Fastmarkets

Margins on the line

CBAM insights for metals suppliers and buyers

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Foreword

The Carbon Border Adjustment Mechanism is reshaping the economics of trade before it has even come into force. From January 2026, every tonne of carbon embedded in steel, aluminium, cement, fertilizer, electricity, and hydrogen will face a price when it crosses into the European Union. What was once a policy concept will become a real cost structure, embedded in margins, competitiveness, and supply strategy.

This marks a profound reordering of global trade incentives. Importers are assessing exposure; producers are revaluing assets given their emissions footprint. Carbon intensity, long treated as a disclosure metric, is becoming a determinant of market access and profitability. The transition from policy ambition to financial reality is underway.

Regulation continues to evolve, but its intent is unmistakable. The European Council's 2025 decision to streamline compliance for smaller importers represented not a retreat, but a win for the pragmatism needed to safeguard the long-term future of the policy. While crucial decisions remain outstanding, it will be essential that pragmatism continues to carry the day, to allow CBAM to be refined for execution, not diluted for convenience.

For metals supply chains, the implications are structural and enduring. The withdrawal of free allowances under the EU Emissions Trading System (EU ETS) will expose the full cost of emissions and reorder competitive hierarchies. Fastmarkets data shows that more than half of EU steel and aluminium imports originate from countries without carbon pricing.

At an EUA price of €90 in 2026, importers of high-intensity steel could face additional costs of €40–€60 per tonne, while aluminium importers may collectively shoulder liabilities nearing €500 million.

By 2034, when free allowances are fully phased out, carbon will represent a material share of import value across most CBAM-covered goods. This will not simply influence trade flows - it will define them.

Cost competitiveness will hinge on carbon efficiency alongside drivers like labor, energy, or logistics.

The adjustment is not prospective; it is present. For anyone doing business with the EU carbon now sits on the balance sheet. It informs pricing, procurement, and portfolio strategy. Companies that grasp its magnitude are not pursuing compliance - they are refining their strategies and shifting capital in prospect.

Fastmarkets is working with metals and materials supply chains to clarify the magnitude of these costs and identify actionable strategies to manage them. Our analysis combines carbon price modeling, policy insight, and market behavior to help businesses translate regulatory risk into insights that drive decision making.

The commencement of CBAM liabilities marks the beginning of a process that will institutionalize carbon as a key driver of risk and opportunities in metals and manufacturing supply chains. As other countries look to use trade tools for climate purposes, carbon will be a key competitiveness lever for producers, traders and end users alike.

> "The definitive phase of CBAM will reshape the global metals trade. Carbon intensity, not geography or labor cost, will decide who wins in Europe's market from 2026 onward.

Stuart Evans
Chief Analytics Officer,
Fastmarkets

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1. CBAM

Understanding the mechanism

1.1 CBAM and EU ETS dynamics

The Carbon Border Adjustment Mechanism (CBAM) is the European Union's tool to equalize carbon costs between domestic industry and foreign suppliers. It applies the EU carbon price to imports of emissions-intensive goods, aiming to prevent carbon leakage as the bloc tightens its Emissions Trading System (ETS).

The Carbon Border Adjustment Mechanism (CBAM) imposes a carbon charge on imports of steel, aluminium, cement, fertilizers, electricity and hydrogen, based on embedded emissions. This charge reflects the market value of European Union Allowances (EUAs), each granting the right to emit one tonne of carbon dioxide equivalent.

From January 2026, importers must purchase and surrender CBAM certificates in line with reported emissions. This obligation will phase in as free allowances under the EU ETS are gradually withdrawn, fully reflecting carbon costs by 2034.

During the transitional period (October 2023 to December 2025), importers are required to report emissions without payment. In 2026, free allocations will still cover 97.5 percent of benchmark emissions but will decline annually. The burden of carbon costs will increase for both domestic producers and foreign exporters.

Certificate volumes will be determined by product-specific emissions benchmarks, expected to be published in early 2026. These are expected to reflect the performance of the EU's top decile of installations, in line with the EU ETS benchmarks. Until then, exposure modeling relies on provisional data, complicating procurement, pricing and risk management strategies.

CBAM marks a structural change in the economics of European trade. In emissions-intensive sectors like steel and aluminium, carbon intensity will become a core driver of cost competitiveness and market access. Importers face material exposure to carbon price volatility, and must now integrate CBAM costs into contracts, sourcing, and strategic planning.

Exhibit 1
Timeline for CBAM steel imports in early 2026

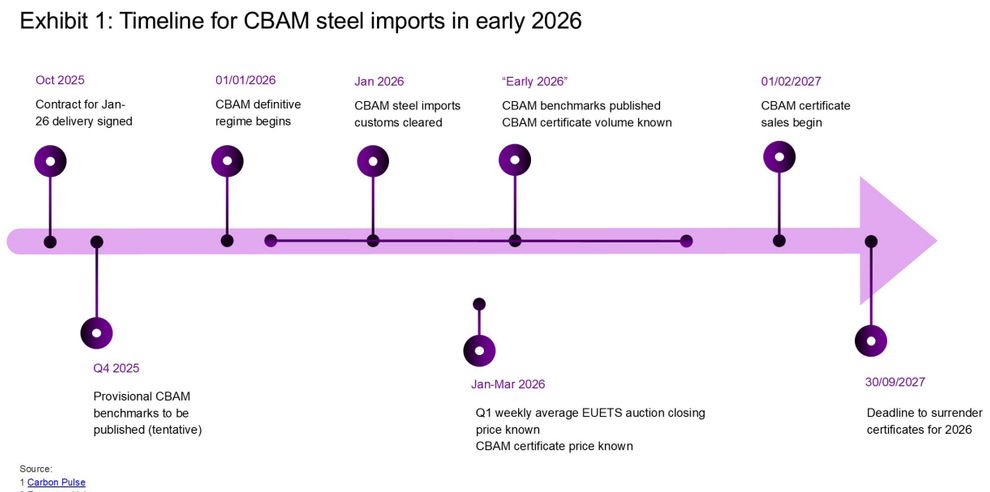
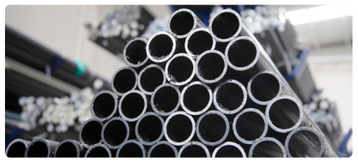


Exhibit 2
Sectors and products in CBAM scope



Iron and Steel

- Pig iron
- Ferro-alloys
- Iron and steel ingots
- Semi-finished Iron and steel products
- Flat-rolled Iron and steel products

Aluminium

- Unwrought aluminium
- Aluminium bars, rods, and profiles
- Aluminium wire
- Aluminium plates, sheets, and strips

Cement

- Clinker
- Portland cement
- Aluminous cement
- Other hydraulic cements

Fertilizers

- Nitrogenous fertilizers
- Phosphatic fertilizers
- Potassium fertilizers
- Compound fertilizers

Electricity

Hydrogen

1.2 How the EU ETS cap will shape CBAM cost

The EU Emissions Trading System is the foundation of Europe's decarbonization policy. It establishes a cap on emissions: the total volume of emissions permitted under the system declines each year, reducing the number of allowances available for compliance. Under current legislation, the cap will contract by around 4.4 percent annually through 2030.

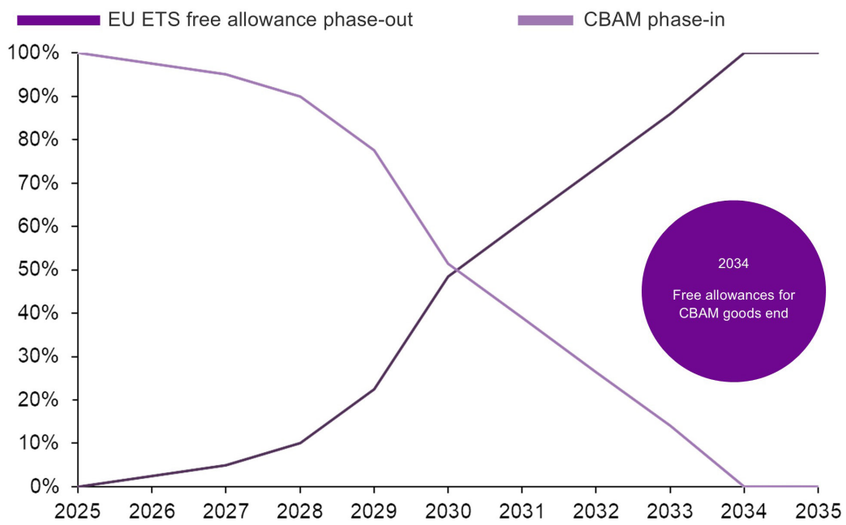
The cumulative effect is around a 20 percent reduction in total allowances between 2025 and 2030, from around 1.1 billion tonnes of CO_2 equivalent to around 0.9 billion tonnes, before the cap decreases towards 0 in 2040. As the supply of EU Allowances (EUAs) tightens, the marginal cost of abatement will rise. This manifests as an increase in the price of EUAs, which are required for every tonne of emissions covered by the system. CBAM certificate prices are directly linked to EUA prices. Each incremental increase in the EUA price transfers through to the cost of importing carbon-intensive goods into the EU.

Fastmarkets analysis projects that the EUA price will rise from approximately €70–75 per tonne in 2025 to about €130 per tonne by 2030 in real 2024 Euros, reflecting the tightening supply and sustained demand for allowances. This reflects an average increase of 10–12 percent per year, consistent with historical responses to cap contractions and market stability reserve adjustments.

The arithmetic is simple but powerful. By 2034, when free allocations are phased out and CBAM costs apply in full, every €1 increase in EUA prices adds the same cost per tonne of embedded CO_2 to imports of steel, aluminium, cement or fertilizer. A carbon cost that was once a concern for EU manufacturers thus effectively becomes a tariff for importers.

