# COFACE ECONOMIC PUBLICATIONS

SEPTEMBER 2026

## FOCUS

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# Industrial metals: Back to the future (cycle)

Why the prices of non-ferrous metal are poised to surge over the next decade

## EXECUTIVE SUMMARY

"Dig, baby, dig!" could well become the motto of the coming decade, as critical metals move to the forefront of industrial competitiveness, technological leadership and economic sovereignty. While the rush for critical materials has brought a growing number of "-ium" elements into the spotlight, the global metals market tells a different story: **steel, aluminum, copper, zinc and nickel still account for around 95% of global metals demand by volume** and remain the backbone of industrial activity. Given their dominant role in both traditional industries and emerging low-carbon technologies, these five markets are the focus of this study.

Metals demand remains fundamentally driven by structural factors, foremost among them urbanization. Construction accounted for around 70% of global zinc demand in 2025, primarily through steel galvanization, and nearly 50% of steel consumption. In parallel, electrification has already absorbed close to three-quarters of global copper demand. Alongside these traditional drivers, the energy transition is a new and rapidly expanding source of demand. **Renewable power generation, electric vehicles, battery storage and grid expansion are increasingly underpinning demand** for aluminum, copper and nickel. As a result, these sectors are expected to account for a growing share of future metals consumption.

At the same time, supply-side constraints are becoming more binding. Geological limitations are only part of the story. Metals markets are also characterized by a **high concentration of mining, refining and processing activities**, while export restrictions and strategic trade measures have multiplied in recent years. China occupies a particularly dominant position, accounting for more than half of global production in steel, aluminum and refined copper. Aluminum, copper and nickel could face **supply deficits averaging around 10% of demand by 2035.**

Although recent price increases may appear largely cyclical, our analysis suggests that the pressures building across metal markets reflect deeper structural shifts affecting both demand and supply. Copper and nickel emerge as the most exposed to structural supply-demand imbalances, with demand growth increasingly constrained by supply limitations, whereas aluminum is likely to face a tightening market but with greater potential for supply-side adjustment. These forces are likely to lay the foundation for a **new bull market in metals markets over the coming decade.** By contrast, zinc and steel appear comparatively less vulnerable, benefiting from more balanced market fundamentals. As a result, future price trajectories will depend not only on the magnitude of demand growth, but also on the ability of each metal's supply chain to respond to emerging constraints.

## SOME OF THE THINGS YOU'LL LEARN...

China's share of global steel demand has more than tripled since 2000 p.2

Clean technologies could drive 35% of global copper and nickel demand by 2035 p.3

Over 1,000 trade restrictions now affect metals and minerals vs. 350 a decade ago p.4

Copper could face a near 20% supply deficit by 2035 p.6

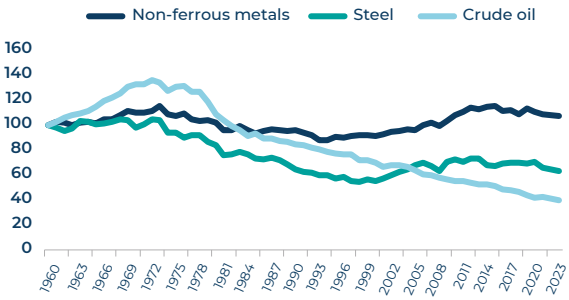
## Metal demand is expected to remain structurally robust over the long term

Demand for industrial metals has historically been driven by urbanization and industrialization. Since the Industrial Revolution, population growth, rising living standards and the mechanization of advanced economies have supported a steady increase in metals consumption. After 1945, the post-war reconstruction of Europe and the Cold War industrial built up further amplified demand. As a result, **global steel consumption more than quadrupled between 1950 and 1990**, while demand for non-ferrous metals such as aluminum, copper, nickel and zinc also expanded rapidly. To this day, **construction and infrastructure remain the dominant end-markets for most industrial metals (see table 1).**

Then, between 1980 and 2000, the metals intensity of global GDP, measured as the quantity of metal required to generate one unit of GDP, declined **(see figure 1).** This is consistent with the advanced economies shift toward more service-based economies. In other words, the increasing contribution of services to value added, combined with the eroding share of manufacturing, reduced the amount of metal required to generate economic output.

