EU Effort Sharing Decision after 2020:

Auctioning of AEAs

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Discussion paper

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Content

List of Abbreviations

AEAs	Annual Emission Allocations
CER	Certified Emission Reduction
EEX	European Energy Exchange
ESD	Effort Sharing Decision
ETS	Emissions Trading System
EU	European Union
EUA	EU allowances
FI	Flexibility Instruments
ICE	ICE Futures Europe
MiFID	Markets in Financial Instruments Directive
TFEU	Treaty on the Functioning of the European Union

1. Summary

In October 2014 the **European Council decided to enhance the availability and use of existing flexibility instruments (FI)** under the Effort Sharing Decision (ESD). Auctioning of Annual Emission Allocations (AEAs) is one option to enhance flexibility. Auctioning could be designed in various ways but all proposals include a permanent platform on which Member States could bid and sell AEAs. The current ESD does not include such a permanent auctioning mechanism but allows Member States to auction AEAs *ad hoc* on the basis of specific agreements. Until now, Member States have not used this possibility.

AEA auctioning could have a number of advantages. Notably it could make price discovery more transparent, lower transaction costs and generate a price that is fair for both buying and selling Member States.

While the theoretical benefits of auctioning may be appealing, it is less clear whether Member States will actually be able to reap these benefits. To that end, Member States have to **give answers to a number of questions**:

- **Can Member States submit closed bids?** Budget and procurement rules raise questions to what extent Member States can submit closed bids – the most likely form of AEA auctioning:
    - **Budget rules:** Despite significant differences in details, budget rules in all EU Member States and the EU itself include the principle of transparency. This principle requires Member States and the EU to publish detailed information on expected income and planned expenditures in their annual budgets. To be able to submit closed bits, Member States must have a degree of discretion over the bid volume and price, which in turn requires confidential budget lines for AEA auctioning. These, however, could violate transparency requirements. Publically available budget lines that provide for ranges of admissible expenditures for AEA auctioning could address these concerns. Such publically available budgets would specify a maximum amount available for purchasing AEAs, maximum prices for AEAs and / or AEA volumes that the Member States intend to bid for. However, budgets that provide too rigid constraints on maximum AEA prices or volumes would make it impractical for Member States to participate in auctioning systems that use closed bids only: technically, they would still be able to submit a closed bit, yet practically, it would be common knowledge on the market what the content of this bid is, encouraging strategic bidding by other players.
    - **Procurement rules:** Closed bids could infringe public procurement rules that require Member States to publish and specify their intention to purchase specific contracts, goods or services. Member States are, however, not required to call for public tender if they intend to buy "supplies quoted and purchased on a commodity market" (Article 32.3.c) of Directive 2014/24 on public procurement). There is a strong argument that an AEA auctioning platform qualifies as such a market.

- **May Member States buy AEAs at any price and speculate?** Budget rules require Member States to use public funds thriftily and economically. The EU Financial Regulation, for example, stipulates that "appropriations shall be used in accordance with the principle of sound financial management". The content of this principle is vague but it determines that governments cannot buy AEAs at any price. The principle of sound financial management also requires Member States to avoid undue financial risks – in contrast to private investors. Speculative buying of AEAs, although not a likely government strategy, could breach this requirement.
- **What happens if the auction does not clear?** If the auction does not clear, there is no clearing price. Under the basic auction design, the last bid that clears the auction sets the clearing price that all successful bidders pay. There are various options to address this issue. Cancelling the auction and deleting all allowances is the most preferable option because it would be most effective in supporting mitigation efforts. Politically, the more likely solution is that the auction is cancelled, and the unsold allowances are returned free of charge to the Member States from whom they originated (which are then free to use them for compliance purposes, to trade or to delete them).
- **Is there sufficient liquidity in an AEA market?** There is a risk that AEA auctions would have insufficient liquidity because only 28 Member States of very different size would be participating in this market. This risk is further aggravated by the absence of 'market makers', as only Member States can hold AEAs. Because banks and other 'market makers' are important providers for liquidity in the ETS market, their absence from AEA trading could decrease liquidity even further. Liquidity could also shrink because Member States could use other flexibility mechanisms instead of auctioning. Bilateral AEA trades, borrowing and banking are other flexibility options that could be more convenient for Member States. To address these liquidity concerns, AEA auctioning is foreseen to require Member States to make available a small amount of AEAs for auctioning, possibly in the range of 1-2% of annual allowances. It remains to be seen whether such an amount will help ensure liquid markets (although it is clear that auctioning alone will not ensure liquidity).
- **Is an AEA market prepared to deal with market participants that have significantly different market powers?** ESD market participants would be of very different size and, as a result, would have considerably different market powers. The considerable difference in size between Member States may give rise to concerns that their market power creates an advantage for larger Member States. It is conceivable, for example, that larger Member States buy the entire auctioning volume with one single bid, forcing smaller Member States to buy bilaterally from other Member States. This risk is small, however, because such a strategy probably comes at a high price.
- **How real and how relevant is the risk of collusion and strategic bidding?** In a market between private entities, with 28 players and a relatively high concentration of market power, there would be a real risk of collusion – i.e. the risk that different bidders informally coordinate their bidding strategies to either capture or to boycott the market, to the disadvantage of other (usually smaller) bidders. Overall, however, this risk seems small because Member States are sensitive towards the political consequences of collusion.