Exhibit 3

EU ETS free allowance phase-out and CBAM phase-in, %



Source: European Parliament - CBAM Fit for 55 explainer

Pricing dynamics

The translation from EU ETS prices to CBAM costs is not immediate. Importers face timing and basis risk: certificates for 2026 imports can only be bought from February 2027, with the certificate surrender deadline set for September 30. Settlement depends on average EUA auction prices rather than shipment-date spot prices. A rise in EUA prices in the weeks after goods have already cleared customs could increase importers' CBAM liabilities, introducing a layer of pricing risk akin to currency exposure.

This also marks a clear shift: EU ETS pricing now feeds directly into import margins in a way it did not in the past.

Importers, traders, and downstream buyers are increasingly treating CBAM as a new category of carbon-linked financial exposure. The availability and liquidity of specific CBAM hedging instruments will shape the market's ability to manage these costs effectively. Uncertainty remains high. Final product-level benchmarks will not be released until early 2026, and rules around indirect emissions, scrap-based inputs, and downstream product coverage are likely to evolve further. These moving parts make long-term contracting, cost pass-through, and investment decisions harder to calibrate.

CBAM is not merely a reporting tool – it is the architecture through which the EU exports its carbon constraint to global trade. Its operational and financial implications will deepen with each passing year.

1.3 Key EUA price drivers

The cost of CBAM certificates is pegged to the market price of EU Allowances (EUAs), which is shaped by a set of interlocking structural and cyclical forces. Chief among these is the tightening cap on emissions and the automatic withdrawal of surplus allowances under the Market Stability Reserve – mechanisms that tighten supply and steadily raise the carbon price.

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Beyond structural scarcity, a range of real-economy and financial market variables influence short-term price dynamics:

Fuel-switching dynamics between gas and coal

Power sector emissions fluctuate with fuel spreads. When gas prices spike or supply tightens, utilities revert to coal, driving up emissions and EUA demand.

Renewables output and power-sector load

Variability in renewable generation alters the short-term need for fossil generation and thus the volume of allowances demanded by utilities.

Industrial demand and macroeconomic conditions

The pace of industrial activity directly affects emissions and allowance demand, while monetary policy and energy prices shape investment in abatement technologies.

Market positioning and liquidity

Speculative hedge fund flows, compliance hedging, and portfolio rebalancing can amplify short-term price movements, though prices tend to converge back to structural fundamentals.

Together, these drivers will determine the volatility and scale of CBAM-related carbon costs. For metals buyers, traders, and exporters, carbon pricing is now as financially material as exchange rates or freight – an embedded exposure that must be priced, hedged, and managed across contracts and supply chains.

> The cap on emissions only moves in one direction - down. As low-cost mitigation from the power sector is exhausted, more pressure will fall on industry, ratcheting up the price in the EU ETS and the CBAM costs over time. Planning for flat costs is wishful thinking"
>
> **Stuart Evans**

2. Metals

CBAM cost forecast scenarios (2026–2030)

Margins on the line: CBAM insights for metals suppliers and buyers

2.1 Iron and steel dominate the CBAM landscape

The iron and steel sector forms the majority of Europe's carbon border exposure, accounting for approximately three-quarters of potential CBAM liabilities and more than two-thirds of all covered import value.

Aluminium follows as a distant second, while fertilizers and cement, though modest in volume, carry a far higher carbon cost per euro traded.

Europe's industrial fabric reveals a striking asymmetry. Steel and aluminium move through long, complex supply chains with multiple production routes, where emissions intensity can vary by an order of magnitude. Cement, by contrast, is far more carbon-intensive per euro traded and has limited import volumes due to high transport costs relative to its value.

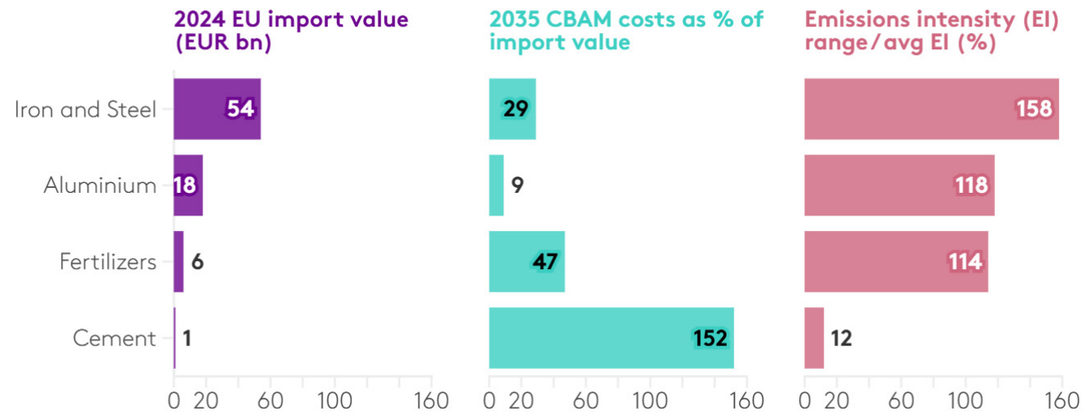
As CBAM tightens, these structural divides will define sectoral pace of adjustment, while within sectors, innovative producers with decarbonization plans will outperform.

Steel stands apart not only for its scale but for its variability. Emissions intensities in the sector span nearly twice the range of any other CBAM-covered market, amplifying both risk and reward as allowance prices climb. This heterogeneity turns steel into a proxy for CBAM's broader intent: to penalize carbon inefficiency and support innovation.

Over the next decade, as the EU carbon price increases, the cost differential between low- and high-emissions intensity production will widen sharply. The shift will reorder sourcing strategies, investment decisions, and the foundations of comparative advantage across the global metals complex.

Exhibit 4

Iron and steel faces more variability in CBAM impacts than other sectors



Source: Global Trade Tracker, Fastmarkets analytics

1.CBAM costs are calculated using Fastmarkets' CBAM cost calculator based on EU Commission and EU JRC publications.

2.Median across CBAM products within each sector, calculated as (max EI – min EI) / average EI for each product

CBAM imposes highly differentiated costs across the steel value chain, driven by emissions intensity and technology mix

Upstream inputs such as agglomerated iron ore and steel slab face the highest proportional costs, with CBAM costs exceeding 20 percent of import value and rising above 40 percent for the most carbon-intensive producers. These segments remain difficult to decarbonize due to capital cost and technology barriers.

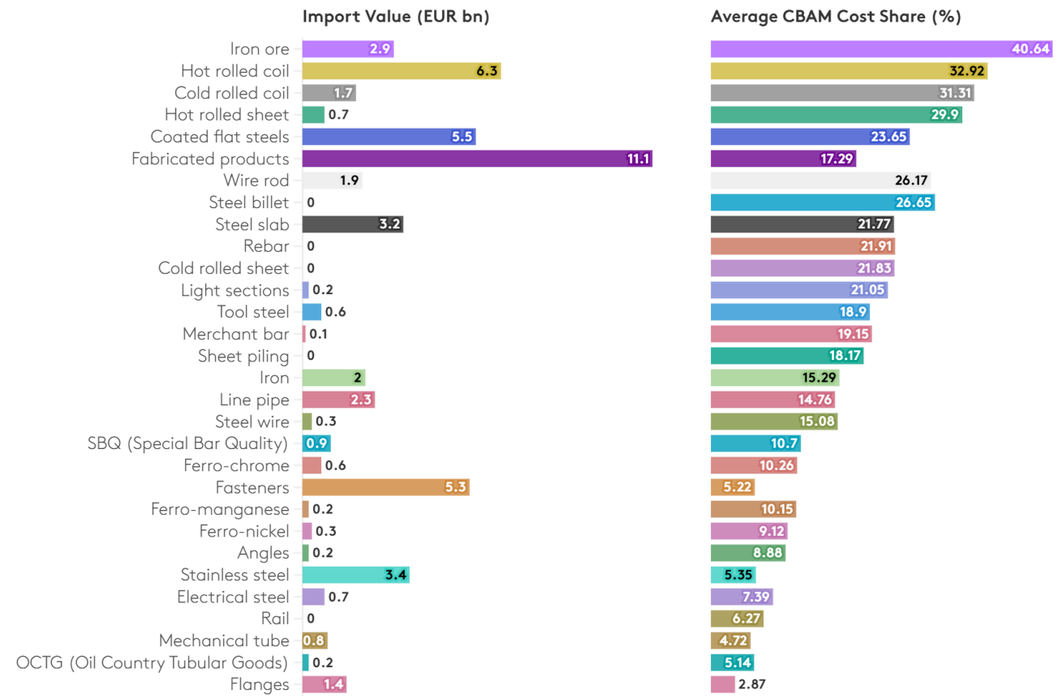
Midstream products like hot rolled coil, cold rolled coil, and coated steels face moderate exposure, typically between 23 and 33 percent. Technology now determines cost position. This is likely to mean electric arc furnaces and hydrogen-based reduction pathways offer long-term relief as carbon prices increase. Producers relying on blast furnaces will face sustained pressure on margins.

Downstream goods including fabricated steel, fasteners, and flanges are less exposed. CBAM costs average below 10 percent, thanks to higher value-added content.
Yet, exposure could be greater due to the risk of entire supply chains shifting outside the EU, and tightening buyer preferences for low-carbon products. For these producers, sourcing strategies will be key to locking in carbon efficient supply to manage input costs.

CBAM is redrawing cost structures across steel. Competitiveness now hinges on emissions and energy source, not just scale or logistics. The shift is structural, and it is accelerating.

Exhibit 5

Iron and steel CBAM exposure (by product)



Source: Global Trade Tracker, Fastmarkets analytics

Hot rolled coil, one of Europe's most traded steel products, illustrates CBAM cost volatility under different policy scenarios

Hot rolled coil, one of Europe's most traded steel products, underscores the volatility of CBAM outcomes. Under the base case – excluding indirect emissions and using our estimated benchmarks – CBAM costs account for 33 percent of import value. Yet that burden rises to 45 percent in a high EUA price scenario and drops to just 22 percent with relaxed policy assumptions. These shifts illustrate how CBAM outcomes are acutely sensitive to EU carbon pricing and CBAM policy design.

