China's economy bottoming and rising crude oil all support copper prices. However, capitals are now dominating the market, and copper market will stage more intense struggles at highs with tight year-end liquidity, changing expectation on global monetary policy after US's rate hike, and arriving of Christmas holiday.

## Hot Topic

### Is Copper at Edge of Cliff after US Rate Hike and Growing LME Copper Inventories?

Copper price leapt in late October following positive data in China and US, speculation over policies after Trump's taking power and a big drop in LME copper inventories. The rapid and big price gain has raised market worries over copper price, as the market will be exposed to downward risks if those price drivers disappear. The recent surge in LME copper inventories and US's rate hike add uncertainties to copper market.

LME copper inventories were off 166,000 mt from September 29 to December 9, but surged by 82,000 mt recently, returning to the level seen one month ago. This, combined with profit-taking by some longs before US's rate meeting, sent down copper price from highs. The big rise in LME copper inventories may be the result of inflows of invisible goods into LME warehouses. SMM expects LME copper inventories to keep growing in the short term, and this will weigh down copper market.

US dollar got a strong boost, with the index climbing above 103 after US Federal Reserve announced December 15 to raise the benchmark rate by 25 basis points and expected to raise the rate three times in 2017 in a hawkish speech.

Recently, economic data both from China and US are positive, and this will support market confidence to some extent.

Positions on the SHFE copper market are on the downward track, a sign of strong risk aversion sentiment. Technically, LME and SHFE copper, now both in the middle band of Bollinger Bands, will test price support at around the line, and will see bound-range trading if finding support there, but will fall to the previous low of USD 5,400/mt if losing support.

Zhang Huawei, an analyst from Soochow Futures, said that the previous round of price gain was partially driven by continuous declines in LME copper inventories. Currently, The cash-to-three-month copper spread was in contango on the LME, a sign of no supply shortages in the spot market. Outflows of goods from LME-registered warehouses, mainly in Asia, led to the previous drop in LME copper inventories, and the recent surge was also the result of increases in Asian warehouses. Considering limited changes in inventories in China's bonded area, there is low possibility that the growth of inventories came from China, and so the inflows were invisible goods that did not flow into the market before. The approaching of off-demand season in China, tightening liquidity in China, US rate hike and subduing speculations over Trump's all bode ill for copper prices, and the surge in LME copper inventories will grow short bets, the analyst pointed out.

Luo Liang, another analyst from China International Futures expected copper futures price to keep falling if LME copper inventories continue growing, but will not see big losses. Recently, warrants on the LME copper market were up, while cancelled warrants were down, and attention should be on changes in inventories when contango narrow from current levels.

## Refined Copper Output

### China Refined Copper Monthly Output and Analysis

Unit: mt

	Output
Nov. 2015	645000
Oct. 2016	662000
Nov. 2016	667000

Sources: NBS, SMM

China's output of refined copper in SMM survey sample was 667,000 mt in November, up 0.76% month-on-month and up 3.41% year-on-year. Output from January to November was 7.095 million mt, up 5.22% on a yearly basis. The output for October was revised from 659,000 mt up to 662,000 mt.

In November, production at major domestic copper smelters was stable except falling output in Jiangxi Copper at unit maintenance. The actual production was less than expected, mainly because of lower-than-expected output from new capacities and production reduction at some secondary refined copper smelters after changing raw material structures. The price gap between refined and scrap copper expanded in November as copper prices surged, and this promoted some secondary smelters to shift to scrap copper as raw materials, which negatively affected production to some extent. But, most of secondary smelters said the rapid growth of spread between the two was a result of skyrocketing copper prices, and should not be sustainable. Meanwhile, supply in the scrap copper market was not stable, and the change in raw material structures was not common, and moreover, supply of blister copper was sufficient, with processing fees stabilizing at RMB 1,500/mt, those secondary smelters added. It was said that deductions for 2017 imported blister copper for term shipments will be around USD160-165/mt, slightly higher than 2016's level of USD150-155/mt.

According to production plans for December, SMM expects China's refined copper output at 679,000 mt, with YTD output at 7.77 million mt, up 5.08% year-on-year. The month-on-month increase will be mainly driven by output increase at Jiangxi Copper after unit maintenance and no new maintenance during the last month of 2016.

## 1. Analysis of Monthly Output at 10 Large Copper Smelters in China

### Monthly Output at 10 Large Copper Smelters in China

Unit: 1,000 mt

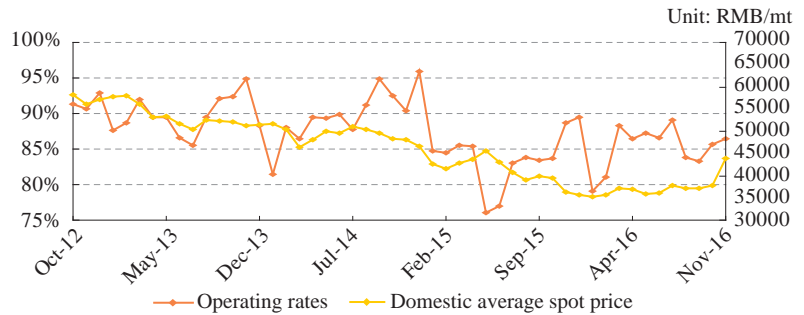
Company	Sep. 2016 Output	Oct. 2016 Output	Nov. 2016 Output
Jiangxi Copper Group (headquarters)	82.3	78.5	75.7
Yunnan Copper Group (headquarters and Chifeng facility)	55	54	51
Tongling Nonferrous Metals Group (Excluding Jinjian Copper)	94	99.5	99
Jinchuan Group Ltd. (headquarters and Guangxi facility)	67	63	64
Daye Nonferrous Metals Group Co., Ltd.	39.5	38.5	38.5
Shandong Yanggu Xiangguang Copper Co.,Ltd.	38	40	38
Baiyin Nonferrous Metals Group Co., Ltd.	13	15	15
Shandong Fangyuan Nonferrous Metals Group	28	33	35
Hangzhou Fuchunjiang Smelting Co., Ltd.	7.8	19.8	23
Yantai Guorun Copper Co., Ltd.	8	5.6	7.5

Source: SMM

Total output at China’s top 10 copper smelters was 446,700 mt in November, flat at October’s 446,900 mt. Output at Jiangxi Copper was down in November due to unit maintenance, and the producer plans to raise December’s output to the highest level of the year, so as to reach annual production target. Other smelters are expected to maintain stable production in December. After completing unit maintenance, Fuyue Group and Guorun Copper resume output to a normal level.

