



Data, Insight,
Strategy &
Communities

Foodservice Packaging Institute – Fall Conference 2024

October 24th-25th

Denver, Colorado

Aluminum Update for Foodservice Packaging Institute

Kaustubh Chandorkar, Head of North America Analysis -Aluminum,

CRU

CRU. Independent *expert* intelligence

Aluminium

Legal Notice

This presentation is private and confidential. It must not be disclosed in whole or in part, directly or indirectly or in any other format without the prior written permission of CRU International Limited.

CRU International Limited's responsibility is solely to its clients and its liability is limited to the amount of the fees actually paid for professional services.

Although reasonable care and diligence has been used in the preparation of this presentation, we do not guarantee the accuracy of any data, assumptions, forecasts or other forward-looking statements. We accept no liability to third parties, howsoever arising.

CRU takes information security seriously and currently holds the UK Government approved Cyber Essentials certification. This certifies that we have the appropriate security controls across our organisation and third party suppliers to protect our information assets. CRU also has a [privacy policy](#) in place which explains how we handle personal data on our customers.



CRU Aluminum: Expertise across three continents



Paul Williams
Head of Aluminium



Guillaume Osouf
Head of Prices Development



Kaustubh Chandorkar
Head of North America Analysis



Min Wang
Senior Analyst



Ross Strachan
Lead Analyst, Primary & Recycled Metal



Matthew Abrams
Analyst



Marziyeh Horeh
Analyst



Elijah Santos
Research Analyst



Kelly Driscoll
Research Manager



Caroline Alglave
Senior Analyst



Wan Ling
Principal Analyst



Yanni She
Analyst



Rebecca Zhou
Senior Analyst



Anthony Everiss
Senior Analyst



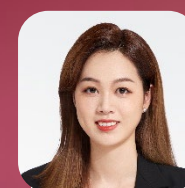
David Leah
Senior Automotive Analyst



Zaid Aljanabi
Principal Analyst



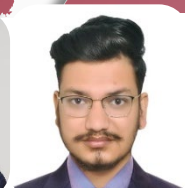
Deborah Idowu
Analyst



Tiantian Zheng
Senior Analyst



Alexey Pavlov
Senior Analyst



Ravindra Panwar
Research Analyst



Alex Christopher
Senior Analyst

CRU International Limited
London | Sydney | Tokyo | Beijing | Shanghai | Singapore | Mumbai | New York | Pittsburgh | Sao Paulo | Santiago

Registered in England No.940750. Registered office: Charles House, 108-110 Finchley Road, London NW3 5JJ

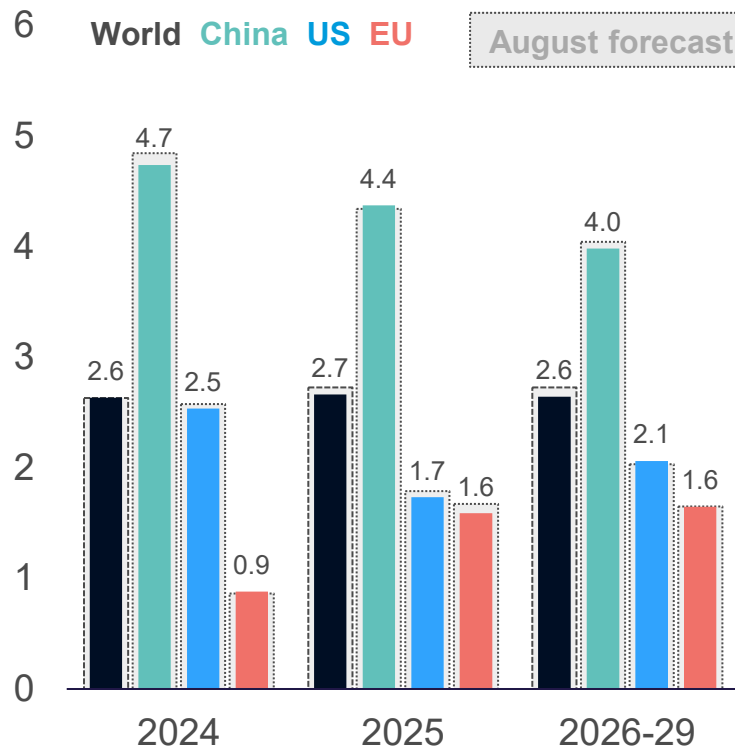


Downside risks to growth in 2025 are growing

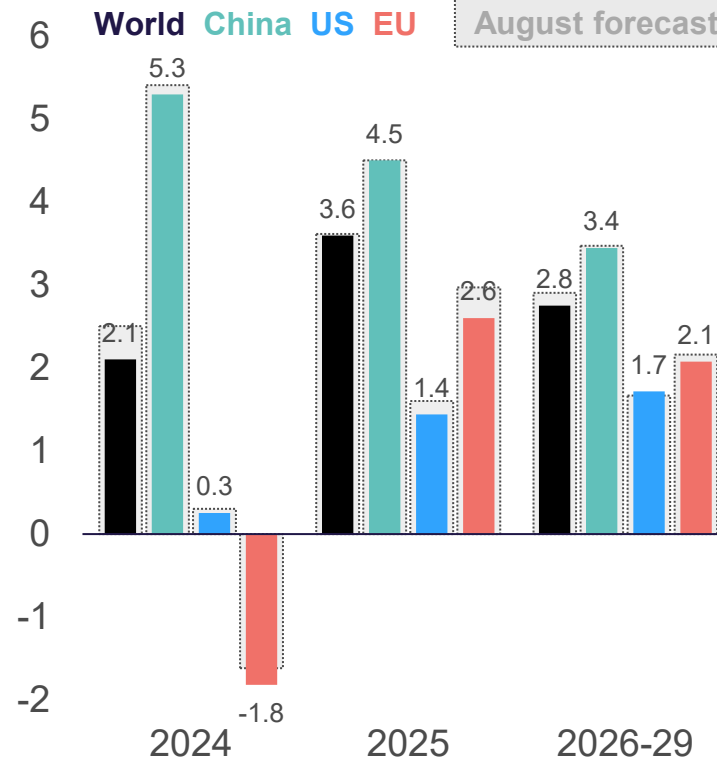
We still expect steady growth in GDP in 2024...

...but we now expect IP to grow more slowly

GDP growth, %



Growth in Industrial Production, %



Policy makers are responding to troubling news on growth.

The world economy continues to be on course for growth of 2.6% in 2024. However, the [US is slowing](#), [Europe](#) continues to stagnate and [China is facing major problems](#) below the surface of headline data, the downside risks for growth in 2025 are mounting.

Policy is responding to these risks. The Fed cut rates by 50bp in September, [pushing down the dollar](#). The ECB also cut rates, by 25bp. The [PBoC unveiled a range of easing measures](#). Whilst we don't believe these are sufficient on their own to achieve the growth target, they lay the groundwork for fiscal stimulus to come. We expect this to be announced in early October, after the Golden Week holiday.

Whether these global policy moves are enough to maintain growth remains to be seen.

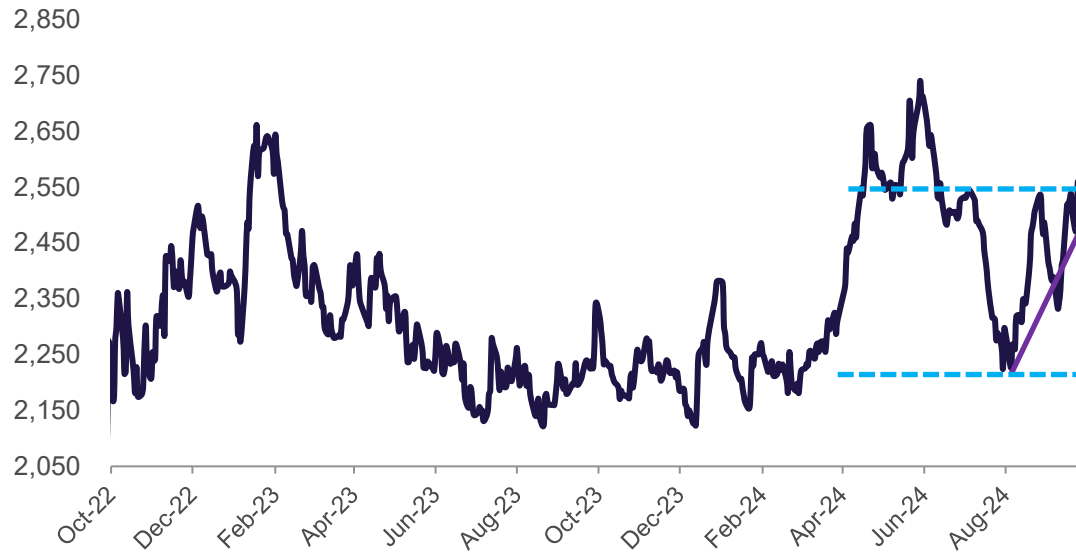
We expect [global light vehicle production](#) to contract 0.5% in 2024, and to grow by 2.5% in 2025.

