

Aluminum Market Report

3Q²⁴



Disclaimer

This report was prepared by CBA, based on market analysis and the Company's own assessments, and may include statements representing expectations about future events or results and may not consider all aspects impacting the industry.

Future considerations substantially depend on general economic, political, and trade conditions in Brazil and global markets, as well as existing and future government regulations, among other factors.

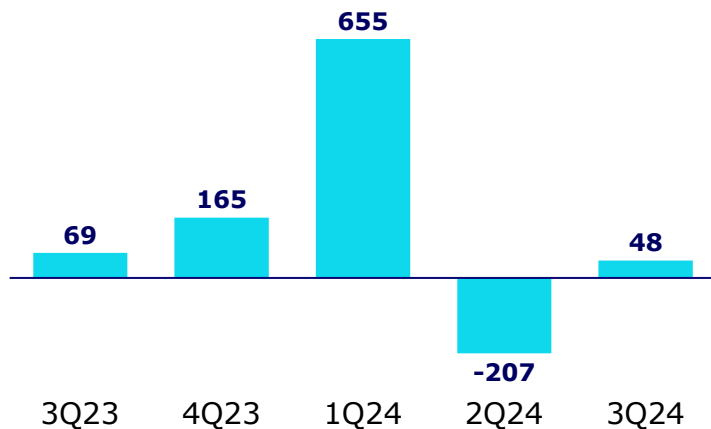
Operational data may affect CBA's future performance and may lead to results that materially differ from those expressed in such future considerations.

The information herein may be rounded or contain variations with updates from third-party information.

The Company does not assume any obligation to update any forecasts, which are only meaningful as of the date they were made.

Improvement in global demand, excluding China, and increased production lead to a stable balance in 3Q24

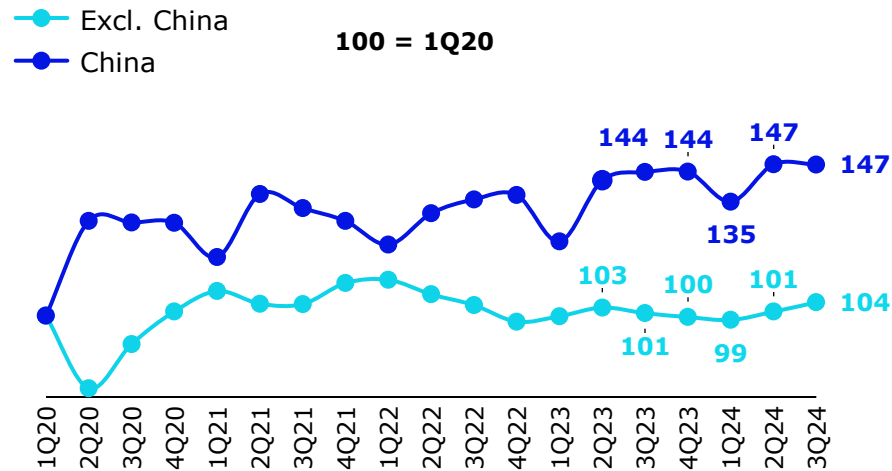
Global Balance¹ (kt) – Supply vs. Demand



¹ Balance adjusted with primary Aluminum exports and imports

Increase in production mainly in China, due to the ramp-up of reopened operations in Yunnan – which saw a 14% growth in production for the quarter (+180kt). This increase met higher demand in the world ex-China and generated a surplus balance in 3Q24.

Primary Aluminum Demand

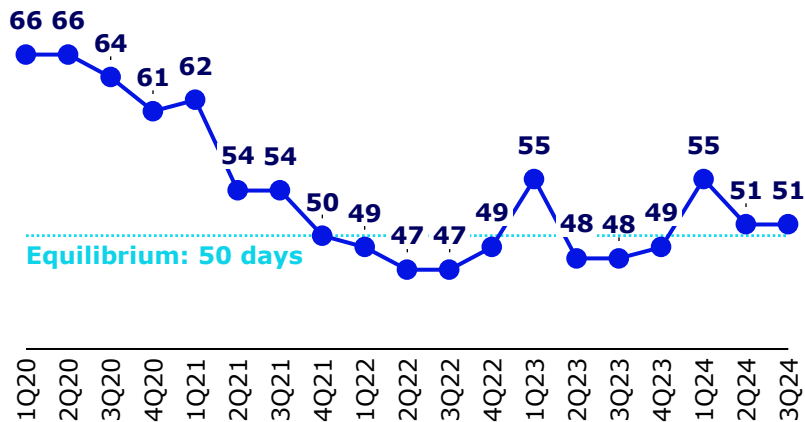


Demand in China remains stable compared to the previous quarter, at the highest level in recent years, despite concerns about the country's economic performance in the short term. In the rest of the world, demand continues to recover and reached the highest level in the last 2 years for the quarter.