## 2. Survey of Operating Rates at China Copper Smelters

### Operating Rates Vs Copper Price Trends



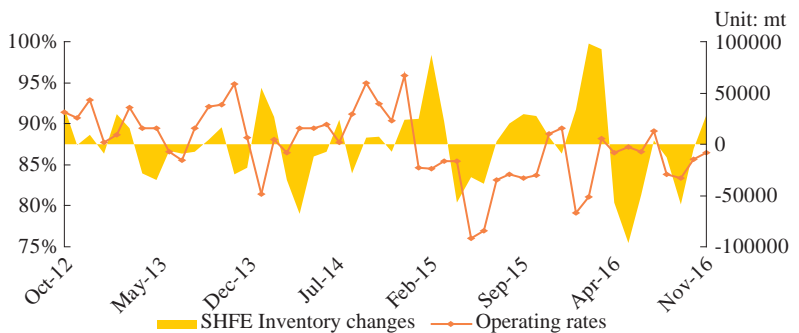
Source: SMM

SMM survey of 29 Chinese copper smelters, with total capacity of 8.4 million mt/yr, shows that the average operating rate was 86.49% in November, up 0.87 percentage point month-on-month.

In November, spot TCs for copper concentrate fell by USD 5.5/mt to USD 96/mt on a monthly basis, and spot premiums dropped from RMB 152/mt to RMB 20/mt, but spot copper prices were up by RMB 6,000/mt in absolute term, encouraging production enthusiasm. Moreover, smelters stepped up production at year end to reach annual production targets, also contributing to higher output.

After falling to 2016’s lowest level of 98,000 mt in early November, SHFE copper inventories rose with lower buying interest after rapid price gains and inflows of imported goods, up to around 130,000 mt, according to official data. Copper inventories, price and output were all up in China’s domestic market.

### Operating Rates Vs Inventory Changes



Source: SMM

### 3. Statistics of New Copper Smelting Capacity in China

#### China New Refined Copper Capacities

Company	Newly-Added Refined Capacity	Total Refined Capacity	Raw Material	Unit: 1,000 mt
				Production Date
China Gold Sanmenxia Co., Ltd.	200	200	Copper concentrate	Mid-May 2015
Xinhui Copper Co., Ltd.	100	100	Copper concentrate	2015
Zhangjiagang United Copper	100	300	Scrap copper, blister copper	Apr. 2015
Zhongtiaoshan Nonferrous Metals Group	50	200	Copper concentrate	2015
Hunchun City Zijin Copper Co., Ltd.	100	100	Copper concentrate	Sep. 2015
Shandong Dongying Fangyuan Nonferrous Metals Co., Ltd.	200	700	Copper concentrate	Oct. 2015
Zijin Copper Co., Ltd.	100	300	Copper concentrate	H2 2015
Shandong Humon Smelting Co. Ltd.	120	170	Copper concentrate	Aug. 2016
Minmetals Copper (Hunan) Co., Ltd.	100	100	Copper concentrate	Apr. 2016
Chifeng JinFeng Copper Industry Co., Ltd.	50	150	Copper concentrate	H2 2017
Shandong Xianghui Copper Co., Ltd.	100	100	Scrap copper, blister copper	2017 (Uncertain)
Guangxi Nanguo Copper Co., Ltd.	200	200	Copper concentrate	H2 2017
Huludao Hongyue Group	150	150	Copper concentrate	Jun. 2017
Zhejiang Heding Copper Co., Ltd.	100	370	Copper concentrate	H2 2017
Ruichang Xikuang Copper Co., Ltd.	200	200	Copper concentrate	2017 (Uncertain)
Western Minerals Qinghai Copper Co., Ltd.	100	100	Copper concentrate	H2 2017
China Gold Sanmenxia Co., Ltd.	150	350	Copper concentrate	H2 2017
<b>Total</b>	<b>1,920</b>	<b>3,790</b>		

Source: SMM

### 4. Unit Maintenance at China Copper Smelters

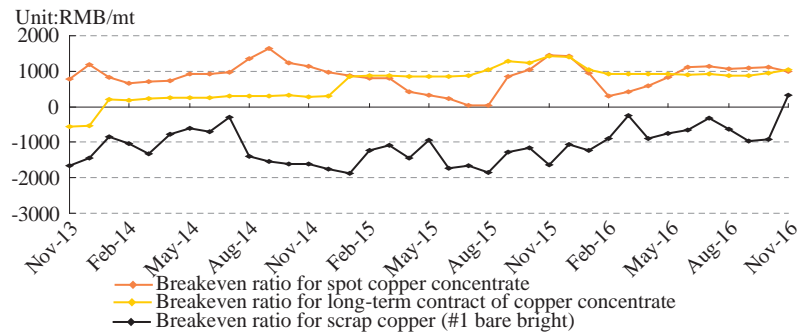
#### Maintenance at China Copper Smelters

Company	Capacity	From	To	Unit: 1,000 mt
				Affected Output
Jiangxi Copper	1000	Mid- May 2016	Mid-Jun. 2016	26
Jinchuan Group Ltd. (headquarters)	400	Mid-May 2016	Late May 2016	1
Chifeng Jinjian Copper Industry Co., Ltd.	100	Early May 2016	20 May 2016	4
Chifeng Yuntong Nonferrous Metal Co., Ltd.	100	Early Jun. 2016	10 Jul. 2016	10
Jinchuan Group (Fangchenggang)	400	Early Jun. 2016	Mid-Jun. 2016	10
Chifeng Yuntong Nonferrous Metal Co., Ltd.	100	Early Jun. 2016	10 Jul. 2016	10
Baiyin Nonferrous Metals Company	200	Late Jul. 2016	Late Aug. 2016	10
Zhongtiaoshan Nonferrous Metals Group	200	Mid-Jun. 2016	Late Jul. 2016	7
Zhejiang Fuye Group Co., Ltd.	200	21 Aug. 2016	23 Sep. 2016	12
Shandong Dongying Fangyuan Nonferrous Metals Co., Ltd.	700	Late Jul. 2016	Late Aug. 2016	30
Hunchun City Zijin Copper Co., Ltd.	100	28 Aug. 2016	Late Sep. 2016	2
Zhongyuan Gold Smelter	200	Early Sep. 2016	Late Sep. 2016	0
Minmetals Copper (Hunan) Co., Ltd.	100	Early Sep. 2016	Late Sep. 2016	5.5
Jiangxi Copper	1000	Oct. 2016	Nov. 2016	11
Jinchuan Group	400	Oct. 2016	Nov. 2016	3.5
Yantai Guorun Copper Industry Co., Ltd.	120	Oct. 2016	Oct. 2016	2.4

