

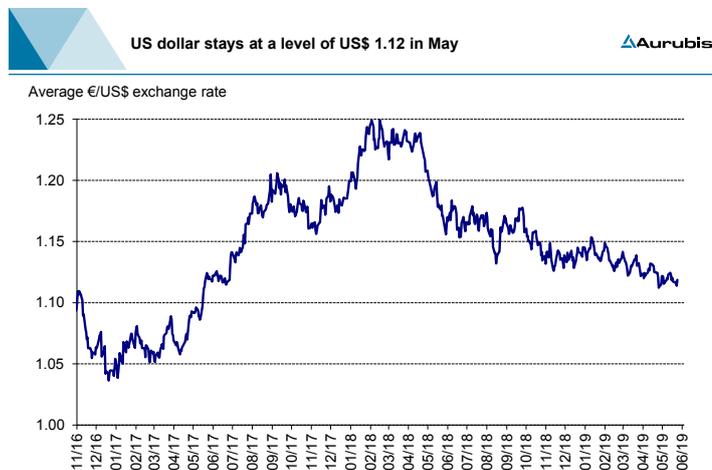
The Aurubis Copper Mail provides monthly information about current trends on the copper market.

In focus



Several market observers adjusted their forecasts in May. The ICSG currently assumes a slight deficit of 189,000 t on the international refined copper market for 2019, followed by 250,000 t in 2020. Reuters also released its latest analyst survey in May. The respondents predict a deficit of 205,500 t for the global copper market for 2019, which should decrease to 172,000 t in 2020.

Economic situation



The tone in the continuing trade dispute between the US and China became increasingly harsh in May after a lack of any kind of breakthrough in the ongoing talks. As a result, the United States raised its import duties from 10 to 25 % on Chinese goods worth about US\$ 200 billion. This further increased the risks for global economic development, which didn't go unnoticed on the copper market and placed additional pressure on the copper price. On top of that, economic data from the US was weaker as well: According to the Institute for Supply Management (ISM), the purchasing managers' index for US industry declined in April to 52.8 points (March: 55.3 points). On the other side of the Pacific – in China – the indicator for the processing

industry was also dampened at 50.2 points in April following 50.8 points in March.

The US also imposed new sanctions in its dispute with Iran, announcing that it wouldn't be sourcing any more Iranian iron, steel, aluminum, or copper, as Bloomberg reported.

The US dollar was quoted at US\$ 1.12 to the euro at the end of May.

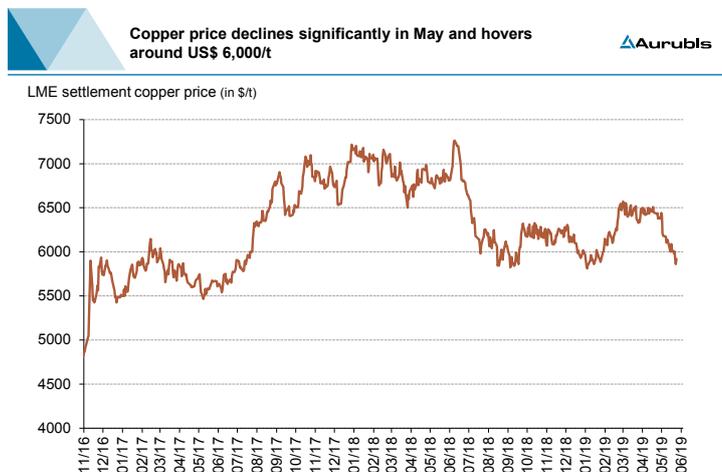
Copper essentials

In May, the International Copper Study Group (ICSG) released its estimates for the period from January to February 2019. According to these numbers, *mine output* in the first two months of the year was at 3,187,000 t and thus at the level of January to February of the previous year. Mine capacity utilization was at 80.6 % (previous year: 81.8 %). The global output of *refined copper* in the period was also at prior-year level at 3,853,000 t. Smelter shutdowns in South America in particular compensated for higher output from Chinese smelters. The utilization of global refining capacities declined from 86.9 % in 2018 to 84.2 % in 2019. Visible *refined copper consumption* worldwide was 3,812,000 t during the period (previous year: 3,826,000 t). This results in a slight surplus of 41,000 t for January to February (previous year: 43,000 t) for the global refined copper *balance*.