Global inventories remained close to the equilibrium, while LME inventories recorded a decline

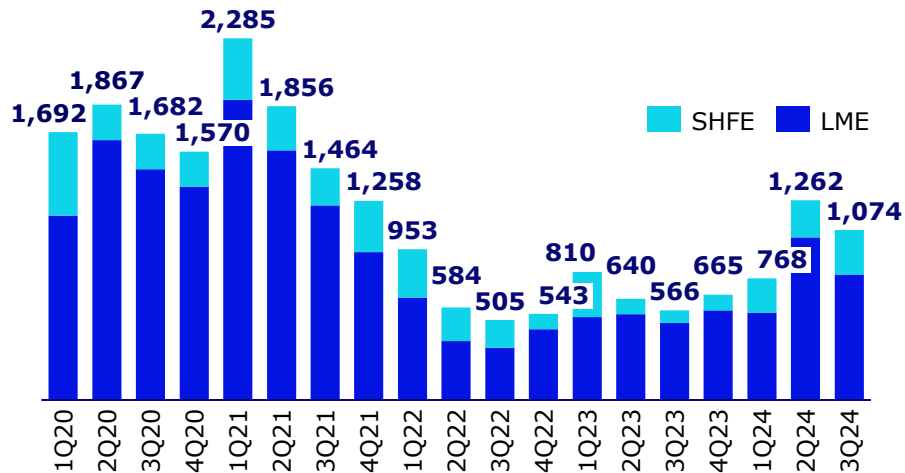


Global stocks in days of consumption¹



Stock levels in days of consumption remained stable compared to 2Q24, staying close to the equilibrium level of 50 days.

LME and SHFE exchange stocks (kt)



After reaching a peak for the year in 2Q24, driven by the influx of metal from non-official stocks², LME inventories decreased in 3Q24.

Source: CRU Aluminum Market Outlook Oct 2024, CRU Aluminum Monitor (Oct 2024) and company analysis.
 Note: Historical figures tend to vary depending on the supply & demand model updates made by CRU consulting
¹ Days of consumption = total stocks/(period demand/period days) | ² Non-official stocks: total stocks (-) LME (-) SHFE