Source: SMM

## 5. Raw Material Cost Comparison

### Raw Material Cost Comparison



Source: SMM

In November, spot TCs for copper concentrate were offered at USD 90-100/mt, down USD 5.5/mt from October's.

In early week, the market, waiting for news of long-term contracts during the LME Week, was predominated by a strong wait-and-see attitude, with sparse spot deals reported. During the conference, market players cut expectations over 2017 term TCs for copper concentrate after the ore supply growth had been cut. In mid month, 2017 term copper concentrate TCs were set during CESCO Week. Freeport McMoRan Inc. set TCs for copper concentrate under term contracts at USD 92.5/mt for Chinese buyers in 2017, lower than market estimation. In late month, spot TCs for copper concentrate fell with term TCs. Meanwhile, Las Bambas's transportation issue and labor strike at Los Bronces also weighed down spot TCs.

Dalai Lama's visit to Mongolia on November 18 frayed the ties between Mongolia and China, and copper ore products from Rio Tinto's Oyu Tolgoi mine are all basically sold to China. New tariffs on exports of copper ore and other products from Mongolia were imposed by China after Dalai Lama's visit, and restrictions on export ports, which required that copper consignments must use the same border crossing as exports of coal, also created huge congestion. Supply disruption from Rio Tinto's Oyu Tolgoi mine weighed down spot TCs.

As of December 9, spot TCs were offered at USD 80-85/mt. The one-month long decline in spot TCs was a combined result of term TCs, spot shortages and traders' bargaining chip in annual negotiations with smelters by pushing down spot TCs, SMM says. As traders concluded signing term contracts in December, the decline in spot TCs is expected to come to an end.

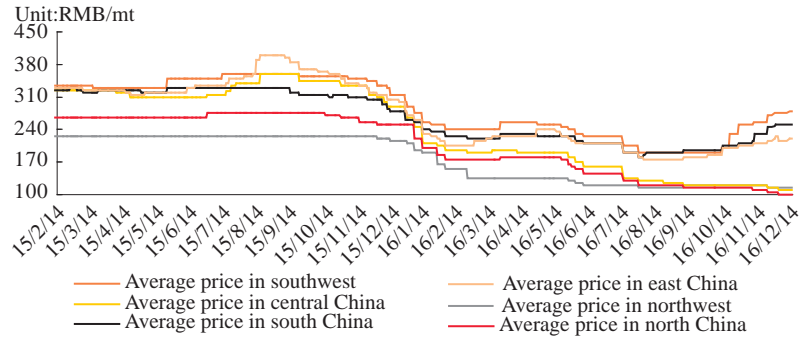
After a strong gain in copper market, the price gap between refined and scrap copper grew rapidly. The average price gap between bare bright copper (including tax) and refined copper was RMB 2,396/mt in November, and largely stayed above RMB 3,000/mt in late November, creating profits for secondary copper smelters by using scrap copper. But, SMM survey finds that only very few secondary copper smelters increased using of scrap copper. Most of them said that the big gap between the two, resulting from big and rapid copper gains, would be short-lived, and supply in the scrap copper market was still unstable. Considering difficulties in scrap copper hedging amid a volatile copper market, they preferred to mainly use blister copper or anode copper as raw materials.



## 6. By-product

### Sulfuric Acid

#### Sulfuric Acid Price Trends across Major Domestic Regions

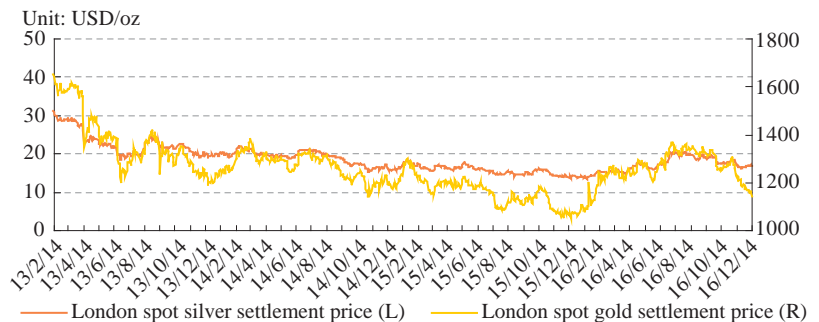


Source: SMM

Domestic sulfuric acid prices fluctuated narrowly in November, with average price at RMB 174/mt, up 8.07% from October's. Operating rates at domestic sulfuric acid producers averaged about 60% in November. Some producers in South China hiked prices due to environmental protection inspections and output cut. Prices in North China fell because of softening downstream demand. Production at sulfuric acid producers in Anhui, Jiangsu and Guangdong was unstable, with limited inventories on hand. When combined with steady downstream purchases, sulfuric acid producers hiked prices by RMB 30-70/mt. Sulfuric acid plants in Shandong maintained normal production and had sufficient goods. Downstream demand was anemic, leaving low orders at sulfuric acid plants, so local sulfuric acid prices were lowered by RMB 10-20/mt. Sulfuric acid prices in Northwest China consolidated at lows. Shipments were disrupted by adverse weather and transportation problem.

