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THE RECORDING OF EMISSION PERMITS ISSUED UNDER CAP AND TRADE SCHEMES IN THE NATIONAL ACCOUNTS

Clarification by the ISWGNA

This note provides a clarification on the treatment of tradable emission permits issued under cap and trade schemes, and published in this issue of the SNA News and Notes in accordance with the update procedures adopted by the United Nations Statistical Commission.

The *System of National Accounts 2008* (2008 SNA) does not fully address the recording of tradable emission permits. Paragraph 17.363 of the 2008 SNA provides a basic recommendation on their treatment, but recognised that further guidance is needed and therefore includes the issue in the 2008 SNA Research Agenda (2008 SNA, paragraph A4.47).

The Advisory Expert Group on National Accounts (AEG) at its meeting in November 2008 discussed the issue and recommended forming a Task Force to consider the treatment of emission permits in the national accounts. The Task Force was established by the OECD and Eurostat under the auspices of the ISWGNA.

The Task Force met twice in June and November 2009 and provided a final report to the ISWGNA in October 2010. The full report of the Task Force is available on the website of the ISWGNA at:

<http://unstats.un.org/unsd/nationalaccount/crlist.asp> and the OECD website at: <http://www.oecd.org/dataoecd/11/49/4642460>

[6.pdf](#). The Task Force took as its starting point the 2008 SNA and the results of the discussion at the AEG. The 2008 SNA recommends that payments for permits relating to emissions into the atmosphere should be recorded as taxes.

Paragraph 17.363 of the 2008 SNA says the following:

Governments are increasingly turning to the issuing of emission permits as a means of controlling total emissions. These permits do not involve the use of a natural asset (there is no value placed on the atmosphere so it cannot be considered to be an economic asset) and are therefore classified as taxes even though the permitted “activity” is one of creating an externality. It is inherent in the concept that the permits will be tradable and that there will be an active market in them. The permits therefore constitute assets and should be valued at the market price for which they can be sold.

The Task Force made considerable progress in understanding the operation of cap and trade schemes, though it also considered other types of permits, articulating their recording in the accounts of the 2008 SNA under various alternatives, including the international dimension of emission permits.

For ease of exposition, and to avoid confusion, the Task Force distinguished between instruments that do not need to be

acquired before emissions occur and are designed to restrict quantities of emissions, referring to such instruments as emission “allowances”; and instruments that needed to be acquired before emissions occurred and which did not necessarily directly restrict the quantity of emissions but rather restricted the quantity of operators engaged in emission activities, referring to such instruments as emission “permits”.

The ISWGNA took the view that whilst the distinction was necessary and useful for the Task Force deliberations, it was not necessary to introduce new terminology for “allowances” in the 2008 SNA, as long as it was recognised that the recommendations of the Task Force and the ISWGNA are explicitly in relation to emission permits issued under cap and trade schemes (which satisfies the Task Force criteria for allowances).

The Task Force concluded that, given the institutional arrangements in place for emission permits, only two of all the options that it considered to record emission permits issued under cap and trade schemes, had merit. Both these alternatives treat the payments for permits as taxes as recommended in the 2008 SNA, but with the taxes recorded on an accrual basis at the time of emission and paid by the emitters as taxes on production. However, the two alternatives differ in two respects (a) the value of the taxes and (b) the type of assets involved.

The first alternative records a prepayment of tax equal to the payment by a unit that acquires the permit at the time of issue. Thereafter, any difference between the market price and issue price represents a marketable contract (a non-financial non-produced asset) for the holder of the permit. At the time of emission, the value of the tax payment recorded is equal to the issue price. This approach therefore means that recorded taxes payable by an emitter for a given permit are equal to cash received by government.

The second alternative treats permits as financial assets sold by governments (which therefore incur matching liabilities). Capital transfers from government to acquiring units, equivalent to the market value of permits, are imputed when government provides permits for free or below market price. The tax

recorded in respect of a surrendered permit is equivalent to the market price of the permit at the time of emission.

Both alternatives have their merits but also their weaknesses; described in detail in the final report. In summary, the position of those who supported the first alternative reflected their desire that the taxes paid to government should reflect the cash received by government. Those supporting the second alternative took the view that this equality, whilst desirable, was not a constraining factor, and that all the transactions at the time the permit is issued, when the emission occurs and when the permits are surrendered, should be recorded at the appropriate market prices of the permits.

The Task Force could not make a unanimous recommendation and asked the ISWGNA to consider both alternatives in their recommendation to clarify the recording of emission permits issued under cap and trade schemes in the national accounts.

The ISWGNA reflected on the options taking into account the nature of schemes currently in operation and the possible evolution of these schemes over time. As such, the ISWGNA took into consideration the following criteria for deriving a conclusion:

- Data requirements;
- International comparability;
- Economic interpretability;
- Consistency with other parts of the SNA; and
- Creation of a new sub-category of financial/non-financial asset, tax and transfers related to emission trading schemes.

The ISWGNA did not restrict itself to a discussion of the preferred approaches of the Task Force, considering in addition, a cap and trade scheme arranged as a supra-national scheme.

In its discussions the ISWGNA recognised the merit of the supra-national approach, in so far as it removes the interpretative problems relating to government liabilities by moving the recording of taxes from the balance sheets of national

governments to the balance sheets of a supranational body. However ingenious it is, the ISWGNA recognised that it did not carry the support of the Task Force and equally created conceptual difficulties with the SNA rules relating to the allocation of taxes by level of government.

