

THE EU STEEL INDUSTRY IS AT HIGH RISK OF CARBON LEAKAGE

Even though the steel sector (NACE 2410) is included in Annex I of the draft Guidelines as eligible for compensation, the study by ADE and Compass Lexecon (consultants' study) at page 33 classifies the sector only at medium risk. As we do not have access to the underlying data of this classification, we would like to make the following remarks, which indicate that also the steel sector should be considered at high risk:

- The indirect emission intensity (indirect emissions/Gross Value Added) of the steel sector (which in the consultants' study is defined as more relevant than trade intensity) is higher than three out of four sectors defined at medium-high risk (leather clothes, inorganic chemicals and pulp).
- Since the steel industry is very labour intensive, the GVA is highly affected by the labour costs. If labour costs are excluded from the calculation (i.e. the GVA is replaced by GOS), the steel sector has the third highest indirect carbon leakage indicator among the 8 eligible sectors.
- Among the 8 eligible sectors, the steel industry has the second lowest profitability indicator Gross Operating Surplus on Turnover) according to Eurostat.
- Steel is one of the most traded goods worldwide and, at the same time, the one where the large majority of anti-dumping investigations have been initiated by G20 countries¹. This is a clear sign of the fact that the sector is suffering from trade distortions at global level.
- As a result of the combined effect of increasing imports and decreasing exports, the EU became net importer in terms of quantities in 2013 and in terms of value in 2015. In 2014, the EU imported 26,3 million tonnes of steel while, in 2019 the imports were 34,7 million tonnes.
- The large number of anti-dumping and anti-subsidies cases clearly indicates that the EU steel sector is a price taker as the EU market price is inevitably affected by dumped imports even if there is no significant trading in official international exchanges.
- The anti-dumping and anti-subsidy measures are punctual measures limited to one product at the time and per country. They address unfair trade practices and aim only at re-establishing a level playing field but do not prevent those countries from exporting large quantities to the EU.
- Given the massive global overcapacities in the steel sector, once the injurious imports from a country are limited thanks to the anti-dumping and/or anti-subsidy measures, other countries can easily replace them (as widely occurred recently).
- In adopting ex officio the EU steel safeguard measures in reaction to the US 232 tariffs, the EU has recognised that anti-dumping and anti-subsidy measures were not enough to tackle the massive trade diversion deriving from US tariffs.
- However, the EU steel safeguard are exceptional, temporary measures to expire on 1 July 2021 (hence, they are not relevant for the EU ETS phase 4 under discussion in this assessment). They aim at mitigating the risk that trade flows are diverted from the US to the EU.
- Unfortunately, due to the design of the mechanism (i.e. reference volume of imports, liberalisation, carry over, etc.), in 2019 the EU steel safeguard measures have not prevented multiple, severe, market disruptions in the EU. Weak steel demand, increased protectionism worldwide (leading to trade diversion) and worsening overcapacities caused more than 15,000 jobs redundancies in 2019.
- The steel industry is highly affected the fuel-electricity exchangeability which causes the risk of increasing direct emissions (both within the EU and internationally) if indirect costs compensation is not effective.
- A [study by NERA Consulting](#) commissioned by EUROFER has clearly concluded that due to the market characteristics, the steel sector cannot pass through unilateral carbon costs without loss of market shares.

¹ Report on G20 Trade and Investment measures, OECD, November 2019

<http://www.oecd.org/daf/inv/investment-policy/22nd-Report-on-G20-Trade-and-Investment-Measures.pdf>

1. Introduction

The EU ETS Guidelines are an essential element of the legal framework that aims at preventing the risk of carbon leakage. In previous publications of the European Commission (e.g. 2015 Impact Assessment accompanying the post 2020 EU ETS Directive proposal, and 2018 Impact assessment accompanying the Communication “A Clean Planet for All”), the steel sector had been identified at highest risk of carbon leakage.

Financial compensation of indirect costs is essential for both the electric arc furnace (EAF), which has very high electro-intensity because it uses large amount of electricity to melt and recycle scrap, and the integrated route, which consumes electricity produced from the combustion of recovered waste gases generated unavoidably by the steel making process. Financial compensation for this case is explicitly mentioned in recital 13 of the post 2020 EU ETS Directive in order to preserve the incentive to recover waste gases, since free allocation is granted only partially for waste gases’ emissions.

2. Indirect carbon leakage indicator and indirect costs’ impact without labour costs

For consistency with the free allocation rules and the ETS Directive, the indirect carbon leakage assessment indicator (ICLI) is based on the multiplication between trade intensity and indirect emissions intensity (kg CO₂ indirect emissions/ € GVA). In this assessment, the steel sector (NACE 2410) has the second last value, which is then reflected also in the red-amber-green (RAG) assessment in the consultants’ study.

	Sectors	Indirect carbon leakage indicator	Trade intensity	Indirect emission intensity [kg CO ₂ / EUR GVA]	RAG rating
NACE		2013-2015	2013-2015	2013-2015	
1411	Manufacture of leather clothes	1,148	83,00%	1,383	Medium-high
2442	Aluminium production	1,060	35,20%	3,011	Medium-high
2013	Other inorganic basic chemicals	0,734	54,00%	1,359	Medium-high
2443	Lead, zinc and tin production	0,620	30,60%	2,025	Medium-high
1711	Manufacture of pulp	0,522	48,10%	1,085	Medium-high
1712	Paper and paperboard	0,412	27,80%	1,482	Medium
2410	Basic iron and steel and of ferro	0,363	25,70%	1,414	Medium
1920	Refined petroleum products	0,266	25,80%	1,031	Medium