DATA: Oxford Economics, CRU; NOTE: World GDP and IP growth are weighted by market exchange rates

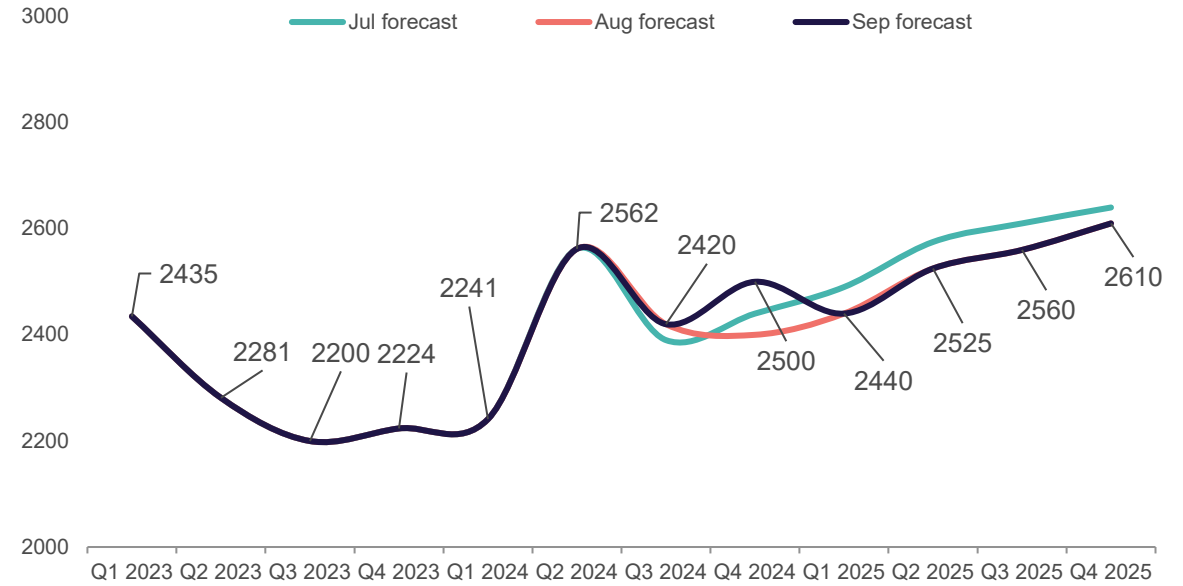


LME rises to almost four-month high amid Chinese stimulus

LME aluminium 3-month price and key technical levels, \$/t



LME aluminium 3-month price forecast, \$/t

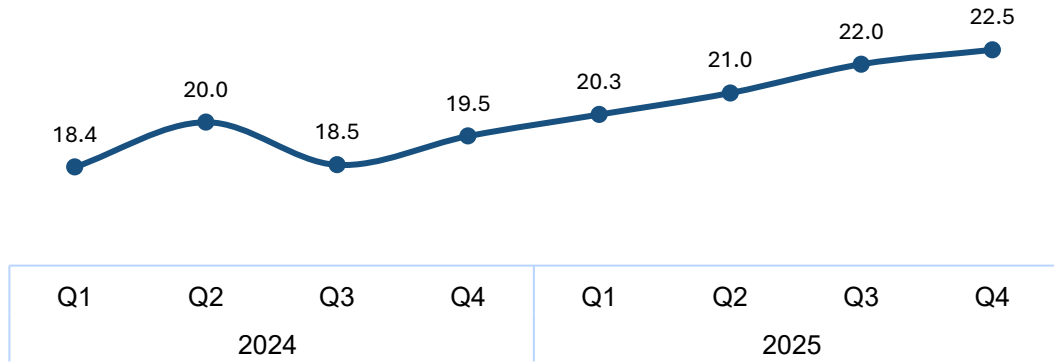


Data: CRU



Premiums: ingot premiums to remain well supported by external factors

US MW premium forecast, ¢/lb



US Midwest

The US Midwest premium has hovered around 18 ¢/lb over the last three weeks as the market enters a holding pattern. Current trading is between 17.9-18.2 ¢/lbs. There is not much activity in the market as new orders move mostly sideways. The forward curve has also flattened out and sits at a slight contango into 2025. We expect the wider cut by the Fed to have a positive impact on sentiment and possibly lift the premium as better demand might follow.

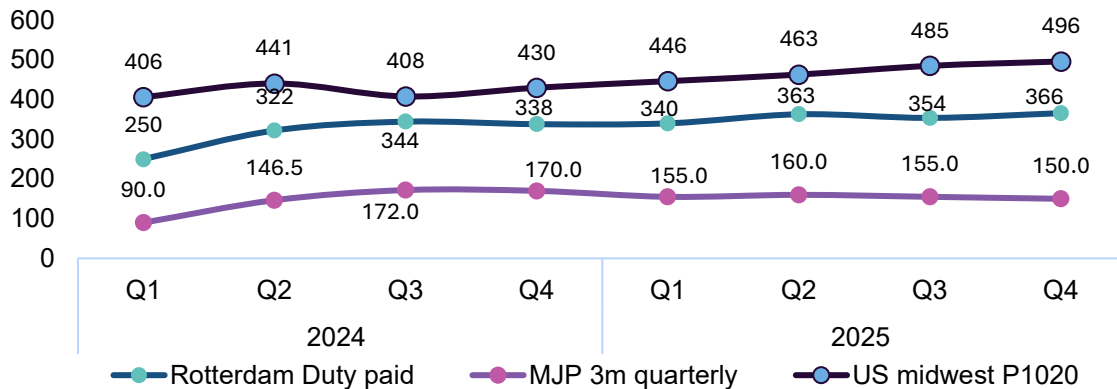
Rotterdam

Despite the weak demand, European ingot premiums have remained well supported by falling inventories and high replacement costs. . Amid this background we expect ingot premiums to remain firm in October and possibly for the duty-paid premium to start increasing although marginally. More pressure expected later in Q4 as demand remains weak.

Japan

The negotiations for the MJP Q4 premium are ongoing. A fire at one of Press Metal operations encouraged one producer to lift its offer to \$200 /t while another one maintained its at \$185 /t. While bids remain in a range of \$150-170 /t, we expect the premium to potentially settle within \$165-175 /t with more upside risks than before.

