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The Pending EU CBAM: *Quo Vadis* Switzerland?

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The intention of the EU to introduce a carbon border adjustment mechanism (CBAM) raises concerns among its trading partners fearing the loss of competitiveness in the EU market, should the measure apply to their exports. Switzerland, a major EU trading partner, has an advantage compared to many others: It has its own emissions trading scheme (ETS) in place, which due to the linking arrangements with the EU ETS results in the same carbon price for Swiss producers as for their EU counterparts. There seems therefore no need to adjust emissions costs at the border between the EU and Switzerland, and good chances for an exemption of Swiss exports from the pending EU CBAM. However, the exemption is unlikely to come without a condition: Switzerland would have to introduce its own CBAM to avoid the transshipment of other countries' carbon-intensive products through the Swiss territory to the EU. The article discusses the main conditions and constraints for the design of an effective Swiss CBAM that would need to balance between achieving environmental and economic objectives, while also remaining acceptable from a practical, legal, and political perspective. In designing its CBAM, Switzerland could follow the EU model and adjust it accordingly depending on the reaction the EU measure will provoke among stakeholders. Statements and recommendations on a CBAM design made in the article hold true, for the most part, also for other third countries.

Keywords: Carbon Border Adjustment, Emissions Trading, WTO Law, EU, Switzerland

1 Introduction

In December 2019, the EU Commission announced the EU Green Deal, a carbon-neutral growth strategy for 2050, which is based on an ambitious carbon emissions reduction target of 55% against the 1990 level to be achieved by 2030.[1] To meet this target, the EU needs to secure additional carbon reductions in the manufacturing, transport, construction, agriculture, and other economic sectors by taking additional measures that would put the EU economy on a low-carbon path and support sustainable development in general. To this end, the Green Deal contains a roadmap for changes in existing legislation, including carbon and energy taxation, emissions standards and other regulations that would stimulate emissions reductions and investments in low-carbon technologies. The related package of legislative proposals, called 'Fit for 55', has recently been adopted.[2] Besides the adoption of the EU climate law that formally sets the 55% reduction target, amendments have also been proposed in other EU climate policy-related acts, particularly the EU directive on emissions trading. The EU plans to extend its ETS to new economic sectors,[3] including shipping, and tighten the ETS cap on greenhouse gas emissions. It is expected that the more stringent carbon restrictions will result in a considerable increase in the carbon price in the EU market and consequently widen the gap between the climate action of the EU and climate actions of other countries.[4] Other things being equal, this will lead to a competitive disadvantage for EU producers bound by emissions reduction obligations *vis-à-vis* their foreign competitors not paying emissions costs.

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1 The European Green Deal, Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions, Brussels, 11 Dec. 2019.

2 *See* Press Release, *European Green Deal: Commission Proposes Transformation of EU Economy and Society to Meet Climate Ambitions* of 14 July 2021, https://ec.europa.eu/commission/presscorner/detail/en/IP_21_3541 (24 Aug. 2021).

3 While electricity generation, energy-intensive manufacturing industries like steel, aluminum, oil refinery, cement, paper, and chemicals, as well as aviation within the EU and EFTA borders are already covered by the ETS, other manufacturing sectors, as well as transport, construction, and agriculture are not yet.

4 Within the first eight months of 2021, in anticipation of the higher carbon restrictions, the carbon price in the EU has risen from less than 35 Euro in Jan. to close to 60 Euro in Aug.

The competitiveness issues are not new though. The EU has been constantly concerned about the risk of carbon leakage, a situation where carbon restrictions in its territory do not result in net emissions reductions because of the increase in emissions in countries without such restrictions.[5] Indeed, this can happen, if the EU producers decide to relocate their production to other countries to escape emissions costs or if they lose their market share to increased imports of cheaper carbon-intensive products from countries without carbon restrictions. It means that carbon leakage may result not only in the failure of the EU climate policy to reduce emissions but also in the deindustrialization of the EU economy. It is therefore no wonder that every time the EU revised its ETS by adopting a tighter cap on emissions, it also assessed the risk of carbon leakage among sectors.[6] Subject to these assessments, over the years, it has provided emissions allowances for free and compensated for an increase in indirect costs of emissions reductions to a significant number of energy-intensive and trade-exposed sectors where the risk of carbon leakage had been assessed as significant.[7] So far, the free allocation of emissions allowances has proved effective in preventing carbon leakage. Yet, it is unlikely to remain so in the future. Meeting the stricter emissions reduction target would require a considerable tightening of the ETS emissions cap in the next years.[8] Under such a tight emissions cap, there will likely be a shortage of emissions allowances available for free allocation to all EU producers that would need them.[9]

Being aware of these competitiveness problems of stricter carbon restrictions and projecting a shortage of emissions allowances that could be distributed for free, the EU is currently contemplating an alternative (or an additional) carbon leakage safeguard. In the Communication of the European Green Deal, the EU Commission referred to the existing differences in levels of ambition worldwide and stated that a CBAM would be needed for selected sectors to reduce the risk of carbon leakage and ensure that the price of imported products reflect their carbon content. On 14 July 2021, the EU Commission issued a proposal on an EU CBAM as part of its 'Fit for 55' legislative package.[10] The CBAM Proposal is currently awaiting the approval by the European Parliament and the Council.

2 The proposed design of the EU CBAM

As follows from the text of the Commission's CBAM Proposal, an EU CBAM will be imposed in the form of the extension of the EU ETS to imports in some sectors covered by the ETS. The sectors include electricity, cement, fertilizers, aluminium, iron and steel.[11] This will translate into the requirement to importers of goods from these sectors to surrender emissions allowances on importation in the quantity corresponding to emissions associated with imported products. This is to be done on a yearly basis according the 'CBAM declaration' submitted by the importer called 'the authorized declarant' to a competent authority of an EU Member State containing the information on the quantity of imported goods, their embedded emissions and the number of CBAM certificates corresponding to the embedded emissions of carbon dioxide (CO_2).[12] To avoid the distortion of the carbon price within the EU, the EU will keep a separate pool of emissions allowances, specially created for these purposes and called 'CBAM certificates', where the importers can buy them to place on their accounts and surrender in due course. Thus, unlike emissions allowances for EU producers, the importer emissions allowances would be untradable.