### Precious Metals

#### London Spot Gold and Silver Prices



Source: SMM

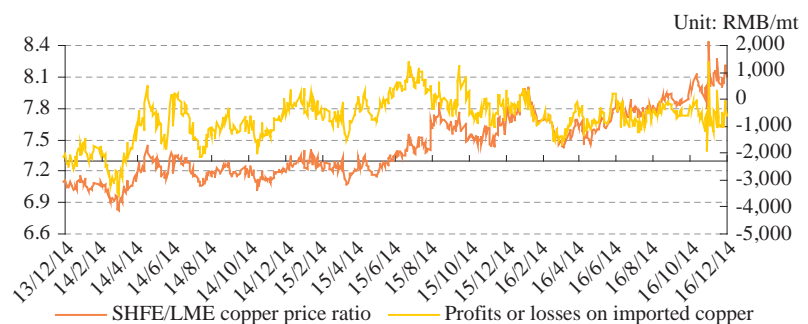
Risk aversion predominated the market in early November due to US presidential election, bolstering precious metals prices to break through the 60-day moving average. After release of voting results of the election November 10, the US dollar weakened. Gold and silver surged to USD 1337.55/oz and USD 19.01/oz, respectively. But after Trump won the general election, investors turned rational and the US dollar rallied, while gold and silver weakened. With market expectations that new policies to be pushed by Trump will stimulate US economic growth and growing likelihood of Fed's rate hike in December, the US dollar index rose all the way and hit a 14-year high of 102.05, weighing down precious metals. The US dollar fell at the end of November, while London gold leveled out, with London silver edging up. London gold closed the month down 8.15%, and London silver fell 7.62% in November. The US dollar stayed above 100 in December as the European Central Bank

prolonged Quantitative Easing whilst curtailing monthly purchases. London gold dropped after meeting resistance from the 10-day moving average, while London silver was resistant to declines and rose to the 10-day moving average. The US Fed hiked interest rate at its December policy meeting December 15, strengthening the US dollar and in turn weighing down precious metals.

## Refined Copper Import & Export Volume

### 1. SHFE/LME Copper Price Ratio and Profits or Losses on Imported Copper

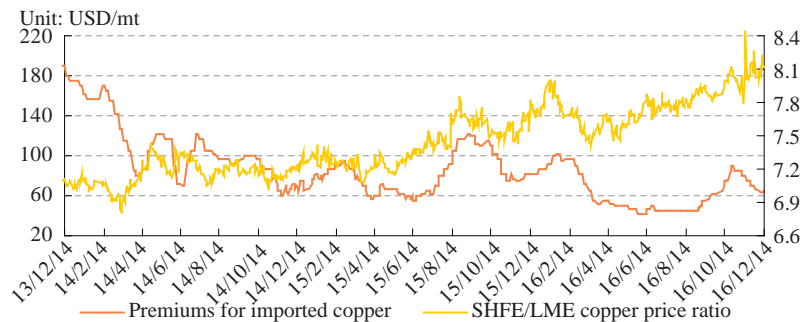
SHFE/LME Copper Price Ratio and Profits or Losses on Imported Copper



Source: SMM

### 2. Premiums for Imported Copper

Premiums for Imported Copper Vs SHFE/LME Copper Price Ratio



Source: SMM

Yangshan copper premiums dropped significantly in November. As of late November, Yangshan copper premiums were offered at USD 60-75/mt, down USD 17.5/mt or 20.6% from late October, and averaging USD 77.6/mt in November. The SHFE/LME copper price ratio rose noticeably, due mainly to Chinese yuan's devaluation. Import losses were still severe.

Quotes by cargo holders were loosened after Codelco decided its term premiums for Chinese buyers in 2017. Purchases weakened as import losses remained between RMB 500-1,000/mt. Market quotes fell precipitously in November.

December witnessed large numbers of deliveries to LME warehouses, growing LME copper inventories by 82,000 mt during December 12-15. Rumors said additional deliveries were expected in the near term. SMM expects the SHFE/LME copper price ratio to rise further in the near term, narrowing import losses. Yangshan copper premiums will thus be supported.

### 3. Imported Copper

#### Major Refined Copper Importers in Oct.

Unit: mt

Company	Imports	Proportion to Major Importers	Proportion to Total Importers
CNMC International Trade Ltd.	14119	20.70%	7.45%
Tianjin Hopetone Co., Ltd.	10080	14.78%	5.32%
Zhongji Ningbo Group Co., Ltd.	9037	13.25%	4.77%
Weihai Lanchuang Import & Export Co.,Ltd.	8318	12.19%	4.39%
Tewoo Import & Export Trade Co., Ltd.	6665	9.77%	3.52%
Zhengwei Technology (Shenzhen ) Co., Ltd.	4842	7.10%	2.55%
East China Ordins Co., Ltd.	4000	5.86%	2.11%
Taiyi Jiangxi Copper (Guangzhou) Co., Ltd.	3891	5.70%	2.05%
Anhui Land Group Co., Ltd.	3711	5.44%	1.96%
CITIC International Co., Ltd.	3547	5.20%	1.87%

Sources: SMM, China Customs

#### Top 5 Customs of Refined Copper Imports in Oct.

Unit: mt

Customs	Amounts	Proportion to Top 5	Proportion to Total Imports
Shanghai Customs	104489	67.16%	55.12%
Urumqi Customs	17447	11.21%	9.20%
Huangpu Customs	13857	8.91%	7.31%
Jinan Customs	12160	7.82%	6.42%
Qingdao Customs	7632	4.91%	4.03%

Sources: SMM, China Customs

#### Main Origins of Refined Copper Imports in Oct.

Unit: mt

Origins	Imports	Proportion
Chile	56979	30.06%
Japan	22109	11.66%
Peru	18985	10.02%
Australia	14387	7.59%
India	12548	6.62%

Sources: SMM, China Customs

#### Trade Mode of Refined Copper Imports in Oct.

Unit: mt

Trade Mode	Imports	Proportion
General Trade	127552	67.29%
Goods in Bonded Areas (including pilot areas under customs supervision)	36720	19.37%
Feeding Processing Trade	18740	9.89%
Goods at Bonded Warehouses	4474	2.36%
Processing and Assembly Trade with Supplied Materials	1842	0.97%

