EU CARBON BORDER ADJUSTMENTS AND WTO LAW, PART ONE

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SUMMARY

In July 2021, the European Commission published a proposal for a Carbon Border Adjustment Mechanism (CBAM), part of a wider package of laws aimed at implementing the EU Green Deal. The exact design of the CBAM is in flux, and priorities will have to be set. The chief concern is the compatibility of a CBAM with the law of the World Trade Organization (WTO). This Article explores whether and how the various CBAM design options under consideration can be reconciled with WTO requirements, focusing on a possible import border adjustment scheme. This issue's Part One describes different instruments under consideration for the EU's proposal; next issue, Part Two will assess the validity of these measures against the public policy exceptions contained in GATT Article XX. The measure will require careful design, and even then there is legal uncertainty in the WTO jurisprudence. In any event, the EU will be required to intensify its efforts to reach out to other jurisdictions to come to globally coordinated solutions.

The Paris Agreement[1] that was adopted in 2015 under the umbrella of the United Nations Framework Convention on Climate Change (UNFCCC)[2] sets the long-term goal of restricting the average global temperature increase to "well below" 2° Celsius (C) above pre-industrial levels. Chances to achieve this goal hinge on the national commitments of its Parties, the so-called nationally determined contributions (NDCs) to climate action, and their effective implementation. The NDCs should reflect the "common but differentiated responsibilities and respective capabilities" of industrialized and developing countries, as acknowledged in Articles 3:1 and 4:1 of the UNFCCC.

Against this backdrop, the European Union (EU) and its Member States that are all Parties to the Paris Agreement have pledged to assume the role as the leader of international climate efforts. This has been affirmed in the "European Green Deal" published by the European Commission in 2019.[3] To this effect, the Commission seeks to achieve climate neutrality for the EU by 2050 and to increase the EU's climate commitments to reducing greenhouse gas (GHG) emissions by 50%-55% from 1990 levels by 2030.[4] The European Council and the European Parliament have seconded the Commission in setting this ambitious agenda.[5] While its implementation will require a mix of climate-related policies, expanding and strengthening the existing EU Emissions Trading System (EU ETS) has been designated to play a key role in those efforts.[6]

The EU ETS operates in all EU and European Free Trade Association Member States, and follows the "cap and trade" approach.[7] In order to meaningfully support the new EU climate ambition, the price for tradable emission

Authors' Note: We are grateful for comments received from Alice Pirlot and others at the Monash University Tax Symposium 2021.

1. The Paris Agreement was adopted by 196 Parties in Paris on December 12, 2015, and entered into force on November 4, 2016.
2. UNFCCC, May 9, 1992, S. Treaty Doc. No. 102-38, 1771 U.N.T.S. 107.
3. *See* European Commission, *The European Green Deal*, at 20, COM (2019) 640 final (Dec. 11, 2019) [hereinafter European Green Deal].
4. *See Commission Proposal for a Regulation of the European Parliament and of the Council Establishing the Framework for Achieving Climate Neutrality and Amending Regulation (EU) 2018/1999 (European Climate Law)*, COM (2020) 80 final (Mar. 4, 2020) [hereinafter Legislative Proposal for European Climate Law].
5. *See* European Council Conclusions of 12 December 2019, EUCO 29/19, CO EUR 31, CONCL 9, recitals 3, 5, 8, 9, 10, 14, 17, 18, https://www.consilium.europa.eu/media/41768/12-euco-final-conclusions-en.pdf; European Parliament Resolution on the European Green Deal, 2019/2956 (RSP) (Jan. 15, 2020).
6. *See* European Green Deal, *supra* note 3, at 4-5.
7. The European Green Deal also contemplates a revision of the EU Energy Directive, in order to align it with carbon tax objectives. This revision is beyond the scope of this Article, but might come to have direct implications

permits, or European emission allowances, required for each ton of carbon dioxide (CO_2) emitted in the covered installations will have to increase steeply in the coming years. Against this background, there is a renewed anxiety about the possibility of international carbon leakage. In the EU Green Deal, it is assumed that

> [a]s long as many international partners do not share the same ambition as the EU, there is a risk . . . [that] production is transferred from the EU to other countries with lower ambition for emission reduction, or . . . EU products are replaced by more carbon-intensive imports. If this risk materialises, there will be no reduction in global emissions, and this will frustrate the efforts of the EU and its industries to meet the global climate objectives of the Paris Agreement.[8]

Currently, this risk is addressed through the free allocation of allowances in industrial sectors at risk of carbon leakage, based on the emissions performance of the most carbon-efficient installations. The EU ETS Directive provides for this system to continue at least until 2030. However, in light of the ambitious Green Deal commitments and the ensuing aggravation of the problem, the European Commission announced in 2019 that it would propose a carbon border adjustment mechanism (CBAM) for selected sectors as an alternative instrument (to the allocation of free allowances) to address the risk of carbon leakage.[9] This alternative has long been under consideration, both by the Union legislature[10] and in scholarly literature.[11]

In its inception impact assessment of March 2020,[12] the Commission insisted that any form of CBAM "should be commensurate with the internal EU carbon price."[13] The Commission further announced that the CBAM would be limited in scope to imported products.[14] To this effect, various possible design options were explored. More specifically, the inception impact assessment mentioned the following three instruments: a new carbon customs duty, a so-called carbon tax on selected products, or the extension of the EU ETS to imports.[15] All of the contended policy options were premised on the rationale that the EU could "convert origin-based carbon prices to destination-based prices"[16] in order to level the playing field between domestic producers and foreign competitors.[17] Since this objective would have a direct impact on international trade, the successful implementation of a CBAM would need to be compatible with World Trade Organization (WTO) law.

Admittedly, it is settled case law of the European Court of Justice that WTO law does not normally have direct effect in Union law and thus cannot invalidate Union legislation.[18] While the EU is a Member of the WTO, the potential of being subjected to trade sanctions might not be heavily weighed by the Commission, should the CBAM proposal be considered to be in violation of WTO law, given the current relative paralysis of the WTO dispute settlement procedure.

However, it would be politically fatal for the climate leader ambitions of the EU to give the impression that it does not care for WTO obligations when designing a CBAM. This could invite accusations of protectionism and undermine the entire Paris Agreement. Moreover, the risk of inciting a global trade war would be imminent, even before the WTO Dispute Settlement Body might award trade partners the right to retaliate. The need to respect WTO law is therefore acknowledged by all EU institutions to be involved in enacting the CBAM (i.e., by the Commission,[19] the Parliament,[20] and the Council[21]).

This Article endeavors to explore whether, and if so how, the various CBAM design options presented by the European Commission could be reconciled with WTO law requirements.[22] In line with previous findings,[23] our main hypothesis is that a measure's effectiveness in addressing carbon leakage correlates with the risk of falling short of the WTO nondiscrimination requirements. To make this evident, we compare the CBAM instru-

with the workings of a carbon border adjustment mechanism (CBAM), depending on the design of the measure, once it is disclosed.

8. European Green Deal, *supra* note 3, at 5.
9. *See id.*; *see also Commission Work Programme 2021*, at 5, COM (2020) 690 final (Oct. 19, 2020). Meanwhile, the European Commission has tabled its CBAM proposal, *see Proposal for a Regulation Establishing a Carbon Border Adjustment Mechanism*, at 2, COM (21) 564 final [hereinafter *Proposal for a Regulation Establishing a CBAM*].
10. See recital 25 of the preamble to Council Directive 2009/29/EC, 2009 O.J. (L 140) 63, 66-67, contemplating the introduction of "an effective carbon equalisation system."
11. *See*, *e.g.*, Joost Pauwelyn, *U.S. Federal Climate Policy and Competitiveness Concerns: The Limits and Options of International Trade Law* 16 (Nicholas Institute, Working Paper No. 07/02, 2007); Javier de Cendra, *Can Emissions Trading Schemes Be Coupled With Border Tax Adjustments? An Analysis Vis-à-Vis WTO Law*, 15 Rev. Eur. Cmty. & Int'l Env't L. 131 (2006).
12. European Commission, Inception Impact Assessment for the Carbon Border Adjustment Mechanism (Mar. 4, 2020) [hereinafter Inception Impact Assessment for the CBAM].
13. *Id.* at 3.
14. *See*, *e.g.*, *id.* at 2 ("A carbon border adjustment measure would apply to imports into the EU."). *See also Proposal for a Regulation Establishing a CBAM*, *supra* note 9.
15. Inception Impact Assessment for the CBAM, *supra* note 12, at 2. However, a clear preference for the latter solution has meanwhile become manifest, *see infra* Section I.2. See also the summary overview in the *Proposal for a Regulation Establishing a CBAM*, *supra* note 9, at 7.
16. Charles E. McLure Jr., *A Primer on the Legality of Border Adjustments for Carbon Prices: Through a GATT Darkly*, 5 Carbon & Climate L. Rev. 456, 456 (2011).
17. *See also* Tatiana Falcão, *A Proposition for a Multilateral Carbon Tax Treaty* (IBFD, Doctoral Series No. 47, 2019).
18. *See* Joined Cases 21 to 24-72, International Fruit Co. v. Produktschap voor Groenten en Fruit, ECLI:EU:C:1972:115 (Dec. 12, 1972); Case C-149/96, Portugal v. Council, ECLI:EU:C:1999:574, para. 47 (Nov. 23, 1999).
19. *See*, *e.g.*, *Commission Work Programme 2021*, *supra* note 9, at 5 ("This measure will be designed to comply with World Trade Organization rules."). *See also Proposal for a Regulation Establishing a CBAM*, *supra* note 9, at 2.
20. *See* European Parliament Resolution of 10 March 2021 Towards a WTO-Compatible EU Carbon Border Adjustment Mechanism (2020/2043(INI)), point 7 [hereinafter European Parliament Resolution 2021].
21. *See* European Council Conclusions of 11 December 2020, EUCO 22/20, CO EUR 17, CONCL 8, at 7, recital 17, https://www.consilium.europa.eu/media/47296/1011-12-20-euco-conclusions-en.pdf.
22. Editor's Note: Tatiana Falcão has provided inputs to the Coalition of Finance Ministers for Climate Action on the legality of employing a CBAM, and has spoken to the European Parliament's Subcommittee on Tax Matters concerning the mechanism.
23. *See* Aaron Cosbey et al., Designing Border Carbon Adjustments and Alternative Measures: An Overview 10 (2020).

ments that were deliberated by the European Commission with the benchmark of a CBAM for a (carbon) excise tax levied on fossil fuels.

CBAM design options have long been the object of substantial economic and political debate, as well as object of legal analysis. Our Article goes beyond the existing literature in that it offers an in-depth comparative analysis of the compatibility of the different CBAM design options (meaning a border adjustment to carbon pricing under different ETS pricing mechanisms or excise tax strategies) with WTO law. This novel approach includes the interpretation of legality of the carbon pricing system developed under an ETS framework, in respect of WTO law and its jurisprudence.

The Article further proposes certain design modifications for individual instruments so as to strike a better balance between the need to respect WTO law standards and the objective of effectively addressing carbon leakage. Due to its comprehensive nature, it is understood that our findings are also applicable to the CBAM proposal recently proposed by the Commission,[24] and for other jurisdictions contemplating similar measures. Several other nations are expected to follow the European lead in introducing a border carbon adjustment (BCA), with the United States[25] and Canada[26] having openly declared that they are analyzing the suitability of introducing a border adjustment, even in the absence of a national carbon pricing scheme such as a carbon tax or an ETS. Finally, we offer a comprehensive survey of scholarly writings on the topic and potentially relevant WTO jurisprudence.

The Article is being published in two separate parts. This issue's Part One describes and qualifies, in Section I, the different instruments that were under consideration for the EU CBAM proposal, namely, (1) a carbon customs duty; (2) an extension of the existing emissions trading scheme; and (3) a border tax adjustment (BTA) for a consumption-based excise tax (CET). Moreover, we also analyze the alternative of (4) a BTA for a tax on fossil fuels. In Section II, we analyze the compatibility of each of these instruments with the General Agreement on Tariffs and Trade (GATT), and we also take into account the Agreement on Subsidies and Countervailing Measures (ASCM). In this central part of the Article, we focus on the most relevant GATT provisions, namely: Article I (General Most-Favoured-Nation Treatment), Article II (Schedules of Concessions), Article III (National Treatment on Internal Taxation and Regulation), and Article XI (General Elimination of Quantitative Restrictions).

In Part Two, next issue, we will assess the validity of these measures against the public policy exceptions contained in GATT Article XX. In the latter context, we will also consider some international political economics aspects of introducing a CBAM that are relevant in light of the chapeau of Article XX. In particular, we explore the need to take into account the practical circumstances of third states, and how bilateral or regional coordination or agreement might be necessary and could eventually lead to a multilateral approach. Part Two will also summarize our conclusions.

I. The Adjustment Mechanisms Under Consideration

In the 2020 inception impact assessment, the European Commission contemplates three different policy instruments for a possible CBAM. These are (1) a so-called carbon tax on selected products, both imported and domestic; (2) a new carbon customs duty or tax on imports (only); or (3) the extension of the EU ETS to imports by way of a notional ETS. We will briefly outline these three measures and how they could be commensurate with the internal EU carbon price. We will further contrast the measures mentioned in the inception impact assessment with the alternative of a fuel excise tax. Those four options will then be analyzed as to their compatibility with WTO requirements in Section II.

A. *Carbon Customs Duty*

An idea first introduced in the inception impact assessment of the Commission[27] was a "new carbon customs duty or tax on imports," which was subsequently renamed as "import carbon tax."[28] A carbon customs duty would be levied on selected commodities and materials in sectors with a high risk of carbon leakage.[29] It would be designed as a tariff upon import of the respective products, with no equivalent levy in the internal tax systems of EU Member States.

This is perhaps the least feasible of all options mentioned in the inception impact assessment, both from an administrative and a legal perspective. Tariffs tend to be ad valorem duties, applied as a percentage of the price and not as a function of pollution, thus limiting the environmental effectiveness of employing this duty as an environmental measure.

24. *Proposal for a Regulation Establishing a CBAM*, *supra* note 9.
25. See, in this respect, Proposal to Amend the Internal Revenue Code of 1986 to Establish a Border Carbon Adjustment for the Importation of Certain Goods, S. 3582, 115th Cong. (2018), https://www.coons.senate.gov/imo/media/doc/GAI21718.pdf. *See also* Lisa Friedman, *Democrats Propose a Border Tax Based on Countries' Greenhouse Gas Emissions*, N.Y. Times, July 19, 2021.
26. Government of Canada, Budget 2021: A Recovery Plan for Jobs, Growth, and Resilience 176 (2021), https://www.budget.gc.ca/2021/home-accueil-en.html (where the Canadian government expresses its intent to launch a consultation process on border carbon adjustments shortly).
27. Inception Impact Assessment for the CBAM, *supra* note 12, at 2.
28. *See Proposal for a Regulation Establishing a CBAM*, *supra* note 9, at 7.
29. The relevant sectors are currently listed in the Annex to the Commission Delegated Decision C (2019) 930 final. As to the decisive criteria, see also Stéphanie Monjon & Philippe Quirion, *How to Design a Border Adjustment for the European Union Emissions Trading System?*, 38 Energy Pol'y 5199, 5202 (2010).

B. Extension of the ETS

As an alternative option, it was considered to extend the EU ETS to imported products in the form of a "notional ETS."[30] This levy would apply to selected imported commodities in sectors covered by the EU ETS with a high risk of carbon leakage. Importers of such products would be required to acquire—and periodically surrender—a certain number of emission allowances. This notional ETS is now indeed the policy approach chosen by the Commission in its July 2021 proposal,[31] and evidence seems to suggest that it is also the European Parliament's preferred approach.[32]

Unlike traditional ETS allowances, the notional ETS allowances (also called CBAM certificates under this approach) would not be tradable in European secondary markets, so as not to distort prices in the European carbon market.[33] Moreover, CBAM certificates would expire within a relatively short period of time, in order to keep their cost aligned with the cost of the EU ETS.[34]

Notional ETS certificates would be generated to cover the carbon emissions caused by the production of the covered imported material. The number of notional ETS certificates required as a result of the import would vary depending on how the built-in polluting potential of the product is valued. It could be determined in any one of three ways: (1) based on actual emissions, (2) by using default values, or (3) through a combination of these options. In the inception impact assessment, the use of default values was foreseen as the standard approach, based on the EU average, as emission intensities for each covered commodity. However, the importer would be allowed to demonstrate that the actual carbon emission generated as a result of the production process was lower than the EU average; the amount of CBAM certificates needed would then be adjusted accordingly.[35]

In its actual proposal for a regulation, the Commission went on to pursue the opposite approach: in principle, the notional permits needed should be determined based on actual emissions. However, where they cannot be adequately determined, default values would be used. They would primarily be determined by employing the average emission intensity for the relevant commodity in the respective exporting country; and absent reliable data to this effect, based on the average emission intensity of the 10% worst-performing EU installations for that type of goods.[36] The tabled proposal leaves open the question as to how these emissions will be measured in practice in the country of origin.

The inception impact assessment did not specify how the price for the notional allowances needed for the respective benchmark would be determined. Basically, two approaches were conceivable that represent a different trade off between ease of administration and the goal of aligning the carbon price for imports as closely as possible with the (average) burden of domestic products. The allowances price to be used for the purpose of the notional ETS could be derived from the clearing price fixed at the auctions of ETS allowances that have been carried out on behalf of the EU Member States over a given period of time, possibly on the basis of a weighted average reflecting the different national shares of auctioned allowances.[37] Alternatively, the price of notional allowances could be determined in shorter intervals, possibly even daily, on the basis of the current spot price paid for ETS allowances in secondary markets.

The first option would imply that in principle, all imported products would incur the same cost regardless of their individual carbon content during the time period for which the notional allowances price has been fixed. It would be administratively less complex, but it would potentially also reflect less accurately the pollution externalities of the imported product. The second option would lead to more volatile notional ETS costs that would depend on the day (or week, etc.) of importation of the chargeable goods, and on the market interest in trading the permits granting the right to pollute on a secondary market. While probably more closely aligned with the (actual or opportunity) costs incurred by domestic producers, it would also considerably increase complexity (due to a higher frequency of price adjustments according to the daily traded price) and possibly also tax planning opportunities.