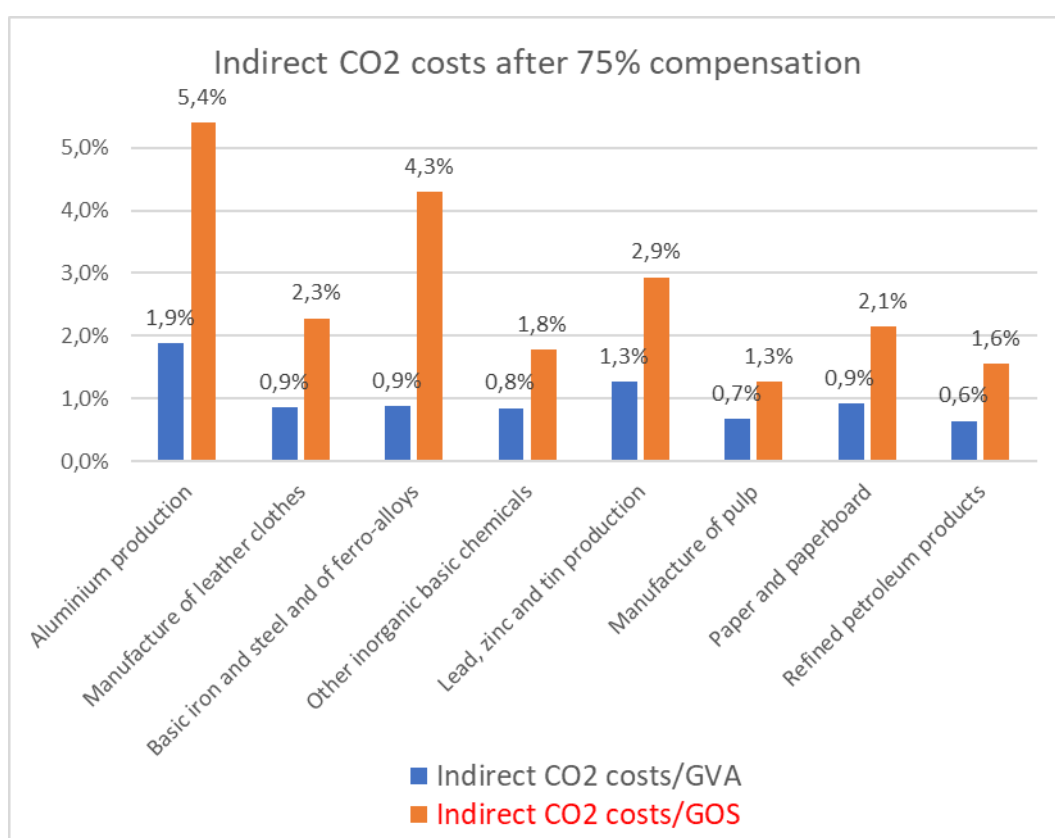
Source: consultants’ study

This assessment is highly influenced by the use of the GVA in the denominator of the indirect emission intensity. Since the steel industry is very labour intensive, the GVA is affected significantly by the labour costs. If labour costs are excluded from the calculation (i.e. the GVA is replaced by GOS), the steel sector has the third highest indirect carbon leakage indicator and the second highest indirect emissions intensity among the 8 eligible sectors.

	Sectors	Indirect carbon leakage indicator (GOS instead of GVA)	Trade intensity	Indirect emission intensity [kg CO ₂ / EUR GOS]
NACE		2013-2015	2013-2015	2013-2015
2442	Aluminium production	3,045	35,20%	8,649
1411	Manufacture of leather clothes	3,029	83,00%	3,650
2410	Basic iron and steel and of ferro	1,763	25,70%	6,859
2013	Other inorganic basic chemicals	1,543	54,00%	2,858
2443	Lead, zinc and tin production	1,437	30,60%	4,696
1711	Manufacture of pulp	0,980	48,10%	2,037
1712	Paper and paperboard	0,955	27,80%	3,436
1920	Refined petroleum products	0,641	25,80%	2,483

Source: recalculations based on consultants' study (GOS figures from Eurostat)

Similarly, the section 3.1.1 on aid intensity and degressivity of the consultants' study assesses the impact of indirect costs (with a carbon price of 25€/t) after 75% compensation taking into account the GVA. In such assessment, among the 8 eligible sectors, the steel industry has around the fourth indirect costs impact (after 75% compensation), which is comparable to the sectors with the lower impact (blue bars below). Yet, if labour costs are excluded from the denominator (i.e. the GVA is replaced by GOS), the steel sector have very clearly the second highest impact (orange bars below), with a large difference above the remaining sectors.



Source: recalculations based on consultants' study (GOS figures from Eurostat)

The above analysis is even more relevant if one considers the profitability of the eligible sectors. In fact, the steel sector shows the second lowest profitability indicator (Gross Operating Surplus/Turnover) among the 8 eligible sectors.

Gross Operating Surplus/Turnover	2013	2014	2015	2016	2017	Average 2013-17
C1920 - Manufacture of refined petroleum products	0,8%	-0,3%	3,7%	5,1%	5,0%	2,9%
C2410 - Manufacture of basic iron and steel and of ferro-alloys	2,4%	3,9%		5,1%	6,5%	4,5%
C2442 - Aluminium production	5,4%	5,5%	6,0%	6,6%	7,1%	6,1%
C2443 - Lead, zinc and tin production	6,9%					6,9%
C1712 - Manufacture of paper and paperboard	7,1%	9,0%	9,8%	10,1%	10,5%	9,3%
C1411 - Manufacture of leather clothes	10,3%	10,1%				10,2%
C2013 - Manufacture of other inorganic basic chemicals	10,8%	12,6%	14,6%	15,8%	8,6%	12,5%
C1711 - Manufacture of pulp	12,4%			14,0%	15,1%	13,8%

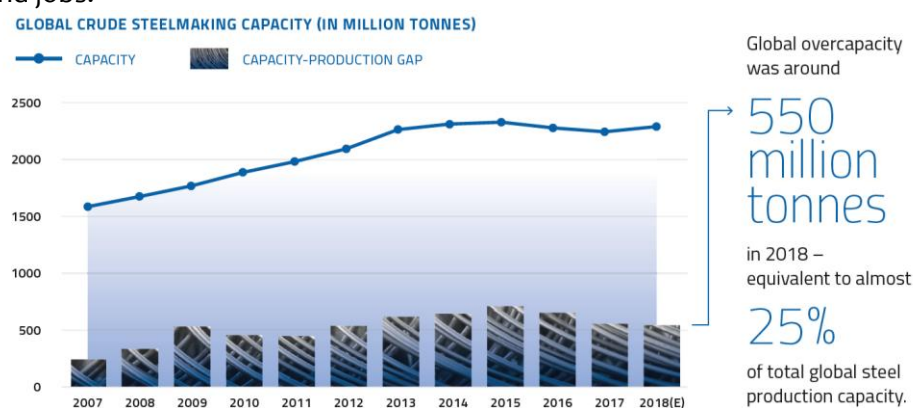
Source: Eurostat

3. Overcapacities: a structural problem of the steel industry

Faced with an unprecedented crisis generated by the trade spill overs of Chinese excess capacity, the EU activated its trade defence tools to defend EU industry from unfair trade for a total of 25 trade defence measures. However, these efforts address the effects of global overcapacity on trade – not its root causes.

To that effect, the EU led the December 2016 creation of **the Global Forum on Steel Excess Capacity**, bringing together 33 economies – all G20 members plus interested OECD countries.

The global surplus in steelmaking capacity has slightly decreased since the Forum's creation but in 2018 is still more than 500 million metric tonnes, an alarmingly high-level equivalent to one quarter of the world's total capacity. This structural surplus floods world markets as soon as there is a cyclical downturn – with yet again a damaging impact on the steel sector, as well as related industries and jobs.



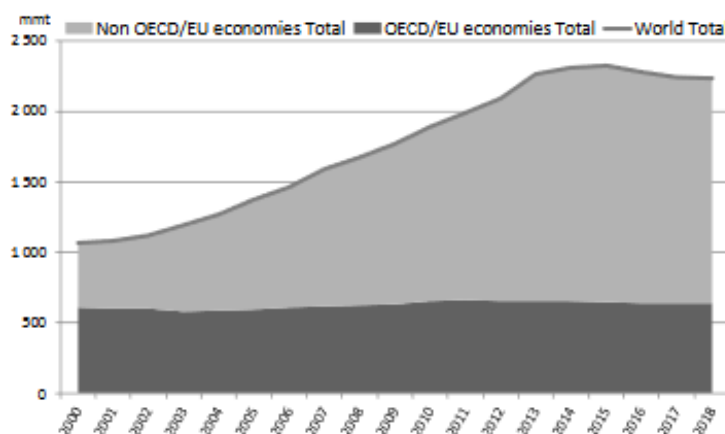
Source: OECD

On 26 October 2019, the Ministerial meeting of the Global Forum on Steel Excess Capacity had to take a decision on the renewal of the Global Forum's three-year mandate. On that occasion, there was an overwhelming support by members to continue working to address the persistent global excess capacity plaguing the global steel sector. However, China was the only country that chose not to join the consensus and hence decided to step out of the Forum. The Global Forum welcomed China's efforts to reduce capacity, but equally identified the need for further reductions and the elimination of subsidies causing overcapacity, underlining that these actions are essential to prevent another major global steel crisis. Despite China leaving, the platform remains open to all interested OECD and G20 members, which continue to be invited to join discussions. **However, without China – producing more than half of the world's steel - the effectiveness of the Global Forum is seriously undermined.**

The latest available information (as of 31 December 2018) suggests that global steelmaking capacity (in nominal crude terms) remained nearly unchanged in 2018, following declines in 2016 and 2017. However, information on announced investment projects suggests that, globally, 87.8mmt of gross capacity additions are currently underway (mainly in Asia and middle East) and could come on

stream during the three-year period of 2019-21. An additional 22.4 million tonnes of capacity additions are currently in the planning stages for possible start-up during the same time period.