Embedded emissions in products other than electricity will be determined based on the actual emissions declared by the importer or, where actual emissions cannot be adequately determined, the embedded emissions will be based on default values. Default values will be set at the average emission intensity of the exporting country for each of the products covered by the CBAM. When reliable data for the exporting country are not available, the default values will be based on the average emission intensity of the 10% worst performing EU installations for that product.[13] A CBAM certificate will be purchased at an average price of EU ETS emissions allowances for the week preceding the importation. Certificates purchased and accumulated this way on the CBAM account of the importer over the year will have to be surrendered on 31 May of the following year. The CBAM proposal foresees a penalty equal to the excess emissions penalty for EU

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[5] OECD, *Climate Policy Leadership in an Interconnected World: What Role for Border Carbon Adjustments?* 7–11 (OECD 2020).

[6] Susanne Dröge, *Tackling Leakage in a World of Unequal Carbon Prices*, Climate Strategies (2009).

[7] Emissions allowances are distributed for free based on the benchmark for each product that rewards most efficient installations (the average level of emissions of the 10% most efficient installations).

[8] In the fourth phase of the EU ETS during 2021–2030 the total emissions cap is expected to be tightened by up to 5% per year to result in more than 40% of reduction in the emissions covered by the ETS. *See* Frank Watson, *Feature: EU Carbon Market to Move Into Fourth Gear from 2021*, S&P Global 22 Oct. 2020.

[9] Verena Graichen, Jakob Graichen & Sean Healy, *The Role of the EU ETS in Increasing EU Climate Ambition: Assessment of Policy Options*, SITRA Studies 161, Oct. 2019.

[10] *See* 'Proposal for a Regulation of the European Parliament and of the Council establishing a carbon border adjustment mechanism' (hereinafter 'the CBAM Proposal'), https://ec.europa.eu/info/files/carbon-border-adjustment-mechanism_en (24 Aug. 2021).

[11] *See* Annex I of the CBAM Proposal.

[12] Article 6 of the CBAM Proposal.

[13] *See* Annex III of the CBAM Proposal.

producers participating in the EU ETS for failure to surrender CBAM certificates. The penalty will be paid for each missing CBAM certificate that the importer should have surrendered by 31 May of each year.

However, the obligation to submit emissions allowances will become effective only after the end of the transition period that will last from 2023 till 2025. During the transition period, importers will not be obliged to submit emissions allowances and hence pay for the emissions but will just have to provide the information on emissions occurred during the production of imported products. They will have to report on a quarterly basis on the total quantity of imported goods, the total emissions embedded in the products, including indirect emissions (i.e. emissions from electricity, heating and cooling in the production process), as well as the carbon price due in the country of import origin which is not subject to an export rebate or other form of compensation on exportation.[14] This information called 'the CBAM report' will have to be independently verified by accredited verifiers and failure to provide the CBAM report will result in penalty.

The EU Commission's CBAM Proposal does not foresee a CBAM on exportation, for instance in the form of rebates of the costs of emissions allowances to EU exporters. In the transitional phase, the EU will postpone such rebates due to the legal uncertainty over such rebates on exportation discussed below. In the meantime, it will try to find other solutions to the competitiveness problem of EU exports.[15] Moreover, the free allocation of emissions allowances to domestic sectors most vulnerable to carbon leakage will continue, albeit in progressively decreasing amounts, till 2035. This implies the overlap with the CBAM on imports in those sectors, which are subject to the CBAM, thereby offering those sectors double protection from carbon leakage. To avoid such a double protection, the EU plans to deduct from the emissions allowance charge on importation a number of free allowances received by EU producers of like products.[16] Moreover, the emissions allowance charge will also take into account a carbon price paid in the country of import origin.[17] No charge will apply to imports from countries where the EU ETS applies or where a national ETS is formally linked with the EU ETS.[18]

Even though the main characteristics of the future EU CBAM have been unveiled, the design of the EU CBAM is not yet final. As the CBAM Proposal is pending approval by the European Parliament and the Council, it is possible that the EU CBAM will further be developed and slightly changed before it will be put in practice in 2023. But major changes are likely to occur after the end of the transitional period only. The CBAM Proposal foresees that before the end of the transitional period, the Commission will assess the possibilities to further extend the scope of embedded emissions to indirect emissions and to other sectors at risk of carbon leakage, as well as 'to goods further down the value chain and services that may be subject to the risk of carbon leakage in the future'.[19] The transition period will thus be used by the EU as a trial period for learning by doing and also for gathering the information on emissions abroad.

3 What the prospective EU CBAM means for Switzerland

The EU plan to introduce a CBAM has already raised grave concerns of EU trading partners.[20] Countries having a significant proportion of carbon-intensive production and no carbon price in place, such as Russia, China, India, Brazil, South Africa and Ukraine, are especially vulnerable to the effects of the CBAM on prices of their exports in the EU market.

The EU is by far the largest export market for Switzerland. The main question for Switzerland concerning the EU CBAM is whether Swiss exports will be subject to the EU measure. If yes, most vulnerable are Swiss chemicals and pharmaceuticals, as well as steel products, given that over 90% of Swiss exports of those products go to the EU. Yet, the Annex II of the Commission's CBAM Proposal lists Switzerland among countries, whose exports to the EU will be exempted from the import emissions allowance obligation. The exemption from the CBAM obligation is provided on the grounds that Switzerland has its own ETS in place and the Swiss ETS is linked to the EU ETS. The linking of the two ETSs means that the Swiss ETS is recognized as fully compatible with that of the EU by a linking agreement that came into force at the beginning of 2020. The linking arrangements between the two ETSs allow for the transfer of emissions allowances between the EU and Swiss markets, so that companies can comply with their ETS

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[14] Article 35 of the CBAM Proposal.