2. Introduction

In October 2014 the **European Council** agreed on the framework for the EU climate and energy policy for the decade after 2020. As an important element of the new framework, the European Council agreed to continue the Effort Sharing Decision (ESD) – albeit with significant reform. The ESD reform includes a new target system where all Member States will be required to reduce emissions and none will be entitled to increase emissions. As another reform element the European Council decided to enhance the availability and use of existing flexibility instruments (FI).[1]

Auctioning of Annual Emission Allocations (AEAs) is one option to enhance flexibility, which seems to have initial support from some Member States. Auctioning could be designed in various ways but existing proposals suggest establishing a permanent platform on which Member States could bid and sell AEAs. Existing proposals also assume that auctioning would be mandatory, i.e. Member States would be required to set aside a specific amount of AEAs for auctioning (while participation in auctioning remains voluntary). The current ESD does not include such an auctioning mechanism. Recital 10 of the ESD only states that "transfers may be carried out in a manner that is mutually convenient, including by means of auctioning [...]". Accordingly, Member States could already today promote trading through auctioning but have not done so until now.

This paper is based on a previous report of the Ecologic Institute on enhancing flexibility under the ESD.[2] While the previous report analyses enhanced ESD flexibility in general, this **paper only discusses one option to enhance flexibility – auctioning of AEAs**. It focuses on recent proposals on how to design AEA auctioning. The paper presents possible design options for AEA auctioning in section 3. Sections 4 and 5 discuss advantages and challenges of AEA auctioning. Within its limited scope, the paper provides an overview of relevant issues. A number of issues will require a more in-depth analysis.

3. AEA Auctioning: How could it work?

In all likelihood a permanent AEA auctioning mechanism would mimic the **EUA auctions regularly held under the EU ETS** – with the crucial difference that a) volumes would be significantly lower and b) only Member States would be entitled to participate in the auctioning. Important design elements of the ETS that would be used for a new auctioning system for AEAs include:

- **Mandatory AEA amount put to auction**: Similar to the ETS, where a specific amount of allowances is made available for auctioning, an AEA auctioning mechanism would require

[1] European Council (2014): European Council Conclusions, 23/24 October 2014. EUCO 169/14, para. 2.12.
[2] Meyer-Ohlendorf, Nils (2015): EU Effort Sharing Decision after 2020: Project-Based Mechanisms and Other Flexibility Instruments. Berlin.

Member States to put a small part of their AEAs aside for mandatory auctioning. For example, 98% of AEAs would be directly allocated to Member States; the remaining 2% would be auctioned. As an alternative or addition, a compulsory system could require Member States to auction AEAs in case they have a surplus of AEAs, possibly above a specific threshold, i.e. AEAs exceeding this threshold would automatically be auctioned. This alternative is, however, problematic because it could impede overachieving a reduction target or meeting a domestic target that exceeds targets set by EU requirements. Such a system would make deleting surplus AEA more difficult because it would probably require the (unlikely) approval of the whole government, including Ministers of Finance. Under current rules, any surplus is automatically cancelled at the end of the period, unless the government decides to sell, transfer or delete the AEAs in question before.

- **Auctioning platform:** Today, there are two auction platforms for ETS allowances, the European Energy Exchange (EEX) in Leipzig and the ICE Futures Europe (ICE) in London. The EEX also acts as Germany's platform, the ICE as the UK's platform. In principle, these platforms could be used for AEA auctioning. As the EU registry holds the allowances, it could perform this function as well, with the European Investment Bank operating as a clearinghouse. This option has the advantage of avoiding involvement in a cumbersome tendering procedure.
- **Auctioning procedure:** According to the EU ETS Auctioning Regulation, ETS auctions are implemented as uniform price, single round, closed bid auctions.[3] That means all bidders submit their bids at once, without knowledge of their competitors' bids, and all successful bidders pay the same price (the market clearing price). Under the EU ETS, auctions are held daily. In the case of AEA auctions, because of the smaller volume of allowances and the smaller number of bidders, auctions would take place significantly less frequently. AEA auctioning could take place annually or biannually[4], which would reflect the current compliance cycle of the ESD. However, annual or biannual auctioning means that price information would only occur once or twice a year, which would undermine the price discovery function of auctions. This provides an argument for more frequent auctioning, possibly monthly or bimonthly (balancing the price discovery function against concerns about the administrative burden and market liquidity).
- **Cancellation of auctioning:** To ensure predictability of the auctioning system, auctioning should only be cancelled in specific and clearly defined circumstances. According to Article 7(6) EU ETS Auctioning Regulation, EU ETS auctions can be cancelled if the "clearing price is significantly under the price on the secondary market".[5] Auctions can also be cancelled "where the proper conduct of that auction is disrupted or is likely to be disrupted" (Article 9(1)). These exceptions are not transferable to AEA auctions: for these, a functioning, transparent and liquid secondary market cannot be assumed. However, auctioning of AEAs could be cancelled if demand is significantly lower than the auctioned amount, or if the price of the