Figure 1. Evolution of crude steelmaking capacity in OECD/EU economies and non OECD/EU economies



Source: OECD, Latest developments in steelmaking capacity, July 2019

<https://www.oecd.org/industry/ind/recent-developments-steelmaking-capacity-2019.pdf>

4. Trade defence measures

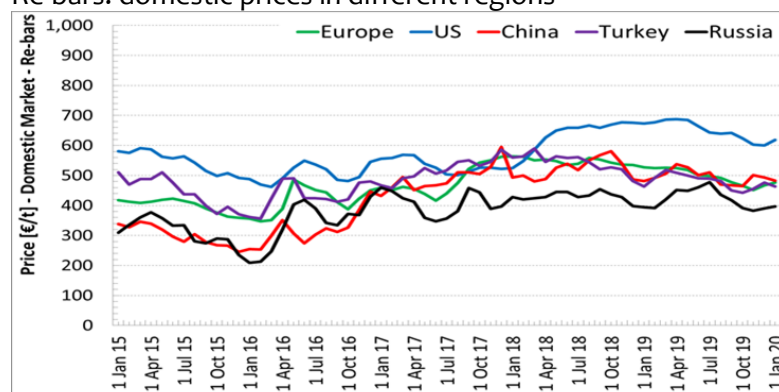
According to the last OECD Report on G20 Trade and Investment Measures, since 2017, metal products accounted for the largest share of initiations (by G20 members) of anti-dumping and countervailing investigations across the reporting periods (July-December 2017; January-June 2018; July-December 2018 and January-June 2019).

The metal's sector accounted for a total of 102 anti-dumping initiations from the second half of 2017 to the first half of 2019. Overall, steel products (HS chapters 72 and 73) accounted for the large majority of these investigations (76 out of 102) –75%².

While steel is a highly-trade good, it is also the one which is subject to the highest amount of anti-dumping measures, clearly showing that the sector is suffering from trade distorting practices.

The large number of anti-dumping and anti-subsidies cases clearly indicates that the EU steel sector is a price taker as the EU market price is inevitably affected by dumped imports. This is also confirmed by the close relationship between steel prices in the EU and in other regions (see graphs below). Most importantly, such relationship remains very close also when trade measures are adopted, clearly indicating that the EU steel market is constantly affected by the global dynamics.

Re-bars: domestic prices in different regions

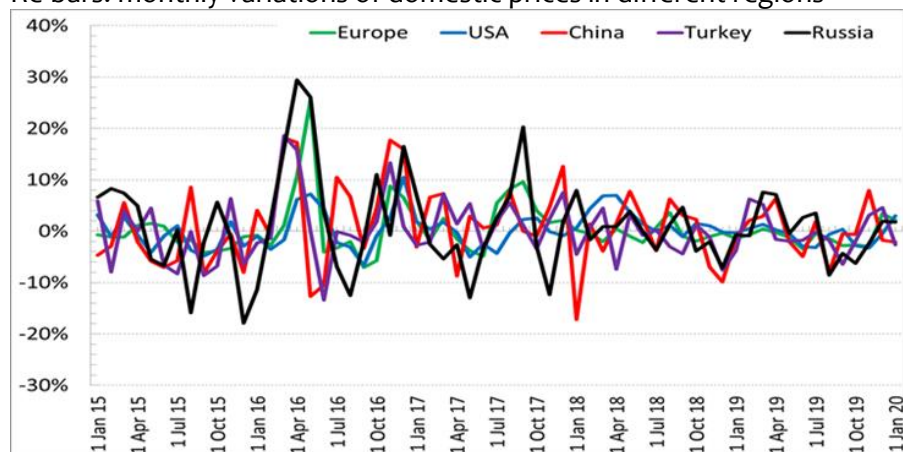


Source: SBB; Indices on Re-Bars, domestic markets; qualities normalised to B500B/C/similar; ex-works/stocks

²Reports on G20 Trade and Investment measures, OECD, November 2019

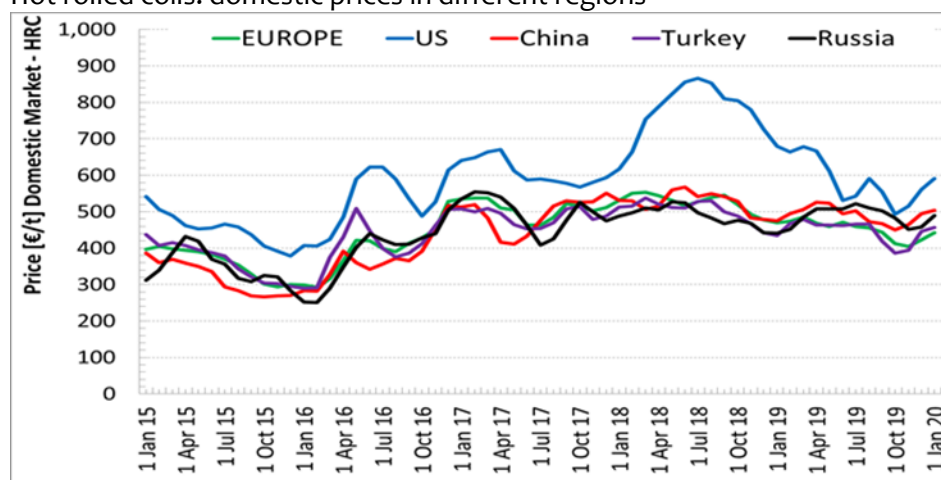
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Re-bars: monthly variations of domestic prices in different regions



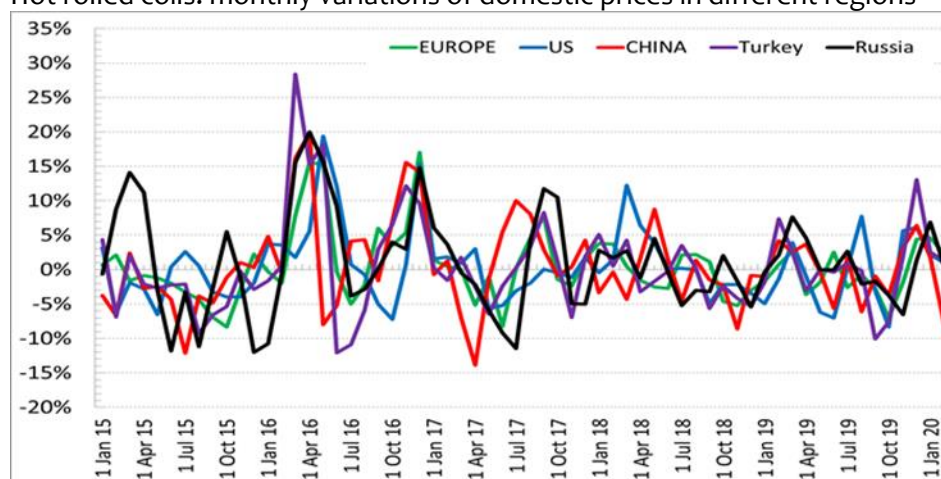
Source: SBB; Indices on Re-Bars, domestic markets; qualities normalised to B500B/C/similar; ex-works/-stocks

Hot rolled coils: domestic prices in different regions



Source: SBB; Indices on HRC, domestic markets; qualities normalised to B500B/C/similar; ex-works/-stocks

Hot rolled coils: monthly variations of domestic prices in different regions



Source: SBB; Indices on HRC, domestic markets; qualities normalised to B500B/C/similar; ex-works/-stocks

a. Anti-dumping and anti-subsidy duties: a punctual reaction to unfair trade practices

While the massive overcapacities in the steel sector are clearly a structural issue which will not be solved in the short term (especially with China stepping out of the Global Forum), trade defence measures are punctual, specific measures, which are limited to a precise product scope and to some specific countries.