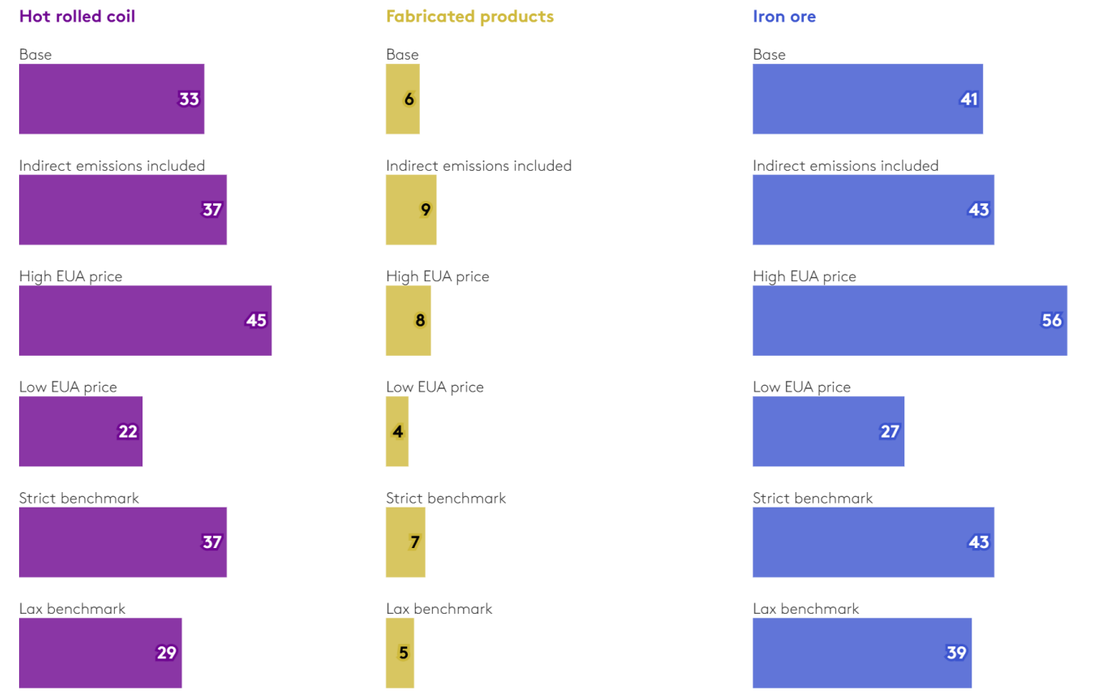
Upstream inputs such as agglomerated iron ore show even starker cost variability, with projected CBAM shares ranging from 27 percent to 50 percent depending on scenario.

These exposures are structural, rooted in carbon-intensive extraction and with limited short-term mitigation levers.

Together, these scenarios reveal the new logic of trade competitiveness. Cost structures will increasingly be dictated not by scale or geography but by emissions profile and abatement technology. The result is a carbon-adjusted playing field that challenges legacy advantages and redefines margin pressure.

Exhibit 6

CBAM cost share of import value in 2030, %



Source: Global Trade Tracker, Fastmarkets analytics
CBAM costs are calculated using Fastmarkets' CBAM cost calculator based on EU Commission and EU JRC publications

Changes in trade patterns can significantly reduce the CBAM costs facing EU importers potentially benefitting downstream firms

CBAM's impact on trade flows and market shares is complex given competition dynamics and the instability of the global trade environment. Fastmarkets' CBAM trade flow model captures three key drivers of cost increases and firms' competitive responses to bring transparency to this key issue:

1. Increase in costs of imported products due to CBAM
2. Increase in EU facilities' direct emissions costs from phase out of free allowances and EUA price increases
3. Increase in EU facilities' costs of procured inputs as CBAM and EUA costs are passed through from (1) and (2)

Steel billets importers' competitiveness could decrease 8 percent by 2030 under current policy proposals. If importers do not switch towards low-carbon producers, the fall in competitiveness could be as great as 30 percent. Not only are margins on the line for importers under CBAM – market shares are too.

For downstream sectors outside the direct scope of CBAM, European industry faces a growing risk from imports arriving on European shores without equivalent carbon costs. These risks can be partially mitigated as supply chains shift towards lower-carbon suppliers, reducing the carbon intensity, and therefore the cost, of key inputs.

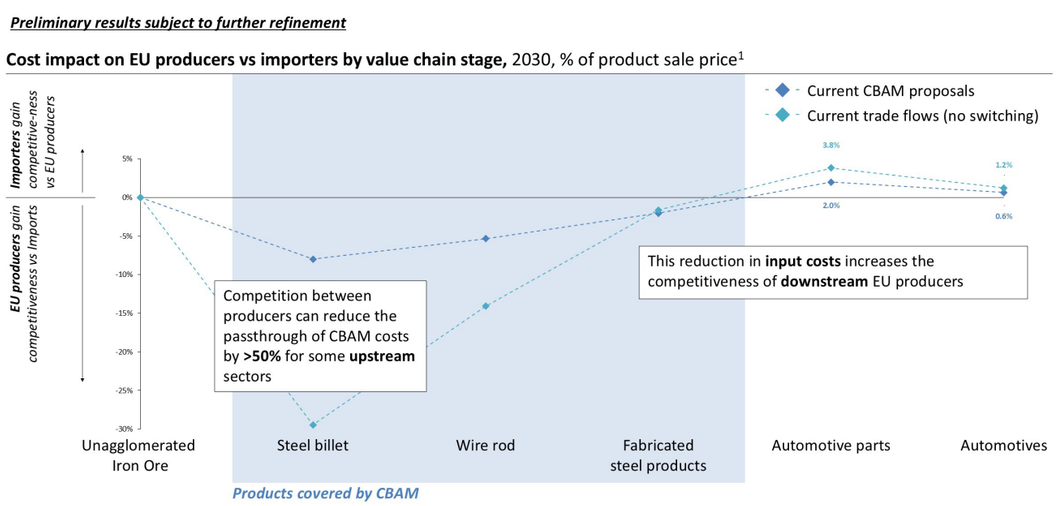
Automotive manufacturing, along with most automotive components, currently falls outside CBAM's scope. As a result, EU producers in these strategic sectors could see their competitiveness erode as input costs for steel and aluminium rise due to CBAM and the EU ETS. Meanwhile, non-EU automotive sector competitors can continue supplying both EU and global markets without facing comparable carbon costs.

Yet CBAM also opens opportunities for firms positioned at the lower end of the carbon cost curve. As global trade adjusts, EU-based manufacturers sourcing from cleaner suppliers may capture margin gains by securing lower input costs.

Over time, firms that integrate verified low-carbon inputs into their value chains could enhance pricing power, improve procurement resilience, and strengthen their competitive advantage as carbon-adjusted prices become the market norm.

Exhibit 7

Cost impact on EU producers vs. importers by value chain stage, 2030, % of product sale price



2.2 Aluminium's CBAM exposure

Aluminium exposure is heavily concentrated in a few key exporters: China, Türkiye, the United Arab Emirates, Mozambique, and Bahrain together account for over half of the sector's projected 2030 CBAM costs. This is driven by a mix of volume, emissions intensity, and production methods. Overall, aluminium currently has a small share of total CBAM liability relative to the iron and steel sector.

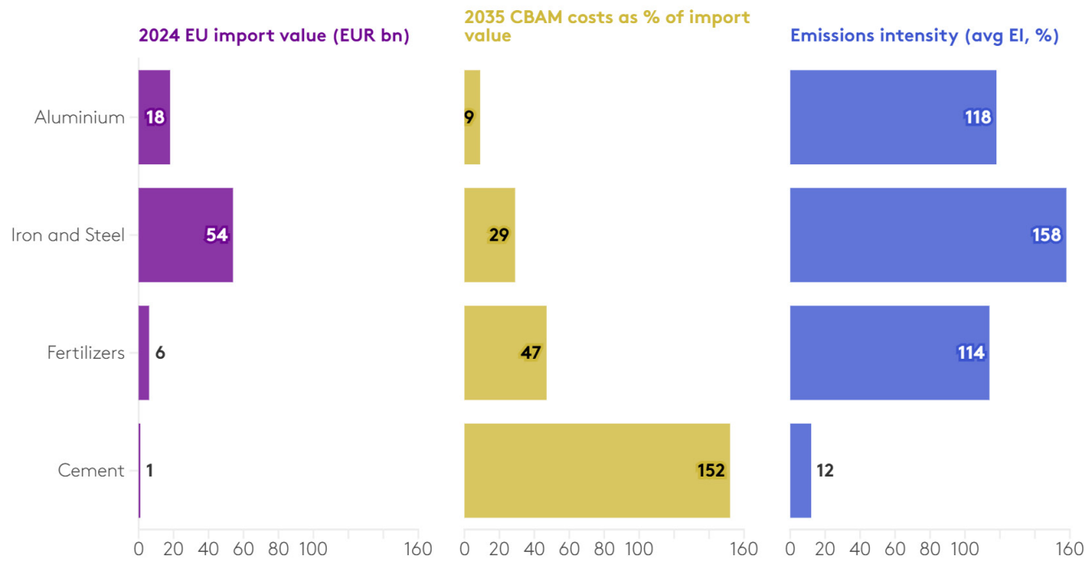
CBAM currently only covers aluminium's direct emissions. If indirect emissions are included in the mechanism, aluminium's total 2030 CBAM costs could rise from €1 billion to €4.7 billion. This shift would significantly alter the competitive landscape, penalizing exporters with carbon-intensive grids while reinforcing the advantage of low-emissions producers.

Mozambique, for example, would benefit from its use of hydroelectric power, resulting in the production of low-carbon aluminium across its substantial volume of trade. In contrast, South Africa's burden rises sharply under scenarios that include indirect emissions due to its coal-dependent energy mix.

Aluminium's current CBAM exposure is smaller than steel's but remains significant given the strategic importance of Europe's aluminium industry. As CBAM evolves, cost structure will increasingly reflect energy origin and process efficiency rather than location or scale.

