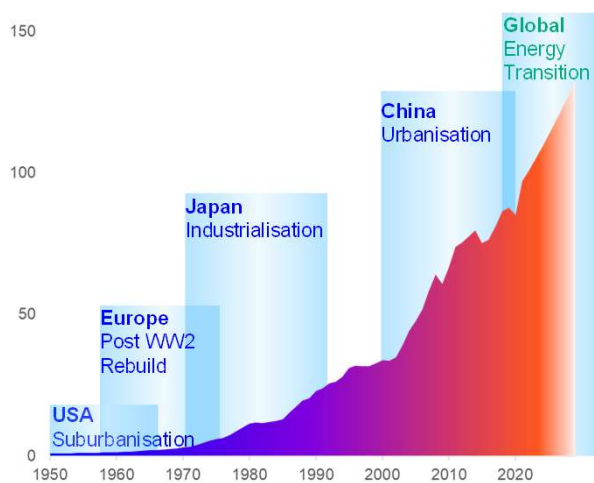


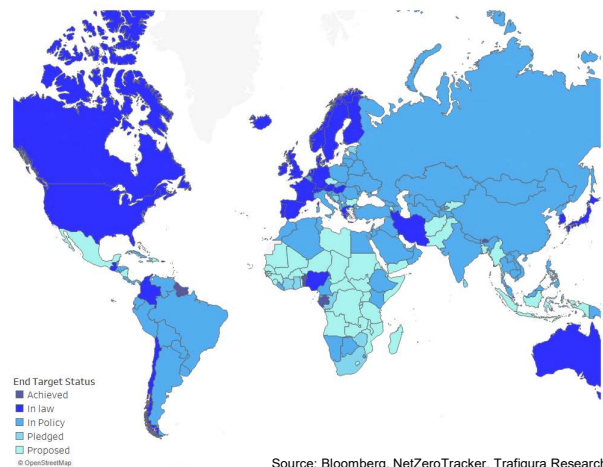


The energy transition has established the next long term demand cycle

Global GDP and historical commodity demand drivers
US\$trn



Net zero targets by country

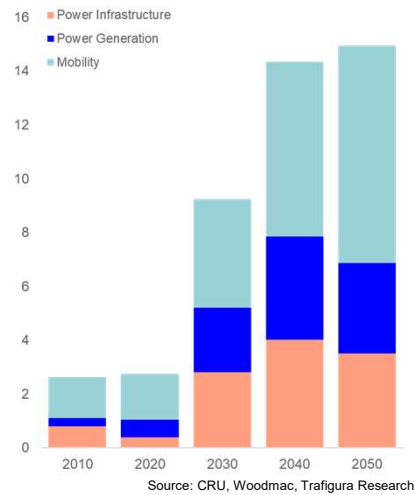


Source: Bloomberg, NetZeroTracker, Trafigura Research

Energy transition demand expected to be a major boost to metals consumption

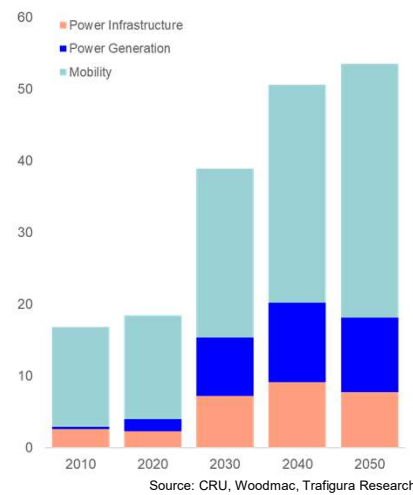
Transition demand – Copper

Million tonnes



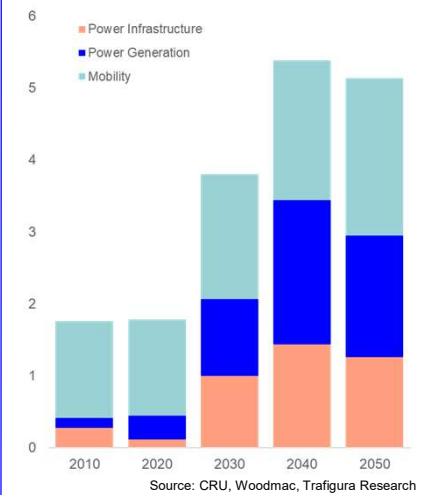
Transition demand – Aluminium

Million tonnes



Transition demand – Zinc

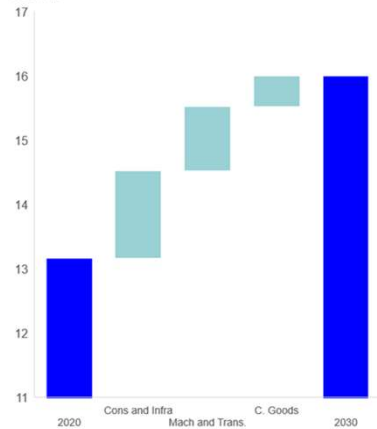
Million tonnes



Demand growth should be more evenly distributed between China and RoW