In May, the ICSG published its updated outlook for 2019. The study group expects global refined copper output of around 24.8 million t in 2019, with visible consumption of 25.0 million t worldwide. This would lead to a slight deficit of 189,000 t on the global refined copper market in 2019. For 2020, the ICSG forecasts a slightly higher deficit of 250,000 t and predicts an output of 25.1 million t and consumption of 25.3 million t. Reuters also released its latest analyst survey on the copper market in May. The survey result indicates that the global refined copper market will register a deficit of 205,500 t in 2019, which will then fall to 172,000 t in 2020.

According to Reuters, the London Metal Exchange (LME) has appointed the first female board chair in its 142-year history, Gay Huey Evans. She will succeed Sir Brian Bender in December. Evans is currently a member of the board of Itau BBA International. Previously, she worked at Citi, Barclays Capital, and the British Financial Services Authority.

» Price trend



In May, the copper price on the London Metal Exchange (LME cash settlement) decreased significantly, and was even briefly below the US\$ 6,000/t mark at the end of the month. It closed the month around US\$ 6,000/t, about 7 % below the level at the end of April 2019 (US\$ 6,442/t).

Reuters published its latest poll in early May, which shows that the analysts surveyed expect an average copper price of US\$ 6,505/t for 2019. The average predicted for 2020 is then US\$ 6,810/t.

Bloomberg reports that the South American mining company Codelco believes that the current downward copper price trend can't last for too long, since there's no fundamental reason for the

decline. The company forecasts a 2.3 % increase in refined copper demand in the current year. As proof, Codelco points to stronger refined copper demand among its customers and traders for the second half of 2019 and 2020.

» Copper raw materials

The copper concentrate supply continued to be satisfactory in May, as indicated by a Reuters report. According to the investment bank Macquarie, the smelter industry's capacity utilization decreased due to an increase in maintenance activities in the sector. Macquarie asserted that this contributed to the spot treatment charges (TCs) for copper concentrates supposedly being at a level of between US\$ 65 and US\$ 68/t in May.

There was more news about current and future mine projects in May.

Reuters stated that the Chilean mining company Codelco had started earlier than planned with ore mining in the underground Chuquicamata copper mine (Chuquicamata Subterránea). The US\$ 5.6 billion switch from an open pit mine to an underground mine is currently underway to secure the mine's production level into the future. The open pit mine will continue operation until 2020. The conversion is supposed to extend the mine life by 40 years, providing an annual output of 320,000 t of copper. Furthermore, it bolsters Codelco in maintaining its production target of approximately 1.7 million t of copper annually. Codelco denied a Reuters report from May stating that the switch in the next two transitional years would lead to a considerable decrease in the mine's copper output. The company is also in the midst of wage talks with the Chuquicamata mine unions at the moment.

The recycling market was focused on Asia once again in May. There is still uncertainty regarding the impacts of the stricter scrap import bans in China. Reuters reported that Beijing would introduce a system with import licenses for high-quality scrap (so-called Category 6) starting July 1. To import these qualities, companies have to prove to the Ministry of Ecology and Environment that they have the necessary capacities to process the copper scrap volumes into refined copper or semi-finished products such as wire. According to a CRU analyst, it isn't transparent at the moment how China plans to implement the quota system, which is causing market actors to shy away from longer-term contracts. This could influence the global copper scrap streams in the short to medium term. The situation is aggravated by the fact that China also announced that it would intensify environmental inspections in the future.

Consequently, an S&P Platts report predicts a further decrease in copper scrap imports to China in the second half of 2019, referring to statements made by the Chinese copper producer Tongling Nonferrous Metals.