[3] Commission Regulation (EU) No 1031/2010 of 12 November 2010 on the timing, administration and other aspects of auctioning of greenhouse gas emission allowances pursuant to Directive 2003/87/EC of the European Parliament and of the Council establishing a scheme for greenhouse gas emission allowances trading within the Community, Recital 17.
[4] Duijnhouwer, Frans (2015): Enhancing existing flexibility instruments to ensure cost-effectiveness, presentation, 21 May 2015, Brussels.
[5] The auction clearing price is significantly under the price on the secondary market prevailing during and immediately before the bidding window when taking into account the short term volatility of the price of allowances over a defined period preceding the auction.

highest bid is significantly below a specific, yet to be determined threshold (i.e. an auction reserve price).[6]

- **Use of revenues:** Similar to the ETS, there are various options how to use revenues. Revenues could go into the general budget, with no specific use earmarked. Member States could also be required to invest revenues in climate action. As another option, revenues could support climate action or other policies in poorer Member States or could feed into EU funds.

Relevant details of auctioning of ETS allowances

According to Article 10 ETS Directive, auctioning of allowances is the **standard allocation method** in power generation, unless the derogation of Article 10c applies. At this point, auctioning is the exception in industrial installations that received 80% of their allowances free of charge in 2013.[7] In principle, this amount should decrease to 30% in 2020; however, the vast majority of industrial emitters benefit from an exemption in Article 10b(12) ETS Directive as they are deemed to be exposed to the risk of carbon leakage.

The EU ETS Auctioning Regulation regulates the details of auctioning, including, for example, eligibility and admission of bidders, modification of auctioning, or administration of auctions:

- **Eligibility of bidders:** Article 18 EU ETS Auctioning Regulation determines the eligibility requirements for bidders. For example, buyers must be operators holding an operator account. Public bodies or state-owned entities of the Member States are covered. Investment firms and credit institutions, bidding on own account or on behalf of clients, must be authorised under the Markets in Financial Instruments Directive (MiFID) (Directive 2004/39/EC) or under the Credit Institutions Directive (Directive 2006/48/EC), respectively.[8]
- **Admission of bidders:** Potential bidders must comply with the admission requirements set out in Article 19 EU ETS Auctioning Regulation, including establishment in the EU (except for compliance buyers).
- **Modification of auctioning:** For transparent and predicable auctioning, the EU ETS Auctioning Regulation allows modification of the annual auction volumes and the bidding windows only in specific circumstances, such as the cancellation of an auction, the cessation of operation of an installation, adaptation of the level of free allocation or allowances remaining in the reserve for new entrants.[9]
- **Monitoring of auctioning:** The EU ETS Auctioning Regulation provides for third party monitoring. The auction monitor reports on the implementation to the Commission on behalf of the Member States and to the Member States concerned. Monitoring should give in particular respect to (a) fair and open access; (b) transparency; (c) price formation; and (d)

[6] Duijnhouwer, Frans (2015): Enhancing existing flexibility instruments to ensure cost-effectiveness, presentation, 21 May 2015, Brussels.
[7] European Commission (2015) Auctioning, http://ec.europa.eu/clima/policies/ets/cap/auctioning/index_en.htm.
[8] European Energy Exchange (EEX) (2012): Auctioning of Emission Allowances in EU ETS Phase III, guidance for Bidders, Integrating Carbon and Energy Markets, 2012, http://www.eex.com/blob/20696/78ddf2f22caedb117be6338a38356c75/eex-piiiauctions-guidance-pdf-data.pdf.
[9] Article 14.2.: "Where the manner in which a modification is to be implemented is not provided for in this Regulation, the auction platform concerned shall not implement that modification until it has previously consulted the Commission and obtained its opinion thereon. The auction platform concerned shall take the utmost account of the Commission's opinion."

technical and operational aspects (Article 25(1) EU ETS Auctioning Regulation).

The **Ministry of Infrastructure and Environment of the Netherlands** was the first to table a concrete proposal for AEA auctioning. The proposal explicitly builds on the EU ETS experience. In concrete terms, the Ministry proposed to auction a small part (e.g. 1% per year) of the total AEA budget. This part would be available for sale at an annual auction. Member States would be required to auction such a quantity but would not be required to place a bid at the auction. These allowances would remain the property of each Member State until they are transferred to the Member States that won the respective bids. The proposal suggests that AEA auctioning would use the EU ETS rules and format for auctions, including uniform price, closed bid, single round. Bids like in the ETS would be undisclosed and could be anonymised by the platform. According to the Dutch proposal, the EU Registry would be used to document and track AEA transfers. The mechanism would set a reserve price.[10] Revenues would be recycled to the Member States, in accordance with the auction price and number of AEAs they have contributed to the auction.