The actual Commission proposal of July 2021 has now opted for a compromise between those two solutions. The price of CBAM certificates should generally be determined in weekly intervals, but only based on primary market (auction) prices.[38]

Moreover, the Commission stated that the notional ETS would not be applied, or the amount of notional permits would be partially reduced, when imported products originate in a jurisdiction with equivalent measures to internalize the cost of carbon emissions.[39] Finally, it is conceivable that the notional ETS could eventually be extended to composite, semi-manufactured, or finished products made

30. See also the similar concept presented by French Association of Large Companies (AFEP), Final Report: Trade & Climate Change 51 (2021).
31. *See Proposal for a Regulation Establishing a CBAM*, *supra* note 9, at 9.
32. *See* European Parliament Resolution 2021, *supra* note 20.
33. See also, with respect to the following design features, the comments made by Benjamin Angel (director at DG TAXUD) at a webinar organized by AFEP, Trade and Climate: Friends or Foes? (Jan. 14, 2021), https://afep.com/en/publications-en/trade-climate-friends-or-foes-making-the-case-for-cbam-and-green-trade-rules/.
34. *See Proposal for a Regulation Establishing a CBAM*, *supra* note 9, at 18, recital 22.
35. Inception Impact Assessment for the CBAM, *supra* note 12, at 2.
36. *See Proposal for a Regulation Establishing a CBAM*, *supra* note 9, annex III, point 4.1.
37. As per Article 4 of the EU ETS Auctioning Regulations (Commission Regulation 1031/2010 of Nov. 12, 2010, 1990 O.J. (L 302) 1, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02010R1031-20191128&from=EN), allowances are auctioned in the form of either two-day spot or five-day futures and offered for sale on an auction platform by means of standardized electronic contracts.
38. *See Proposal for a Regulation Establishing a CBAM*, *supra* note 9, art. 21.
39. *See* Inception Impact Assessment for the CBAM, *supra* note 12, at 2. *See also Proposal for a Regulation Establishing a CBAM*, *supra* note 9, art. 9.

with materials whose production is covered by the EU ETS,[40] or to the emissions allowances needed for the generation of electricity used in the production process.[41]

The inception impact assessment of the Commission did not yet address the consequences of a CBAM for the practice of allocating some allowances for free to certain industries. Under the current operation phase of the EU ETS, emission permits are auctioned as the default rule, but 43% of permits are allocated for free[42] in an effort to "level the playing field" in internationally competing sectors of the economy and to curb carbon leakage. The tabled CBAM proposal of July 2021 actually accounts for that by stipulating that the notional ETS shall only gradually be phased in, in parallel to a phaseout of the distribution of free allowances[43] under the EU ETS.

C. BTA for a CET

A third alternative mentioned in the inception impact assessment was a border-adjusted so-called carbon tax, to be levied on selected products irrespective of their origin.[44] Moreover, by default, the amount of tax to be paid would either be determined by benchmark values aligned with the EU ETS, or based on a predefined carbon content of the respective product. From this, it can be inferred that the designation of the envisaged tax as a "carbon tax" was somewhat misleading, because different from the conventional understanding of an (implicit or explicit) carbon tax, the tax would, in principle, not be levied in proportion of the carbon content or carbon footprint of the individual product. Moreover, unlike classical carbon taxes, it would not necessarily be levied (only) on energy or fuels. The notion of a "carbon tax" option should therefore rather be conceived as a CET on select products that are at high risk of carbon leakage.

Against this background, such a CET could feature the following design elements: like the aforementioned other two instruments, it would initially be limited to selected basic materials and commodities in sectors with a high risk of carbon leakage and could subsequently be expanded. The taxable amount would be determined per unit of taxable product based on product-specific carbon emission benchmarks. In order to make the desired connection with the ETS carbon price, it should reflect the average cost of acquisition of ETS allowances needed in order to produce the respective commodity under the relevant benchmark.[45] This benchmark could either be the best available technology[46] or the predominant method of production in the EU.[47]

The taxable amount would be recalculated periodically, for example on an annual basis. The taxable amount would then be applied uniformly to imported and domestic products, and in principle irrespective of their origin and individual carbon content. The CET on domestically produced taxable products would become chargeable once they are released for consumption (free circulation). Similarly, imported products would be subject to a BTA upon customs clearance and release for consumption.

A uniform CET would also be compatible with the eventual elimination of free allocations granted under the EU ETS. Ending this practice would remove any waiver in the allocation of allowances and complementing EU ETS coverage to 100%. The Commission has indeed stated that the introduction of the CBAM is expected to be consistent with the elimination of free allowances.[48] In order to avoid double burdens for domestic products, with both excise tax and the cost of ETS allowances, the payment of the tax liability could then be made creditable against the acquisition cost for ETS allowances in current or future auctions for participants in the EU ETS. To this effect, certificates of CET payment could be issued. While technically a tax on a specific product category, the excise tax burden would then economically function as a prepayment on the EU ETS cost of the corresponding ETS allowances.

The inception impact assessment of the Commission further declared that any carbon border adjustment should rely on benchmark values "unless the exporter certifies a lower carbon content and/or a higher carbon cost at origin."[49] This would imply the possibility of a CET rebate (only) for imported products upon procurement of the necessary documentation.[50]

40. *See* European Commission, Staff Working Document, Executive Summary of the Impact Assessment Report, at 3, SWD (2021) 644 final. *See also* Monjon & Quirion, *supra* note 29, at 5203.
41. The European Commission treads quite carefully in this regard. It is foreseen that the notional ETS could be extended to such "indirect emissions" only after the end of a three-year transition period, and only "upon further assessment," *see Proposal for a Regulation Establishing a CBAM*, *supra* note 9, pmbl. recital 17.
42. European Commission, *Free Allocation*, https://ec.europa.eu/clima/policies/ets/allowances_en (last visited Aug. 24, 2021).
43. *See Proposal for a Regulation Establishing a CBAM*, *supra* note 9, at 3, 8.
44. Inception Impact Assessment for the CBAM, *supra* note 12, at 2.
45. See, in this regard, Roland Ismer et al., *Border Carbon Adjustments and Alternative Measures for the EU ETS: An Evaluation* 5 (DIW Berlin, Discussion Paper No. 1855, 2020).
46. *See*, *e.g.*, Roland Ismer & Karsten Neuhoff, *Border Tax Adjustment: A Feasible Way to Support Stringent Emission Trading*, 24 Eur. J.L. & Econ. 137, 140 (2007). As to possible specifications of this benchmark, see Monjon & Quirion, *supra* note 29, at 5204.
47. *Cf.* Aaditya Mattoo et al., *Reconciling Climate Change and Trade Policy* 3, 5 (Peterson Institute for International Economic Policy, Working Paper No. 09-15, 2009).
48. Coalition of Finance Ministers for Climate Action, Virtual Workshop on Carbon Pricing (May 6, 2021).
49. Inception Impact Assessment for the CBAM, *supra* note 12, at 2.
50. The World Bank has suggested that it would be more economically efficient to introduce "feebate" systems such as the one proposed by the European Commission's inception impact assessment report. A feebate mechanism applies the same tax rate for all units of a commodity, with a discount or rebate when it is proven that the production method of the product was "sustainable" or "green," and the product has been certified as such. The amount of tax rebate that the sustainable producers receive is just the amount that they should not have been taxed in the first place because their production technique imposes fewer external costs. That is essentially what this type of tax seems to assimilate. A tax followed by a rebate would arguably be consistent with WTO rules. See, in this respect, Dirk Heine et al., *Letting Commodity Tax Rates Vary With the Sustainability of Production*, *in* Designing Fiscal Instruments for Sustainable Forests 145, 157-58 (Dirk Heine & Erin Hayde eds., World Bank Group 2021).

Finally, it is inherent to the idea of a CET that uniformly covers both products produced in the EU and products imported into the EU, that it should be a harmonized tax not only regarding the border adjustment element, but concerning the tax as a whole. This includes any potential interactions with a reformed energy tax that takes into account the carbon price of the product in taxing the energy.

D. BTA for a Tax on Fossil Fuels

This option would entail the application of an excise tax both domestically and at the border, where the excise tax takes the form of a genuine carbon tax. As such, the rate could vary according to the carbon intensity of the imported (or extracted) fossil product, hence providing an economic incentive for producers and consumers to acquire the least carbon-intensive fossil source of energy. The fossil fuel tax would differ from the CET since the latter, by default, would not take into account the actual carbon content of the individual product, whereas the former would.

Best practice would mandate for the fuel tax to be employed at the upstream level of the production chain, therefore at import or extraction, although they could also be employed at the downstream level (at the refining, processing facility, or consumption level). Because upstream carbon tax regimes are more effective at capturing the full carbon-producing potential of the fossil product, they get to be employed more often. However, in recent years, a variety of downstream carbon tax regimes have proliferated in countries such as Chile, Singapore, and South Africa.

A carbon tax that is imposed at the upstream level is typically imposed on the traditional fossil fuels (coal, diesel, gasoline, and natural gas) so as to also impose a significant economic impact on the products manufactured through the use of these fossil products. For example, a carbon-intensive industry (such as cement, steel, paper pulp, and others) operating in the EU internal market and using a carbon-intensive fuel such as coal or diesel as the main source of energy to produce its products will have an incentive to (1) switch to a less carbon-intensive fuel if the economic impact of the carbon tax is high enough to justify the switch, and/or (2) invest in research and development to increase fuel efficiency and potentially decarbonize the production process through the use of renewable energy sources, blends, and low-carbon products.

Further, since this is a one-time tax, applied either on import or on extraction, there is no need to calculate the carbon footprint of the product before it enters the EU common market, because (1) the tax is levied on a primary energy source that has not yet been subject to a conversion or transformation process, and (2) the entire carbon emissions potential of the primary product is still built in to the fossil product and will only be released once it is subjected to a transformation process (such as production or manufacturing).

Products are said to carry a carbon footprint within them because it takes energy to produce and transport them. The energy used to produce manufactured products is typically provided by fossil fuels. Therefore, by taxing the fossil fuel, one is automatically also indirectly taxing and burdening the entire production chain employing fossil fuels as the primary energy source.

Therefore, this would also be the least complex option, capable of providing administrative simplicity, which is a positive feature, considering such a tax would have to be employed by several Member States concomitantly and in parallel to each other. The excise tax design reduces the potential for fraud usually arising in the context of value-added tax (VAT)-type taxes.

However, while the implementation of this solution would be relatively straightforward, administratively efficient, and hardly subject to allegations of protectionism, it would also tend to be less effective against carbon leakage than the aforementioned alternatives. That is because a carbon tax that is employed at the border on fossil fuels would not cover the use of fuel as an input in foreign production processes. This means that the import of fuels would be covered, but not the import of energy-intensive products such as cement, pulp, steel, aluminum, and so on produced abroad with fuel and energy as an input there. Carbon leakage would hence still be an issue for the types of products covered by the EU ETS because the incentive to have emissions-intensive commodities produced abroad to escape the EU fuel carbon excise tax would remain unchanged.

II. WTO Law Analysis

A. Incompatibility of Import Tariffs With GATT and ASCM

The one option for a CBAM contemplated in the inception impact assessment published by the European Commission that should immediately be discarded from a WTO law perspective is the idea of a new carbon customs duty on selected materials. The introduction of new carbon customs duties in excess of WTO tariff concessions of the EU would contravene Article II:1(b) of GATT.[51] And with respect to most materials with carbon-intensive production processes and a high risk of carbon leakage, the maximum tariffs (the "bound rates") that the EU has conceded are very low (e.g., regarding cement (1.7%)), or even zero (e.g., regarding steel).

It would further be difficult to justify such a "green tariff." In particular, this instrument would hardly meet the evenhandedness requirement of GATT Article XX(g),[52]

51. *See* Jochem Wiers, *French Ideas on Climate and Trade Policies*, 2 Carbon & Climate L. Rev. 18, 22 (2008); Reinhard Quick, *"Border Tax Adjustment" in the Context of Emission Trading: Climate Protection or "Naked" Protectionism?*, 3 Global Trade & Customs J. 163, 164 (2008); Joost Pauwelyn, *Carbon Leakage Measures and Border Tax Adjustments Under WTO Law*, *in* Research Handbook on Environment, Health, and the WTO 448, 466 (Geert Van Calster & Denise Prévost eds., Edward Elgar Publishing 2013); *see also* Michael O. Moore, *Carbon Safeguard? Managing the Friction Between Trade Rules and Climate Policy*, 51 J. World Trade 43, 49 (2017).
52. *See infra* Section II.F.2.

because it would have only a loose link to the system of domestic carbon taxation and carbon pricing in EU Member States. This would leave the EU with no or only insufficient leeway to effectively prevent or reduce carbon leakage. The customs duty option would thus require a renegotiation of the relevant custom duty concessions, which would be a time-consuming process with dim prospects of success.

For the sake of completeness of our analysis, it should be mentioned that the imposition of a carbon customs duty could also not be justified as a countervailing duty pursuant to Article 19 of the ASCM. An eventual foreign government inaction on the internalization of external environmental costs of the production of certain materials does not amount to a subsidy within the meaning of Article 1 of the ASCM.[53] In a similar vein, it does not constitute a case of dumping as defined in Article VI of GATT and in Article 2 of the Agreement on Implementation of Article VI of GATT.[54]

B. Admissibility of BTAs

1. Preliminary Analysis of the Relationship Between GATT Articles II:2(a) and III:2

BTAs for internal taxes of a WTO Member are addressed in two separate provisions of GATT. First, BTAs qualify the prohibition of ordinary customs duties on imported goods in excess of those set forth in the relevant schedules of tariff concessions, as stipulated in GATT Article II:1(b) (referring to the schedule of concessions).[55] Pursuant to Article II:2(a), this prohibition shall not prevent

> any contracting party from imposing at any time on the importation of any product a charge equivalent to an internal tax imposed consistently with the provisions of paragraph 2 of Article III in respect of the like domestic product or in respect of an article from which the imported product has been manufactured or produced in whole or in part.

Second, BTAs are also mentioned within the context of the national treatment requirement of Article III:2, which concerns "internal taxes or other internal charges of any kind" applied to "imported products." According to the Note Ad Article III:

> Any internal tax or other internal charge . . . which applies to an imported product and to the like domestic product and is collected . . . in the case of the imported product at the time or point of importation, is nevertheless to be regarded as an internal tax or other internal charge . . . of the kind referred to in paragraph 1, and is accordingly subject to the provisions of Article III.

The relationship between the two provisions (i.e., the qualification of tariff limits and national treatment (GATT Articles II:2(a) and III:2, respectively)) is not entirely clear. As pointed out in scholarly research, some panels and the Appellate Body have reached different conclusions regarding the scope of, and interaction between, both provisions.[56] A first possibility that enjoys some support in literature[57] but that has occasionally also been mentioned in dispute settlement proceedings is that both provisions overlap in scope.

In particular, the early panel report on *European Economic Community—Animal Feed Proteins* stated that it "appeared to be the common understanding of the drafters of these articles that their scope should be the same as to the kind of measures being covered."[58] In the *India—Additional Import Duties* case, the European Communities leaned toward a similar interpretation, albeit more cautiously, by pointing out "the possibility that Articles II and III may to some extent overlap." A full overlap should then imply that uniform conditions and admissibility criteria for all kinds of BTAs would have to be derived from both provisions read together.[59] However, it has also been argued that GATT Article II:2(a) is mostly declaratory in nature and should not be understood so as to limit the eligibility of internal taxes for BTA beyond the criteria established in Article III:2(1).[60]

53. *See also* Markus Schlagenhof, *Trade Measures Based on Environmental Processes and Production Methods*, 29 J. World Trade 123, 145-46 (1995); Jagdish Bhagwati & Petros C. Mavroidis, *Is Action Against U.S. Exports for Failure to Sign Kyoto Protocol WTO-Legal?*, 6 World Trade Rev. 299, 302-03 (2007); Pauwelyn, *supra* note 51, at 470-72. For a different view, see Robert Howse & Antonia L. Eliason, *Domestic and International Strategies to Address Climate Change: An Overview of the WTO Legal Issues*, *in* International Trade Regulation and the Mitigation of Climate Change 48, 73-76 (Thomas Cottier et al. eds., Cambridge Univ. Press 2009).
54. For extensive analysis, see Pauwelyn, *supra* note 51, at 466-69.
55. The schedule of concessions provides the maximum customs duties applicable to foreign products upon import into a national territory. The WTO acts so as to reduce customs tariffs as much as possible; therefore, the scheduled concessions provide the maximum negotiated rate a country is willing to apply. The objective, in the interest of free trade, is that ultimately all commerce would be exempt from customs duties.
56. For a comprehensive analysis, but with sometimes different conclusions, see Alice Pirlot, Environmental Border Tax Adjustments and International Trade Law 168-77 (2017); *see also* Pauwelyn, *supra* note 11, at 19.
57. *See* Jennifer Hillman, Changing Climate for Carbon Taxes: Who's Afraid of the WTO? 5 (2013); Matthew C. Porterfield, *Border Adjustments for Carbon Taxes, PPMs, and the WTO*, 41 U. Pa. J. Int'l L. 1, 12-13 (2019); *see also* Paul Demaret & Raoul Stewardson, *Border Tax Adjustments Under GATT and EC Law and General Implications for Environmental Taxes*, 28 J. World Trade 5, 17, 19 (1994); Michael Hahn, *Understanding on the Interpretation of Article II:1(b) of the GATT 1994*, *in* WTO—Trade in Goods, art. II, para. 70 (Rüdiger Wolfrum et al. eds., Brill Academic Publishers 2010).
58. Report of the Panel, *EEC—Measures on Animal Feed Proteins*, para. 4.16(c), L/4599 (adopted Mar. 14, 1978), GATT B.I.S.D. 25S/49.
59. See the approach by Christian Pitschas, *GATT/WTO Rules for Border Tax Adjustment and the Proposed European Directive Introducing a Tax on Carbon Dioxide Emissions and Energy*, 24 Ga. J. Int'l & Comp. L. 479, 493 (1995).
60. *See* Ole Kristian Fauchald, Environmental Taxes and Trade Discrimination 178 (1998) (referring to the drafting history of GATT Article II:2(a)); Howse & Eliason, *supra* note 53, at 65; Donald H. Regan, *How to Think About PPMs (and Climate Change)*, *in* International Trade Regulation and the Mitigation of Climate Change, *supra* note 53, at 97, 122-23; John H. Jackson, World Trade and the Law of GATT 296 (1969).

A second view that is supported by some scholars[61] considers that GATT Article II:2(a) serves only to delineate the scope of the limitations for the levy of "ordinary customs duties" laid down in GATT Article II:1. This view was endorsed by the panel report in the *India—Additional Import Duties*.[62] The panel considered that a border charge of the type contemplated in Article II:2(a) would not come within the scope of Article II:1 if it could be established that it was functionally equivalent to an internal tax.