This trend reversed in the early 2000s with the emergence of China as a major manufacturing hub. Following its accession to the WTO in 2001, the country became the primary destination for global manufacturing offshoring while experiencing rapid urbanization[1]. At this time, Chinese metals consumption surged. By the onset of the Global Financial Crisis in 2008, China accounted for around 50% of global steel consumption, up from just 15% in 2000. Demand for non-ferrous metals followed a similar trajectory, driven by a sharp increase in aluminum consumption and the expansion of electricity and transport infrastructure. This episode also highlights **a key distinction between metals and energy commodities.** While China's rise did not reverse the long-term decline in oil intensity, it led to a marked rebound in global metal intensity. This reflected both the exceptionally metals-intensive nature of China's growth model, centered on manufacturing, infrastructure and urbanization, and the limited scope for substituting industrial metals in many end-use applications. Looking ahead, metal demand should continue to benefit from two major structural tailwinds.

**Figure 1: Global GDP intensity of selected resources**
*(1960 = 100)*




*Sources: LME, USGS, WorldBank, Coface*

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**Table 1 - Breakdown of selected metals main uses in 2025** *(in % of total consumption)*

| | USE 1 | USE 2 | USE 3 | USE 4 |
|---|---|---|---|---|
| **Aluminum** | **Construction and infrastructures (25%)** Light weight, durability and corrosion resistance; steel substitution in some applications. | **Transport (23%)** Automotive and aerospace applications. | **Electricity (12%)** Electrical equipment and distribution; copper substitute in some applications. | **Packaging (8%)** |
| **Copper** | **Construction and infrastructure (42%)** Electrical wiring and plumbing. | **Equipment (32%)** Electronics, machinery and refrigeration equipment. | **Transport (13%)** Automotive applications. | **Other uses (13 %)** Miscellaneous industrial uses, chemicals, jewellery alloys... |
| **Nickel** | **Stainless steel (66%)** Stainless steel production: corrosion resistance, toughness and formability. Stainless steel is prevalent in consumer goods, medical equipment & machinery | **Batteries (16%)** Nickel-rich lithium-ion chemistries, including NMC and NCA. | **Nickel alloys (8%)** High-performance alloysand superalloys; aerospace, turbines and chemical processing. | **Electroplating (4%)** Metal and plastic coatings; corrosion resistance and surface finish. |
| **Steel** | **Construction and infrastructure (52%)** Buildings and public works; beams and reinforcing bars. | **Machinery (16%)** Industrial and agricultural equipment. | **Transport (12%)** Vehicle bodies, engines and suspensions; advanced high-strength steel grades. | **Fabricated metal products (10%)** Manufactured metal goods and components. |
| **Zinc** | **Steel galvanizing (60%)** Corrosion protection, especially in construction. Galvanized steel is mostly used in construction. | **Chemical compounds (11%)** Fertilizers. | **Brass and bronze (9%)** Alloy production. | **Other alloys (15%)** Die-casting alloys, including zamak. |

*Sources: WorldSteel, ICSG, IAI, INSG, IZA, IEA, Coface*

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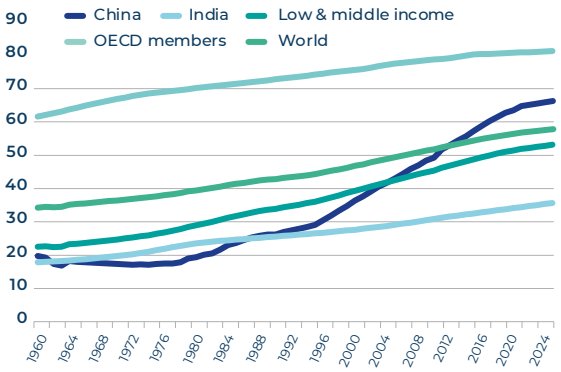
This trend reversed in the early 2000s with the emergence of China as a major manufacturing hub. Following its accession to the WTO in 2001, the country became the primary destination for global manufacturing offshoring while experiencing rapid urbanization[1]. At this time, Chinese metals consumption surged. By the onset of the Global Financial Crisis in 2008, China accounted for around 50% of global steel consumption, up from just 15% in 2000. Demand for non-ferrous metals followed a similar trajectory, driven by a sharp increase in aluminum consumption and the expansion of electricity and transport infrastructure. This episode also highlights a key distinction between metals and energy commodities. While China's rise did not reverse the long-term decline in oil intensity, it led to a marked rebound in global metal intensity. This reflected both the exceptionally metals-intensive nature of China's growth model, centered on manufacturing, infrastructure and urbanization, and the limited scope for substituting industrial metals in many end-use applications.

Looking ahead, metal demand should continue to benefit from two major structural tailwinds.

