

The Aurubis Copper Mail informs you monthly about current trends on the copper market.

In Focus

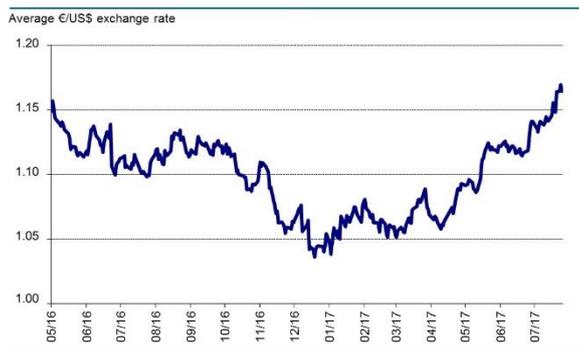


On April 28, 2016 the copper producer Aurubis celebrated its 150-year anniversary. To be sure, we will not cover the entire timespan in this 150th edition of the monthly publication Copper Mail; nevertheless, it has already been approximately twelve and a half years in which we have tried to bring the events of the copper market closer to the reader. For this, the market itself has taken care that we have never run out of material. July 2017 was no exception. At the turn of the month June / July, an inventory increase of 73,000 t at the LME caused some unrest. Later, unexpectedly positive economic data from China added to this and the production sites threatened by strikes presented some news. In the meantime, the normally quiet summer season had indeed begun, but the view seemed to already be oriented to the time afterwards.

Economic Situation

Euro increases in value over the course of July

 Aurubis



The looming economic upturn in **China** strengthened further. The second-largest national economy in the world reported economic growth of 6.9 % for the second quarter (measured by Gross Domestic Product / GDP). Previously, forecasts with values between 6.7 % and 6.8 % had been expected. Significant driving forces were, among others, the commodities sector, foreign trade and industrial production. The latter is one of the primary processors of refined copper for consumer use, such as refrigerators or air conditioners. The growth in the manufacturing industry reached a level of 7.6 % in June and was thus significantly more than the market expectation of 6.5 %. Although China was supposed to lose some momentum in the second half of the year, the current value provided a good cushion to reach the announced GDP growth target of 6.5 %.

In the **United States**, production increased slightly. An increase of 0.2 % was in line with analysts' expectations. It is important to note the steady development: In the past five months, both domestic demand and exports rose steadily. That is the longest recovery period since 2014. After some difficult months, automobile production (among others) profited from this and finally gained momentum again.

In the **euro zone**, signs are signaling growth. In their latest forecast, the European Central Bank upgraded the gross domestic product for the euro zone. In 2017, this should lie 0.2 points higher than previously assumed and so amount to 1.9 %. Furthermore, industrial exports have developed positively. In comparison with the preceding month, these rose by approximately 4 %; this represents the highest increase since August last year.

Even though there are not yet any official results for the second quarter, growth in **Germany** this year should be stronger than it has been for some time. Both exports and industrial production grew strongly. The business climate index of the Munich ifo Institute rushed from record to record. The International Monetary Fund accordingly predicted economic growth of 1.8 % for Germany.

Copper Essentials

The latest Reuters poll answered the question of how supply and demand will behave in relation to refined copper in the year 2017. It summarizes the opinion of 29 analysts. A manageable production deficit of 44,000 t is expected. In 2018 it should then reach a small surplus of 74,000 t.

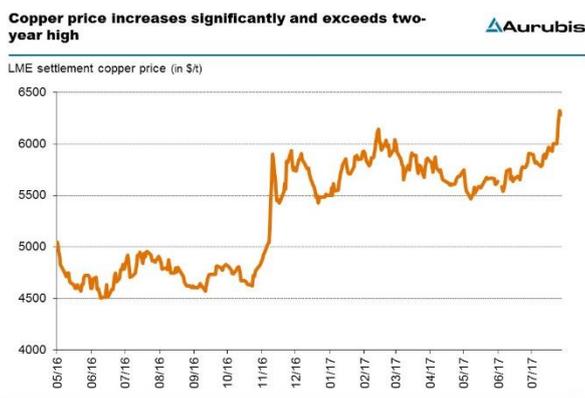
The figures from the World Bureau of Metal Statistics (WBMS) support this tendency: For the first five months of 2017, the institute sees a deficit of 65,000 t with a slightly lower mine output of 8.3 million t and slightly higher production of refined copper of 9.6 million t. This production is in contrast with market demands of 9.7 million t, according to WBMS.