In addition and under a separate analysis, it would have to meet the national treatment requirements of Article III:2. However, this position was rejected by the Appellate Body, which instead preferred a third interpretation: a border charge is admissible under GATT Article II:2(a) and dispensed from the limitations for customs duties laid down in Article II:1 only if it meets all the criteria stipulated in the former provision, including its consistency with GATT Article III:2.[63] Hence, the national treatment requirement is regarded as an integral element of the test to be carried out under Article II:2(a). This position has also found some support in literature.[64]

While the last two viewpoints differ regarding the implications of the reference to the national treatment obligation in GATT Article II:2(a), they both imply that different admissibility standards might apply for different categories of BTAs,[65] namely those that are akin to a customs duty, and those that constitute an integral part of an internal tax. The distinction between those two categories of BTAs is now indeed the predominant approach in WTO jurisprudence,[66] and has found its most elaborate expression so far in the Appellate Body report on *China—Auto Parts*. In this landmark decision, the Appellate Body has further specified the relevant criteria for establishing whether a charge levied upon importation nevertheless constitutes an integral element of an internal tax or charge within the meaning of GATT Article III:2 and is therefore directly covered by this provision.

According to the Appellate Body, "the time at which a charge is collected or paid is not decisive" for the distinction between a "border charge"-type of adjustment and an "internal charge" adjustment for imported products. As can indeed be inferred from the Ad Note to Article III, the latter can be levied upon importation at the border, too.[67] Instead, the Appellate Body identified as

> a key indicator of whether a charge constitutes an "internal charge" within the meaning of Article III:2 of the GATT 1994 . . . "whether the obligation to pay such charge accrues because of an *internal* factor . . . , in the sense that such 'internal factor' occurs *after the importation* of the product of one Member into the territory of another Member."[68]

This could for instance be the subsequent sale, use, or processing of the imported good.[69] Whether such a connection to an internal factor is sufficiently relevant must be assessed "in the light of the characteristics of the measure and the circumstances of the case," taking into account both the design and the operation of the fiscal measure.[70]

As a consequence, BTAs, which constitute an integral element of an internal tax or charge, because the tax on imported products becomes chargeable on occasion of—or with a view to—an internal event as in the case of a domestic product, do not fall under the scope of GATT Article II:2(a) and therefore only need to pass the national treatment test enshrined in Article III:2.[71] By contrast, other types of (genuine) border charges are covered, in principle, by GATT Article II:1 and must therefore meet the criteria of Article II:2(a) in addition to—indeed as a "gateway" to—the national treatment requirement of GATT Article III:2 in order to be compatible with WTO obligations.[72]

We find this understanding of the relationship between GATT Articles II:2(a) and III:2 more convincing than the first alternative, which assumes a broad overlap in scope of the two provisions or even considers Article II:2(a) to be merely declaratory in nature. In conformity with customary rules on treaty interpretation,[73] our understanding is based on the wording of the two provisions, while also taking into account their context and rationale. Our first

61. *See*, *e.g.*, Fauchald, *supra* note 60, at 96; Barbara Volmert, Border Tax Adjustments: Konfliktpotential zwischen Umweltschutz und Welthandelsrecht 39-41 (2011); Sophie Gappa, Grenzausgleichsmassnahmen als Klimaschutzinstrument 160-63 (2014).
62. Panel Report, *India—Additional and Extra-Additional Duties on Imports From the United States*, paras. 7.206 and 7.209, WTO Doc. WT/DS360/R (adopted Nov. 17, 2008).
63. Appellate Body Report, *India—Additional and Extra-Additional Duties on Imports From the United States*, paras. 180-181, WTO Doc. WT/DS360/AB/R (adopted Nov. 17, 2008). *See also* Panel Report, *India—Additional and Extra-Additional Duties on Imports From the United States*, para. 7.203, WTO Doc. WT/DS360/R (adopted Nov. 17, 2008). *See also* Pirlot, *supra* note 56, at 170.
64. *See* Wen-Chen Shih, *The Border Tax Adjustment Provisions of the GATT/WTO and Their Implications on the Design of Energy and Carbon Tax*, 14 Int'l Trade & Bus. L. Rev. 53, 61 (2011); Frieder Roessler, *India—Additional and Extra-Additional Duties on Imports From the United States*, 9 World Trade Rev. 265, 267-69 (2010) (Roessler moreover assumes that regarding internal taxes on imported products that are directly covered by GATT Articles III:2 and II:2(a) has the additional and complementary function of authorizing the "border" element of a BTA for the internal tax).
65. For a different understanding, see Pirlot, *supra* note 56, at 174-77, who assumes that only the third position allows for the possibility of different standards with respect to the admissibility of different categories of border tax adjustments.
66. *See* Appellate Body Report, *China—Measures Affecting Imports of Automobile Parts*, para. 171 n.233, WTO Doc. WT/DS339, 340, 342/AB/R (adopted Jan. 12, 2009) ("In *India—Additional Import Duties*, the Appellate Body made a similar observation with respect to the issue of whether a measure falls under Article II:2(a) *or* the Ad Note to Article III" (emphasis added)).
67. *Id.* para. 162.
68. *Id.* para. 163 (emphasis added, in line with para. 162).
69. *See also* Hillman, *supra* note 57, at 5.
70. Appellate Body Report, *China—Measures Affecting Imports of Automobile Parts*, para. 171, WTO Doc. WT/DS339, 340, 342/AB/R (adopted Jan. 12, 2009).
71. *See also* Pauwelyn, *supra* note 51, at 475.
72. For a different view regarding *taxes occultes* that are not permitted under GATT Article II:2(a) (*see infra* Section II.B.2), see Howse & Eliason, *supra* note 53, at 65; Gappa, *supra* note 61, at 188-89.
73. See, in particular, Article 31(1) of the Vienna Convention on the Law of Treaties, May 23, 1969, 1155 U.N.T.S. 331; as to the relevance of those rules for the interpretation of the agreements covered by the WTO, see Dispute Settlement Understanding Article 3.2, and, for example, Appellate Body Report, *China—Measures Affecting Imports of Automobile Parts*, para. 145, WTO Doc. WT/DS339, 340, 342/AB/R (adopted Jan. 12, 2009).

observation is that Article II:2(a) differs from Article III:2 and its Ad Note in that the former provision addresses "a charge *equivalent* to an internal tax," whereas the latter concerns "internal taxes or other internal charges" themselves. The difference in terminology suggests that there is a conceptual difference between a border charge within the meaning of GATT Article II:2(a) and an internal charge—possibly collected at the border, too—dealt with in GATT Article III, and that Article. II:2(a) applies exclusively to the former.[74]

This literal interpretation is not called into question by the explanation given in the preparatory work of GATT, pursuant to which the term "equivalent to" was deemed appropriate in order to clarify that an internal charge imposed on a part of the imported product may only be matched by a border charge in proportion to the value of this part.[75] The preparatory material explains why this particular expression was chosen for the benchmarking required by Article II:2(a) (instead of, for example, "corresponding to"), but at the same time it is still premised on the conceptual difference between the border charge and the internal charge on the domestic product.

Admittedly, though, the wording of Article II:2(a) is, in itself, not conclusive. The provision also stipulates that the border charge must be imposed consistently with Article III:2. If understood as a direct reference and not one by analogy, this would imply that a border charge compensating for an internal charge always forms an integral element of the latter, because the national treatment requirement of Article III:2 concerns only internal charges.

However, we find further support for a conceptual difference and also for the delineation criteria relied on by the Appellate Body in a contextual analysis. GATT Article II:2(a) constitutes an integral element of Article II, which lays out the legal consequences of the schedules of concessions, in particular the maximum tariffs that can be applied by a WTO Member for a particular product. By contrast, GATT Article III is concerned with national treatment on internal taxation and regulation. But where the chargeable event of the internal tax or charge is linked to a factor that occurs outside the national jurisdiction in the case of imported goods (i.e., before their importation), the corresponding border adjustment has more the nature of a substitute for the internal tax or charge, rather than forming a constituent element of it.

From the perspective of the importing country, such a BTA is thus not merely a specific way of collecting the internal tax or charge in the case of imported goods where the chargeable event for its levy would normally still materialize internally. Instead, it acts as a surrogate to compensate for the fact that, substantively, only domestically produced goods trigger the chargeable event and bear the corresponding tax burden. Without the discrete arrangement of a border adjustment, the tax liability would never materialize for the imported product under the general rules for chargeability of the internal tax, because the chargeable event occurred before the imported product crossed the border. In this sense, the raison d'être for the levy of the tax on the imported product is its importation, in itself, because even though the border adjustment is related to an internal charge, the imported product does not fall within the substantive and territorial scope of the latter.

As we shall discuss more in detail in Section II.B.4, distinguishing the scope of application of GATT Article II:2(a) and Article III:2, respectively, might be relevant for the degree to which charges that are only indirectly levied on a domestic product (so-called *taxes occultes*) are border-adjustable vis-à-vis imported products.

Regarding the different CBAMs that the European Commission was contemplating or could have pursued, the following classifications should thus apply with respect to GATT Articles II:2(a) and III:2, in line with the predominant view in WTO jurisprudence. A notional ETS would be levied in function of the (actual or default) amount of carbon emitted in the course of production of a unit of chargeable material. The obligation to pay such a charge would not accrue to an "internal factor" (i.e., based on an "internal factor" realized within the territorial jurisdiction of the importing country after importation). Rather, it would be designed to compensate for the fact that foreign production processes are not included in the EU ETS, and have not been subjected to a similar charge outside the EU. The admissibility of the notional ETS as a border adjustment measure would therefore have to be assessed in light of GATT Article II:2(a).

By contrast, a CET linked to the ETS but designed as an indirect tax levied on both imported and domestic products would qualify as an "internal tax" within the meaning of GATT Article III:2. The substantive basis for charging this kind of tax would consist in the use or consumption of the taxable product within the EU. The same would apply to an eventual fuel excise tax.

2. The Concept of a "Charge" Eligible for Border Adjustment

Border adjustment mechanisms are only carved out from the limitations on border charges laid down in GATT Article II:1(b) where they impose a "charge equivalent to an internal tax imposed consistently with the provisions of paragraph 2 of Article III." In scholarly literature, it has been debated whether this excludes the extension of an ETS to imported products, because the requirement to buy

74. By contrast, it is little convincing to rely on the term "imported products" in GATT Article III:2 to argue—as the Appellate Body did in its report, Appellate Body Report, *China—Measures Affecting Imports of Automobile Parts*, para. 161, WTO Doc. WT/DS339, 340, 342/AB/R (adopted Jan. 12, 2009)—that the charges falling within the scope of Article III are charges that are imposed on goods that have already been "imported," because the same wording is also employed in GATT Article II:2(a).

75. See the explanation of the chairman of the Legal Drafting Committee during the second session of the Preparatory Committee of the United Nations Conference on Trade and Employment, *Verbatim Report of the Twenty-Sixth Meeting of the Tariff Agreement Committee*, at 21, E/PC/T/TAC/PV/26 (Sept. 23, 1947) [hereinafter *Verbatim Report of the Tariff Agreement Committee*].

emission allowances imposes a price, rather than a tax, on the covered products.[76]

Regarding the options that were under review for the EU CBAM, this was primarily a concern with respect to the concept of a notional ETS. This mechanism requires that importers of qualifying materials acquire quasi-allowances at a price reflecting the market price for the actual allowances that would be needed for the production of the respective good within the EU. By contrast, the CET would be levied at a fixed rate per taxable unit, and would only be broadly linked to the cost of ETS allowances through periodical adjustments of the rate. A fuel carbon tax, in turn, would be levied independently of the ETS and would thus even more resemble a tax in the classical sense. Moreover, as explained above, WTO jurisprudence tends to suggest—and convincingly so—that the latter two instruments would not fall within the ambit of GATT Article II in the first place.

However, it is understood that, ultimately, the characterization of the border adjustment mechanism as either a price asked for allowing the importation of the good, or a classical border tax arrangement, is irrelevant for its admissibility under WTO law. First, it is noteworthy that GATT Article II:2(a) applies to all kinds of border "charges." Based on the ordinary meaning of this term, it has been understood in a panel report as covering any "pecuniary burden and liability to pay money laid on a person."[77]

While the panel was interpreting the notion of a "charge" in the context of GATT Article III:2, we see no reason why it should be construed more narrowly for the purposes of Article II:2(a), especially because the panel relied, essentially, on a literal interpretation of the term. The need to acquire (notional) allowances certainly does imply the imposition of a pecuniary burden, and should therefore be regarded to constitute a "charge" in the literal sense of this term.[78] Contrary to some assertions in literature,[79] however, mere opportunity costs (of using allowances that have been allocated for free) do not constitute a charge under the above definition.[80] As a consequence, a border adjustment would be inadmissible to the extent that EU producers of a particular commodity covered by the CBAM receive free allowances for their production.

Moreover, the context and purpose of Article II:2(a) support a broad understanding of the concept of "charge," as well. This provision qualifies the prohibition of Article II:1(b) on the levy of customs duties in excess of the maximum tariffs laid down in the respective schedule of concession, to the extent that an additional charge does not (further) affect the equality of competitive relationships between imported and domestic products, because the latter are subject to an equivalent internal charge. This rationale would seem to apply irrespective of the exact nature of the respective pecuniary burden. Finally, a narrower interpretation that would exclude a "price" extracted upon the importation of a good from the notion of "charge," would consequently also have to consider such an instrument to fall out of the scope of GATT Article II:1(b) in the first place, since this provision is only concerned with "duties or charges," too. This would, however, undermine the entire system of tariff concessions and should not therefore be accepted as a good-faith interpretation of Article II:2.

Second, Article II:2(a) makes explicit reference only to an "internal tax" imposed consistently with the provisions of Article III:2, instead of to the full substantive scope of the latter provision, which also includes "other internal

76. *See*, *e.g.*, Quick, *supra* note 51, at 166; Carol McAusland & Nouri Najjar, *The WTO Consistency of Carbon Footprint Taxes*, 46 Geo. J. Int'l L. 765, 796 (2015). For further references, see Gappa, *supra* note 61, at 170.

77. Panel Report, *Argentina—Measures Affecting the Export of Bovine Hides and the Import of Finished Leather*, para. 11.143, WTO Doc. WT/DS155/R (adopted Feb. 16, 2001).

78. See also, based on the Organisation for Economic Co-operation and Development (OECD) definition of a tax, Roland Ismer & Karsten Neuhoff, *Border Tax Adjustment: A Feasible Way to Support Stringent Emission Trading* 11 (Cambridge Working Papers in Economics, Paper No. 36, 2004); de Cendra, *supra* note 11, at 135-36; Dana Ruddigkeit, Border Tax Adjustment an der Schnittstelle von Welthandelsrecht und Klimaschutz vor dem Hintergrund des Europäischen Emissionszertifikatehandels 19 (2009); Daniel Gros et al., Climate Change and Trade: Taxing Carbon at the Border? 47-48 (2010); Michael A. Mehling et al., *Designing Border Carbon Adjustments for Enhanced Climate Action*, 113 Am. J. Int'l L. 433, 459 (2019). See also Volmert, *supra* note 61, at 69-70, who argues that the obligation to acquire allowances should be regarded as a tax. For a different view, see, e.g., Howse & Eliason, *supra* note 53, at 69; Case C-366/10, Air Transport Association of America v. Secretary of State for Energy and Climate Change, ECLI:EU:C:2011:637, para. 216 (Oct. 6, 2011) (opinion of Advocate General J. Kokott). See also McLure, *supra* note 16, at 464, who would classify permits purchased directly from government during an auction as adjustable charge, but not permits bought on the secondary market. In our view, this narrow understanding is not required by the above definition; *see also* 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 205, 220-21 (Christoph Herrmann & Jörg Philipp Terhechte eds., Springer 2010).

79. *See*, *e.g.*, Joost Pauwelyn, *U.S. Federal Climate Policy and Competitiveness Concerns: The Limits and Options of International Trade Law* 22 (Nicholas Institute for Environment, Working Paper No. 07-02, 2007); Jason E. Bordoff, *International Trade Law and the Economics of Climate Policy: Evaluating the Legality and Effectiveness of Proposals to Address Competitiveness and Leakage Concerns*, *in* Brookings Trade Forum 2008/2009: Climate Change, Trade, and Competitiveness: Is a Collision Inevitable? 35, 45 (Lael Brainard & Isaac Sorkin eds., Brookings Institution Press 2009); Mehling et al., *supra* note 78, at 459.

80. *See also* Ruddigkeit, *supra* note 78, at 19; for an extensive discussion, see also Gappa, *supra* note 61, at 163-70.

charges of any kind." However, we do not consider this to preclude a border adjustment for an equivalent "internal charge" that does not have the nature of a tax.[81] This is already indicated by the wording of the Note Ad Article II, according to which GATT Article II:2(a) makes a "cross-reference . . . to paragraph 2 of Article III"; the Ad Note thus refers to the entire Article III:2 and does not provide for any further qualifications or limitations regarding the scope of the reference.

Moreover, to resolve remaining ambiguities, recourse could be had to the preparatory work of the provision.[82] When explaining the provision, the chairman of the Legal Drafting Committee referred uniformly to "duties" through which and for which a border adjustment could be made.[83] From this, we infer that the drafters of the provision did not see any need to distinguish between different categories of internal charges with respect to their eligibility for a border adjustment. Moreover, this is apparently also the position of the Appellate Body.[84]

If, contrary to our assessment, one were to qualify the ETS allowances as an integral element of a market-based regulatory instrument rather than a charge that comes within the scope of Article III:2,[85] this should also not a priori rule out a border adjustment. Article II:1(b) should then not be applicable, either. Since its rationale is to prohibit charges that operate as quasi-tariffs and could undermine the respective WTO Member's tariff concessions, the provision should not be construed so as to extend to purely regulatory measures. The latter would then instead have to be assessed directly under the national treatment obligation of GATT Article III:4.[86]

Finally, the panel on the *United States—Superfund* case convincingly held that the tax adjustment rules of GATT "do not distinguish between taxes with different policy purposes. Whether [an internal charge] is levied on a product for general revenue purposes or to encourage the rational use of environmental resources, is therefore not relevant for the determination of the eligibility of a tax for border tax adjustment."[87] It is therefore irrelevant for our assessment of border tax eligibility under GATT Articles II and III that all the CBAM options that were reviewed by the European Commission, including the notional ETS, would be levied primarily to support its environmental and climate change policies. This neither helps nor hinders their classification as (in)admissible border adjustment mechanisms based on the relevant criteria stipulated in Articles II and III. By contrast, the environmental objective of the measure would, however, be a significant aspect if the aforementioned criteria were not met, and the chosen CBAM would therefore be in need of a justification based on the exceptions listed in GATT Article XX.