Rotterdam, Japan, and US MW premium forecasts, \$/t

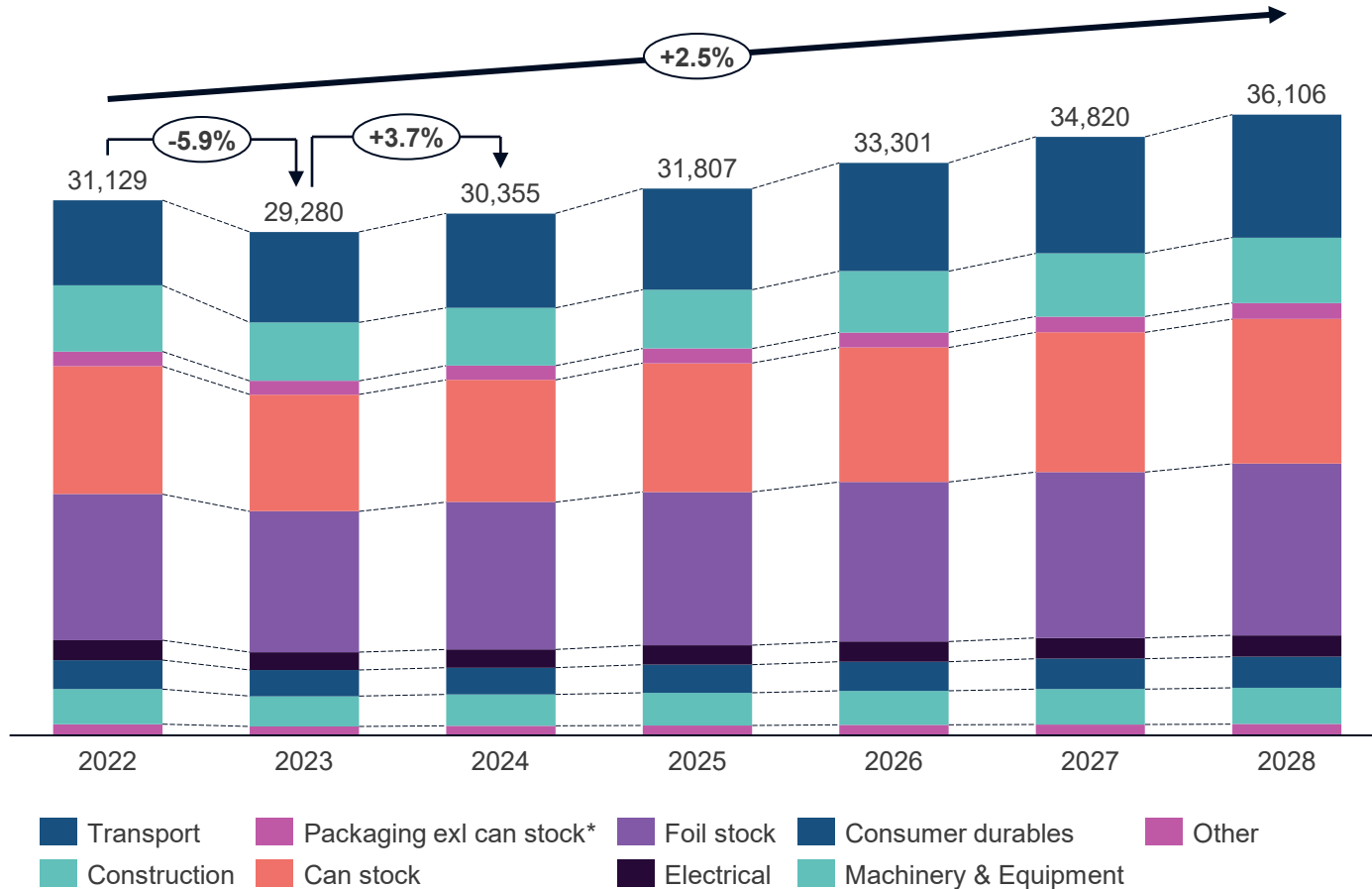


DATA: CRU, SHFE



Global FRP markets will slowly recover from 2023 annus horribilis

Projected Global FRP Consumption across market sectors in KT from 2022-2028



Transportation and beverage can markets will continue to lead FRP recovery

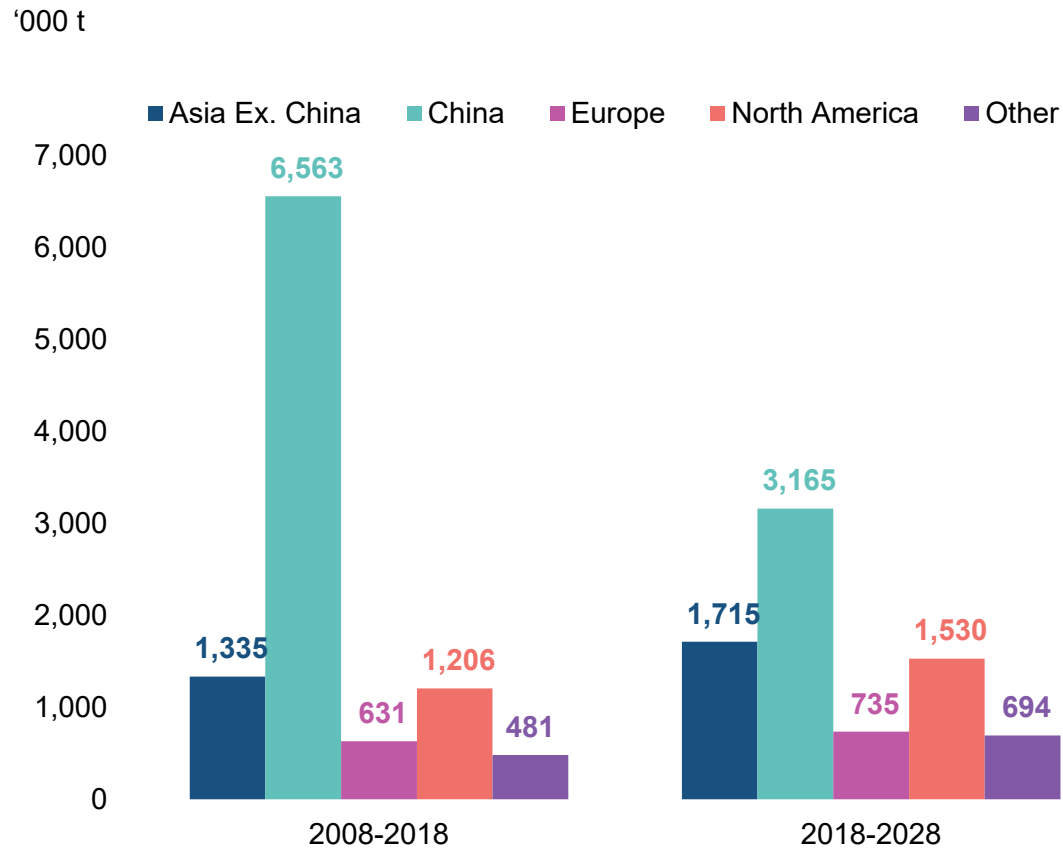
- Global demand fell 6% last year but 9% outside of China
- Automotive will be a driver of growth out to 2028 but we have been lowering our projections due to slower uptake of BEVs than originally anticipated.
- However, growth is anticipated to come from the higher aluminium content in BEVs.
- The global construction market is expected to show recovery with a 3.1% growth rate as anticipated interest cuts in upcoming years spur construction activity. But this follows a very painful few years.
- Global beverage can packaging market is forecast to grow at a healthy 4.2% rate, with renewed focus towards sustainable aluminium beverage can benefits.
- Global foil stock growth of 3.6% is forecast to be driven in part by recovered BEV growth, after a fairly awful 2023

DATA: CRU, industry Associations



More balanced growth will be the story of the forecast period

Change in FRP consumption by region current vs previous ten-year period



FRP growth between 2024–2028 expected to hit 5.7 Mt

Three regions (i.e. US and Canada, Europe and China) account for 68% of global FRP growth. The "big three" sectors (i.e., transportation, beverage can sheet and foil) account for 75% of the FRP growth between 2024–2028.

The global growth profile will be much more balanced in the ten years starting in 2018 versus the previous ten-year period. Chinese domestic consumption will slow to a more sustainable rate, while Europe and North America outpace their post-GFC growth rates.

As for the bulk of the transportation growth, ~ 90% is between US/Canada, China and Europe. Automotive will drive this growth in part by the recovery in BEV and the growth of AIV models. China exhibits the largest increase in foil stock growth, driven in large part by the battery foil growth associated with BEVs.

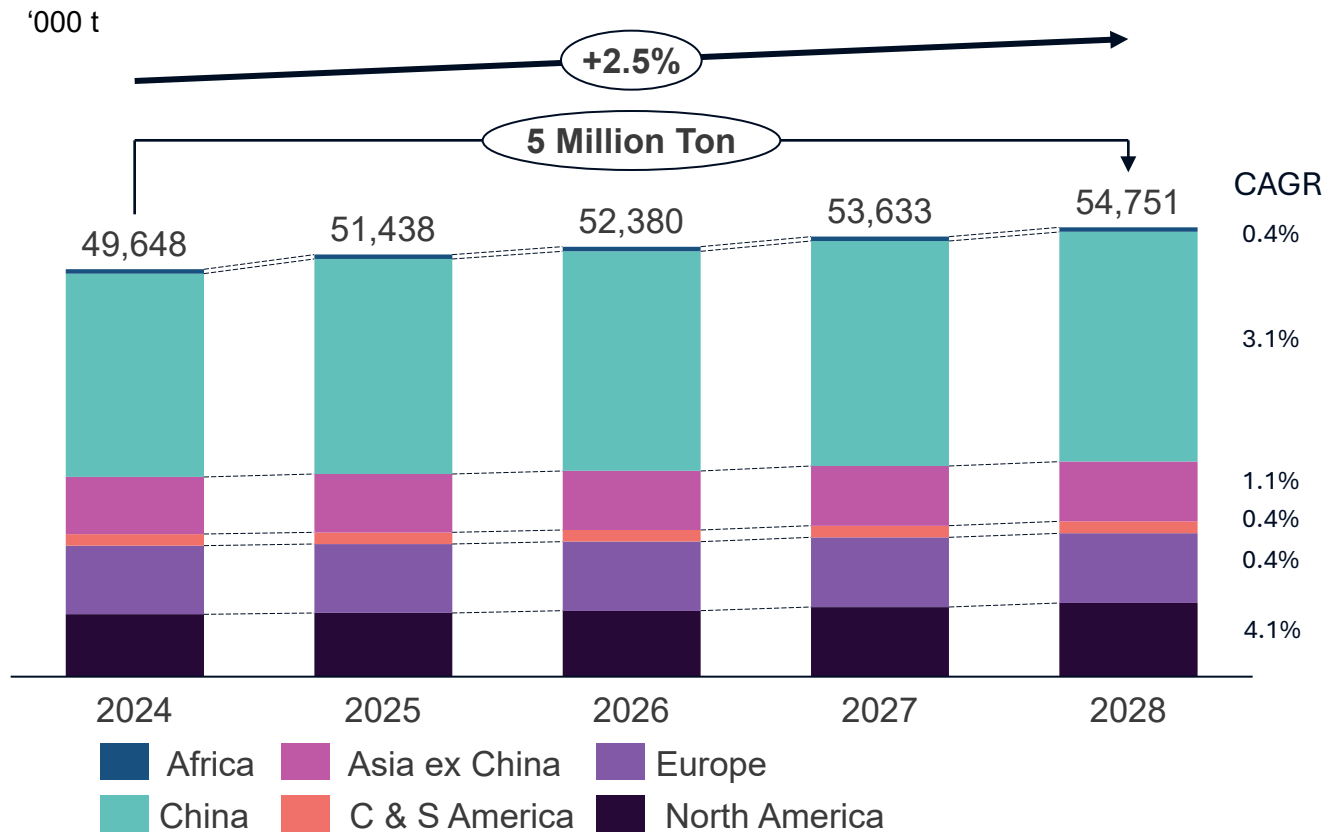
Beverage can sheet will be more uniformly distributed in terms of growth, with the US and Canada leading the way, followed by Europe along with Mexico, C&S America, Asia ex. China and China showing 100-150 kt growth over 2024–2028 time period.