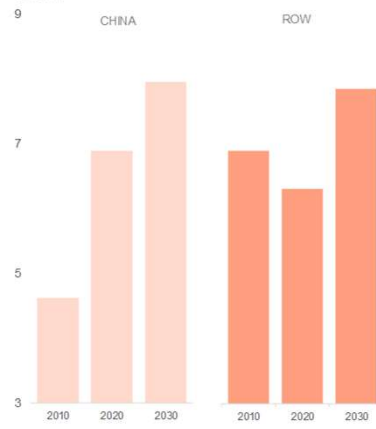
Growth drivers of zinc consumption

Stated in Mt



Zinc demand growth forecast

Stated in Mt

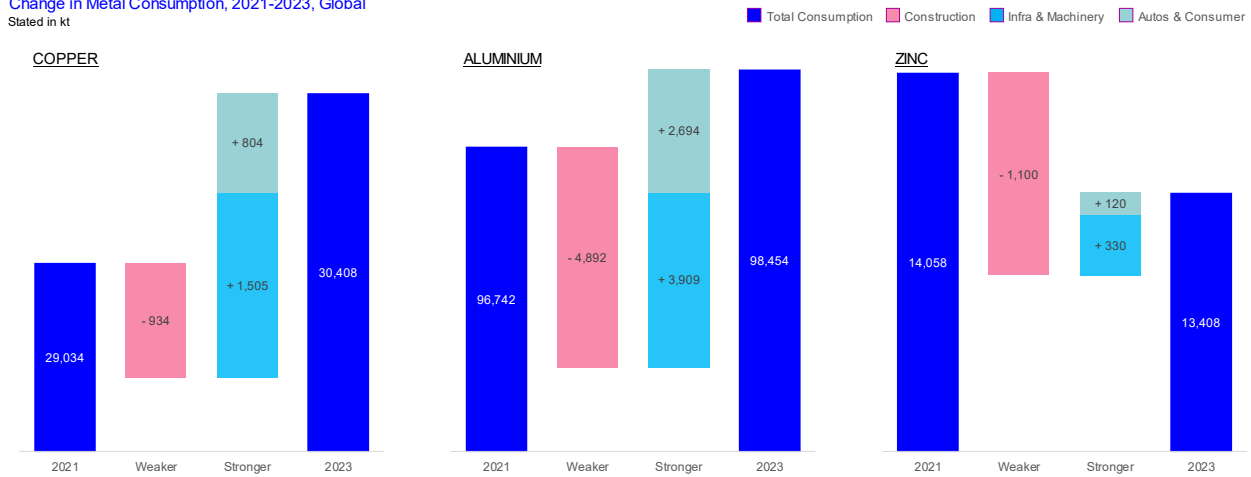


Everything needed for the energy transition is housed in or supported by galvanised steel



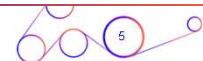
There are offsets to falling construction demand

Change in Metal Consumption, 2021-2023, Global
Stated in kt



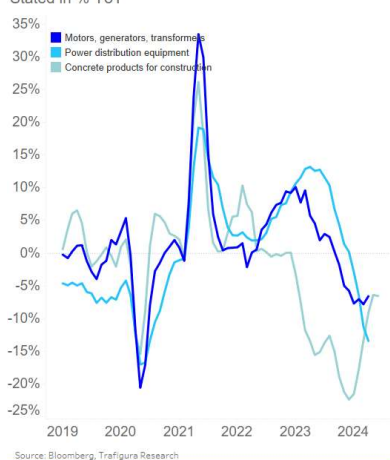
Source: Trafigura Research

Trafigura

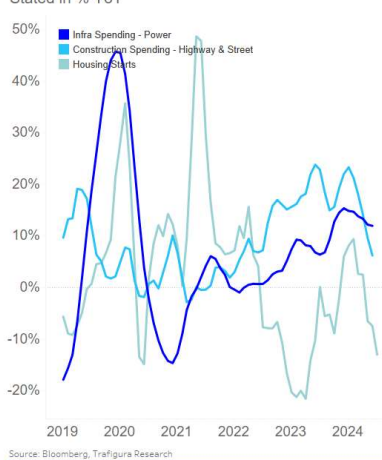


These offsets now clear in US and China, Europe is struggling

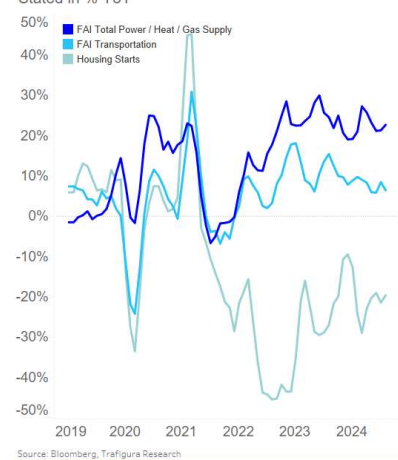
Output of energy infra and construction products, Europe
Stated in % YoY