4. Advantages of AEA Auctioning

There are a number of **advantages of auctioning** that are also relevant for auctioning of AEAs:

- **Price discovery:** An auction is a suitable tool for establishing a common price in a situation in which no market price is known, for instance because trading only occurs in the form of occasional bilateral trades that will usually not disclose the price**.**
- **Guarantee of AEA availability:** Auctioning could in principle ensure that there is a certain amount of AEAs available on the market at all times (or at predictable intervals).
- **Transparency:** Auctioning creates greater transparency about who buys, from whom, and at what price. This information is usually not readily available if trading only occurs in the form of bilateral trades (unless parties are obliged to disclose such information).
- **Lower transaction costs:** Transaction costs of auctions will probably be below those of bilateral trading. Bilateral trading requires the negotiation of a bilateral agreement. This could be cumbersome in particular if the AEA price is contested. Only if Member States have gained more experience in transferring AEAs and agreements become more and more standardised, transaction costs would fall.
- **"Fair" price:** In principle, the cost of reducing emissions (the "marginal abatement cost") differs considerably across Member States. The auction price would be expected to lie somewhere in the middle of the abatement cost range. Member States that face high abatement costs for domestic emission reductions can avoid these by buying cheaper AEAs at an auction. For Member States in which the costs of domestic abatement are relatively low, auction revenues outweigh the costs of emission reductions. Like other flexibility and trading mechanisms, auctioning could help Member States to reduce emissions cost-effectively.

[10] Duijnhouwer, Frans (2015): Enhancing existing flexibility instruments to ensure cost-effectiveness, presentation, 21 May 2015, Brussels.

- **Initiating and enhancing trading:** Because auctioning would generate an AEA price in a transparent manner, auctioning could help initiate and enhance AEA trading – bilateral trades would probably recur to the average AEA prices generated through auctioning.

5. Questions related to AEA Auctioning

While the theoretical benefits of auctioning may be appealing, it is less clear whether Member States will actually be able to reap those benefits. To that end, Member States have to give answers to the following questions:

- Can Member States submit closed bid?
- May Member States buy at any price and speculate?
- What happens if the auction does not clear?
- Is there sufficient liquidity in an AEA market?
- Is an AEA market prepared to deal with market participants that have significantly different market powers?
- Is there a risk of collusion and strategic bidding?

5.1. Can Member States submit closed bids?

For AEA auctioning, **States would become bidders**. This is unusual. It is very common for governments to acts as auctioneers: the EU ETS allowance auctions are one example, but in fact most public procurement processes share features of an auction, wherein the state receives bids in public tenders and selects the most economical bid. But there are only a few examples where Member States or public entities are bidders in an auction – for instance where public museums bid for works of art.[11] For these reasons, public administrations are not experienced in participating in auctions, nor are the rules that govern public behaviour geared towards their role as a bidder.

Bidding by Member States is not only unusual but also raises a **number of legal issues**, in particular if auctioning of AEAs works on the basis of closed bids, the standard methodology in the ETS. Several rules and principles resulting from public budget rules and public procurement laws need to be taken into account.

Laws governing public budgets raise the following questions:

- **Transparency:** Despite significant differences in details, budget rules in all EU Member States and the EU itself include principles of transparency. Transparency rules require Member States and the EU to publish detailed information on expected income and planned expenditures in

[11] See, e.g. Der Standard (2003): Spanien ersteigert zwei Goya-Gemälde, http://derstandard.at/1294551/Spanien-ersteigert-zwei-Goya-Gemaelde.

their annual budget. If the amount that a Member State budgeted for AEA purchases is documented and publicly available, including to all other bidders, this defeats the purpose of closed bids. At the same time, concealing information on planned AEA expenditures could violate transparency requirements.

- **Completeness:** The principle of completeness requires that all expenditures and income feature in the budget. However, because AEA prices will not be foreseeable, the question arises whether public budgets may include ranges of admissible AEA prices and income from AEA sales.
- **Balanced budget:** Relevant rules require that the budget must balance revenues and expenditures, i.e. every expenditure must be covered by revenues, either generated by taxes, other forms of income or debt. Similar to the principle of completeness, a balanced budget would allow only ranges for AEA auctioning. If the AEA price exceeds the maximum budget range, the state may not bid.

However, these principles are subject to a **number of exemptions and flexibilities**. Most importantly, budget rules provide the executive with a certain degree of flexibility, and budgets usually work with ranges of admissible expenditures. The executive, for example, is not obliged to exhaust all budget titles, of course. Within the limits of the budget, the executive has its own political margin of discretion.[12] There are also budget rules that allow governments to exceed budget lines in emergency situations or other exceptional circumstances, which, however, do not apply to AEA auctioning. Defense or secret service budgets are other examples where transparency rules do not fully apply. In these instances, designated committees can ensure parliamentary oversight. These committees must comply with specific confidentiality rules.

In light of this legal background, **confidential budget lines for AEA auctioning** that are the basis for closed bids could violate these requirements. Such confidential budget lines are, however, an unlikely and unnecessary scenario. It is more plausible that national budgets would include **maximum amounts available for purchasing AEAs**, i.e. x Million € would be earmarked for AEA auctioning or other ways of buying AEAs. In addition, budgets could display maximum prices for AEAs and / or include AEA volumes that the Member States intend to buy through auctioning. Importantly, however, budgets that disclose maximum AEA prices and / or AEA volumes would make it impractical for Member States to participate in auctioning systems that use closed bids only. Technically, there is no problem with submitting a closed bid that complies with the pre-specified rules. In practice, however, competing Member States could anticipate the content of the bid in advance, and could respond by adjusting their own bids accordingly, defeating the purpose of a closed-bid auction. Even budgets that only include maximum amounts available for purchasing AEAs could make it difficult for Member States to submit closed bids because other government documents could include information on expected / admissible AEA prices and volumes or because budget discussions in national parliaments revealed bid contents.

[12] Sachs, Michael (2007): Grundgesetz, Kommentar, 4. Edition, Article 110 GG, paras. 28, 63.