[15] In an attempt to address the WTO law inconsistency problem, the idea has also been put forward to provide export rebates only partially. *See* Luis Garicano, *A proposal for the Design of an European Carbon Border Adjustment Mechanism (CBAM)*, Bruegel event on 4 Feb. 2021.

[16] Article 31 of the CBAM Proposal.

[17] Article 9 of the CBAM Proposal.

[18] *See* Annex II of the CBAM Proposal.

[19] Article 30 of the CBAM Proposal.

[20] *See* the Joint Statement issued at the conclusion of the 30th BASIC Ministerial Meeting on Climate Change hosted by India on 8 Apr. 2021.

obligations using EU and Swiss emissions allowances interchangeably. The fact that the linking arrangements lead to basically the same carbon prices in the two carbon markets can be seen as a legitimate reason for the EU to provide an exemption for Swiss products.[21]

However, the exemption of Swiss products foreseen in the CBAM Proposal from the EU CBAM requires an action on part of Switzerland. If Switzerland does not introduce a similar CBAM itself, its territory will be used for the transshipment of carbon-intensive products from third countries to the EU. Besides preventing a transshipment of products through Switzerland, an inclusion of imports into the Swiss ETS would improve the competitive position of Swiss companies covered by the ETS. Moreover, not only would a Swiss CBAM serve as a carbon leakage safeguard, it would also help achieve other climate policy objectives. First, it would help mobilize climate finance, if the revenues from a CBAM were earmarked for climate change mitigation and adaptation projects within Switzerland and abroad. Second, a CBAM would stimulate foreign producers to reduce the carbon intensity of their products, especially if there were a possibility for foreign producers to pay a CBAM charge on the actual carbon footprint of their products. Also, the introduction of a CBAM for Switzerland may well become a condition to get an exemption from the pending EU CBAM.

It is therefore high time for Switzerland to start developing a CBAM that could be introduced in parallel to the EU CBAM.[22] The good news is that there is no need to reinvent the wheel. Given the high dependency of Swiss exports on the EU market and considering a similar level of climate policy ambitions, as well as the practically equivalent ETSs of the EU and Switzerland, the question arises if Switzerland could actually replicate the EU CBAM.

4 How Switzerland can design its own CBAM

While designing its CBAM, Switzerland has the opportunity to observe the reaction of stakeholders to the EU measure as the process of the EU CBAM approval and implementation evolves and adjust the design accordingly. As a CBAM is a novel measure that has never been used before, its best design is not known yet. What is clear, however, is that the development of a CBAM faces the trade-off between practical, economic, legal, and political implications of the measure, on the one hand, and its effectiveness from the climate policy perspective, on the other hand.

4.1 *WTO Law Issues*

As a measure affecting foreign trade, a CBAM has to comply with WTO rules. Given that a CBAM has never been tested in the WTO dispute settlement, its consistency with WTO rules is uncertain. But if a CBAM is meant to be a measure of border adjustment in its literal meaning, it has to follow the legal pattern for border adjustment under WTO rules, as discussed below.

4.1.1 *Concept of Border Adjustment*

Imposing taxes on importation and giving tax rebates on exportation is usual for indirect taxes, i.e. taxes levied on traded products. Unlike taxes imposed on producers (such as royalties, corporate, payroll, income and other direct taxes), taxes imposed on products (such as VATs and excise duties) follow the destination principle of taxation. They are imposed on domestic products and imported products alike and rebated to national exporters on exportation.[23] It is a widespread practice for VATs, sales taxes and excise duties on alcohol, cigarettes, gasoline, and other products, consistent with the national treatment rule for indirect taxes of the General Agreement on Tariffs and Trade (GATT) and the 'not in excess' rule for export rebates of indirect taxes of the Agreement on Subsidies and Countervailing Measures (ASCM).[24]

However, a fundamental principle of border adjustment is the rule of even-handedness, whereby border adjustment measures are imposed in parallel to domestic measures. If a CBAM is designed as a tax on imports, an equivalent carbon tax should also be levied on like domestic products. If not, such a CBAM will qualify as an import duty and fall under the WTO rules for import tariffs.[25] Under WTO law, according to GATT Article II, the rate of an import duty may not exceed the bound tariff rate for a given product. In any case, designing a CBAM as an import tariff would not help Switzerland achieve the objective of preventing competitiveness loss and carbon leakage. This is due to the fact that the bound tariff rates

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[21] In Switzerland, the average auction price of an emissions allowance in 2020 was equal to EUR 24.9/tCO_2e, which is approximately the same as the EU average emissions allowance price for the same period. *See* 'Swiss ETS', ICAP, 22 Mar. 2021.

[22] It is worth noting that in Mar. 2021, a proposal was submitted in the Swiss National Council (parliamentary initiative Ryser 21.432) asking for the creation of a legal basis for a Swiss border adjustment system for CO_2-intensive products, taking into account the corresponding developments in the EU. The initiative is currently pending discussion in the Swiss Parliament.

[23] Paul Demaret & Raoul Stewardson, *Border Tax Adjustments Under GATT and EC Law and General Implications for Environmental Taxes*, 28(4) J. World Trade 6 (1994).

[24] Alice Pirlot, *Environmental Border Tax Adjustments and International Trade Law: Fostering Environmental Protection* 101–118 (Edward Elgar 2017).

[25] Kateryna Holzer, *Carbon-Related Border Adjustment and WTO Law* 64–73 (Edward Elgar 2014).

for industrial products (the main target of a CBAM) are too low to secure an import charge high enough to level the playing field for domestic producers bound by emissions reduction obligations under the Swiss ETS.