Anti-dumping/anti-subsidy measures can be put on imports of specific products if the Commission's investigation justifies it. When it comes to anti-dumping, the Commission's investigation checks if:

1. There is dumping by the producers in the country/countries concerned;
2. The European industry concerned suffers 'material injury';
3. There is a causal link between dumping and injury;
4. Putting measures in place is not against the European interest (hereafter Union interest).

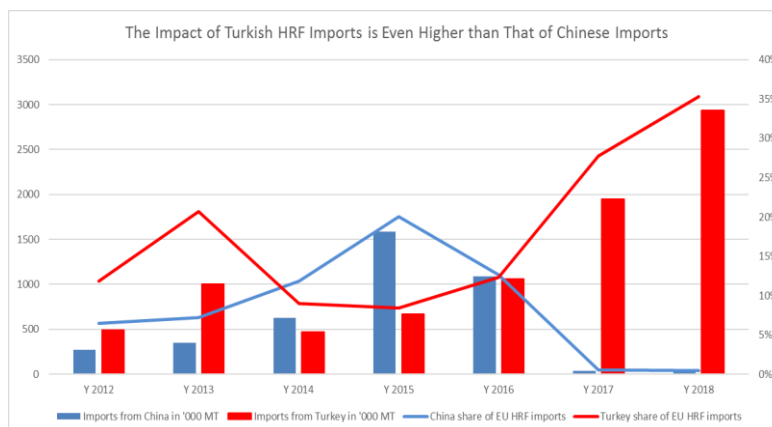
It is only when **all four conditions** are met that the Commission may put anti-dumping measures in place. As mentioned in point 4, in its evaluation, the Commission assesses whether measures in place don't harm the European interest. This is not a mandatory provision under the WTO Anti-Dumping Agreement. In fact, the European Union's legislation contains certain provisions which could be defined as "WTO plus", meaning that they are not mandatory under WTO law. Two examples are: the Union interest and the lesser duty rule (LDR). With regards to the LDR, it is worth noting that the jurisdictions which apply it can decide to impose duties lower than the margin of dumping when these are sufficient to remove injury.

For the above-mentioned reasons, it seems clear that trade defence measures are last resort tools. **The aim of the European Commission is always to struck a balance between domestic industry, importers and users. The reason why the EU imposes those measures is simply to seek a level playing field and tackle unfair trade practices, while considering the interest of the EU as a whole.**

The effectiveness of anti-dumping and anti-subsidy duties can be undermined by the fact that if the imports of a certain product from a certain country decrease following the imposition of the duties, it is not always the case that EU producers will benefit from it. In fact, in a situation of massive overcapacities, the market share that China (and/or other countries whose products are subject to trade defence measures) used to hold has often been replaced by other exporting countries.

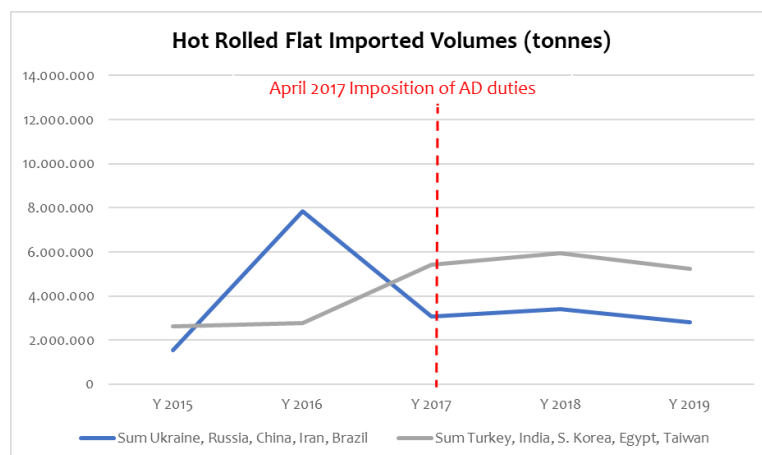
Some examples can be found below:

- Hot Rolled Flat (HRF): The recent surge of Turkish imports is higher than that of Chinese HRF imports back in 2015-2016 when the EU imposed dumping duties on Chinese based on a threat of injury.



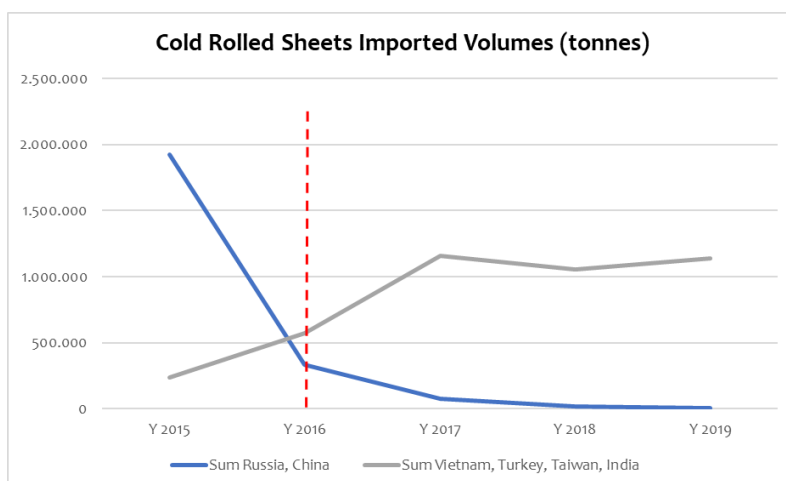
Source: Eurostat

- Hot Rolled Flat (HRF): similarly, the imposition of AD duties on Ukraine, Russia, China, Iran and Brazil was followed by a surge of imports from other countries, notably Turkey, India, South Korea, Egypt and Taiwan.



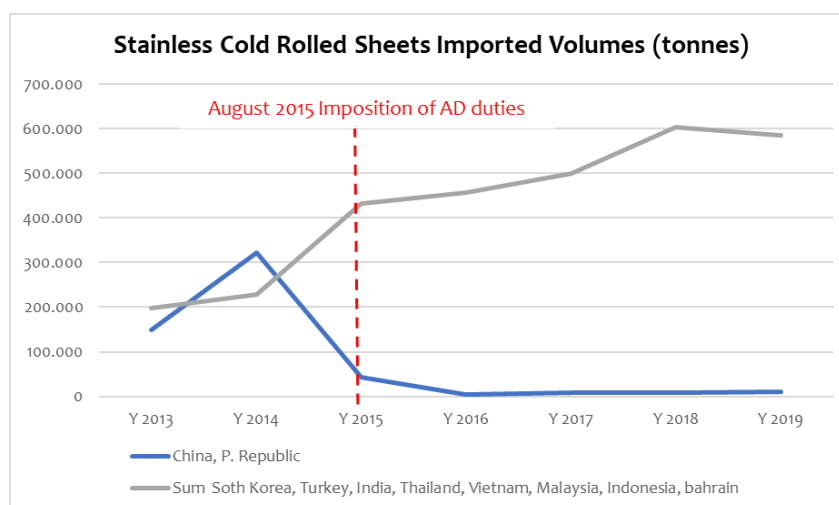
Source: Eurostat

- Cold Rolled Flat: if imports from Russia and China sharply decreased after the imposition of anti-dumping duties, new countries (which were not exporting significant volumes back in 2015) have increased their exports to the EU after 2016.