**First, metal consumption will be backed by structural demand linked to economic growth and urbanization.** Rising incomes and urban population growth across emerging economies remain key sources of demand. According to the World Bank, the global population is expected to approach 10 billion by 2050, nearly 2 billion more than today. **Population growth will be concentrated in emerging and low-income economies,** which are also expected to be the largest contributors to global GDP growth over the coming decades. **With approximately 60% of the emerging economies' population currently living in urban areas, considerable long-term catch-up potential remains against the OECD benchmark of roughly 80% (see figure 2)**. Urbanization-driven electrification is also set to boost metals demand, as evidenced by China's rapid rise in consumption during the 2000s **(see figure 3)**.

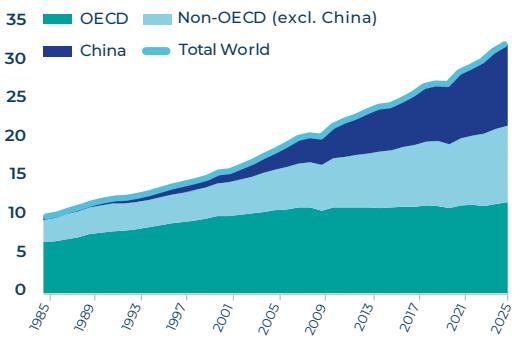
Second, consumption from emerging end-markets is growing rapidly, primarily **driven by energy transition and the digital boom**. Renewable power, electric vehicles (EV), battery storage, data centers and grid infrastructure are all significantly more metal-intensive than the technologies they replace. Given these new sources of demand, metal consumption is expected to grow rather than merely remain stable. According to the IEA's Announced Pledge Scenario (APS), assuming that all announced climate and energy policy commitments are fully delivered, **clean energy technologies alone could account for approximately 35% of global copper and nickel demand by 2035 (see figures 4a, b - next page).**

**Figure 2: Urban population in selected areas** *(in % of population)*




*Sources: LME, USGS, WorldBank, Coface*

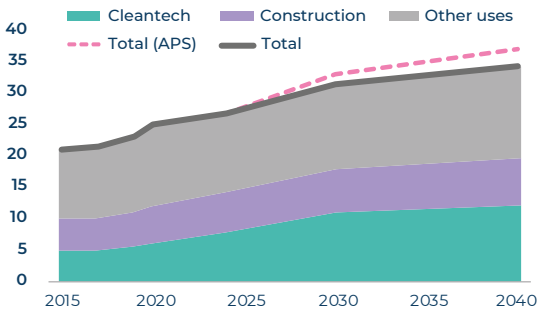
**Figure 3: Electricity generation in selected areas** *(in thousand of Terawatt-hours)*




*Sources: LME, USGS, WorldBank, Coface*

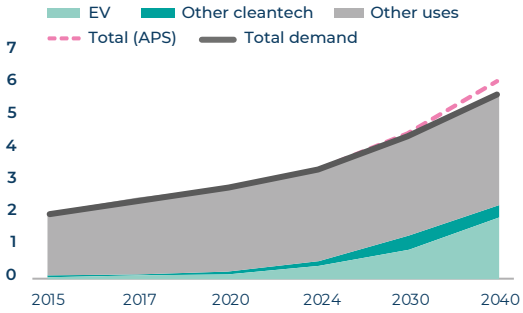
1 - The progressive easing of hukou restrictions, supporting large-scale rural-to-urban migration.

