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LEGAL NATURE OF THE TRADED UNITS UNDER THE EMISSIONS TRADING SYSTEMS AND ITS IMPLICATION TO THE RELATIONSHIP BETWEEN EMISSIONS TRADING AND THE WTO

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Legal nature of the traded units under the emissions trading systems and its implication to the relationship between emissions trading and the WTO

Wen-chen Shih*

With regard to the relationship between emissions trading and the WTO, most existing literature focuses on the emissions trading system under the Kyoto Protocol without analysing existing or forthcoming domestic or regional emissions trading systems. Furthermore, these analyses also did not differentiate between different types of emissions trading systems, in particular the possible different legal nature of various types of the ‘units’ that are being traded under different types of emissions trading system. Is this an over-simplified approach in terms of analysing the relationship between emissions trading and the WTO? This is the main research question of this article. By focusing on two different types of emissions trading system—cap & trade versus baseline & credit—this article attempts to provide detail analysis on the legal nature of different types of ‘units’—allowances versus credits—that is being traded under these two systems in order to re-examine the relationship between emissions trading and the WTO. The article concludes as follows. First, there are certain differences between allowances and credits in terms of their legal nature under domestic law. Second, depending on the types of markets under the emissions trading system, differences in the legal nature of these traded units have different implications. Both of these ‘traded units’ share one similar legal characteristic that render the inapplicability of the WTO disciplines in both the sovereignty market and primary market where the main purpose of trade is to meet regulatory requirements: these traded units, similar to permit under public law, represent regulatory sovereignty of governments and are, thus, neither ‘goods’ nor ‘services’ in the context of the WTO. However, as these traded units have market value and are freely transferable in the secondary market, they might be regarded as ‘negotiable instruments’ or ‘financial assets’ under the definition of financial services of the GATS.

Key word: emissions trading, cap & trade, baseline & credit, Kyoto Protocol, EU Emissions Trading Scheme, GATT, GATS, WTO

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1. INTRODUCTION

When the EU Emissions Trading Scheme (ETS) and the emissions trading under the Kyoto Protocol kicked off, the so-called ‘carbon market’ operating on the platform of a proliferation of emissions trading mechanisms have kept growing. The compatibility or even applicability of the international trade rules under the World Trade Organisation (WTO) with these emissions trading systems largely determines whether this market will face legal uncertainty in the event of possible legal challenges under the WTO. Literature abounds that offer legal analysis on the relationship between the emissions trading system and the WTO rules.¹ Most articles began the analysis on the applicability of WTO laws on the operations of the emissions trading mechanisms, which, in turn, depend on the legal characteristics of the ‘commodity’ or ‘units’ being traded from the perspectives of WTO laws. Only a few articles offer detail analysis on whether such ‘commodities’ are ‘goods’ or ‘services’, with the aim of determining whether the General Agreement on Tariffs and Trade 1994 (GATT) or the General Agreement on Trade in Services (GATS) should be the main applicable treaty in this regard.² These articles mainly focus on the emissions trading system under the Kyoto Protocol.

However, such analytical approach might seem insufficient considering the following developments.

Firstly, several emissions trading system on a regional or national scale have also

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² For example: Charnovitz, S., id, 10-11, 12, Petsonk, A., id, 200, Wiser, G.M., id, 558, Werksman, J., id, 256. Many subsequent literature draw from the conclusions of these articles with regard to the characterisation of the traded units.
been designed or/and implemented since the coming into force of the Kyoto Protocol
and its emissions trading system.

Secondly, and most importantly, most literature does not differentiate between
different types of emissions trading systems and the differences between the ‘units’
being traded under the different systems. There are two broad types of emissions
trading systems: the ‘cap & trade’ system and the ‘baseline & credit’ system.
‘Allowances’ are the traded units under the cap & trade system. ‘Credits’ are, on the
other hand, the traded units under the baseline & credit system. As these two systems
have different legal design and institutional arrangements, ‘allowances’ and ‘credits’
created and being traded under these two systems could have different legal nature.
The above-mentioned literature does not take these possible differences into
consideration when analysing the relationship between emissions trading and the
WTO. This might be an over-simplified approach in terms of analysing the
relationship between emissions trading and the WTO.

Thus, this article will attempt to take a new approach to re-examine the
relationship between emissions trading and the WTO from the perspectives of
possible differences in legal nature of different ‘units’ being traded under these two
emissions trading systems.

The article will proceed as follows. An introduction to the two types of emissions
trading systems will be presented in Section 2. Section 3 will conduct detail analyses
on the possible differences in legal nature between ‘allowances’ and ‘credits’ from the
perspectives of domestic legal system. Based on the findings in Section 3, Section 4
will re-evaluate the relationship between emissions trading and the WTO from the
perspectives of different legal characteristics of these two types of traded units.
Section 5 will be the conclusion of this article.

2. TYPES OF EMISSIONS TRADING SYSTEMS

Economists have been advocating market-based instruments as policy tools in
environmental regulations. Such instruments can offer flexibilities and incentives so
that individual firm can choose the most cost effective means to achieve the statutory
environmental objectives.3 Emissions trading mechanism is one such instrument. By
providing a market-based solution and conferring titles of property rights, emissions
trading mechanism might alleviate the ‘tragedy of the commons’ problems associated
with the management and use of common-pool resources such as atmosphere and

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3 Choi, I., Global climate change and the use of economic approaches: the ideal design features of
domestic greenhouse gas emissions trading with an analysis of the European Union’s CO2 emissions
trading directive and the Climate Stewardship Act, 45 NATURAL RESOURCES JOURNAL 865, 879-894 (fall 2005).
Using different benchmarks, emissions trading systems can be categorized differently. Depending on how the traded units are created, emissions trading systems can be grouped into two broad types: ‘cap & trade’ (or ‘allowances trading’), and ‘baseline & credit’ (or ‘credit trading’, ‘project-based/credit based trading’).

A. cap & trade (allowances trading)

The system of ‘cap & trade’ operates as follows: An overall limit on emissions - The emissions ‘cap’ - which is allowed to emit during a given period of time is set by the regulator for all the participants in the trading system. This cap is then divided into an equal unit—‘allowance’—and allocated to all the participants via auction, free distribution, or any other method. Participants holding such allowances can use them to meet statutory emissions standards. If the actual emissions level is lower than allowances allocated to some participants as a result of emissions reduction strategies adopted by such participants, they can sell the unused allowances to other participants who may find it more cost effective to purchase allowances than to undertake emissions reduction measures themselves. In any event, all participants are legally required to hold or surrender sufficient amounts of allowances to meet their statutory emissions level at the end of each compliance period.

Most of the emissions trading systems in operation or at the planning stage adopt such type of emissions trading. For example, the EU’s Emissions Trade Scheme (ETS) is the most typical ‘cap & trade’ system. Currently, the EU ETS Directive authorizes each member states to set their own national cap and to determine the allocation rules, subject to the review by the Commission. An EU-wide cap is expected to be established after 2013 according to the revised ES Directive adopted in 2009.

B. baseline & credit (credit trading, project-based/credit-based trading)

The system of ‘baseline & credit’ operates as follows. An emissions baseline is set for individual participant by the regulator, either based on statutory standards, or based on the data submitted by the participant itself and verified by the regulator. Such baseline is most likely to be the current emissions level without adopting any

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4 Rose, C.M., Expanding the Choices for the Global Commons: comparing newfangled tradable allowance schemes to old-fashioned common property regimes, 10 DUKE ENVIRONMENTAL LAW & POLICY FORUM 45, 50-70 (fall 1999).


emissions reduction measures, i.e. the business-as-usual (BAU) scenario. But the baseline often varies with the level of, for example, output. Participants can voluntarily adopt emissions reduction measures during the compliance period. At the end of any compliance period, if the actual emissions level (which needs to be verified by the regulator) is lower than the participant’s baseline, it then receives ‘credits’ that are equal to the differences. Credits can be held by the participant itself to meet its statutory emissions standard, or be sold freely to other participants. Such credits can also be obtained by investing in projects. The investment in the projects that has the effect of reducing the total emissions from the projects in comparison with the BAU scenario will create emissions reduction units, which need to be verified by the relevant authorities. Credits obtained from such projects can then be traded, which is called ‘project-based trading’. The Clean Development Mechanism (CDM) and Joint Implementation (JI) under the Kyoto Protocol are two such examples. ‘Certified emission reductions’ (CERs) produced from CDM projects and ‘emission reduction units’ (ERUs) produced from JI projects are such types of ‘credit’.

The ‘baseline & credit’ has many different variations, such as credit trading, project-based trading, or credit-based trading. Different variations might have different requirements and design feature. Regardless of their differences, such emissions trading system share the following common features:

First, participation is often voluntary and participants are not subject to any emissions cap. Second, ‘credits’ that can be traded are not created and allocated by regulators. These are obtained through voluntary actions undertaken by participants, subject to strict verifications from the regulatory authorities. They are, thus, all grouped together under the ‘baseline & credit’ type.