CER Purchase Programmes

Several EU Member States have bought ERUs and CERs, typically on the basis of bilateral contracts between the selling and buying country. Because of confidentiality clauses, these bilateral contracts were generally not public (until a certain date). The price used in these transactions was established on the basis of the secondary market price. In the case of Belgium, financial inspectors screened the CER purchase, before the council of ministers gave the final approval of the CER purchase.

In this sense, there are similarities between CER/ERU purchases and possible approaches to AEA auctioning. In both cases, Member States acquire certificates on a legal basis that is partly confidential. However, there are also important differences: above all, CER and ERU transactions were based on bilateral contracts, negotiated for each specific deal. The process allowed sufficient time for financial audits and approval at higher political level. If this level of scrutiny were to be applied to auctioning, the result would be relatively high administrative costs and a drawn-out procedure. This might defeat the purpose of auctioning – to distribute allowances in the most efficient way.

In addition to these questions stemming from budget rules, **public procurement law** raises other legal issues. In principle, contracting authorities have to publish and specify their intention to purchase specific contracts, goods or services, as laid down in pertinent EU directives and national laws. In Germany, for example, § 97.1 of the Act against Restraints of Competition (GWB) stipulates that "contracting entities shall procure goods, works and services […] by way of *transparent* award procedures". Other rules require that calls for tender specify unequivocally and exhaustively the subject of procurement.[13] These rules transpose requirements of pertinent EU directives into national law. They can be found in all Member States – in principle.

According to EU Directive 2014/24 on public procurement[14], these rules are applicable if the **auctioning of AEAs constitutes procurement** within the meaning of the directive. Pursuant to Article 1 of the Directive, procurement is "the acquisition by means of a public contract of works, supplies or services by a contracting authority from economic operators". Even if AEAs qualify as "supplies" and selling Member States qualify as "economic operator" within the meaning of Article 1, it is noteworthy that respective transparency rules do not apply to "supplies quoted and purchased on a commodity market" (Article 32(3)(c)). Specifying this provision, recital 50 of the Directive states that "a procurement procedure is not useful where supplies are purchased directly on a commodity market, including trading platforms for commodities such as agricultural products, raw materials and energy exchanges". In these cases public procurement is not necessary because "the regulated and supervised multilateral trading structure naturally guarantees market prices" (Recital 50). Given its novelty, it is not established whether an AEA auctioning platform could qualify as such a market. There is a strong argument, however, that it would because it is the very purpose of the platform to

[13] e.g. § 7 (EG). 1 VOB/A, A Solbach, Markus; Bode Henning (2015): Praxiswissen Vergaberecht, p. 16.
[14] Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement.

guarantee transparent market prices. It could also be argued that Article 12 exempts an AEA auctioning platform from Directive 2014/24.[15]

Member States cannot avoid these legal issues by **commissioning a private agency** to bid on their behalf. Private agencies may be subject to procurement laws to the same extent as official public entities, depending on the circumstances.[16] Under the German Act against Restraints of Competition, for example, the relevant concept of the contracting authority is subject to a functional rather than a formal interpretation. Accordingly, private entities that are in fact financially or structurally dominated or governed by public entities are put on par with traditional public contracting authorities. Such a functional approach ensures that the state does not circumvent procurement requirements by outsourcing specific functions and duties.[17]

5.2. May Member States buy at any price and speculate?

In the EU market, i.e. the carbon market associated with the EU ETS, there are a **number of different participants** who pursue different strategies. Participants range between pure 'compliance traders', who will only purchase once a year to cover an existing shortage of allowances, and financial investors and speculative traders, who do not have any compliance obligations themselves, and who only enter into the market in anticipation of rising (or falling) prices. The majority of trading is carried out by the trading desks of big emitters, who cover the compliance needs of their company, and use forward trading to hedge against market risks. This variety of market actors, including speculative traders as 'market makers', is essential for high levels of liquidity and transfers, both in EU ETS auctions and in the secondary market.

This raises the question **to what extent a market purely between governments can assume the variety of functions that private market actors fulfil**, including speculative traders as 'market makers'. Could the AEA market function well when only governments participate while essential market facilitators are absent? The following issues seem to impede such a facilitating role for governments and make it unlikely that Member States will engage in speculative buying:

- **Principle of sound financial management:** National governments and the EU institutions are obliged by national and EU budget rules to use tax payers' money in accordance with the principle of sound financial management. Article 30.1 of the EU Financial Regulation, for

[15] Article 12 states that a „contract concluded exclusively between two or more contracting authorities shall fall outside the scope of this Directive, where all of the following conditions are fulfilled:
(a) the contract establishes or implements a cooperation between the participating contracting authorities with the aim of ensuring that public services they have to perform are provided with a view to achieving objectives they have in common;
(b) the implementation of that cooperation is governed solely by considerations relating to the public interest;
and (c) the participating contracting authorities perform on the open market less than 20 % of the activities concerned by the cooperation."
[16] BMWi, Öffentliche Aufträge und Vergabe, http://www.bmwi.de/DE/Themen/Wirtschaft/Oeffentliche-Auftraege-und-Vergabe/uebersicht-und-rechtsgrundlagen.html.
[17] Solbach, Markus and Bode, Henning (2015): Praxiswissen Vergaberecht: Die aktuellen Grundlagen, p. 35.

example, stipulates that "appropriations shall be used in accordance with the principle of sound financial management, namely in accordance with the principles of economy, efficiency and effectiveness".[18] This principle requires governments to spend thriftily and economically. This is a vague principle but it determines that governments cannot buy AEAs at any price – even within the limits of the budget.[19] Although practically there are few incentives for governments to engage in overly risky transactions, budget rules set governments limits that private investors do not have to meet.