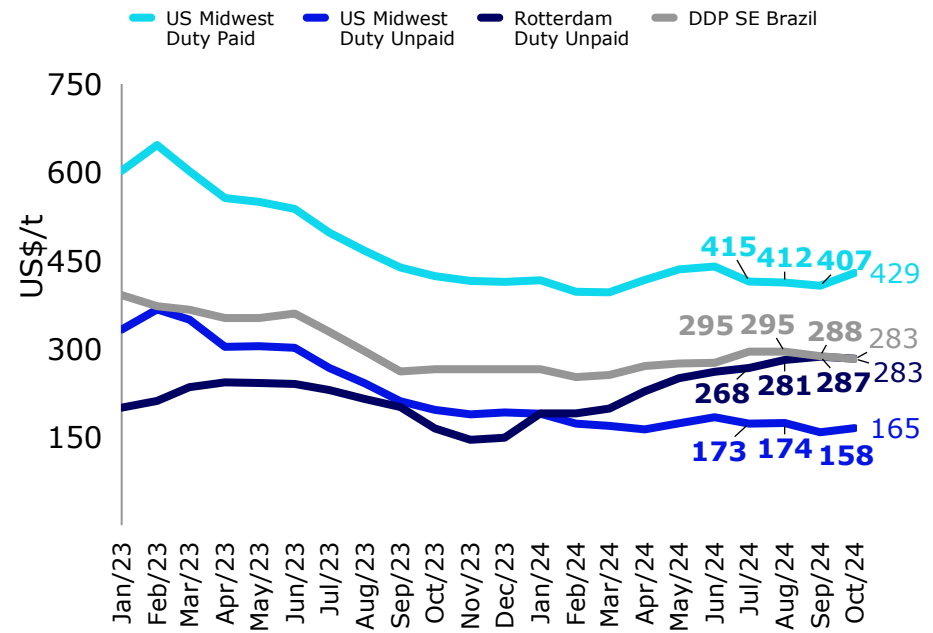
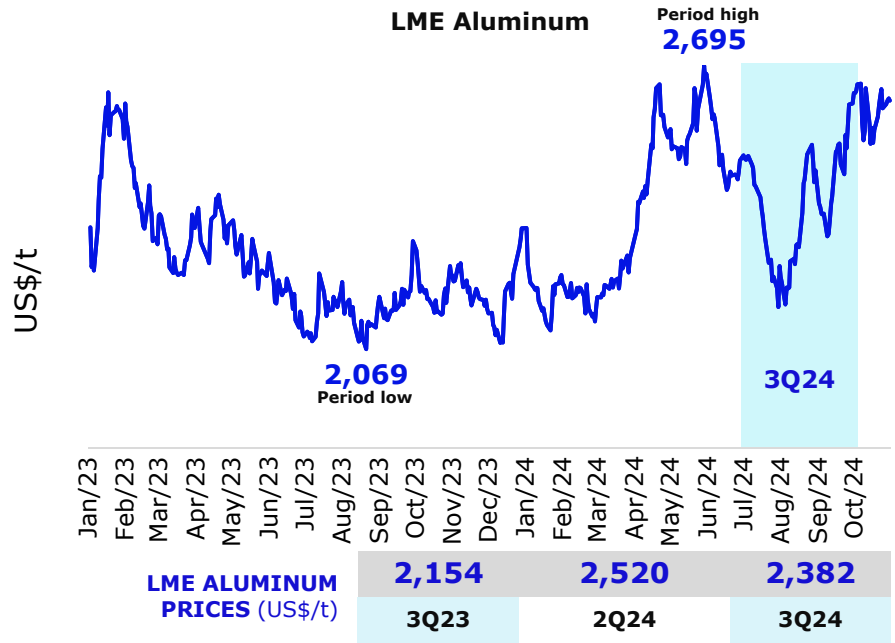


Better outlook, combined with disruptions in the alumina supply chain, boosted aluminum prices on the LME



Interest rate cuts by the Fed and ECB, China's stimulus package, in addition to temporary disruptions in the bauxite and alumina supply chain in Australia, India, China, and Guinea boosted aluminum prices on the LME during the quarter.

Falling inventories and rising logistical costs reflected in higher premiums in Europe. On the other hand, the still weak demand in the American market affected the Midwest premium's contraction during the quarter, though signs of recovery emerged in October.

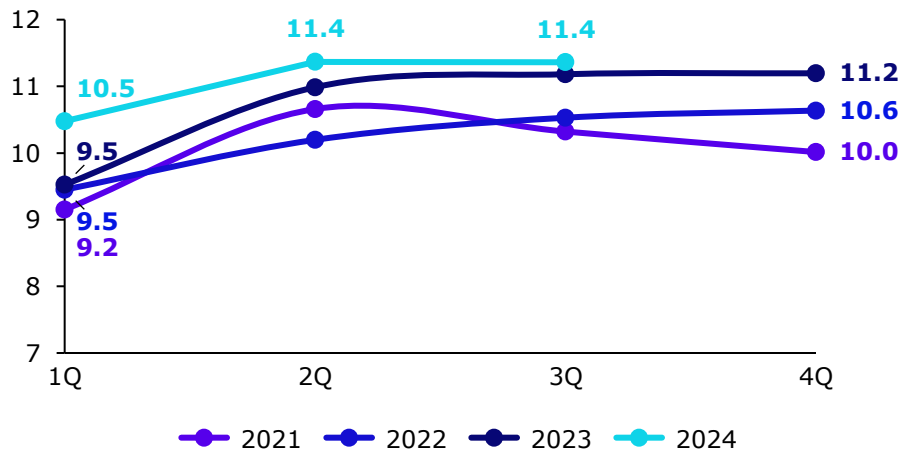


Source: Bloomberg, CRU Aluminum Market Monitor Oct 2024, S&P Platts and company analysis