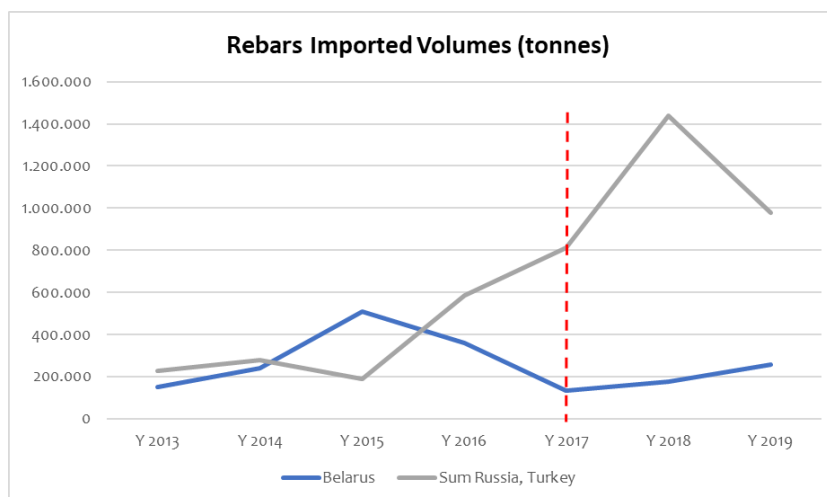


Source: Eurostat

- A similar consideration can be made for Stainless Cold-Rolled Flat and Rebars.

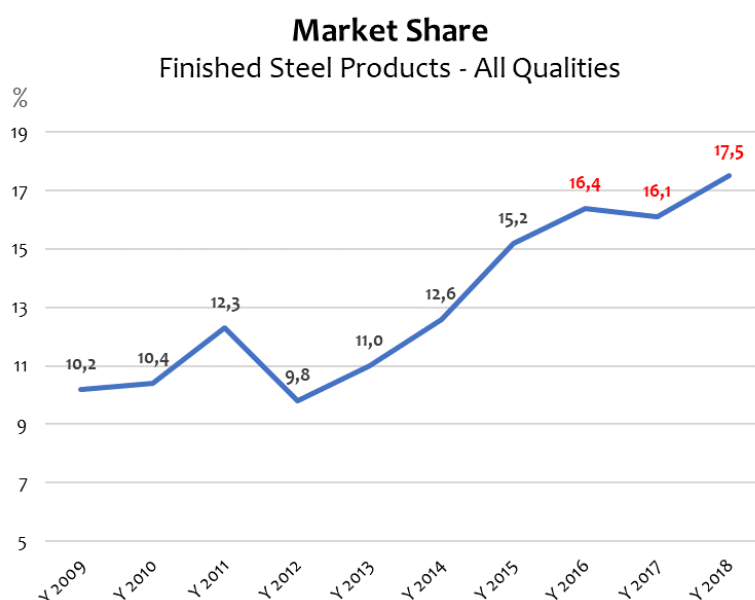


Source: Eurostat



Source: Eurostat

- The import market share of all finished steel products in 2018 was higher than in 2016.



Source: Eurostat

b. EU Steel Safeguard Measures: a temporary solution to exceptional circumstances

The EU has reacted to U.S. 232 measures by introducing safeguard measures to defend the domestic industry by imposing provisional measures in July 2018 and definitive measures in February 2019: in doing so, the Commission assessed that anti-dumping and anti-subsidy measures were not sufficient to address the huge import increase deriving from trade diversion.

The safeguards are a justified trade policy response to import surges caused by external factors. The definitive measures cover 26 steel product categories and are **expected to remain in force for three years, hence till 1 July 2021. Hence, they are not relevant for the EU ETS phase 4 under discussion in this assessment.**

When imposing the EU steel safeguard measures, the Commission recognized that the EU steel industry “is still in a fragile and vulnerable position” and considered that traditional import flows **should have been maintained as far as possible**. The measures are indeed aimed at tackling the trade diversion following the imposition of the US measures, not to close the EU market. While the

US imposed a 25% tariff from the first tonne without granting duty-free volumes to the European Union, the Commission decided to apply the 25% duty only to imported quantities above a reference historical level because it considered that, with safeguard measures established under the form of a **Tariff Rate Quota**, effective competition between imports and the Union industry would have been maintained, and that the risk of general price increases and of any shortage would have been avoided (Recital 136 of Commission Implementing Regulation (EU) 2019/159 of 31 January 2019 imposing definitive safeguard measures against imports of certain steel products).

How does the EU steel safeguard work?

- The quota of imports without the 25% duty is based on the average volume data from 2015-2017. This quota increased by 5% in February 2019, 3% in July 2019 and is scheduled to increase by another 3% in July 2020. **This expansion of the quota size is independent of the growth of the overall EU steel market.**

The quota structure takes the form of a set of tariff-rate quotas, based on the average volume of traditional imports over 2015-17 plus 5%. It is important to stress that this 5% increase which occurred in February 2019 is an adjustment the EU has foreseen, but which is not mandatory under WTO rules (unlike the liberalisation). The key assumptions underlying the 5% increase in quota volumes in February 2019 were that consumption was likely to experience double digit growth and that, accordingly, the Union industry was unlikely to suffer serious harm if imports increased by slightly more than 4%. This assumption of buoyant demand and growing consumption was based on a claim by users that EUROFER thought unrealistic at the time. Unfortunately for the sector, users' claims were unfounded and the market has not grown at all as EUROFER had expected since the beginning of 2019:

EU Real Steel Consumption (year-on-year) (%)	Q3 2019	Q4 2019	Q1 2020	Q2 2020
January 2020 ³	-1.6%	-2.5%	-2.2%	-0.7%

- Only once the quota is exceeded, a 25% tariff applies to other imported products, with major traditional steel importers retaining their own country-specific quotas.
- All other countries are assigned to a product-specific, 'residual quota' pool. In contrast to the country specific quotas, this residual quota is divided into quarters.
- Developing countries that have less than 3% import share are excluded from the measures while their volumes are counted in the average 2015-17 quota levels and are available to the included countries and thus artificially increase the quota even further).

Imports of stainless-steel flat products from Indonesia were originally exempted from measures as Indonesia is considered a "developing country", and imports were below the 3% threshold. This however changed quickly. At the time the Commission's definitive regulation was published, Indonesia had already largely exceeded by far the 3% threshold (28.5% for SSHR and 9% for SSCR). In the future, the same situation might occur with other countries which have declared themselves as "developing".