DATA: CRU



Global cold rolled capacity will grow by 10% or 5 million tons by 2028

Global cold rolled capacity in KT projected from 2024–2028, including capacity creep



DATA: CRU

Global rolled capacity to grow at 2.5% CAGR through 2028

China continues to be the largest source of cold rolled capacity, providing ~ 50% of global cold rolled capacity. Chinese rolling mills have been increasing their collective cold rolling capacity by 3 million tonnes by 2028 at a CAGR of 3.1%. Significant additions have come from Anhui Yinbang, Chongqing Jinghongyuan, and Liuzhan Yin Hai.

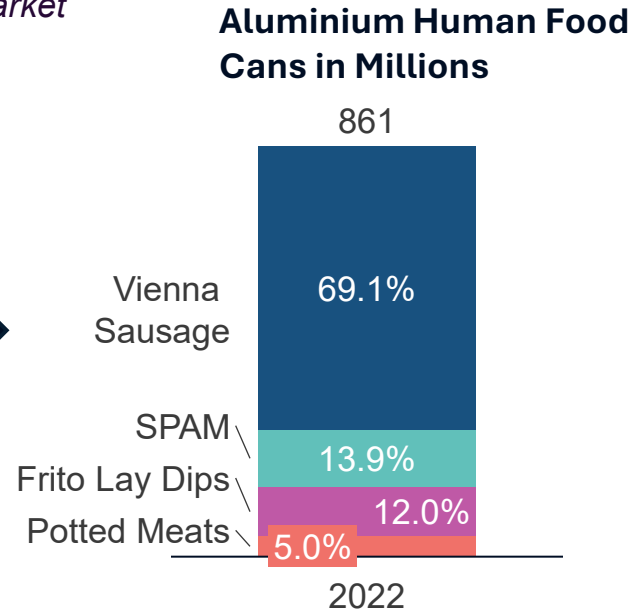
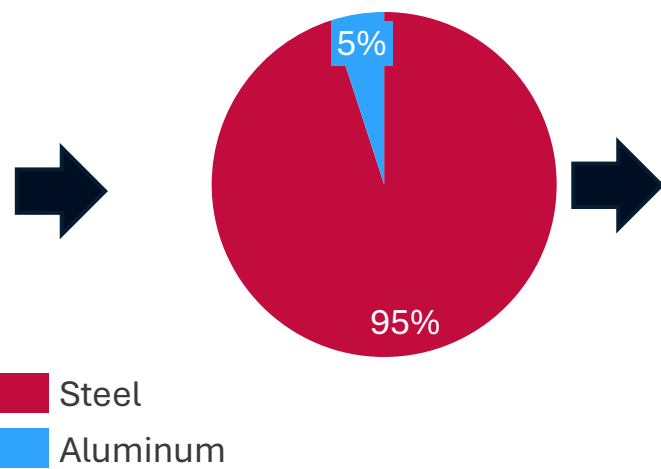
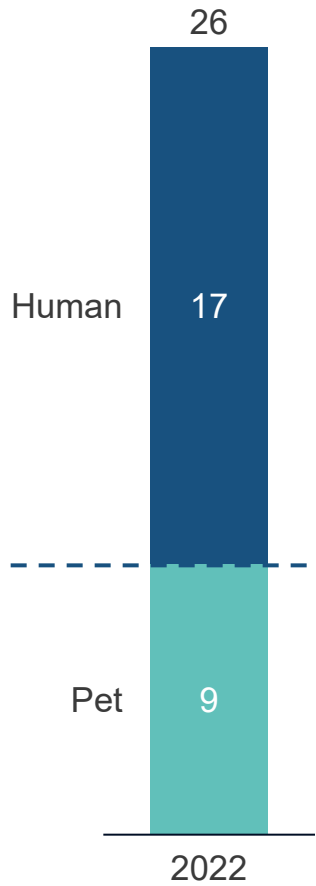
Small capacity increases, along with cold rolling capacity, creep across European rolling mills, Central and South America mills as well as Asia ex. China, resulting in growth CAGR's between 0.4 to 1.1%

North America reflects a capacity increase of ~ 1.5 million tonnes with new rolling mills Aluminum Dynamics in Columbus, MS and Novelis Bay Minette, Alabama collectively contributing 1.2–1.25 million tonnes of additional new cold rolling capacity. Other sizable cold rolling capacity increases has come from Texarkana at 150 kt, along with some capacity creep across the NA rolling mills.

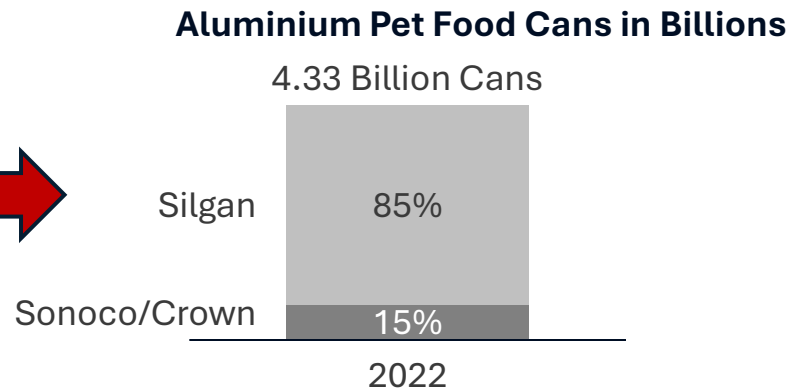
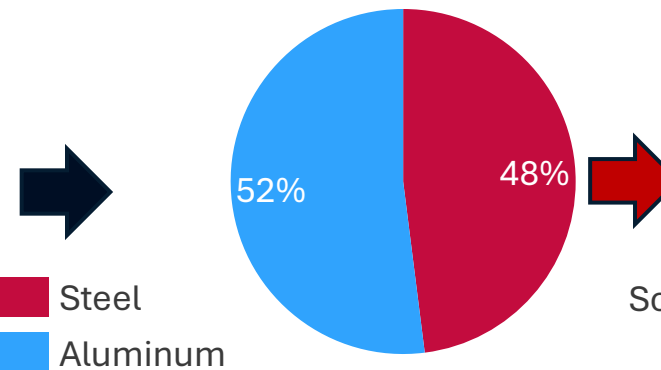


Silgan is the largest player in Aluminium Pet Food Cans with 85% share

Using 2022 as representative year volume – breakdown of Food Can Market



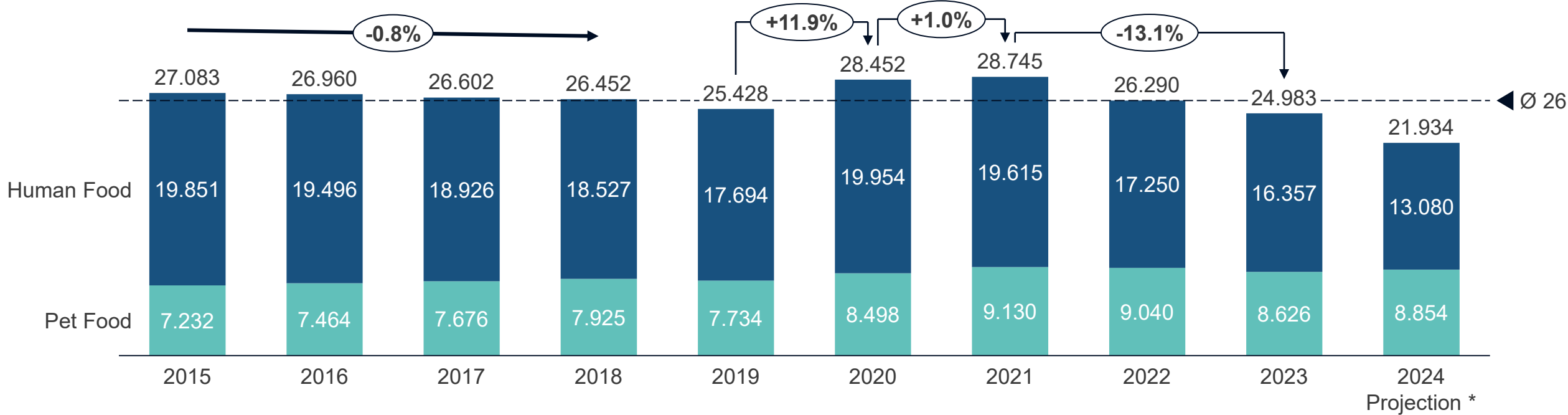
Data: CMI, CRU





After COVID bump Food can market appears to have regressed below pre-Covid levels