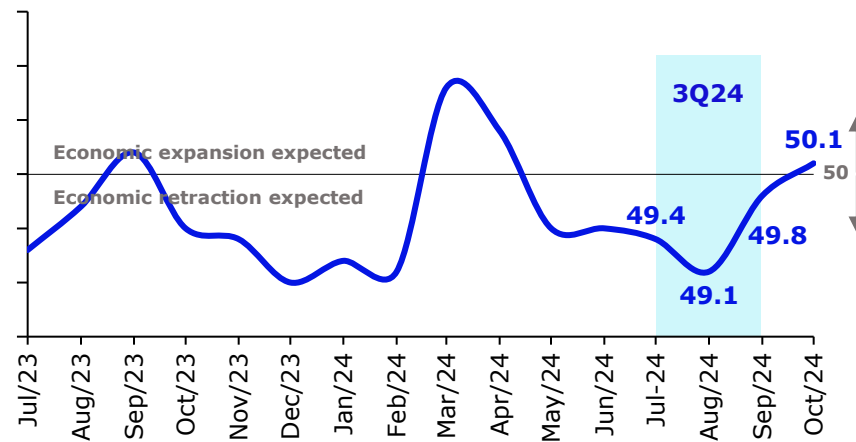
Demand in China remained stable, despite PMI below the expansion line

Primary Aluminum Consumption (Mt)



After reaching the highest level in recent years in 2Q24, demand for aluminum remained stable in 3Q24. Despite macroeconomic challenges, demand continues to be supported by increased consumption linked to the energy transition.

Chinese Manufacturing PMI (NSB)

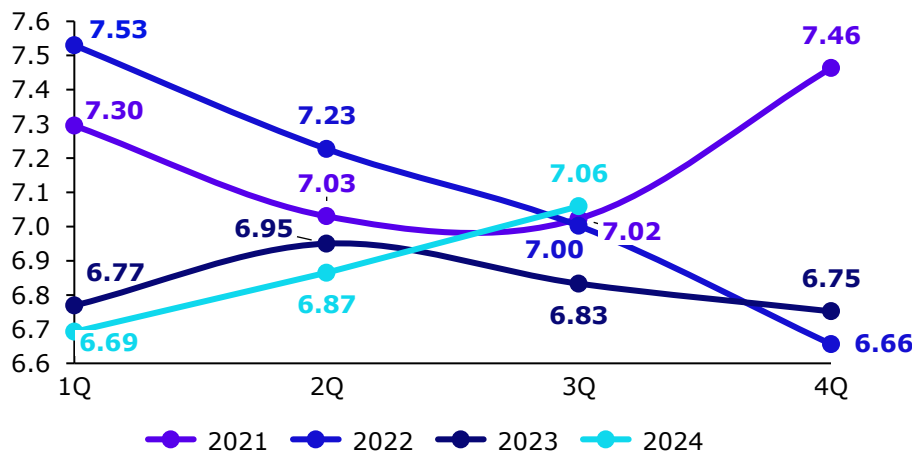


The manufacturing PMI fell below the expansion line for the fifth consecutive month during the quarter. However, October's results indicate a recovery that could sustain itself if the economic stimulus packages announced by the Chinese government prove successful.



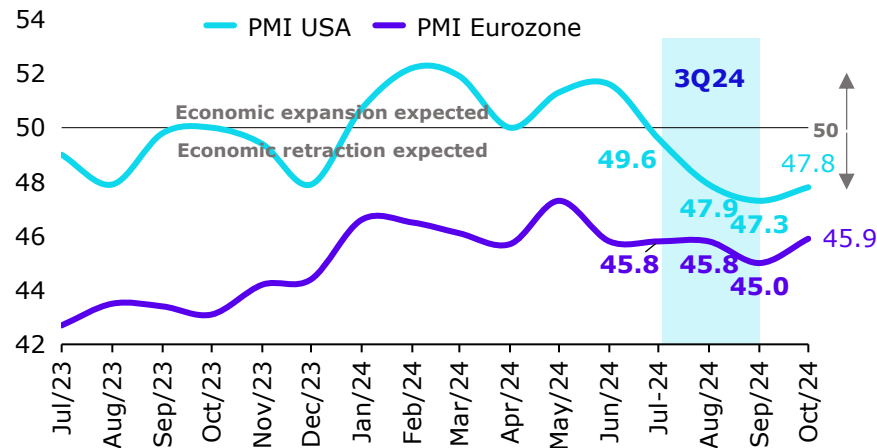
Global consumption, excluding China, continued its recovery trend

Primary Aluminum consumption ex-China (Mt)



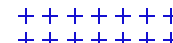
Despite macroeconomic uncertainties outside of China, demand continued its upward trend, growing compared to 2Q24 and reaching levels above those of 2021 and 2022 in this quarter.