Sources: SMM, China Customs

#### Major Destinations of China Refined Copper Exports in Oct.

Unit: mt

Destination	Exports	Proportion
South Korea	8934	39.02%
Taiwan (China)	5571	24.34%
Malaysia	2730	11.93%
Singapore	1988	8.68%
Indonesia	1097	4.79%

Sources: SMM, China Customs

## China Refined Copper Exports in Oct. by Trade Mode

Unit: mt

Trade Mode	Exports	Proportion
Goods in Bonded Areas (including pilot areas under customs supervision)	18329	80.07%
General Trade	4563	19.93%

Sources: SMM, China Customs

## 4. Monthly Import &amp; Export

## China Monthly Refined Copper Import

Unit: mt

	Refined Copper	MoM	YoY	YTD	YTD YoY
Nov. 2015	358,727	4.44%	11.99%	3,254,868	-0.61%
Oct. 2016	189,812	-21.82%	-44.74%	2,992,546	3.33%
Nov. 2016 (E)	278,000	46.46%	-22.50%	3,270,546	0.48%

Sources: China Customs, SMM

China's imports of unwrought copper and copper semis witnessed big growth in November. Imports of unwrought copper and copper semis increased 31% MoM to 380,000 mt in November, according to China Customs.

What's behind the surge in unwrought copper and copper semis imports after sliding for seven months in a row?

This is due mainly to four reasons. First, importers had been actively importing goods due to expectations of yuan's further devaluation, which may expand import losses. Devaluation in the Chinese yuan has accelerated after its inclusion in the Special Drawing Right (SDR) October 1.

Second, producers and traders stepped up imports at the year's end out of credit extension consideration at banks next year, although import window remained closed most of this year, SMM added.

Third, copper imports had arbitrage opportunity at one point in October.

Fourth, China's November imports were around the average level for the year.

Imports of unwrought copper and copper semis totaled 4.46 million mt in the first eleven months of the year, a rise of 4.3% YoY, according to China Customs.

## China Monthly Refined Copper Export

Unit: mt

	Refined Copper	MoM	YoY	YTD	YTD YoY
Nov. 2015	19,680	81.78%	-0.26%	190,621	-20.33%
Oct. 2016	22,892	-17.72%	111.45%	386,033	125.83%
Nov. 2016 (E)	25,000	9.21%	26.79%	411,033	115.63%

Sources: China Customs, SMM

LME copper inventories grew over 80,000 mt recently mainly at LME's Asia-based delivery warehouses. SMM does not attribute this to China's exports. Changes in inventories in Shanghai bonded warehouse were only limited over the past month, while the export window still remained closed.

LME copper inventories decreased 166,000 mt during September 29-December 9. SHFE copper inventories grew 25,000 mt during this period, while Shanghai bonded zone inventories fell about 30,000 mt. SMM attributes recent surge in LME copper inventories to invisible inventories which had been shipped back to LME warehouses, not exports from China.

# Refined Copper Consumption

## 1. China Copper Semis Monthly Output

China Copper Semis Monthly Output Unit: mt

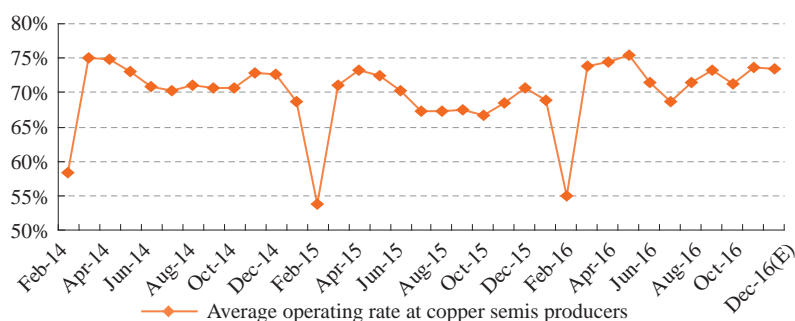
	Copper Semis	MoM	YoY	YTD	YTD YoY
Nov. 2015	1,856,818	4.5%	22.56%	17,237,119	8.44%
Oct. 2016	1,816,824	0.5%	2.22%	17,662,649	18.15%
Nov. 2016 (E)	1,871,328	3.0%	0.78%	19,533,977	13.32%

Source: NBS

SMM survey shows the average operating rate at China’s copper semis producers is expected to rise in November, in line with improvement in China’s manufacturing PMI. SMM expects China’s copper semis output to be 1,871,328 mt in November, up 3.0 percentage points MoM and 0.78 percentage point YoY.

## 2. Average Operating Rate at Copper Processing Industry

Average Operating Rate at Copper Semis Producers

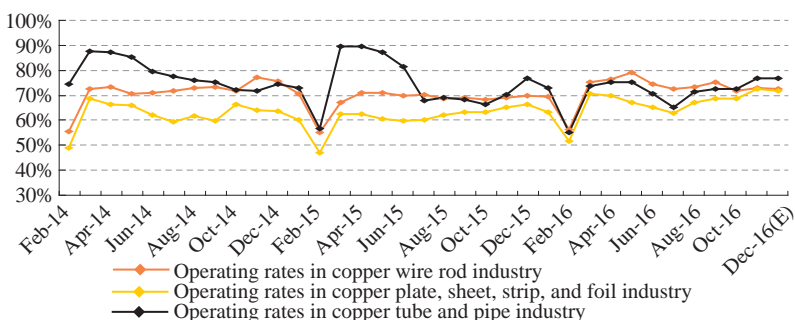


Source: SMM

The average operating rate at China’s copper semis producers was 73.73% in November, up 2.42 percentage points MoM and 5.18 percentage points YoY. Operating rates at copper plate/sheet, strip and foil producers hit the highest in SMM’s record. Copper prices soared in November. End-users replenished stocks in mid-November after accepting price gains. Demand from wire & cable and automobile industry was strong, production at air conditioner producers also increased due to stock-building by distributors, inspiring operating rates at copper semis producers.

