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# Copper Market

*(Analytical Review)*

## **Q1 2021 RESULTS**

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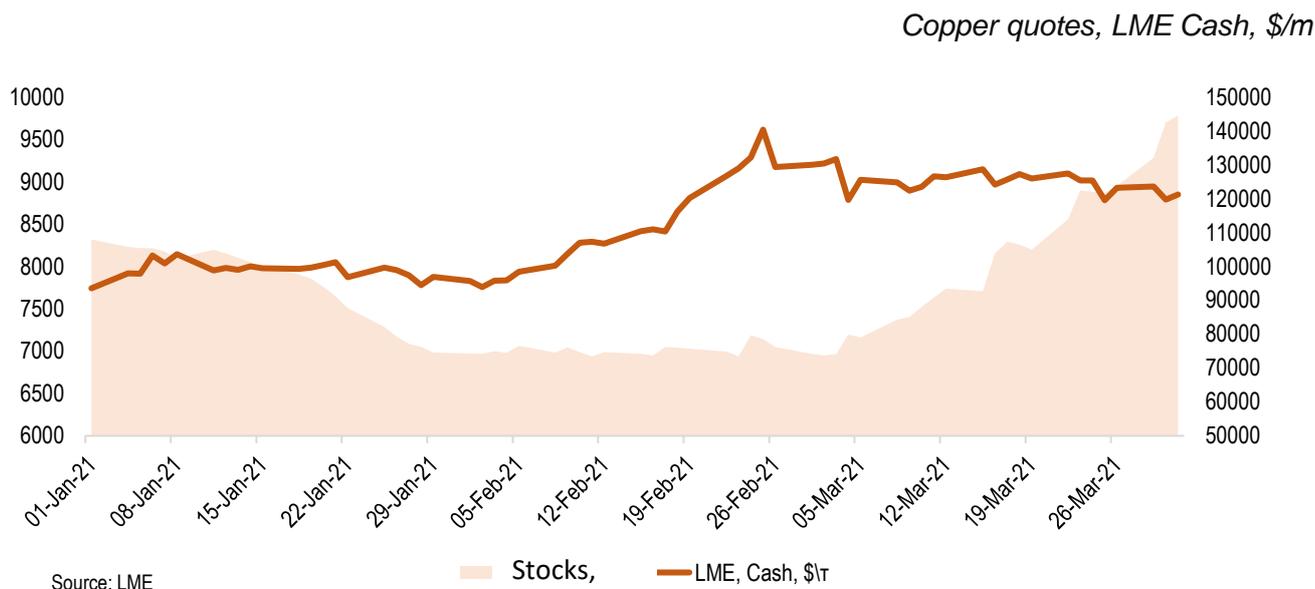
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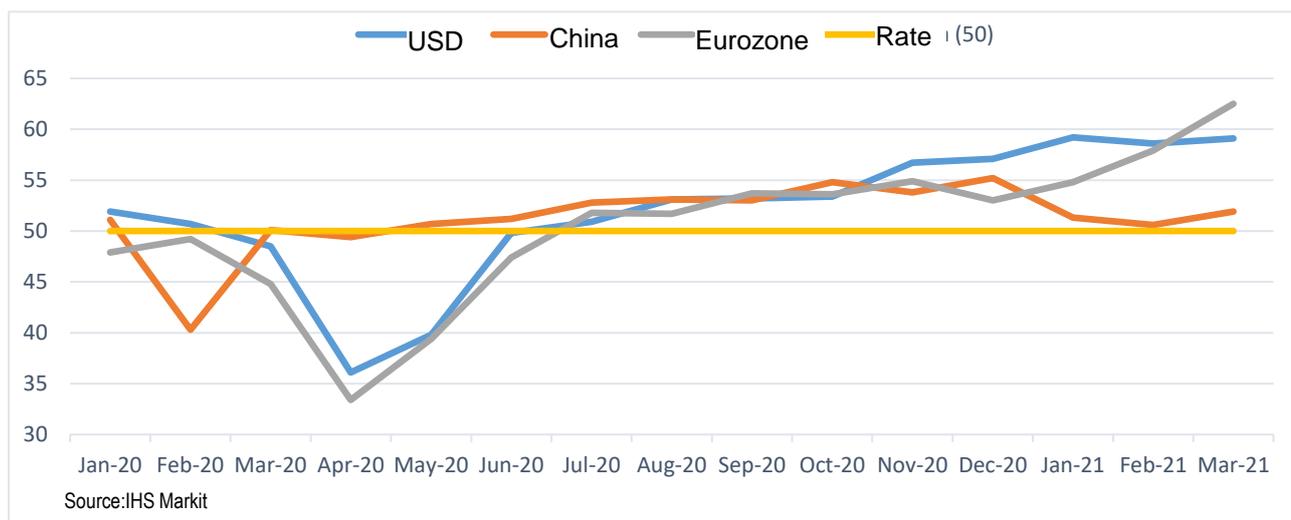
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## Global Copper Market