Power infrastructure spending and housing starts, US
Stated in % YoY



Power infrastructure spending and housing starts, China
Stated in % YoY



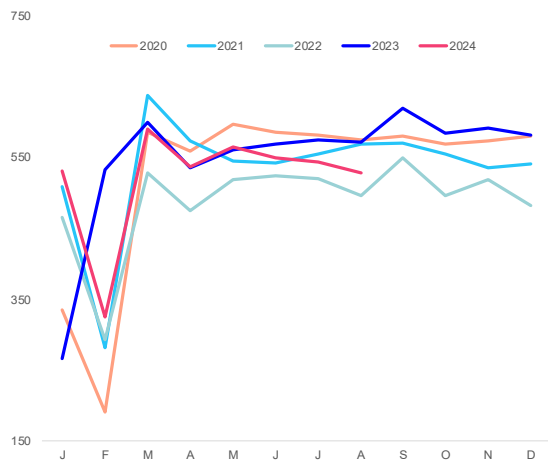
Trafigura



Even so, China zinc demand has softened on a YoY basis

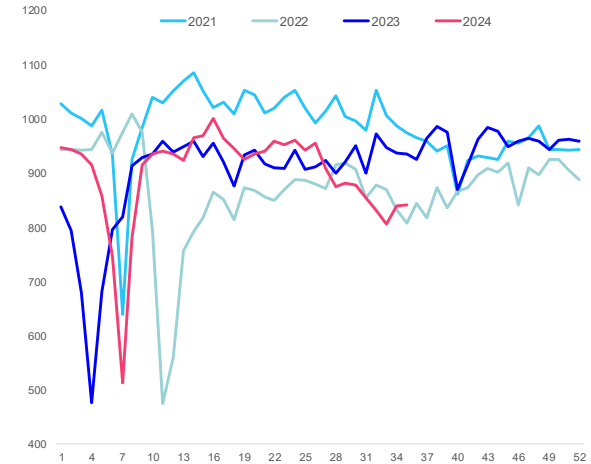
China Zinc Apparent Consumption

Stated in kt



China galv sheet apparent consumption

Stated in kt



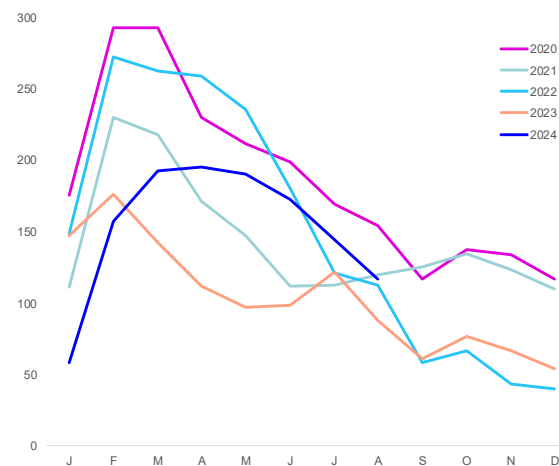
Trafigura



But stocks have started to drop while metal imports are still being attracted

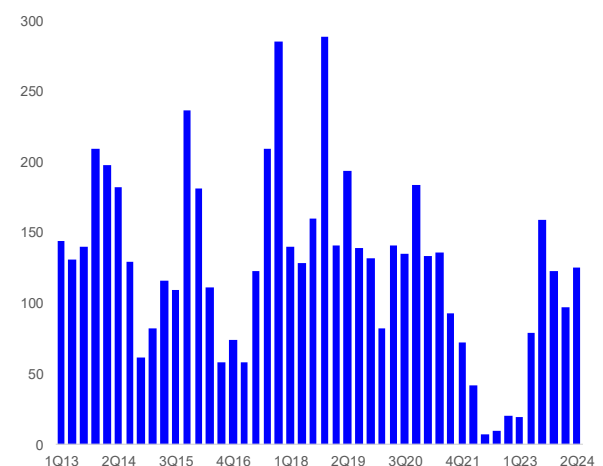
China refined zinc Social stocks

Stated in kt



China refined zinc imports

Stated in kt



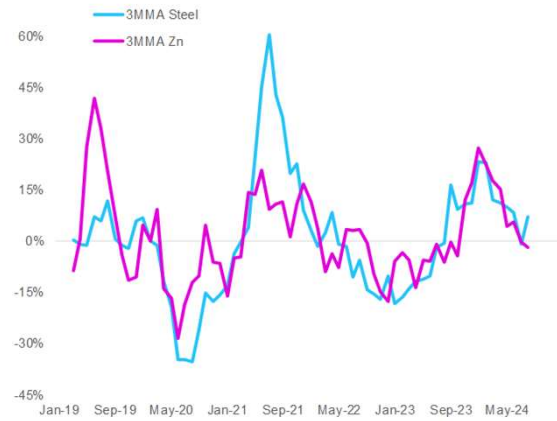
Trafigura



US demand has been quite strong over the last year due to large scale investment

US raw steel production vs USCA zinc apparent consumption

Stated in YoY%



Source: AISI, Trafigura Research

Construction spending in the manufacturing sector, US

Stated in \$ bn



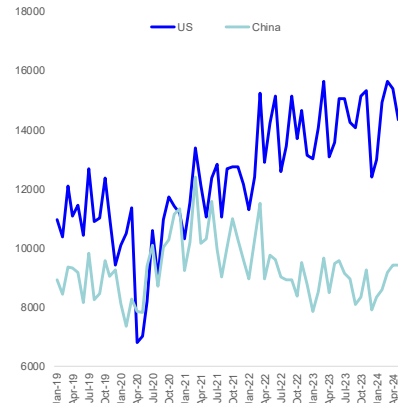
Trafigura



US is providing a huge buffer to weaker China import demand

German exports to US and China

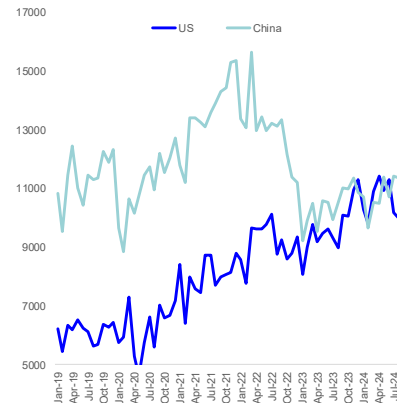
Stated in USDm



Source: IMF, Bloomberg, Trafigura Research

Korean exports to US and China

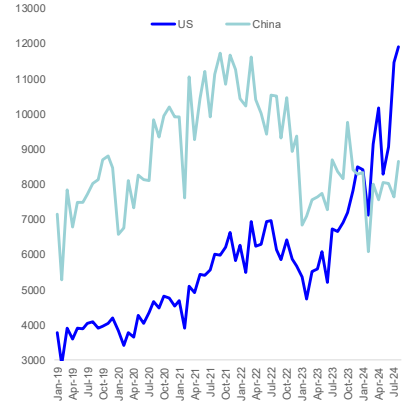
Stated in USDm



Source: IMF, Bloomberg, Trafigura Research

Taiwanese (PoC) exports to US and China

Stated in USDm



Source: IMF, Bloomberg, Trafigura Research

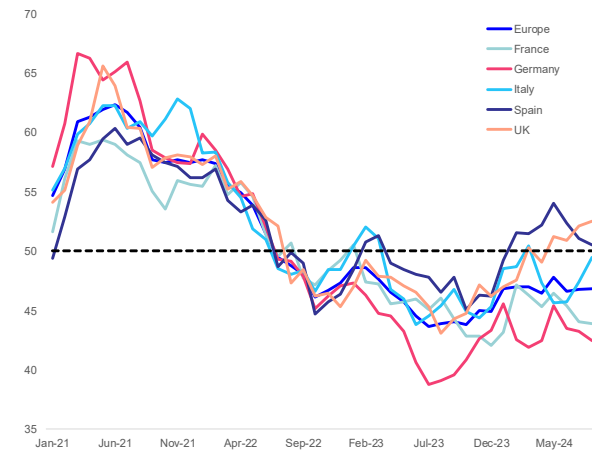
Trafigura



Europe demand has been very poor but maybe an end in sight?