**Figure 4a: Copper demand outlook** *(in million tons)*




*APS: IEA Announced Pledge Scenario*

**Figure 4b: Nickel demand outlook** *(in million tons)*

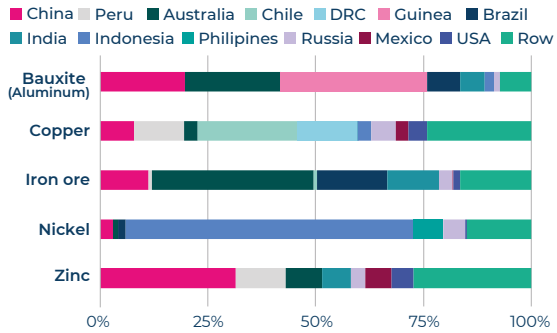



*APS: IEA Announced Pledge Scenario · Sources: IEA, Coface*

## Metal supply is becoming less elastic as multiple constraints intensify

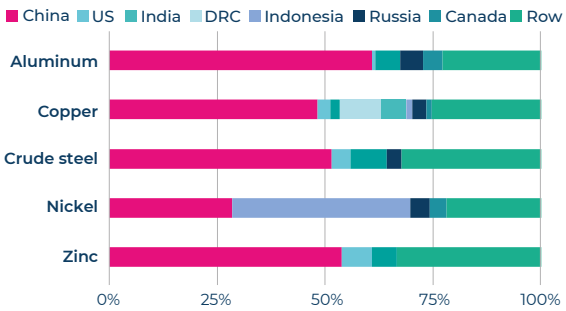
**In the short term, mining supply is experiencing increasing constraints, and this trend is expected to worsen in the coming years.** Mining projects deliver structurally low returns on investment (ROI), marked by high volatility and often falling below the cost of capital over the long run. This weakness reflects, first, the extremely low probability of success at the exploration stage (fewer than 1% of projects result in mine), combined with the very long lead times between exploration, final investment decision and start-up, increasing exposure to the cycle. These dynamics tend to intensify as geological extraction conditions deteriorate structurally, as shown below. They are compounded by recurrent cost overruns – particularly in periods of geopolitical tension – and by pronounced price cyclicality, which encourages investment at the top of the cycle but often leads to production at the bottom. This results in a low median ROI, with value creation concentrated in a limited number of projects or time windows. This has led, since the last supply deficit in the mid-2010s, to greater capital discipline among large mining groups, favoring short-term returns over volume expansion. For instance, Codelco, one of the world's top three copper producers, has cut its output by roughly 20% since 2021, even as its profits have continued to rise. This structural weakness constrains future supply: it is precisely the poor returns on new projects that limit future output, even in the face of a credible and sustained demand expansion, as large-scale capital deployment remains curtailed by uncertain returns and persistent geological, political and regulatory risks.At the same time, mining production remains highly concentrated across countries, and **refining capacity is even more tightly clustered.** For most major metals – including iron ore, copper, nickel, zinc and bauxite – a limited number of countries account for the bulk of global output **(see figure 5a).** Australia and Brazil produce 55 % of global iron ore, and Indonesia accounts for 67% of nickel ore. Iron ore supply continues to expand, illustrated by the opening of the Simandou mine in Guinea at end 2025, whose annual output could reach 90 million tons of ore (4% of global production) by 2030. Downstream, **China occupies a central position in refining, holding over 50% of global capacity for several selected metals (see figure 5b)**. This concentration limits short term geographic substitution and increases the sensitivity of metal markets to local disruptions, whether linked to mine outage, political decisions **(see Box 1)**, logistical bottlenecks or industrial policy shifts. Nickel stands out as particularly exposed to geographical concentration of production capacity – particularly in mining – with Indonesia alone accounting for more than two thirds of global output. The effective tightening of supply also reflects uncertain exploration outcomes, rising lead times for new mining projects, about 15 to 20 years, weak incentives to expand mining capacity and the fact that **value capture is often greater downstream in refining and processing than in extraction itself.** Taken together, these trends point to a structural – rather than merely cyclical – compression of ores supply. In other words, even in the absence of major short-term shocks, **the ability of supply to adjust rapidly to sustained demand will continue to diminish over the long run.**

**Figure 5a: Global output of mining ores** *(in % of global production)*




*Sources: USGS, Coface*

**Figure 5b: Global output of refined metals** *(in % of global production)*




*Sources: USGS, Coface*

**BOX 1 - TRADE RESTRICTIONS**

The rapid and widespread tightening of trade restrictions on minerals has become a major structural constraint on global supply. By end 2025, according to Global Trade Alert's tracker of global import and export restrictions on critical minerals, 1,138 measures were in force, up from 357 a decade earlier, with a sharp acceleration since 2021 and a shift towards more coercive instruments, marked by a declining share of tariff measures (duties and taxes) and a rise in quotas and physical import/export restrictions.

The situation is further compounded by the introduction of export control regimes and upgrading strategies by some producing countries, such as the Democratic Republic of Congo, which has recently announced restrictions on cobalt exports.

This trend is occurring against a backdrop of deteriorating global trade conditions, particularly between Western economies and China, which accounts for around 70% of refining capacity for 19 of the 20 key minerals. China is leveraging this position as a geoeconomic weapon, given the high dependency of advanced economies. Export restrictions also support its domestic manufacturing base, helping it maintain an edge in the race for next generation technologies. Tariff measures introduced by the second Trump administration have further reinforced these dynamics over the past year.

2 - LP. Bihouix,2010.

Over a longer horizon, extracting conditions themselves could also become less favorable. The mineralogical barrier theory[2] suggests that the extractive industry will face mounting physical constraints, owing to the relative scarcity of high grade deposits and declining ore grades. According to this theory, the mineralogical barrier marks a virtual limit beyond which metals would be present only in very low concentrations in Earth's crust, making extraction much more difficult and costly. Technological progress and new deposit discoveries may alleviate part of this geological pressure on resources. However, they are unlikely to fully offset the structural constraints associated with declining ore quality and rising extraction costs.