Regional Manufacturing PMI United States and Eurozone



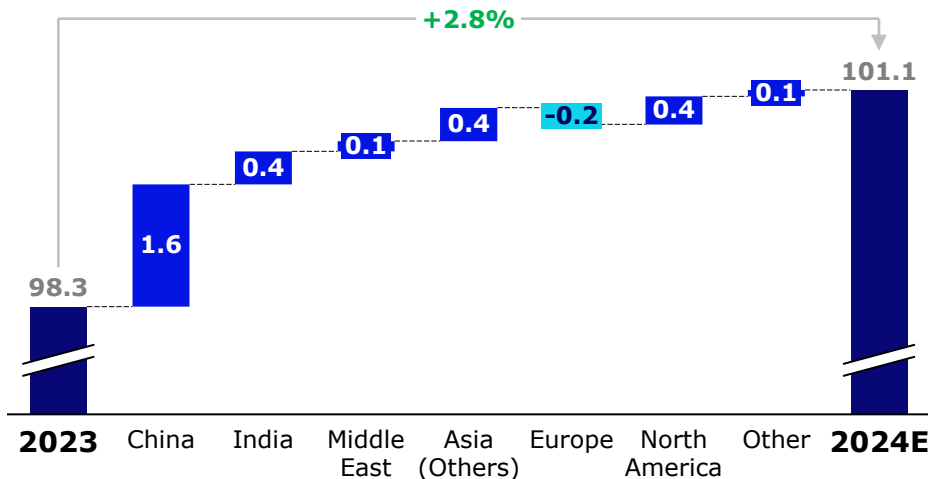
A long period of high interest rates impacts manufacturing in the US and Europe, with lower production, stockpiling, and layoffs, also affecting sentiment and PMI.

On the other hand, it can also serve as an incentive for stronger interest rate cuts, which would boost demand again. In Oct/24, the result shows signs of recovery.



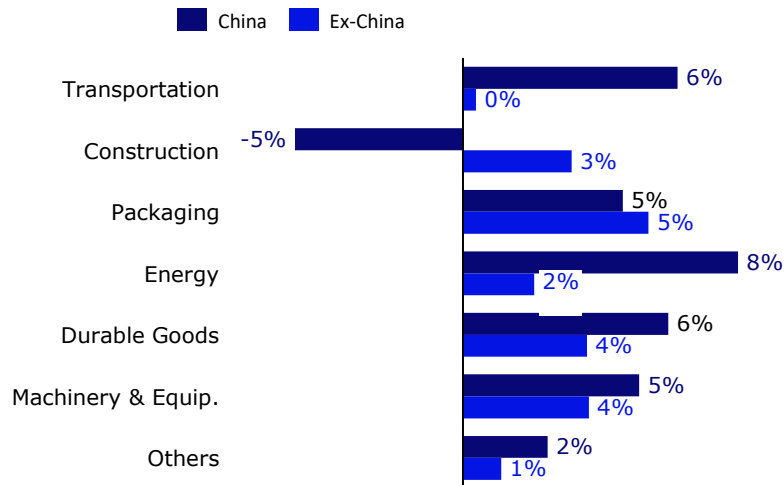
Improved outlook and macroeconomic conditions are expected to boost demand in most regions

Global downstream aluminum demand (Mt)



Even with a high inflation scenario and macroeconomic uncertainties, global aluminum demand is expected to grow 2.8% y/y in 2024. For 2025, this scenario may improve with greater stabilization of the macroeconomic scenario and reduction in interest rates.