Exhibit 8

Aluminium sector faces lowest tariff but high emissions variability under CBAM



Source: Global Trade Tracker, Fastmarkets analytics

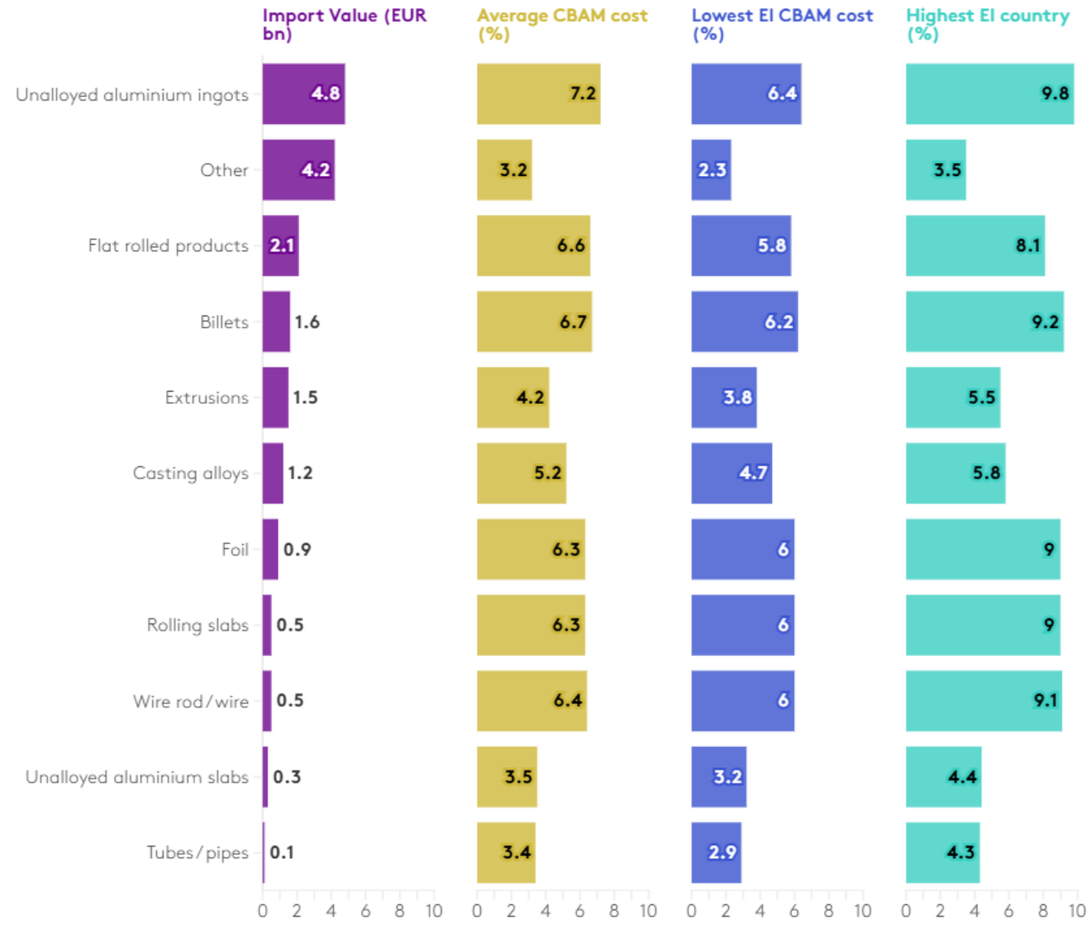
1. CBAM costs are calculated using Fastmarkets' CBAM cost calculator based on EU Commission and EU JRC publications.
2. Median across CBAM products within each sector, calculated as (max EI – min EI) / average EI for each product

By 2030, upstream aluminium products will face the steepest CBAM costs, while carbon intensity reshapes trade competitiveness.

CBAM will introduce significant divergence across the aluminium value chain. Primary products closest to the smelting stage - unalloyed ingots, slabs, billets, and casting alloys - will carry the highest embedded emissions, with projected CBAM cost shares ranging from 7 to 10 percent of import value. The most carbon-intensive origins may approach double that. Downstream products such as extrusions, tubes, and pipes will face lower proportional exposure, typically between 2 and 5 percent, as greater value-added content absorbs the impact of embedded carbon.

Exhibit 9

CBAM cost share of imports and import values



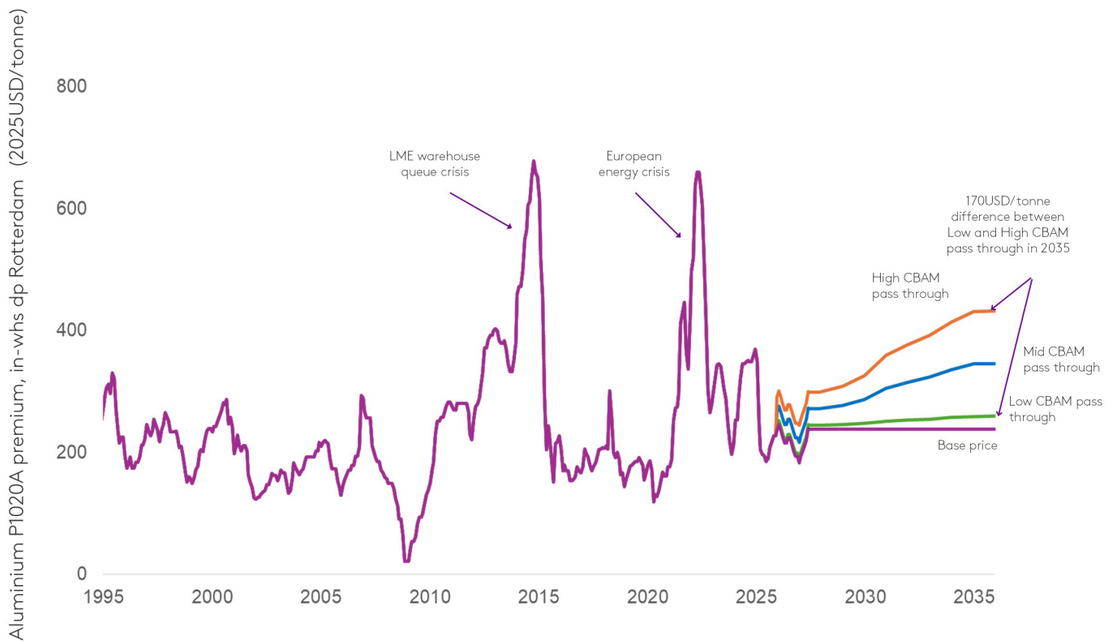
Source: Global Trade Tracker, Fastmarkets analytics

P1020A Rotterdam duty-paid premia

By 2035, CBAM could add anywhere between $20 to $200 per tonne to the P1020A Rotterdam duty-paid premium, depending on cost pass through rates, emissions profile and EUA price trajectories. For low-carbon EU producers or non-EU exporters, the shift enhances competitiveness and market access – for some producers, margins could even rise as market price growth exceeds growth in CBAM liabilities. For high-emission producers, however, the stakes are higher: sustained margin erosion, contract repricing pressures, and potential loss of market share could accelerate structural shifts.

Exhibit 10

CBAM impact on P1020A Rotterdam premium could reach up to $200/tonne by 2035



Source: Global Trade Tracker, Fastmarkets MB-AL-0004 historical prices, MB-AL-0004 price forecast, Fastmarkets analytics
Values shown do not represent an official Fastmarkets forecast and should not be interpreted as such. 'Base' price excludes CBAM costs entirely and held flat in real terms after Jul-27. Mid CBAM pass through assumes that 50% of the weighted average CBAM cost (2025USD/tonne) across European consumption is 'passed through' into the Aluminium P1020A in-warehouse duty-paid Rotterdam premium. Low CBAM pass through assumes 10% of weighted average is 'passed through'; and High CBAM pass through assumes 90% is 'passed through'. CBAM costs are calculated using Fastmarkets' CBAM cost calculator based on Global Trade Tracker, Eurostat PRODCOM, EU Commission and EU JRC. The 'Low CBAM pass through' and 'High CBAM pass through' cases illustrate how varied the impact of CBAM on premia could be – they do not represent a confidence interval.

Unalloyed ingot CBAM costs could range from 5 percent to 32 percent of import value in 2030 depending on policy parameters

Aluminium's CBAM exposure is lower than steel's in absolute terms but could grow significantly if indirect electricity emissions are covered in future. In the base case, unalloyed ingots, billets, and foil incur CBAM costs of 6-7 percent of import value. When indirect emissions are included, costs rise significantly to 32 percent for ingots, 36 percent for billets, and 24 percent for foil. Electricity generation mix, rather than production method, determines the extent of exposure if indirect emissions from aluminium production are included.

Under current CBAM policy, the impact of the relative carbon price level or strictness of benchmarks remain muted. At an EUA price of €130 per tonne, 2030 CBAM costs increase to 8 to 10 percent. At €70, they fall to 4 to 5 percent.