A similar tendency emerges in the numbers from the International Copper Study Group. Namely, these see a surplus of 80,000 t in a one-month shorter time period from January to April 2017. According to the experts' data, however, the deficit of 18,000 t in March widened to 53,000 t in the month of April.

According to WBMS, China expanded its production in the first five months and once again increased output by around 241,000 t. At the same time, Chinese demand for copper declined by 253,000 t to 4.7 million t. However, China remains the largest copper consumer in the world, with a 48 % share of the worldwide market.

At the end of the month, the People's Republic surprised with an announcement to import less copper scrap, from the end of 2018. According to information from Morgan Stanley, this should specifically concern scrap with a low copper content of around 14 %. This currently constitutes between 60 and 70 % of scrap imports from China.

» Price Trend



The copper price increased significantly on the LME at the end of July and exceeded the US\$ 6,000 mark. In general, the reaction to current events in July remained moderate and there were no larger price fluctuations to take note of. In the middle of July, the LME copper price (settlement) consolidated to an average value of around US\$ 5,950 / t, before it increased significantly at the end of the month and exceeded the US\$ 6,000 mark, with which a new two-year high was reached. Observers see the weak US dollar and China's announcement of plans to import less scrap in the future as possible reasons for the dynamic development. There was movement in the difference between the spot price and the three-month price. The contango expanded and was

most of the time more than US\$ 30 / t. The arbitrage window between the LME and SHFE remained closed. The latest Reuters survey gave an average predicted value of US\$ 5,716.50 / t for 2017. The average of the LME settlement listings for the first half of the year was around US\$ 5,750 / t.

» Copper Raw Materials

There is little new to report from the **copper concentrate** market in July. It was described in the media as calm and showed only limited spot activity. After publication of the base TC/RC for the Chinese Smelter Purchase Team for the third quarter in the amount of US\$ 86 and 8.6 cents / lb, attention is focused on whether this mark will be confirmed in active trading. Inclement weather is hindering and delaying concentrate shipments from Chile, though larger disruptions in supply will not stem from this. According to the Metal Bulletin, the current TC/RCs in the Chinese mine business are spread in a range from US\$ 80/8.00 cents to US\$87/8.70 cents for deliveries in July to September.

In the European **copper scrap market**, the development beginning in the previous month continued in July. Stable to solid copper prices provided for a comparatively solid supply, which faced only selective buying interest. Seasonal influences appeared only slowly in the second half of the month, which could strengthen in August. It will then be vacation season in many areas throughout Europe, but to what extent this accordingly has an effect on market activity is not determinable. The indications for refining charges correspond to good availability.

» Production

Also in July, there were a few events that had an effect on the discussion about the availability of concentrates and refined copper.

In Indonesia, it is said that the Grasberg mine is still producing. In addition, things began to move in the continuing confrontation between the government and Freeport about the operation of the second-largest copper mine in the world. After negotiations between government representatives and the management of the American mine operator in Jakarta, initial agreements for the future operation of the mine have been reached. The Chuquicamata mine in Chile is likewise preparing for the future: Operations in underground mining should begin there for the first time as of 2019. However, the dismantling of open-pit mining will continue until approximately the year 2027. In Chile, thanks to the government's negotiation efforts, another walkout in the Centinela mine (Antofagasta) could also be averted. Similar discussions were in progress in the neighboring Zaldivar mine (Antofagasta). Here, the employees voted for a strike in mid-July, had the ongoing talks remained unsuccessful. The all-clear was also given here on July 24, after a new contract was concluded. In addition, Antofagasta reported that their copper production in the second quarter was 1.5 % higher than in the previous quarter and that the total 2017 production should remain unchanged, between 685,000 and 720,000 t. In the Democratic Republic of Congo, an electrical fire led to brief production fluctuations at the Tenke copper mine in July. According to information from the operator, China Molybdenum, this had no major impact on production. Tenke is said to be one of the largest copper-cobalt mines worldwide with supposed reserves of 3.8 million t. The announced strike of the unionized workers in Peru only lasted a short while: After the walkout on July 19, the workers returned to work as normal on July 24. The reason for this was an agreement with the government. The spokespeople for the large mine operators confirm that it would not have, for example, come to any noteworthy downtime in the important Peruvian mines – Cerro Verde or Las Bambas.