C. The Kyoto emissions trading: a hybrid system

Emission trading is provided under Article 17 of the Kyoto Protocol, which only provides that Annex B parties may participate in emission trading “for the purposes of fulfilling their commitments under Article 3,” but any such trading “shall be supplemental to domestic actions” for the purpose of meeting such commitments. According to Decision 11/CMP.1, eligible Annex I parties can transfer and/or acquire ERUs, CERs, Assigned Amount Units (AAUs), or Removal units (RMUs) issued in

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8 Annex B parties in the Kyoto Protocol includes all Annex I parties to the FCCC but Turkey. In addition, the following five countries are also listed in Annex B: Croatia, Liechtenstein, Monaco, Slovakia, and Slovenia. Most of the literature refer to Annex I parties in general, so will this article.
accordance with relevant rules under the Protocol. These four types of traded units under the Kyoto emissions trading will be referred to as ‘Kyoto units’.

The national ‘cap’ for each Annex I party is the assigned amount calculated according to Article 3, Annex B, and the relevant CMP decisions. The assigned amount will be adjusted for those Annex I parties which choose to include removals by sinks resulting from direct human-induced land-use change and forestry (LULUCF) activities as laid down in Article 3.3, Article 3.4, and relevant CMP decisions. The assigned amount is then divided into equal units as the AAU—the ‘allowance’.

For those Annex I parties which intend to include LULUCF activities, detailed accounting, reporting, and reviewing rules and procedures will have to be complied with their national GHG inventories. If the accounting represents net emissions, the corresponding Kyoto units will have to be cancelled. If the accounting represents net removal, the equivalent number of RMUs can be issued. As the emissions by sources and removals by sinks resulting from the LULUCF activities are accounted for in the assigned amount, the RMUs also represent ‘allowance’.

Meanwhile, Decision 11/CMP.1 also allows the transfer and acquire of two other Kyoto units that are generated from project activities, i.e. CERs from the CDM projects between Annex I party and non-Annex I party, and EURs from the JI projects between Annex I parties. Under Article 6 and Article 12 of the Kyoto Protocol, to generate Kyoto units which can be used to meet the emissions reduction obligations under the Protocol, such projects have to be ‘additional to’ any that would occur in the absence of such projects. To demonstrate that a CDM project or JI project meet such ‘additionality’ requirement, a ‘baseline’ has to be established. This aspect of the generations of the CERs and EURs closely resembles the ‘credits’ from the ‘baseline & trade’ type of emissions trading.

It seems, thus, that the Kyoto emissions trading is a mixture of the two types of emissions trading systems: ‘cap & trade’ and ‘baseline & credit’. That is, an Annex I party can acquire AAUs from another Annex I party if it finds that its emissions level will be higher than its assigned amount as designated in Article 3.7 during the first commitment period. This resembles a typical cap & trade system. Parties or any eligible entities can obtain CERs or EURs from CDM projects or JI projects and sell these units to an Annex I party to meet its emissions reduction obligations as reflected in its assigned amounts. This involves the ‘baseline & credit’ type of emissions trading.

In summary, both the emissions trading systems of ‘cap & trade’ and ‘baseline &

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10 For relevant CMP decisions on LULUCF activities, please see: http://unfccc.int/methods_and_science/lulucf/items/1084.php (last visited 12 Jun. 09).
credit’ do share certain common features, such as the accuracy and importance of basic emissions data, rigorous monitoring by regulators, and registration system for emissions trading. In addition, these two types of emissions trading are not mutually exclusive, as the example of the Kyoto emissions trading illustrated. However, they do exhibit different characteristics that need to be taken into consideration in terms of analysing the legal nature of ‘allowance’ and ‘credit’, as the following section demonstrates.

3. LEGAL NATURE OF THE TRADED UNITS IN THE DOMESTIC LEGAL SYSTEM

It is paramount to identify the legal characteristics of the traded units in the emissions trading systems. A well-defined unit of trade provides the required certainty as to what is being traded on the market and being freely transferable ensures that participants who place the highest value on certificates are able to hold them, thus reflecting the true market value of these permits. To determine the legal nature of the traded unit has several implications that are of practical concerns. For example, whether it is a tangible or intangible property right will have consequences for accounting and taxation purposes. For the purpose of trusts law, whether the traded unit is an asset or financial instrument will affect the scope of trustees’ fiduciary duties. In the absence of clarity, private parties seeking to allocate their risks through contractual arrangements will face more difficulties.¹¹ Finally, when emissions trading systems are “linked”, such as in the EU ETS, differences in legislation defining these traded units differently might distort the market as one sub-market of the overall system might be more attractive than others.¹²

The legal nature or legal status of the traded units can be defined in the legal instruments establishing the emissions trading system. If such legal instruments do not provide specific rules regarding the legal nature of the traded units, inferences of the legal characteristics of these traded units will have to be drawn from the trading activities in practice as well as the perceptions of the participating traders in such trading markets. Most of the literature on emissions trading does not specifically differentiate ‘allowance’ and ‘credit’ under the two types of emission trading system, neither do they focus on the legal nature of the traded unit. Experiences from previous similar systems will first be presented, in particular with regard to how these systems characterise the traded units from a legal viewpoint. Based on all the information, a

A. experiences under previous and current systems
   a. Icelandic fishery quota system

   As a reaction to the threat to the code stock, Iceland’s government introduced a system of total allowance catch (TAC) for code with respect to commercial fishing as early as in 1976. The 1990 Fisheries Management Act states that Iceland’s fish resources remain the common property of all Icelanders; and the rights allocated to quota holders could not be considered private property in the constitutional sense. The Act allocated TAC shares permanently to the boat owners (the individual vessel quota) by prolongation of previous allocations.¹³ Such a system resembles the ‘cap & trade’ system.

   A controversial Supreme Court decision in 1998 illustrated the complicated issue of the paradoxical status of quota shares as public or national property according to the law, but private property for all practical purposes. The Court found that the individual transferable quotas (ITQs) system as such was not unconstitutional. The constitutional problem was linked to the perpetual allocation of quota and consequently the permanent closure of the fisheries in favour of a “guild” of quota owners. This Court decision has resulted in the revision of the Fisheries Management Law which allowed the granting of fishing licenses to all new vessels, with or without quota. However, the ITQ system remained unchanged. Another Supreme Court decision in April 2000 found that perpetual allocation of quotas was not against the constitution. Public interests in resources protection were found sufficient to justify restrictions in equal employment rights, and as quota holdings were not formally defined as private property, they could be changed or made conditional by the legislator.¹⁴

   To summarise, the legal status of quota was not explicitly laid down in the Fisheries Management Act which were resulting in a series of court cases that try to give a clearer guidance on the legal nature of these quotas. Earlier cases held that the quota should be taxed as private capital. Later jurisprudence, on the other hand, held that quota holdings were not to be defined as private property, and quotas holding could be changed or made conditional by the legislator according to public interests in resource protection. Such a finding seems to indicate that the regulators should be left

¹⁴ Id, pp 143-157. For more information on the Icelandic fishery management system, see the official website of the Icelandic Ministry of Fisheries and Agriculture at: http://eng.sjavarutvegsraduneyti.is/ (last visited: 22 June 2009).
with sufficient flexibilities and power to amend the TAC and ITQs according to the need to conserve fisheries resources, which are held to be common property of all Icelanders.

b. US emissions trading system under the Clean Air Act

Prior to the enactment of the 1990 Amendments to the Clean Air Act, the US Environmental Protection Agency (EPA) experimented with several approaches that used economic incentives to regulate air pollution and set out elements of an emission trading program in the 1986 Emissions Trading Policy Statement. An operator of an emitting source is permitted to create reductions of emissions at certain emission sources beyond the requirements applicable to the source, and to use these reductions to meet requirements applicable to other sources under these mechanisms. The “common currency” of all emissions trading activity is the Emission Reduction Credits (ERCs). This early US experience resembles more closely to the ‘baseline & credit’ emissions trading system.

The 1977 Clean Air Act reserved power in the states to establish their own pollution control policies to meet their individual needs. This was accomplished by setting air quality standards at the federal level and delegating to the states the task of creating their own implementation plans. California effectuated the Clean Air Act through the Air Resources Act in 1986. The Air Resources Act adopted the Offset Policy and provided that: “…certificates evidencing ownership of approved reductions issued by a district shall not constitute instruments, securities, or any other form of property.”

In 1993, the state agency responsible for air quality in the Los Angeles Area, the South Coast Air Quality Management District (SCAQMD), implemented a tradable emissions programme called the Regional Clean Air Incentives Market (RECLAIM) programme. The RECLAIM regulations explicitly state that no property rights are created by the tradable emission programme. Specifically, the RECLAIM regulations state that a RECLAIM Trading Credit (RTC) is a “limited authorisation to emit RECLAIM pollutants”. Although an RTC “may be bought, sold, traded or otherwise transferred or acquired in accordance with the provisions of this rule”, and although an RTC may be used as collateral for indebtedness security, “an RTC shall not constitute a security or other form of property.” The SCAQMD rules states that: “…nothing in the District rules shall be construed to limit the District’s authority to

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15 Rauch, I., *Developing a German and international emissions trading system—lessons from US experiences with the Acid Rain Program*, 11 FORDHAM ENVIRONMENTAL LAW JOURNAL 307, 327-330 (spring 2000).
condition, limit, suspend or terminate any RTCs…”

Some of the literatures that touched upon the legal nature of ERCs conducted their analysis from the perspective of public law, in particular the US Constitution. That is, whether ERCs are the type of property rights as provided under the US Constitution and, if they are, whether compensation would be needed if such “property rights” are “confiscated”. Scholars have divergent views as to whether ERCs constitute “property” under the Fifth Amendment. From the relevant federal and state rules that explicitly reserve the agencies’ authority to adjust the banking rules, Lindgren is of the opinion that the ownership interests created in the ERCs are not “vested”, and therefore are not a property interest under the Fifth Amendment. Austin also held similar opinion by concluding that the government has wide latitude to define property rights that it creates. He further stated that, even if the government is not careful in drafting statutes and regulations that prevent property rights in tradable emission permits from vesting, courts probably will apply a presumption against vesting and the government will not be liable for a takings claim. Savage, on the other hand, had a different opinion. The participating firms seek to take part in an environment where the government cannot seize at will emission credits such as ERCs. The better regime would grant a limited property right in ERCs, which would provide the certainty necessary for emission trading and allow regulators the flexibility they need to address changing air quality goals.