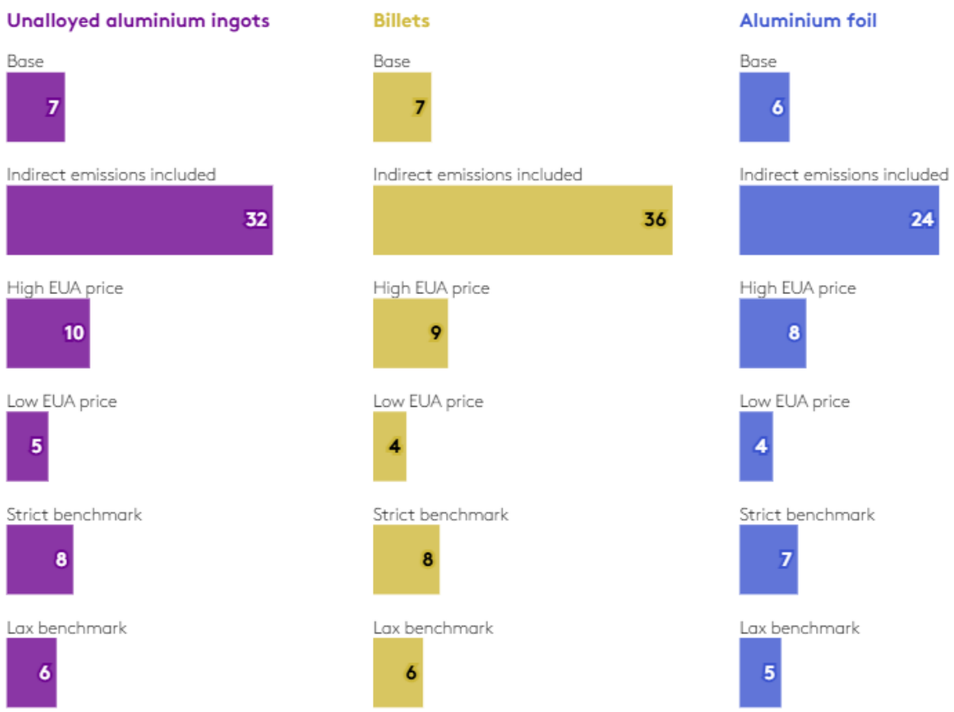
This confirms that for aluminium the potential coverage of indirect emissions remains a key uncertainty – alongside scrap and downstream policy loopholes.

Billets show the highest exposure when indirect emissions are counted, due to their low value-added relative to energy use. Foil remains least affected, as downstream processing reduces carbon intensity per euro of trade.

CBAM costs are not as large for aluminium as for steel relative to current product prices. However, its effects are conditional and geographically uneven. Risks around CBAM circumvention through offshoring of entire supply chains or use of pre-consumer scrap represent major threats to European industry and CBAM implementation for aluminium.

Exhibit 11

CBAM cost share of import value, %



Source: Global Trade Tracker, Fastmarkets analytics.

Alumina remains outside CBAM despite high emissions intensity and critical upstream role

CBAM currently applies to approximately €17.9 billion in aluminium imports, largely covering primary metal and semi-fabricated products. It omits critical upstream inputs, including bauxite (€0.6 billion), alumina (€0.5 billion), and scrap (€0.6 billion), leaving significant emissions outside regulatory reach. Alumina occupies a structurally exposed position in the value chain. As the intermediary between bauxite and finished aluminium, its production is carbon-intensive but unpriced.

If alumina were brought under CBAM, liabilities could reach between 11 and 24 percent of import value by 2030, reflecting high emissions intensity relative to trade value.

The alumina refining process is energy-intensive, while the material's relatively low value-added renders carbon costs disproportionately high.

Extending CBAM upstream would more accurately account for emissions across the aluminium chain but introduces further administrative complexity. Measuring emissions would require more layered tracking and careful calibration to avoid double counting carbon costs. European smelters could also face greater cost pressure given their reliance on alumina imports and limited domestic refining capacity.

Exhibit 12

Exhibit 12: Alumina CBAM cost share of import value in 2030, %

Source: Global Trade Tracker, Fastmarkets analytics

Scrap's exclusion from CBAM could reshape Europe's aluminium trade and disrupt circular economy incentives

Recycled aluminium occupies a central role in Europe's decarbonization agenda. Scrap now comprises nearly half of the EU's total aluminium input, well above the global average of 37 percent. Its use is most concentrated in ingot production, where scrap accounts for 63 percent of feedstock, and declines to 49 percent in final products as imported primary material dilutes circular content downstream.

CBAM currently exempts scrap, creating a structural price divergence that amplifies the cost advantage of secondary producers. As tariffs inflate the price of high-emission imports, demand for recycled feedstock is set to rise, accelerating investment in domestic recycling infrastructure. Yet Europe's role as a net scrap exporter presents a constraint.

Global competition for high-quality scrap is intensifying, particularly from the United States due to scrap's exempt status under current tariffs, tightening supply and increasing input costs for EU producers. This may erode the cost advantage conferred by CBAM exemptions.

The policy also creates arbitrage opportunities. Producers could divert pre-consumer scrap-based aluminium into the EU to minimize liabilities, while sending primary, carbon-intensive material to less regulated markets. By exempting scrap, CBAM supports circularity but creates misaligned incentives that could harm competitiveness of primary producers.

The European Commission has recently signaled a policy shift towards including pre-consumer scrap as a CBAM precursor material. However, implementation challenges could be significant.

Exhibit 13
Scrap content in EU production by stage, %

Source: Global Trade Tracker, Fastmarkets analytics
CBAM costs are calculated using Fastmarkets' CBAM cost calculator based on EU Commission and EU JRC publications

> CBAM does not eat into margins that are already thin in Metals; it could completely erase them. For low-value contracts, the question is not how to protect profit, but whether profit survives at all.
>
> **Shyamal Patel**

2.3 Key takeaways for metals buyers

Carbon now priced into procurement

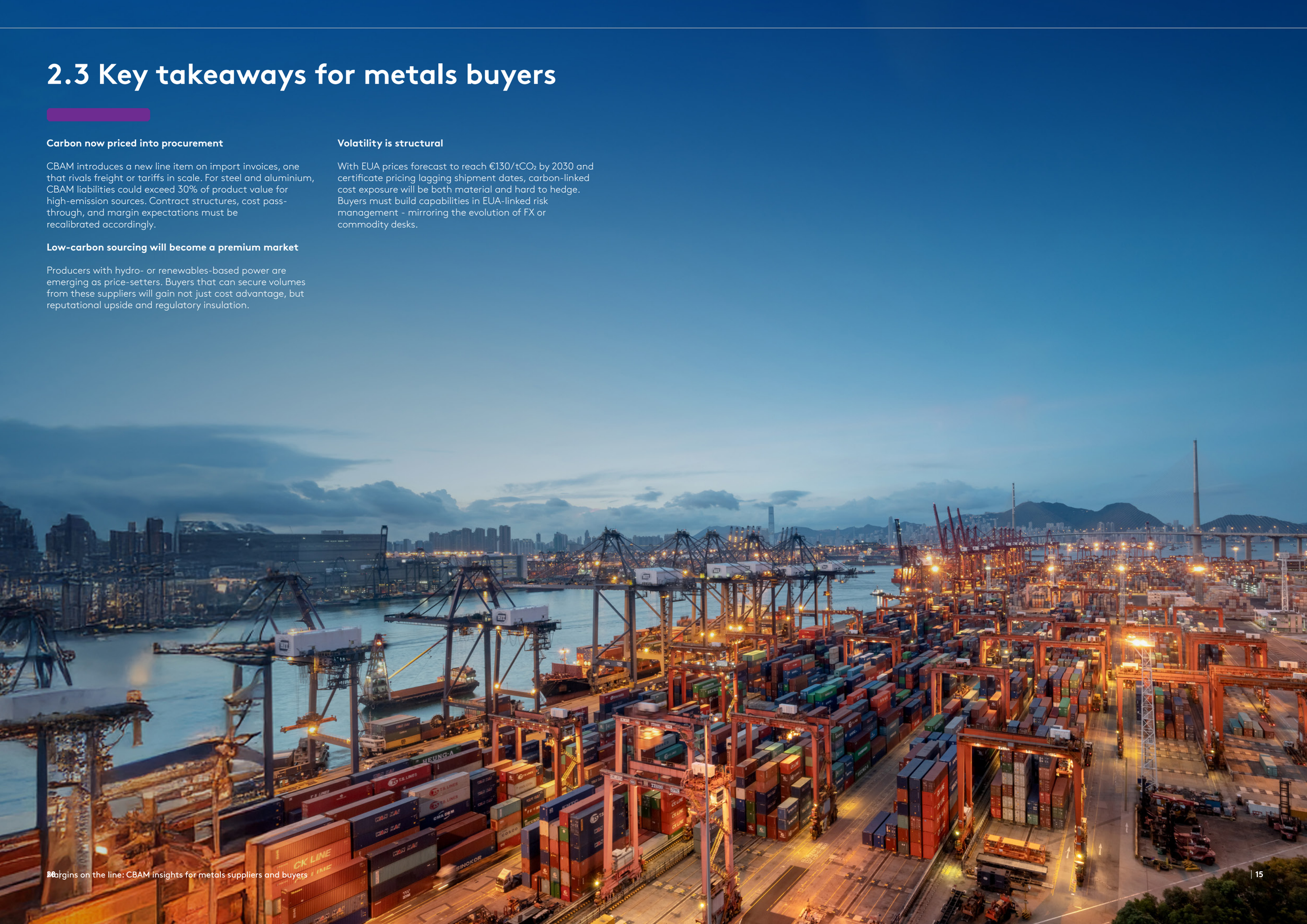
CBAM introduces a new line item on import invoices, one that rivals freight or tariffs in scale. For steel and aluminium, CBAM liabilities could exceed 30% of product value for high-emission sources. Contract structures, cost pass-through, and margin expectations must be recalibrated accordingly.

Low-carbon sourcing will become a premium market

Producers with hydro- or renewables-based power are emerging as price-setters. Buyers that can secure volumes from these suppliers will gain not just cost advantage, but reputational upside and regulatory insulation.

Volatility is structural

With EUA prices forecast to reach €130/tCO_2 by 2030 and certificate pricing lagging shipment dates, carbon-linked cost exposure will be both material and hard to hedge. Buyers must build capabilities in EUA-linked risk management - mirroring the evolution of FX or commodity desks.



3. Margins at risk

Country-level exposure

3.1 Steel sector: Asia dominates

By 2030, more than half of EU steel CBAM liabilities will be borne by four exporters: India, Russia, Ukraine, and China.

The concentration reflects not only trade volume but emissions intensity. India alone is expected to make up 18 percent of total CBAM costs, nearly double its share of EU import value, driven by its reliance on blast furnace–basic oxygen steelmaking, coal-based DRI production, a skew toward semi-finished exports, and the absence of a domestic carbon pricing mechanism.

Emission intensity, not trade value, will determine exposure

China's EU-bound exports span more diversified, higher-value steel goods such as fabricated and coated flat products, which carry lower direct emissions per euro of trade.

