

The Carbon Border Adjustment Mechanism (CBAM) proposal needs upgrading for chemicals

As carbon leakage risks for the EU chemical industry are set to increase, effective carbon leakage prevention remains essential for the chemical industry's transformation. A consideration of chemicals for CBAM would however require all of four conditions to be fully met so as to ensure equivalent carbon leakage safeguards as under ETS free allocation and indirect compensation.

The European chemical industry supports the EU Green Deal and has the ambition to become climate neutral by 2050. The sector is uniquely positioned at the heart of European manufacturing to contribute to realizing a climate neutral EU society.

Cefic welcomes the recognition, inherent in the proposal for a CBAM, of the need to safeguard the competitiveness of domestic industries. The chemical industry is already deemed at high risk of carbon leakage today given its high trade and energy intensities. This carbon leakage risk – which itself leads to a significant risk of investment leakage (see **chart 1**) – will further increase over the current 4th ETS trading period, as carbon costs increase and carbon leakage provisions (free allocation) gradually decrease. Continued, effective measures against carbon leakage are crucial to secure the massive investments in industry needed to achieve the climate transition.

Cefic believes that the CBAM proposal, if applied to the EU chemical sector, would require resolving four key issues, all of which are equally important to mitigate carbon leakage risks in the European chemical industry during the transition towards the European Union's carbon neutrality in 2050.

1. Indirect carbon costs

The chemical industry is energy- and capital-intensive. Chemicals are the biggest industrial energy consumer in Europe: important parts of the production are powered by electricity, where the power sector's marginal carbon emission costs are factored into the electricity bills of companies. These indirect emission costs contribute to a higher cost base for the European chemical industry and would increase the carbon leakage risk if they were not considered for the setting of the CBAM for competing imported products. This challenge will grow as electrification will play a critical role in reducing the sectors' direct emissions.

Solution: *Access to competitive, climate-friendly and abundant electricity is essential. The calculation of the level of the CBAM charge should reflect all current and forthcoming ETS-related carbon costs in products and particularly the expected rise in indirect carbon costs due to the electrification strategy of the EU. 2*

2. Covering full value chains avoid circumvention and collateral carbon leakage among our customers

Chemical industry value chains are complex and interlinked, involving all sectors of the economy (charts 2 and 3). A CBAM that covers only the upstream (base materials) part of a value chain - as envisaged for the sectors covered by the CBAM proposal - could be circumvented through the import of downstream products. This is a realistic concern, putting European upstream chemical production, and eventually the entire value chains, at risk of carbon leakage. This would send a discouraging signal to precisely those manufacturers who are preparing to reverse the recent EU investment downwards trend (chart 1) for a transformation of their European manufacturing sites towards a carbon neutral society.

The example of fertilisers – one of many important sectors of the chemical industry – which is included in the current Commission proposal, illustrates the complexity of and the need to include full value chains in designing CBAM. The only chemical product included is ammonia, the basis for most chemical products that contain nitrogen. CBAM-induced cost increases for ammonia (see charts 5 and 6) and nitric acid would affect domestic downstream production costs of hundreds of chemicals in the ammonia value chain, including polyamide, polyurethanes, amines and amides and other indispensable products and applications – none of which are proposed to be covered by a CBAM or by free allowances. This will weaken their competitive position and provide an incentive for an increase in imports of more downstream products in these value chains that would not be included in CBAM.

Solution: *To avoid the effect of a base materials focus resulting in value chain circumvention, CBAMs would need to apply along an entire value chain and not just the upstream sector(s). A CBAM should allow for a stepwise integration of chemical value chains, based upon fully meeting the conditions mentioned above. Cefic will support the Commission in analysing value chains and further develop carbon footprint methodologies where necessary to be able to separate value chains, and in defining specific timelines. Cefic already has done extensive preparatory work on this and stands ready to share the results with EU policy makers.*

3. Export competitiveness

The European chemical industry is an export champion (chart 7). It currently exports more than one third of its production outside Europe (chart 8), making the EU the biggest chemicals exporting region in the world with a €41bn trade surplus for chemical products. In order to avoid trade conflict from compromising this favourable position, it is important for the EU to actively drive international dialogue with its key trading partners and follow international trade rules. Phasing out free allocation as carbon costs increase will severely weaken EU chemical industry's competitive export position and put large parts of the sector and its value chains at a high risk of carbon leakage. This would be detrimental for the needed transformational investments which require ongoing profitability of European production sites.