These divergent opinions seem to indicate that the debate concerning legal status of ERCs in the early US experiences has not yet been settled.

The 1990 Amendment to the Clean Air Act set up the ‘cap & trade’ system. Under the Act, the term ‘allowance’ is defined as “an authorization, allocated to an affected unit by the Administrator under this subchapter, to emit, during or after a specified calendar year, one ton of sulphur dioxide.” In addition, the nature of allowances is also provided in the Act as follows: “An allowance allocated under this subchapter is a limited authorization to emit sulphur dioxide in accordance with the provisions of this subchapter. Such allowance does not constitute a property right.

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17 Austin, S.A., Tradable emissions programs: implications under the takings clause, 26 ENVIRONMENTAL LAW 323, 328-330 (spring 1996).
18 For example: Austin, S.A., Tradable emissions programs: implications under the takings clause, 26 ENVIRONMENTAL LAW 323, 328-330 (spring 1996); Lindgren, Y.F., The emissions trading policy: smoke on the horizon for takings clause claimants, 18 HASTINGS CONSTITUTIONAL LAW QUARTERLY 667, 678-680 and footnote 102 (spring 1991); Savage, J., Confiscation of emission reduction credits: the case for compensation under the takings clause, 16 VIRGINIA ENVIRONMENTAL LAW JOURNAL 227 (winter 1997); Span, H.A., Of TEAs and takings: compensation guarantees for confiscated tradable environmental allowances, 109 YALE LAW JOURNAL 1983 (June 2000).
19 Lindgren, Y.F., supra note 18, pp 680-682.
20 Austin, S.A., supra note 18, pp 330-348.
21 Savage, J., supra note 18, p 271.
Nothing in this subchapter or in any other provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. In other words, the Act clearly states that ‘allowances’ under the US SO2 ‘cap & trade’ programmes does not constitute property rights. This is also reflected from the relevant provisions regarding the allocation of allowances: “…If necessary to meeting the restrictions imposed in the proceeding sentence, the Administrator shall reduce, pro rata, the basic Phase II allowance allocations for each unit subject to the requirements of sections 7651d of this title.”

The 1990 Clean Air Act specifically states that ‘allowances’ under the SO2 cap & trade system do not possess property rights. Whether such a characterisation is appropriate still invoke debates amongst scholars from both the public (e.g. constitutional law) and private law (e.g. bankruptcy law) perspective. From the perspective of constitution, Quiggle argued that the federal government is avoiding due process concerns by legislating sulphur dioxide emission allowances as “non”-property. Quiggle proposed that the experiences under the radio frequency license could provide some guidance in re-defining or re-considering the legal nature of allowances. From the perspective of the bankruptcy law, Cho was of the opinion that the Congress’s decision not to give emission allowances private property status creates uncertainty about their treatment during bankruptcy. From the relevant regulations regarding the allocation of allowances in the case of a change in the operation of any plant, Cho’s reading of the Clean Air Act suggested that allowances are property, but only to the extent that an entity still exists to receive them. Cho proposed that courts should include allowances as “assets” of a bankruptcy estate because they are similar to other permits and licenses that have been classified as assets in previous cases.

To summarise, both the experiences with the ERCs in the earlier ‘baseline & credit’ system and the allowances in the SO2 ‘cap & trade’ system illustrate the controversies regarding determining the legal nature of these traded units. Legislations at both the federal (the 1990 Clean Air Act) and state level (the California’s Air Resource Act, and the RECLAIM rules) specifically confer no

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23 42 U.S.C.A. § 7651b(f).
25 For example: Quiggle, R., Smog futures: the latest in commodities trading lacks procedural due process safeguards, 2 DICKINSON JOURNAL OF ENVIRONMENTAL LAW AND POLICY 105 (fall 1992). Earlier relevant literatures mainly focus on ERCs under the earlier US experiences with the “baseline & credit” type of emissions trading. This article, on the other hand, focused on allowances under the “cap & trade” system set up in 1990.
27 Quiggle, R., supra note 25, p 110-111.
28 Id, pp 118-121.
29 Cho, T., supra note 26, Sections II.B & III.
property rights upon these trade units, mainly because the legislators would like to give as much flexibilities as possible for the regulators to adjust and implement relevant rules. Scholars still express reservation toward such an approach, which seems in conflict with the market reality of the emission trading systems.

c. EU ETS

Legal status of EAUs is not defined under the EU ETS Directive. Earlier draft prepared by the European Commission defined EAUs as administrative authorization. This seemed to model after the US experience as mentioned previously. But the legal service of the Commission advised against incorporating such definition into the Commission’s proposal mainly to preserve the subsidiarity principle and to respect member states’ national legal systems. As a result, legal status of EAUs will depend on the national legal systems and traditions of each EU member state.\textsuperscript{30}

A report compiled by the European Environmental Agency demonstrates that the legal status of EAUs has been defined, if at all, differently amongst member states.\textsuperscript{31} Some member states do not have specific rules on legal status of EAUs. For some member states that lay down specific rules, EAUs have been characterised as (intangible) assets for accounting purposes, as liabilities, as financial instruments that need to be supervised by the financial service authority, or as commodities.\textsuperscript{32} With respect to the issues of taxation, the variations amongst member states are even more diverse. Nevertheless, the Commission has provided the following guidance on the application of value-added tax:

“The delegations agreed unanimously that the transfer of greenhouse gas emission allowances as described in Article 12 of Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003, when made for consideration by a taxable person is a taxable supply of services falling within the scope of Article 9(2)(e) of Directive 77/388/EEC….”\textsuperscript{33}

In order word, for the purpose of application of value-added tax, transfer of EAUs between taxable persons will be considered as a taxable supply of services. Whether this implies that the EAUs will be characterised as “services”, however, remains unclear. Firstly, this guidance is only applicable for fiscal purpose: the application of value-added tax. And secondly, and most importantly, the legal instrument setting up the EU ETS—the ETS Directive—does not specifically define


\textsuperscript{32} \textit{Id.} p 38.

the legal status of EAUs.34

To summarise, within the EU ETS, the legal status of EAUs, a type of ‘allowance’, is not specified in the ETS Directives, leaving the members states the discretion to determine the legal status of EAUs.

B. Legal nature of ‘allowances’ and ‘credit’ under the domestic legal system

From the examinations of the previous and current experiences of emissions trading systems, it seems that none of the relevant literature distinguishes between ‘allowances’ and ‘credits’ when analysing the issues of legal nature of the traded units. These two types of traded units do exhibit very similar characteristics. However, they are generated from two different types of emission trading systems with different institutional design features. Whether this factor influences the legal nature of these two traded units under the domestic legal system require further analysis, as follows.

The way the traded units are generated and their characteristics in these two types of emission trading systems have both similarities as well as differences. In the ‘cap & trade’ system, a national regulator establishes an emissions cap, divides such a cap into equal units—allowances—and allocates different amounts of ‘allowances’ to participants. Participants are not permitted to operate without being issued a certain amount of ‘allowances’ at the beginning of a regulatory period, and are required to hand in sufficient amounts of ‘allowances’ at the end of a regulatory period. From this perspective, ‘allowances’ are very similar to, for example, construction permits or business licenses under public law. In other words, participant cannot undertake activities that generate emissions without holding sufficient amount of ‘allowances’—emissions permits/licenses. Once the participants are allocated with ‘allowance’, they can trade these allowances on the markets as long as they are confident that they will have sufficient amounts of ‘allowances’ at the end of a regulatory period. From this perspective, ‘allowances’ possess a certain monetary value on the markets. In the ‘baseline & credits’ system, participants voluntarily undertake emissions reduction activities with the aim of obtaining extra ‘credits’. Participants are not required to hold any sufficient amount of ‘credits’ before undertaking normal activities that generate emissions. For those who obtain such ‘credits’, however, they can undertake activities that generate “extra” emissions up to the level corresponding to the amount of ‘credits’ they have obtained. From this perspective, ‘credit’ also resembles emissions permits/licenses. These ‘credits’, after being verified by the regulators, can be used by the participants or sold to others. In other words, such ‘credits’ also have monetary value on the market. In sum, both

34 For more discussion on differences in the legal treatment of EAUs under each EU member states, see: Wemaere, M. & Streck, C., supra note 30, 50-52.
‘allowances’ and ‘credits’ represent emissions permits/licenses and possess monetary value on the markets.