Thus, a Swiss CBAM needs to be designed as a border adjustment of a domestic measure imposed in relation to climate policy. What would be such a domestic measure available for adjustment at the border? Switzerland has a carbon tax in place. However, this tax is currently imposed only on sales of fossil fuels, such as heating oil and natural gas. By contrast, the Swiss carbon tax is not imposed on steel, aluminum, chemical and other products from sectors covered by the ETS, where levelling the playing field by a CBAM would be needed. In those sectors, instead of a carbon tax, there is an obligation to keep emissions within the limit of emissions allowances. Hence, a CBAM for these sectors should consist of the same obligation on importation. Thus, a logical form of a CBAM for Switzerland would be an extension of the ETS to imports and its adjustment on exports.[26]

Indeed, based on the concept of border tax adjustment in international trade, a CBAM can also apply to exports and consist of a compensation of emissions costs for national exporters.[27] In fact, as a complete border adjustment mechanism, a CBAM can combine emissions charges on importation and rebates of emissions costs on exportation. However, the peculiarities of a CBAM based on emissions trading makes an adjustment on exportation more vulnerable to the claims of inconsistency with WTO rules compared to a CBAM based on a tax.[28]

4.1.2 *Adjustment of Taxes vs. Adjustment of Regulations*

Will a CBAM in the form of an emissions allowance requirement rather than a carbon tax still be compatible with WTO rules for border adjustment? As already mentioned, a border adjustment for indirect taxes is acceptable under WTO rules, whereas a border adjustment for direct taxes is not: Export rebates of direct taxes are particularly considered to be a prohibited export subsidy under the rules of the ASCM. The problem is that a requirement to submit emissions allowance under an ETS can be considered a regulation rather than a tax.

Opinions on whether an ETS requirement can qualify as a tax vary considerably among experts. Based on the definition of a tax being 'an unrequited payment to the government' or 'a compulsory contribution imposed by the government for which taxpayers receive nothing identifiable in return', some submit that an emissions allowances requirement can qualify as a tax adjustable at the border.[29] Others, by contrast, argue that an emissions allowance cannot qualify as an unrequited payment to the government and, hence, a tax, because in return for paying the costs of emissions allowances, firms get the right to emit, that is, 'the privilege of discharging CO_2 into the environment'.[30] Also the fact that emissions allowances can be purchased by firms on the secondary market and not directly from a government makes the tax nature of the emissions allowance requirement questionable.[31] Moreover, taxes and charges do not give any additional benefits in return, whereas emissions allowances have a value because it can be resold by a company if the company does not need it anymore to comply with its emissions reduction obligations.[32] Based on all these arguments, an emissions allowance requirement can well be considered to be a non-fiscal measure, i.e. a regulation, rather than a tax. Notably, the European Court of Justice has considered the requirement for airlines to surrender emissions allowances on flights to be a market-based measure but not a tax. And this is for two grounds. First, a conventional tax has a fixed rate that a person or a firm must pay, whereas the costs of emissions allowances for a firm vary depending on the number of allowances initially allocated to it for free and the market price of an allowance. Second, unlike a tax, the emissions allowance requirement is not primarily intended to generate revenue in the budget.[33]

If an emissions allowance requirement to importers is considered to be a regulation, it will fall under the scrutiny of GATT Article III:4, which requires a treatment of imported products not less favourable than the one of like domestic products. Compared to the national treatment

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[26] In fact, the Swiss ETS can be substituted for a Swiss carbon tax applicable to all sectors as an alternative mechanism of emissions reduction to the ETS. In that case, a CBAM can be introduced as an import carbon tax. But this is unlikely to happen in the near future.

[27] GATT, Report by the Working Party on Border Tax Adjustments, L/3464, 2 Dec. 1970, BISD 18S/97, para. 4.

[28] Kateryna Holzer, *Emissions Trading and WTO Law*, in *Research Handbook on Emissions Trading* 345 (Stefan Weishaar ed., Edward Elgar 2016).

[29] *See* e.g., Javier De Cendra, *Can Emissions Trading Schemes be Coupled with Border Tax Adjustments? An Analysis vis-à-vis WTO Law*, 15(2) *RECIEL* 131 (2006), and Joost Pauwelyn, *U.S. Federal Climate Policy and Competitiveness Concerns: The Limits and Options of International Trade Law,* Nicholas Institute for Environmental Policy Solutions Working Paper (2007).

[30] *See* e.g., Charles McLure, *The GATT-Legality of Border Adjustments for Carbon Taxes and the Cost of Emissions Permits: A Riddle, Wrapped in a Mystery, Inside an Enigma,* 11 Fla. Tax Rev (2011).

[31] Roland Ismer, *Mitigating Climate Change Through Price Instruments: An Overview of the Legal Issues in a World of Unequal Carbon Prices*, in *European Yearbook of International Economic Law* 220–221 (Christoph Herrmann & Joerg Philipp Terhechte eds, Springer-Verlag 2010).

[32] Lorand Bartels, *The Inclusion of Aviation in the EU ETS: WTO Law Considerations*, ICTSD Global Platform on Climate Change, Trade and Sustainable Energy Issue Paper no. 6, at 4 (2011).

[33] *See* ECJ Case C-366/10, *Air Transport Association of America and others v. Secretary of State for Energy and Climate Change* [2011], paras 142–144.

requirement under Article III:2 for taxes (which requires exactly the same amount of tax rate for imported products and like domestic products), the requirement for regulations is less stringent. However, regarding the possibility of export-side border adjustment of domestic regulations, the current WTO rules are silent on the matter. Thus, the compliance of emissions allowance rebates on exportation with WTO rules will be assessed against general rules of the ASCM with the central question of whether these export rebates acquire characteristics of being *de jure* or *de facto* contingent on export performance (ASCM Article 3.1).[34] In that case, if the quantity of rebates of emissions allowances on exportation is linked to the production volumes going for export, the rebates of emissions allowances on exportation can fall in the category of prohibited export subsidies.

4.1.3 *Adjustment Level*

Another question arises with respect to setting an adequate level of adjustment, i.e. the rate of a CBAM charge per product. In the case of a tax, the national treatment rule of GATT Article III requires that an import tax rate be exactly the same as a tax rate for the like domestic product. In case of a regulation, that same rule requires that imported products be treated not less favourable than like domestic ones. If the adjustment level is fixed based on the emissions level of the best available technology in a given Swiss sector (for example, at the average level of 10% most efficient Swiss producers in this sector) or even at the sector's average level of emissions, imports would most probably be taxed at a level, which is lower than the actual emissions released during their production. Accordingly, there would be no discrimination against imports but this method of determining the adjustment level will be less effective in addressing competitiveness and carbon leakage concerns. For some products this might not be the case, though. Depending on technologies used by individual factories, some foreign producers might be less carbon-intensive.[35] For this reason, it is necessary to give importers the possibility of proving the actual carbon footprint of their products and allow them to pay a lower tax. Whether this will always be possible, in light of the scarce information on emissions at foreign factories and the lack of reliable emissions certification schemes, remains to be seen.