3. Taxes on Products, Not Producers

While occasionally still challenged,[88] it is now settled WTO jurisprudence and also the predominant scholarly view that only indirect taxes and other indirect charges on products are eligible for a border adjustment upon importation, as contrasted to direct taxes on producers, which are not.[89] This position is indeed supported by the wording of GATT Article II:2(a), a contextual analysis in light of the corresponding provision of ASCM Article 3.1 and Annex I(e) concerning export adjustments, and the history of GATT.[90]

As can be inferred from footnote 58 of Annex I of the ASCM, "direct taxes" are to be understood as taxes on wages, profits, interests, rents, royalties, and all other forms of income, and taxes on the ownership of real property. By contrast, the footnote lists excise taxes, inventory taxes, and equipment taxes among the indirect taxes, which are further generally defined as "all taxes other than direct taxes." Admittedly, the two categories of taxes are defined only "for the purpose of the ASCM." But considering that import and export BTAs tend to be two sides of the same coin for typical indirect taxes as expressly listed in footnote 58, it is reasonable to presume that this understanding should also be relevant in the context of GATT Article II:2(a).[91]

81. *See also* Shih, *supra* note 64, at 55-56.
82. *Cf.* Vienna Convention on the Law of Treaties, art. 32, May 23, 1969, 1155 U.N.T.S. 331.
83. See the explanation of the chairman of the Legal Drafting Committee, *Verbatim Report of the Tariff Agreement Committee*, *supra* note 75, at 21.
84. *Cf.* Appellate Body Report, *India—Additional and Extra-Additional Duties on Imports From the United States*, para. 215, WTO Doc. WT/DS360/AB/R (adopted Nov. 17, 2008), where the Appellate Body discusses a border adjustment for local taxes and "other charges," including fees.
85. The European Commission might be inclined to frame the notional ETS as a regulatory instrument rather than a fiscal one, so as to be able to argue that the introduction of the CBAM does not fall under Article 192(2)(a) of the Treaty on the Functioning of the European Union and thus does not require unanimous agreement in council for its adoption.
86. *See* Howse & Eliason, *supra* note 53, at 69; Bordoff, *supra* note 79, at 43; Kateryna Holzer, Carbon-Related Border Adjustment and WTO Law 106-07 (2014); Christine Kaufmann & Rolf H. Weber, *Carbon-Related Border Tax Adjustment: Mitigating Climate Change or Restricting International Trade?*, 10 World Trade Rev. 497, 505 (2011). For a different opinion, see Steve Charnovitz, *Border Tax Equalization*, *in* The World Trade System: Trends and Challenges 25, 29 (Jagdish N. Bhagwati et al. eds., MIT Press 2016), with further references, who tends to qualify the need to acquire permits upon importation as a prohibited cross-regulation/tax adjustment.
87. GATT Panel Report, *United States—Taxes on Petroleum and Certain Imported Substances*, para. 5.2.3, L/6175, GATT B.I.S.D. 34S/136 (adopted June 17, 1987).
88. *See*, *e.g.*, Pirlot, *supra* note 56, at 183-93, with further references.
89. *See*, *e.g.*, Panel Report, *Mexico—Tax Measures on Soft Drinks and Other Beverages*, para. 8.42, WTO Doc. WT/DS308/R (adopted Mar. 24, 2006); Demaret & Stewardson, *supra* note 57, at 8; Frank Biermann & Rainer Brohm, *Implementing the Kyoto Protocol Without the USA: The Strategic Role of Energy Tax Adjustments at the Border*, 4 Climate Pol'y 289, 292-93 (2005); Matthew Genasci, *Border Tax Adjustments and Emissions Trading: The Implication of International Trade Law for Policy Design*, 2 Carbon & Climate L. Rev. 33, 35 (2008).
90. Regarding the latter, see the BTA Working Party's implicit understanding of the current rules, even though criticized as inappropriate by some Members. Report of the Working Party on Border Tax Adjustments, paras. 8, 9, and 21, L/3464 (adopted Dec. 2, 1970) [hereinafter Report of the Working Party on BTAs].
91. *See* Demaret & Stewardson, *supra* note 57, at 30-31; Ismer & Neuhoff, *supra* note 46, at 146-47; Hillman, *supra* note 57, at 6 n.16; Pauwelyn, *supra* note 51, at 478. For a different opinion (albeit in the context of GATT Article III:2), see Gappa, *supra* note 61, at 189-93.

This is further suggested by the conception of the direct tax versus indirect tax dichotomy underlying the discussions in the 1970 Working Party on Border Tax Adjustments. As evidenced by a reference in the report of the Working Party[92] to an earlier Organisation for Economic Co-operation and Development (OECD) report on border adjustments,[93] it was assumed that

> indirect taxes on goods themselves . . ., whether known as sales taxes, turnover taxes, value-added taxes, excise taxes or State monopolies, are . . . eligible for border tax adjustment while other taxes such as income taxes, profits taxes, payroll taxes, social security charges and property taxes are not . . . eligible.

Altogether, this would suggest to consider as an "indirect" tax or other "indirect" charge—eligible for an import border adjustment—any charge that does not have as object a person's wealth or increase in wealth (income or profit), and in particular any charges levied on input or output transactions with respect to particular products.

Moreover, the rationale underlying the direct and indirect tax dichotomy in the context of border adjustments is the objective to ensure trade neutrality of the latter.[94] Against this background, the traditional position is premised on the assumption that indirect taxes can be more easily—and typically therefore also will be—treated as a cost component of the product that factors in its price calculation, and thus better allow for an adjustment linked to individual import and export transactions.[95] This assumption, too, militates for an inclusion of charges levied on production processes or capital assets used for production in the category of adjustable "indirect charges," besides the traditional consumption taxes.[96]

In view of the above considerations, there should be no doubt that a CET or fuel tax would qualify as a traditional form of "indirect tax" on products.[97]

But also the price for ETS allowances should, in principle, qualify for a border adjustment via the levy of a notional ETS, as a specific kind of "indirect" charge on the production of the respective category of product.[98] It certainly does not constitute a direct tax on the income or wealth of the producer. Its qualification as an indirect charge on "products" also corresponds with the aforementioned rationale of limiting border adjustments to this category of levy.[99] The amount of emission allowances that need to be surrendered by EU producers correlates with their production of covered commodities, so that the acquisition cost of the permits will typically constitute a cost component in the calculation of the price of those goods.[100] As a caveat, however, it should be noted that the issue is still controversial.[101] There does not as yet exist any directly relevant WTO precedent, and the comprehensive 2009 WTO-United Nations Environment Programme (UNEP) report on trade and climate change addresses the issue but does not resolve it.[102]

These conclusions would not be different if one were to base the distinction between direct taxes and indirect taxes on legislative intent, as has been advocated in scholarly literature.[103] According to this view, the decisive criterion would be the statutory incidence of the tax or other charge. In the particular case of environmental charges, the aim of the legislator to convey a price signal for the environmental cost of use or consumption of a particular good or service would be sufficient to designate the charge as an "indirect tax."[104] Clearly, the intention of the EU ETS is precisely to send a carbon price signal as an incentive to reduce emissions and increase *carbon* efficiency in the production processes, so it should be designated an "indirect charge" under this theory.

4. BTAs for *Taxes Occultes*

A critical issue that has been debated for decades and has not yet been settled by WTO jurisprudence concerns the admissibility of border adjustments also for so-called *taxes occultes*. They concern charges that are not imposed on the product for which a border adjustment is sought. Instead, they are levied on the inputs that are used for the production or sale of the respective good and that are not physically incorporated into the final product. The traditional examples for such "hidden taxes" are taxes levied on auxiliary materials, energy, or equipment used in the production process, or on transportation services.[105]

❑ *No clear indication in WTO texts and jurisprudence*. According to GATT Article II:2(a), an "equivalent" border ad-

92. *See* Report of the Working Party on BTAs, *supra* note 90, para. 14.
93. OECD, Report on Tax Adjustments Applied to Exports and Imports in OECD Member Countries 16, para. 7 (1968).
94. *See* Report of the Working Party on BTAs, *supra* note 90, paras. 8, 9, and 22; Charnovitz, *supra* note 86, at 28.
95. *See* Demaret & Stewardson, *supra* note 57, at 14-16; Beatrice Chaytor & James Cameron, Taxes for Environmental Purposes: The Scope for Border Tax Adjustments Under WTO Rules 3 (1995); Mitsuo Matsushita et al., The World Trade Organization 246 (2d ed. 2006); Genasci, *supra* note 89, at 35; Raj Bhala, Modern GATT Law para. 12-006 (2d ed. 2013).
96. *See also* Pauwelyn, *supra* note 51, at 478-80.
97. *See* Shih, *supra* note 64, at 75.
98. *See also* Regan, *supra* note 60, at 122. See also, regarding carbon taxes levied in function of the carbon emitted during the production process, Holzer, *supra* note 86, at 103.
99. *See also* Peter Wooders & Aaron Cosbey, Climate-Linked Tariffs and Subsidies: Economic Aspects (Competitiveness & Leakage) 18 (2010) (background paper written for the conference Climate Change, Trade, and Competitiveness).
100. For a more detailed discussion, see also *infra* Section II.B.4 (subsection *Assessing the WTO Rules Against Different CBAM Options*).
101. For an opinion that differs from our view, see Patrick Low et al., *The Interface Between the Trade and Climate Change Regimes: Scoping the Issues* 10 (WTO, Staff Working Paper No. 2011-1, 2011) ("To the extent that most GHG emission charges fall on producers, including at the plant level, such direct taxes . . . appear to be prima facie inconsistent with GATT Article II, Article III and the SCM Agreement.").
102. *See* Ludivine Tamiotti et al., WTO & UNEP, Trade and Climate Change: WTO-UNEP Report 103 (2009), https://doi.org/10.30875/6933d673-en.
103. *See* Pauwelyn, *supra* note 51, at 479-80.
104. *Id.* at 480.
105. *See, e.g.*, Report of the Working Party on BTAs, *supra* note 90, para. 15.

justment charge may be levied with respect to internal taxes that are imposed "in respect of the like domestic product or in respect of an article from which the imported product has been manufactured or produced in whole or in part." The wording clearly indicates that a border adjustment is admissible with respect to taxes on materials that have been physically incorporated into the like domestic product and can still be traced in it (i.e., identified as one of its physical components).[106] This is confirmed by the perfume example given by the chairman of the Legal Drafting Committee when explaining the meaning of the term "equivalent" in Article II:2(a):

> [T]he word "equivalent" here means that if a duty is imposed on an article because a duty is imposed on part of the content of this article, then the duty should only be imposed regarding the particular content of this article. For example, if a duty is imposed on perfume because it contains alcohol, the duty to be imposed must take into consideration the value of the alcohol and not the value of the perfume; that is to say, the value of the content and not the value of the whole.[107]

What is disputed, though, is whether charges on inputs that have not been physically incorporated into the final product that is subject to border adjustment may also be taken into account (i.e., whether such inputs can be regarded as "articles" from which the imported product has been manufactured or produced for the purpose of GATT Article II:2(a)). The 1970 Working Party on Border Tax Adjustments did not reach a conclusion on this point.[108] It "noted that there was a divergence of views with regard to the eligibility for adjustment of . . . [inter alia] 'taxes occultes' [and] it appeared that adjustment was not normally made for taxes occultes except in countries having a cascade tax."[109] A note on border tax adjustment and environmental charges issued by the WTO Secretariat in 1997 remained inconclusive as well.[110]

However, in 2004, the WTO Secretariat declared:

> Under existing GATT rules and jurisprudence, "product" taxes and charges can be adjusted at the border, but "process" taxes and charges by and large cannot. For example, a domestic tax on fuel can be applied perfectly legitimately to imported fuel, but a tax on the energy consumed in producing a ton of steel cannot be applied to imported steel.[111]

But the 2009 WTO-UNEP report on trade and climate change somewhat backpedaled again, and merely noted that an "extensive discussion has taken place on the extent to which the energy inputs and fossil fuels used in the production of a particular product could be considered 'articles from which the imported product has been manufactured or produced . . .'" but did not express any views of its own.[112]

No clear conclusions can be drawn from the relevant WTO jurisprudence, either.[113] Admittedly, the panel report on the *United States—Superfund* case is often cited in support of a broad interpretation of GATT Article II:2(a).[114] The panel found that a tax on imported chemical substances could be qualified as a BTA corresponding in its effect to the internal tax on certain chemicals from which these substances were derived.[115] Moreover, the panel did not—explicitly—make its findings conditional on the continued physical representation of the original chemicals (that were subject to internal taxation) in the final substances (that were subject to the border charge). So at first sight, one might be inclined to conclude that in the panel's view, the issue whether the chemical inputs were physically incorporated into the final product was irrelevant for an analysis under Article II:2(a).[116]

However, we consider it to be much more likely that the panel had tacitly premised its assessment of the border adjustment admissibility precisely on the understanding that such physical incorporation was ensured by the design and scope of the tax at issue.[117] In its reasoning to defend the tax on imported substances as a border adjustment, the United States had argued that the drafters of GATT "had clearly contemplated the possibility for making border tax adjustments in respect of imported products that *contained* substances subject to an internal tax,"[118] and made reference to the above-mentioned perfume example. Moreover, it was stated that the taxable substances were *derivatives* of the chemicals subject to the internal tax on certain chemicals.[119] Accordingly, the panel assumed that

106. For a (singular) different opinion, based on the wording of GATT Article III:2 ("applied to") to which GATT Article II:2(a) makes reference, see Gavin Goh, *The World Trade Organization, Kyoto, and Energy Tax Adjustments at the Border*, 38 J. World Trade 395, 410 (2004).
107. *Verbatim Report of the Tariff Agreement Committee*, *supra* note 75, at 21.
108. This was—deliberately or accidentally—overlooked in the unadopted GATT Panel Report, *United States—Restrictions on Imports of Tuna*, paras. 5.13.-5.14, DS21/R, GATT B.I.S.D. 39S/155 (circulated Sept. 3, 1991), where the panel established that only internal measures (including taxes) "that are applied to the product as such" would qualify for a border adjustment. See also the criticism of this panel report by Demaret & Stewardson, *supra* note 57, at 28-29.
109. Report of the Working Party on BTAs, *supra* note 90, para. 15.
110. *Cf.* WTO Secretariat, *Note on Taxes and Charges for Environmental Purposes—Border Tax Adjustment*, at 18, WT/CTE/W/47 (May 2, 1997).
111. WTO Secretariat, Trade & Environment 17 (2004).
112. Tamiotti et al., *supra* note 102, at 104. *See also* OECD, *Environmental Taxes and Border Tax Adjustments: Joint Session on Taxation and Environment—2nd Session*, para. 30, COM/ENV/EPOC/DAFFE/CFA(94)31 (1994) ("the concept of 'article' remains somewhat ambiguous").
113. *See also* Demaret & Stewardson, *supra* note 57, at 25-26.
114. *See* Pirlot, *supra* note 56, at 173; Fauchald, *supra* note 60, at 180-81; Ruddigkeit, *supra* note 78, at 11; Hillman, *supra* note 57, at 6 n.16; Porterfield, *supra* note 57, at 24.
115. GATT Panel Report, *United States—Taxes on Petroleum and Certain Imported Substances*, para. 5.2.3, L/6175, GATT B.I.S.D. 34S/136 (adopted June 17, 1987).
116. *See, e.g.*, Pirlot, *supra* note 56, at 201; for a different view, see Pitschas, *supra* note 59, at 492, and McLure, *supra* note 16, at 460. See also Holzer, *supra* note 86, at 102, who considers that the GATT panel did not decide on this point.
117. *See also* Pitschas, *supra* note 59, at 492; McLure, *supra* note 16, at 460.
118. GATT Panel Report, *United States—Taxes on Petroleum and Certain Imported Substances*, para. 3.2.6, L/6175, GATT B.I.S.D. 34S/136 (adopted June 17, 1987) (emphasis added).
119. *Id.* para. 2.4 (emphasis added).

the border charge was levied in proportion to "the chemicals *used as materials in the manufacture or production* of the imported substance."[120] Therefore, we find that *United States—Superfund* is inconsequential to our analysis.[121]

❑ *Our understanding*. In our view, a narrow understanding of GATT Article II:2(a) is appropriate, based on a literal interpretation of the term "articles" in Article II:2(a).[122] The wording of the provision is more revealing than it might appear at first sight, because the French and Spanish language versions must also be taken into consideration. They are equally authentic,[123] and according to customary rules of treaty interpretation, the English terminology must therefore be presumed to have the same meaning as can be inferred from the French and Spanish text.[124] In particular, if one language version of a WTO legal text is unclear—as is the English one in the case of Article II:2(a)—it must be compared to the other authentic texts in order to find a common meaning that can be reconciled with all language versions.[125]

The French text of Article II:2(a) allows a BTA "équivalant à une taxe intérieure frappant . . . un produit national similaire ou une marchandise qui a été incorporée dans l'article importé." In a similar vein, the Spanish version describes the taxes eligible for a border adjustment as "impuesto interior aplicado . . . a un producto nacional similar o a una mercancía que haya servido, en todo o en parte, para fabricar el producto importado." Both the French and the Spanish text limit the scope of adjustable "*taxes occultes*" to taxes on goods ("marchandise"/"mercancía"), whereas they clearly exclude taxes on services or other intangible inputs such as energy. Moreover, the French version clarifies that those goods must have been physically incorporated into the final good that is subject to the border charge,[126] even though they need not necessarily still be present in their original form.[127] The English (or Spanish) wording of the provision is not inconsistent with such a narrow understanding; as a consequence, it must be presumed to have the same meaning.[128]

It is important to point out that, based on our understanding of the relationship between Article II:2(a) and Article III:2, a narrow interpretation of internal charges that are eligible for a border adjustment under Article II:2(a) does not preempt a broader understanding of Article III:2 regarding BTAs that constitute an integral element of an internal tax and therefore need only pass the national treatment test.[129] Notably, the wording of the first sentence of Article III:2 is more open than Article II:2(a) (in all language versions) to an inclusion of taxes on inputs that cannot be traced in the final product. Pursuant to the former provision, it need only be ensured that the border adjustment does not exceed "the internal taxes or other internal charges . . . applied, directly or indirectly, to like domestic products." It is now generally accepted that the term "directly or indirectly" refers to taxes that are directly levied on the product and taxes on inputs that can become an indirect cost component of a product.[130] There is no limitation as to the categories of inputs consumed in the process of producing and selling the respective product.[131]

Admittedly, the drafting history of GATT Article III:2 suggests that its wording is nevertheless not entirely clear in this regard. In particular, it was disputed—and not resolved—whether Article III:2 would permit border adjustments only for the equivalent of the taxes on the final product and on its components and ingredients, but not taxes on power consumed in their manufacture and on other non-traceable inputs.[132] And it has been argued that the phrase "applied to" would support a narrower scope of Article III:2 with respect to taxes that are eligible for a BTA, similar to the one endorsed by us in the context of Article II:2(a). According to this view, this wording requires a more direct relationship between the tax and the