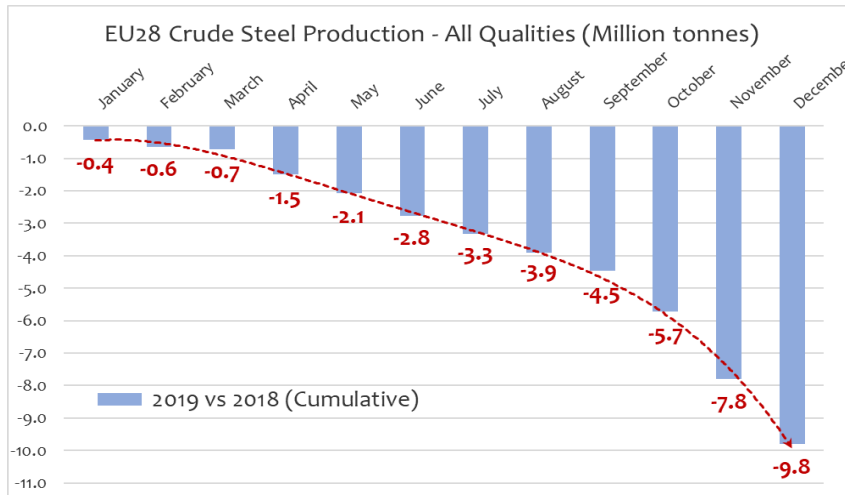
- When a quarterly quota is under-utilised, the volume is rolled over into the next quarter to avoid shortages. Hence, in the context of stagnating demand, historical volumes can be

³ EUROFER Economic and Steel Market Outlook 2020-2021, January 2020, <http://www.eurofer.org/Issues%26Positions/Economic%20Development%20%26%20Steel%20Market/REPORT%20-%20Economic%20and%20Steel%20Market%20Outlook%20-%20Quarter%201,%202020.pdf>

easily shifted and used by importers as soon as EU demand resumes, thus gaining further market shares.

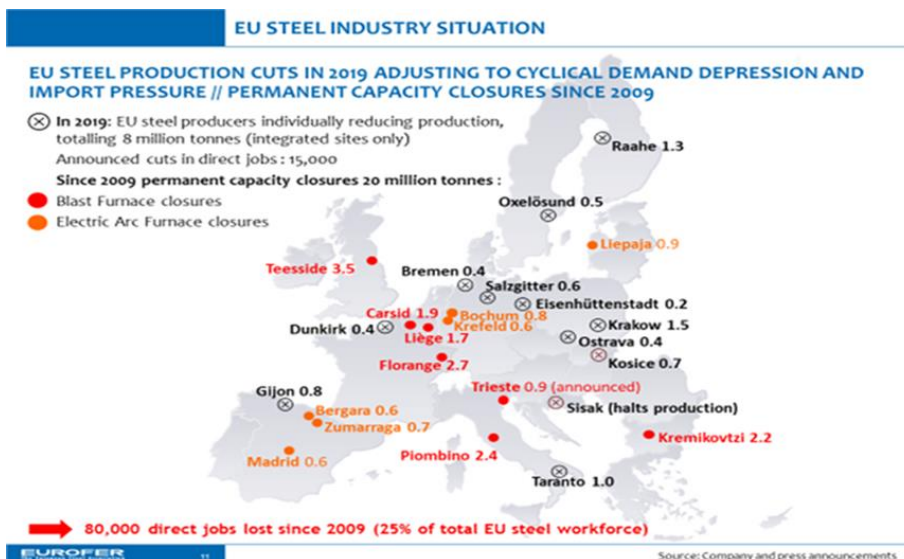
Despite the presence of the EU steel safeguard measures, multiple market disruptions and production cuts have occurred in 2019 in European facilities, as indicated below:

- EU crude steel production in 2019 decreased by 9.8 million tonnes compared to 2018 (-6% y-o-y). From January to June 2019 the decrease was -2.8 million tonnes (averaging -465 thousand tonnes/month, -3% y-o-y). From July to December the decrease was -7 million tonnes (averaging -1.2 million tonnes per month, -9% y-o-y).



Source: EUROFER

- Steel production cuts have occurred throughout the EU market in 2019:



Source: EUROFER

5. Increased protectionism worldwide

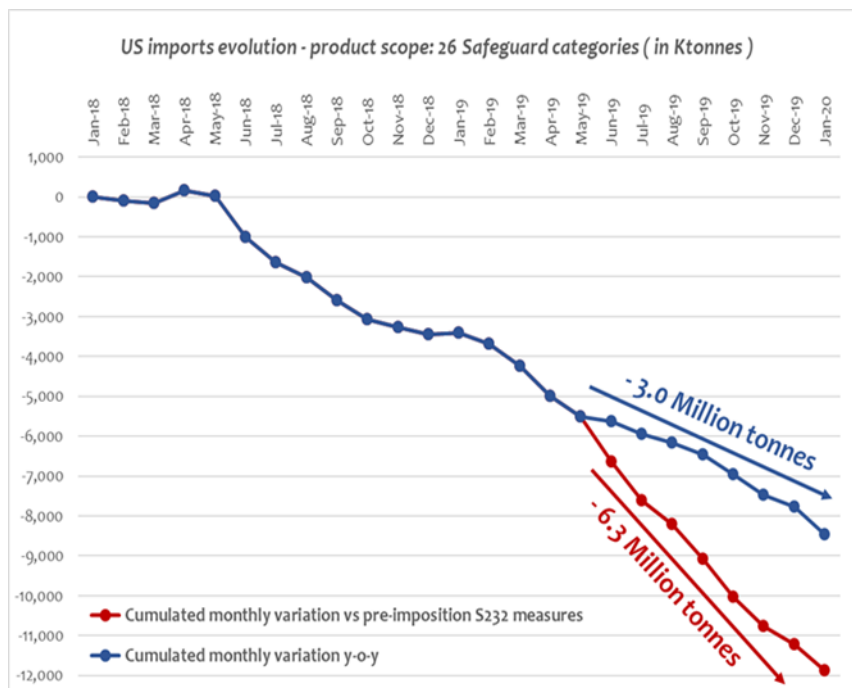
Third countries' trade restrictions have increased since the imposition of the EU definitive safeguard measures, increasing the risk of trade diversion to the weakened European market:

- Threats of the U.S. President to double again the 25% tariff on Turkish steel imports illustrates the extreme volatility in the implementation of the Section 232 policy on

steel – and the unpredictability of U.S. trade policy (which is itself a source of deflection).

- Following Mexico's exclusion from the U.S. import tariff, the U.S. DOC has now initiated a new U.S. anti-dumping investigation on certain rebar to address circumvention of existing duties on general rebar.
- In October 2019, the Gulf Cooperation Council initiated a steel safeguard investigation covering flat and long carbon steel.
- Mexico extended in September 2019 its temporary import tariff of 15% to last through 2024.
- Turkey increased certain steel import tariffs from 10% to 30% (April 2019).
- Malaysia imposed anti-dumping duties on coated sheet from China and Vietnam (March 2019).
- Morocco launched a steel safeguard (May 2019).
- India imposed provisional anti-dumping duties on imports of coated flat steel from China, South Korea and Vietnam (July 2019).
- Vietnam initiated an anti-dumping investigation on cold-rolled coil imports from China (September 2019).
- Indonesia initiated an anti-dumping investigation on imports of coated sheet from China and Vietnam (August 2019) and an anti-dumping investigation on imports of stainless steel cold-rolled flat products from China and Malaysia (October 2019).
- Egypt imposed safeguard tariffs on rebar and wire rod (Oct 2019).
- China imposed anti-dumping duties on imports of stainless steel hot-rolled sheets and strips from the EU, Japan, South Korea and Indonesia (July 2019).
- Malaysia imposed definitive antidumping duties on rebars from Singapore and Turkey (January 2020).
- Malaysia imposed definitive antidumping duties on cold-rolled nonalloy steel from China, Japan, Korea, and Vietnam (December 2019).
- India initiated a countervailing duty investigation on flat products of stainless steel from Indonesia (October 2019).
- Thailand initiated an antidumping investigation on HDG cold-rolled painted steel (October 2019).
- Vietnam imposed definitive antidumping duties on pre-painted steel sheets and strips from China and Korea (October 2019).
- Canada initiated an anti-dumping investigation on imports of corrosion-resistant flat products from Turkey, the United Arab Emirates, and Vietnam (November 2019).