- **Custodian of tax payers' money:** Related to the principle of sound financial management, Member States are the custodians of tax payer money. For this reason they have to spend tax money thriftily and have to avoid undue financial risks. Speculative buying of AEAs could breach these requirements. Governments cannot engage in speculative buying of AEAs as private traders could.
- **What are the incentives for governments to buy at the lowest price?** Most national budgets function on an annual base. Generally, budget allocations must be spent within the budget year; otherwise the budget expires and is of no use for the respective ministry or agency anymore. Under these circumstances, it is questionable what incentives government agencies actually have to buy at the lowest possible price: for the government as a whole, saving money is desirable – but how, in practical terms, will the individual government agency charged with AEA acquisition be rewarded for saving money by purchasing AEAs at least cost? If this problem of split incentives cannot be resolved, it is questionable whether AEA auctioning would actually achieve one of its fundamental purposes – to help reduce emissions as cheaply as possible.

Principle of Sound Financial Management: EU Budget Rules

Basic EU budget rules are enshrined in the Treaty on the Functioning of the European Union (TFEU) and the Financial Regulation. They resonate in large parts rules that are common in the Member States. Article 310(1) TFEU requires that all items of revenue and expenditure are included in the budget. Article 310(5) determines that the budget is "implemented in accordance with the principle of sound financial management". The Financial Regulation specifies the principles of unity and budgetary accuracy (Article 8)[20], the principle of sound financial management (Article 30)[21] and the principle of transparency (Article 34)[22]. Similar to national rules, there are exceptions to these general principles.

[18] Regulation (EU, Euratom) No 966/2012 of the European Parliament and of the Council of 25 October 2012 on the financial rules applicable to the general budget of the Union and repealing Council Regulation (EC, Euratom) No 1605/2002, http://ec.europa.eu/smart-regulation/evaluation/docs/syn_pub_rf_mode_en.pdf.

[19] The principle of sound financial management is further specified by the minimal and the maximal principle. According to the former, a certain objective needs to be met at the lowest possible cost. The maximal principle stipulates that any expense must lead to the best possible result. For example, the examination regulations of the German Federal Court of Audit (§4 para. 3) requires an examination whether the most advantageous ratio between the pursued objective and the used resources has been achieved and assesses whether the amount of resources used was necessary to meet the objective. In line with these principles, the procurement contract is awarded to the most economically advantageous offer, not the cheapest.

[20] Article 8 Financial Regulation (Specific rules on the principles of unity and budgetary accuracy):
1. Without prejudice to Article 83, no revenue shall be collected and no expenditure effected unless booked to a line in the budget. 2. No expenditure may be committed or authorised in excess of the authorised appropriations.

[21] Article 30 Financial Regulation (Principles of economy, efficiency and effectiveness):
1. Appropriations shall be used in accordance with the principle of sound financial management, namely in accordance with the principles of economy, efficiency and effectiveness.

5.3. What happens if the auction does not clear?

While auction clearing may sound like a technicality of auction design, this design element of the auctioning process has wider implications for climate policy: what **should happen if an auction does not clear**, i.e. if the total amount of AEAs that Member States bid for is lower than the amount available for auctioning? Such a situation could emerge, for instance, if the EU as a whole overachieves its emission reduction target, and hence Member States simply do not need all the AEAs that are up for sale. The situation may also be the result of strategic bidding or even a boycott of the mechanism – if, for whichever reason, Member States who would actually need to buy AEAs choose not to place bids.

If the auction does not clear, one immediate effect is that there is **no clearing price**. Under the basic auction design discussed in chapter 3 (uniform-price, closed-bid, single-round auction, as currently implemented in EU ETS auctions), the last bid that clears the auction sets the clearing price that all successful bidders pay.

If the auction does not clear, the question is **what should happen to the bids placed, and to the unsold allowances**. Five options are conceivable:

1. **AEAs are deleted**: The auction is cancelled, and all allowances are deleted. Bidders would then simply bid at the next auction, until the auction clears again. The deletion of allowances reduces the total AEA supply – i.e. a genuine overachievement of the emission reduction target.
2. **AEAs are carried forward:** The auction is cancelled, and all allowances are carried forward to the next auction (the solution in place for EU ETS auctions). That would leave the total supply of AEAs unchanged, i.e. it prevents an overachievement of the emission reduction target. One consequence is that the supply of allowances at subsequent auctions would be correspondingly higher, which makes it less likely that these auctions would clear. If EU aggregate emissions lie far enough below the trajectory, the surplus could be shifted for a prolonged period.
3. **Combination of deleting and carrying forward AEAs:** In principle, any combination of 1 and 2 is conceivable – the auction is cancelled, and some but not all allowances (20%, 50%, 80% …) are carried forward to the next auction, the rest is deleted. It is also possible that the share of allowances for which bids were placed determines the share of allowances that is carried forward.