India's exports remain anchored in slabs, billets, and hot-rolled coil – relatively low-value, high-emission products. This structural difference raises India's liability relative to its export footprint.

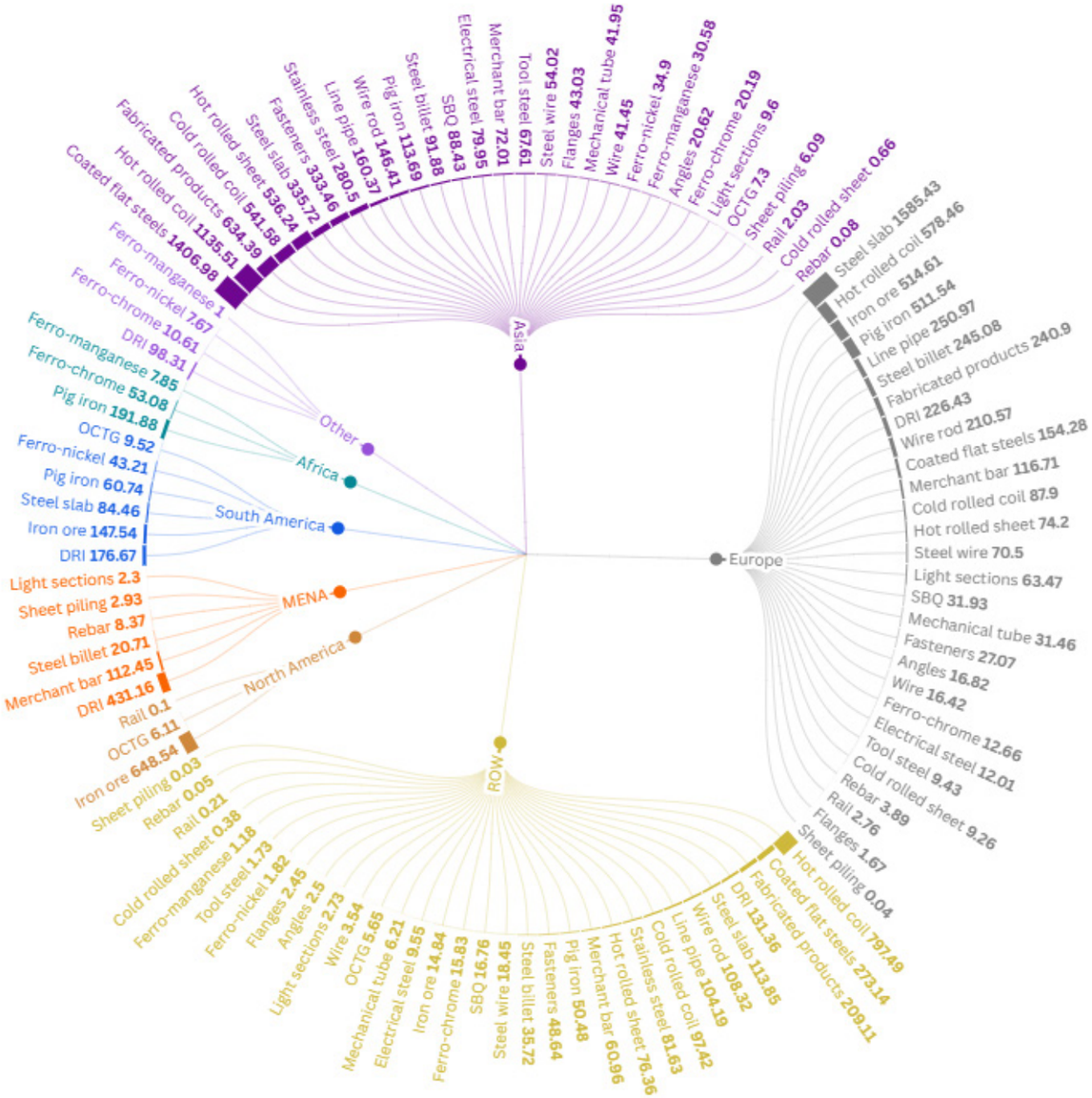
Cost advantage will accrue to low-emission producers

Countries with cleaner production profiles, including Türkiye, the United States, and South Korea, benefit from higher electric arc furnace penetration and greener electricity grids. By 2030, projected CBAM costs for hot-rolled coil are estimated at over €500 per tonne for India, compared with circa €100 for the United States. As CBAM matures, competitiveness will be redefined by carbon efficiency alongside production scale or geographic proximity.

Margins on the line: CBAM insights for metals suppliers and buyers

Exhibit 14

Total 2030 iron and steel CBAM costs by product (€12bn total)



Total 2024 EU iron and steel import value shares = €54bn

Source: Global Trade Tracker, Fastmarkets analytics

1. CBAM costs calculated for each country for 2030 using Fastmarkets' CBAM cost calculator based on EU Commission and EU JRC publications. Import volumes from each country are based on Global Trade Tracker data and excludes imports from countries which are not in the EU but are not expected to face CBAM costs (e.g., Norway, Switzerland). NB - country of origin effective carbon price is not included in calculations.
2. Based on CBAM Iron and Steel CN codes only

CBAM cost could amplify risk across the steel value chain

Imports from Russia (of which €1.66 billion are iron and slab products), India (of which €62 million in steel slab and €305 million in hot-rolled coil), and Ukraine (of which €462 million are across semi-finished steel) account for the largest shares of high-intensity trade. These flows sit squarely in the cost bands exceeding 25 to 50 percent of import value, reflecting both carbon-heavy production and reliance on conventional blast furnace routes.

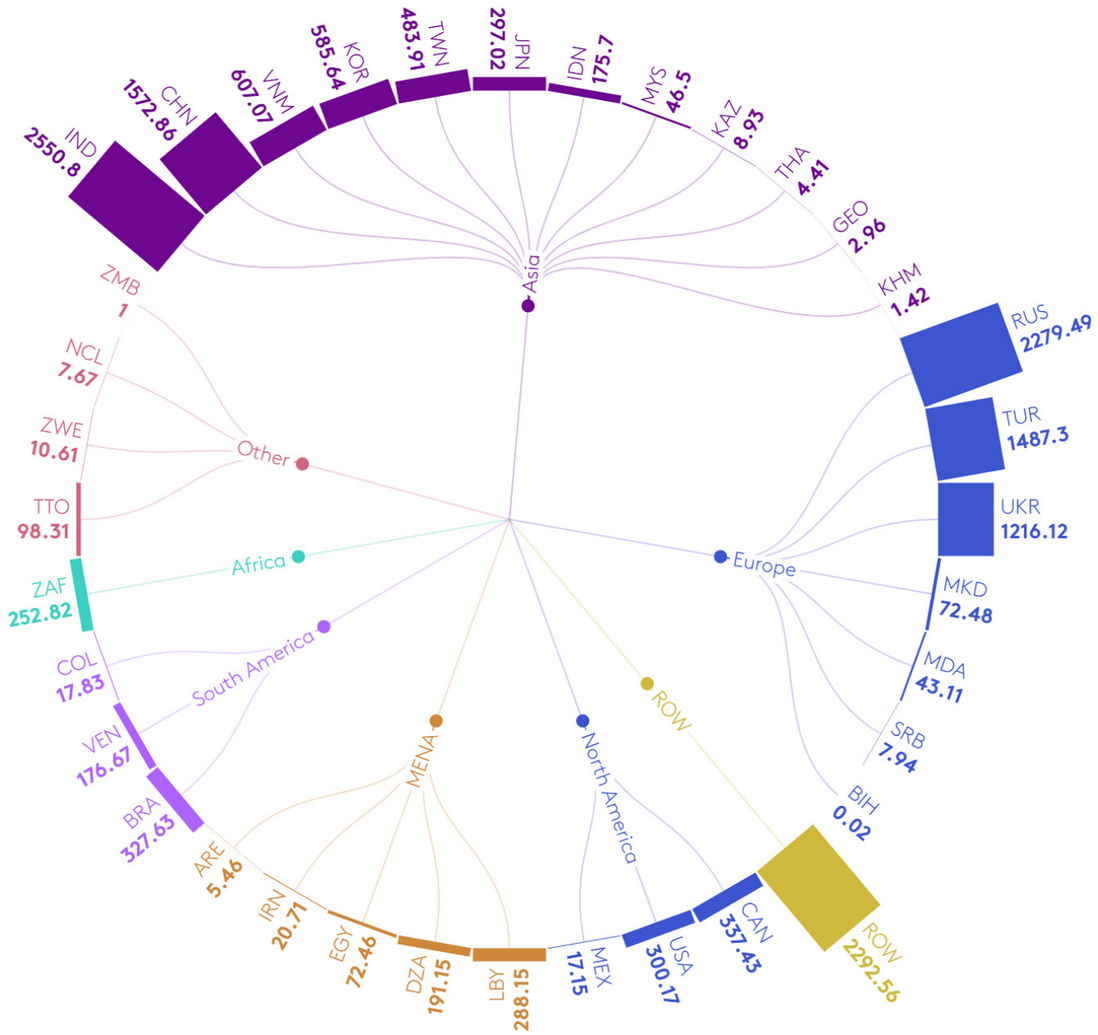
By comparison, exporters such as Turkey, South Africa, and the United States, whose shipments are largely processed via electric-arc furnace (EAF) routes, remain in lower exposure bands below 15 percent. Their lower direct emissions allow more favorable cost-to-value ratios, even when export volumes are substantial.

In total, over €7 billion of EU iron and steel imports are projected to face cost increases exceeding 50 percent of current trade value, with a further €17 billion facing costs more than 25 percent.

Margins on the line: CBAM insights for metals suppliers and buyers

Exhibit 15

Total 2030 iron and steel CBAM costs by country (€12bn total)



Total 2024 EU iron and steel import value shares = €54bn

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2. Based on CBAM Iron and Steel CN codes only

3.2 Aluminium sector: MENA and Asia dominate

By 2030, MENA and Asian aluminium exporters are projected to shoulder over half of EU CBAM liabilities, totaling more than €500 million. Exposure is concentrated in China, Türkiye, the UAE, and Bahrain, reflecting high export volumes to the European market.