CMI reported data on Food Containers in billions from 2015 through 2023



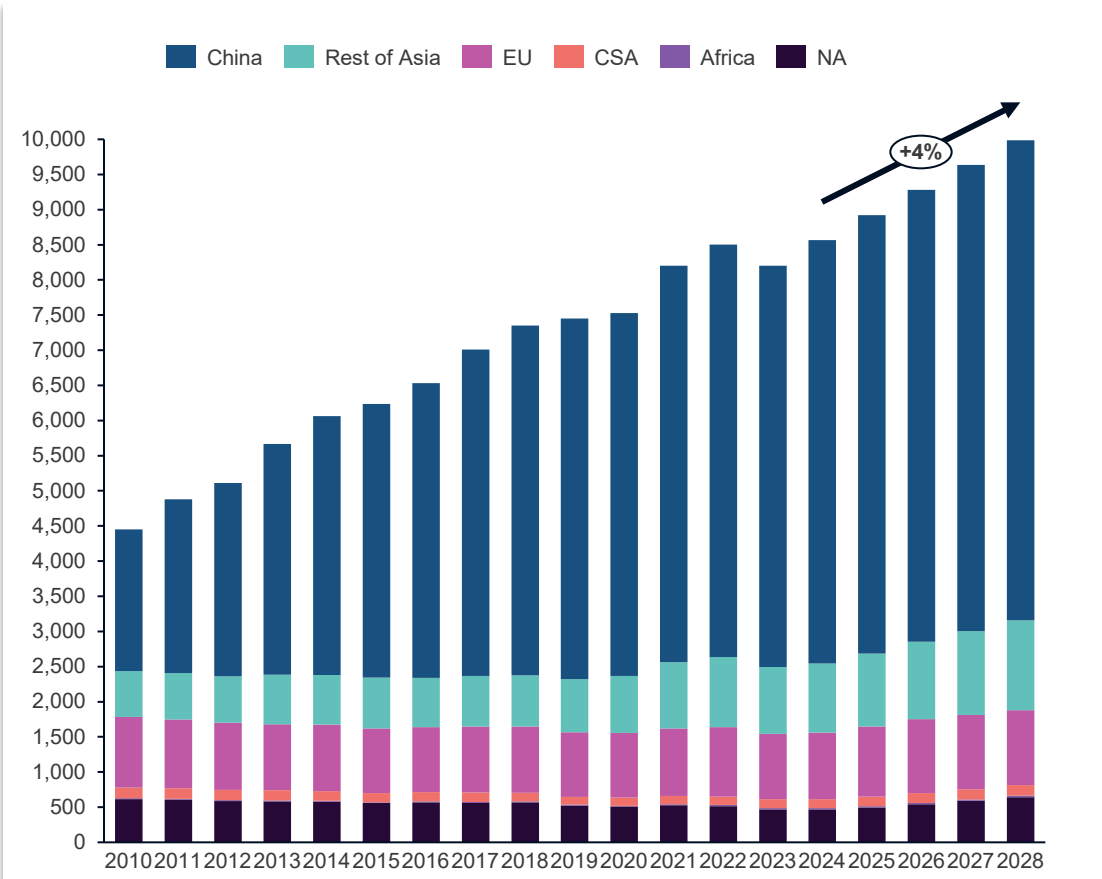
Note: *- based off published 1H2024 data from CMI and projecting for full year 2024

Data: CMI, CRU

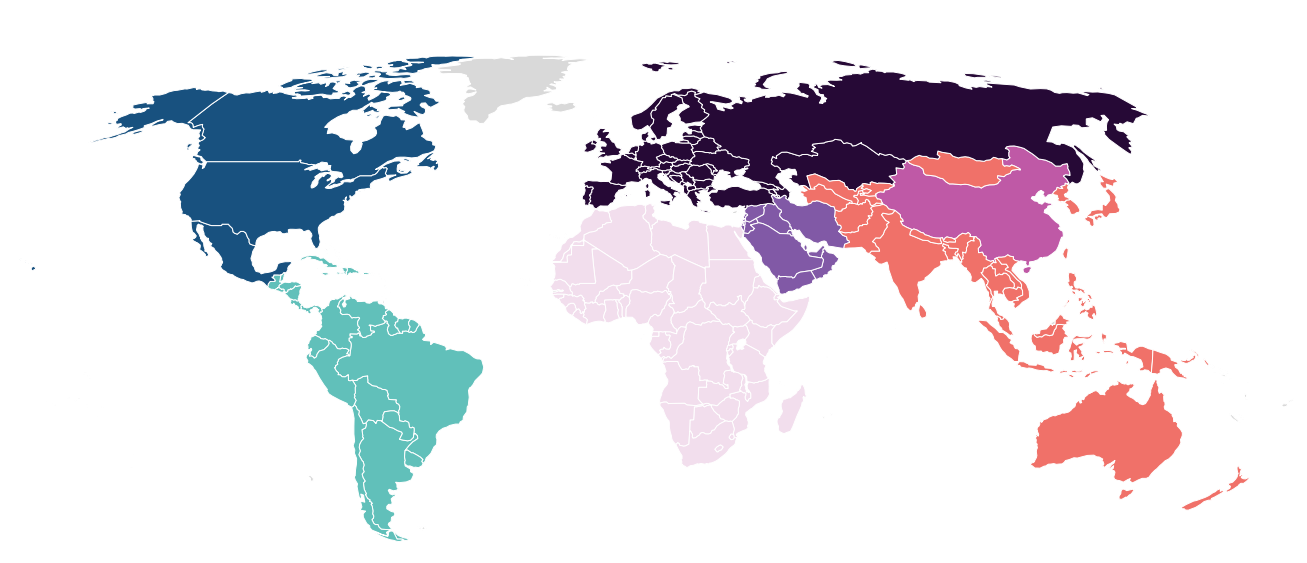


Overview of the Foil market

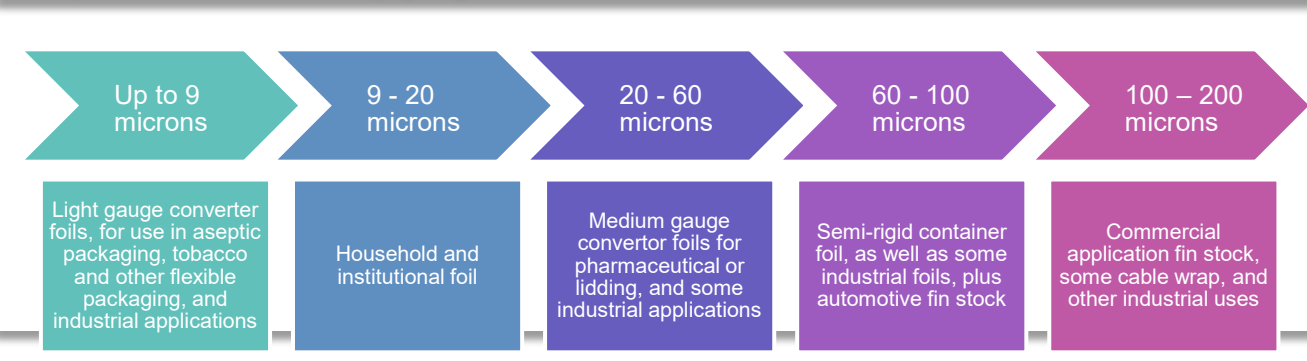
Foil stock consumption by country and region, 2010-2028 ('000 t)