Despite such similarities, these two traded units also have distinct differences.

First, ‘credits’, although whose legality and transferability require verification by the regulators, are generated by the participants whilst ‘allowances’ are created by the regulators.

Second, participants cannot undertake activities that generate emissions without holding sufficient amount of ‘allowances’. But they do not have to possess ‘credit’ to undertake such activities.

Third, ‘credits’ have to be verified by the regulators to see whether they meet various conditions such as baseline and additionality before they can be traded. On the other hand, ‘allowances’, once allocated by the regulators to the participants, do not have to undergo verification procedures before they can be traded.

Table 1 summarises the similarities and differences between ‘allowances’ and ‘credits’.

Table 1: Similarities and differences of ‘allowances’ and ‘credit’

<table>
<thead>
<tr>
<th></th>
<th>Allowance</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Similarities</strong></td>
<td>Both have monetary value on the markets</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Both exhibits the characteristics of emissions license/permits</td>
<td></td>
</tr>
<tr>
<td><strong>Differences</strong></td>
<td>Generated by whom?</td>
<td>Created by regulations and allocated by regulators</td>
</tr>
<tr>
<td></td>
<td>Created by individual participants, but verified by regulators</td>
<td></td>
</tr>
<tr>
<td>Is it legally required to hold such units?</td>
<td>Similar to permits under public law; participants cannot undertake activities that generate emissions without holding such units allocated from the regulators</td>
<td>Participants are not required to hold such units before undertaking activities that generate emissions</td>
</tr>
<tr>
<td>Does the unit need to be verified prior to entering into the market?</td>
<td>Once being allocated to participants, owners of allowances can either use such units or freely transfer them to other participants</td>
<td>Credits must be verified by the regulators before being able to be traded in the market</td>
</tr>
</tbody>
</table>
In light of these similarities and differences of ‘allowances’ and ‘credit’, what are the legal nature and characteristics of these two different types of traded units under domestic law?

In the emissions trading markets—in particular from the perceptions of the market participants—‘allowances’ and ‘credits’ do share many similarities in terms of their legal nature. When participants acquire ‘allowances’ or ‘credit’ after fulfilling all the necessary conditions, such traded units possess monetary values in the sense that participants can sell such units on the markets in exchange of money—in particular in the secondary market where participants, such as traders, brokers, and investors, are not firms which are the primary participants as stipulated by laws. The monetary or property value of both ‘allowances’ and ‘credits’ is created by regulations. An efficient and well-functioned emission trading market depends on creating an environment that provides legal securities and predictabilities for participants to engage in buying and selling these traded units. Regulators can provide such securities and predictabilities by guaranteeing the monetary or property values of these traded units on the markets and minimizing regulatory interferences. Many institutional underpinnings in an emissions trading system, for example, the centralised registry system, are designed to facilitate the operations of the markets. In addition, none of the emissions trading system prohibits the development of the so-called ‘secondary markets’ where participants such as traders, brokers or investors are engaging in selling and buying these units for purposes other than fulfilling regulatory requirements. These secondary markets facilitate and support the expanding of the primary markets where participants are those regulated entities under the relevant legislations. By building a robust market, the “true” costs of producing emissions can be reflected and internalised, which is the main economic rationale behind the adoption of the emissions trading system. Thus, from the perspectives of market participants, it seems that ‘allowance’ and ‘credits’, once being released into the markets, are essentially the same in terms of their monetary value.

From the previous experiences of the ‘cap & trade’ system, for example, the Icelandic fishery quota system and the US Clean Air Act, regulators are often reluctant to grant property rights to ‘allowances’ for the following reasons: Possessing these ‘allowances’ would imply the “right to emit/pollute”. Considering the ultimate environmental goal of reducing emissions, the numbers of ‘allowance’ allocated and being traded should decrease gradually. Thus, these traded units are not suitable to be granted the status of “property rights”, and ergo to be held permanently by a certain group within a society. Furthermore, a certain level of regulatory flexibilities in prescribing terms and conditions of the issuance, and retirement/cancellation of the
‘allowances’ as well, is necessary to achieve the environmental goal of any ‘cap & trade’ system. If ‘allowances’ are considered property rights, the government would be taking property whenever it reduced the number of ‘allowances’. When the government takes private property, it must either allow for due process of the law or compensation. Such a requirement might impose burdensome administrative costs and procedures and, as a result, weaken the regulatory flexibilities of the agency in charge. For these reasons, previous experiences under the ‘cap & trade’ system tended to refrain from treating ‘allowances’ as property rights. What, then, about the ‘baseline & credit’ system?

First, the only experience thus far, i.e. the early US emissions offset policy, also has similar regulations. For example, the RECLAIM regulations state that a RECLAIM Trading Credit (RTC) “shall not constitute a security or other form of property.” The number of ‘allowances’ might be reduced from time to time should the regulators decrease the “cap”. However, the number of ‘credits’, once verified, remains stable in the market without later interference from the regulators/verifiers. This might suggest that, once verified, ‘credits’ can be regarded as property rights as they are not subject to subsequent review by the regulators. However, as mentioned previously, ‘credits’ also exhibit the characteristics of emissions permit, i.e. right to emit and reducing the overall level of emissions is also the environmental objective of the ‘baseline & credit’ system. The regulators might tighten verification rules so that fewer ‘credits’ can be verified and legally traded. Once being verified, the regulators might be unable to reduce the number of ‘credits’ on the market. But, as the ‘baseline & credits’ system is increasingly linked to the ‘cap & trade’ system where ‘credits’ can also be used for participants under the ‘cap & trade’ system to fulfil their regulatory obligations, the regulators can change the “linking” rules to limit the percentage of ‘credits’ that can be held by the participants to fulfil their obligations in the ‘cap & trade’ system. This will indirectly reduce the number of ‘credits’ being traded, resulting in significantly diminishing the value of ‘credits’. Both these regulatory moves will affect those participants who made huge investments to undertake activities that they originally expect would generate valuable ‘credits’. Will such a move by the regulators be considered “indirect takings” or “regulatory taking” if ‘credits’ are property rights? Even if it won’t, the regulators will face tremendous pressure from the holders of ‘credits’, which might reduce their regulatory flexibilities as well. As a result, it might not be appropriate to grant property rights to ‘credits’ for reasons similar to those under the ‘cap & trade’ system.

On another note, the more recent experiences have shown the tendency of “linking” different emissions trading systems. For example, under the “Linking Directive” of the EU ETS, member states can allow operators, being subject to the
relevant rules, to use CERs and ERUs in the ETS. This shall take place through the issue and immediate surrender of one EAU in exchange for one CER or ERU held by the operator in the national registry of its member state. The Kyoto Protocol also permits Annex I parties to use CERs and ERUs to meet their emissions reduction obligations. It seems that ‘allowances’ and ‘credits’ are considered interchangeable under these “linking” schemes.

The analysis so far seems to indicate that ‘allowances’ and ‘credits’ share very similar, if not the same, legal characteristics. However, the way these units are generated and the terms and conditions of their use are, as suggested previously, quite different. Such differences might also be reflected in the legal characteristics of these two types of traded units. First, ‘credits’ are not allocated by the regulators. They are generated by participants who voluntarily undertake activities that can generate ‘credits’. However, only after the regulators have verified such ‘credits’ in accordance with various conditions will that ‘credits’ possess monetary value in the market. Participants who decide to invest in activities that can later generate ‘credits’, thus, face certain legal risk of failing to meet the verification requirements. In contrast, ‘allowances’, once allocated, immediately generate monetary value on the market should the holders decide to sell the ‘allowances’ being allocated. Granted, ‘allowances’ are mainly used by the participants under the ‘cap & trade’ system to meet their regulatory obligations. Thus, for those participants who hold the exact amount of ‘allowances’ that need to be handed out at the end of the regulatory period, ‘allowances’ do not necessarily possess monetary value. Nevertheless, for those participants who receive more ‘allowances’ than their emissions level, or who carry out emissions reduction activities so that extra ‘allowances’ can be saved, ‘allowances’ allocated free of charge would look like some sort of “windfall” to the participants. As a result, the perceptions of monetary value and legal certainty from the participants who hold ‘credits’ or ‘allowances’ will be different in terms of how and under what conditions are these traded units being generated.

Further, under the ‘cap & trade’ system, regulators will prescribe detail rules on the overall cap, allocation method, and other terms and conditions of trading. Once ‘allowances’ are allocated according to such rules, the numbers of allowances held by each participant and their legal validity will no longer be subject to additional administrative review by the regulators. Under the ‘baseline & credits’ system, regulators will also prescribe detail rules on eligibilities and verification requirements. However, when an individual project developer, along with the ‘credits’ which the project generates, applies for verification, the regulators have considerable discretion to decide whether the project can be verified and how much ‘credits’ can be generated. In some cases, verification might be subsequently withdrawn should certain
conditions are not fulfilled. All these will create uncertainty around the legal validity of ‘credits’. As a result, from the perspective of a potential buyer, the legal risk of purchasing ‘credit’ and ‘allowances’ will be different.