Moreover, U.S. steel imports took a nosedive after June 2019. From June 2019 to January 2020, imports were 3.0 million tonnes lower than the same period in the previous year, and 6.3 million tonnes lower than the same period before the imposition of the Section 232 import tariff. This material has to go somewhere – but it is increasingly blocked from third countries by TDIs. Increased exports to the EU are therefore likely. This is a worsening of the situation since the period considered in the First Review.



Source: US International Trade Commission

6. Abatement potential and fuel and electricity substitutability

The last two parameters of the RAG assessment are the abatement potential and the fuel electricity substitutability. Due to the high relevance of energy costs, steel production is very energy efficient and very close to thermodynamic limits. Hence, it has very limited abatement potential.

With regard to the fuel-electricity substitutability, the consultants' study (page 77) states: "To determine the overall RAG rating, we consider first if there is variability between undertakings on fuel used for production. If there is no variability, then there is no risk on this criterion. If variability exists, the risk on the fuel and electricity substitutability criteria only exists if the sector is included on the Carbon Leakage List for Phase IV, i.e. the sector receives compensation for its direct emissions. If the RAG score is Red for the fuel and electricity substitutability, then the overall RAG rating performed on the previous three criteria will be increased to a higher score reflecting a higher risk of carbon leakage". On this point, table 7 (page 76) of the consultants' study does not seem fully consistent as it attributes a green category to a sector with high substitutability in case compensation was granted in the past. In this way, a sector like steel has its RAG assessment downgraded at a lower risk. Yet, since this is a forward-looking assessment, it should consider the situation where a sector with high substitutability would not receive compensation in the future, in which case its overall RAG rating should be increased.

In the case of steel, the substitutability between fuel and electricity can manifest in different forms, notably:

- Firstly, within the electric arc furnace (EAF), where fuel-electricity substitutability has been recognised in the scope of the carbon and high alloy steel ETS benchmarks. Insufficient compensation of indirect costs would risk increasing fuel consumption, hence direct emissions.
- Secondly, between the EAF route and the integrated route, in particular if the international dimension is taken into account. Insufficient compensation of indirect costs would undermine the competitiveness of EU EAF producers against integrated route producers in third countries that still produce long products that in the EU are largely manufactured in EAF. That would cause increase of total emissions at global level.

CONTRIBUTION TO THE PUBLIC CONSULTATION ON

COMPENSATION OF INDIRECT CARBON COSTS IN THE POST 2020 EU ETS

OUR KEY MESSAGES

- Several elements of the draft text (e.g. state aid intensity limited at 75%, exclusion of sectors in the steel value chain such as industrial gases, mining of iron ores and tubes) undermine the effectiveness of the provisions to prevent the risk of carbon leakage because they result in a very low level of compensation (up to less than 50% of the actual indirect costs).
- If the default aid intensity is not increased to **100% of the benchmark**, the possibility for member states to grant compensation beyond 75% is an important step to reduce indirect costs to eligible sectors.
- The additional compensation should be set so that indirect costs are capped at **0.5% of the GVA and should be open to all eligible sectors** and not restricted only to some of them. Furthermore, it should be accessible to both the electric arc furnace (EAF), which uses large amount of electricity to melt and recycle scrap, and the integrated route, which consumes electricity produced from the combustion of recovered waste gases generated unavoidably by the steel making process.
- Similarly to the allocation of free allowances to the heat consumer under the rules on free allocation for the direct emissions, the consumption of **industrial gases** (e.g. oxygen, hydrogen, etc.) should also be considered as eligible for financial compensation when it occurs in a sector that is exposed to indirect carbon leakage such as steel and **state aid should be granted to the exposed sector**.
- Sectors belonging to the steel value chain (**mining of iron ores and seamless pipes**) **need to remain eligible** for compensation since they are already recognised at risk of carbon leakage in phase 3 and they contribute to the carbon leakage exposure of the steel industry.
- The proposal of **splitting existing regions contradicts the political objective of linking more the national energy markets**. Furthermore, the overly strict methodology for defining regional areas (1% price divergence in significant number of hours per year) does not capture the reality of energy markets where the emission pass through factor is influenced by neighbouring member states due to interconnections. Hence, the **existing regional areas should be maintained**.
- **Compensation should not be made conditional** because it does not distort incentives for energy efficiency investments, **since it is based already on very strict benchmarks**. If now state aid is made conditional to additional measures to be taken by the company, de facto it is not anymore a (partial) reimbursement of incurred costs as it requires additional costs to the company.
- The **fall-back benchmark** (80% of reference electricity consumption) **should not be reduced** further, since it entails already a major reduction of aid.
- The steel industry (NACE code 2410) is recognised as eligible for indirect costs compensation in the draft Guidelines but the consultants' study classifies the sector only at medium risk. Even though there is no different treatment, we are providing evidence which indicates that **steel is at very high risk of carbon leakage**.

Introduction

The EU ETS Guidelines are an essential element of the legal framework that aims at preventing the risk of carbon leakage. In line with the spirit and wording of the EU ETS Directive, the ultimate objective of both free allocation and indirect costs compensation is to avoid undue costs at the level of best 10% performers in the EU. The Guidelines should be developed and implemented in all member states in view of reaching that objective. This is even more urgent now due to the higher carbon price compared to phase 3 and in view of the development and uptake of low carbon technologies that will increase substantially the (direct and/or indirect) electricity consumption in the steel sector.

Indicative impact assessment of the draft Guidelines on the steel sector

The steel industry (NACE code 2410) is recognised at risk of carbon leakage in the draft Guidelines and hence is eligible for compensation of indirect costs. Yet, several elements of the draft text undermine significantly the effectiveness of the provisions to prevent the risk of carbon leakage because they result in a very low level of compensation when compared with the actual indirect costs of a steel site. The following indicative assessment can be provided:

- 25% shortage due to state aid intensity capped at 75% (if the sector is excluded from the possibility of additional aid beyond 75%);
- 20% shortage due to benchmark (at least for the fall-back benchmark);
- 20-25% shortage due to exclusion of sub-sectors in the steel value chain (at least in the BF/BOF route) such as industrial gases (NACE code 2011) and mining of iron ores/sintering (NACE 0710).

As a result of the restrictions mentioned above, the compensation could cover even less than 50% of the actual indirect costs borne by a steel producer. Therefore, these elements of the draft Guidelines need to be improved in order to provide effective prevention of the carbon leakage risk.