In upstream aluminium, direct emissions intensities differences largely result from smelter age. China's share, around 16 percent, tracks its import value.

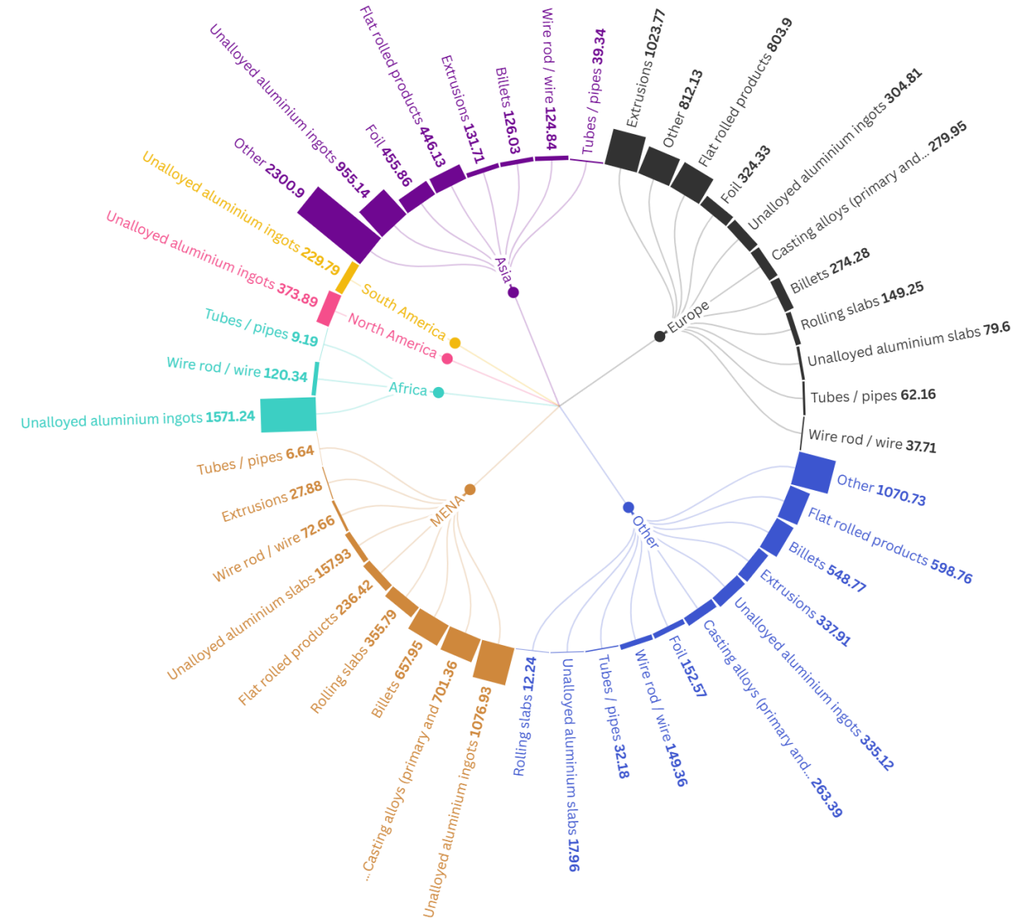
The burden is steepest for upstream products like ingots, slabs, and billets, where CBAM costs may reach 30–35 percent of import value. Downstream items such as foil and rolled goods are less exposed, typically 5 to 8 percent, due to greater value addition and lower emissions per euro traded.

Currently, CBAM policy scope includes only direct emissions for aluminium. This could create differences between the traditional market for low-carbon aluminium – wherein low-carbon status is largely driven by low indirect emissions[3] – and the market for low CBAM cost aluminium which will be driven by direct emissions intensity.

Direct and indirect emissions intensity of production are not well correlated in upstream aluminium today – direct reflects smelter age, and indirect reflecting grid emissions intensity or power purchase agreements.

What is clear however, is that EU buyers will increasingly favor certified low-carbon primary aluminium supply.

Exhibit 16
Total 2030 aluminium CBAM costs by country, by product (€1bn)



Total 2024 EU aluminium import value = EUR 18bn

Source: Global Trade Tracker, Fastmarkets analytics

1. CBAM costs calculated for each country for 2030 using Fastmarkets' CBAM cost calculator based on EU Commission and EU JRC publications. Import volumes from each country are based on Global Trade Tracker data and excludes imports from countries which are not in the EU but are not expected to face CBAM costs (e.g., Norway, Switzerland). NB – country of origin effective carbon price is not included in calculations.
2. Based on CBAM Iron and Steel CN codes only.
3. Indirect emissions from electricity consumption represented 73% of the aluminium sector's total emissions in 2022 (IEA).

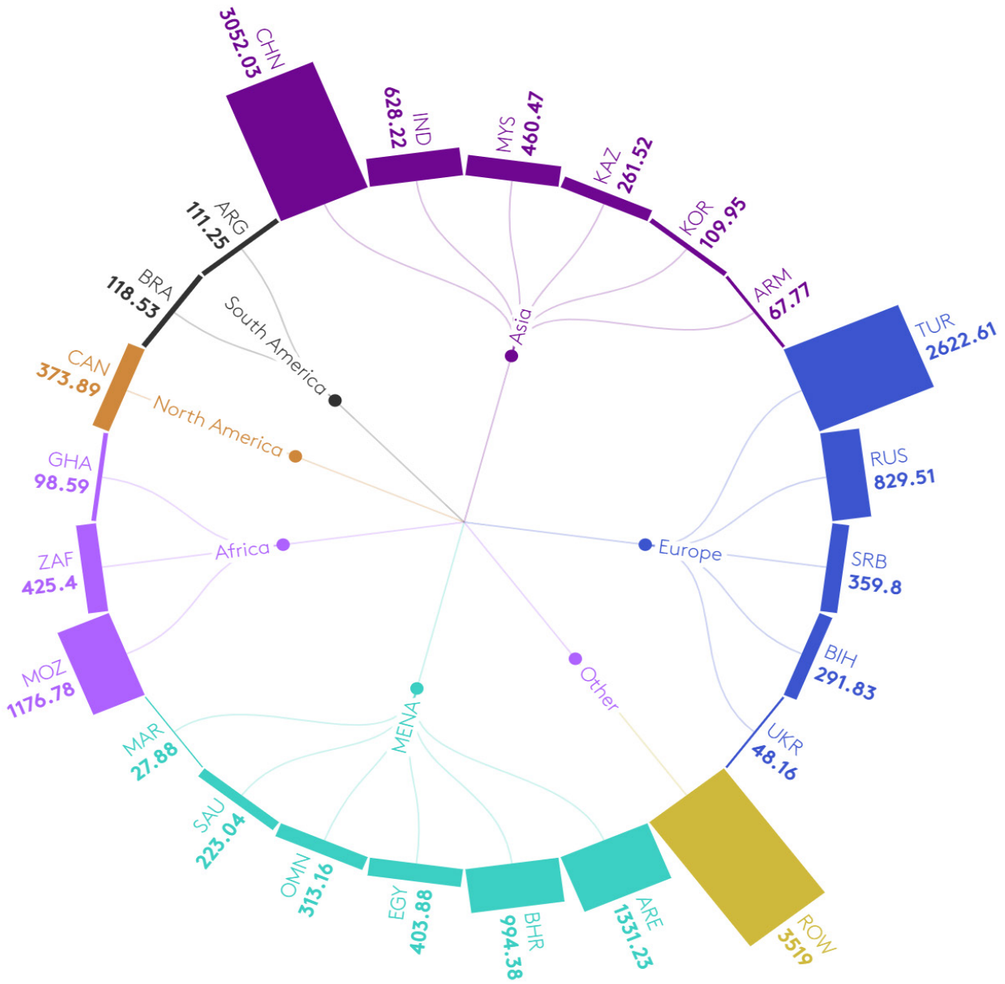
By 2030, MENA and Asian aluminium exporters are projected to shoulder over half of EU CBAM liabilities, totaling €1 billion. Exposure is concentrated in China, Türkiye, the UAE, Mozambique, and Bahrain.

China, Türkiye, and Mozambique hold the largest exposure within aluminium trade to the EU by 2035. Together they account for most of the value concentrated in medium- to high-intensity cost bands between 10 and 25 percent of import value. China's diverse export base keeps average costs moderate, while Mozambique's upstream primary aluminium and power-linked production place it among the most carbon-exposed.

Trade worth roughly €9.9 billion sits within the 10–25 percent CBAM cost range, largely representing unalloyed slabs, billets, and semi-finished products. Another €8 billion remains in low-intensity categories below 10 percent, dominated by rolled and fabricated products with embedded low-carbon power. Only a limited share, under €0.1 billion, crosses the 50 percent threshold, typically from coal-based smelting routes.

Margins on the line: CBAM insights for metals suppliers and buyers

Exhibit 17
Top countries by import value



Total 2024 EU aluminium import value = EUR 18bn

Source: Global Trade Tracker, Fastmarkets analytics

1. CBAM costs calculated for each country for 2030 using Fastmarkets' CBAM cost calculator based on EU Commission and EU JRC publications. Import volumes from each country are based on Global Trade Tracker data and excludes imports from countries which are not in the EU but are not expected to face CBAM costs (e.g., Norway, Switzerland). NB – country of origin effective carbon price is not included in calculations.
2. Based on CBAM CN codes only.

3.3 Strategic risks metals buyers must price in

The country-level footprint of CBAM liabilities is concentrated, material, and volatile. Over 50 percent of projected CBAM certificates by 2030 will be tied to exports from just five countries: India, Türkiye, China, Ukraine and Russia. For buyers, this is not just an emissions issue, it is a trade fragility issue.

CBAM will elevate geopolitical risk as a cost driver

High-emissions countries facing steep CBAM liabilities may respond with tariffs, subsidies, or carbon pricing of their own. This creates a dynamic, uneven regulatory environment where today's trade partner could become tomorrow's legal risk. Sanctions, retaliatory pricing, or border reclassification tactics could disrupt contracts and spike costs unexpectedly.