120. *Id.* para. 5.2.8 (emphasis added).
121. *See also* Tamiotti et al., *supra* note 102, n.225.
122. *See also* Pitschas, *supra* note 59, at 492-93; for a different opinion, see Weidong Zhu, *Establishment of a Belt and Road Dispute Settlement Mechanism*, 5 China & WTO Rev. 86, 88-89 (2019).
123. *See* Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, para. 6 (Apr. 15, 1994) (final, authenticating clause).
124. *See* Vienna Convention on the Law of Treaties, art. 33(3), May 23, 1969, 1155 U.N.T.S. 331 ("The terms of the treaty are presumed to have the same meaning in each authentic text."). This reflects customary rules of treaty interpretation; *see* (regarding the related Vienna Convention Article 33(4)) LaGrand (Germany v. U.S.), 2001 I.C.J. Rep. 502, para. 101 (June 27); Bradly J. Condon, *Lost in Translation: Plurilingual Interpretation of WTO Law*, 1 J. Int'l Disp. Settlement 191, 193-94 (2010).
125. *See, e.g.*, Appellate Body Report, *Chile—Price Band System and Safeguard Measures Relating to Certain Agricultural Product*, para. 271, WTO Doc. WT/DS207/AB/R (adopted Oct. 23, 2002); Appellate Body Report, *United States—Subsidies on Upland Cotton*, para. 424, WTO Doc. WT/DS267/AB/R (adopted Mar. 21, 2005); in more general terms, Mala Tabory, Multilingualism in International Law and Institutions 176-77 (1980).
126. *See also* Biermann & Brohm, *supra* note 89, at 293; McLure, *supra* note 16, at 460. For a different, more cautious interpretation of the French version, see Volmert, *supra* note 61, at 63.
127. This can be inferred from the wording ("a été incorporée"); *see also* Shih, *supra* note 64, at 77.
128. For a different opinion, dismissing the relevance of the French and Spanish versions, see Pirlot, *supra* note 56, at 200 n.138.
129. See also the extensive analysis by Gappa, *supra* note 61, at 183-200 (albeit on the basis of a different understanding of the relationship between GATT Article II:2(a) and Article III:2).
130. *See, e.g.*, GATT Panel Report, *Japan—Customs Duties, Taxes, and Labelling Practices on Imported Wines and Alcoholic Beverages*, para. 5.8, L/6216, GATT B.I.S.D. 34S/83 (adopted Nov. 10, 1987); *confirmed by* Panel Report, *Argentina—Measures Affecting the Export of Bovine Hides and the Import of Finished Leather*, para. 11.183, WTO Doc. WT/DS155/R (adopted Feb. 16, 2001); WTO Secretariat, *Note on Taxes and Charges for Environmental Purposes—Border Tax Adjustment*, WT/CTE/W/47, at 18 (1997).
131. *See also* David. A.C. Bullock, *Combating Climate Recalcitrance: Carbon-Related Tax Adjustments in a New Era of Global Climate Governance*, 27 Wash. Int'l L.J. 609, 630 (2017); Demaret & Stewardson, *supra* note 57, at 18. *See also* Fauchald, *supra* note 60, at 186; however, he relies mainly on policy arguments and does not distinguish between GATT Article II:2(a) and Article III:2.
132. *See* Fauchald, *supra* note 60, at 182-83; Porterfield, *supra* note 57, at 14; *see also* GATT Report of the Working Party II on Schedules and Customs Administration, GATT B.I.S.D. 3S/205 (adopted Feb. 26, 1955), *cited in* Panel Report, *Argentina—Measures Affecting the Export of Bovine Hides and the Import of Finished Leather*, para. 11.231, WT/DS155/R (adopted Feb. 16, 2001). In particular, a German proposal to explicitly include taxes on the power consumed in the production process in the wording of GATT Article III:2 was ultimately not successful.

product than the term "taxes borne by" used in GATT Article VI:4 and in the Note Ad Article XVI.[133]

However, we consider the textual argument for a restrictive interpretation of Article III:2 to be a relatively weak one, and to be hard to reconcile with the context and purpose of the provision. We have argued[134] that Article III:2 should be the relevant stand-alone standard for border adjustments (only) concerning charges whose substantive basis for taxation (such as the sale or use of a product) materializes internally also in the case of imported products. Since, in this case, the border adjustment operates as an integral element of the internal system of taxation, it would seem reasonable to assume that WTO Members may also design it according to the logic of this internal system.

Taxes on inputs should therefore be eligible for a border adjustment under Article III:2 at least in either one of the following two situations. First, where the input consists in material built into the taxable product, and where the sale, use, and so on of like domestic material is subject to tax, a tax on the respective imported component corresponding to the tax on the domestic material must be admissible; this is indeed undisputed. Second, where the internal tax or charge has been designed so as to function as a cascading levy covering several stages of production or distribution, its cumulative burden with respect to the like domestic product should be eligible for a border adjustment.

This relatively broad interpretation is not only in line with conventional practice.[135] Further, it aligns GATT Article III:2 with the WTO regime for BTAs on exports. In this context, too (at least[136]), any "priorstage cumulative indirect taxes on goods or services used in the production" of the exported finished goods qualify for border adjustment, as can be inferred from item (h) of Annex I to the ASCM. As further specified in footnote 61 to Annex II, this includes, in particular, taxes on energy used in the production process.[137] Admittedly, CETs are often not conceived as, nor constitute an integral element of, *cumulative* indirect taxes to which the scope of footnote 61 is limited (as can be inferred from its context, in particular Annex I paragraph (h) and Annex II, Section I, paragraph 2)[138]; however, this must be assessed on a case-by-case basis depending on the design of the specific CET at issue.

❑ *Assessing the WTO rules against different CBAM options*. Regarding the different possible models for a CBAM, it is therefore necessary to distinguish between measures that are within the scope of GATT Article II:2(a) and measures that qualify as internal taxes and need only comply with Article III:2. As discussed above, the notional ETS would constitute a border charge within the meaning of Article II:2(a). As a consequence, the notional ETS would be admissible only if, and to the extent that, it were equivalent to either an internal charge "imposed in respect of the like domestic product" or to a charge imposed in respect to materials that have been physically incorporated into the like domestic product.

Against this background, one might even wonder whether the concept of a notional ETS, in itself, is compatible with the requirements of GATT Article II. Pursuant to Articles 3h and 6 of Directive 2003/87/EC (ETS Directive), the obligation to acquire and surrender emission permits is linked to the operation of certain GHG-emitting installations listed in Annex I to the ETS Directive. Prima facie, the cost of ETS allowances imposed by this regime could therefore be regarded as a charge on the operation of a facility that constitutes an indirect cost factor for the production of certain materials, but is not directly "imposed in respect of" them.[139] From this perspective, the notional ETS would seek compensation for an internal charge on a production input that is however not physically represented in the product,[140] and thus not eligible for border adjustment.[141]

However, a closer examination of the design of the ETS suggests that the pecuniary burden imposed through this system is sufficiently linked to the goods produced in the respective installations to qualify it as a charge that is imposed "with respect to" the latter, rather than a charge merely imposed generally on a factor of production without a direct link to the production of a particular good.[142] First, the need to acquire ETS allowances arises, and the corresponding costs are incurred, in the course of the production of a particular good, rather than at a prior stage that is not intrinsically linked to such a production process. Second, GHG-emitting production sites are not per se covered by the ETS, but only if they are classified as installations where certain specified goods are manufactured or produced, as laid down in Article 3(4) and Annex I of the ETS Directive. Against this background, the associated pecuniary burden can be adjusted in the case of like imported products, in conformity with GATT Article II:2(a).

By contrast, it would be inconsistent with Article II:2(a) if the amount of CBAM certificates required for an imported product would be calculated so as to also match

133. *See* Goh, *supra* note 106, at 409. See also Chaytor & Cameron, *supra* note 95, at 4, who consider "taxes borne by" a product to be more broadly worded, but avoid drawing any firm conclusions based on the difference in wording.
134. *See supra* Section II.B.1.
135. Report of the Working Party on BTAs, *supra* note 90, para. 15(a) ("It appeared that adjustment was not normally made for taxes occultes except in countries having a cascade tax.").
136. *But cf.* Tamiotti et al., *supra* note 102, at 105. For a broader scope of BTAs, see Ruddigkeit, *supra* note 78, at 15.
137. *See* Howse & Eliason, *supra* note 53, at 65-66; however, those authors would go even farther and rely on footnote 61 to Annex II also in the context of GATT Article II:2(a), contrary to its wording.
138. *See* Schlagenhof, *supra* note 53, at 143-44; Ruddigkeit, *supra* note 78, at 14-15; McLure, *supra* note 16, at 459; Holzer, *supra* note 86, at 102. For a different opinion, see Porterfield, *supra* note 57, at 22.
139. This view is adopted, for example, by Gappa, *supra* note 61, at 182-83.
140. *See*, *e.g.*, Umweltbundesamt, Border Tax Adjustments for Additional Cost Engendered by Internal and EU Environmental Protection Measures: Implementation Options and WTO Admissibility 10 (2009).
141. For similar reasoning (albeit relating to taxes on air emissions rather than an ETS), see Demaret & Stewardson, *supra* note 57, at 59; Fauchald, *supra* note 60, at 187.
142. For broadly similar reasoning, see Charnovitz, *supra* note 86, at 39.

the allowances needed within the EU in order to cover the emissions caused by the generation of energy that is used as an input for the production of like domestic goods. This cost is normally incurred at a prior industrial stage, and irrespective of the use to which the energy generated in the power plant that must surrender the ETS allowances is eventually put. Further, the power consumption is not a "material" that is "incorporated" into the domestic product,[143] and the corresponding indirect cost effect therefore constitutes a *taxe occulte* that is not eligible for border adjustment under Article II:2(a).

The European Commission appears to be aware of this limitation. In its CBAM proposal from July 2021, it states that the border adjustment in the form of a notional ETS would initially be limited to direct GHG emissions resulting from the production of covered imported goods. An extension to "indirect emissions," in particular those caused through the generation of energy inputs, would be contemplated only after the end of a transition period, and only "upon further assessment."[144] This assessment would then indeed have to include a careful WTO law analysis.

Admittedly, it could be argued that the imposition of a definitive pecuniary burden on energy input generation under the EU ETS constitutes a system of multistage cumulative charges that has been designed to cover the total emissions caused by the production of a particular good. This conception is indeed reflected in Article 10a(6) of the ETS Directive concerning measures against carbon leakage caused by such "indirect costs" of production. However, different from an analysis under GATT Article III:2, which can be more broadly construed, such a classification of the EU ETS as a system of cumulative burdens is immaterial for the assessment of its compliance with GATT Article II:2(a). It does not render the "hidden" cost on energy inputs eligible for a border adjustment.

The alternative CBAM instruments (i.e., a CET or a fuel excise tax on certain imported products) would instead have to comply with GATT Article III:2. The fuel excise tax would be levied on imported and domestic fossil fuels at the time of their release for free circulation. It would be applied directly to like imported and like domestic products and would thus cause no issues with respect to eligibility for BTA. The same would apply to the CET if the scope of the border adjustment were limited to certain materials with a generally high carbon footprint, and did not exceed the excise tax burden falling directly on like domestic products. If the border adjustment were extended to components of intermediate and final products made from taxable materials, it would equally be compatible with Article III:2, as it is generally agreed that the corresponding tax burden indirectly applied to similarly composed domestic products may be adjusted for under this provision, no different from the explicit admission in GATT Article II:2(a).

Based on our understanding of Article III:2, the border adjustment for imported products could even take into account both the CET directly imposed on the like domestic product and an eventual energy tax element of the CET.[145] If the latter were broadly aligned with the cost of ETS allowances for energy production, it could be held to constitute an element of cumulative CET, no different from the cumulative carbon pricing through the EU ETS itself. Assuming—as we do—that GATT Article III:2 also permits BTAs for *taxes occultes* where the latter constitute integral elements of a system of cascading taxation, this internal tax design would thus fully qualify for a border adjustment including the energy tax element in the production process. As a caveat, this view is not generally accepted; it is therefore likely that such a design would be challenged in a complaint brought before the WTO.

C. National Treatment Requirement Under GATT Article III:2(1)

Pursuant to Article III:2(1), the products of the territory of any contracting Party imported into the territory of any other contracting Party shall not be subject to internal taxes or other internal charges of any kind in excess of those applied—by this latter Party[146]—to like domestic products. As we have argued above, this national treatment requirement would apply directly to a CBAM for a CET or a fuel excise tax. Regarding a possible notional ETS, it would not be tested independently, but would nevertheless have to be fulfilled as a condition for the admissibility of a CBAM under GATT Article II:2(a). In any event, the eligibility of the internal charge at issue for a BTA does not preempt an assessment under Article III:2(1).[147]

Clearly, the core question relating to GATT Article III:2(1) in the context of a CBAM is whether the actual carbon content of the imported product may be taken into account for the purpose of calculating the amount of border adjustment charge, even if this implies that certain imported materials and products would be taxed higher than domestic materials and products with similar characteristics and functions but with a lower carbon content. This requires a careful analysis of all constituent elements of the national treatment requirement.

143. *See, e.g.*, Schlagenhof, *supra* note 53, at 142.
144. *See Proposal for a Regulation Establishing a CBAM*, *supra* note 9, pmbl. recital 17.
145. *See also* Pauwelyn, *supra* note 79, at 19-20. For a more skeptical view, see Kaufmann & Weber, *supra* note 86, at 501-03; McAusland & Najjar, *supra* note 76, at 798-99. For an undecided view, see Demaret & Stewardson, *supra* note 57, at 18-19; Biermann & Brohm, *supra* note 89, at 295.
146. GATT Article III:2 does not require taking into account eventual tax burdens imposed—and not rebated—by the country of origin; for a different opinion, see Goh, *supra* note 106, at 411-12.
147. We do not share the doubts raised in this regard by Pauwelyn, *supra* note 51, at 489, who in our view reads too much into the fact that the panel in *United States—Superfund* did not *explicitly* assess the likeness criterion.

1. Likeness: Economic Interpretation Versus "Aim and Effects"

A first gateway for differentiated border adjustments depending on actual carbon content could be the likeness criterion of GATT Article III:2(1).

From the perspective of the regulatory objective of the notional ETS, and to a certain degree also in view of the objective of a CET, the carbon content is precisely what should determine whether two products are comparable or not when determining the amount to be charged. And in the early 1990s, there was indeed a short period when GATT panels tended to establish likeness of products in light of the motives and objectives underlying the internal tax or charge at issue.

In what became known as the "aim and effects" test, the (unadopted) panel report in *United States—Automobiles* held that "the first step of determining the relevant features common to the domestic and imported products (likeness) would . . . have to include an examination of the aim and effect of the particular tax measure."[148] To defend this position, and in line with a previous panel report,[149] the panel argued that GATT Article III:2 needed to be construed so as to reflect the central purpose of the national treatment requirement laid down in Article III:1, namely to prohibit—only—differentiations made "so as to afford protection to domestic production."[150]

However, while this approach found certain support in scholarly writing,[151] subsequent WTO jurisprudence has firmly rejected the "aim and effects" test in the context of GATT Article III:2(1),[152] and convincingly so.[153] Article III:2 must not be construed as a general principle of equal treatment that is open for any regulatory objective as potential comparator (*tertium comparationis*) except protectionist aims. Instead, the fundamental purpose of GATT Article III "is to ensure equality of competitive conditions between imported and like domestic products."[154] Accordingly, "Article III:2, first sentence, is not concerned with taxes or charges as such or the policy purposes Members pursue with them, but with their economic impact on the competitive opportunities of imported and like domestic products."[155] Therefore, "a determination of 'likeness' . . . is, fundamentally, a determination about the nature and extent of a competitive relationship between and among products."[156]

As a consequence, it is necessary to establish likeness based on criteria that are indicative for such a competitive relationship, rather than national regulatory aims.[157] Moreover, as the Appellate Body has explained in the context of Article XVII of the General Agreement on Trade in Services (GATS), regulatory aspects or concerns are more appropriately addressed in the context of the GATS provisions on relevant exceptions. Addressing them already in the context of the nondiscrimination provisions would upset the existing balance between the former and the latter provisions.[158]

We find this reasoning to be applicable in the context of GATT, too, where the limited admission of, and strict