The ISWGNA took the view that none of the emission trading schemes currently in operation conceptually satisfies the requirements that an international body is the tax raising power. The view taken was that national governments collectively determined the allocation of permits to each other in the scheme and independently determined the allocation of revenues generated from the scheme. Nonetheless, even if such a scheme were to be developed in the future, the fundamental question of whether the permits should be treated according to either of the alternatives proposed by the Task Force remained.

In considering the two preferred options proposed by the Task Force, the ISWGNA recognised the presentational difficulties presented by both approaches for the accounts. The ISWGNA also came to the conclusion that if all permits were issued through auction the two alternatives would, in practise and assuming rational markets, deliver the same outcomes.

However the ISWGNA recognised that in the current situation, with the majority of permits being allocated for free, that the first alternative (the timing difference between cash received by government for the permits and the time of the emission gives rise to accounts receivable and payable (financial asset) and that the difference between the prepayment of tax and the market price of permits represents a marketable contract (a non-produced non-financial asset) for the holder) has some advantages over the second alternative. These advantages pertain in particular to government accounts, in so far as the approach minimises the imputations to be made in the accounts.

The ISWGNA recognised the possibility that the non-produced asset to be recorded under this approach could develop a negative value; albeit never in the case of permits provided for free. In addition, it was recognised that the first option has advantages

in the equivalence it placed on permits that are acquired via programmes such as the Clean Development Mechanisms embodied in the Kyoto Protocol.

Whilst, arguably resolving the presentational impact on the government accounts, it was recognised that the first alternative could cause problems in the accounts of companies surrendering permits if one took the opportunity cost view, from the company's perspective, of the value of the permit. One of these problems relates to the issue described in the report as the "indifference problem". In its simplest form, the recording of emission permits as pre-payment of taxes and also as marketable contracts could lead to different tax payments being recorded by a company surrendering a permit that was originally issued for free, rather than a permit that was initially sold by auction. This difference may even occur if the surrendering company paid the same price to acquire both permits from the market after they were issued.

Although recognising the problem related to indifference (which affects both of the two alternative approaches), it was also recognised that in practice it would be unlikely to pose a significant problem , as national accountants would determine average prices for surrendered permits, thereby introducing some equivalence in the value of permits when surrendered. The ISWGNA considered that the guidance provided in the report of the Task Force eliminates the problem of indifference and is also beneficial in the context of cross-border sales and purchases of permits in the Balance of Payments. The guidance provided by the Task Force on the indifference issue is therefore reflected in the clarification below.

The ISWGNA therefore provides the following **clarification of the recording of emission permits issued under cap and trade schemes in the national accounts:**

The payments for emission permits, issued by governments under cap and trade schemes, should be recorded at the time the emissions occur as taxes on production on an accrual basis. The timing difference between the cash received by government for the permits and the time the emission occurs gives rise to a financial liability (accounts payable)

for government and a financial asset (accounts receivable) for the holder. The difference between the pre-paid tax value of the permit and the market value of the permit represents a marketable contract (non-produced non-financial asset) for the holder.

The total financial liability of a government at any point in time, in respect of emission permits, is equal to the cash it has received through sales of the permits up to that point in time minus any taxes it has received through the surrender of these permits. The financial liability of that government to any particular permit that exists on the market (including those issued by other governments), which it has committed to accept, at surrender, as a tax payment for emissions that occurred within its jurisdiction, is equal to its total outstanding liabilities, in respect of emission permits, divided by the total number of outstanding permits; including those permits issued by other governments within the scheme - where governments have agreed collective responsibility to accept all permits.

For schemes where governments have agreed collective responsibility to accept all permits, the total value of the financial part of the permit is equal to the outstanding liabilities of all governments divided by the total number of outstanding permits. The value of the non-produced non-financial part of the permit is equal to the difference between the market price of the permit and the total value of the financial asset.

At the time of emission the tax receipt recorded by any government for a single permit is equal to the outstanding liability that government has in respect of that permit at that point in time. A tax on production to the Rest of the World is also recorded reflecting the extinguishing of liabilities owed by other governments (and the collective nature of the scheme) in respect of the permit. The non-produced non-financial part of the permit disappears as an "other change in volume".

Permits acquired via other mechanisms that confer the same benefits to the holder as those acquired from governments should be recorded and valued on the same basis as those permits issued by governments.

In conclusion the ISWGNA recognises that the approach for dealing with emission permits is not perfect but it has come to the view that it is the best of all the possible options at the present time; especially given the current background, where most permits are issued for free and where there is an explicit equivalence between permits issued under cap and trade schemes and those that can be acquired via other means, such as the Clean Development Mechanism. Cognisant of the fact that the recommendation retains some challenges, the ISWGNA recognises that the issue may need to be reviewed again in future, taking into account developments in the nature of cap and trade schemes that may occur in the longer term.

MEETINGS AND SEMINARS

9 to 11 February 2011, Government Finance Statistics Advisory Committee meeting, Washington D.C.

28 February to 2 March 2011, IMF/OECD Conference on Strengthening Position and Flow Data from the Macroeconomic Accounts, Washington D.C.

3 to 4 March 2011, ISWGNA Task Force on FISIM, Washington D.C.

12 to 15 April 2011, UNSD-ECA seminar on SNA implementation, Addis Ababa, Ethiopia

Editorial Note

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Following the completion of the 2008 SNA it was necessary to update the website of the ISWGNA. The updated website now include, in addition to information about the ISWGNA activities, a platform for monitoring the implementation of the SNA with links to the work programmes of the ISWGNA members and regional commissions; information about the research agenda of the SNA; and the activities of the AEG. The website is available at: <http://unstats.un.org/unsd/nationalaccount/iswgna.asp>. A searchable PDF copy of the 2008 SNA and earlier versions of the SNA are available at <http://unstats.un.org/unsd/nationalaccount/sna.asp>.

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