## A widening supply-demand imbalance is emerging across non-ferrous metal markets

The outlook for aluminum, copper and nickel points to progressively tighter market balances. Demand is set to benefit from the **expansion of low-carbon technologies, while supply growth is likely to remain constrained** by longer development timelines and declining supply responsiveness. The risk of persistent deficits therefore warrants closer attention. By contrast, and as we have seen, **steel and zinc are less critical than other metals,** given their more limited exposure to new demand drivers and a stronger supply outlook. This is especially true for steel, where substantial overcapacity and expanding iron ore supply should help contain market tightness.

To quantify future supply-demand imbalances and assess the impact of the energy transition on metals markets, we compare projected supply trends with two alternative demand scenarios **(see figures 6a, b, c, d, e).**

**SCENARIO 1** *(baseline scenario)*

extrapolates the observed demand growth trend over the past decade (2015-2025), assuming that demand continues to expand at the same average annual rate through 2035.

**SCENARIO 2** *(Net Zero Emissions scenario (NZE))*

for energy transition-related metals only: aluminum, copper and nickel) is based on demand projections from the IEA and International Aluminum Institute (IAI). This scenario captures the additional metals demand generated by the deployment of low-carbon technologies required to achieve global decarbonization targets.

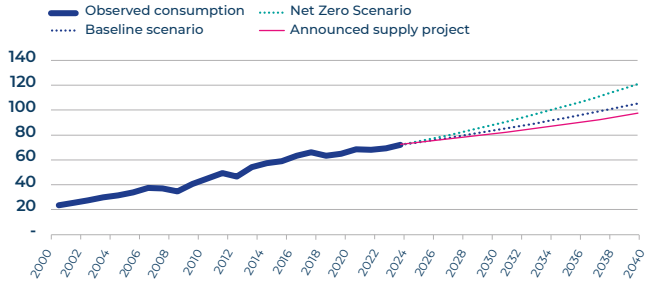
**FOR STEEL AND ZINC,** projected market balances remain broadly manageable over the coming decade. Although both will remain essential to the global economy, they are unlikely to benefit to the same extent from emerging sources of demand. Growth prospects-related to energy transition are structurally less favorable than for aluminum, copper and nickel. As a result, demand growth is expected to remain broadly in line with, or even below, in the case of steel, projected supply growth, suggesting limited risks of structural shortages and price increase under current market conditions **(see figures 6d and e)**. While temporary imbalances may still emerge, our projections do not indicate a material deterioration in market fundamentals over the medium term.

The picture differs markedly for energy transition-related metals. **Across aluminum, copper and nickel,** demand growth is projected to outpace supply growth under both scenarios. Over the next decade, supply is expected to increase by only 0.4% per year for aluminum, 1.0% for copper and 1.5% for nickel. By comparison, demand growth reaches approximately 1.8% annually for all three metals under the baseline scenario and accelerates further under the NZE scenario to around 2.2% for aluminum and copper and 4.5% for nickel.

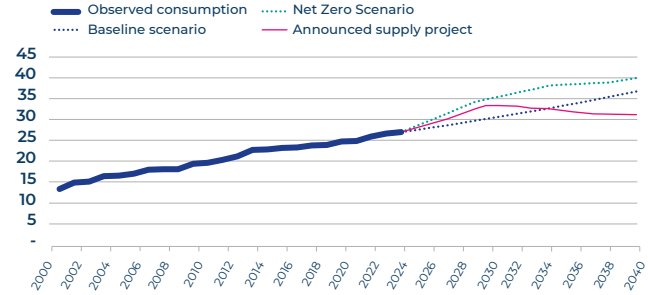
**Figure 6: Supply and demand forecast for selected metals**

*Sources: USGS, WorldSteel, ICSG, IAI, INSG, IZA, IEA, Coface*

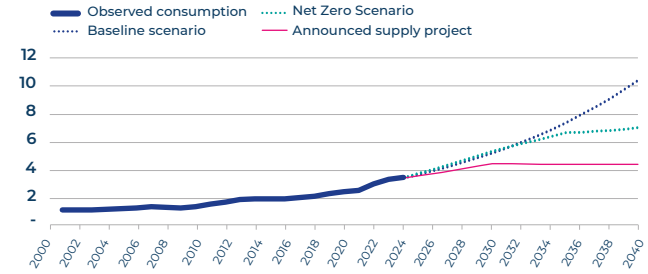
**6a** **Market forecast - Aluminum** *(in million tons)*