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2. The principle of economy requires that the resources used by the institution in the pursuit of its activities shall be made available in due time, in appropriate quantity and quality and at the best price.
The principle of efficiency concerns the best relationship between resources employed and results achieved.
The principle of effectiveness concerns the attainment of the specific objectives set and the achievement of the intended results.

[22] Article 34 Financial Regulation (Publication of accounts, budgets and reports):
1. The budget shall be established and implemented and the accounts presented in accordance with the principle of transparency.
2. The President of the European Parliament shall have the budget and any amending budget, as definitively adopted, published in the Official Journal of the European Union. The budgets shall be published within three months of the date on which they are declared definitively adopted.

4. **AEAs are returned to Member State:** The auction is cancelled, and unsold allowances are returned free of charge to the Member States from whom they originated (which are then free to use them for compliance purposes, to trade or to delete them).
5. **Auction is not cancelled:** The auction is *not* cancelled. Instead those allowances for which bids were placed are sold; the remaining AEAs are deleted or carried forward. Since there is no clearing price, it would be determined by the lowest price bid or a predetermined reserve price – which could be very low.

While all options are feasible, **option 1 is the most preferable** because it is best equipped to support mitigation efforts. Option 4 is more likely to gain broad support as it gives the Member States control over unsold AEAs. Both 4 and 5 are susceptible to strategic behaviour and / or collusion. In the case of 4, for instance, there is the possibility that large Member States would agree not to bid, in order to receive the allowances free of charge. The obvious risk of this strategy is that any other Member State that is not part of the collusion agreement could clear the market by simply placing a large bid at a low price – provided that Member States are indeed (legally and organisationally) capable of such strategic behaviour.

5.4. Is there sufficient liquidity in an AEA market?

Because only Member States would participate in AEA auctioning, it is considerably different from auctioning under the ETS Directive. It is possible that a market of this type would run into problems of insufficient liquidity:

- **Limited number of market participants:** Under the ESD, only Member States are entitled to hold AEAs, no other entity (including private traders) has this right. This is different from the ETS, where any (registered) account holder can participate in the auctioning of EUAs. This increases the number of potential market participants to several hundred, and thereby leads to a more liquid market, which is less prone to manipulation or strategic behaviour. It should be noted, however, that there are on average only 15 bidders in the EUA auctioning on the primary market on the joint auctioning platform.
  In contrast, auctioning of AEAs would take place in a market with only 28 Member States, i.e. a very small number of market participants. Several countries would not be buyers since they are in compliance with their targets, which would reduce the number of market participants even more. For this reason it is possible that only a small number of Member States would be interested in buying or selling AEAs, reducing the number of market participants further.
- **All Member States short of allowances after 2020?** In contrast to the period 2013 - 2020, there are estimates by Climate Strategies that all Member States will be short of allowances after 2020 (before trading). [23] Climate Strategies calculated three scenarios for the decade of

[23] Sartor, Oliver (IDDRI), Istvan Bart (MEHI), Ian Cochran (CDC Climat), Andreas Tuerk (Joanneum) (2015): Enhanced flexibility in the EU's 2030 Effort Sharing Agreement: issues and options, Discussion paper, March 2015.

2020 - 2030. In all three scenarios, demand is larger than the supply before abatement efforts. Even in the Low Emissions Scenario the demand surplus would amount to around 110 MtCO2eq, and demand could be relatively high in the Medium and High Emissions Scenarios (between 360-600MtCO2eq). Against this backdrop, AEA trading could become more difficult after 2020.

- **Member States different from ETS market participants:** ETS market participants are profit-maximising entities that regularly engage in trading of other types of commodities – not only carbon, but also inputs (fuels) or outputs (e.g. electricity). In the case of AEA auctions, in contrast, the market participants are Member States that have to meet specific reduction targets and that operate in a political context, but otherwise have little exposure to trading. Compliance considerations and the political context can diminish incentives to trade and reduce liquidity (further). Budget and procurement requirements probably make Member States more risk averse than private entities.
- **Absence of 'market makers':** As only Member States can hold AEAs, banks or other traders cannot buy or sell AEAs. In the market for EUAs, in contrast, banks and other traders play a significant role as 'market makers': particularly under the current surplus conditions, many compliance entities (i.e. emitters) have covered their needs and are not very active in the market. Especially in constellations like these, banks and trading companies have an important function insofar as they buy EUAs at low cost, either in the expectation of being able to sell them at higher cost, or acting on behalf of compliance entities. Because banks are an important provider of liquidity in the ETS market, their absence from AEA trading could decrease liquidity.
- **Auctioning only one flexibility tool out of various others:** In all likelihood, auctioning would not be the only flexibility option. Borrowing and banking are other flexibility options that are set to continue after 2020. Auctioning is unlikely to exclude bilateral trades or a project mechanism. It is not clear how Member States will use these different options but it is possible that they are more convenient for Member States and will "compete" with auctioning.