Solution: *The European chemical industry needs provisions to ensure its EU exports can compete on extra-EU markets and keep EU sites profitable, ideally through continued free allocation or equivalent measures. A CBAM focusing on imports only would undermine also the domestic capacity utilization and competitiveness. Ensuring a WTO compliant CBAM will reduce the risk of retaliatory action in EU export markets.*

4. Feasible and effective functioning

The effectiveness and efficiency of CBAM depend on adequate rules and procedures for authorities and business. These will need to emerge in time to enable compliance of non-EU suppliers. This work includes

agreed parameters for embedded carbon in products (in the EU and internationally), effective verification instruments as well as customs implementation and recognition of third-country carbon pricing systems. It is also critical that stakeholders can contribute to developing effective and efficient measures

Solution: To identify possible challenges early, a stakeholder process involving customs, the proposed CBAM authority and industry would be helpful identifying bottlenecks regarding data availability, methodologies, adequate customs procedures, for which alternative approaches may need be explored.

In summary, Cefic believes

- As the risk of carbon leakage is set to further increase, EU policy needs to strengthen carbon leakage provisions as long as the asymmetry in global climate response makes this necessary. This is crucial to ensure the massive transformational investments needed for the industry to successfully meet the climate challenge flow to Europe. The current CBAM proposal is not sufficient in this regard.*
- In order to provide an adequate operating and investment framework for the chemical industry, the CBAM proposal would need to be amended towards a comprehensive solution (chart 9) resolving four key issues: the inclusion of indirect carbon costs, coverage of full downstream value chains, assurance of export competitiveness and a workable implementation are crucial.*
- Free and fair trade – of which Cefic remains a strong supporter – must be governed by WTO rules. The European chemical industry is closely interlinked internationally and relies on an agreed international trade order. Ensuring a WTO compliant CBAM will reduce the risk of retaliatory action in EU export markets. This requires greater international dialogue to ensure that key trading partners are fully informed of the EU plans and of the ways in which their imports will be treated under CBAM. For example, an agreed, standardized and product-specific methodology for calculating product carbon footprints needs to be developed, and potential for trade conflict minimised.*

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About Cefic:

Cefic, the European Chemical Industry Council, founded in 1972, is the voice of large, medium and small chemical companies in Europe, which provide 1.2 million jobs and account for 16% of world chemicals production.

Chart 1: EU27 loses about 60% of its original market share during 20-year period

EU27 share of global chemicals investment

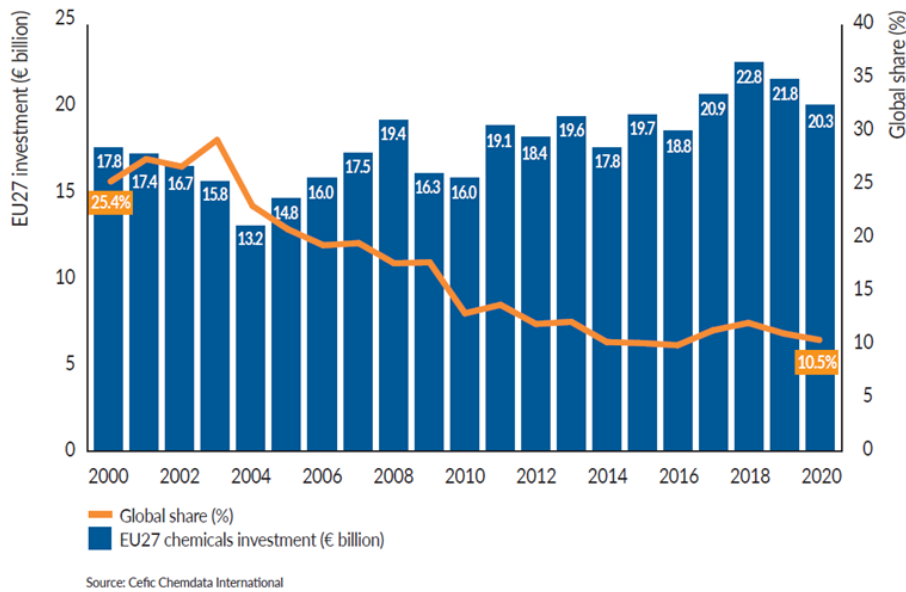
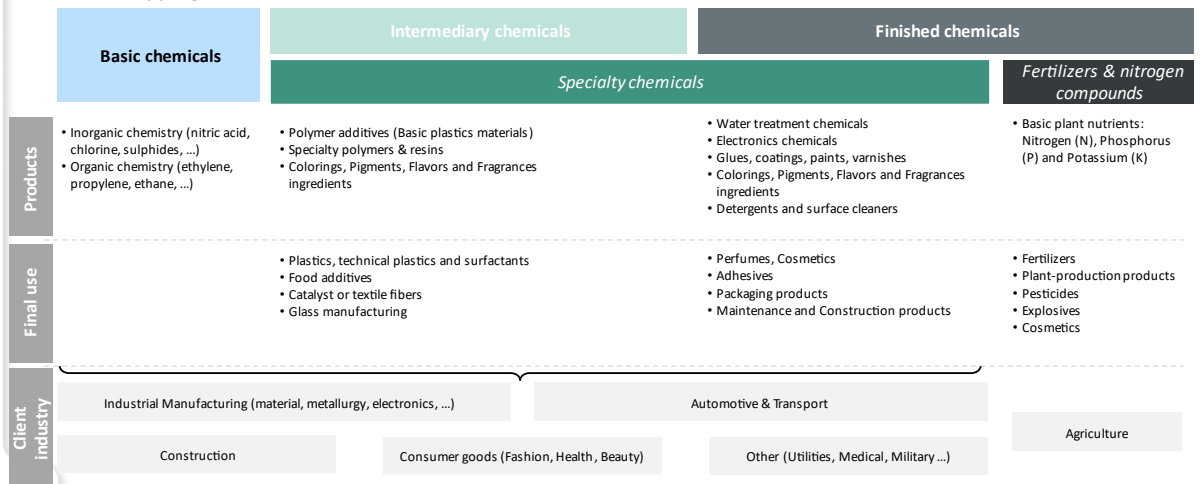