As mentioned in earlier issues of the Copper Mail, in the meantime, Malaysia has become an important buyer of copper scrap with low copper contents that was previously imported directly into China. In Q1 2019, Malaysia was the most important source of China's copper imports from treated copper scrap, accounting for about 15 %, according to Shanghai Metal Markets. Reuters reported that Malaysia is now reacting to the rising import volumes of copper scrap with low copper contents into the country with intensified inspections. As a result, some shipments have even been turned away, and other ships have been prevented from unloading their freights in the harbor. For

the most part, these have been shipments of copper cable scrap and old engines. The reason for the stricter inspections is the government's fear of environmental crimes in this context.

The European copper scrap market was influenced by lower demand from Chinese companies for European copper scrap in April. The availability of copper scrap was consistently good and refining charges developed positively as a result, according to CRU.

» Production

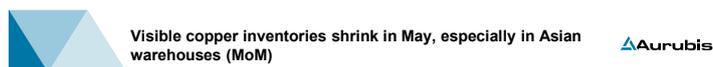
S&P Global Platts reported that copper concentrate exports from Chile rose considerably in Q1 2019, by about 29 % (906,300 t) compared to the first three months of 2018. This was impacted in particular by the shutdown of two smelters belonging to the state company Codelco, which took place during this period.

The Chinese copper producer Jiangxi Copper is planning to build a copper scrap processing plant in nearby Malaysia, as Fastmarkets reported. The permit has supposedly already been issued. This is a reaction of Jiangxi Copper to the Chinese import ban on so-called Category 7 copper scrap. The company plans to build a capacity of up to 100,000 t per year.

Two Chinese smelters have just ramped down their production, as CRU reported. Nanguo Copper is carrying out repair work after the furnace lining was allegedly damaged due to the plant being overheated. At the same time, Chifeng Jinfeng announced maintenance work for its older furnace because there were supposedly problems there connected with the sulfuric acid facility. This work has reportedly been underway since the first week of May and should take at least a month.

According to American Metal Market, global spot copper premiums haven't changed notably compared to April.

» Inventories



After the inventories in the global warehouses recovered again recently, they declined considerably once more in May.

| May 27, 2019 | Europe | North America | Asia | Total* |
|---|----------|---------------|-----------|-----------|
| | | | | |
| LME | 69,700 t | 50,825 t | 65,300 t | 185,825 t |
| COMEX / SHFE | --- | 31,825 t | 172,266 t | 204,091 t |
| Total Cu inventories at metal exchanges | 69,700 t | 82,650 t | 237,566 t | 389,916 t |

Overall, visible inventories in warehouses worldwide were at approximately 390,000 t at the end of May, 80,000 t below the level at the end of April (about 470,000 t).

*Differences possible due to rounding

» Copper products

The following developments were evident in selected European end markets:

The construction industry was a key driver of economic development in Germany in Q1 2019. This was the statement issued by the Central Association of German Construction Companies (ZDB), which pointed to the construction investments made during the period. They increased in real terms by over 5 % in the first three months of the year, compared to the previous year. A good ongoing order situation and stable incoming orders lead the association to continue looking to the future with confidence as well.

According to the German Mechanical Engineering Industry Association (VDMA), orders in the sector remain under pressure, as MBI NE-Metalle reported. The VDMA stated that orders decreased by about 10 % in Q1 2019, since Germany – as an export nation – wasn't able to dodge the international trend. The VDMA identified global uncertainty due to the trade conflict between the US and China as the main reason for this.

The mining group BHP is optimistic when it comes to the ongoing development of electric vehicles. According to a Reuters report, the company increased its forecast in this area and now expects that at least 7 % of all vehicles will be electric in 2035. Two years ago, BHP still anticipated that the figure would be at least 5 %. This new outlook is equivalent to about 132 million electric vehicles in 2035. The mining group views falling battery costs and rising interest among auto manufacturers as positive incubators of the trend.