## 3. Comparison of Operating Rates in Copper Processing Industries

Comparison of Operating Rates at Copper Processing Industries



Source: SMM

## Copper Wire Rod

SMM's survey of 19 Chinese wire rod producers, representing 4.47 million mt/yr in capacity, shows the average operating rate at wire rod producers surveyed by SMM rose to 73.03% in November, up 3.84 percentage points YoY and 1.18 percentage points MoM. November was still a high-demand month for copper wire rod. Electric wire & cable producers were aggressively delivering at the year's end. Orders from automobile and communication cable were also steady. Surge in copper prices also boosted operating rates in November. The market accepted surging copper prices in mid-November, so end-users produced in advance or hoarded stocks in case that prices would rise further. Any impact on large copper wire rod producers from big copper price gains was limited thanks to hedging operation.

## Copper Tube/Pipe

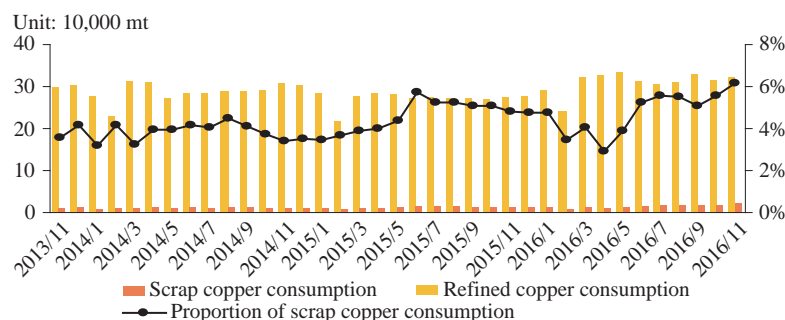
SMM's survey of 20 Chinese copper tube/pipe producers, representing 1.54 million mt/yr in capacity, shows the average operating rate rose to 76.69% in November, the highest for the year, up 6.29 percentage points YoY and 3.99 percentage points MoM. November is a peak-demand month for copper tube/pipe industry. Sharp gains in copper prices also offered an opportunity for copper tube/pipe industry. Raw material prices surged in November. Air conditioner plants chose to replenish stocks in mid-November so as to avoid risks from further price gains. Production at air conditioner producers remained high in December. As domestic air conditioner producers decided to hike prices in December, distributors had hoarded stocks in November.

## Copper Plate/Sheet, Strip, and Foil

SMM's survey of 21 Chinese copper plate/sheet, strip and foil producers, representing 1.17 million mt/yr in capacity, shows the average operating rate at those surveyed was 72.44% in November, up 3.76 percentage points MoM, and 7.26 percentage points YoY, refreshing SMM's record high. Copper plate/sheet, strip and foil producers showed strong performance, especially copper foil producers, which ran at full capacities, according to SMM survey. With year-end nearing, producers have stepped up production to reach annual production target. Similar to copper rod producers, end-users also rushed to replenish goods as copper prices surged. Decent orders at automobile, electronics, communications and home appliance producers were strong, stimulating production at copper plate/sheet and strip producers. According to China Association of Automobile Manufacturers, auto output was 3.01 million sets in November, a new record high, thanks to halt-cut in purchase tax for vehicles with engine at 1.6L and below introduced last October. In the home appliance market, distributors increased inventories with rumors of price hike in home appliance products after copper prices soared in November, and market sentiment in the home appliance market also picked up.

## 4. Raw Material Utilization in Copper Processing Industries

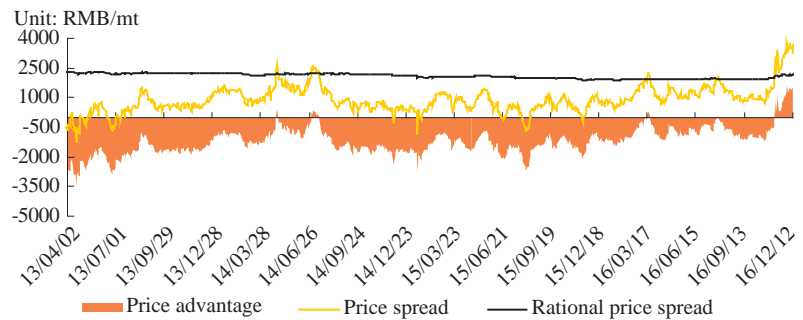
### Changes in Utilization Rate of Scrap and Refined Copper in Copper Processing Industry



Source: SMM

The price spread between refined and scrap copper expanded in November due to surging copper prices and increased scrap copper supply. Consequently, downstream producers increased using proportion of scrap copper. SMM survey shows using proportion of scrap copper increased from October's 5.6% to 6.2% in total raw materials in November. But SMM sees limited upward room for the proportion. Downstream buyers purchased cautiously after copper prices stabilized in December. Besides, scrap copper dismantling and processing in major markets, including Hebei and Guangdong were both restricted by environmental protection inspections.

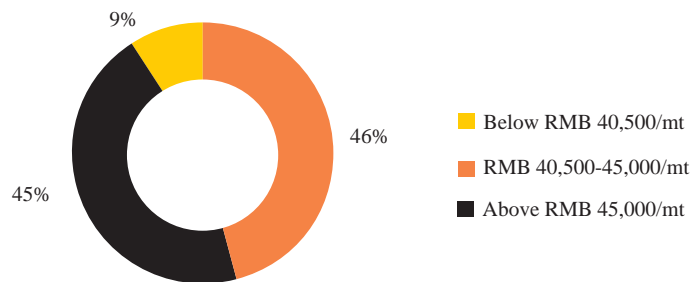
#### Changes in Price Spread between Scrap and Refined Copper



Source: SMM

The price spread between refined and scrap copper expanded remarkably in November, with RMB 3,370/mt in late November. Profit for scrap copper dismantling increased after scrap copper prices rose. Dismantling period for automobile is normally 2 weeks, and the period for electric wire & cable and communication device is shorter. Scrap copper supply grew significantly in mid-to-late November, so price gains for scrap copper were less significant than those for refined copper, widening the price spread between the two.