148. GATT Panel Report, *United States—Taxes on Automobiles*, para. 5.9, DS31/R (unadopted, circulated Oct. 11, 1994) (*see also* para. 5.10).
149. GATT Panel Report, *United States—Measures Affecting Alcoholic and Malt Beverages*, paras. 5.25 and 5.71, DS23/R, GATT B.I.S.D. 39S/206 (adopted June 19, 1992).
150. *See* GATT Panel Report, *United States—Taxes on Automobiles,* para. 5.7, DS31/R (unadopted, circulated Oct. 11, 1994).
151. *See*, *e.g.*, Chaytor & Cameron, *supra* note 95, at 6-7; Aaditya Mattoo & Arvind Subramanian, *Regulatory Autonomy and Multilateral Disciplines: The Dilemma and a Possible Resolution*, 1 J. Int'l Econ. L. 303, 314 (1998); Robert Howse & Donald Regan, *The Product/Process Distinction—An Illusory Basis for Disciplining "Unilateralism" in Trade Policy*, 11 Eur. J. Int'l L. 249, 269 (2000).
152. *See* Appellate Body Report, *Japan—Taxes on Alcoholic Beverages* 18, WTO Doc. WT/DS8, 10, 11/AB/R (adopted Nov. 1, 1996), *confirmed by* Appellate Body Report, *European Communities—Regime for the Importation, Sale, and Distribution of Bananas*, para. 241, WTO Doc. WT/DS27/AB/R (adopted Sept. 25, 1997) (regarding the national treatment requirement of General Agreement on Trade in Services (GATS) Article XVII); Appellate Body Report, *European Communities—Measures Prohibiting the Importation and Marketing of Seal Products*, para. 5.114, WTO Doc. WT/DS400, 401/AB/R (adopted June 16, 2014) (concerning GATT Article III:4). *See also* Holger P. Hestermeyer, *Article III GATT*, *in* WTO—Trade in Goods, *supra* note 57, art. III, para. 34; Gene M. Grossman et al., *The Legal and Economic Principles of World Trade Law: National Treatment* 67-68 (Research Institute of Industrial Economics, Working Paper No. 917, 2012); Simon Lester et al., World Trade Law: Text, Materials, and Commentary 279 (2d ed. 2012).
153. *See, e.g.*, Petros C. Mavroidis, The General Agreement on Tariffs and Trade: A Commentary 147 (2005); Rob Howse & Elisabeth Tuerk, *The WTO Impact on Internal Regulations—A Case Study of the Canada-EC Asbestos Dispute, in* The EU and the WTO: Legal and Constitutional Issues 283, 293 (Gráinne De Búrca & Joanne Scott eds., Bloomsbury 2002); for a critical opinion see, for example, Emily Lydgate, *Sorting Out Mixed Messages Under the WTO National Treatment Principle: A Proposed Approach*, 15 World Trade Rev. 423, 437 (2016).
154. Appellate Body Report, *Canada—Certain Measures Concerning Periodicals* 18, WTO Doc. WT/DS31/AB/R (adopted July 30, 1997); *see also, e.g.*, Appellate Body Report, *Korea—Taxes on Alcoholic Beverages*, para. 120, WTO Doc. WT/DS75, 84/AB/R (adopted Feb. 17, 1999); Appellate Body Report, *Philippines—Taxes on Distilled Spirits* 18, WTO Doc. WT/DS396, 403/AB/R (adopted Jan. 20, 2012); Appellate Body Report, *China—Measures Affecting Imports of Automobile Parts*, para. 161, WTO Doc. WT/DS339, 340, 342/AB/R (adopted Jan. 12, 2009); Appellate Body Report, *Thailand—Customs and Fiscal Measures on Cigarettes From the Philippines*, para. 110, WTO Doc. WT/DS371/AB/R (adopted July 15, 2011); *see also* earlier GATT panel reports, *e.g.*, GATT Panel Report, *Brazilian Internal Taxes*, para. 15, GATT/CP.3/42, GATT B.I.S.D. II/181 (adopted June 30, 1949); GATT Panel Report, *United States—Taxes on Petroleum and Certain Imported Substances*, para. 5.1.9, L/6175, GATT B.I.S.D. 34S/136 (adopted June 17, 1987); GATT Panel Report, *United States—Section 337 of the Tariff Act of 1930*, para. 5.13, L/6439, GATT B.I.S.D. 36S/345 (adopted Nov. 7, 1989).
155. Panel Report, *Argentina—Measures Affecting the Export of Bovine Hides and the Import of Finished Leather*, para. 11.182, WTO Doc. WT/DS155/R (adopted Feb. 16, 2001).
156. Appellate Body Report, *European Communities—Measures Affecting Asbestos and Asbestos-Containing Products*, para. 99, WTO Doc. WT/DS135/AB/R (adopted Apr. 5, 2001) (concerning GATT Article III:4); Appellate Body Report, *Argentina—Measures Relating to Trade in Goods and Services*, para. 6.31, WTO Doc. WT/DS453/AB/R (adopted May 9, 2015) (concerning GATS Article XVII). *See also* Lester et al., *supra* note 152, at 271; Bhala, *supra* note 95, para. 13-048.
157. This is ignored by Howse & Eliason, *supra* note 53, at 67, who argue that "potentially catastrophic global environmental harms" should have to be considered in a holistic assessment of likeness. In a similar vein, Rohinton Medhora and Maria Panezi, *Will the Price Ever Be Right? Carbon Pricing and the WTO*, 10 Trade L. & Dev. 19, 26 (2018), argue that the domestic regulatory framework for carbon emissions should have a bearing on the likeness analysis.
158. *See* Appellate Body Report, *Argentina—Measures Relating to Trade in Goods and Services*, paras. 6.115 and 6.118, WTO Doc. WT/DS453/AB/R (adopted May 9, 2015).

requirements for, relevant exceptions under GATT Article XX should not be undermined by considering regulatory aims already in the likeness analysis. Considering the traditional, clearly articulated, and limited objective of GATT Article III, we also do not find it convincing to refer to the general sustainable development goal mentioned in the preamble to the Marrakesh Agreement in order to justify that environmental concerns should, by themselves, influence the assessment of product likeness.[159]

It is now settled WTO jurisprudence that "like" products are a subset of directly competitive or substitutable products.[160] Products that are perfectly substitutable or come close to being perfectly substitutable are "like" products, whereas products that compete to a lesser degree fall within the scope of GATT Article III:2(2).[161] Whether this narrow notion of likeness for the purposes of Article III:2[162] is fulfilled must be determined on a case-by-case basis.[163] To this effect, WTO jurisprudence has established that the 1970 Report of the Working Party on Border Tax Adjustments[164] sets out the basic approach for interpreting likeness.[165] In general, relevant factors are therefore (1) the product's end-uses in a given market; (2) consumers' tastes and habits, in particular the extent to which consumers perceive and treat the products as alternative means of performing particular functions in order to satisfy a particular want or demand; and (3) the product's physical properties, nature, and quality.[166] Moreover, the international classification of the products for tariff purposes has also been relied on by the Appellate Body.[167]

No single one of the above criteria is always decisive; instead, a holistic assessment in light of all of them is required.[168] It is therefore possible that products with very similar physical characteristics may not be "like" if their substitutability in a given consumer market is nevertheless low.[169] In its decision in *European Communities—Asbestos*, the Appellate Body therefore found that consumers' tastes and habits are very likely to be shaped by health risks associated with a particular product, and may render it "unlike" a product with similar characteristics and end-uses but without such health risks.[170] However, as a general rule, products with physically identical or very similar characteristics will presumably also be "like" from a consumer perspective.[171] Moreover, it must be avoided to reintroduce "aim and effects" by the backdoor, by assuming that a "reasonable" consumer would share the concerns and legitimate objectives underlying the regulatory approach, and thus distinguish between products accordingly.[172] What matters are actual rather than politically desired consumer attitudes.[173]

In the literature,[174] it has been argued that the Appellate Body might have modified its position in the relatively recent decision in *Canada—Renewable Energy*.[175] In this case, the Appellate Body found that the wholesale market for electricity produced from certain renewable energy was to be distinguished from the market energy produced from other sources, even though both categories of electricity were physically identical.[176] While the decision concerned the notion of "benefit" within the meaning of ASCM Article 1.1(b), and therefore did not directly relate to the "likeness" concept of GATT Article III, separate markets would normally indicate a lack of relevant competition and relevant demand side substitutability.[177] This, in turn, should also rule out "likeness" for the purpose of GATT Article III, considering its overall objective.[178]

159. For a different opinion, see Zaker Ahmad, *Carbon Tax as Discrimination: Revisiting the Legal Standard of National Treatment in WTO Law*, 32 Nat'l L. Sch. India Rev. 181, 194 (2020).
160. Appellate Body Report, *Korea—Taxes on Alcoholic Beverages*, para. 118, WTO Doc. WT/DS75, 84/AB/R (adopted Feb. 17, 1999).
161. Appellate Body Report, *Philippines—Taxes on Distilled Spirits*, para. 1499, WTO Doc. WT/DS396 403/AB/R (adopted Jan. 20, 2012); and earlier Appellate Body Report, *Canada—Certain Measures Concerning Periodicals* 28, WTO Doc. WT/DS31/AB/R (adopted July 30, 1997); Appellate Body Report, *Korea—Taxes on Alcoholic Beverages*, para. 118, WTO Doc. WT/DS75, 84/AB/R (adopted Feb. 17, 1999).
162. *See* Appellate Body Report, *Japan—Taxes on Alcoholic Beverages* 20-21, WTO Doc. WT/DS8, 10, 11/AB/R (adopted Nov. 1, 1996).
163. *See id*. at 20.
164. *See* Report of the Working Party on BTAs, *supra* note 90, para. 18; regarding the legal significance of the agreements reached in the Report, see Grossman et al., *supra* note 152, at 51-53.
165. *See* Appellate Body Report, *Japan—Taxes on Alcoholic Beverages* 20, WTO Doc. WT/DS8, 10, 11/AB/R (adopted Nov. 1, 1996).
166. *See* Appellate Body Report, *European Communities—Measures Affecting Asbestos and Asbestos-Containing Products*, para. 101, WTO Doc. WT/DS135/AB/R (adopted Apr. 5, 2001); Appellate Body Report, *Canada—Certain Measures Concerning Periodicals* 21, WTO Doc. WT/DS31/AB/R (adopted July 30, 1997); Panel Report, *United States—Certain Measures Affecting Imports of Poultry From China*, para. 7.425, WTO Doc. WT/DS392/R (adopted Oct. 25, 2010).
167. *See* Appellate Body Report, *European Communities—Measures Affecting Asbestos and Asbestos-Containing Products*, para. 101, WTO Doc. WT/DS135/AB/R (adopted Apr. 5, 2001); *see also* the earlier GATT Panel Report, *EEC—Measures on Animal Feed Proteins*, para. 4.2, L/4599, GATT B.I.S.D. 25S/49 (adopted Mar. 14, 1978); GATT Panel Report, *Japan—Customs Duties, Taxes, and Labelling Practices on Imported Wines and Alcoholic Beverages*, para. 5.6, L/6216, GATT B.I.S.D. 34S/83 (adopted Nov. 10, 1987).
168. *See* Panel Report, *United States—Certain Measures Relating to the Renewable Energy Sector*, para. 7.89, WTO Doc. WT/DS510/R (adopted June 27, 2019).
169. *See* Appellate Body Report, *Philippines—Taxes on Distilled Spirits*, para. 120, WTO Doc. WT/DS396, 403/AB/R (adopted Jan. 20, 2012).
170. *See* Appellate Body Report, *European Communities—Measures Affecting Asbestos and Asbestos-Containing Products*, para. 122, WTO Doc. WT/DS135/AB/R (adopted Apr. 5, 2010).
171. *See* Panel Report, *United States—Measures Concerning the Importation, Marketing, and Sale of Tuna and Tuna Products*, para. 7.2, WTO Doc. WT/DS381/R (adopted June 13, 2012); Reinhard Quick & Christian Lau, *Environmentally Motivated Tax Distinctions and WTO Law: The European Commission's Green Paper on Integrated Product Policy in Light of the "Like Product" and "PPM" Debates*, 6 J. Int'l Econ. L. 419, 432 (2003); *see also* Low et al., *supra* note 101, at 7 (market studies tend to show that consumers generally ignore processes and production methods).
172. See, however, Bhagwati & Mavroidis, *supra* note 53, at 308; Ruddigkeit, *supra* note 78, at 16. For a position more aligned with the one adopted here, see Joel P. Trachtman, *WTO Law Constraints on Border Tax Adjustment and Tax Credit Mechanisms to Reduce the Competitive Effects of Carbon Taxes* 11-12 (Resources for the Future, Discussion Paper No. 16-03, 2016).
173. *See also* Gerald G. Sander & Andreas Sasdi, Freihandel und Umweltschutz 145-46 (2005); Gappa, *supra* note 61, at 204.
174. *See* McAusland & Najjar, *supra* note 76, at 780; Charnovitz, *supra* note 86, at 40.
175. Appellate Body Report, *Canada—Certain Measures Affecting the Renewable Energy Generation Sector*, WTO Doc. WT/DS412/AB/R (adopted May 24, 2013).
176. *See id*. para. 5.169.
177. *See also* Hestermeyer, *supra* note 152, art. III, para. 32.
178. For such—in itself, convincing—reasoning, see Charnovitz, *supra* note 86, at 40.

However, we are not persuaded that this decision indicates a general willingness of the Appellate Body to take into account the environmental profile of products in its likeness analysis. Rather, its decision in *Canada—Renewable Energy* was guided by specific circumstances that allow the framing of the outcome as wholly compatible with the above-mentioned, conventional approach toward assessing whether products are competitive or substitutable.

In particular, the demand side for electricity in this case was characterized by a high degree of government intervention: it was only due to government regulation that energy from renewable sources was fed into the grid, government controlled the wholesale market, and its energy policy preferences and energy supply mix choices thus dictated the demand for renewable energy.[179] Thus, at the wholesale level, government was the only relevant "consumer," and its "tastes and habits" were chiefly responsible for creating a separate market for renewable energies. Such circumstances are, however, absent in competitive markets for commodities and other products affected by the EU ETS.

What does the above imply for the border charges that were under discussion for an EU CBAM? All of them would be imposed, at least initially, on certain products—typically commodities—whose production causes significant carbon emissions. The notional ETS and the CET might further be extended to intermediate and finished products into which the relevant materials have been incorporated.

Regarding, first, commodities such as fuel, steel, cement, and so on, the respective products within each category of materials will normally share the same physical properties,[180] they will be perfectly or almost perfectly substitutable with respect to their end-uses, and they will also share the same or very similar tariff classifications. A different carbon content as a result of the respective production process could thus only prevent their qualification as "like" products if it had a significant impact on consumer preferences and perceptions in the EU internal market.[181] This might actually be the case in the future, especially if carbon emissions labeling became standard procedure in the EU,[182] if consumers therefore became more aware and sensitive to this factor, and if they were to develop a preference for products with a low carbon footprint.

However, this is arguably not yet the case.[183] Commodities are overwhelmingly traded business-to-business, and they are subsequently put to use in the manufacture of intermediate goods and finished products. Purchasers and consumers of the latter are usually unaware of the specific carbon content of the concrete materials built into the products they buy, and therefore they are of no concern to the commercial purchasers of the commodities, either.[184] And even where commodities are sold business-to-consumer, the consumer is usually not aware of their carbon footprint, nor inclined to make any inquiries to this effect. Therefore, products in a specific category of commodities must be assumed to be "like" also with respect to consumers' tastes and habits.

Concerning, second, a possible extension of the border adjustment to composite intermediate or finished products that have been produced from certain chargeable materials, this would presumably not be accompanied by a similar expansion of the substantial scope of the EU ETS or an eventual CET with respect to domestically produced goods. In the case of domestic production, there would be no need for the associated increase in administrative complexity, because their carbon-intensive components can be charged directly under the relevant scheme. As a consequence, it would still be necessary to compare the border adjustment corresponding to the chargeable components of an imported product with the ETS price or CET burden imposed directly on *like* components produced domestically.

Border adjustments regarding any of the measures currently under discussion for a CBAM would therefore potentially fall under the national treatment requirement for "like" products, as stipulated in GATT Article III:2(1).

As a caveat, this conclusion could not already have been drawn based on the presumption, established in WTO jurisprudence,[185] that when a measure makes a distinction between products based exclusively on the origin of the product, the likeness of such products can be presumed. First, a distinction based on origin would exist only

179. *See* Appellate Body Report, *Canada—Certain Measures Affecting the Renewable Energy Generation Sector*, paras. 5.175-5.177, WTO Doc. WT/DS412/AB/R (adopted May 24, 2013).

180. For a different opinion, which in our view is based on a rather contorted line of reasoning, see Nathaniel Eisen, *Carbon Emissions as a Physical Property: Ontological Approaches to the WTO Like Products Debate*, 51 N.Y.U. J. Int'l L. & Pol. 871, 899 (2019).

181. For a similar view, see Schlagenhof, *supra* note 53, at 129; Goh, *supra* note 106, at 407-08; Madison Condon & Ada Ignaciuk, *Border Carbon Adjustment and International Trade: A Literature Review* 18 (OECD Trade and Environment, Working Paper No. 2013/06, 2013), https://www.oecd-ilibrary.org/docserver/5k3xn25b386c-en.pdf; James J. Nedumpara, *Energy Security and the WTO Agreements*, *in* Trade, the WTO, and Energy Security 15, 20 (Sajal Mathur ed., 2014); Natalie L. Dobson, *The EU's Conditioning of the "Extraterritorial" Carbon Footprint: A Call for an Integrated Approach in Trade Law Discourse*, 27 Rev. Eur. Comp. & Int'l Env't L. 75, 80 (2018).

182. *See also* Kaufmann & Weber, *supra* note 86, at 510; Volmert, *supra* note 61, at 56; Keith Kendall, *Carbon Taxes and the WTO: A Carbon Charge Without Trade Concerns*, 29 Ariz. J. Int'l & Comp. L. 49, 79 (2012).

183. *See also* Bordoff, *supra* note 79, at 44; Daniel Becker et al., *Grenzausgleichsinstrumente bei unilateralen Klimaschutzmaßnahmen* 18 (RECAP15, Discussion Paper No. 10/2013, 2013); Gappa, *supra* note 61, at 204-05, with references to empirical research. Also Mehling et al., *supra* note 78, at 461, are leaning toward the position adopted here. By contrast, Kaufmann & Weber, *supra* note 86, at 508, consider this to be questionable, but would apparently not rule it out. However, they put too much emphasis on the opinion of experts, rather than consumer preferences. While the former tend to eventually inform the latter, there may be a considerable time lag for this to happen. For a position differing from the one adopted here, assuming that emissions might matter for some products and markets, see Ahmad, *supra* note 159, at 193-94; *see also* McAusland & Najjar, *supra* note 76, at 777.

184. In a similar vein, see McLure, *supra* note 16, at 461; Holzer, *supra* note 86, at 113-14.

185. *See*, *e.g.*, Appellate Body Report, *Argentina—Measures Relating to Trade in Goods and Services*, para. 6.36, WTO Doc. WT/DS453/AB/R (adopted May 9, 2015); Panel Report, *India—Measures Affecting the Automotive Sector*, para. 7.174, WTO Doc. WT/DS146, 175/R (adopted Apr. 5, 2002); Panel Report, *Colombia—Indicative Prices and Restrictions on Ports of Entry*, para. 7.182, WTO Doc. WT/DS366/R (adopted May 20, 2009); Panel Report, *United States—Certain Measures Relating to the Renewable Energy Sector*, para. 7.89, WTO Doc. WT/DS510/R (circulated June 27, 2019).

under the notional ETS, which would apply exclusively to imported products and would differ in some key aspects from the original EU ETS, whereas the various excise tax alternatives would feature no such distinction.

Second, the Appellate Body has clarified in *Argentina—Financial Services* that for the aforementioned presumption to apply, the different treatment must have its root cause in product origin, rather than be explained by other factors.[186] In the case of the notional ETS, its imposition only on imported products would merely reflect the need to pursue the same regulatory objective of the ETS through a different technique, to cater to the customary public international law limitation of its jurisdiction to prescribe and enforce the ETS abroad. Therefore, the difference in treatment would not be based on origin per se.

2. No Import Taxation "in Excess of" Domestic Taxes and Differentiated Tax Burdens

To the extent that an imported product subject to the CBAM is "like" a domestic product, as will usually be the case for imported commodities in particular, the imports must not be charged "in excess" of their domestic counterparts.

❑ *Notional ETS with "CBAM allowances."* Under the notional ETS model as contemplated in the European Commission's inception impact assessment, the amount of allowances needed per unit of imported product would be based on the respective EU average carbon benchmark. This default number of CBAM allowances would then have been reduced to the extent that the importer could demonstrate that the carbon content of the imported product is lower than the EU average. By contrast, the cost of the ETS for domestic products would always depend on the emissions actually caused by their production, which could be above or below the average carbon benchmark. Imported products and like domestic products would therefore not be treated equally.