5.5. Is an AEA market prepared to deal with market participants that have significantly different market powers?

ESD market participants would be of very different size and, as a result, would have considerably **different market power**. Some Member States account only for a tiny share of emissions, while others account for 16% and more. Taken together, the five biggest emitters under the ESD (Germany, France, UK, Italy, and Spain) accounted for roughly 60% of ESD emissions.[24] In the ETS

[24] 2013/162/EU: Commission Decision of 26 March 2013 on determining Member States' annual emission allocations for the period from 2013 to 2020 pursuant to Decision No 406/2009/EC of the European Parliament and of the Council (notified under document C(2013) 1708), http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32013D0162; In 2015, five Member States (MT, CY, LU, EE, LV) each

market, purchasing power of market participants does not vary as significantly. The considerable difference in size between the Member States may give rise to concerns that their market power creates an advantage for larger Member States. It could also raise concerns over market manipulation by larger Member States. It is conceivable that larger Member States could buy the entire auctioning volume with one single bid, forcing smaller Member States to buy on the secondary market (i.e. bilaterally from other Member States). **This risk is, however, small because such a strategy probably comes at a high price**.

5.6. Is there a risk of collusion and strategic bidding?

In a market between private entities, with 28 players and a relatively high concentration of market power, there would be a real **risk of collusion** – i.e. different bidders that informally coordinate their bidding strategies to either capture or to boycott the market, to the disadvantage of other (usually smaller) bidders. Applying this lesson to AEA auctioning, several large Member States could agree on a relatively high price in order to clear the entire market, and then re-sell the AEAs at an even higher price. There is also the possibility that large Member States agree not to place a bid, thereby preventing the market from clearing. Whether this is an attractive strategy would obviously depend on what happens to the unsold allowances (see 5.3 above).

The question arises whether such a **scenario is realistic**. On the one hand, reasons suggesting that such scenario is realistic are the frequent informal contacts between Member States, which cannot be monitored effectively, and which would provide an easy platform to prepare such collusion. In an effort to achieve a low clearing price, large Member States could agree to bid jointly on low prices. On the other hand, it is questionable whether Member States are in fact willing and capable of such strategic behaviour, i.e. whether they have the legal mandate, the political chutzpah and the organisational capacities, or decision-making structures to enter into such deals in a credible way. It should also be noted that the incentives for collusion are comparatively small because auctioning of AEA will only be a small part of a larger AEA market. In sum, collusion seems to be an unlikely scenario, also because the political damage of such behaviour could be large.

An alternative scenario that requires less ill meaning, but is therefore perhaps more likely, is **unintentional collusion**, i.e. without an explicit agreement on a bidding price. A conceivable situation would be that one or more Member States adopt a very static, and therefore predictable, bidding strategy: bidding for the same volumes and at the same price – for instance because it operates in the confines of a rigid budget, or restrictive rules for the use of public funds. If all bids are published after the auction, this would become evident soon – and even if bids are not published, a very rigid, repetitive bidding strategy by a large enough Member State could be inferred from the auction results over time. Once this behaviour is discovered, other (more flexible

accounted for less than 10 million tons of ESD emissions, or less than half a percent of total EU emissions covered by the ESD, while Germany alone accounts for almost 500 million tons (16% of the EU total).

and more strategic) Member States could adjust their strategies accordingly, and thereby rig the market to their favour.

In any case, some of the risks related to **strategic bidding behaviour could be limited through the use of an auction reserve price**, i.e. a fixed price limit below which the auction cannot clear. The function of this price would be to prevent fraud and limit strategic behaviour, rather than to establish a floor price. For this reason, a relatively low reserve price would already be sufficient to limit the risk that more speculative Member States exploit a situation of low demand, and buy up a large chunk of the auctioned amount at nearly no cost (e.g. bidding a cent per ton).

Another type of strategic behaviour that is more difficult to control would be a **quasi-opt out**. In this scenario, Member States would place a bid at an extremely high price (e.g. several hundred Euro per ton), for an amount of allowances that corresponds exactly to the amount deducted from their own national AEA budget before auctioning. In this way, they would be sure to be among the successful bidders – at whichever price the auction clears. The clearing price would be irrelevant, since they would effectively buy back "their" AEAs, and receive the corresponding share of the auctioning revenue. In financial terms, this would thus amount to a zero-sum game. Effectively, this strategy amounts to an opt-out by the Member State in question.

There are at least **two caveats**, however, related to the feasibility of this approach.

- First, it assumes that there is no legal or procedural hurdle which prevents the government agency placing the bid from bidding at an extremely high price. Irrespective of the fact that, for the country as a whole, the strategy amounts to a zero-sum game, the fact that different government agencies might be involved in spending on the purchase of AEAs and receiving the revenue from the auction could already create problems in practice.
- Second, the strategy increases the risk that the auction will not clear: to begin with, the strategy is more attractive for a Member State that expects to have an overall shortage of AEAs to cover its emissions. For a Member State that already expects to have a surplus of AEAs, placing a high-price bid to acquire even more AEAs would be technically possible, but logically nonsensical. This could mean that the strategy reduces demand from would-be buyers only. If a certain number of potential buyers adopt this strategy, it increases the risk that the auction does not clear. Whether this risk acts as a deterrent depends on what happens if the auction does not clear (see **Error! Reference source not found.** above). If it simply means that unsold allowances are returned to the Member States, it will not a have a deterring effect. If, by contrast, a non-cleared auction results in the cancellation of all allowances from that auction, it would be an effective deterrent.

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