#### Costs of Raw Material Inventories in Copper Processing Industry



Source: SMM

## 5. New Projects in Copper Processing Industry

### Capacity Expansion Projects at Copper Wire Rod Producers

Unit: 1,000 mt/yr

Company	New Capacity	Total Capacity after Expansion	Estimated/Actual Operation Time
Guangxi Jinhong Metal Co., Ltd.	200	200	Jul. 2015
Huangshi Shengxiang Copper Co., Ltd.	300	300	Q4 2015
Anhui Tianda Copper Co., Ltd.	150	150	Nov. 2015
Shanghai Chenli Investment Co., Ltd.	400	400	Oct. 2015
Wuxi Rongcheng Electrician Material Co., Ltd.	220	320	Jul. 2015
Shanghai Shenghua Cable Co., Ltd.	150	150	Mar. 2016
Hengtong Optic-electric Co., Ltd.	150	150	Apr. 2016
Zhengwei (Gansu) Copper Technology Co., Ltd.	250	250	Nov. 2016
Tongtai High-Conductivity Copper Wire Co., Ltd.	400	400	Feb. 2016
NAN Electrical Cable Australia Pty Ltd (NAN Cables)	180	180	2016
Jinxin Copper Industry Co., Ltd.	100	100	Mid-2016
Gaowei Copper Technology (Liaoning) Co., Ltd.	250	250	Late 2016 or Early 2017
Luoyang Haochang Copper Industry	150	200	Sep. 2016
Guangdong Hongyu Copper	400	400	2017
Sun Cable	50	100	Mid-2017
Baosheng Science & Technology Innovation Co., Ltd.	225	555	2017
Ningbo Jiangbei Copper Wire Co., Ltd.	150	300	Mid-2017
Amer International Group Co., Ltd.	500	500	Unclear
<b>Total</b>	<b>4225</b>	<b>4905</b>	

Source: SMM

### New Expansion Projects at Copper Tube/Pipe Producers

Unit: 1,000 mt

Company	Newly-Built/ Expanded Capacity	Total Capacity after Operation of Newly-Increased/Expanded Capacity	Estimated/Actual Operation Time
Guangdong Hailiang Copper Industry Co., Ltd.	25	25	Jan. 2016
Wuxi Longda Metal Material Co., Ltd.	25	45	Unclear
Zhongming Copper Industry Co., Ltd.	20	20	Unclear
Jiangsu Changfa Refrigeration Co., Ltd.	20	30	Unclear
<b>Total</b>	<b>90</b>	<b>120</b>	

Source: SMM

### Expansion Projects at Copper Plate/Sheet, Strip and Foil Producers

Unit: 1,000 mt/yr

Company	New Capacity	Total Capacity after Expansion	Estimated/Actual Operation Time
Zhongming Copper Industry Co., Ltd.	50	50	Late 2015
Zhejiang Huayuan Copper Co., Ltd.	100	100	H2 2015
Guangzhou Copper Semis Plant	20	50	Unclear
Jiangxi Xinrong High-Tech Co., Ltd.	150	150	Unclear
Huakun International (Hong Kong) Co., Ltd.	150	150	Unclear
<b>Total</b>	<b>470</b>	<b>500</b>	

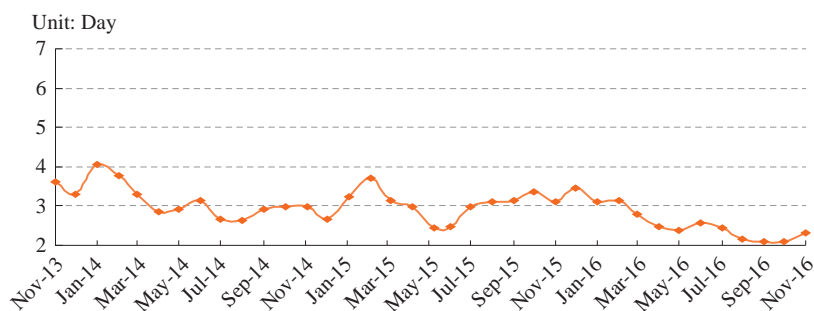
Source: SMM



## Refined Copper Inventories

### 1. Inventories at Smelters

#### Changes of Days of Inventories at Smelters

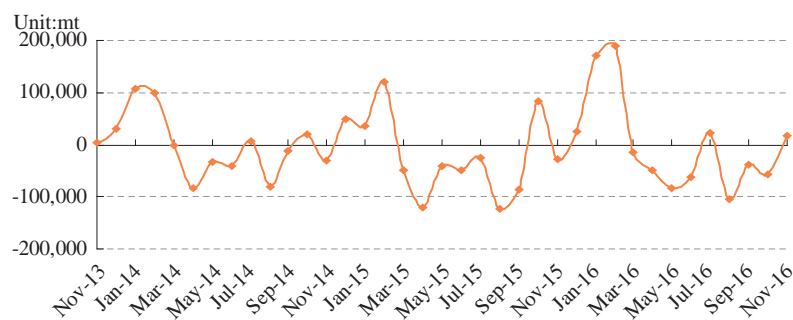


Source: SMM

Average refined copper inventories at Chinese copper smelters increased slightly on a monthly basis to 2.33 days in November. Operating rates at downstream producers increased as a whole, but they turned wary of purchases after copper prices surged. Moreover, Chinese copper smelters limited selling in November to gain bargaining chip in long-term contracts negotiation with traders and downstream buyers, which also grew their inventories.

### 2. Inventories at Traders

#### Changes of Inventories at Traders

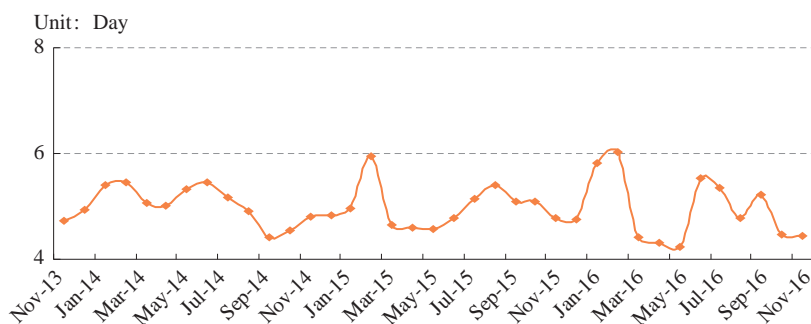


Source: SMM

Inventories held by traders, including inventory in Shanghai bonded zone, Shanghai and Guangdong) increased 17,000 mt MoM in early December. Inventories in Shanghai bonded zone dropped to 460,000 mt from 470,000 mt, down 10,000 mt, while inventories in Shanghai grew 39,000 mt to 127,000 mt. This was mainly because of customs clearance for goods by many, and growing supply of imported copper grew inventories in Shanghai. Inventories were 10,000 mt in Guangdong, down 12,000 mt from October's level, due to modest outflows from warehouses and shipment controls by smelters for long-term contracts negotiation at the end of year.