On another note, such type of differences, i.e. verification requirements, might be less obvious in the Kyoto units. As Section 2 indicated, there is no “Kyoto-wide” cap as in a typical ‘cap & trade’ system. Each Annex I party has its own national cap that is determined by negotiations under the Kyoto Protocol and each national cap is then being divided equally into AAUs. According to the Decision 13/CMP.1, the exact amount of AAUs and RMUs have to be reviewed and verified according to Article 3 of the Kyoto Protocol as well as the relevant CMP decisions. In contrast to the domestic ‘cap & trade’ system where ‘allowances’, once allocated, no longer need to be subject to review and verification, this practice under the Kyoto rules, with respect to AAUs and RMUs, seem to resemble the ‘baseline & credit’ system where CDM and/or JI projects need to be verified by the CDM Executive Board and/or JI Supervisory Committee before CERs and EURs can be generated.

To summarise, it is not recommended to grant the legal status of permanent property rights to both ‘allowances’ and ‘credits’ in order to give maximum regulatory flexibilities to the regulators to fulfil the environmental objective of any type of emissions trading system. Previous experiences also echo such concern. From this viewpoint, ‘allowances’ and ‘credits’ share the same legal characteristics. On the other hand, because of the way these two types of traded units are generated, as well as the terms and conditions of their use, perceptions from both the “sellers” and “buyers” of these two types of traded units might be very different, especially in terms of the legal validity of these traded units and their subsequent transferability. Table 2 lists these similarities and differences.

Table 2: Legal characteristics of allowances and credits

<table>
<thead>
<tr>
<th></th>
<th>Allowance</th>
<th>Credits</th>
<th>Legal characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generation of traded units</td>
<td>Allocated by regulators</td>
<td>Created by participants</td>
<td>Differences exist</td>
</tr>
<tr>
<td>Values of traded units</td>
<td>Monetary value</td>
<td>Monetary value</td>
<td>Similar</td>
</tr>
<tr>
<td>Risks associated with trade</td>
<td>None</td>
<td>Yes: credits might not be verified by the regulators</td>
<td>Different</td>
</tr>
<tr>
<td>Legal nature</td>
<td>Not to be give property titles or rights</td>
<td>Not to be given property titles or rights</td>
<td>Similar</td>
</tr>
</tbody>
</table>
This section has provided preliminary analysis on the legal nature and characteristics of ‘allowances’ and ‘credits’ from a domestic legal viewpoint. Are these traded units exhibit similar legal characteristics under the WTO legal regime? Furthermore, similarities and differences between these two types of traded unit in terms of their legal characteristics have also been identified. Will this analysis affect how we examine the relationship between emission trading system and the WTO?

4. LEGAL CHARACTERISTICS OF THE TRADED UNITS UNDER THE WTO LEGAL FRAMEWORK

As has been pointed out in the Introduction, literature abounds that offer legal analysis on the relationship between the emissions trading system and the WTO rules. Whether the results of these analyses will be different, if legal characteristics of two types of traded units are taken into consideration, is to be examined in this Section. A brief overview of the emissions trading markets at different levels and the types of traded units under these markets will be presented first. This will be used as the basis for identifying which markets are likely to have interaction with the WTO legal framework, as well as whether differences in the legal characteristics of two types of traded units in the domestic legal order will affect such an interaction. Further examinations on the legal status of these two types of traded units under the WTO will then be conducted. Finally, a re-examination on the relationship between the emissions trading system and the WTO will be carried out based on these preceding findings.

A. Types of emissions trading markets, traded units under those markets, and the implications to the relationship with the WTO

The emissions trading markets can be categorised into two different levels according to the characteristics of the participants: sovereign markets and private markets. Sovereign markets consist of sovereign government participants. Private markets consist of non-government participants. Based on the purpose of participating in the trading markets, private markets can be further divided into primary markets and secondary markets. Participants in the primary markets are under statutory obligations to take part in the emissions trading system. The EU ETS is one such type of market. Participants in the secondary markets take part in the trading markets for mostly profit seeking purpose, such as investment or

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35 Supra note 1.
36 This categorisation draws from Werksman, J, supra note 1, pp 252-255.
Currently only one sovereign market exists, that is the sovereign market created by the Kyoto Protocol. The participants in this sovereign market are Annex I parties with treaty obligations to reduce GHGs emissions. According to Article 17 of the Kyoto Protocol and the subsequent CMP decisions (the “Kyoto Rules”), Annex I parties can, amongst themselves, acquire and/or transfer AAUs, RMUs, CERs, ERUs, to meet their emissions reduction obligations under Article 3 of the Kyoto Protocol. In addition, Annex I parties can also acquire and/or transfer CERs or ERUs from and/or to private entities according to either the Kyoto Rules or domestic legislations.

Primary markets are for those non-government participants who are under statutory obligations to reduce emissions and, in case of insufficient or extra holdings of allowances and/or credits, to buy or sell these units. The majorities of such type of markets are under the ‘cap & trade’ system. These participants can buy and/or sell allowances from fellow participants under the same regulatory regime. They might also be permitted to buy ‘allowances’ from other participants in other (mostly foreign) ‘cap & trade’ systems, or ‘credits’ generated from the ‘baseline & credit’ systems (both domestic and foreign) to fulfil their statutory obligations to reduce emissions. All these transactions will depend on the relevant domestic emissions trading legislations. In addition, they might also buy and/or sell their allowances from and/to participants in the secondary markets, e.g. trader, investors or brokers. These transactions are mostly governed by the so-called “emission reduction purchase agreement/contract”. As emissions trading systems proliferate, the terms of conditions of such agreements and contracts have become more standardised.

Secondary markets are consisted of participants who take part in such markets for investment or other purposes. Participants in such secondary markets are not under statutory obligations to reduce emissions or to hold/surrender allowances/credits. They are investors, traders, or brokers who take part in the market for profit and/or service fees. They can trade allowances and/or credits with either participants in the primary markets or with their fellow investors/traders/brokers. Most of the transactions in the secondary markets are governed by contracts.

The traded units permitted under these markets are also different depending on the primary rules within each market. In the sovereign market, both ‘allowance’ (AAUs and RMUs) and ‘credit’ (CERs and ERUs) are permitted to be transferred and

37 Under the US SO2 emissions trading system, environmental NGOs, public interests groups or individuals also participated in the emissions trading market with the aim of reducing the number of allowances on the market, which means fewer permits to emit. The secondary market should also cover such trading activities.

38 The International Emissions Trading Association (IETA) has published a series of model master agreement and single trade agreement mainly for the use of EU ETS and the Kyoto emissions trading. All these model contracts can be downloaded from the IETA website at: www.ieta.org (last visited: 13 Feb. 08).
acquired according to the Kyoto Rules. But only these four types of units are permissible under this sovereign market. In the primary markets, what are permitted to be traded by firms participating the emission trading system will depend on the respective national or regional legislation. Take the EU ETS as an example: participants can trade EAUs as well as CERs and ERUs under the relevant EU Directives. Considering the fact that primary markets are usually set up by legislation mandating compulsory ‘cap & trade’ emissions trading system, participants usually will be allocated ‘allowances’ to be used or traded. Whether ‘allowance’ from other primary markets, or whether ‘credits’, be it CERs, ERUs, or those generated by other ‘baseline & credit’ system, can be used will depend on the authorising national or regional legislations. Last, for the secondary markets, pretty much all types of traded units can be ‘packaged’ and sold depending on the emissions reduction purchase agreements or contracts. Table 3 summarises the types of traded units and their legal base under different emissions trading markets.

Table 3: Traded units under different types of emissions trading markets and their legal base

<table>
<thead>
<tr>
<th>Types of emissions trading markets</th>
<th>Traded units</th>
<th>Legal base</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sovereign markets</td>
<td>AAUs, RMUs, CERs, ERUs (the “Kyoto units”)</td>
<td>Kyoto Rules</td>
</tr>
<tr>
<td>Primary markets</td>
<td>Domestically-allocated ‘allowances’</td>
<td>National (or regional) emissions trading legislation</td>
</tr>
<tr>
<td></td>
<td>Domestic and foreign ‘credits’?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Foreign ‘allowances’?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kyoto units?</td>
<td></td>
</tr>
<tr>
<td>Secondary markets</td>
<td>All kinds of traded units</td>
<td>Emissions reduction purchase agreements or other contracts</td>
</tr>
</tbody>
</table>

The Section 3.B has offered some preliminary observations in terms of the different legal characteristics between ‘allowances’ and ‘credits’ under the domestic legal systems. How can those observations fit into these different levels of emissions trading markets? For sovereign market, the different legal characteristics between ‘allowances’ and ‘credits’ have little implications as such differences between AAUs/RMUs and CERs/ERUs are not as obvious under the Kyoto Rules. For primary markets, the differences in legal characteristics might have the following implications. First and foremost, whether firms are permitted to use domestic credits, or “import”
foreign allowances and/or credits, under the compulsory ‘cap & trade’ system depends on national or regional legislation. Even if domestic or foreign credits, or foreign allowances are permitted to be used to meet statutory obligations by firms under the cap & trade system, legal risks associated with using credits, as identified in the previous section, will no doubt affect the willingness of firms to use credits. As for foreign allowances, similar risk might arise, should the national or regional legislation decide, after ‘recognising’ foreign allowances that such foreign allowances still need to undergo verification. Nevertheless, considering the nature of how these two types of traded units are generated, such kind of verification might be unrealistic regarding foreign allowances. Is one going to verify the determination of cap, the method of allocation, or the allocation process of a foreign cap & trade system set up by national legislation of a foreign (and sovereign) government in order to determine the validity of the foreign allowances?