What needs to be assessed, however, is only whether this unequal treatment would also imply "excessive" taxation of imports. Does it matter that domestic "like" products with a carbon emission performance better than EU average would have effectively been burdened with an ETS cost below the notional ETS, whereas imported products would have had to pay the notional ETS by default, and would have gotten a rebate only if they also have a better-than-average carbon emission performance and can moreover prove this to the satisfaction of the competent authorities? Or is it admissible to levy a higher charge on (presumably) "dirtier" imports than on cleaner-than-average domestic products, especially since the charge on imports reflects, at most, the average cost for domestic products?

It is settled WTO jurisprudence that in principle, the first sentence of GATT Article III:2 does not allow for "jurisdictional blending" of the charges imposed on imported products and on domestic products, respectively. At least in the case of a *de jure* difference in treatment,[187] more favorable treatment of some imported products cannot be balanced against less favorable treatment of other like imported products.[188] Rather, a "diagonal test" is applied[189]: no single imported product must be charged in excess of any like domestic product, even if some other domestic products are charged more heavily than certain like imported products.[190] Further, there is no de minimis threshold; "even the smallest amount of 'excess' is too much."[191] The underlying logic of this approach is that the "exposure of a particular imported product to a risk of discrimination already constitutes a form of discrimination"[192]; therefore, imported products should enjoy the same competitive opportunities as the most-favored like domestic products.

Consequently, the GATT panel decision on *United States—Cigarettes* considered it a violation of the national treatment requirement for an internal tax to provide for differentiated calculation of the tax burden for domestic products and foreign-derived products. Under the facts of this case, the like imported products were subject to the average domestic tax burden and thus inherently taxed higher than some of the directly competing domestic products.[193] In a similar vein, the panel decision on *Argentina—Hides and Leather* rejected the argument that a tax rate for imported products met the national treatment requirement, because it corresponded to the average of the differentiated tax rates for internal sales.[194] The former panel decision also made clear that the "diagonal test" was not limited to nominal

186. *See* Appellate Body Report, *Argentina—Measures Relating to Trade in Goods and Services*, para. 6.56, WTO Doc. WT/DS453/AB/R (adopted May 9, 2015).

187. See, however, the application of the "diagonal test" also to instances of de facto discrimination under GATT Article III:2(1), in the GATT Panel Report, *United States—Measures Affecting Alcoholic and Malt Beverages*, para. 5.19, DS23/R, GATT B.I.S.D. 39S/206 (adopted June 19, 1992). For extensive (and critical) discussion, see Fauchald, *supra* note 60, at 220.

188. *See* Appellate Body Report, *Canada—Certain Measures Concerning Periodicals* 29, WTO Doc. WT/DS31/AB/R (adopted July 30, 1997).

189. *See* Lothar Ehring, *De Facto Discrimination in World Trade Law: National and Most-Favoured-Nation Treatment—Or Equal Treatment?*, 36 J. World Trade 921, 924 (2002).

190. *See*, *e.g.*, GATT Panel Report, *United States—Measures Affecting the Importation, Internal Sale, and Use of Tobacco*, paras. 91-98, DS44/R (adopted Oct. 4, 1994); Panel Report, *Argentina—Measures Affecting the Export of Bovine Hides and the Import of Finished Leather*, paras 11.196 and 11.260, WTO Doc. WT/DS155/R (adopted Feb. 16, 2001); Appellate Body Report, *India—Additional and Extra-Additional Duties on Imports From the United States*, paras. 214 and 220-221, WTO Doc. WT/DS360/AB/R (adopted Nov. 17, 2008). *See also* Kevin Kennedy, *GATT 1994*, *in* 1 The World Trade Organization: Legal, Economic, and Political Analysis 111, 117 (Patrick F.J. Macrory et al. eds., Springer 2005).

191. Appellate Body Report, *Japan—Taxes on Alcoholic Beverages* 23, WTO Doc. WT/DS8, 10, 11/AB/R (adopted Nov. 1, 1996).

192. *See* Panel Report, *Colombia—Indicative Prices and Restrictions on Ports of Entry*, para. 7.197, WTO Doc. WT/DS366/R (adopted May 20, 2009).

193. *See* GATT Panel Report, *United States—Measures Affecting the Importation, Internal Sale, and Use of Tobacco*, para. 98, DS44/R (adopted Oct. 4, 1994).

194. *See* Panel Report, *Argentina—Measures Affecting the Export of Bovine Hides and the Import of Finished Leather*, para. 11.259, WTO Doc. WT/DS155/R (adopted Feb. 16, 2001). In a similar vein, see Panel Report, *United States—Standards for Reformulated and Conventional Gasoline*, para. 6.14, WTO Doc. WT/DS2/R (adopted May 20, 1996).

tax rates, but related to actual tax burdens, including the basis of assessment and calculation methods.[195]

Against this background, it can be concluded that in light of settled—albeit questionable[196]—GATT and WTO jurisprudence, a border adjustment charge must not exceed the best available, which means lowest, charge on any like domestic product in order not to be "excessive" within the meaning of GATT Article III:2(1).[197] This requirement is often overlooked in the literature on the intersection between climate change policies and WTO law rules.[198]

In the context of a notional ETS, the above implies that the national treatment requirement would be infringed if the amount of CBAM certificates required for an imported product was calculated as the average of the amount of emission permits needed by the domestic (EU) competitors in order to produce a like commodity. Even where the person lodging the customs declaration could file for a reduction in the number of CBAM certificates required as a result of the import transaction, based on evidence of the actual emissions released in that particular production process, such an adjustment possibility would not, in itself, ensure compatibility of the border adjustment with GATT Article III:2(1). Rather, "once products are designated as like products, a regulatory product differentiation, e.g. for . . . environmental purposes, becomes inconsistent with Article III,"[199] unless imported products are treated like the most-favored domestic ones.

This is true even if the importer is ultimately charged a price that is lower than the corresponding EU average carbon price, due to an optional regime that can apply as an exception to the main—discriminatory—rule. The Appellate Body held in its report on *Thailand—Cigarettes* that it is not sufficient to preclude a finding of inconsistency with Article III:2(1) that the importer may take action to avoid the imposition of any excessive charges.[200] The reduction of the border charge to the level of the—best available—internal charge would moreover have to be granted automatically and immediately when the levy becomes chargeable,[201] and must not cause excessive compliance costs.[202] In a nutshell, WTO law privileges the regulatory structure over the actual outcome in a particularized case.

A slightly more nuanced position regarding default values has only been exceptionally adopted in the GATT panel report on *United States—Superfund* with respect to a border adjustment for materials that have been incorporated into imported intermediate or finished products. The panel accepted estimates of the amount of taxable materials used to produce the imported product based on the predominant method of production, if the importer did not demonstrate that a lesser quantity was actually used.[203] The panel did not specify the geographic dimension of this default benchmark.[204] However, it can be assumed that the panel based its findings on the assumption that the relevant U.S. legislation referred to the globally predominant method of production, since the imposition of a tax burden corresponding to the domestically predominant method would not have ensured that the tax burden is broadly determined "in relation to the amount of the [taxable materials] used."[205] But the incorporated units of chargeable material so determined were then, once more, subject to the regular national treatment requirement of GATT Article III:2(1),[206] which means that it must be ensured for each individual transaction that the border charge does not exceed the burden imposed on any domestic like product.

Contrary to what has sometimes been suggested in the literature,[207] the panel decision in *United States—Superfund* thus does not condone any sort of averaging the border adjustment for (environmental) input taxes with respect to imported products that have been manufactured from the taxable inputs. What can be estimated based on the predominant method of production is only the amount of taxable inputs used in the production of the imported product,[208] provided that the importer is given the opportunity to rebut this default benchmark and furnish information as to the exact amount of inputs used. By contrast, the amount of tax to be applied per unit of such taxable input must not be calculated as the average of the domestic tax burden on like inputs; this applies irrespective of

195. *See* GATT Panel Report, *United States—Measures Affecting the Importation, Internal Sale, and Use of Tobacco*, para. 98, DS44/R (adopted Oct. 4, 1994).
196. For a critical analysis, see Mavroidis, *supra* note 153, at 144-45; Joachim Englisch, Wettbewerbsgleichheit im grenzüberschreitenden Handel 428 (2008). See also the criticism by Fauchald, *supra* note 60, at 192; however, his counterarguments are based on environmental policy concerns and should only be considered under GATT Article XX.
197. *See also* Fauchald, *supra* note 60, at 191, 203; Ismer & Neuhoff, *supra* note 46, at 147.
198. *See*, *e.g.*, Charles E. McLure, *Could VAT Techniques Be Used to Implement Border Carbon Adjustment?*, 66 Bull. for Int'l Tax'n 436, 439 (2012); Pauwelyn, *supra* note 51, at 491; Ross Astoria, *Design of an International Trade Law Compliant Carbon Border Tax Adjustment*, 6 Ariz. J. Env't L. & Pol'y 491, 514 (2015); Moore, *supra* note 51, at 57.
199. GATT Panel Report, *United States—Measures Affecting Alcoholic and Malt Beverages*, para. 5.72, DS23/R (adopted June 19, 1992).
200. *See* Appellate Body Report, *Thailand—Customs and Fiscal Measures on Cigarettes From the Philippines*, para. 117, WTO Doc. WT/DS371/AB/R (adopted July 15, 2011).
201. *Cf.* Panel Report, *Colombia—Indicative Prices and Restrictions on Ports of Entry*, para. 7.196, WTO Doc. WT/DS366/R (adopted May 20, 2009).
202. *See* Appellate Body Report, *Brazil—Certain Measures Concerning Taxation and Charges* 36, WTO Doc. WT/DS472, 497/AB/R (adopted Jan. 11, 2019).
203. GATT Panel Report, *United States—Taxes on Petroleum and Certain Imported Substances*, para. 5.2.9, L/6175, GATT B.I.S.D. 34S/136 (adopted June 17, 1987).
204. Nor did the relevant U.S. legislation, *see* I.R.C. §4671(b)(3), as amended by the Superfund Revenue Act of 1986.
205. The panel had emphasized that a calculation of the tax burden on this basis would ensure that the taxation of imported finished materials would not exceed the tax burden indirectly imposed on like domestic products made from the same taxable components, *see* GATT Panel Report, *United States—Taxes on Petroleum and Certain Imported Substances*, para. 5.2.8, L/6175, GATT B.I.S.D. 34S/136 (adopted June 17, 1987).
206. *See also* Panel Report, *Mexico—Tax Measures on Soft Drinks and Other Beverages*, para. 8.44, WTO Doc. WT/DS308/R (adopted Mar. 24, 2006); Appellate Body Report, *Canada—Certain Measures Concerning Periodicals* 19, WTO Doc. WT/DS31/AB/R (adopted July 30, 1997).
207. *See*, *e.g.*, Biermann & Brohm, *supra* note 89, at 298-99; Volmert, *supra* note 61, at 74; Gappa, *supra* note 61, at 213-14; and in a similar vein, Genasci, *supra* note 89, at 37; Pauwelyn, *supra* note 51, at 492-93.
208. *See also* Demaret & Stewardson, *supra* note 57, at 26.

whether the amount of taxable inputs has been merely estimated or determined on the basis of actual data.[209]

It would indeed be inconsistent to require that taxes or charges applied to imported raw materials must not exceed the lowest amount of internal tax or charge imposed on like domestic materials (under the "diagonal test"), but to accept averaging of the respective domestic tax burden for the same kind of materials if they are taxed as production inputs or components of an imported finished product. This would also give rise to economic distortions running counter to the overall purpose of GATT, by favoring the importation of raw materials over finished products.

So, by way of example, if steel were subject to a tax or charge levied per unit of steel, it would be admissible to estimate the amount of steel used in the production of an imported widget based on its predominant method of production for the purpose of calculating the amount of tax or charge due. However, it would be theoretically inadmissible—in light of settled GATT and WTO decisions—to determine the amount of tax or charge levied per unit of steel component based on the average amount of the corresponding internal tax or charge applied to domestically produced steel inputs.

The original conception of a notional ETS as contemplated in the Commission's inception impact assessment fell short of those requirements. It did not guarantee that each single imported product subject to the CBAM would be charged no more than the equivalent of the ETS cost for any like domestic product. This would be unattainable for any imported product that does not meet the EU best available technology benchmark for low emission production. Even where this standard would be met (or surpassed) by the imported product, the mere fact that the default charge would still be based on the EU average benchmark would be discriminatory according to WTO jurisprudence, unless measures were put into effect at the border to automatically and immediately grant a rebate upon presentation of the relevant evidence.

From the above, it can also be inferred that the reversal of the order of the relevant reference value, namely actual carbon content and default carbon content, for the purpose of determining the number of CBAM certificates (as it is now foreseen in the proposal tabled by the European Commission in July 2021), does not avert the verdict of incompatibility with the national treatment requirement. Requiring a number of notional permits that reflects the actual carbon content as a standard procedure does not ensure that no imported product is charged in excess of any like domestic product, because the ensuing pecuniary burden would still depend on the respective carbon content, which could, of course, be higher in the case of an imported product vis-à-vis (some) domestic products.

Moreover, the cost of verifying actual carbon content would have to be borne in full by the importer who would be charged with the obligation of declaring the actual emissions to the customs authority and eventually surrender the CBAM certificates.[210] This compliance cost might well be excessive in certain countries of origin, depending on the cost associated with a carbon content certification or control procedure. Under the tabled European Commission proposal, this cost could probably be avoided by opting for a default value.

However, it is clear that the primary default value—the average emission intensity for the relevant commodity in the respective exporting country—will not normally reduce the number of required CBAM certificates to the number of permits required by domestic (EU) producers operating with best available technology. Therefore, the default value approach would probably also fail the "diagonal test." This is all the more obvious where the subsidiary default value would have to be chosen (i.e., the average emission intensity of the 10% worst-performing EU installations).

Moreover, under both the original conception and the tabled proposal of the Commission, producers of like domestic products might be able to avail themselves of a lower price for ETS allowances at the time of their purchase than the price charged for notional permits needed for the CBAM.[211]

Therefore, the proposed notional ETS CBAM is not in compliance with GATT Article III:2(1)[212] and would therefore have to be justified based on GATT Article XX,[213] general exception clause.

In order to ensure consistency with Article III:2(1), the notional ETS would instead have to be calculated on the basis of EU best available technology[214] and best available allowances price in a reasonable period.[215] If the notional ETS were extended to composite products into which chargeable materials have been incorporated, the same would have to be ensured for the calculation of the proportionate levy corresponding to the quantity of materials used[216]; only the latter could be estimated on the basis of average use. Such an approach would, however, reduce both the CBAM revenue and the effectiveness of the CBAM as an instrument against carbon leakage.[217] It would also cause considerable administrative complexity[218]; however, as a panel has laconically stated, "nothing

209. For a similar view, see Porterfield, *supra* note 57, at 25.

210. *See Proposal for a Regulation Establishing a CBAM*, *supra* note 9, at 9.

211. See, in this regard, Kendall, *supra* note 182, at 64.

212. For a different opinion regarding a CBAM in general, see Pirlot, *supra* note 56, at 237.

213. *See infra* Section II.E.

214. See, in this regard, Ismer & Neuhoff, *supra* note 46, at 147-52; in a similar vein, Gabrielle Marceau & Joel P. Trachtman, *The Technical Barriers to Trade Agreement, the Sanitary and Phytosanitary Measures Agreement, and the General Agreement on Tariffs and Trade: A Map of the World Trade Organization Law of Domestic Regulation of Goods*, 36 J. World Trade 811, 856.

215. *See* Genasci, *supra* note 89, at 41-42; Gappa, *supra* note 61, at 216.

216. As a caveat, this applies only where the imported composite product is "like" a domestically produced product bearing an indirect ETS cost burden; as explained *supra* Section II.C.1, the (near) perfect substitutability required for the likeness criterion will less often be found with respect to such products than in the case of bulk commodities.

217. *See* Gappa, *supra* note 61, at 215; in a similar vein, Pauwelyn, *supra* note 51, at 493; McAusland & Najjar, *supra* note 76, at 796. However, it has been argued that the detrimental effect of a best available technology benchmark on revenues and effectiveness might be moderate, see Monjon & Quirion, *supra* note 29, at 5204.

218. *See* McLure, *supra* note 16, at 462.

in Art. III:2(1) GATT suggests that Members need not adhere to its provisions where doing so would compromise administrative efficiency."[219]

In the literature, it has been argued that contrary to the above findings, a differentiation in the amount of tax or charge levied on imported and domestic products should be regarded as compatible with Article III:2(1) where the difference is proportionate to the difference in the carbon content. To support this position, reference is made to generally accepted border adjustments for ad valorem taxes such as VAT, which are levied in function of the market price of the product. As a consequence, an imported product will attract a higher tax burden than a like but cheaper domestic product. Consequently, so the argument goes, a "pollution factor" should be as acceptable as a determinant of the amount of tax borne by the respective product as a "price factor."[220]

However, this comparison is arguably inappropriate; in essence, it amounts to an argument based on the policy purpose and structure of the charge at issue, which has however been rejected in WTO jurisprudence. First, ad valorem BTAs depending on the price of the product do not affect the relative competitive position of imported and domestic goods, and therefore do not run counter to the central purpose of GATT Article III, whereas a differentiation based on a "pollution factor" would have a distortive effect on the competitive relationship. Moreover, it is also liable to give rise to de facto discrimination based on origin.[221]

Second, for the reasons stated above in Section II.B.2, GATT Article III:2(1) is not concerned with the policy purposes WTO Members pursue with a given charge.[222] This is also in line with the Appellate Body's consistent rejection to separately assess an eventual protective application of the border adjustment under GATT Article III:2(1).[223] Different from GATT Article III:2(2),[224] the structure and objective of the internal charge or tax therefore have no bearing on the analysis under the former provision. However, the argument that a "pollution factor" should be accepted as the basis for a differentiation of the tax burden in the context of an environmental levy is precisely an argument based on the regulatory purpose of a Pigovian tax, merely in a different guise.

But admittedly, the precedents set by the Appellate Body are not entirely consistent in this regard. On one occasion, albeit only in the context of GATT Article III:4, the Appellate Body was apparently inclined to accept the disparate impact of indiscriminately applicable national rules on imported and domestic products, because it was "unrelated to the foreign origin of the product."[225] For the reasons stated above, it could be argued that it would neither be likely nor appropriate that WTO adjudication would exclude, on this basis, the potentially discriminatory nature of a pollution factor in calculating the amount of border adjustment.