Aluminum downstream demand growth in 2024 by segment (% YoY)

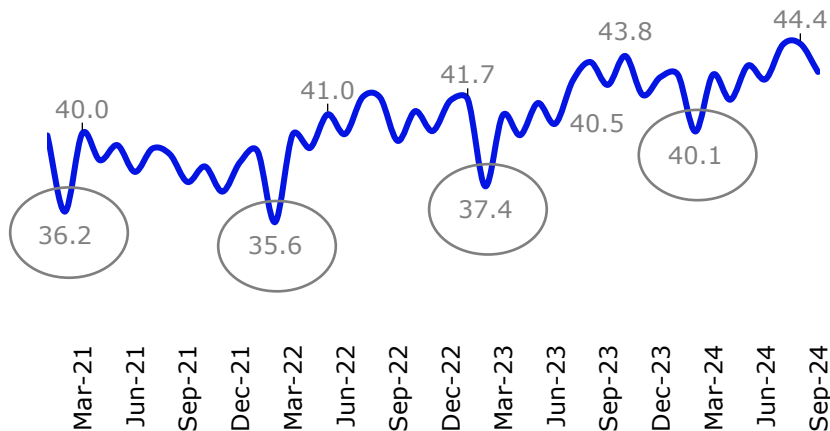


Accelerated investments in energy transition in China are one of the main drivers of demand throughout the year, offsetting part of the slowdown in the construction sector. In the rest of the world, a recovery is anticipated across nearly all sectors.



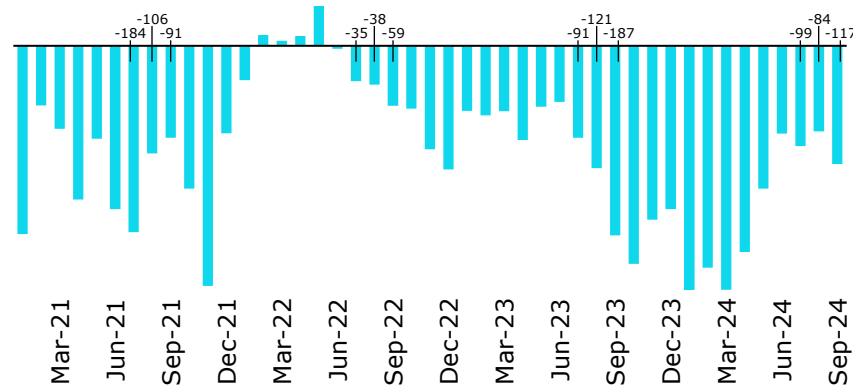
Ramp-up of reopened operations in Yunnan and increased utilization drive production in China

Annualized primary aluminum production in China (Mt)



With the complete reopening of operations in Yunnan (+1.1Mt) and an increase in capacity utilization in the country (~96%), China achieved the highest primary aluminum production on record in August. Improved water inflow in Yunnan province may prevent the need for further cuts in the region this year.

Net primary aluminum exports in China (kt)



After ramping up imports at the beginning of the year due to strong demand and part of Yunnan's capacity still being closed, China returned to net import levels like previous years for the third quarter.



Brazil: demand continues to grow strongly in 3Q24

Highlight on light commercial vehicle production, which achieved its best performance of the year in 3Q24.

The launches of the 'Minha Casa Minha Vida' program and better employment rates boosted cement consumption, despite the sector still facing challenges with inflation. Nevertheless, a 2.8% growth is projected compared to 2023.

The bus body market remains strong, driven by fleet renewal programs and initiatives such as 'Caminho da Escola,' with focus on urban and school vehicles.

Brazilian transformed aluminum exports grew by 20% until September compared to 2023, partially attributed to anti-China policies, bringing a favorable outlook for increased demand in the external market.

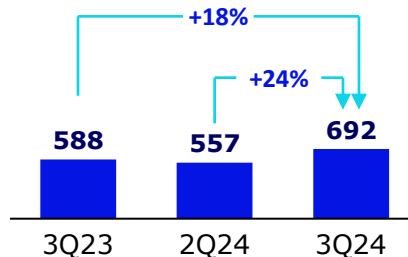
Domestic premium continued its upward trend, signaling favorable demand in the country:

| Brazil DDP SE Premium ¹ (US\$/t) | 296 | 274 | 289 |
|---|------|------|------|
| | 3Q23 | 2Q24 | 3Q24 |

