

Aluminium surplus to persist as demand disappoints

Global economic uncertainty will continue to weigh on the outlook for aluminium. However, we believe the growing adoption of electric vehicles and green energy infrastructure should cushion the slowdown in more traditional sectors for the lightweight metal



Demand mostly disappoints

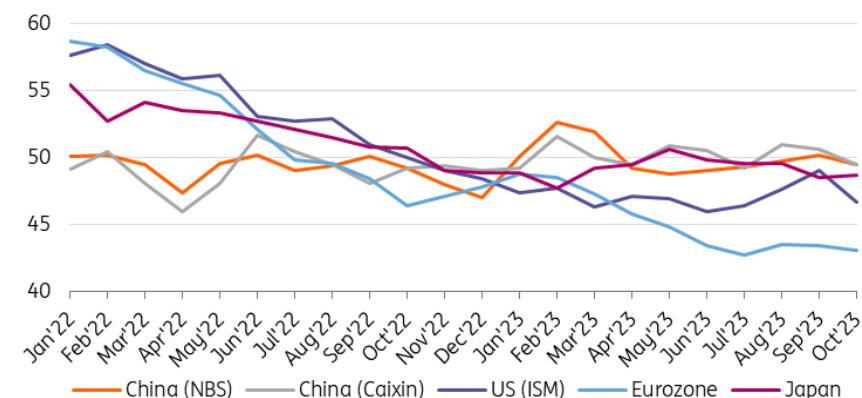
The LME aluminium price is down about 7% this year as China has been slow to recover from the Covid-19 lockdowns, while economic growth in Europe and the US has remained sluggish.

While Chinese aluminium has been stronger than expected – mainly due to increased appetite from the green sector in the country – demand from more traditional sectors like building and construction has mostly disappointed. Sales, starts, and under construction year-to-date numbers are all in negative territory. This will continue to weigh on aluminium demand looking further ahead, given the current low level of starts and the lag between starts and aluminium usage.

In Europe and the US, building and construction also remain weak, with manufacturing PMIs stagnating globally, and we believe higher borrowing costs and uncertainty over monetary policy will continue to be a drag on demand for the metal. European demand has been hit the hardest in

2023, and we expect it to be the major reason behind weak growth in 2024.

Manufacturing PMIs disappoint globally



Source: Refinitiv Eikon, ING Research

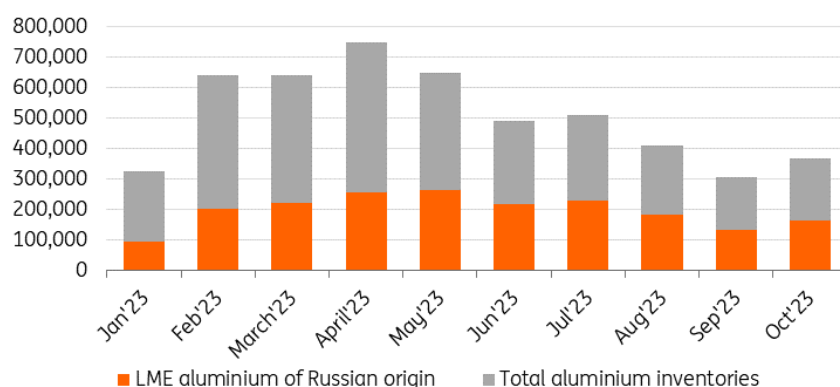
LME warehouse stocks pile up

Weak demand for aluminium amid China's slow economic recovery and a global slowdown in manufacturing has translated into rising inventories in LME-registered warehouses, the market of last resort. And as LME inventories continue to rise, a lack of brand variety is adding to concerns for the aluminium market. About 79% of aluminium in the LME's warehouses was of Russian origin at the end of October, up from less than 10% before the start of the war in Ukraine. This is the highest level seen in at least a decade. However, the share of the Russian metal declined from 81% at the end of August. India is the other major source of LME aluminium stocks.

There are no sanctions on buying Russian material, but some European buyers have been self-sanctioning since the invasion of Ukraine, leading to fears that LME warehouses could be used as a dumping ground for unwanted Russian metals. In turn, this has led to a disconnect between LME and actual traded prices. If the share of Russian aluminium on the LME continues to grow, this could ultimately lead to action from the exchange. If the LME bans Russian metal, this will likely be bullish for the metal. However, for now, the expectation is that the LME will take no action unless targeted sanctions are adopted by governments.