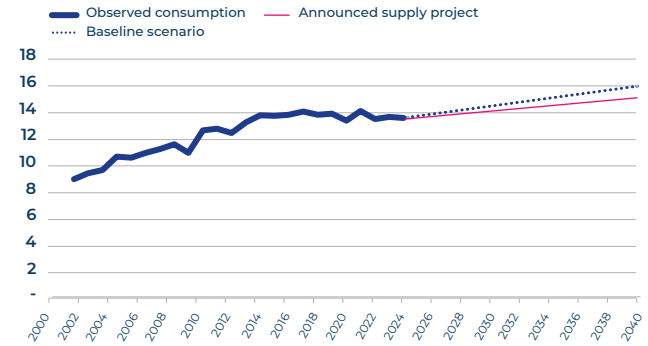

**6b** **Market forecast - Copper** *(in million tons)*



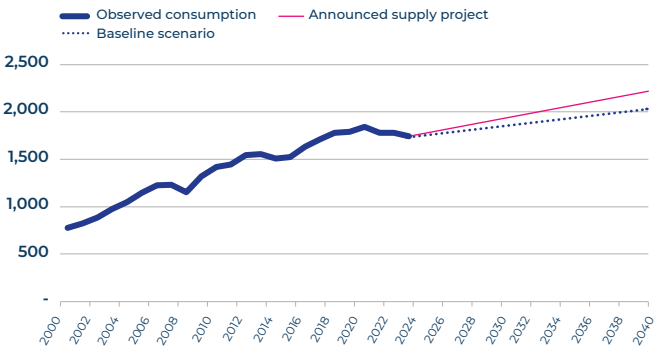

**6c** **Market forecast - Nickel** *(in million tons)*




**6d** **Market forecast - Zinc** *(in million tons)*




**6e** **Market forecast - Steel** *(in million tons)*



As a result, **market balances are expected to deteriorate progressively over the coming decade.** Even without additional decarbonization efforts, supply growth appears insufficient to keep pace with demand. The energy transition therefore acts as a powerful amplifier of already existing structural tensions, particularly for nickel and copper, where low-carbon technologies significantly increase future metals requirements **(see figures 6a, b, c - previous page).**

**ALUMINUM** appears vulnerable to supply deficits despite a relatively limited incremental demand effect from the NZE scenario **(see figure 6a - previous page).** The difference between our baseline and NZE demand trend remains relatively small, suggesting that **decarbonization is not the primary driver of long-term market tightness.** By 2035, our projections indicate a primary aluminum deficit ranging from 5 to 15 million tons, equivalent to approximately **10% of projected demand**. This result should however be interpreted with caution. Aluminum is not constrained by geological scarcity, as global bauxite resources remain abundant, but ores supply will remain vulnerable to trade restrictions. Instead, future supply growth will depend primarily on the availability of low-cost electricity and on sustained investment in alumina refining and smelting capacity. Consequently, **the projected deficit reflects industrial and energy constraints rather than resource scarcity.**

**COPPER** market fundamentals are expected to become increasingly challenging over the long term as supply growth faces growing geological constraints **(see figure 6b - previous page)**. In the near term, market balances should remain relatively manageable, supported by refining capacity additions, particularly in China. **Beyond 2030, however, demand growth is projected to exceed supply growth more significantly**, resulting in a rapid tightening of market conditions. Our scenarios point to a refined copper deficit between 1.5 and 6.5 million tons by 2035, corresponding to **approximately 11% of projected demand**. Under the NZE scenario, the deficit could rise to as much as 17% of demand, making copper one of the metals most exposed to structural shortages during the energy transition. Beyond decarbonization, additional sources of demand are likely to reinforce these pressures. The rapid expansion of data centers is expected to provide further support to copper consumption, increasing the risk of sustained market tightness over the next decade.

**NICKEL** stands out as **the metal most leveraged to the net-zero transition**, displaying the strongest demand growth profile among the three metals **(see figure 6c - previous page)**. Demand is already broadly consistent with the requirements of the NZE trend, reflecting **its key role in battery manufacturing and electric mobility**. Under NZE scenario, the refined nickel market could face a supply deficit of around 6.5 Mt by 2035, **equivalent to roughly 35% of projected demand.** This represents by far the largest imbalance among the metals examined.