CRU regional breakdown



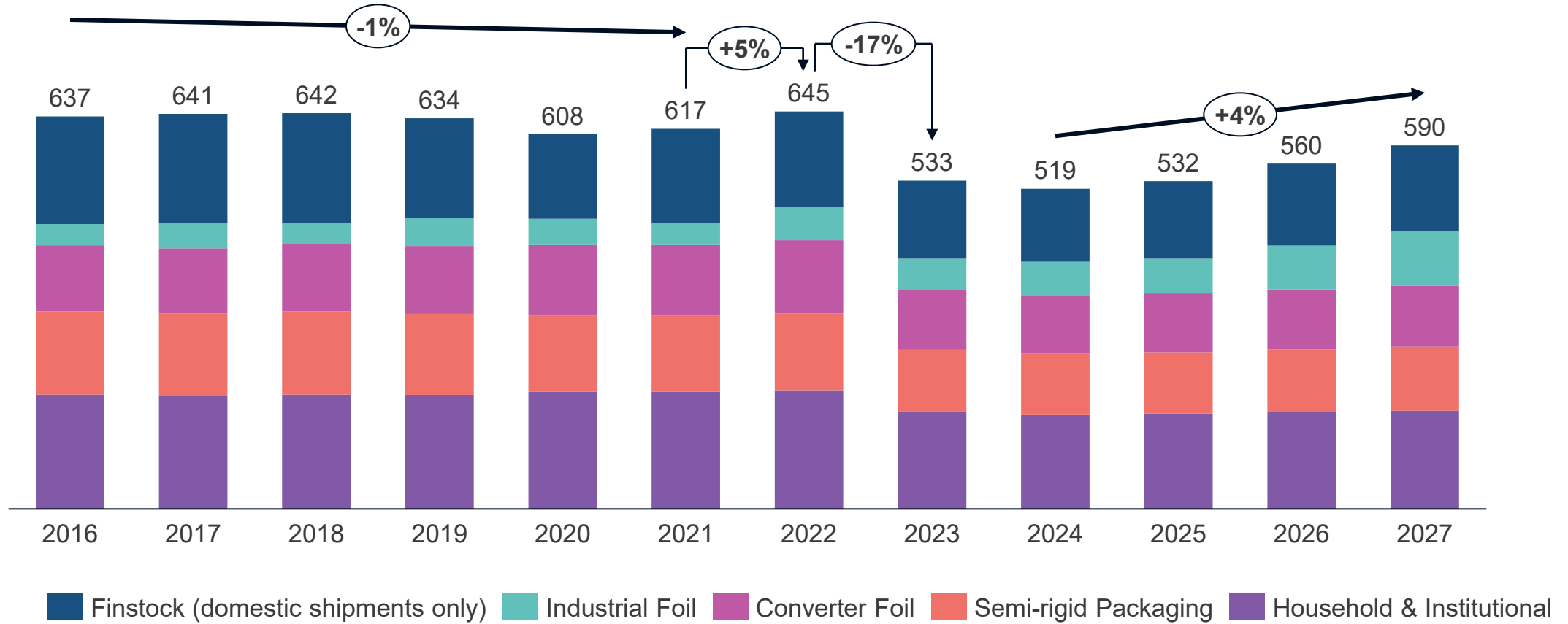
Foil product breakdown by gauge





Foil Market appears to be in recovery mode post 2023 destocking

US/Canada Plain Foil Market from 2016 thru 2027 in KT

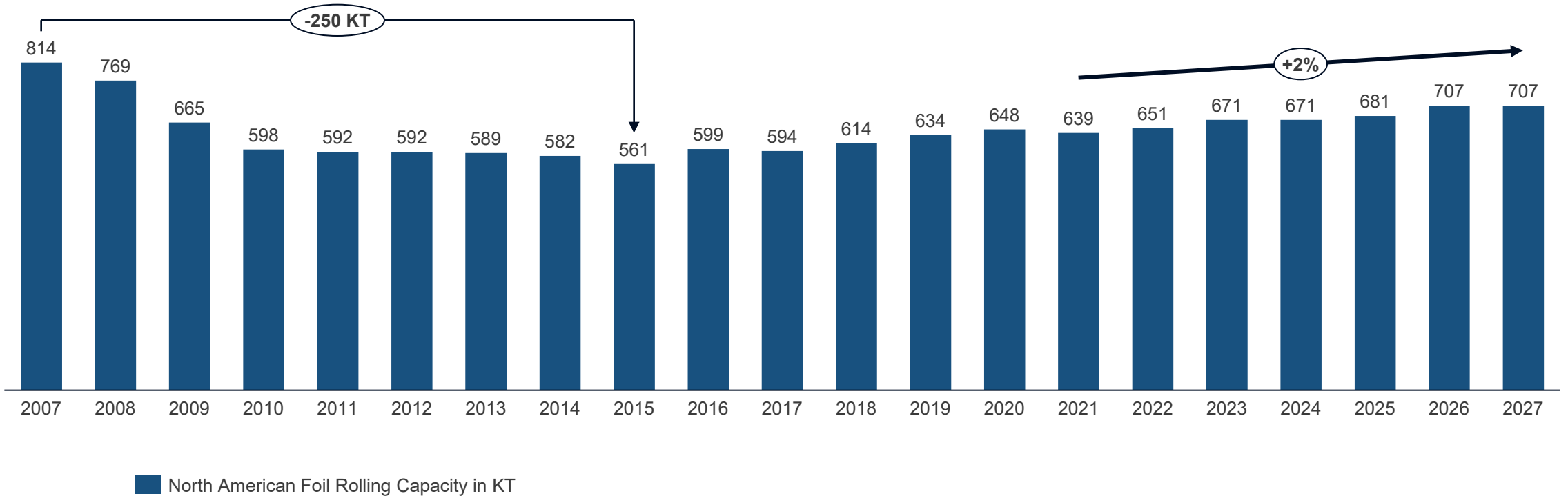


Data: CRU



NA Foil capacity declined dramatically post GFC but appears to be on the rise

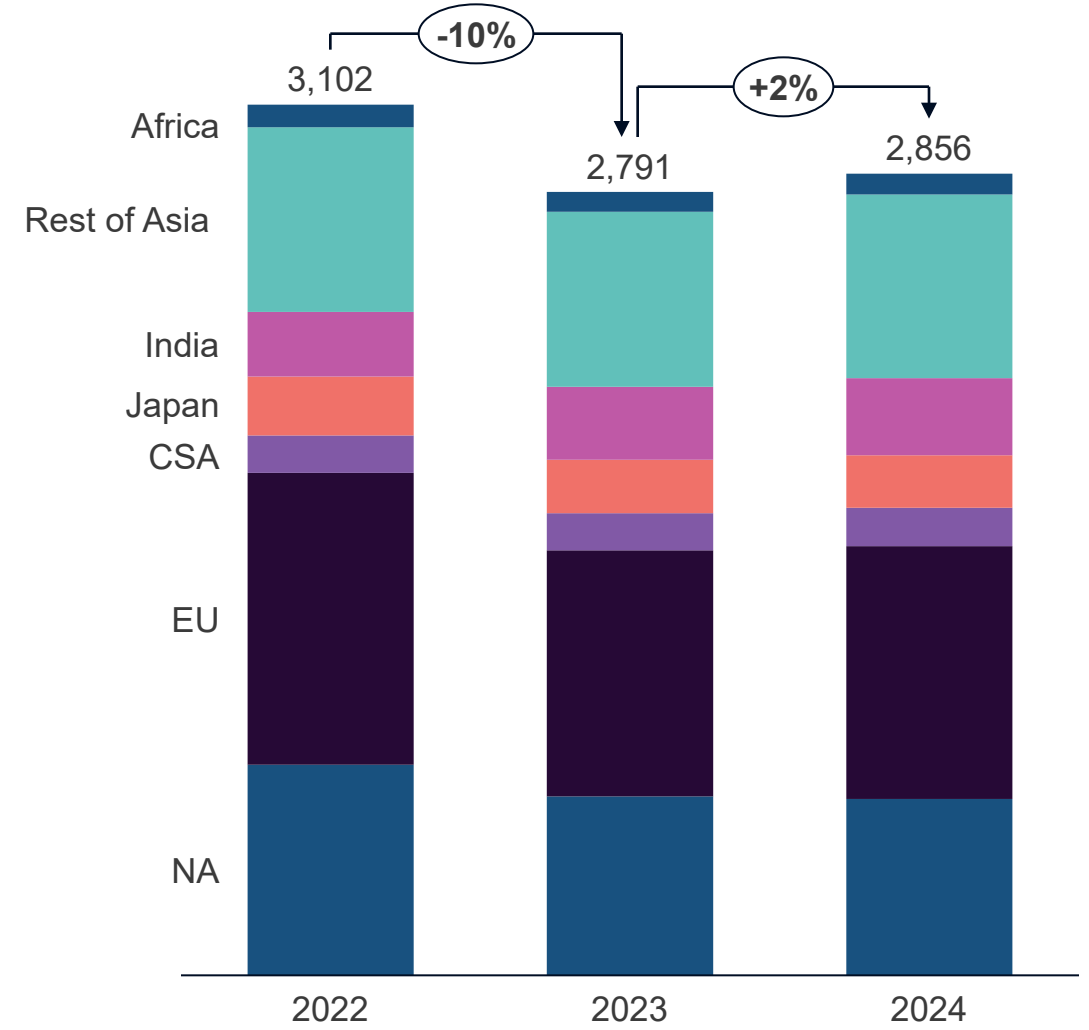
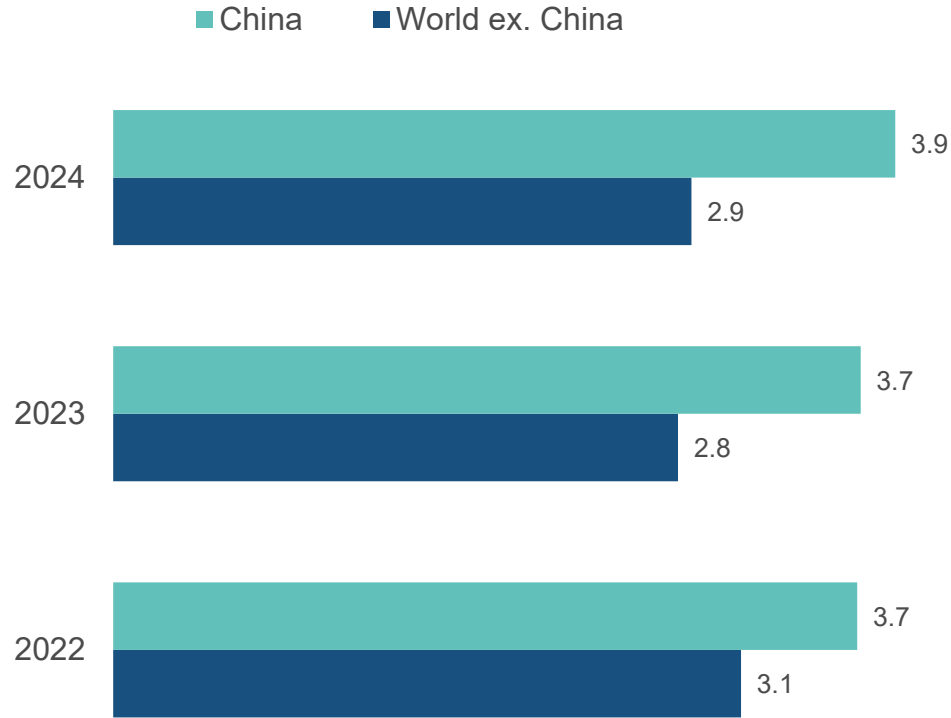
North American Foil Rolling Capacity in KT from 2007 through 2027