The possibility to comply with a CBAM based on the actual emissions in imported products could also allow stricter thresholds for default values of embedded emissions. This seems to be the case with the EU CBAM, which is going to take by default the average emission intensity of the 10% worst performing EU installations producing the product at issue.[36]

4.1.4 *CBAM as Exception to WTO Rules*

Given the uncertainty of a CBAM based on an ETS to comply with WTO rules, it would make sense to design a Swiss CBAM in a way to be defendable as an exception to WTO rules in case of its legal challenge. Such exceptions (at least for the rules of the GATT) are available for measures taken with certain public policy objectives under a number of conditions, as set out in GATT Article XX. Such a CBAM could be defended referring to paragraph b) or paragraph g) of Article XX, either as a measure that is necessary to protect human, animal or plant life or health or a measure relating to the conservation of exhaustible natural resources, respectively. For a CBAM to fall under these paragraphs, it is necessary that its objectives are explicitly set as relating to climate change policy and referring specifically to carbon leakage concerns, rather than to competitiveness concerns of domestic producers (even though the latter are inherent to carbon leakage). It is non-trade-related public policy objectives that gives a measure a shelter under GATT Article XX exceptions, and it is therefore the environmental objective and not the economic one that needs to be associated with a CBAM for a successful defence as an exception to WTO rules.

Moreover, a successful justification of a CBAM largely depends on its ability to meet the requirements of the chapeau of Article XX.[37] This means that a CBAM should be designed so that it does not constitute a means of arbitrary or unjustifiable discrimination or any form of disguised protectionism. According to WTO jurisprudence, this means that a CBAM should take into account conditions in other countries, if these conditions are relevant for the objective pursued by the measure. Given that the main objective of a CBAM is preventing carbon leakage, the Swiss CBAM design should be flexible enough to exclude imports from countries having a carbon leakage safeguard in place. Under a narrow interpretation of the chapeau requirement, it might even require the exclusion of imports from countries with any kind of carbon restrictions in place.[38] However, this would be ineffective for levelling the playing field for Swiss producers currently paying a

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[34] The criteria of financial contribution or income support, and a benefit for emissions allowance rebates to be qualified as a subsidy seem to be met here. For more details on the subsidy analysis, *see* Holzer, *supra* n. 28, at 345.

[35] Andrei Marcu, Michael Mehling & Aaron Cosbey, *Border Carbon Adjustments in the EU: Sectoral Deep Dive*, ERCST (2021).

[36] Annex III of the CBAM Proposal.

much higher carbon price than their non-EU foreign competitors. Therefore, the exclusion should be given to imports from countries, which have a carbon price comparable to the Swiss one. This would be fully justifiable under the requirements of the chapeau, since it would have a connection to the objective of carbon leakage prevention, for there is no reason in relocating the production to countries where emissions costs are the same. This would also induce other countries to put a national price on carbon by adopting a carbon tax or an ETS and thereby support the achievement of the objectives of the Paris Agreement. So far, the only candidates for the exclusion from a Swiss CBAM based on this criterium are the EU, the other countries of the Free Trade Association (EFTA), and the UK (all of them having approximately the same price of emissions allowances as Switzerland).

While the Article XX requirements are quite stringent, a defense of a CBAM on importation as an exception seems quite realistic. There is one nuance, however. It will be more difficult to justify a CBAM under Article XX, if a requirement to submit emissions allowances for importers is coupled with export rebates of emissions allowances.[39] Even though it can be argued that for preventing carbon leakage there needs to be a level playing field also in the export market (and this is what the export rebates are for), the emissions allowances rebates on exportation might be viewed as contrary to the climate policy spirit.[40] Consequently, the whole CBAM might be perceived as a measure meeting the economic objective of facilitating the competitiveness of domestic producers rather than serving the environmental purposes. A possible way out here could be a partial provision of export rebates, where export rebates are provided only for the most efficient producers in a sector.[41] The determination of the most efficient producers can be based on today's benchmarks for free allocation of emissions allowances and imply (gradual) substitution of free allowance allocation. An argument here could be that such a partial rebate of emissions allowances would minimize undesirable incentives for carbon-intensive exports and stimulate domestic producers to undertake further emissions reductions, which would establish a closer link with the environmental objective of CBAM necessary for justification.

4.2 *Practical Constraints*

As follows from the above, a CBAM as such is not illegal under WTO law. It is important, however, that it does not discriminate against imported products when applied on importation and does not amount to an export subsidy when applied on exportation. While these requirements are clear, the devil is in the details, given the complexity of a CBAM, especially its practical difficulties.

An important factor in considering a concrete design of a CBAM is its practical feasibility. The most desirable CBAM is one based on the actual carbon footprint of imported products, which would cover all possible emissions[42] and compensate all possible emissions reduction costs to domestic producers.[43] This would allow addressing the problem of carbon leakage and competitiveness most effectively. However, such a CBAM would face technical and administrative hurdles, which would be primarily linked to tracing emissions in products and related verification procedures. In most sectors, there is no single technology for product manufacturing. Technologies vary among different countries and within a country. Energy used in product manufacturing is of different origin too. It is no wonder, therefore, that the proposed EU CBAM currently accounts only for direct emissions. But as the information in the transitional period will also be gathered on indirect emissions, it cannot be excluded that the EU CBAM will be applied also to indirect emissions at a later stage.

The technological peculiarities complicate the tracing of emissions and the process of verification of the actual carbon footprint of imported products is costly. If a CBAM foresees the possibility for an importer to provide information on the carbon footprint of a product, the question is how to verify the quantity of emissions released during the production process abroad. In most

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[37] Pauwelyn, *supra* n. 29, at 38–41.