## The combination of structurally strong demand and limited supply responsiveness points to a sustained period of upward pressure on metal prices

At the macro level, non-ferrous metal prices already suggest mounting supply-demand pressures **(see figure 7).** As observed during the post-war expansion and the 2000s commodity super cycle, persistent price increases suggest that structural forces are becoming the dominant driver of market dynamics. First, the decomposition of aluminum, copper and nickel prices since 2008 using a SVAR model **(see box 2)** indicates that while demand factors account for most of the price increase during periods of rising prices, they generally explain a smaller share of the subsequent correction **(see figures 8a, b, c - next page).**

**BOX 2 - SVAR MODEL**

We use a sign-restricted structural VAR (SVAR) to decompose monthly real price movements for aluminum, copper and nickel since 2008 into three components: a supply factor, a demand factor and a residual shock (not shown).

The model relies on global production data from the LME, USGS and specialized institutions (ILZSG, ICSG, IAI), on inventory data (LME), and on the global industrial production index proposed by Baumeister and Hamilton (2019).

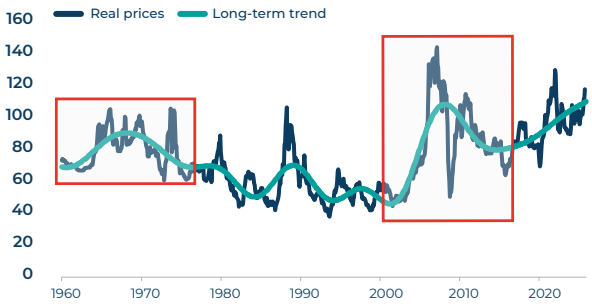
Supply and demand factors together explain about two-thirds of observed price movements over the sample. In the charts, the "supply" and "demand" bars show the sign and typical magnitude of each factor's monthly contribution to price changes. These contributions are estimated separately and are therefore not strictly additive.

The lines show cumulative contributions to the log of the real price, measured relative to a reference date. A positive (negative) bar indicates that the factor contributed positively (negatively) to the monthly price change.

Although periods of weaker demand can contribute to lower prices, as seen between 2017 and 2022, the model suggests that supply-side adjustments have played the dominant role in bringing prices back down over complete market cycles. This is consistent with new mining and smelting capacity gradually coming online after a lag. The 2008-2016 cycle provides the clearest illustration of this mechanism. However, this additional supply reached the market only after global growth had begun to slow, contributing to the prolonged surplus and depressed prices observed between 2011 and 2014, even 2016 for copper **(see figure 8b - next page).**

Secondly, our analysis corroborates that long-lasting price increases typically arise from the **simultaneous contribution of demand and supply factors**. Strong demand alone is often insufficient to sustain high prices unless supply deteriorates at the same time. The aluminum and copper markets since 2024 provide a good illustration of this mechanism **(Figures 8-a, 8-b - next page)**, with resilient demand interacting with limited supply growth to support prices over an extended period. This combination of demand expansion and delayed supply adjustment is a characteristic feature of long-term commodity cycles.

**Figure 7: Index of non-ferrous metal prices** *(Manufacturing Unit Value index deflated, 1960-2026, 2010 = 100)*

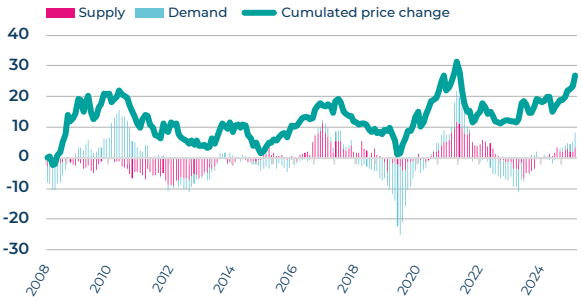



*Real price index of major non ferrous industrial metals (copper, nickel, aluminum and zinc), January 1960 to January 2026. Prices are deflated using the World Bank's Manufacturing Unit Value (MUV) index. The index is weighted by each metal's price and production volume. The long-term trend is an asymmetric Christiano-Fitzgerald filter.*

*Sources: LME, USGS, ILZSG, ICSG, IAI, Coface*

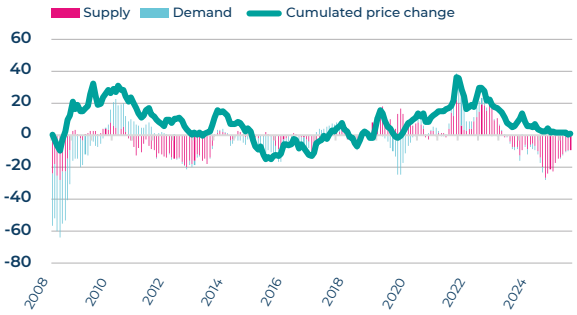
Finally, our results support the idea that **when production is highly concentrated, supply-side developments become the dominant driver of prices** Nickel provides the clearest recent example of this mechanism, as the rapid expansion of Indonesian output since 2016 reshaped global market conditions by fueling abundant supply. This recently exerted significant downward pressure on prices as shown by **figure 8-c**.