### 3. Inventories at Downstream Processors

#### Changes of Days of Inventories at Downstream Enterprises



Source: SMM

Inventories at Chinese copper processing enterprises kept falling in November. Copper processors took cautious attitude in purchases after big copper gains, and gradually accepted high copper prices after the rising momentum was asserted in the market, dashing hope for copper price to return to RMB 36,000-39,000/mt. Hence, their copper inventories were down in November, but only slightly.

## Industry News

#### SHFE Raises Trading Margins for 10 Commodities, Including Copper and Rebar

Shanghai Futures Market (SHFE) announced to raise trading margins to 9% from 8% for copper, aluminum, zinc, lead, nickel, tin, rebar, hot-rolled coils, natural rubber and bitumen from November 11, and increase their daily movement limits to 7% from 6%.

#### SHFE Completes R&D Work for Copper and Gold Options

Zhang Min, Senior Manager of Derivative Department of Shanghai Futures Market (SHFE), indicated that the bourse has completed R&D work for copper and gold options. SHFE will carry out mock trading or network test at an appropriate time.

#### Tongling Nonferrous Metals to Invest RMB 1.59 Bln in Ultra-thin Copper Foil Project

Tongling Nonferrous Metals Group signed a contract for high-precision and storage 20,000-mt ultra-thin lithium battery copper foil project with a total of investment at RMB 1.59 billion under two phases. The company will start construction of first phase in Q4 2016 and expect to put it into operation in June 2018 with annual capacity of 10,000 mt after completion. The second phase will be started building after production line of the first phase beginning operation. Tongling Nonferrous Metals Group will gain sales revenue at RMB 1.52 billion per year after the project reaching production target.

#### Codelco to Invest USD 3.8 Billion and Keep Cutting Costs in 2017

Codelco CEO Nelson Pizarro said that the company plans to invest USD 3.8 billion in 2017 and cut costs further, with USD 3.14 billion for projects and USD 651 million for mine's development. The company invested about USD 3 billion in 2016.

#### Strike at Copper Mine to Affect Economic Growth in Q4 in Peru

Capital Economics indicated that MMG Las Bambas's strike in October will undermine Peru's economic growth in Q4. Peru's economic growth was 4.5% in Q3. JPMorgan Chase expects Peru's annual economic growth to be at 4.5% in 2017 and 4% for 2016.

#### Copper Output in Chile Drops 11.1% in October

Chile's copper output was 445,117 mt in October, down 11.1% YoY, according to Chilean government's data. Technical production interruption at one processing enterprise served as a major factor behind the decline. Falling ore grade at major mines and maintenance also affected copper output, the government pointed out.

#### Codelco's Copper Output Falls Slightly YoY in the First Nine Months

Copper output at Codelco's wholly mine increased to 1.27 million mt from January to September, up from 1.26 million mt in the same period last year. Codelco's total copper output, including its share in El Abra and Anglo American Sur, dropped to 1.37 million mt from 1.38 million mt YoY in the first nine months. Codelco posted losses in the same period but costs reduction limited the losses to some extent.

## SMM also provides

### SMM Regular Report (weekly & monthly)

#### Non-ferrous Metals Reports

China Base Metal Briefing (weekly)

China Metal Briefing (weekly)

China Copper Weekly

China Aluminum Industry Chain Weekly Report

China Zinc Weekly

China Lead Weekly

China Steel Briefing

China Iron Ore Weekly Monitor

China Copper Monthly

China Aluminum Monthly

China Nickel Monthly

China Manganese Monthly

China Silicon Metal Market Monthly

China Rare Earth Quarterly

China Iron Ore Monthly Monitor

China Steel PMI Monthly

### SMM Annual Reports & Special Study

#### Non-ferrous Metals Reports

China Copper Industry Chain Annual Report, 2016-2019

China Aluminum Industry Chain Annual Report, 2016-2020

China Nickel Industry Chain Annual Report, 2016-2019

China Lead Industry Chain Annual Report, 2016-2018

China Zinc Industry Chain Annual Report, 2016-2019

China Rare Earth Industry Chain Annual Report, 2016-2019

China EMM Industry Chain Annual Report, 2016-2019

China Steel Industry Chain Annual Report, 2016-2020

China Nickel, Cobalt and Lithium Industry Annual Report 2016

#### SMM Research Team

**Hotline:** +86-21-5155-0322

**Fax:** +86-21-5155-0345

**Email:** [service.en@smm.cn](mailto:service.en@smm.cn)

**Add:** 8th FL in North Section, Building 9, Lujiazui Software Park, No. 20, Lane 91, E'Shan Road, Pudong New Area, Shanghai, 200127, China.

**Web:** <http://www.metal.com>

This report is an original work and/or a compilation by SMM, which holds the copyright thereto and is entitled to copyright protection under the Copyright Law of the People's Republic of China and applicable international treaties. Without the prior written permission of SMM, neither this report nor its contents, in part or in whole, may be reproduced, revised, sold, transferred, displayed, translated, compiled, or otherwise disseminated.

The contents of this report, including, but not limited to, any and all information, articles, data, tables, charts, photographs, audio and/or video recordings, logos, advertisements, trademarks, trade names, domain names, layout designs, are subject to protection under China's Copyright, Trademark, and Unfair Competition laws, as well as applicable international treaties pertaining to the legal protection of copyrights, trademarks, domain names, commercial data, and other forms of intellectual property, and are owned and held by SMM, its rights and assigns. Without the prior written permission of SMM, neither this report nor its contents, in part or in whole, may be reproduced, revised, sold, transferred, displayed, translated, compiled, or otherwise disseminated.

The views expressed in this report are based on a comprehensive assessment of available market information by SMM Research as of the date of publication. This report is provided for reference only. Reliance on the contents hereof is at your own risk.