DATA: CRU

CRU Foil consumption weakened considerably in 2023, China firmer

Global foil consumption
plain foil, million tonnes

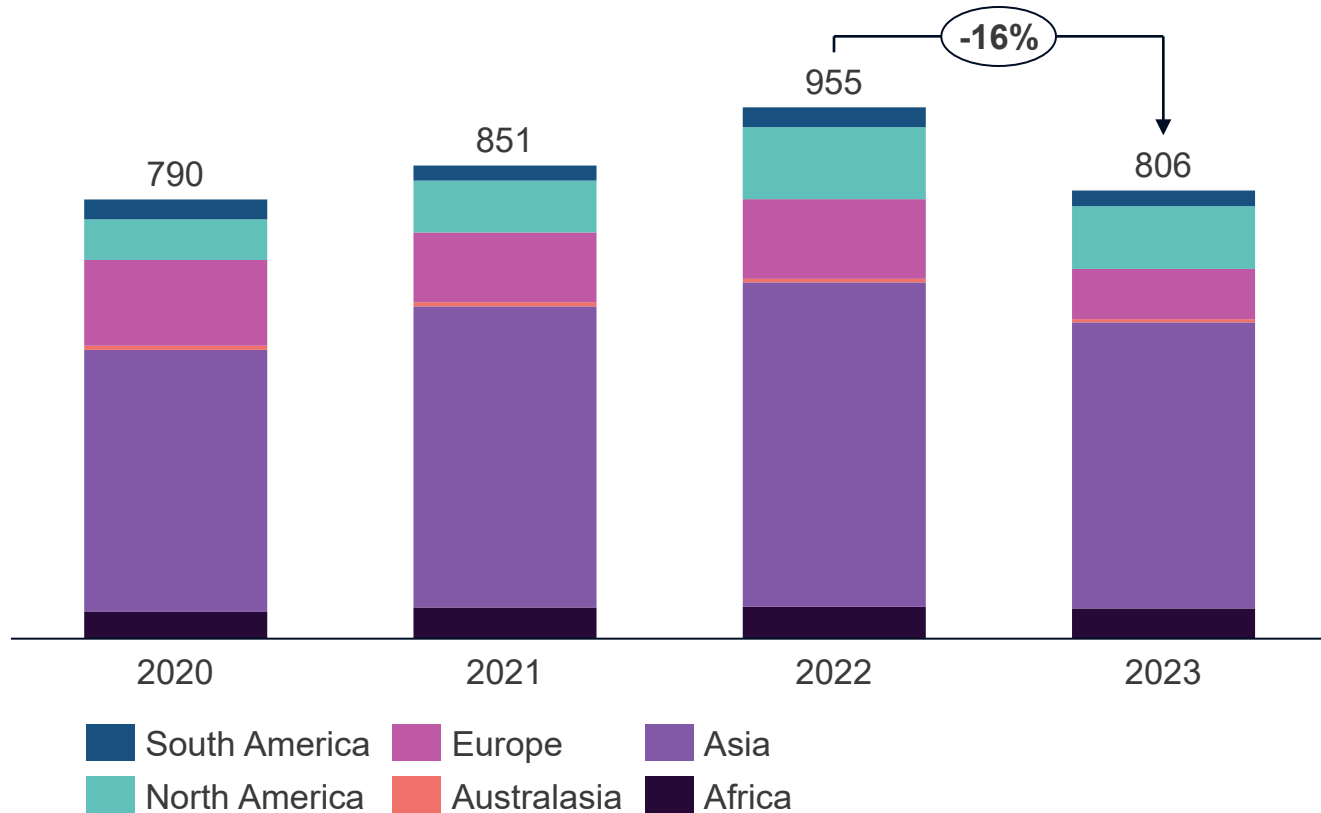


DATA: CRU, Industry associations



Chinese plain foil exports fell in 2023 due to weak global demand and trade actions

Chinese Plain Foil Exports to different region from 2020 thru 2023 in KT



Chinese exports begin to pick up in 2024

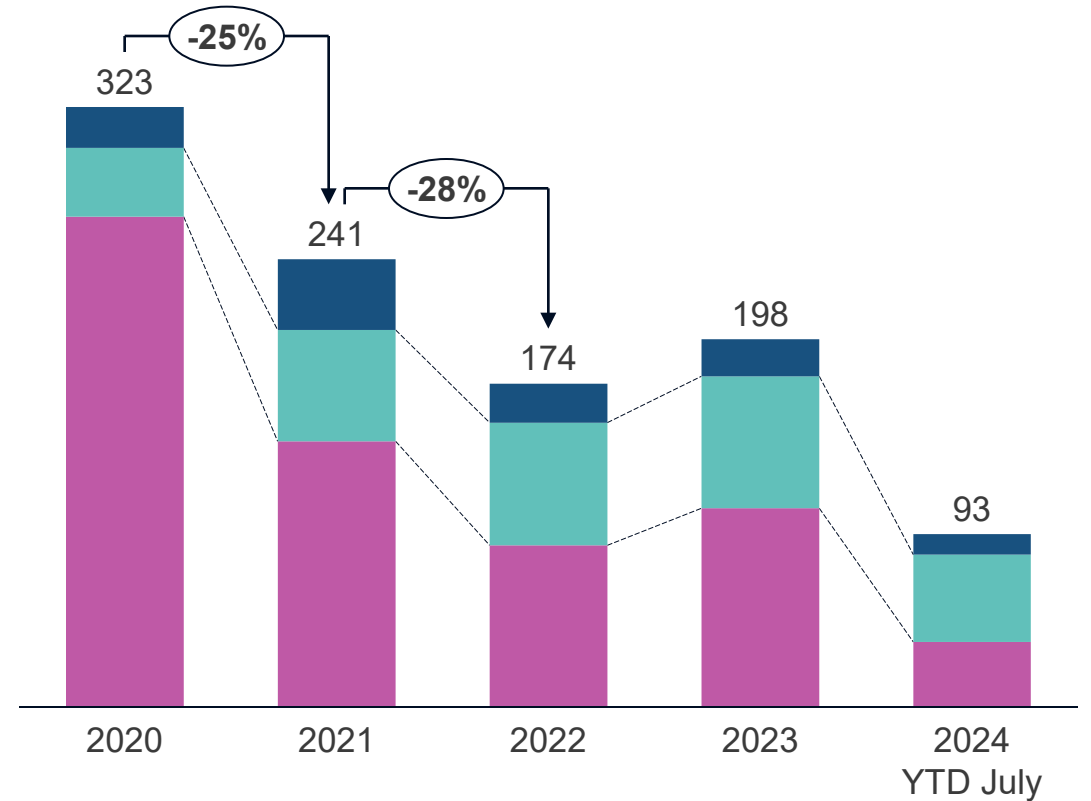
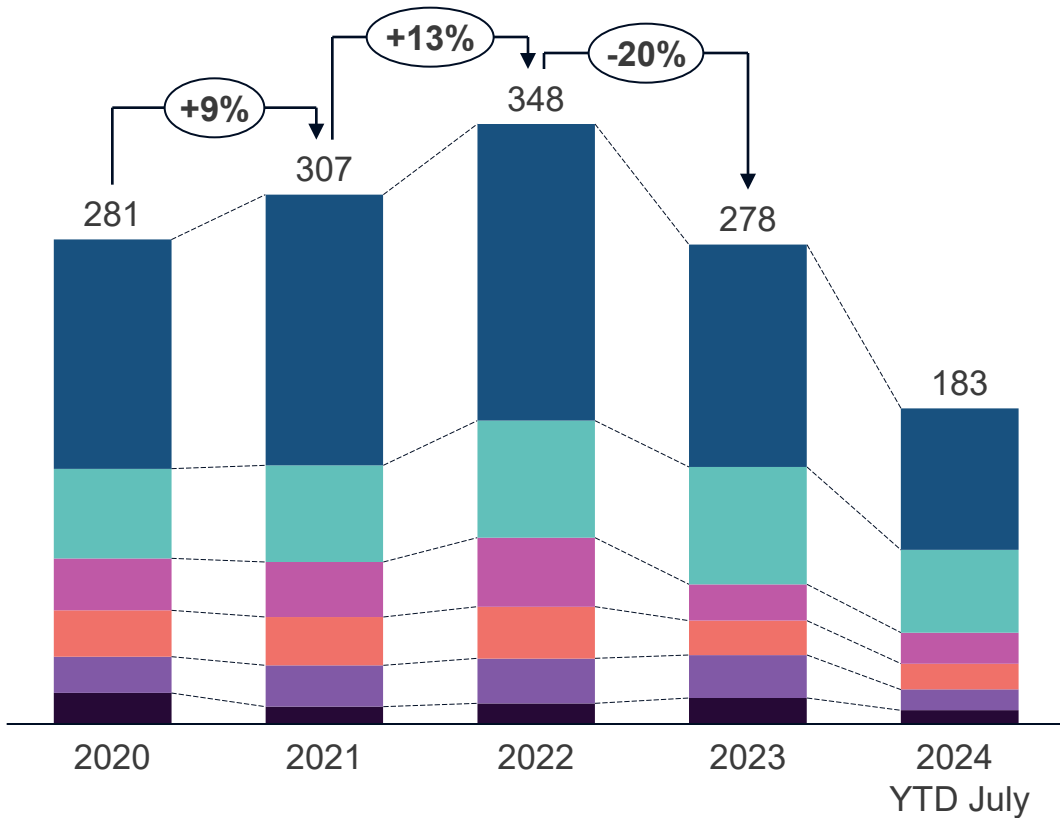
- Chinese exports declined by 16% and fell to ~800kt in 2023 with sharp declines to Europe and Asia – including SE Asia.
- Chinese exports up +11% y/y in first half of 2024
 - Up in Asia and North America
 - Still down to Europe