[38] Holzer, *supra* n. 25, at 167–175.

[39] An important remark to be made here is that the justification under Art. XX is unlikely to be possible for rebates of emissions allowances *per se*, should they fail to satisfy the rules on subsidies. This is because GATT Art. XX is unlikely to apply to violations under the ASCM. *See* e.g. Marie Wilke, *Feed-in Tariffs for Renewable Energy and WTO Subsidy Rules: An Initial Legal Review*, ICTSD 19–20 (2011). Given this remaining element of uncertainty regarding the compliance with the ASCM, it is also worth exploring the idea of consumption charges in combination with targeted or partial free allocation of emissions allowances. *See* Roland Ismer et al., *Climate Neutral Production, Free Allocation of Allowances Under Emissions Trading Systems, and the WTO: How to Secure Compatibility with the ASCM*, DIW Berlin Discussion Paper 12–16 (2021).

[40] Gary Clyde Hufbauer, Steve Charnovitz & Jisun Kim, *Global Warming and the World Trading System* 69 (Washington DC: Peterson Institute for International Economics 2009). *See also* Julia Reinaud, *Would Unilateral Border Adjustment Measures be Effective in Preventing Carbon Leakage?*, in *Climate and Trade Policies in a Post-2012 World* 74 (UNEP 2009).

[41] Garicano, *supra* n. 15.

[42] Besides direct emissions resulted from the production process itself, one could also account for indirect emissions that are associated with the whole lifecycle of the product. This would cover, for instance, emissions from the use of energy (electricity, fuels) for offices, transportation of the product etc.

[43] Including indirect emissions costs, such as increased electricity prices.

countries, there are no registries of facility-level emissions. Given that there is no single international standard for the carbon footprint calculation and that there is a variety of carbon footprint certification schemes (some of which are based on scientifically unsound methodologies), this would require a plant-by-plant determination of carbon footprints under an accredited verification process.[44] It is a complex and expensive procedure. Moreover, many final products are based on long value chains with raw materials and intermediate products sourced from dozens of countries. Therefore, the level of adjustment (i.e. the level of emissions to be attributed to imported products) in such cases needs to be set as an assumed value, such as the average level of emissions in the production of the product in the importing country, the level of best available technology for the production of the product, the level of the predominant method of production (a technology used by most producers in a given sector) etc. Using such an assumed value would obviate the need of verification of emissions abroad.[45]

The problem of tracing emissions in imported products bears also on the question of sectoral coverage by a CBAM. It is much easier to trace carbon in raw materials and primary products like electricity, steel products, and cement clinker than to calculate the carbon footprint in downstream products with long international value chains, like sophisticated machine tools or pharmaceuticals. Therefore, it is more feasible to include only upstream industries in a CBAM leaving downstream industries outside. However, this displays a big trade-off between practical feasibility of a CBAM and the objectives it is meant to achieve. A lion's share of emissions is contained in value-added products. Therefore, excluding these products from a carbon charge would leave a big chunk of emissions unrestricted.

4.3 *Economic Considerations*

As follows from the above, a decision on a CBAM involves a trade-off between its WTO compliance and its practical feasibility and environmental integrity. Economic implications add an additional variable to the equation.[46] Some economic complexities are readily perceived. For instance, limiting a CBAM coverage to primary products will not only prevent from achieving the highest possible level of emissions reductions but will also have a negative economic effect on downstream industries.[47] Given that products from upstream industries are used as inputs by downstream industries, the increased prices for the inputs will make downstream industries less competitive. Foreign producers from downstream industries having access to cheaper inputs abroad and not being subject to a CBAM will have a competitive advantage both in the market of the country implementing a CBAM and in the world market. Therefore, by trying to address the competitiveness problem of sectors covered by a domestic ETS, a CBAM risks undermining the competitiveness of industries and products not covered by the ETS. The problem of competitiveness of downstream industries is one of the trickiest issues of the CBAM design, especially for a country like Switzerland, which is export-oriented and dependent on imports of intermediate products.[48]

A CBAM is not a perfect competitiveness safeguard anyway. Sectors differ considerably in their trade patterns, complexity of value chains, and energy-intensity. This might require variations in the CBAM design tailored to each sector.[49] However, practical and legal constraints put limits to such a differentiation. Moreover, there is a dilemma of whether to adjust only direct costs of emission reductions or also indirect costs. The adjustment of indirect costs would include, apart from the increased price of energy resulting from the participation of electricity generating facilities and oil refineries in an ETS (scope 2 emissions) also increased costs associated with emissions in intermediate goods and transportation of goods to the market (scope 3 emissions). To create a truly level playing field, one would need to adjust indirect costs as well. However, the adjustment of indirect costs of emissions faces methodological and administrative problems associated with the calculation of indirect costs in complex international value chains.[50]

Another important question is how to create a level playing field in export markets, should a CBAM not foresee export rebates for the reasons of legal uncertainty discussed above. An alternative solution for exporters needs to be found, as national producers bound by the ETS obligation need a level playing field also in export markets. One option is to continue with the free

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[44] Kateryna Holzer & Aik Hoe Lim, *Trade and Carbon Standards: Why Greater Regulatory Cooperation is Needed*, in *Cool Heads in a Warming World: How Trade Policy Can Help Fight Climate Change* (Daniel Esty & Susan Biniaz eds, Yale Center for Environmental Law and Policy 2019), https://envirocenter.yale.edu/sites/default/files/files/CoolHeads_Holzer (1).pdf (24 Aug. 2021).

[45] Roland Ismer & Karsten Neuhoff, *Border Tax Adjustment: a Feasible Way to Support Stringent Emission Trading*, 24(137) Eur. J. Econ. L. 147–148 and 155 (2007). *See also* Matthew Genasci, *Border Tax Adjustments and Emissions Trading: The Implications of International Trade Law for Policy Design*, 1(33) Carbon & Climate L. Rev. 37 (2008).

[46] Roland Ismer, Karsten Neuhoff & Alice Pirlot, *Border Carbon Adjustments and Alternative Measures for the EU ETS: An Evaluation*, DIW, Berlin (2020).