In Q1 2021 the average copper price reached USD 8,457/t, which is 50% higher compared to Q1 2020 (USD 5,640). Following the sharp decline of the quotes in April and May 2020, recovery price growth started and continued until stabilization at comparatively high level over USD 9,000/t at the end of Q1 2021. The peak of price growth in Q1 (USD 9,614/t) accrued to the significant stock reduction at stock exchange, besides it was a response to the news of the upcoming large-scale financial support of the US economy recovery plan, which consequently raised an issue of extra demand for the metal as well as an inevitable weakening in US dollar.



### *Industrial PMI*



Judging by the changes of PMI, The USA and Eurozone have entered the recovery growth path supporting positive expectations for the early recovery of the world economy. China traditionally slows down at the beginning of the year particularly due to extended public holidays in the country.

Nevertheless, China remains the key country for the global copper market: import of concentrate to the country went up 7.4% and reached 5.96MT; total import of copper witnessed 11.9% rise and reached 1.44MT. Copper scrap import, after the restrictions being lifted, increased by 60% in January-February. Copper consumption in China within the period up to 2025 is expected to be growing by 2.5-4% a year, resulting in copper consumption growth up to 16MT by 2025. The main growth drivers will be construction sector, development of 5G network and consumption expansion in green technologies.

Copper consumption in electric vehicle manufacturing will directly depend on stimulus measures. CPC has set an objective for the electro vehicle production to reach 20% of the country's automotive market by 2025. Upon reaching this indicator, the additional demand for copper due to electro vehicle manufacturers may get to 0.5 – 0.6MT.

The USA and Europe will show significant consumption growth caused by suspended demand and low stock of last year. Trafigura points out that the metal consumption in the US and European countries in Q1 2021 gained 5% as compared to January – March 2020. The expectation of additional demand of metal in the US is connected with large-scale investment program in country's infrastructure, leading to annual increase in consumption in the country until 2035 for a total of 0.10-0.17MT according to various estimates.

Q1 2021 PERFORMANCE OF KEY PRODUCERS, kt

Company	Q1 2020	Q1 2021	21/20, %
CODELCO	361	386	6.9%
BHP	425	391	-7.9%
Freeport McMoRan	332	413	24.5%
Glencore	293	301	2.7%
Southern Copper	238	235	-1.5%
First Quantum	195	205	5.3%
Antofagasta	193	183	-5.4%
KGHM Polska Miedz	174	186	6.5%
Anglo American	147	160	8.8%
Rio Tinto	127	121	-4.8%
MMG	90	77	-13.8%
KAZ Minerals	75	72	-3.3%

Source: company's data

Growing demand for metals makes producers intensify their efforts in developing new mining projects. In 2021-2022 the commissioning of 4 large mines is expected: Kamoakakula (Democratic Republic of Congo, +530kt/y of copper), Quellaveco (Peru, +300kt/y of copper), Spence-SGO, Quebrada Blanca QB 2 (Chile, +316kt/y of copper during 5 first years of operation) and Udokan (Russia, +68 kt of copper in concentrate). Note that Spence-SGO and one of the stages of Kamoakakula mine started operation several months ahead of the plan.

According to ICSG, new projects and renewal of mining at existing mines will lead to a slight copper surplus of about 80.000t for 2021 and 110.000t for 2022.

However, other researchers forecast the shortage of metal up to 190kt in 2021, which will maintain in 2022 at a level of 150kt.

Key global copper producers showed diverse production dynamics. South American mining assets are still under negative impact of quarantine restrictions. For instance, BHP's fall in production volumes is directly related to the impossibility to fully employ workforce at their South American assets. Antofagasta attributes the decrease in concentrate production to a reduction of the copper content in the ore. However, the company has overcome a critical issue of negotiations with Los Pelambres trade unions, which allows to expect steady production in future periods.