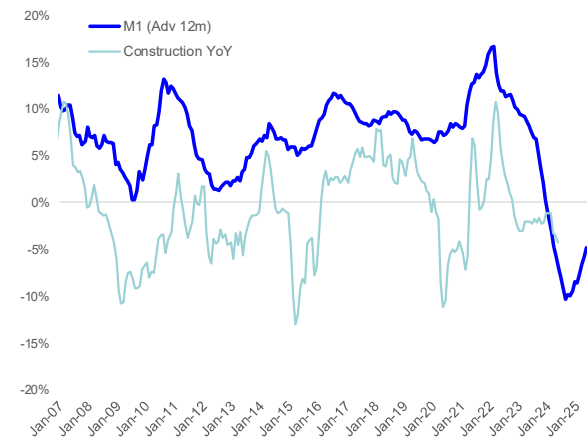
Manufacturing PMI, Europe

Stated as index > 50 expansion



Money supply and construction activity, Europe

Stated in % YoY



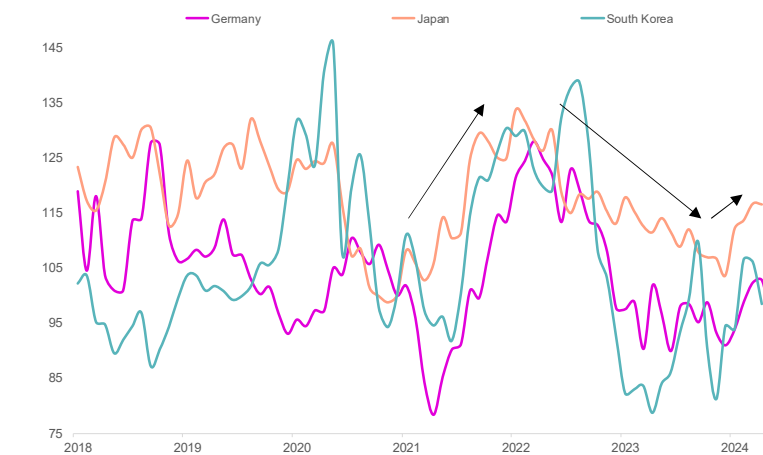
Trifigura



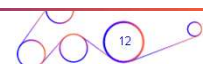
Destocking in RoW zinc value chain has weighed on demand the last 2 years