[47] Andrei Marcu, Michael Mehling & Aaron Cosbey, *Border Carbon Adjustments in the EU: A Policy Proposal*, ERCST 13–14 (2021).

[48] André Müller et al., *Border Tax Adjustments: Can Energy and Carbon Taxes be Adjusted at the Border? Study Prepared for SECO and FFA* (2014), https://www.zora.uzh.ch/id/eprint/106383/1/Ecoplan_2013_e.pdf (24 Aug. 2021).

[49] Marcu, Mehling & Cosbey, *supra* n. 35.

[50] OECD, *supra* n. 5, at 18–19.

allocation of emissions allowances for energy-intensive and trade-exposed sectors, where the risk of carbon leakage is the highest. However, this could only be a temporary solution available until the ETS emissions cap is fully exhausted. It would need to be replaced gradually anyway. More so that free allocation is far from being an ideal safeguard.[51] Moreover, keeping free allocation in place while simultaneously imposing an emissions allowance requirement on imports leads to another inconsistency with WTO law, which is related to the national treatment obligation under the GATT. Under the free allocation of emissions allowances to some firms, a CBAM would impose a disproportionate burden on imports of the respective products. Therefore, an emissions allowance requirement to importers can be applied only for the part of emissions of EU producers, which is above the benchmark for free allocation, or in other words, should be reduced by a number of free allowances received by domestic producers of like products.[52]

4.4 *Political Considerations*

A central question for the development of a CBAM is the reaction of key stakeholders, especially exporting countries, to the measure. If Switzerland imposes a CBAM together with the EU and the ETS-allied countries, such an ETS-based CBAM will particularly hit exports of such countries as the US, China, Russia, Turkey, India, Brazil, South Korea, Ukraine, and Serbia, which are major exporters of steel, aluminum, fertilizers, plastics, medicines, cement clinker, and other products from the ETS-covered sectors. There is therefore a high risk that these countries challenge the measure either by bringing claims to the WTO dispute settlement or under free trade agreements (FTA). However, given that dispute procedures might go over years, during which the measure might still be in place, and considering that there are good chances that a CBAM could be justified as an exception under GATT Article XX, some trading partners are likely to choose to act straightaway unilaterally by imposing retaliatory trade barriers to imports from countries imposing a CBAM. Some of these trading partners have a sufficient market power to respond with painful retaliations. Importantly, they can retaliate not only in the steel sector but also impose higher trade barriers for pharmaceuticals, chemicals and machine tools, which are main export products of Switzerland.

The imposition of a CBAM can also have repercussions on international climate negotiations and hinder progress in the implementation of the Paris Agreement. In this respect, it comes as no surprise that the US has asked the EU to keep its CBAM as a measure of last resort and wait at least until after the climate summit of the Conference of Parties in Glasgow in November 2021 (COP 26) before moving forward with it.[53] The border carbon adjustment (BCA) has long been raising much controversy in international fora.[54] Developing countries usually perceive a BCA as a hidden protectionist measure and an unfair punishment for their lack of climate action. In rejecting a BCA, they often appeal to the principle of common but differentiated responsibilities (CBDR), which underlines the international climate change regime. The CBDR principle is usually interpreted as allowing discrepancies in sharing a global burden of emissions costs among developed and developing countries.[55] The topic of BCA has consequently become a sort of taboo in international climate negotiations.

The risk of obstruction of the climate negotiations, as well as the prospect for the WTO dispute settlement to be overheated by a long series of CBAM-related disputes, and especially the risk of trade wars have so far deterred the EU and other countries from putting a BCA into practice.[56] Even today, when the EU is more determined than ever to enact a CBAM, it is recommended to proceed cautiously.[57] Proponents of the 'mild course' argue that the mere intent of the EU to introduce a CBAM can already serve as a credible threat for other countries and might motivate them to adopt carbon restrictions comparable to those in the EU.

And yet, today the determination to go forward is very strong. What can be done to mitigate the political risks? First of all, the enactment of a CBAM should be preceded

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[51] From an economic perspective, free allocation distorts the carbon market by suppressing the carbon price and deprives the state budget of revenues that would have been collected, had allowances been distributed through auctions. From a legal perspective, it raises issues of actionable subsidy. *See* a preliminary US Department of Commerce decision to treat certain free allowances under the EU's Emission Trading System as a countervailable subsidy issued on 11 Dec. 2020 with respect to forged steel fluid end blocks from Italy and Germany.

[52] Marcu, Mehling & Cosbey, *supra* n. 47, at 9. In fact, the deduction of free allowances received by EU producers from the CBAM charge is foreseen in Art. 31 of the EU CBAM Proposal.

[53] Leslie Hook, *John Kerry Warned EU Against Carbon Tax*, Financial Times 12 Mar. 2021.

[54] *See* e.g., a communication from Singapore to the WTO Committee on Trade and Environment, *Promoting Mutual Supportiveness Between Trade and Climate Mitigation Actions: Carbon-related Border Tax Adjustments*, 30 Mar. 2011, WT/CTE/W/248.

[55] Lavanya Rajamani, *The Changing Fortunes of Differential Treatment in the Evolution of International Environmental Law*, 88(3) Int'l Affair 622–623 (2012).

[56] Harro van Asselt & Thomas Brewer, *Addressing Competitiveness and Leakage Concerns in Climate Policy: An Analysis of Border Adjustment Measures in the US and the EU*, 38(1) Energy Pol'y 42–51 (2010); Kateryna Holzer, *Proposals on Carbon-Related Border Adjustments: Prospects for WTO Compliance*, 4(1) Carbon & Climate L. Rev. 51–64 (2010). One of the earliest proposals on BCA in the EU was prepared in 2007 as an amendment to the EU ETS. It was called 'The Foreign Allowance Import Requirement' (FAIR) and foresaw the border adjustment of the emissions allowance requirement on both importation and exportation.