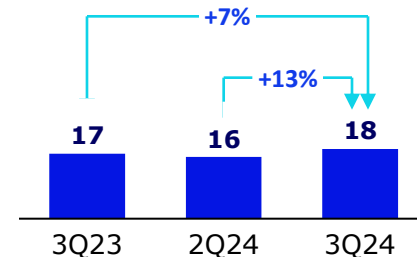
¹ Brazil DDP SE: referring to product P1020 – standard ingot, sow e T-bars
 Sources: Premium DDP - S&P Global Platts, sources aforementioned and company analysis

Sectorial Indexes

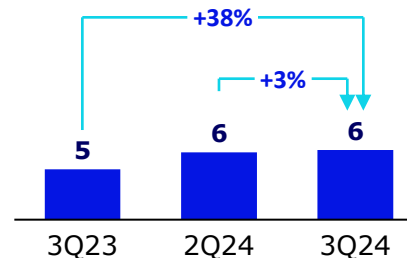
Light Commercial Vehicle Production
 (Anfavea) Thousand units



Domestic Cement Sales (SNIC)
 Thousand tons



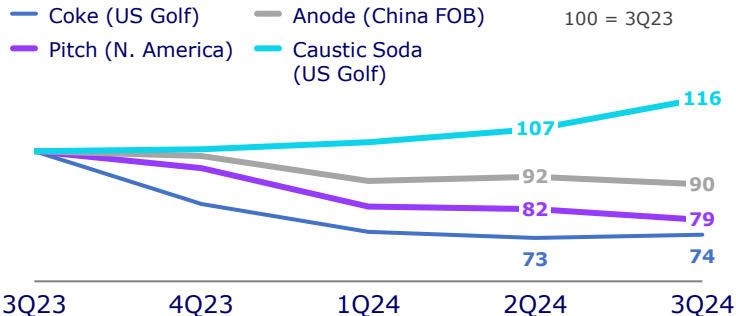
Bus Bodies Production (Fabus)
 Thousand units



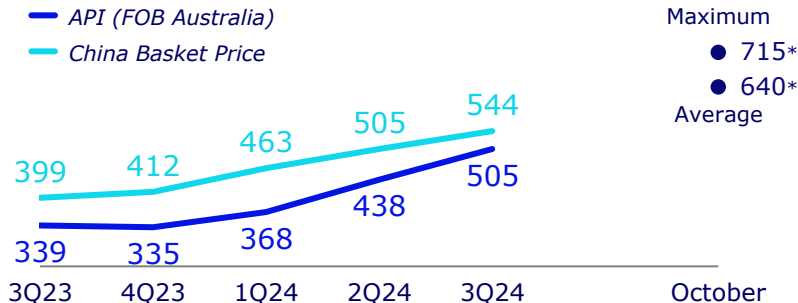
The price of raw materials continues the downward trend, except for alumina and soda, which are facing supply constraints



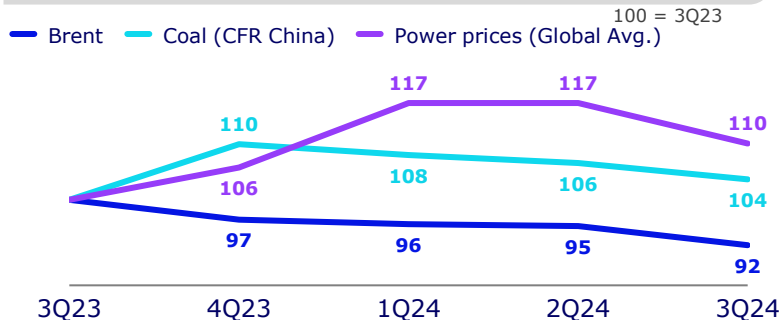
Price Index Carbon Products and Caustic Soda



Alumina Prices (US\$/t)



Price Index – Energy Prices



Supply restrictions on soda in the US have led to an increase in the raw material's price during the quarter.

Alumina continues to trend upward due to production disruptions in Australia and India, as well as bauxite supply constraints in China and Guinea, raising concerns about scarcity in the market and impacting prices, which reached historic highs in October.

After stabilization in 2Q24, prices of other inputs and energy resumed their downward trend in 3Q24.