Coated sheet stocks

Stated as an index Dec.20 = 100



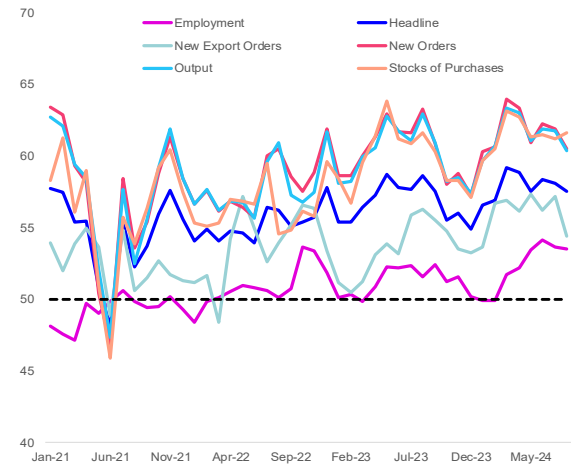
Trifigura



India clearly a bright spot

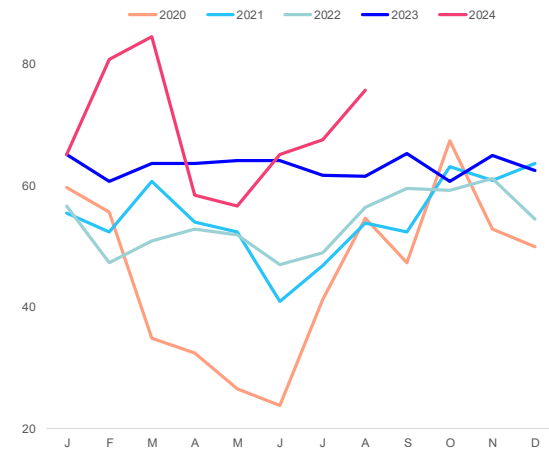
Manufacturing PMI, India

Stated as index > 50 expansion



India Zinc Apparent Consumption

Stated in kt



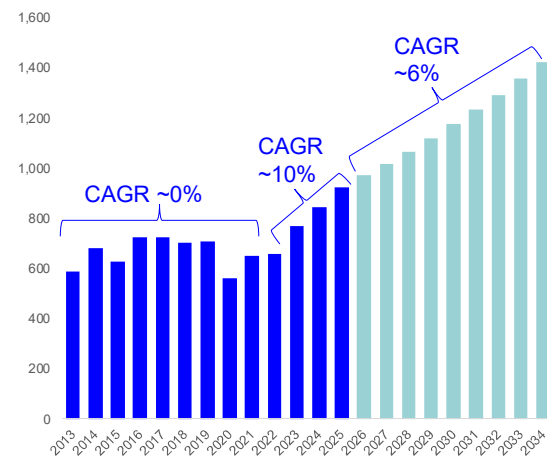
Trafigura



India now offering huge long term potential

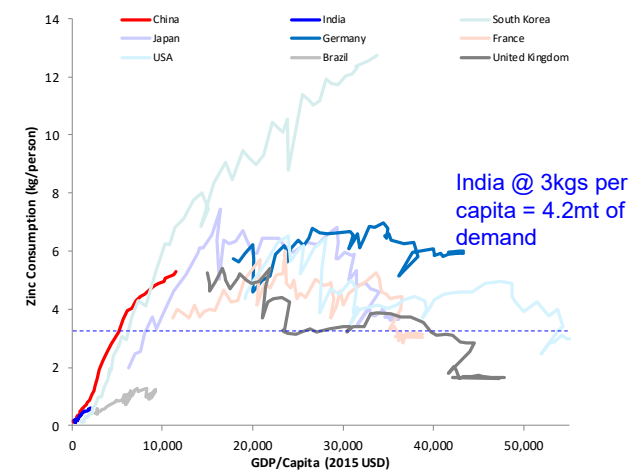
Zinc demand, India

Stated in k tonnes



Zinc consumption and GDP per capita

Stated in kgs/person and \$/person



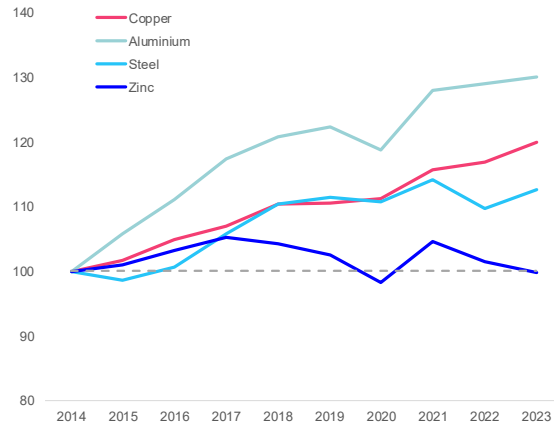
Trafigura



But there is a big risk to bullish views of forward demand, basis recent history

Industrial metals demand, Global

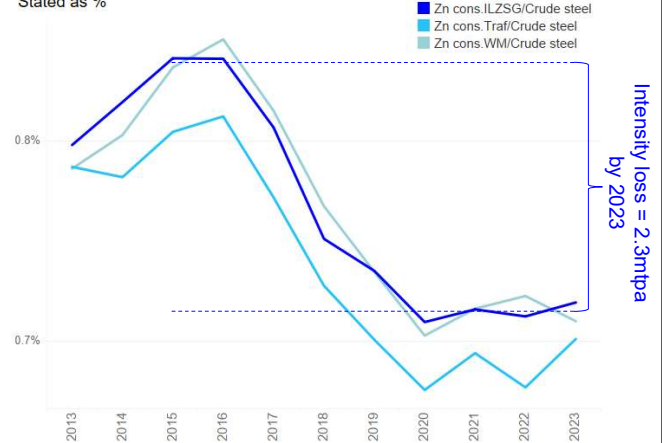
Stated as an index (2014 = 100)