Freeport McMoRan production growth is linked to successful acceleration of transition to underground mining districts at their key Indonesian assets. All in all concentrate producers are reaching full production rates although the necessity to divert investments to maintain quarantine measures negatively affects the prospects of geological exploration projects, which in next 4-5 year period may reflect on the production rate and shortage of the metal on the market, and impact the price growth prospects.

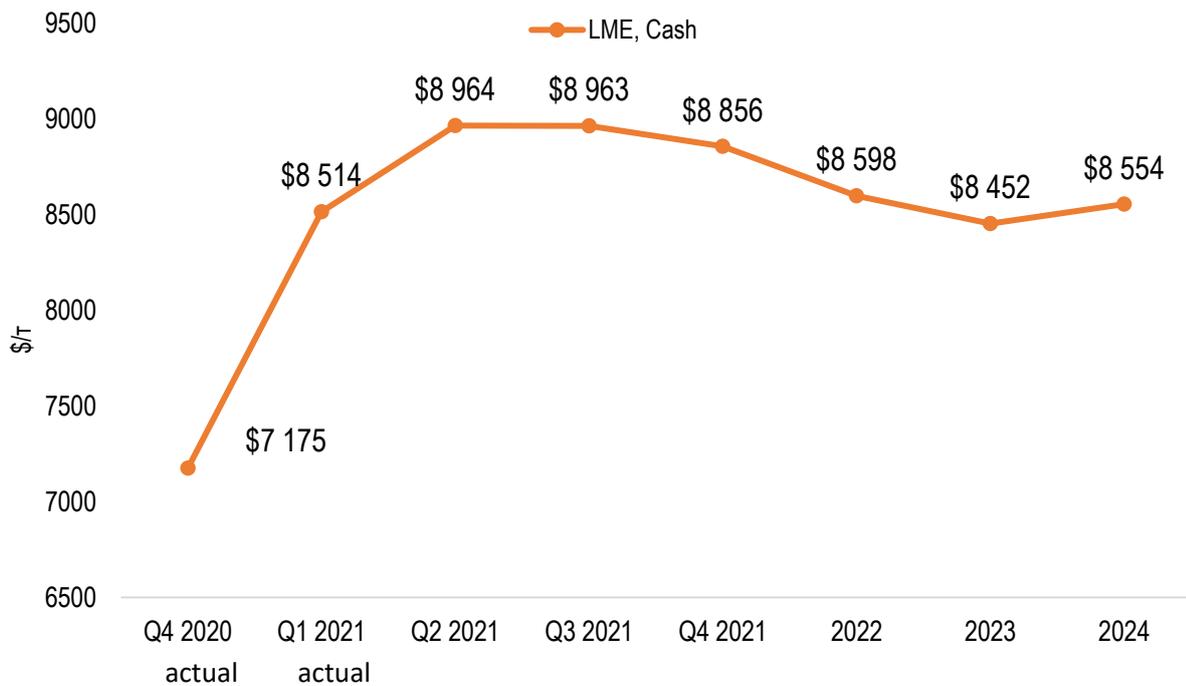
*Global copper market indicators, kt*

	2018	2019	2020	Q1 2020	Q1 2021	21/20, %
<b>Production</b>						
China	9,291	9,783	10,238	2,290	2,532	10.5%
America	4,790	4,509	4,376	1,101	1,097	-0.4%
Europe	3,819	3,724	3,806	933	972	4.2%
Others	6,157	6,030	6,154	1,525	1,563	2.5%
<b>Total</b>	<b>24,058</b>	<b>24,045</b>	<b>24,574</b>	<b>5,849</b>	<b>6,164</b>	<b>5.4%</b>
<b>Consumption</b>						
China	12,543	12,750	14,600	2,859	3,145	10.0%
USA	1,811	1,838	1,742	459	473	2.9%
Europe	3,228	3,057	2,859	749	886	18.3%
Others	6,901	6,782	5,953	1,674	1,783	6.5%
<b>Total</b>	<b>24,484</b>	<b>24,427</b>	<b>25,154</b>	<b>5,741</b>	<b>6,429</b>	<b>12.0%</b>
Market balance	-426	-383	-580	108	-180	
% of consumption	1.7%	1.6%	2.3%	1.9%	4.1%	
<i>LME, Cash \$/m</i>	6,524	6,008	6,044	5,640	8,475	50.3%
<i>TC/RC</i>	82.3	80.8	62.0	62.0	59.5	-4.0%
<i>Benchmark</i>						