Quite unlikely, isn’t it? The most likely scenario might be the adoption of some sort of ‘mutual recognition’ where foreign allowances are regarded as having the same legal effect as the domestic allowances, if the domestic allowances are also granted similar effect under that particular foreign jurisdiction. Under such scenario, legal risk involving using foreign allowances will not be similar to using credits, domestic or foreign. As a result, the different legal characteristics between allowances and credits under the domestic legal systems might have some implications in the primary markets. For secondary market, participants trade these units for investment or brokerage purposes. The different legal risk associated with using allowances and credits will of course affect their monetary value in the secondary markets. However, as participants in the secondary markets are not under any legal obligations to hold and hand in allowances and/or credits, they do not have to consider the above-mentioned legal risk of holding credits. Thus, such differences have limited implications in the secondary markets.

What, then, are the implications to the relationship with the WTO legal framework? First: For the sovereign market, the major legal rules are the Kyoto Rules, in particular those relating to the generation, verification, and terms of transferring and acquiring the Kyoto units. Kyoto Rules, consisted of the Kyoto Protocol and any subsequent CMP decisions, are international rules parallel to the WTO legal rules. Thus, the operations of the sovereign market will not be affected by the WTO legal rules. Furthermore, as it has been pointed out in Section 2 and the relevant literature, emissions trading under Article 17 of the Kyoto Protocol, i.e. the sovereign market, does not concern ‘trade’. And there is, strictly speaking, no market for trade in goods or services. Consequently, it seems that the sovereign market will not be affected by
the WTO legal rules.\textsuperscript{39} Second: For those primary markets where foreign credits and allowances are permitted to be used in the domestic cap & trade system, whether the underpinning national legal rules have any interaction with the WTO legal rules will depend on the legal nature of the traded units under the WTO legal framework. In addition, from the experiences of the EU ETS where CERs and ERUs can be used to meet regulatory obligations, further analysis on the legal nature of CERs and ERUs under the WTO legal framework is also necessary. Third: For secondary markets, most of the participants are private entities whose rights and obligations are governed by contracts. As WTO legal framework does not directly affect non-governmental private actors and private contracts, the secondary market seems unaffected by the WTO legal rules. However, national regulations concerning the operation of private transactions in the secondary markets might interact with the WTO legal rules under certain circumstances.

Table 4 summaries the following: first, whether the different legal characteristics between credits and allowances have any implications to three different markets, and, second, whether the operations and legal rules of these different markets interact with the WTO legal framework.

<table>
<thead>
<tr>
<th></th>
<th>Implications of differences in legal characteristics between allowances and credits under the domestic legal system</th>
<th>Interaction with WTO laws</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sovereign markets</td>
<td>Limited</td>
<td>None</td>
</tr>
<tr>
<td>Primary markets</td>
<td>Yes</td>
<td>Depending on the legal nature of traded units, including CERs and ERUs under the WTO</td>
</tr>
<tr>
<td>Secondary markets</td>
<td>Limited</td>
<td>Non-applicable to contracts, but might be applicable regarding supporting national regulations</td>
</tr>
</tbody>
</table>

As we can see, the differences in legal characteristics of the traded units under domestic legal system might have some implications to the primary market where

\textsuperscript{39} Werksman holds the same view. Werksman, J., \textit{supra} note 1, pp 252-253.
WTO legal rules might interact with the underpinning national legislation. What influences, if any, will WTO legal rules have on such national emissions trading system depend on further analysis on the legal nature of these traded units under the WTO legal framework, as follows.

B. Legal nature of the traded units under the WTO

As it has been pointed out in the Introduction, most articles on the relationship between WTO laws and the emissions trading mechanisms began their analyses on whether the traded units, mostly Kyoto units, are ‘goods’ or ‘services’ with the aim of determining whether the GATT or the GATS should be the main applicable treaty in this regard. Nearly all of the relevant literature agree that these Kyoto units are not ‘goods’, but are rather similar to ‘financial instruments’ or ‘negotiable instruments’. As a result, GATS should be the most relevant rules under the circumstance. This mainstream conclusion reflects the monetary value embedded in these traded units. However, the fact that these Kyoto units are generated from two different types of emissions trading systems has not been taken into consideration. Is this going to affect the validity of their legal analyses? Not necessarily. As it has been pointed out in Section 3.B, the differences regarding verification requirements might be less obvious in the Kyoto units because the exact amount of AAUs and RMUs—‘allowances’ under the ‘cap & trade’ system—have to be reviewed and verified according to the Kyoto rules that resemble the ‘baseline & credit’ system where CERs and ERUs from CDM and JI projects also need to be verified. But can these analyses apply to ‘allowances’ or ‘credits’ generated from domestic emissions trading systems?

This depends on whether these domestic or regional units can be regarded the same as the four types of Kyoto units. If they are, this mainstream analysis might be applicable, resulting in the possible applicability of GATS rules in these domestic or regional emissions trading systems. If they are not similar, what will be the legal nature of these domestic or regional traded units under the WTO legal framework? Judging from the main purpose of these traded units, i.e. representing or authorising one tonne of emission, all these units, be they Kyoto units, domestic, or regional should be regarded as the same. Nevertheless, further examinations are required considering the different types of emissions trading markets, their participants, and the prevailing legal rules in these markets.

In the secondary markets, participants take part in the emissions trading markets for investment or other profit-seeking purposes. As all the traded units can be

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For example, Jinnah, S., supra note 1, pp 740-742; Martin, M., supra note 1, pp 446-453; Petsonk, A., supra note 1, pp 197, 200-203; Voon, T., supra note 1, p 44; Werksman, J., supra note 1, pp 252, 255-257; Wiser, G.M., supra note 1, pp 556-563.
packaged and sold depending on the emissions reduction purchase agreements or contracts, these trade units can all be regarded as possessing monetary value. The Kyoto units and the domestic/regional units can, thus, be regarded as the same.

In the primary markets where participants are under statutory requirements to hold these units, which types of these traded units are acceptable depends on the authorising national or regional legislations. Under the EU ETS, the ‘linking Directive’ permits, to a certain extent, the use of the credits-type CERs and ERUs to meet its statutory requirements of holding the allowances-type EAUs. It seems, thus, that the Kyoto units are regarded as the same as the regional units—EAUs. This ‘linking’ practice is very likely to be adopted by other emissions trading systems with a view to expand the scope of emissions trading markets. However, different national legislations might take different approaches in terms of whether to give the Kyoto units, or under what conditions are these units regarded as having the same legal effect as the domestic units. For example, Annex I parties to the Kyoto Protocol adopting mandatory emissions trading system to fulfil their emissions reduction obligations might opt for designing a punitive system to punish non-Annex I parties or non-parties by adopting the following approaches. They might refuse to recognise CERs from CDM projects hosted by non-Annex I parties without emissions reduction commitments, or domestic unites generated in non-parties. They might also prohibit their domestic firms to transfer their Kyoto units to non-Annex I parties, non-parties, or firms located within such countries. Under such circumstance, the Kyoto units will not be regarded as the same as the domestic units.

In the sovereignty market, only Kyoto units are permitted to be used by Annex I parties according to the Kyoto rules. Domestic or regional units generated under national or regional legislations are not recognised under the Kyoto Rules and, thus, not regarded as the same as the Kyoto units in the sovereignty markets. However, there is no need to discuss the legal nature of these domestic or regional units in the sovereignty market as they have no legal effect according to the Kyoto rules.

From these discussions, it seems that only in the primary markets will there be certain differences between Kyoto units and some domestic units. What, then, is the legal status of such domestic units under the WTO? And will ‘allowances’ and ‘credits’ be given different legal status? Such questions will have to be addressed by taking into consideration the legal status of such unites under the domestic legal system as discussed in Section 3.B. If, by drawing analogy to the aforementioned mainstream conclusion, these domestically traded units are regarded as ‘financial assets’ or ‘negotiable instruments’, one major controversy immediate arise. As Section 3.B showed, from the US experiences, governments are reluctant to grant specific property rights by law to these traded units so that they can maintain a certain
regulatory flexibilities to change or even cancel the validity or value of such traded units. However, ‘financial assets’ or ‘negotiable instruments’ are legally protected property rights under nearly all of the domestic commercial laws so as to provide legal certainties underpinning their uses and transactions. Moreover, one legal uncertainty associated with ‘credits’ are those concerning the verification process, i.e. credits might not be recognised by the relevant government agencies and deprived of their monetary value. Such legal uncertainty might create transaction risk and uncertainty, which is in stark contrast with the use of financial assets and negotiable instruments where all of the supporting regulations are designed to reduce their transaction risk and to facilitate their use in commercial transaction. All these seem to indicate that, contrary to the Kyoto units, there might be some difficulties in regarding these domestic units as financial assets or negotiable instruments.