**Figure 8a: Cumulative contributions to primary aluminum prices** *(%, 100*Δlog)*



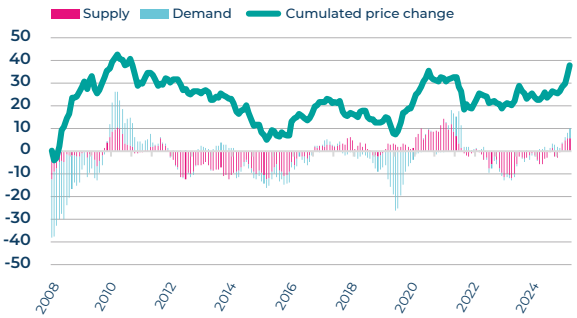

*Sources : ICSG, IAI, INSG, LME, Coface*

**Figure 8b: Cumulative contributions to primary copper prices** *(%, 100*Δlog)*




*Sources : ICSG, IAI, INSG, LME, Coface*

**Figure 8c: Cumulative contributions to primary nickel prices** *(%, 100*Δlog)*




*Sources : ICSG, IAI, INSG, LME, Coface*

If traditional demand drivers continue to support metals consumption, notably in emerging and less developed economies, the energy transition-related demand become increasingly dominant for metals. Renewable power generation, battery storage, electric mobility are set to account for a growing share of future consumption. As most non-ferrous metals will face a significant supply deficit by 2035, we believe a structural imbalance is growing. This will fuel a long-lasting upward price cycle for non-ferrous metals such as aluminum, copper and nickel **(see Table 2)**.

Of the five metals covered in this study, copper appears particularly vulnerable to persistent supply-demand imbalances, as rapidly growing demand collides with mounting supply constraints. Overall, we expect both copper and nickel prices to roughly double over the next decade. Aluminum, while benefiting less directly from energy-transition demand, should still face a tightening market environment and see prices sharply increase. However, unlike copper and nickel, aluminum benefits from a less vulnerable ore supply chain and a more diversified base of miners and refiners, reducing the risk of extreme price increases. By contrast, zinc and steel are likely to capture only a limited share of demand growth from new energy-transition applications.

Nevertheless, traditional end-markets should continue to partially support consumption, while supply-side conditions remain less constrained than copper, nickel, and aluminum. As a result, zinc and steel prices are expected to rise more moderately. For downstream manufacturers, the challenge will increasingly extend beyond managing input costs. As markets tighten, securing access to the most critical metal inputs, improving recycling rates and reducing material intensity may become key determinants of industrial competitiveness. We summarize our analysis in the comparative overview below. The color scale illustrates the relative outlook for each metal by 2035. In both the supply-demand and price assessments, darker shades indicate a tighter market, characterized by larger projected supply deficits and stronger upward price pressure. Lighter and greener shades indicate more balanced market conditions, lower supply risks, and more moderate price expectations.

The supply-demand and price risk assessments do not necessarily coincide, as they reflect the underlying drivers of future market imbalances. When vulnerabilities stem from geological resource constraints and limitations in the availability of raw materials, higher prices alone may not be sufficient to unlock additional supply, resulting in sustained market tightness and stronger long-term price pressure (e.g., copper). By contrast, when supply constraints are primarily driven by production costs or investment incentives, rising prices can stimulate additional production capacity and accelerate market rebalancing (e.g., aluminum). Consequently, metals facing similar supply-demand gaps may exhibit different price risk profiles depending on the nature of the constraints affecting supply.

**Table 2: Comparative overview of the selected metals in 2035**

| Metals | Supply outlook (in million tons) | Demand outlook (in million tons) | | Supply demand assessment | Price assessment |
|---|---|---|---|---|---|
| | | Baseline | Net Zero | | |
| Aluminum | 88.8 | 93.7 | 103.1 | | |
| Copper | 31.9 | 33.4 | 38.3 | | |
| Nickel | 4.4 | 7.4 | 6.7 | | |
| Steel | 2,053 | 1,944 | – | | |
| Zinc | 14.6 | 15.1 | – | | |

*Sources: WorldSteel, ICSG, IAI, INSG, IZA, IEA, Coface*

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