Source: Woodmac, worldsteel, Trafigura Research

Zinc consumption / Steel production, Global

Stated as %



Source: WM, ILZSG, Trafigura Research

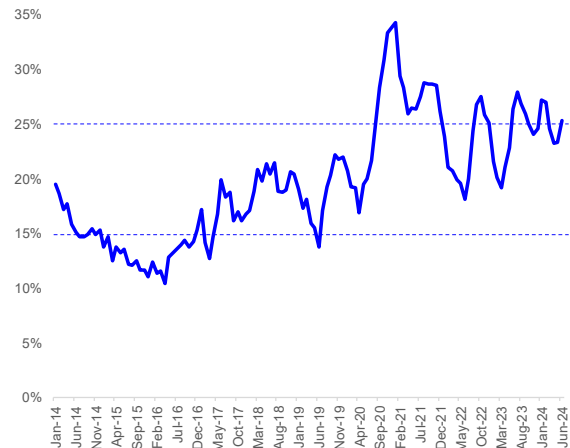
Trafigura



Substitution and thrifting appear to be real risks

Ratio of Zn/Al coated sheet exports to regular galv sheet exports, China

Stated as %



Source: Customs data, TDM, Trafigura Research

Zinc and aluminium prices and difference

Stated in \$/tonne



Source: LME, Trafigura Research

Trafigura



Zinc has been an underperformer the last couple of years, but needs longer term context

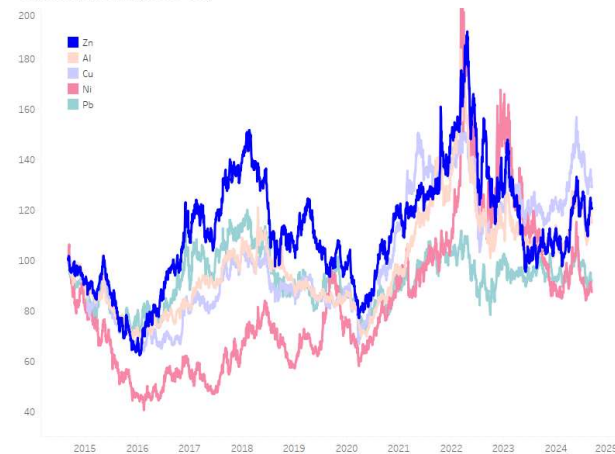
LME metals - 2 year price performance

Stated as an index (Sep 2022 = 100)

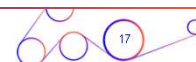


LME metals - 10 year price performance

Stated as an index (Sep 2014 = 100)