Russian metal continues to dominate LME stocks

(metric tonnes)



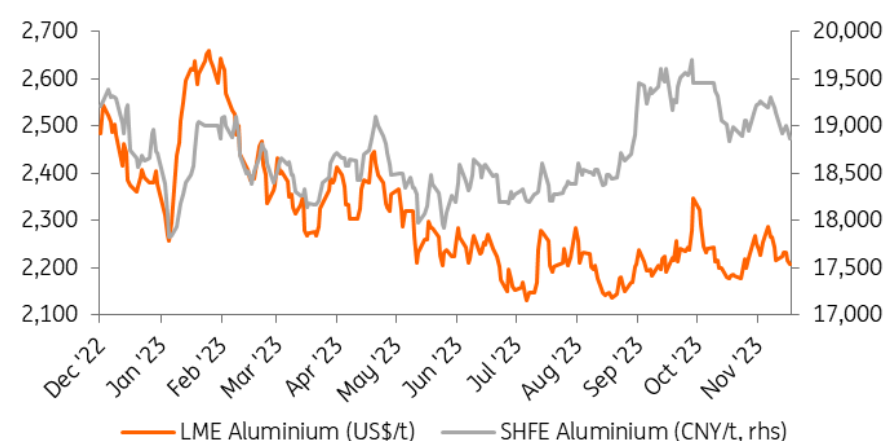
Source: LME, ING Research

Open arb boosts aluminium flows into China

Aluminium prices in China have remained stronger than global prices for most of the year. LME aluminium prices have slumped around 7% this year, while prices on the Shanghai Futures Exchange (SHFE) are up around 1% year-to-date. Chinese demand for aluminium has been resilient throughout the year amid growing demand from the green sector, despite the country's disappointing economic recovery.

An open arbitrage window resulting from SHFE prices outperforming the LME boosted aluminium flows into China. China's imports of unwrought aluminium and products jumped 27.5% year-to-date to October to 1.8 million tonnes. However, Russian material still dominates these imports. With many Western buyers self-sanctioning since the invasion of Ukraine, China has been absorbing a large part of this shunned material. This trend is likely to continue as Europe presses on with self-sanctioning.

SHFE prices have remained stronger than LME for most of 2023



Source: LME, SHFE, ING Research

China aluminium output hits a record

Imports are continuing to surge despite domestic output hitting new highs, mainly due to the open arbitrage window throughout most of August and September. However, with the arbitrage opportunity now closed, China's primary aluminium imports will likely decline from November onwards.

Primary aluminium output continued to increase in October, now up more than 3.5% year-to-date to October. However, if the upcoming dry season has insufficient rain, Chinese output could disappoint again. Starting in the first week of November, Yunnan's aluminium smelters already began reducing output in reaction to the province's limited power supply during the dry season. A total of 1.16 Mt/y of aluminium smelting capacity is set to be halted and is expected to remain offline until May 2024, when the rainy season usually begins. This will mark the third consecutive year that Yunnan smelters have reduced output during the dry season. Further cuts remain a possibility.

Additional supply cuts due to a lack of hydropower could lead to higher imports, which could absorb the world ex. China surplus. Last year, smelters in the province were forced to cut output amid low rainfalls and low water levels, reducing 2 million tonnes of capacity. The capacity cap of

45 million metric tonnes will also limit smelter expansion in the country, which could drive the need for more imports.

Surplus to persist as demand lags behind

Still, global aluminium output will rise slightly faster than demand this year. The aluminium market is expected to be in a surplus in 2024 as China continues to drive growth over the next two years.

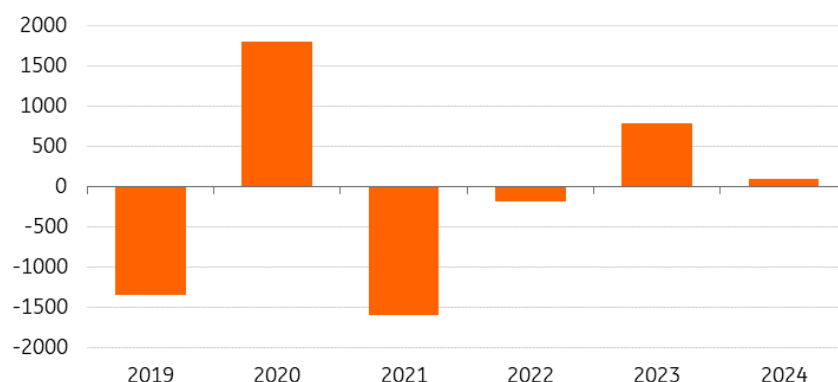
Meanwhile, restarts in Europe are not expected until 2025. Several output cuts have taken place in Europe since December 2021, accounting for 2% of the global total. Soaring energy costs following Russia's invasion of Ukraine have squeezed producers' margins, with energy-intensive metals like aluminium being particularly affected.

Power prices have eased, but we haven't seen European restarts on a wide basis. Restarting a smelter is a long and costly process, meaning some of the production halts we have seen since 2021 could be permanent. Weak demand for aluminium is the second key obstacle for smelter restarts after higher power prices. We don't expect any major restarts in Europe before 2025 unless demand in the region surprises to the upside.