Source: ICSG, LME, company's analytics

Many forecasts remain "conservative", but in view of the above, it seems that prices in 2021 have more growth capacity - ~ USD 9,000 per ton. The price behavior in the Q1 2021 can be explained, among others, by speculative factors and informational pressure of certain investment, financial and trading companies, which fuel investors' interest in copper with their price forecasts exceeding USD 10,000 per ton. Trafigura and Goldman Sachs indicate the level of \$ 15,000 per ton, but GS emphasizes that this level will be reached by 2025, whereas Bank of America expects USD 20,000

per ton of copper by 2025. Such optimism is caused by challenges related to raw materials supply at growing consumption, but it is also complemented by “green” concept and the expectation of active replacing "dirty" energy sources with environmentally friendly ones, which demands more copper. Note that an increase in copper consumption will occur under any scenario of energy consumption growth in the global economy, and focusing on alternative energy sources still seems to be an additional argument for investment attractiveness of copper, rather than a technological necessity.

*Estimated price behavior*


Sources: Consensus forecast, the Company analysis

Undoubtedly, as we approach a peak copper consumption, it is possible to reach, stabilize and exceed the price level USD15,000, but not in the prospect of 2021, when USD8,800- 9,000 per ton sounds more realistic.

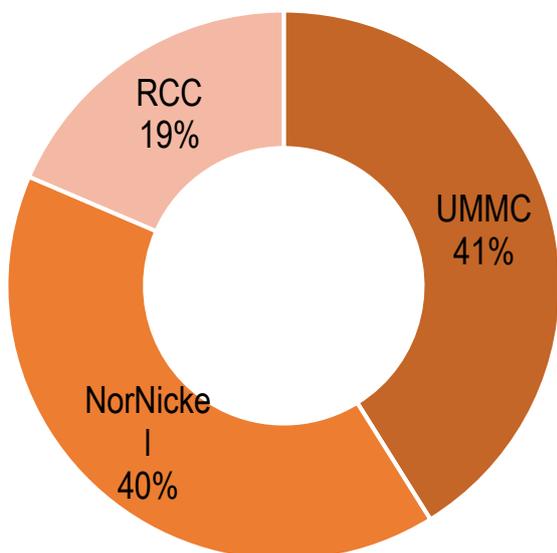
## Russian Copper Market

Copper production in Russia in Q1 2021 decreased by 10%. It is associated with output decline in the Norilsk Nickel: the Polar Division reduced output by 24%, Kola MMC - by 46%. The company explains such decline with temporary shutdown of the Oktyabrsky and Taimyrsky mines and Norilsk Concentrator and the planned closure of the smelting plant at Kola MMC. According to preliminary estimates, the overall decline in copper output by Norilsk Nickel in 2021 will amount to 65 kt, although this estimate can be revised later.

Apparent copper consumption dropped by 28% due to lower output of copper wire rod. The producers diminished their output by 24%. It is suggested that this drop is caused by unfavorable external market conditions, which were influenced by large stocks of Chinese wire rod at producers' warehouses, as well as by low demand in the domestic market, where the consumption of investment goods is decreasing.

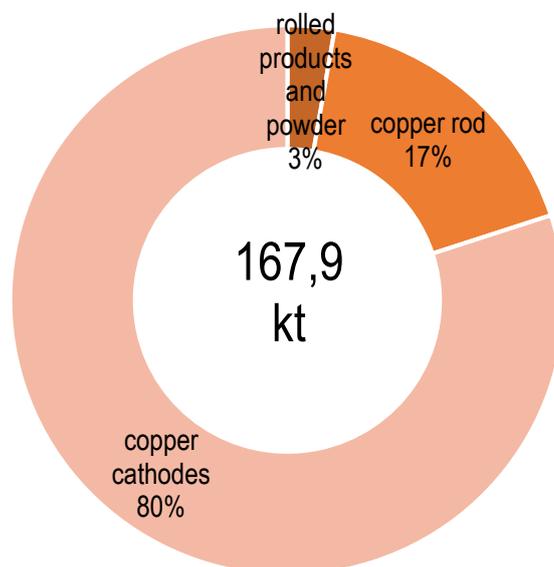
The export of cathodes contracted by 8% and amounted to 134 kt. Export of wire rod remained unchanged, i.e. 29 kt.

Structure of copper cathode production for Q1 2021



Source: the companies' data; calculations

Export structure of copper as finished products for Q1 2021



Source: the Federal Customs Service