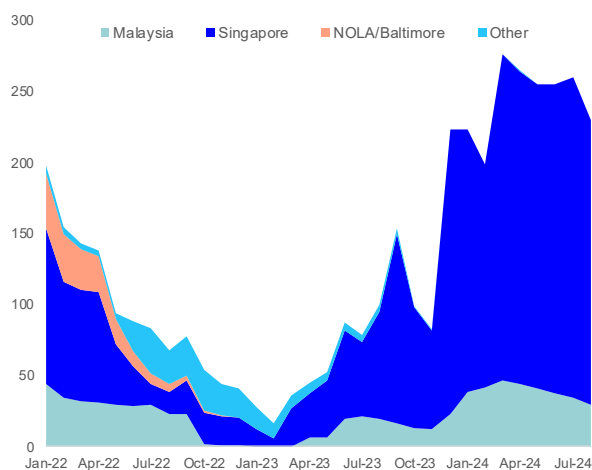
Trafigura



Despite recent LME stock increases, visible volumes remain close to historical lows

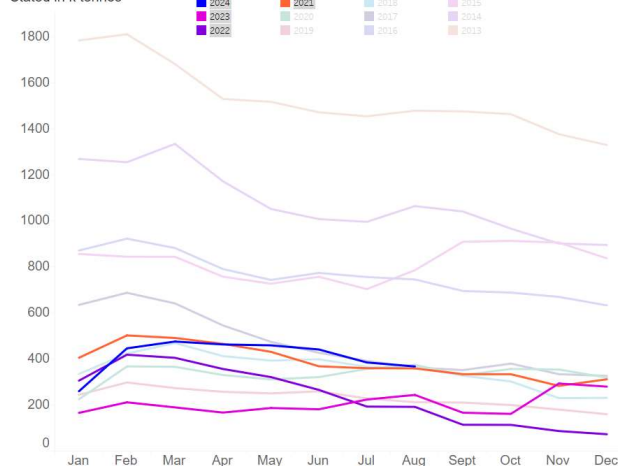
LME close stocks

Stated in kt



Global visible zinc stocks (China Social+LME close+Comex)

Stated in k tonnes



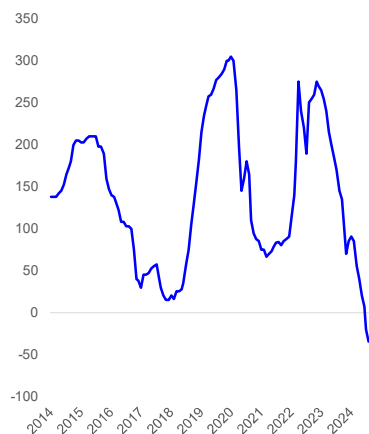
Trafigura



Tightness in zinc concentrates is unprecedented

Zinc concentrate treatment charges

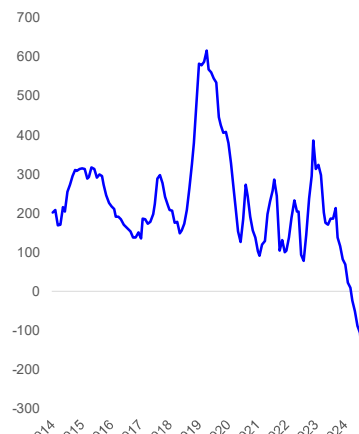
Stated in \$/tonne



Source: Woodmac, Trafigura Research

Zinc smelter profitability, China

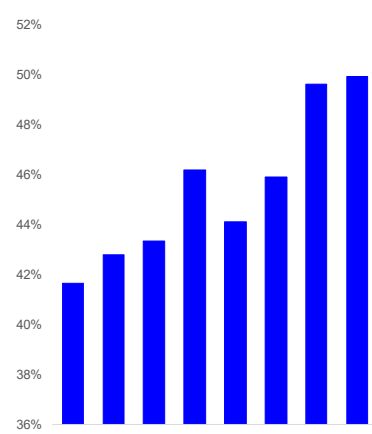
Stated in \$/tonne



Source: Woodmac, Trafigura Research

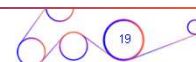
China share of zinc concentrate consumption

Stated as % of global mine supply



Source: Trafigura Research

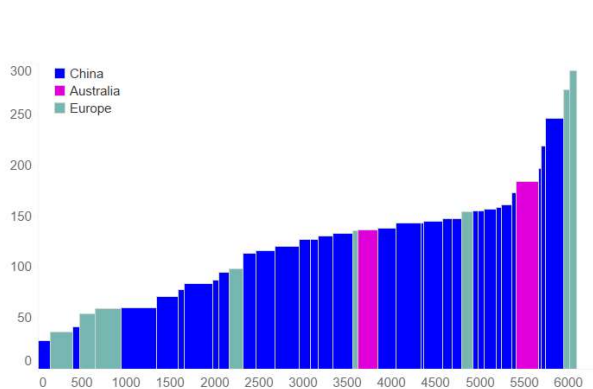
Trafigura



Current TCs are absurd and point to a risk of metal shortages just as demand could lift