The latest production numbers for the Chilean mine Escondida were published in mid-July. According to these, the mine operated by BHP Billiton produced 80,800 t of copper in the month of May subsequent to 64,000 t in April 2017. The mine was not in production in March, due to a 44-day down time. In May of this year, the state-owned mining company Codelco yielded 150,500 t copper from the earth, in comparison with 141,900 t in May 2016. In the first five months of 2017, the company produced a total of 710,000 t copper, approximately 5 % less than in the same time period of the previous year. One of the largest mines in Peru, Las Bambas, is in the meantime working on plans for expanding production to 145,000 t per day. According to estimates, the mine has reserves of 877 million t, which should be depleted by the year 2033.

On the smelting side, there were also disturbances: The Korean Onsan 2 smelter from LS-Nikko Copper, with a capacity of 2,700 t / day, had to pause for approximately one week. This was reported by someone familiar with the matter, according to ICIS news. Until July 25, the unit ran at a reduced level of 70 % before it came to a further 48 - 72 hour maintenance shutdown.

» Inventories

LME copper inventories stabilize after significant increase 

July 28, 2017	Europe	North America	Asia	Total
				
LME	56,000 t	27,800 t	216,775 t	300,575 t
COMEX / SHFE	---	155,119 t	172,774 t	327,893 t
Total Cu inventories at metal exchanges	56,000 t	182,919 t	389,549 t	628,468 t
Shanghai bonded warehouse (2 nd half of July 2017; CRU + MB)			510,000 – 530,000 t	510,000 – 530,000 t

What was shown in the LME inventory development at the turn of the month June/July resulted in a feeling of déjà-vu for many. As already happened three times since December 2016, there was a significant increase in copper inventories within a short period of time at the LME. In only four days they grew by around 73,000 t, from 243,330 t to 315,925 t, an increase of 30 %. As Dow Jones reported, one market player alone is responsible for the delivery of 87,000 t. Asian LME warehouses were once again affected. In light of the repetition effect, market observers may have meanwhile realized that this cannot be an indication for the supply / demand development. Copper prices therefore hardly showed a reaction. The significant increase at the beginning of the

month remained a one-time occurrence as the month progressed. The inventory amounts instead decreased slightly and reached an amount of 300,575 t. on July 27. At the SHFE there were, on the whole, few changes in the stored volumes. Triggered by the arrival of new quantities of cathodes in Shanghai, the copper inventory in bonded warehouses is supposed to have risen to 530,000 t.

Product Markets

The development in the markets for copper products is determined primarily by the business cycle in downstream branches, such as the electrical industry or machine and plant engineering:

The economic data published in July by ZVEI (German Electrical and Electronic Manufacturers' Association) for the German electrical industry had a positive surprise ready. After orders in April hardly increased, they increased by double digits again in May 2017. The previous year's amount was surpassed by around 14.7 %. Positive impulses came from both home and abroad. In May, German production in the industry was around 12 % above that of the previous year. Although the development from month to month was varied, the underlying trend was clearly positive. The production plans for the coming months were indeed revised somewhat downwards, but are, overall, still on a predominantly expansive course.

For new orders, German machine and plant engineering can also look back on a very positive month of May. This rose by about 17 % in comparison with the previous month. Overseas demand dominated clearly here, differently from the electrical industry, with a gain of 23 %. On this basis, VDMA's annual forecast for industry output was increased from real plus one to plus 3 %. The indicators have also improved in other countries. Overall, the VDMA expects a gain of 4 % for the worldwide machine turnover in 2017.