DATA: GTT, CRU, Chinese Customs



US Foil imports have increased post Covid; Mexico imports have declined

Left: US foil imports; Right: Mexico foil imports (HS 7607) YTD through July



■ Other
 ■ china
 ■ Korea
 ■ Germany
 ■ Turkey
 ■ Brazil

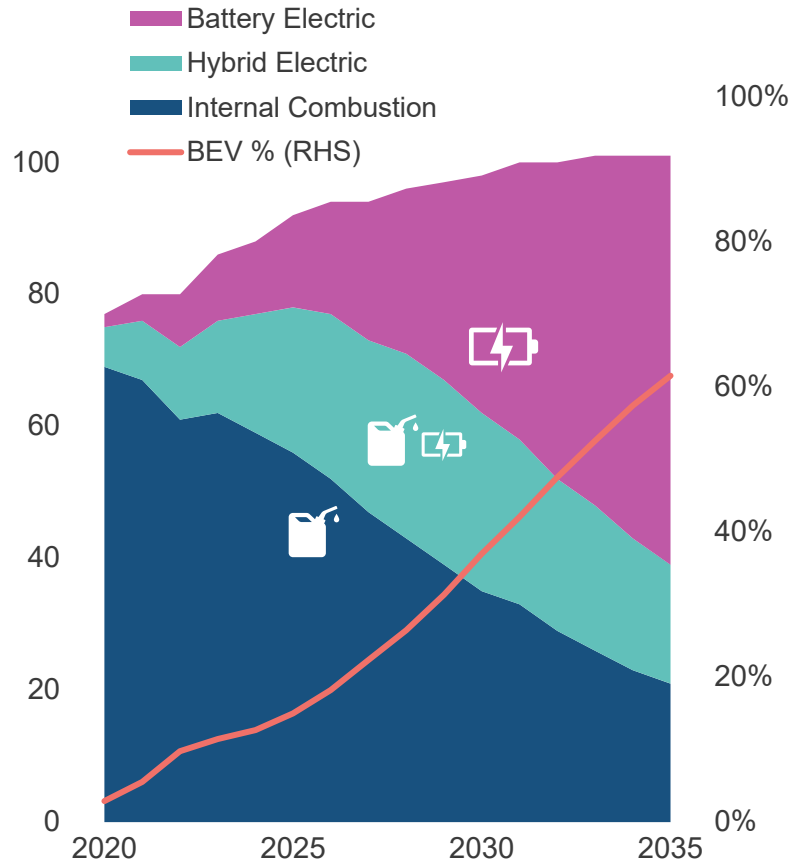
■ Other
 ■ China
 ■ US



The trend towards ZEV is inevitable for all vehicle types... but

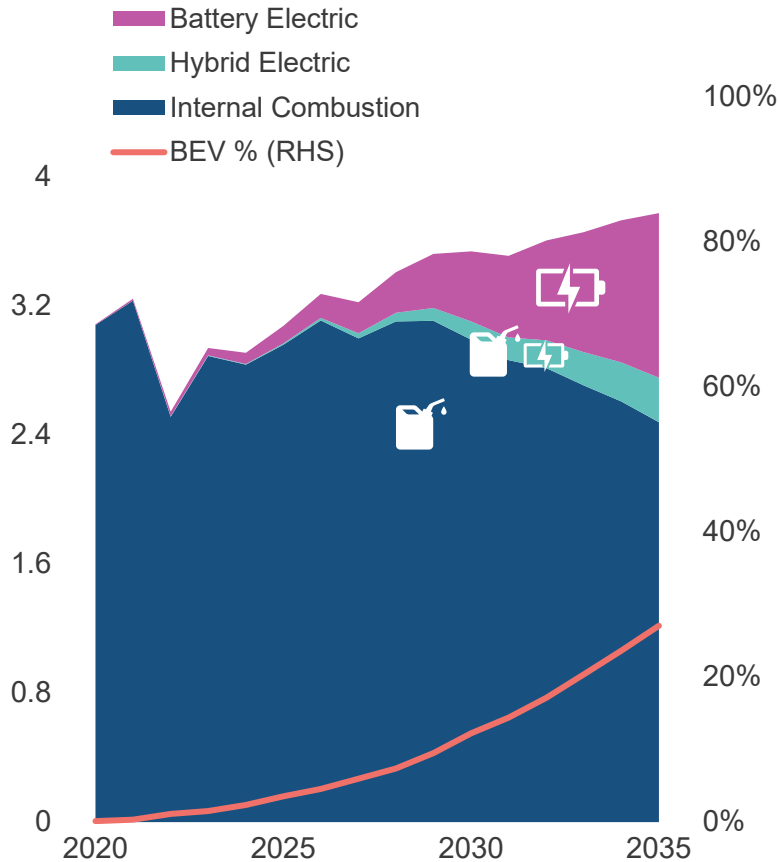
Long-term prospects for EVs remain, despite localised upheaval and slowing growth this year

Light duty vehicle sales by powertrain type, million



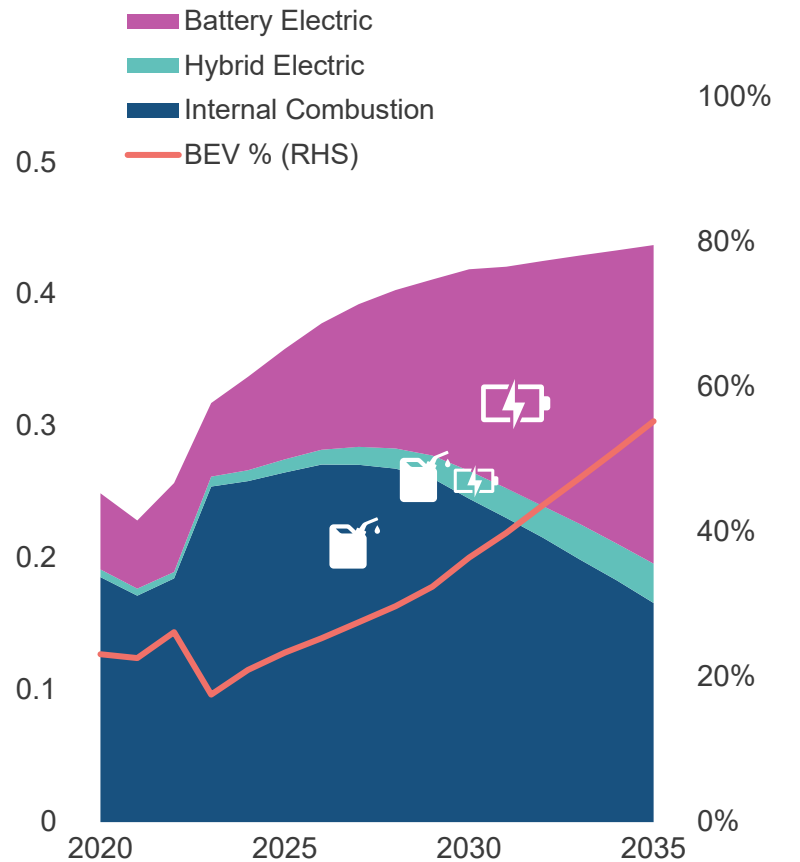
Legislation and favourable ownership costs over long-term will help drive ZEV truck demand

Truck sales by powertrain type, million



City buses to witness strong ZEV growth, given CO₂ reduction targets and conducive duty cycle

Bus sales by powertrain type, million



DATA: CRU. NOTE: Hybrid Electric includes MHEV, MHEV (48V), FHEV, PHEV, EREV and FCEV. Internal Combustion includes Petrol, Diesel, CNG and LNG

CRU Takeaways



Prices have been on a “rollercoaster”. LME prices on average will rise through 2025, assuming economic recovery stays on track – there are many economic and geopolitical risks



Both sheet, plate and foil markets will continue to be impacted by trade actions and changes in trade flows. Onshoring a key theme - especially in the US – whoever wins the Presidential election.



Chinese sheet and foil demand continues to grow in energy transition markets and automotive, Chinese rollers will need to export more but increasingly its markets are being hit by rising tariffs.



CRU *Legal Notice*

This presentation is private and confidential. It must not be disclosed in whole or in part, directly or indirectly or in any other format without the prior written permission of CRU International Limited.

CRU International Limited's responsibility is solely to its clients and its liability is limited to the amount of the fees actually paid for professional services.

Although reasonable care and diligence has been used in the preparation of this presentation, we do not guarantee the accuracy of any data, assumptions, forecasts or other forward-looking statements. CRU cannot be held responsible for the views of third parties or any associated data and charts provided. Where references are made to CRU Prices, our methodologies are available on www.crugroup.com We accept no liability to third parties, howsoever arising.

CRU follows all applicable information security compliance and the relevant laws and regulations on personal information protection. Our privacy policy can be viewed at <https://www.crugroup.com/privacy-policy/>

Copyright CRU International Limited 2024. All rights reserved.



Data, Insight,
Strategy &
Communities

Thank you

Kaustubh Chandorkar

Head of North America Analysis - Aluminium
CRU

CRU. Independent *expert* intelligence