Zinc smelter cost curve

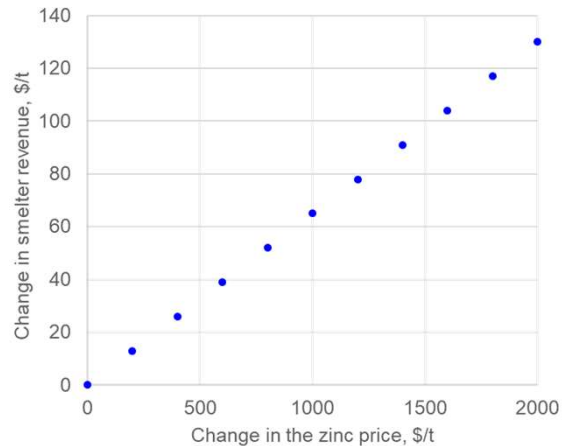
Stated in \$/t concentrate



Source: Woodmac, Trafigura Research

Impact of rising zinc prices on smelter profitability

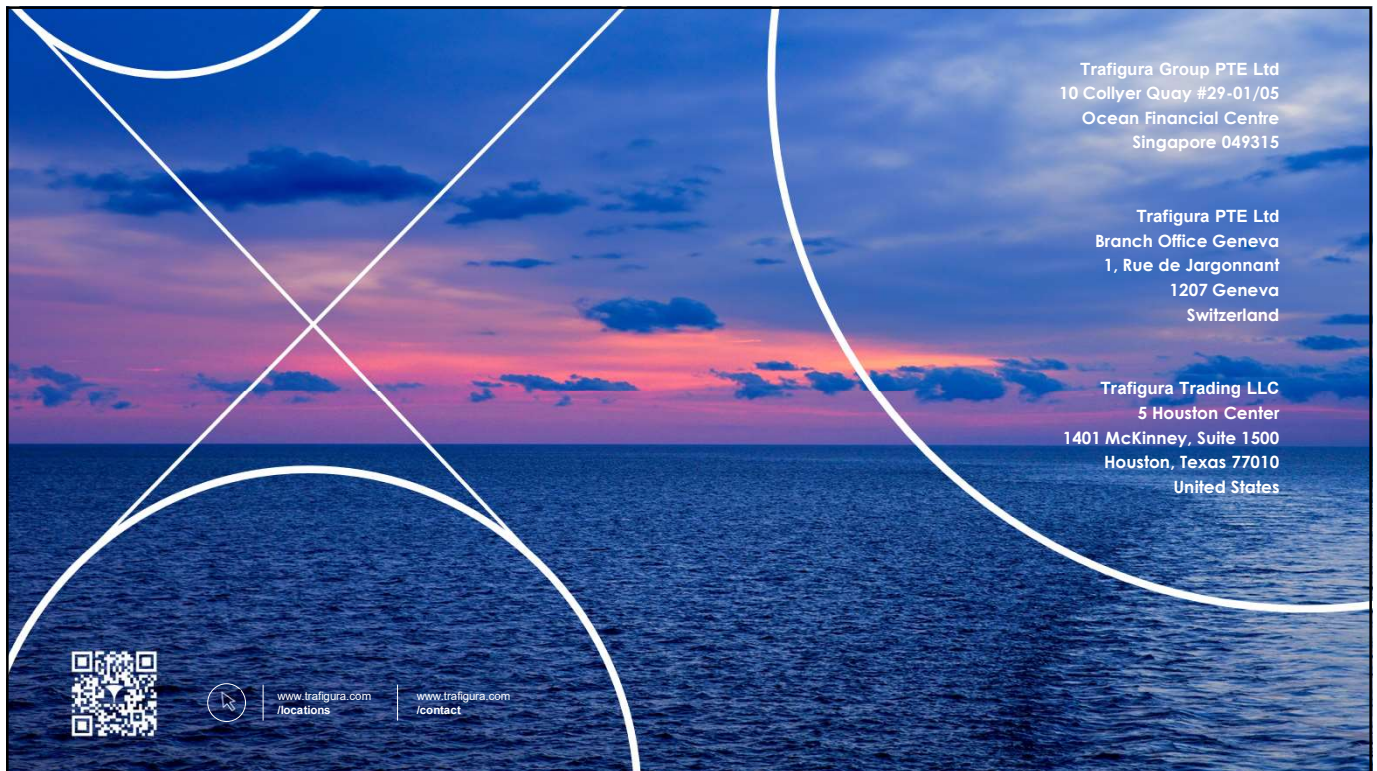
Stated in \$/t



Source: Woodmac, Trafigura Research

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