Chart 2: Chemical industry value chains

The chemical industry value chain is very diverse with many products supplying a wide variety of end applications

Product mapping



December 2021

Chart 3: Chemical industry interlinked with key economic sectors

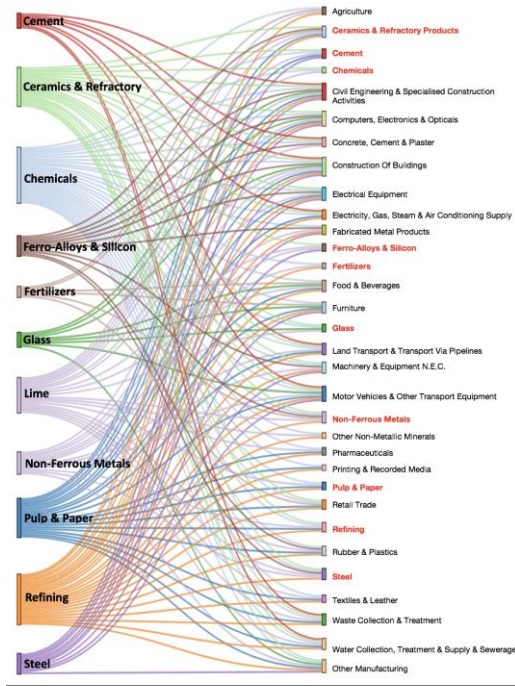
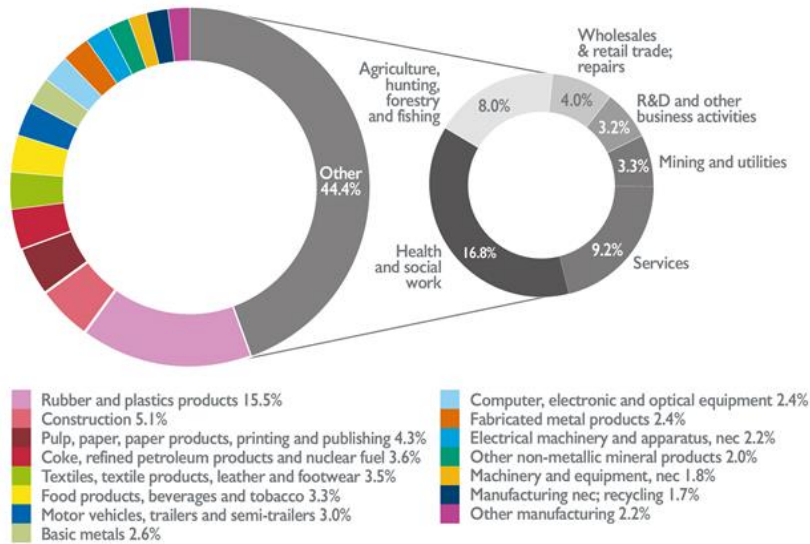