Supplier exposure must now be mapped by jurisdiction, not just facility

Even low-emissions producers operating in high-risk countries may inherit elevated CBAM costs through national-average emissions factors or shifting EU classification rules. Due diligence must include both plant-level audits and risks of national carbon policy shifts, energy mix volatility, and legal frameworks on emissions reporting.

Trade patterns are being redrawn, but remain unpredictable

Rerouting flows to avoid CBAM exposure is already underway, with buyers already reevaluating supply relationships. Concern remains regarding circumvention through shifting from upstream to finished goods or by gaming classification codes. For buyers, this increases the risk of regulatory arbitrage, where apparent cost savings mask long-term compliance risk.

CBAM's effectiveness and fairness hinge on non-EU policy and data choices

As countries like Türkiye and Ukraine look to adopt ETS systems to retain carbon revenues domestically and drive decarbonization, buyers will need to constantly reassess whether exposure is migrating or evolving. Liabilities today may not reflect liabilities tomorrow.

> In a decade, carbon intensity could matter more for export performance than exchange rates. CBAM is just the opening bid in a global repricing of industrial advantage."
>
> **Ben Crick**

4. Forward outlook

From forecast to financial control

4.1 Forecast CBAM exposure now demands financial action

As CBAM obligations take effect in 2026, metal importers face a cost stream that behaves like a market exposure, not a fixed levy. Managing it requires financial discipline on par with emissions accounting.

CBAM certificates are monetized against the EU carbon market: for 2026 imports purchased in 2027, certificates are priced at the quarterly average of 2026 EU ETS allowance prices; from 2027 onward, prices track the weekly average of EU ETS auction closing prices.

This creates a live volatility channel that flows straight into procurement and treasury.

Companies must internalize two dimensions of risk – price and volume – and wire them into contracts, budgets and risk controls.

Price risk

EUA prices are shaped by a range of variables including policy shifts, industrial output, weather patterns, and speculative trading. Forecasts indicate they could be as high as €170 per tonne by 2030, with sharp intra-year fluctuations that complicate forward planning.

Volume risk

Final product-level CBAM benchmarks, expected in early 2026, will determine how many certificates must be surrendered per shipment. Until then, importers must rely on provisional figures, based on national or route-based averages, creating wide exposure bands across supplier portfolios.

Market structure is defined

CBAM certificates will be sold through a centralized EU platform from 1 February 2027. For 2026 imports, prices will use the quarterly average of 2026 EU ETS allowances; from 2027 onward, they follow the weekly average of EU ETS auction prices. Annual declarations and certificate surrenders are due by 30 September, with quarterly purchases covering 50 percent of embedded emissions since year start, adjusted for free allocation.

Operational responsibility

A single 50-tonne mass-based threshold per importer per calendar year applies across iron and steel, aluminium, fertilizers, and cement imports. Electricity and hydrogen are excluded from this exemption. If the threshold is exceeded, all embedded emissions for that year fall into scope.

Authorization and delegation

Importers expecting to cross the threshold must secure authorized declarant status before doing so. Applications filed by 31 March 2026 permit provisional importing while pending. Declarants may delegate filings to EU-based intermediaries with an EORI, though compliance liability remains with the importer.

Carbon price deductions

Authorized declarants can offset part of their CBAM obligation with carbon prices already paid in third countries. From 2027, the European Commission will publish default carbon prices for these markets as a standard reference. Such deductions reduce total certificates required but exposure to EU carbon-price movements remains.

Data quality and verification

For metals, only direct emissions are included under CBAM; indirect emissions remain outside the mechanism for the foreseeable future.

Embedded emissions can use default or verified actual values. Verification is needed only for actuals. Where data are lacking, defaults reflect average intensities of high-emitting exporters. Accuracy improves as suppliers move toward plant-level verification, enhancing comparability and providing importers with better cost visibility.

What to hedge

CBAM exposure depends on a few measurable variables. Understanding how these move matters more than eliminating them.

Carbon price exposure

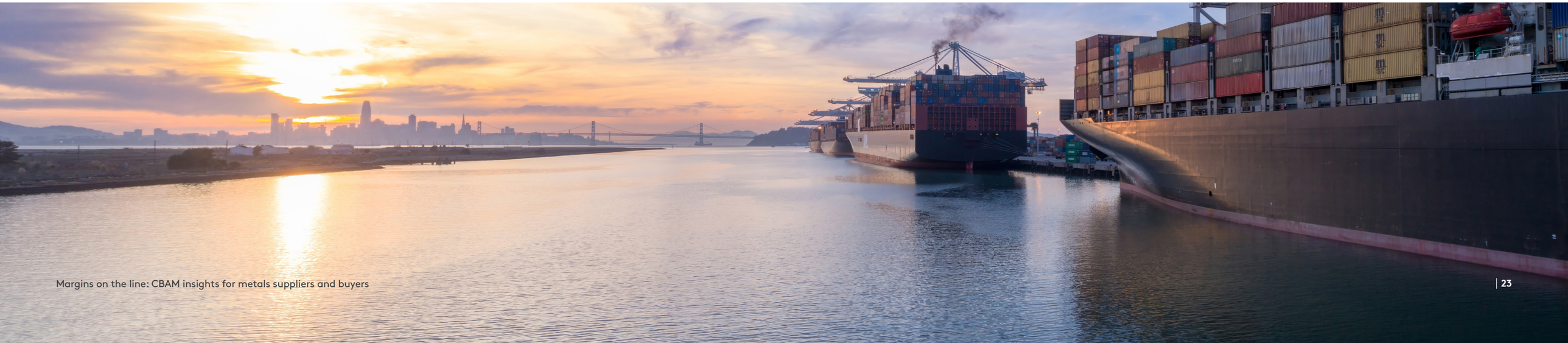
EU ETS prices remain the main driver of CBAM cost volatility, shaped by policy shifts, industrial demand, and energy dynamics. Forward carbon pricing now guides procurement and budgeting much like fuel or currency forecasts once did.

Timing exposure

Certificates for 2026 imports are purchased in 2027 and surrendered by 30 September, creating a pricing lag. Aligning hedge positions with purchase windows, not shipment dates, limits mark-to-market risk as CBAM certificate price determination moves from quarterly to weekly in 2027.

Volume exposure

Certificate volumes depend on benchmarks and verified data. Until these stabilize, importers operate within exposure bands, modeling intensity by product and origin to narrow uncertainty.



4.2 Translating risk into hedgeable contract structures

CBAM risk is financial in nature but contractual in transmission. Procurement and treasury teams now need a common language to manage it.

Index alignment

Contracts could begin to link CBAM clauses to transparent carbon price references derived from the EU ETS. Aligning those clauses with regulatory averaging methods could reduce disputes and improve cost comparability across suppliers.

Scenario discipline

Budgeting and sourcing decisions are moving toward scenario-based planning, where certificate costs are stress-tested under different carbon price and verification outcomes. This approach shifts the discussion from compliance to portfolio management.

Verification and data rights

Verified emissions data are becoming a commercial asset. Buyers that secure disclosure rights and audit access will gain a quantifiable advantage as benchmarks tighten and defaults become less acceptable in customs reporting.

Supplier performance pricing

Contracts that reward verified low-emission production will price in transparency and build resilience against regulatory change.

The discipline that once governed energy and currency exposure is now being extended to carbon. As market data deepen and verification systems mature, CBAM costs are shifting from reactive calculation toward structured planning and risk quantification. Fastmarkets' analysis supports this evolution by translating policy and market signals into empirical context, helping companies understand how carbon price volatility shapes long-term trade economics.

> CBAM risk behaves like FX. You need carbon intelligence wired into the same systems that handle commodity price swings and credit exposure.
>
> **Stuart Evans**

Conclusion

Margins are on the line, and so is control

CBAM marks a structural shift in how emissions are priced, perceived, and acted upon in global metals trade. Its implications reach far beyond compliance, reshaping procurement logic, supplier competitiveness, and financial exposure.

What this report lays bare is the asymmetry between legacy procurement systems and the demands of carbon accountability. A decade from now, firms will not be measured solely by cost discipline, but by their fluency in managing regulatory risk as financial risk.

The introduction of a floating carbon price on imports transforms commercial strategy. It alters contract architecture, redraws supplier portfolios, and forces convergence between sustainability data and treasury systems. The capacity to navigate this change is becoming a differentiator.

At the same time, the policy remains in motion. Benchmarks, coverage, and pricing mechanics are now tied directly to the EU Emissions Trading System, whose volatility sets the marginal cost of carbon across global trade flows.

The risk is no longer just in emissions, but in assumptions. Strategic resilience will hinge on building models that link CBAM costs to EU ETS price dynamics and trade-flow movements.

Fastmarkets is expanding its CBAM Intelligence Suite within the Carbon digital platform to include EU ETS price modeling and trade flow analysis. The suite models CBAM liabilities, forecasts risk scenarios, and links strategic planning with policy and market developments, giving firms the analytical edge to act before costs crystallize.

CBAM will reward precision over position. The advantage will belong to firms that translate volatility into control, those prepared first, not those reacting fastest.

Margins are on the line.

About us

Fastmarkets is the benchmark for trusted commodities data. With more than 130 years of expertise in transparent price reporting, we help traders, manufacturers, investors and sustainability leaders make informed decisions in volatile markets.

Fastmarkets Carbon extends this capability to compliance and voluntary carbon markets, providing market-reflective pricing, fundamentals-based forecasts and structured intelligence across carbon credits, removals and green commodities.

Our analytics integrate EU ETS modeling, CBAM cost assessment, trade-flow analysis and regulatory monitoring to support accurate evaluation of carbon exposure and procurement risk.

Through the Fastmarkets Carbon platform, users access independent benchmarks, forward market views and tools including the CBAM Intelligence Suite and CBAM Cost Calculator. These resources enable evidence-based planning across sourcing, margin management and compliance as carbon constraints become increasingly embedded in global trade.

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Please contact us at cbamcarbon.queries@fastmarkets.com

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