One might reflect on the EU ETS case where Kyoto units and EAUs are regarded as having the same legal validity. Some EU member states even refer EAUs as commodities or financial instruments for accounting or other purposes, as indicated in Section 3.B. The EU experience seems conflicting to the analysis in the preceding paragraph. It also seems that the legal characteristics of these traded units under the domestic legal regime might be at variance with the legal nature of the Kyoto units in the context of WTO law even where these units (i.e. the Kyoto units and the domestic units) are regarded as equivalent under the domestic or regional emissions trading legislation in the primary markets. This might be explained by the uniqueness of emissions trading systems where, one the one hand, monetary values are bestowed to these traded units to encourage deeper emissions reductions, and, on the other hand, regulatory flexibilities are in place to guarantee the ultimate goal of the system: reductions of harmful substances. Each government has the sovereignty right to choose different regulatory tools in its environmental regulations.\footnote{Petsonk, supra note 1, p. 206.} Direct regulations to mandate emissions reductions, emissions trading and carbon taxes are all regulatory means to reduce GHGs emissions. A firm whose emissions level is higher than the statutory standards needs to take extra investment to reduce emissions under direct regulations, pay more taxes under the carbon tax system, or to buy allowances or credits in the primary or secondary markets under the emissions trading system. In other words, such type of firms inevitably incurs extra cost regardless of the types of regulations. A firm whose emissions level is equal or even lower than its statutory standards does not incur extra cost to invest in pollution control measures, pays less carbon taxes, or does not need to purchase insufficient credits or allowances. The attractiveness of emission trading system is the incentive it provides to those firms that are willing or capable of taking further measures to lower their emissions to gain
from such positive measures by creating a market where such types of firms can be rewarded. This is why domestic traded units are bestowed with monetary value. However, the ultimate goal of emissions trading system is to gradually reduce emissions by decreasing the numbers of these traded unites. This is, as pointed out in Section 3.B, why the prevailing practices of national emissions trading regulations differentiate such regulatory “property rights” from private property rights. Consequently, considering the policy goal of any domestic emission trading system, the legal characteristics of these traded units under the domestic legal system might render the characterisation of ‘negotiable instruments’ or ‘financial assets’ inapplicable to these domestic units in the primary markets, even where Kyoto units can be used interchangeably in such markets.

Another point of discussion relates to the differences between ‘allowances’ and ‘credits’—will such differences, in particular under the domestic legal system, affect the abovementioned analysis? First, the question of analysing the legal nature of these traded units in the context of WTO-law only arises where ‘linking’ with foreign emissions trading system is permissible. For a primary market, where the authorising legislation does not permit the use of Kyoto units or foreign ‘allowances’ and/or ‘credits’, there will be no cross-border transaction of the traded units in the market and, consequently, no WTO-related issue will occur. For a primary market where ‘linking’ is permitted and cross-border transaction of traded units is possible, whether interaction with the WTO-law is possible will come down to the question of the legal nature of all the different types of traded units in the context of WTO-law. With regard to ‘allowance’ in the mandatory cap & trade system, these traded units resemble emissions permits where firms are required to possess to engage in production activities that emit the regulated pollutant, e.g. GHGs. The issuance of and conditions to trade in such permits are subject to the authorising legislation. In this respect, ‘allowances’ are no different from other regulatory permits or licences such as business licences or construction permits where firms are required to obtain as a pre-condition to begin business operation. The legal validity of ‘allowances’, domestic or foreign, in the primary market are created by regulations where a government exercises its regulatory sovereignty. In order words, whether to recognise allowances issued by foreign governments or international agencies, or credits generated and verified both domestically or internationally, as having the same legal effect as domestic allowance issued in the domestic cap & trade system are within the exclusive regulatory power of the government in question. With regard to ‘credit’ in the baseline & credit system, firms are usually not legally required to hold ‘credit’ before they engage in production activities. However, the legal validity and, consequently, its monetary value, will ultimately depend on whether and how these
credits can be verified as well as whether regulators recognise their equivalence as allowances to be used under the cap & trade system. Credits might not be regarded as regulatory permits or licences, as it is in the case of ‘allowances’. However, once being verified and recognised, credits also resemble emissions permits where firms will be able to emit when acquiring the extra credits. As a result, both ‘allowances’ and ‘credits’ being traded in the primary markets, with their similarities in having monetary value and exhibiting the nature of emissions permits, do not seem to quality as either ‘goods’ or ‘services’ under the WTO-law. In other words, regardless of their differences in the domestic legal regime, the above analysis can apply to both ‘allowances’ and ‘credits’.

Table 5 summaries the legal nature of the traded units under the WTO in different trading markets.

<table>
<thead>
<tr>
<th>Trading markets and the traded units</th>
<th>Legal nature under the WTO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kyoto units in the sovereign markets</td>
<td>Might be regarded as ‘negotiable instruments’ or ‘financial assets’ in the financial services</td>
</tr>
<tr>
<td>Allowances and credits in the primary markets</td>
<td>Those linking with the Kyoto Protocol: Neither ‘goods’ nor ‘services’ Those not yet linked with the Kyoto Protocol</td>
</tr>
<tr>
<td>Secondary markets</td>
<td>Might be regarded as ‘negotiable instruments’ or ‘financial assets’ in the financial services</td>
</tr>
</tbody>
</table>

As the beginning of this Section has pointed out, nearly all of the relevant literatures agree that the Kyoto units are similar to ‘financial instruments’ or ‘negotiable instruments’ in the context of the GATS. The discussion so far, on the other hand, indicated that the legal characteristics of these traded units under the domestic legal regime might be at variance with the legal nature of the Kyoto units in the context of WTO-law, in particular in the primary markets. Is this finding contradictory with the mainstream view? Most of the relevant literature does not distinguish the different levels of emissions trading markets, with the exception of one major work by Werskman. Wersman distinguishes two levels of emissions trading and analyses the interaction between WTO-laws and international emissions trading.
system at different levels of markets.\textsuperscript{42} According to Werksman’s analysis, sovereign market established by Kyoto Rules does not create a ‘market’ in either goods or services and, thus, would not fall within the purview of the WTO law.\textsuperscript{43} In the primary markets, Kyoto units are

“neither goods nor services under the WTO. They are, instead, licences or permits issues by a government authority and entitling (under specific conditions) the holder to carry out a regulated activity within its territory.”\textsuperscript{44}

This finding echoes the previous analysis on the legal characteristics of the traded units in the domestic legal system. According to Werksman, Kyoto units can in economic terms be characterised as ‘commodities’ because they are internationally tradable and have a market value.\textsuperscript{45} As internationally traded units have financial value, they may well be considered a ‘negotiable instrument’ within the GATS.\textsuperscript{46} This finding has been accepted and widely quoted by many subsequent literatures with regard to characterising the traded units (mostly the Kyoto units). However, Werksman also makes two important observations that have been less mentioned. He states that: “It would be specious to argue, for example, that anything that is tradable and has economic value must be, simply by analogy to covered products and services, either a product or a service for WTO purposes.”\textsuperscript{47} He also argues that, even if these traded units are regarded as ‘negotiable instruments’ in the context of financial services under the GATS, GATS rules cannot compel a WTO member to recognise these traded units as valid for the purpose of offsetting emissions within its territory.\textsuperscript{48}

Even though Werksmen’s article focuses on the Kyoto units, there is no reason why this analysis cannot be applied to other domestic or regional traded units as they all exhibit similar characteristics as emissions permit or license. As a result, the findings that legal nature of the traded units under the WTO need to be analysed at different levels of emissions trading markets as well as taking into consideration the legal characteristics of these units under the domestic legal regime do not deviate from the mainstream conclusion. They simply offer a much detailed analysis depending on the levels of markets as well as the major legal framework underpinning each type of markets. Furthermore, despite some differences in legal characteristics between ‘allowances’ and ‘credits’ in the domestic legal regime, such differences do not seem to affect the findings that both of these traded units are neither goods nor services in the context of the WTO-law. In the sovereignty market

\textsuperscript{42} Werksman, supra note 1, pp. 252-257.
\textsuperscript{43} Werksman, supra note 1, p 252
\textsuperscript{44} Werksman, supra note 1, p 255.
\textsuperscript{45} Ibid
\textsuperscript{46} Werksman, supra note 1, p 256
\textsuperscript{47} Werksman, supra note 1, p 255.
\textsuperscript{48} Werksman, supra note 1, p 256
where the use of non-Kyoto units are not permitted and where the underpinning Kyoto Rules are international rules parallel to the WTO-law, there is no need to analyse the legal nature of all these traded unites in the WTO context. In the primary markets, all the traded units, Kyoto units or other domestic or regional units, possess monetary value that enable them to be regarded as ‘negotiable instruments’ or ‘financial assets’. However, their legal validity as well as transferability will depend on the authorising domestic or regional legislation, which fall within the exclusive regulatory sovereignty of a government. Considering the policy goal of the emissions trading system and the resulting legal characteristics of these traded units under the domestic legal order, these traded units resemble emissions permits that are neither goods nor services in the context of the WTO-law. In the secondary markets, participants are not under any legal requirements to hold or surrender these traded units. The participants buy and sell these traded units, usually packaged in futures or derivatives contracts, for investment or other profit-seeking purposes and can, thus, be regarded as ‘negotiable instruments’ or ‘financial assets’ in the WTO context. To accommodate these findings, table 5 is further amended as follows in table 6.