Chart 4: More than half of EU chemicals are supplied to the industrial sector

Customer sectors of the EU27+UK chemical industry (2017)



Sources: ICCA report 2019, Catalyzing Growth and Addressing Our World's Sustainability Challenges (Oxford Economics)

Unless specified, chemical industry excludes pharmaceuticals

Chart 5: PwC study scenarios:

Scenario description	CBAM product scope	CBAM emissions scope	Carbon cost	Free allowances
1a As-is situation	No CBAM	n.a.	€50/t	✓
1b To-be situation (2036) without CBAM and FA	No CBAM	n.a.	€150/t	✗
2 To-be situation (2036) with restrictive CBAM	Upstream → Downstream (Cost pass-through)	Direct Indirect	€150/t	✗
3 To-be situation (2036) with comprehensive solution (full CBAM or climate contribution)	Upstream → Downstream	Direct Indirect ¹	€150/t	✗

Carbon costs and FA apply to products in ETS scope

Carbon costs apply to products in ETS scope and are assumed to be passed-through onto end products

FA maintained in case of a climate contribution

Chart 6: For ammonia, the proposed restrictive CBAM would still increase the risk of carbon leakage while a comprehensive mechanism ensures level playing field

CBAM impact along the Textile (Clothes & Carpets value chain – focus on Ammonia

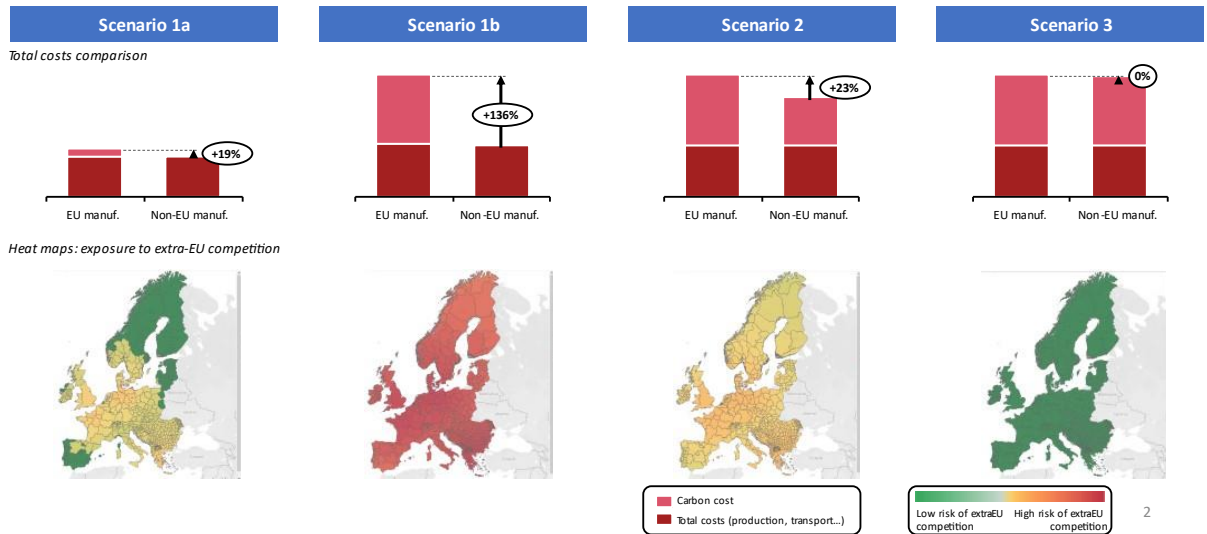
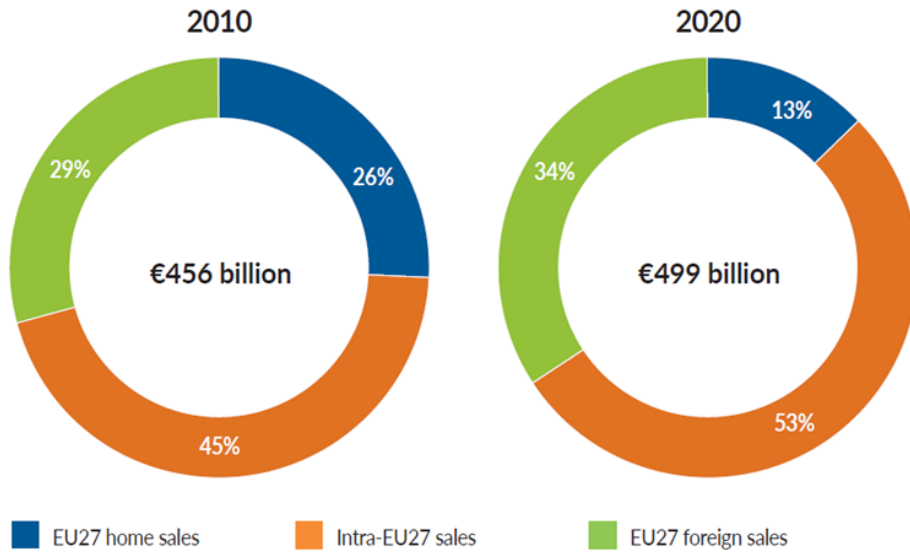