❑ *Excise taxes*. The fuel excise tax would impose a uniform tax burden per unit of fuel released for free circulation, irrespective of its origin. Such a tax would clearly meet the national treatment requirements of GATT Article III:2(1).[226]

In a similar vein, the taxable amount of the CET would be determined per unit of taxable product, with a uniform amount of unit tax per product category. Different from the fuel excise tax, the CET would be linked to the EU ETS by periodically aligning the amount of tax with the average cost of ETS allowances for the respective taxable material, based on a carbon benchmark such as best available technology or predominant method of production. This link to average cost structures and standardized benchmarks as present in the EU internal market, in itself, would not create any problems with respect to GATT Article III:2(1), as long as the ensuing amount of tax per unit of taxable material is applied equally to imported and domestic products.[227]

However, the CET model examined here could further be designed so as to allow taxpayers who are admitted as participants in EU ETS auctions to credit their tax payment against the cost of acquiring ETS allowances in such auctions. This could be regarded as a problematic de facto neutralization of the internal tax burden (only) for domestic products whose production comes within the ambit of the EU ETS, under the premise that the practice of allocation of free allowances is terminated.

There are not many WTO decisions on tax compensation schemes; the most relevant is probably the panel report on *Brazil—Taxation*.[228] Here, the panel argued that the operation of the relevant tax on domestic products must be assessed "holistically" and with respect to actual

219. Panel Report, *Argentina—Measures Affecting the Export of Bovine Hides and the Import of Finished Leather*, para. 11.226, WTO Doc. WT/DS155/R (adopted Feb. 16, 2001). For a different opinion, see Fauchald, *supra* note 60, at 204.
220. *See* Pirlot, *supra* note 56, at 236; Bordoff, *supra* note 79, at 44; Porterfield, *supra* note 57, at 38-39; in a similar vein, Hillman, *supra* note 57, at 9.
221. This is also acknowledged by Pirlot, *supra* note 56, at 236.
222. *See* Panel Report, *Argentina—Measures Affecting the Export of Bovine Hides and the Import of Finished Leather*, para. 11.182, WTO Doc. WT/DS155/R (adopted Feb. 16, 2001). A similar conclusion is reached by Dobson, *supra* note 181, at 80.
223. *See* Appellate Body Report, *Japan—Taxes on Alcoholic Beverages* 18, WTO Doc. WT/DS8, 10, 11/AB/R (adopted Nov. 1, 1996); Appellate Body Report, *European Communities—Measures Prohibiting the Importation and Marketing of Seal Products*, paras. 5.114 and 5.115, WTO Doc. WT/DS400, 401/AB/R (adopted June 16, 2014).
224. *See* Appellate Body Report, *Chile—Taxes on Alcoholic Beverages*, paras. 62 and 71, WTO Doc. WT/DS87/AB/R (adopted Jan. 12, 2000).
225. Appellate Body Report, *Dominican Republic—Measures Affecting the Importation and Internal Sale of Cigarettes*, para. 96, WTO Doc. WT/DS302/AB/R (adopted May 19, 2005). This has been cited in support of the view that a carbon border tax whose amount reflects the respective carbon footprint could be compatible with GATT Article III:2(1) by Regan, *supra* note 60, at 122; Pauwelyn, *supra* note 51, at 491-92.
226. *See* Goh, *supra* note 106, at 402; Ian Sheldon, *Economic and Legal Analysis of Climate Policy and Border Tax Adjustments: Federal vs. State Regulation*, 79 Ohio St. L.J. 781, 792 (2018).
227. *Cf.* Panel Report, *Dominican Republic—Measures Affecting the Importation and Internal Sale of Cigarettes,* para. 7.351, WTO Doc. WT/DS302/R (adopted May 19, 2005). *See also* McAusland & Najjar, *supra* note 76, at 789.
228. Panel Report, *Brazil—Certain Measures Concerning Taxation and Charges*, WTO Doc. WT/DS472, 497/R (adopted Jan. 11, 2019).

rather than nominal tax burdens.[229] Where a transaction "involves the payment of a tax as well as the granting of a tax credit, these two elements must be taken into account in order to make an overall assessment of the actual tax burden imposed."[230]

Arguably, the credit scheme at issue here should not be assimilated with the tax credit at issue in *Brazil—Taxation*. It would be designed so as to fully or partially avoid the additional cost incurred by domestic producers for acquiring ETS allowances, rather than leading to a (full or partial) reversal of the excise tax burden on domestic products. In particular, no credit would be granted if the taxpayer no longer needs to acquire ETS allowances, as could, for instance, be the case where production is discontinued.

The full or partial neutralization of the cost associated with the ETS, in turn, would fall outside the scope of GATT Article III:2(1), because no equivalent charge (i.e., the need to acquire and surrender ETS allowances) would be imposed on imported products. Admittedly, a domestic producer acquiring ETS allowances with CET credits might benefit from price volatility of the allowance, whereas an importer cannot. However, this is an inherent aspect of having to participate in the—quintessentially burdensome—ETS in the first place, rather than a feature inherent to making the CET creditable.

Admittedly, a problem could arise if the carbon benchmark for calculating a creditable CET were set below the best available technology standard. In this case, the tax burden would exceed the average cost of ETS allowances needed to acquire and surrender for the production of a unit of taxable material in the case of domestic producers with a better-than-benchmark carbon performance in producing the respective material. If the tax burden were nevertheless fully creditable against the cost of auctioning for ETS allowances, they could generate a profit from selling excess allowances acquired by using the credit, and thus partially undo the tax burden itself. In such a scenario, the adjudicating bodies of the WTO would probably find an infringement of Article III:2(1) in need of justification.

D. Most-Favored-Nation Requirement Under GATT Article I:1

The most-favored-nation (MFN) requirement as a cornerstone of GATT is laid down in its Article I:1. Pursuant to this provision, each WTO Member must, inter alia, accord any advantage granted to any product originating in any other country immediately and unconditionally to the like product originating in the territories of all other contracting Parties, including with respect to charges of any kind imposed on or in connection with importation. Reductions or alleviations of taxes and other charges must thus be applied equally to all like imported products regardless of their origin.

From the perspective of a CBAM as the one envisaged by the EU, the key question regarding MFN is whether it is nevertheless admissible to waive or reduce the border adjustment charge where the climate protection objectives of the internal charge are already fully or partially achieved abroad. This could either be assumed to be generally the case where equivalent measures have been adopted in the country of origin, for example because the latter operates an emissions trading scheme similar to the EU ETS, or individually upon proof of low-carbon production of the imported good. Such measures would accord preferential treatment with respect to border charges imposed on imported products and would therefore come within the scope of Article I:1.

1. Broad Interpretation of "Like" Products

It is settled WTO jurisprudence that different from GATT Article III:2, the notion of "likeness" must be construed broadly in the context of Article I:1. The Appellate Body has convincingly held that GATT Article I:1 protects expectations of equal competitive opportunities for like imported products from all Members.[231] This fundamental purpose must inform the interpretation of the concept of "like products."[232] Consequently, it is sufficient to establish that a competitive relationship exists between the imported products from different origin whose treatment is to be compared.[233] To this effect, the same criteria and indicia derived (mostly) from the 1970 Report of the Working Party on Border Tax Adjustments as relied on for the purpose of determining "likeness" under Article III:2 should be taken into account.[234]

We have already demonstrated that all forms of CBAM discussed in this Article would typically impact imported products for which (nearly) perfect substitutes exist among domestic products, at least where the CBAM would be applied to bulk commodities. Regarding the kind of products where this might not be the case, especially finished products that have been built using chargeable materials, it has further been pointed out that there will usually exist some imperfect yet still competing substitute for them. There seems to be no reason why this should not normally also be the case with respect to imported products from different

229. *Id.* para. 7.164. *See also* Panel Report, *Argentina—Measures Affecting the Export of Bovine Hides and the Import of Finished Leather*, paras. 11.182-11.184, WTO Doc. WT/DS155/R (adopted Feb. 16, 2001).

230. Panel Report, *Brazil—Certain Measures Concerning Taxation and Charges*, para. 7.164, WTO Doc. WT/DS472, 497/R (adopted Jan. 11, 2019).

231. *See* Appellate Body Report, *Japan—Taxes on Alcoholic Beverages* 16, WTO Doc. WT/DS8, 10, 11/AB/R (adopted Nov. 1, 1996); Appellate Body Report, *Korea—Taxes on Alcoholic Beverages*, paras. 119, 120, and 127, WTO Doc. WT/DS75, 84/AB/R (adopted Feb. 17, 1999); Appellate Body Report, *European Communities—Measures Prohibiting the Importation and Marketing of Seal Products*, para. 5.87, WTO Doc. WT/DS400, 401/AB/R (adopted June 16, 2014); *see also* Panel Report, *United States—Certain Country of Origin Labelling (COOL) Requirements*, para. 7.571, WTO Doc. WT/DS384, 386/R (adopted July 23, 2012).

232. Appellate Body Report, *European Communities—Measures Prohibiting the Importation and Marketing of Seal Products*, para. 5.87, WTO Doc. WT/DS400, 401/AB/R (adopted June 16, 2014).

233. Panel Report, *European Union and Its Member States—Certain Measures Relating to the Energy Sector*, para 7.837, WTO Doc. WT/DS476/R (circulated Aug. 10, 2018).

234. *Id.*

origins. In all those situations, the respective imported products would have to be regarded as "like" products within the meaning of Article I:1. In particular, and no different from our analysis under GATT Article III:2(1), it does not matter here, either, whether they have a different carbon content.

2. Rejection of "Aim and Effects"

In full alignment with its position on GATT Article III:2(1), the Appellate Body has rejected an "aim and effects" test also for the purposes of Article I:1. It is contended that there is "no basis in the text of Article I:1 to find that . . . it must be demonstrated that the detrimental impact of a measure on competitive opportunities for like imported products does not stem exclusively from a legitimate regulatory distinction."[235] This would offset the balance struck in GATT between the protection of equal competitive opportunities in international trade, on the one hand, and a limited number of exceptions that can be invoked under certain specified conditions based on GATT Article XX.[236]

It is therefore immaterial for an analysis under GATT Article I:1 whether, and to what extent, a waiver of the BTA in recognition of equivalent climate protection measures in the respective country of origin or individual efforts for low emission production can be aligned with the rationale and regulatory objectives of the EU ETS or a CET. This can only be taken into account for the purposes of GATT Article XX, should the measure be found to be incompatible with Article I:1.

3. Equal and Unconditional Application of Preferential Treatment

Clearly, any rebate or waiver with respect to the border adjustment for a notional ETS or a CET would confer an advantage for the imported product benefitting from such treatment. Making such favorable treatment for imported products conditional upon their production with less carbon-intensive technologies than the emission benchmark underlying the border charge, or upon the operation of an equivalent scheme in their country of origin, could therefore prima facie be inconsistent with Article I:1, which requires "unconditional" extension of the advantageous treatment to all like imports.

However, several WTO panel reports have rightfully emphasized that this requirement must be interpreted contextually and therefore restrictively. Essentially, it prohibits making the extension of the advantage "subject to conditions with respect to the situation or conduct of [other] countries."[237] By contrast, other conditions that are not intrinsically related to product origin are admissible; this includes—but is not limited to—conditions related to the imported product itself.[238]

Against this backdrop, a reduction in the amount of notional ETS or border carbon tax adjustment in function of the low emission profile of the production process for a particular imported product would be admissible.[239] Even if not considered as a condition "related" to the imported product itself and therefore acceptable already on this ground, such an advantage would in any event not be intrinsically related to a particular product origin.

By contrast, making a waiver or reduction contingent on the climate protection policies and measures of a particular country of origin, such as, for example, the operation of an equivalent ETS or carbon pricing scheme in the country of origin,[240] would be inconsistent with GATT Article I:1.[241] It would therefore have to meet the requirements of GATT Article XX. This would also apply if such a scheme were limited to products originating in developing countries,[242] because the enabling clause of 1979[243] is not applicable in the case of unilateral concessions regarding internal taxes.[244]

E. Quantitative Restrictions

Subject to some exceptions, GATT Article XI provides that "no prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas, import or export licenses or other measures," are to be instituted on import or export transactions between States that are Parties to the agreement.

GATT Article XI thus focuses on market access concerning administrative requirements connected with an import or export transaction. It says, in a nutshell, that imported products should not be subject to regulatory requirements that could have a limiting effect on the quantity or amount of a product being imported or exported.[245]

235. Appellate Body Report, *European Communities—Measures Prohibiting the Importation and Marketing of Seal Products*, para. 5.90, WTO Doc. WT/DS400, 401/AB/R (adopted June 16, 2014).
236. *See id.* para. 5.125.
237. *See*, *e.g.*, Panel Report, *Canada—Certain Measures Affecting the Automotive Industry*, para. 10.23, WTO Doc. WT/DS139, 142/R (adopted June 19, 2000).
238. *Id.* paras. 10.24 and 10.25.
239. *See also* Charnovitz, *supra* note 86, at 41.
240. This has been proposed by the European Commission, *see Proposal for a Regulation Establishing a CBAM*, *supra* note 9, at 7-8.
241. In a similar vein, Bordoff, *supra* note 79, at 47-48; Umweltbundesamt, *supra* note 140, at 19-20; Monjon & Quirion, *supra* note 29, at 5205; McLure, *supra* note 16, at 462; Hillman, *supra* note 57, at 11; Pauwelyn, *supra* note 51, at 494; Holzer, *supra* note 86, at 140; Pirlot, *supra* note 56, at 240; Ismer et al., *supra* note 45, at 7. For a different opinion, see Astoria, *supra* note 198, at 507-11; Pauwelyn, *supra* note 11, at 32-33; Ryan Vanden Brink, *Competitiveness Border Adjustments in U.S. Climate Change Proposals Violate GATT: Suggestions to Utilize GATT's Environmental Exceptions*, 21 Colo. J. Int'l Env't L. & Pol'y 1, 85, 104 (2010).
242. *See also* Kaufmann & Weber, *supra* note 86, at 503-04.
243. *See* Decision of 28 November 1979 on Differential and More Favourable Treatment Reciprocity and Fuller Participation of Developing Countries, L/4903, GATT B.I.S.D. 26S/203 (adopted Dec. 3, 1979).
244. *See* Appellate Body Report, *Brazil—Certain Measures Concerning Taxation and Charges*, paras. 5.406-5.415, WTO Doc. WT/DS472, 497/AB/R (adopted Jan. 11, 2019). For a different understanding of the enabling clause, see Paul-Erik Veel, *Carbon Tariffs and the WTO: An Evaluation of Feasible Policies*, 12 J. Int'l Econ. L. 749, 785-86 (2009).
245. Appellate Body Report, *China—Measures Related to the Exportation of Various Raw Materials*, para. 320, WTO Doc. WT/DS394, 395, 398/AB/R (adopted Jan. 30, 2012); *see also* Appellate Body Report, *Argentina—Measures Affecting the Importation of Goods*, para. 5.217, WTO Doc. WT/DS438, 444, 445/AB/R (adopted Jan. 26, 2015).

Thus, a signatory cannot restrict market access by creating overly burdensome licensing, registration, or reporting requirements.

This provision has not been referenced before the Appellate Body in an environmental or climate change-related case[246] and will therefore not be dealt with more extensively, but it could pose a problem if the EU attempts (as it now does) to employ its domestic regulatory standards to foreign-derived products, using standards that are used as a benchmark in the EU, and exporting such standards to third countries to the extent they have to live by such standards. Benchmarks that are common in the EU, such as best available technology and best available allowances price using locally derived benchmark prices, could be considered to be discriminatory against third states if they are considered to be overly burdensome to the importer.[247]

In assessing whether the measure falls within the types of measures covered under GATT Article XI:1, it is important to assess the nature of the measure. In *Brazil—Retreaded Tyres*,[248] the panel examined a fine of $400 reals per unit on the importation of retreaded tires, which both Parties agreed were an enforcement measure in addition to and in support of the import ban on these tires. Brazil confirmed that the fines were intended to exceed the unit value of most tires, because they were a punitive measure intended to penalize traders that circumvented the import ban. The panel found the fine to be a restriction on importation of retreaded tires even though it was not applied at the border, and thus found it to be fitting within the meaning of Article XI:1.

Similarly, the Appellate Body and panels have in the past found that discretionary import licensing systems[249] and nonautomatic import licensing systems[250] that may cause substantive delays in the import or export of products are prohibited by Article XI:1, meaning that the use of certification companies to certify compliance with low-carbon production of goods that are compatible with EU standards, for example, could be considered a hindrance to trade.

Whether GATT Article XI and the relevant case law would be in fact a concern in employing a CBAM would depend on the design features of the respective instrument. It could be an issue if a BCA for a CET is employed, in the form of a so-called feebate (a consumption tax followed by a rebate) if it is proved and certified that the product was manufactured using a low emissions process, for example.[251] The same could hold true for the extension of the ETS system option, if a mandatory certification system were introduced.[252] On the other hand, this would not pose a concern under voluntary certification systems involving any of the four options, and would probably not be an issue under the BTA for fossil fuels, which would mandate a straightforward non-sectoral carbon tax.

Next issue, Part Two of this Article will assess the validity of these measures against the public policy exceptions contained in GATT Article XX, and conclude.

246. Although there is no case law, several Members have notified that they maintain quantitative restrictions on measures aiming to protect the environment, such as, for example, under the Montreal Protocol on Substances That Deplete the Ozone Layer or the Convention on International Trade in Endangered Species of Wild Fauna and Flora to protect trade in endangered species. When Members notify of such restrictions, they are generally justified under the general exception clause in GATT Article XX. The Decision on Notification Procedures for Quantitative Restrictions, which was adopted by the Council for Trade in Goods on June 22, 2012, requires WTO Members to notify all quantitative restrictions, ensure that they are employed in a nondiscriminatory manner, and revalidate their notification every two years.

247. On this point, McLure notes that while calculating a border tax adjustment based on best available technology worldwide is legally fail-safe, its implementation raises difficult issues, including the definition of product classes, the treatment of intra-class variations in energy intensity, the type of technology to be considered best available technology, and the choice of energy sources (which can be fossil in nature, or renewable). There is a high risk that the application of a best available technology standard would not level the playing field between domestic and foreign products. *See* McLure, *supra* note 16, at 461, 462.

248. Panel Report, *Brazil—Measures Affecting Imports of Retreaded Tyres*, paras. 7.360-7.368, WTO Doc. WT/DS332/R (adopted Dec. 17, 2007).

249. *See* Panel Report, *India—Quantitative Restrictions on Imports of Agricultural, Textile, and Industrial Products*, para. 5.130, WTO Doc. WT/DS90/R (adopted Sept. 22, 1999).

250. *See* GATT Panel Report, *Japan—Trade in Semi-Conductors*, para. 118, L/6309, GATT B.I.S.D. 35S/116 (adopted May 4, 1988).

251. See, in this respect, Heine et al., *supra* note 50, at 157-58.

252. *See* Monjon & Quirion, *supra* note 29, at 5204.