Sectoral eligibility: sectors in the steel value chain (industrial gases, iron ores and tubes)

In addition to direct electricity consumption, the steel sector uses significant amounts of industrial gases (NACE code 2011) for unavoidable purposes such as oxygen which have an important electricity consumption embedded. On the basis of the data from the Best Available Techniques Reference document (BREF), the embedded electricity consumption is estimated at 24 kWh/t crude steel in the EAF route and 92 kWh/t in the BF/BOF route (which is around 20-25% of the total electricity consumption in BF/BOF route). The lack of compensation for the indirect costs linked to industrial gases further exposes the steel sector to carbon leakage risk. Therefore, similarly to the allocation of free allowances to the heat consumer under the rules on free allocation for the direct emissions, the consumption of industrial gases should also be considered as eligible for financial compensation when it occurs in a sector that is exposed to indirect carbon leakage such as steel and state aid should be granted to the exposed sector. Such treatment would be important in the context of the medium to long term transformation of the sector, whose breakthrough technologies will need large consumption of industrial gases like hydrogen.

Furthermore, it should be noted that also the NACE code 0710 (Mining of iron ores), which is eligible for financial compensation in the EU ETS phase 3, is very important for the steel sector as it is within the same value chain. Even though it has a different NACE code than steel making (NACE 2410), actually it covers the activity of sintering of iron ores that is performed in the integrated steel sites. Since it contributes to the overall exposure to the indirect carbon leakage risk of the steel industry, it is important that it remains eligible for the post 2020 period.

Finally, in the EU ETS phase 3 seamless steel pipes were also included in the list of eligible sectors as they are closely linked to the steel sector because they represent a very electro-intensive process similar to other hot/cold rolling processes. Therefore, they should remain eligible.

Default aid intensity and possibility for additional aid

The steel sector is highly exposed to carbon leakage risk linked to indirect costs and is unable to pass through unilateral regulatory costs without genuine risk of losing market shares. This risk is even more relevant in the context of much higher carbon prices compared to the ones experienced until 2017. Furthermore, affordable and competitive electricity prices are essential to facilitate the transition to breakthrough technologies which require even larger amounts of electricity. Therefore, it is important to set the aid intensity at 100% of the benchmark; any reduction of the aid intensity below the benchmarks undermine the effectiveness of the carbon leakage provisions as long as there is no comparable climate legislation in competing countries.

Even 100% aid intensity would not mean full compensation of indirect costs, as it would still be capped by the very strict benchmarks. For instance, in fall back benchmarks, it would still be reduced by 20% compared to the baseline electricity consumption; i.e. with the current 75% aid intensity level fixed in 2020, the installations in fall back may receive compensation only for 60% of the indirect costs (75% of 80%). This is far below the maximum aid intensity level according to EU state aid rules.

If the default aid intensity is not increased to 100% of the benchmark, introducing the possibility for member states to grant additional compensation beyond the default value is an important step to reduce indirect costs to eligible sectors. The additional compensation should be set so that indirect costs are capped at 0.5% of the GVA. This possibility should be open to all eligible sectors and not restricted only to some of them.

Furthermore, it should be accessible to both the electric arc furnace (EAF), which has very high electro-intensity because it uses large amount of electricity to melt and recycle scrap, and the integrated route, which consumes electricity produced from the combustion of recovered waste gases generated unavoidably by the steel making process. Financial compensation for this case is explicitly mentioned in recital 13 of the post 2020 EU ETS Directive in order to preserve the incentive to recover waste gases, since free allocation is granted only partially for waste gases' emissions. Therefore, if the option of granting additional aid beyond 75% is retained, it should consider not only the electro-intensity, but also the actual carbon leakage risk and the environmental purpose of the state aid (i.e. promoting the recovery of waste gases).

Finally, it should be noted that undertaking specific assessment need to take into account the actual specificities of the sites. The GVA of companies is highly dependent on their structure, including the configuration of the production steps where the higher share of value added is generated. Hence, a site assessment would also be necessary where appropriate. Furthermore, company-specific assessment on electricity consumption should not lead to unintended results in case energy efficiency measures that have been already implemented.

Conditionality

Compensation should not be made conditional on additional requirements. In fact, this kind of state aid aims at reimbursing partially the energy consuming sectors for the indirect costs passed on in the energy bill. If now state aid is made conditional to additional measures to be taken by the company (i.e. investments in energy efficiency or emission reductions and carbon free power purchase agreement,) de facto it is not anymore a (partial) reimbursement of incurred costs since it requires additional expenditure to the company. As the eligible sectors are acknowledged as being at risk of carbon leakage (on the basis of market characteristics, profit margins and abatement potential), the missed reimbursement would create the conditions for the materialisation of such risk, leading to an increase in global emissions.

Energy efficiency improvements are a must for industries with high energy costs in order to remain competitive. Compensation of indirect costs does not distort incentives for energy efficiency investments because it is still based on very strict benchmarks reflecting the best performance in the sector (and actually the state aid intensity does not even cover the full benchmark but only 75%

of it). Furthermore, the “incentive effect” is also preserved by the fact that the benchmarks will be updated during the phase 4, so that companies have further interest in improving performance, where technically possible.

Furthermore, the proposed conditionality requirements are actually linked to the implementation and enforcement of other pieces of legislation (notably the Energy Efficiency Directive and the Renewable Energy Directive). However, member states retain the possibility of adopting different instruments to promote energy efficiency and renewables in order to achieve the targets set in such legislation. Therefore, the conditionality requirements would overlap and possibly collide with different national measures.

Finally, the three proposed conditionality requirements present several specific limitations:

- The energy efficiency investments with a payback period of 5 years do not reflect the reality of business decisions in the steel sector, which are bound to a significantly shorter period. Furthermore, the draft text does not take into account early actions such as recent energy efficiency investments.
- The requirement to install an onsite renewable energy generation facility covering at least 50% of the electricity needs does not match with the very large energy consumption of industrial sites and the physical limits of such on-site generation. As an indicative example, an average electric arc furnace producing 700,000 tonnes of steel per year consumes around 450,000 MWh of electricity and an average integrated site producing 4 million tonnes of steel per year consumes around 1,800,000 MWh. Assuming an on-shore wind turbine with 3 MW installed capacity operating 2,000 full load hours/year, the electric arc furnace would need around 40 turbines to cover half of its electricity needs and the integrated site around 150 turbines. Considering the land requirements and also the regulatory restrictions to the instalment of such turbines, this conditionality requirement is not technically nor financially feasible, hence it cannot be achieved realistically by the eligible sectors.
- The requirement to invest at least 80% of the received state aid into investments to reduce direct emissions of the installation is not consistent with the scope of the Guidelines which are targeting indirect costs.

Emission factor and regional areas

As a matter of principle, the CO₂ emission factor must reflect the full indirect CO₂ burden, i.e. the actual CO₂ cost passed through into prices. The approach of using historical empirical data on the fossil emission factor in the relevant regional market should be maintained in order to ensure a consistent and stable framework. The calculation of this factor should be based on reliable and transparent sources in order to reflect the real costs faced by the industry. The proposal of splitting existing regions in more areas does not provide details on the underlying evidence and contradicts the political objective of linking more the national energy markets. Furthermore, the overly strict methodology for defining regional areas (1% price divergence in significant number of hours per year) does not capture the reality of energy markets where the emission pass through factor is influenced by neighbouring member states due to interconnections. Hence, the existing regional areas should be maintained.

Update of the fall-back benchmark

The draft guidelines do not indicate the default value of the fall-back benchmark. In phase 3, this was 80% of the reference electricity consumption. Since this represents a major reduction of aid, it should not be reduced further, otherwise the state aid would be insufficient to achieve its objective of avoiding the risk of carbon leakage. It should also be noted that the reference fall back benchmark in the free allocation rules for direct emissions is the process emissions benchmark, which is much higher than the electricity fall back benchmark (97% of historical process emissions) and most importantly has not been further reduced between phase 3 and phase 4.