We expect the global aluminium market to be in a small surplus of around 100,000 tonnes, after a surplus of around 800,000 tonnes in 2023. China should account for more than half of the global production increase, while European production will be mostly unchanged. Extended production cuts in the Yunnan province due to tight power supply provide an upside risk to our outlook.

Global aluminium market balance

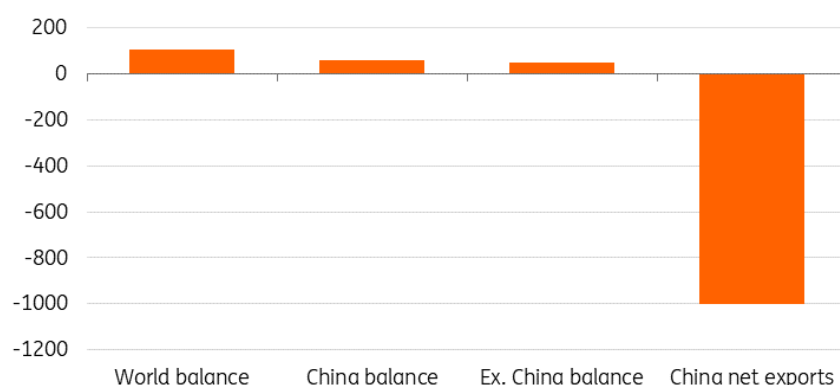
(Thousand tonnes)



Source: ING Research

2024 aluminium market balance

(Thousand tonnes)



Source: ING Research

China's green push to boost green metals demand

China's construction sector remains under pressure and is adding to short to medium-term challenges for aluminium demand. At the same time, the green parts of the economy are growing, which should offset the weakness from the more traditional sectors and boost the need for green metals, including aluminium.

Aluminium is a key component in mobility and transport, buildings, construction, packaging, aerospace, and defence. It is also used in almost all energy generation, transmission, and storage technologies – particularly those that will deliver the energy transition, such as wind and solar power, alternative fuel cells, hydrogen production, high-voltage cables, and batteries. Beijing's decarbonisation efforts have boosted the need for metals that are key to renewable energy-related manufacturing, from EVs to solar panels. China's green energy drive is part of its efforts to meet dual carbon goals set in 2020, when it pledged to achieve peak CO₂ emissions before 2030 and carbon neutrality by 2060.

More than half of the electric cars on roads worldwide are now in China, and the country has already exceeded its 2025 target of 20% for new energy vehicle sales, according to data from the International Energy Agency. As the demand for EVs continues to grow, so does the demand for the minerals inside them. This trend should support aluminium demand looking forward. And if we see governments introducing even firmer policies to fight climate change, this will lead to an even faster adoption of EVs and green energy-related infrastructure, which will, in turn, boost the need for aluminium.

China's new energy vehicles (NEV) sector, including battery electric vehicles and plug-in hybrids, is growing rapidly. China's NEV sales reached a new record in October at 956,000, surpassing September's previous record of 904,000, according to data from the China Association of Automobile Manufacturers (CAAM). This represents an increase of about 34% over the 714,000 units sold in the same period last year and an increase of 5.75% over September. The CAAM's NEV sales are the carmaker's wholesale sales, including those in China and those exported to overseas markets. Excluding exports, China's NEV sales in October were a record 832,000 units, up 2.9% from September.

In battery electric vehicles, aluminium is used in e-drive housing, battery pack housings, ballistic battery protection, and cooling plates. Additionally, aluminium plays a crucial role in electromobility infrastructure, including power cables and charging stations.

However, China's energy transition path is not without its challenges. Droughts last summer forced cities in southwest China to curb power supply to heavy industries, disrupting aluminium production in the country. As China continues to decarbonise its aluminium industry, and as more smelters move from coal-dominated Shandong to the hydropower-dominated Yunnan province, it's left more vulnerable to further disruptions, with green energy being heavily reliant on weather conditions and patterns.

Prices to gradually recover in 2024

While there are some upside risks mainly to do with green energy growth in China, outside of China demand outlook remains lacklustre. Still, we believe that prices will start rising slowly next year as demand begins to recover gradually.

Our short-term outlook remains neutral to bearish for demand, and we do not foresee a substantial recovery before the second quarter of 2024, which should be the starting point for US Fed rate cuts. There is a risk, however, for demand to weaken further if high inflation keeps interest rates high. We see prices averaging \$2,260/t in 2024.

ING forecast

| | 1Q24 | 2Q24 | 3Q24 | 4Q24 | FY24 |
|------------------------|-------|-------|-------|-------|-------|
| LME Aluminium (US\$/t) | 2,220 | 2,250 | 2,270 | 2,300 | 2,260 |

Source: ING Research

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