[57] *See* e.g., Georg Zachmann & Ben MacWilliams, *A European Carbon Border Tax: Much Pain, Little Gain*, 5 Bruegel Policy Contribution (2020).

by a dialogue with trading partners. Such discussions preceding the imposition of a measure is also a prerequisite for a successful justification under Article XX GATT. As follows from the WTO's *Shrimp-Turtle* jurisprudence, before imposing a unilateral measure with environmental purposes, a country should try to negotiate in good faith to reach some multilateral solution to the problem – in our case, try to find a multilateral solution to carbon leakage.[58] Even if urging a trading partner to introduce a carbon tax or an ETS might seem unrealistic, the discussions could help 'appease' trading partners through clarifying the measure. The dialogue could also enable finding ways to reduce the CBAM burden through improvement in administrative procedures, signing mutual recognition agreements for carbon footprint certification purposes and eventually providing exemptions, including those accounting for the difference in carbon prices between the CBAM imposing country and the country of import origin. Besides the EU, UK and EFTA countries, South Korea is one of the candidates for exemptions based on the existing carbon prices. Through its ETS it has established a carbon price equal to around USD 28 per ton of CO_2-equivalent as of May 2021.[59] South Korean products from sectors covered by a Swiss CBAM could be adjusted for the difference in current emissions allowance prices in the Swiss and Korean markets.

A downside of the adjustment for price difference is an additional layer of administrative complexity. According to the requirements of GATT Article XX, exemptions should be given with care, so that the measure does not discriminate between trading partners, where the grounds for such discrimination are not related to the objective of prevention of carbon leakage. At the same time, exemptions could be provided to low-income developing countries, including least developed countries under the WTO Enabling Clause.[60] This will not be critical for preserving the level playing field, given very small volumes of ETS-related imports from these countries, but will be in line with ethical norms.[61] In any case, additional tools, such as certification of origin, would need to be used to prevent transshipment of carbon-intensive goods through the territories of exempted countries to the Swiss market. Furthermore, Switzerland, like the EU, has numerous FTA partners. Therefore, an agreement on the introduction of a comparable carbon price and no use of BCAs in partner countries could be made part of those FTA provisions.[62] Trade partners with no retaliation power might be willing to discuss the introduction of a carbon tax or an ETS on their territory rather than expose their exports to a CBAM.

Finally, to reduce political and trade tensions over a CBAM, Switzerland could direct at least part of its CBAM revenues to climate mitigation projects in developing countries. This would reinforce the evidence of the genuine environmental rationale of its CBAM and facilitate its defense as a measure taken for climate protection purposes. Another option would be to return each country the collected revenues from the CBAM applied to its exports to be used for climate mitigation purposes in the exporting country. This would also increase acceptance of the measure by trading partners and the chances for a CBAM to be successfully justified under environmental exceptions of GATT Article XX.

5 Conclusion

Being a country too small in size and too big in its dependency on trade, especially as regards the need for importation of intermediate products for its export production, Switzerland cannot go alone with the implementation of its own CBAM. But as the EU, its biggest trading partner, and some other trading partners are currently in the process of development of their CBAMs, Switzerland has to develop its CBAM too. While getting an exemption from the EU CBAM on the grounds of linked emissions trading schemes, Switzerland has to ensure that carbon-intensive products from other countries are not transshipped through its territory to the EU. A Swiss CBAM can be based on the EU CBAM model implying an extension of the Swiss ETS to imports and therefore a requirement for importers to submit emissions allowances in relation to imported products.

Even though Switzerland could simply copy the EU CBAM, it could also adjust it based on the reaction of stakeholders to the pending EU CBAM. When designing its own CBAM, Switzerland should consider its various legal, practical, economic, and political implications. The risk is quite calculable. It is unlikely that a CBAM will be ideal, if only because of the practical complexity of attributing the carbon content to

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[58] An even better solution would be to reach a plurilateral agreement on climate change or adopt a waiver for trade-related climate policy measures in the WTO. However, in present political circumstances it seems unfeasible. *See* James Bacchus, *The Case for a WTO Climate Waiver*, Centre for International Governance Innovation (2017).

[59] *Korea Emissions Trading Scheme*, ICAP (2021).

[60] The Enabling Clause gives the right, but not the obligation, to developed countries to give trade preferences to developing countries on a non-reciprocal basis.

[61] In fact, the Enabling Clause would allow exemptions from a CBAM to any developing country (i.e., a country, which has proclaimed itself a developing country in the time of its accession to the WTO). However, given the substantial weight of some developing countries, such as China, India and Brazil, in import-driven emissions, the CBAM exemptions for these countries will significantly undermine the effectiveness of a CBAM. It would also have a reduced ethical meaning in light of the substantial level of economic development of these countries, at least in absolute values.

[62] Holzer, *supra* n. 25, at 274–292.

imported products from downstream industries, and it is by no means a silver bullet in achieving the climate policy objective of full decarbonization of the economy.[63] Therefore, it is important to find the right balance between the legal, economic and political considerations and to weigh the risks against the benefits of the measure. At the beginning, the risks might outweigh. At this point, it would be essential to use all possible diplomatic means in the attempt to negotiate the acceptance of the Swiss CBAM, including through bilateral agreements and exemptions based on crediting other countries' carbon restrictions. At the same time, the introduction of CBAMs by the EU, the UK, and the other EFTA countries more or less simultaneously with the Swiss one would strengthen the market power of all these countries and as such mitigate the risk of legal and political challenges of the measures by other countries.

Someone has to start, be it only with a relatively cautious design of a CBAM and perhaps only with its partial application to imports from a limited number of upstream sectors. The opportunity to make the CBAM bolder may come sooner than expected, as more and more countries join the first movers. At that point, the risk of political and legal challenges will disappear allowing more leeway to address competitiveness and carbon leakage concerns, until ultimately global action on climate change will lead to a universal carbon price with no need for border adjustment.

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[63] Encouraging companies to invest more in climate-neutral technologies requires additional measures with more powerful incentives, like project-based carbon contracts for difference. *See* Oliver Sartor & Chris Bataille, *Decarbonising Basic Materials in Europe: How Carbon Contracts-for-Difference Could Help Bring Breakthrough Technologies to Market*, IDDRI (2019).