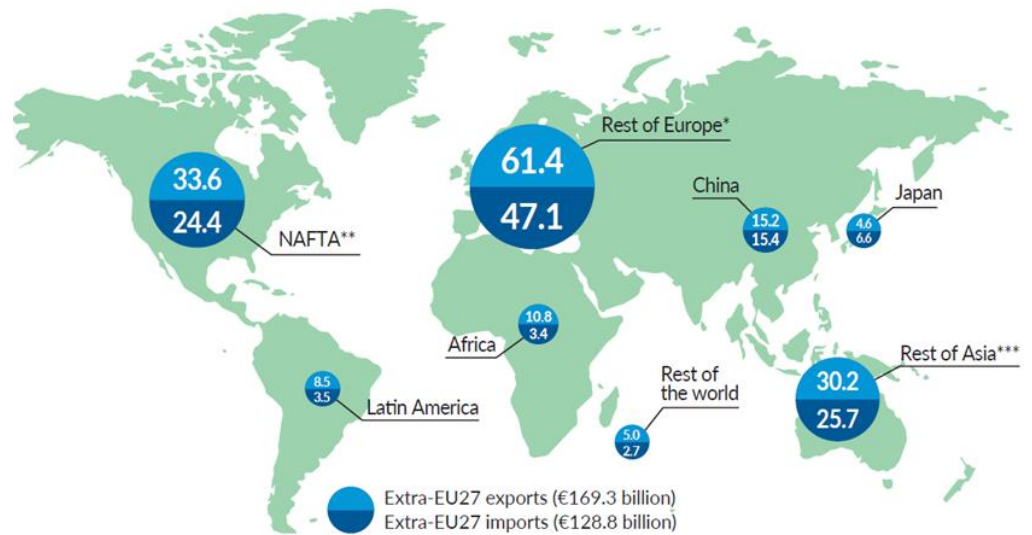
Chart 7: The European chemical industry is an export champion
EU27 chemical sales structure (%)



Source: Cefic Chemdata International

Chart 8: EU27 holds trade surplus with top competing markets

EU27 chemicals trade flows with major geographic blocs (2020)



Source: Cefic Chemdata International
 * Rest of Europe covers UK, Switzerland, Norway, Turkey, Russia and Ukraine
 ** North American Free Trade Agreement
 *** Asia excluding China and Japan

Chart 9: A comprehensive CBAM or equivalent policy tool can level the playing field for chemicals

- (1) As-is situation by 2036, considering the maintaining of free allowances as is
- (2) CBAM close to the current EC proposal, considering only direct emissions and upstream products – No free allowances
- (3) CBAM including all emissions and all products on the value chain (including downstream) – CBAM without free allowances or climate contribution

Future design should include all emissions

- The CBAM considered by the EC focuses on direct carbon emissions. As a CBAM should aim to create level playing field on European trade market, hence the need to fully replicate future ETS-related carbon costs onto imported products.
- Besides, considering direct emissions only would not fully encourage producers to look for the greenest possible production processes and energy sources, depending on local energy mix when generating electricity.

Future design should include downstream products

Complex value chains and products should also be taken into account: if 3rd country players only pay CO2 costs related to specific steps of the value chain, an incentive to relocate full value chains outside the EU will arise.

Future design should include exports

The considered design option considered by the EC supposes the end of free allowances (FA), which would increase carbon leakage related to exports. For a sample of 70 products, a full rebate on exports carbon costs would cost €Bn 1.2 and help preserve exports worth €Bn 70