Table 6: Legal nature of traded units under domestic law and WTO law, and its implications to the applicability of WTO law on emissions trading in different markets

<table>
<thead>
<tr>
<th>Trading markets and traded units</th>
<th>Legal nature of domestic law</th>
<th>Legal nature under WTO law</th>
<th>Applicability of WTO law</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kyoto units being traded between Annex I parties in the sovereign markets</td>
<td>Possessing monetary value, but without legal titles; might be regarded as ‘negotiable instruments’ or ‘financial assets’</td>
<td>No need to analyse</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Allowances and credits being traded between firms in the primary markets</td>
<td>Possessing monetary value, but without legal titles; might be regarded as ‘negotiable instruments’ or ‘financial assets’</td>
<td>Neither ‘goods’ nor ‘services’</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Secondary markets</td>
<td>Possessing monetary value, but without legal titles;</td>
<td>Possessing monetary value; might be regarded</td>
<td>GATS might be applicable</td>
</tr>
</tbody>
</table>
might be regarded as ‘negotiable instruments’ or ‘financial assets’
as ‘negotiable instruments’ or ‘financial assets’

C. A re-examination of the relationship between the emissions trading system and the WTO: Are WTO-laws applicable

Based on the analysis in the previous two sub-sections, the legal nature of all the traded units in those trading markets that are created for the purposes of meeting mandatory requirements, i.e. a sovereignty market under the Kyoto Protocol and primary markets, cannot be defined as possessing statutory property rights. The legal validity, transferability, and the resulting market or monetary value of these traded units are created and determined by the respective legal base underpinning these markets.

In the sovereignty market, the Kyoto units have been regarded as ‘negotiable instruments’ or ‘financial assets’ in the context of GATS. But the operations of this sovereignty market will not have direct interaction with the WTO rules for the following two reasons: first, the legal bases of this market are the Kyoto Rules that are international rules parallel to the WTO-laws, and second, strictly speaking, governments participate in this market are not actually conducting trading activities but merely transferring the Kyoto units in different national registries and relevant international registries according to the Kyoto rules. In the primary markets, regardless of different types of units (allowances versus. credits) or wither such markets are ‘linked’ with the sovereignty market where Kyoto units are regarded as having the same legal validity as the domestic units, the legal bases are mostly domestic legislations. Such types of legislations might have certain interaction with the WTO law. Nevertheless, whether or not to use emissions trading as a policy tool in their environmental regulations is within the exclusive regulatory sovereignty of the governments. In view of the policy goal of the emissions trading system, the legal nature of all types of traded units closely resembles that of emissions permits or licenses, rather than that of full-fledged statutory properties. As a result, the generation, legal validity, transferability, and other conditions of transactions, including whether to recognise ‘foreign’ or ‘international’ ‘allowances’ or ‘credits’, should not be affected by the WTO-laws.

In the secondary markets situations might be different from the sovereignty and primary markets. Participants in the secondary markets mostly perceive these traded units, or whatever derivative financial products they are packaged into, as instruments for investment or brokerage purposes. Even if the traded units themselves cannot be
regarded as ‘negotiable instruments’ or ‘financial assets’, the derivative financial products which are generated out of these traded units can no doubt be categorised as financial assets in the context of financial services within the GATS. The legal bases supporting such markets are a series of contracts. Therefore, most of the domestic legislations regulating the operations of such contracts might have certain interaction with the WTO-laws, in particular with the GATS.

To summarise, based on the previous analysis, WTO-laws might not be applicable in the sovereignty emissions trading markets and the primary emissions trading markets. The-WTO laws, in particular the GATS, are only applicable in the secondary emissions trading markets. As a result, even if all the traded units possess the legal characteristics of ‘negotiable instruments’ or ‘financial assets’, governments are not required to comply with the principle of non-discrimination or market-access rules under the GATS when negotiating international rules under the Kyoto Protocol (the sovereignty market) or designing domestic regulations on emissions trading (the primary markets). In other words, governments are free to determine whether to recognise the legal validity to foreign or international allowances or credits, or to permit the use of how much percentage of such units, under their domestic, especially mandatory emission trading market. But in designing or revising the supporting laws, such as financial or commercial regulations, regulating the operations of contracts in the secondary markets, relevant GATS rules will be quite important.

Another point of discussion in the relevant literature on the relationship between emission trading and the WTO-laws is the issue of subsidy. Some commentators have addressed the issue of whether free allocation to domestic firms under the cap & trade system is an act of ‘subsidy’ that should be regulated by the Agreement on Subsidies and Countervailing Measures (the SCM Agreement). Based on the legal characteristics of possessing monetary value of these traded units in the domestic legal system as well as their legal nature of ‘negotiable instruments’ or ‘financial assets’ in the secondary markets, free allocation of ‘allowances’ might be regarded as ‘a financial contribution by a government’ involving a direct transfer of funds as defined under Article 1.1(a) (1) (i). However, these traded units also exhibit the legal characteristics as emissions permits where firms are under legal obligations to hold and surrender the required amounts during the regulatory period. These traded units are not private properties in most of the domestic legislations with the aim of maintaining regulatory flexibilities. The firms are under legal obligations to hold a certain amount of allowances. These allowances are required to be surrendered toward the end of the regulatory period. Thus, benefit will not necessarily occur to these firms. The decision of the cap and the number of allowances to allocate to firms is very

49 For example: Petsonk, supra note 1, pp 206-209, Shah, supra note 1.
similar to determining the tax base, tax rate and taxable products in the carbon tax system, as well as determining the statutory emissions level and the regulated firms in the direct regulations to reduce emissions. These are all within the purview of any government’s regulatory sovereignty. If free allocation can be regarded as receiving subsidies from the governments, what about firms under a carbon tax system that pay less tax because their emissions level are lower, or firms under a direct regulation system that does not need to pay the cost of pollution control because their emissions level is below the statutory level? Can these firms also receive subsidies from the governments that have to be scrutinised under the SCM Agreement? Such an explanation will no doubt limit the regulatory sovereignty of any government. Thus, considering the legal nature of these traded units both domestically and under the WTO context, free allocation under the cap & trade system might not constitute a subsidy under the SCM Agreement.

5. Conclusion

With regard to the relationship between emissions trading and the WTO, most existing literature focuses on the emissions trading system under the Kyoto Protocol without analysing existing or forthcoming domestic or regional emissions trading systems. Furthermore, these analyses also did not differentiate between different types of emissions trading systems, in particular the possible different legal nature of various types of the ‘units’ that are being traded under different types of emissions trading system. Is this an over-simplified approach in terms of analysing the relationship between emissions trading and the WTO? This is the main research question this article set out to answer.

After introducing the two types of emissions trading systems, i.e. cap & trade versus baseline & credits, and the practices of the Icelandic fishery quota system, the US Clear Air Act and the EU ETS, this article finds that statutory private properties are rarely conferred to either allowances or credits in order to give maximum regulatory flexibilities to the regulators to fulfil the environmental objective of any type of emissions trading system. From this viewpoint, ‘allowances’ and ‘credits’ share the same legal characteristics. On the other hand, because of the way these two types of traded units are generated, as well as the terms and conditions of their use, perceptions from both the “sellers” and “buyers” of these two types of traded units might be very different, especially in terms of the legal validity of these traded units and their subsequent transferability. After identifying the similarities and differences between these two types of traded unit in terms of their legal characteristics under the domestic legal system, this article proceeds to analyse their legal nature under the WTO as well as examining the relationship between emission trading system and the
This article concludes that, depending on the level of emissions trading markets, legal nature of these traded units under the WTO as well as their interaction with the WTO-law differ. In addition, the legal characteristics of these traded units under the domestic legal system will affect their legal nature under the WTO. In the sovereignty market where the use of non-Kyoto units are not permitted and where the underpinning Kyoto Rules are international rules parallel to the WTO-law, there is no need to analyse the legal nature of all these traded units in the WTO context. In the primary markets, all the traded units, Kyoto units or other domestic or regional units, possess monetary value that enable them to be regarded as ‘negotiable instruments’ or ‘financial assets’. However, considering their legal characteristics as resembling emissions permits, these traded units are neither goods nor services in the context of the WTO-law. Despite some differences in legal characteristics between ‘allowances’ and ‘credits’ in the domestic legal regime, such differences do not seem to affect the findings that both of these traded units are neither goods nor services in the context of the WTO-law. In the secondary markets, participants buy and sell these traded units, usually packaged in futures or derivatives contracts, for investment or other profit-seeking purposes. These traded units can, thus, be regarded as ‘negotiable instruments’ or ‘financial assets’ in the WTO context. As a result, WTO-law might not be applicable in the sovereignty emissions trading markets and the primary emissions trading markets. The WTO-law, in particular the GATS, are only applicable in the secondary emissions trading markets.

From these findings, it seems that differences between ‘allowances’ and ‘credits’ in their domestic legal context do not affect the analysis on the relationship between the emission trading system and the WTO-law. However, the definitions of ‘goods’ and ‘services’ in the WTO-law are evolving concepts resulting from further negotiation or jurisprudence. It also cannot be ruled out that national legislations on emissions trading might define these traded units as ‘goods’ or ‘services’ in certain way so that WTO framework will apply to such legislations. Under these circumstances, whether such differences between ‘allowances’ and ‘credits’ in their domestic legal context will affect the determination of ‘likeness’ in the context of WTO remains to be seen and awaits future observation.