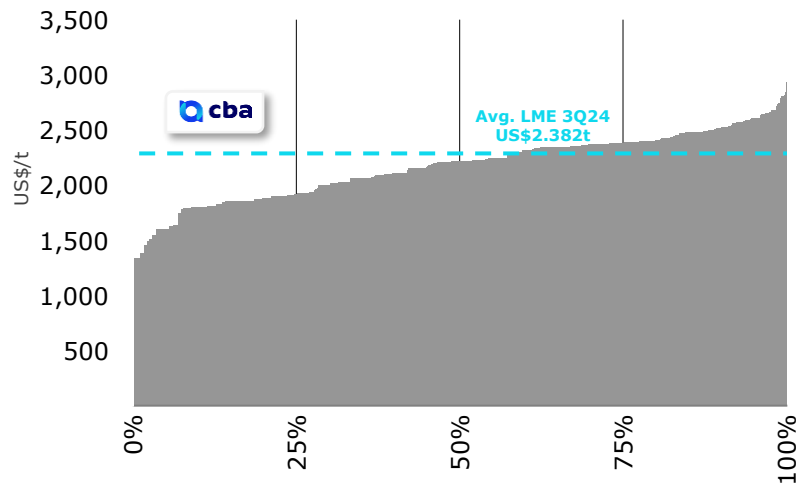


Rising alumina prices and falling aluminum prices on the LME pressured producers' margins in the quarter

Integration with the alumina refinery and the appreciation of the dollar have reinforced CBA's cost competitiveness, placing it in the first quartile of the industry.

The increase in alumina prices and the lower average aluminum price during the quarter on the LME have pressured global producers' margins. However, compared to 3Q23, margins in China are declining, while the rest of the world has improved.

Liquid Aluminum Cash Cost 1Q24
CRU Liquid Metal Cost (US\$/t)



EX-CHINA

Margin Index
(3Q23 = 100)

| | 3Q23 | 4Q23 | 1Q24 | 2Q24 | 3Q24 | YoY | QoQ |
|--|------|------|------|------|------|------|------|
| CRU Alumina Price (FOB Australia) (\$/t) | 339 | 335 | 368 | 438 | 505 | +49% | +15% |
| Energy Price Hydro (\$/MWh) | 25.6 | 25.7 | 26.1 | 27.2 | 26.5 | +4% | -2% |
| Energy Price All sources (\$/MWh) | 27.9 | 28.1 | 29.2 | 29.5 | 29.0 | +4% | -2% |

CHINA

| | 3Q23 | 4Q23 | 1Q24 | 2Q24 | 3Q24 | YoY | QoQ |
|---------------------------------------|------|------|------|------|------|------|-----|
| CRU China Alumina Basket Price (\$/t) | 399 | 412 | 463 | 505 | 544 | +36% | +8% |
| Energy Price Hydro (\$/MWh) | 51.4 | 56.2 | 63.5 | 63.3 | 57.4 | +12% | -9% |
| Energy Price All sources (\$/MWh) | 52.5 | 56.6 | 63.9 | 63.6 | 58.7 | +12% | -8% |





Market Dynamics

OPPORTUNITIES

- ✓ A strong rise in the reference price of alumina may support higher aluminum prices on the LME
- ✓ Growth in Brazilian downstream products exports in 2024, with the prospect of increasing market share in the external market
- ✓ Aluminum demand in Brazil has grown for the third consecutive quarter, confirming a recovery and a positive outlook for 2024
- ✓ Currency depreciation continues to favor CBA's competitiveness

IMPORTANT CONSIDERATIONS

- ✓ Despite government incentives, the recovery of the real estate and construction market in China remains uncertain
- ✓ Improved water flow in the Yunnan region may prevent capacity cuts in the province this year
- ✓ An increase in the Selic rate could slow down the real estate and construction market in Brazil



Key Takeaways

Aluminum prices on the LME were driven by disruptions in bauxite and alumina supply chains, monetary policies in Europe and the US, and economic stimulus in China. For 2025, China's capacity cap and lower global interest rates should be incremental factors to this favorable scenario.

Demand in China remained stable in 3Q24, with a slowdown in the real estate market offset by sectors related to the electric transition. Recent stimulus measures may further support the market.

Yunnan has experienced above-average water flow in recent years, indicating that seasonal capacity closures in the region may not occur.

In Brazil, the aluminum demand outlook is positive, with a projected growth of 2.8% in the real estate sector in 2024 and a reduction in the unemployment rate. Additionally, vehicle production also presents optimistic expansion prospects.