CARBON EMISSION ALLOWANCES – FINANCIAL INSTRUMENTS
TRADED ON CAPITAL MARKETS

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Abstract: The carbon dioxide allowances trading market has rapidly developed over the past years, having a tendency to maintain such development pace in the future as well. An issue in dealing with climate change is deciding who has the right to emit CO₂ and under what conditions, when those emissions are limited. The European Union Emissions Trading Scheme is the world’s first large experiment with an emission trading system for carbon. The Commission would like to see reforms made to the European mechanism to reduce costs, improve its efficiency and environmental effectiveness and help more countries participate in the carbon market.

Key words: carbon emission allowances trading, allowances allocation, carbon market, EU ETS

JEL classification: G15, G17, L17, Q52, Q56

1. Carbon emission allowances – transferable financial instruments

The information regarding both carbon emission allowances and the European Commission Plan for reducing emissions was abundant over the past two years.

1.1. Greenhouse gas emission allowances characteristics

Carbon emission allowance is defined by the Directive 2003/87/EC of the European Parliament and of the Council establishing a scheme for greenhouse gas emission allowance trading within the Community. The provisions of the Directive were transferred in the Romanian legislation through Government Decision No.780/2006 establishing a scheme for greenhouse gas emission allowance trading; such legislative act defines carbon emission allowances as a title which gives the right to emit one tonne of carbon dioxide equivalent during a specified period, which shall be valid only for the purposes of meeting the requirements of the specific legislation.

Installation means a stationary technical unit where one or more activities listed in the Directive’s Annex are carried out and any other directly associated activities which have a technical connection with the activities carried out on that site and which could have an effect on emissions and pollution.

The operator of the installation means any person who operates or controls an installation or, where this is provided for in the national legislation, to whom decisive economic power over the technical functioning of the installation has been delegated.

For each period established by the Directive, each Member State shall develop a national plan stating the total quantity of allowances that it intends to allocate for that period and how it proposes to allocate them. The plan shall be based on objective and transparent criteria, taking due account of comments from the public.

Concerning the method of allocation, for the three-year period beginning January 1st, 2005, Member States shall allocate at least 95 % of the allowances free of charge. For the five-year period beginning January 1st, 2008, Member States shall allocate at least 90 % of the allowances free of charge.

In order for greenhouse gas emission allowances and derivatives based on them to be admitted for trading, we have analyzed their characteristics from a legal point of view and we have come to the conclusion that greenhouse gas emission allowances are claim rights.

A claim right is a patrimonial right according to which the right-holder, that is the asset subject – the creditor – is entitled to require that the named debt subject – debtor – give, perform or not perform a certain action.

The greenhouse gas emission allowances characteristics and the criteria establishing the nature of claim right are: opposability – opposable to state authorities, the content of the obligation is not to perform an action, respectively not to emit greenhouse gas, while the relation may be regarded as a direct relation between persons. Thus, greenhouse gas emission allowances give their holder a claim right in which the debtor (state authorities) has the obligation to refrain from stopping the right-holder (creditor) to emit a certain amount of carbon dioxide over a specified period of time.
The definition of the greenhouse gas emission allowances results in the conclusion that such allowances are standardized – they give the respective rights for a certain period of time, while the rights have the same “value” (the right to emit a tonne of carbon dioxide).

In view of including greenhouse gas emission allowances in the financial instruments category or in the goods category, the following aspects should be taken into account:

a) the nature and the rights greenhouse gas emission allowances give;
b) the possibility of standardizing greenhouse gas emission allowances;
c) comparing the characteristics from points a) and b) with the characteristics of goods and financial instruments.

Financial instruments have the following characteristics (cumulatively): they give their holders claim rights over the issuer or the central counterparty, and are standardized in order to give their holders equal rights over the issuers and in order to be susceptible to being traded on a regulated market.

As regards goods, they have the following characteristics (cumulatively): they give the holder an absolute right over a good that is useful to people and which can be subject to a patrimonial right (has an economic value), and are goods resulting from production or operation activities.

The analysis of greenhouse gas emission allowances results in the following characteristics:

- give the holder the right to emit a tonne of carbon dioxide equivalent during a specified period (claim right);
- are standardized – give the holders equal rights regarding the emission of carbon dioxide during a specified period.

Analyzing greenhouse gas emission allowances leads to the conclusion that such allowances fall under the category of financial instruments, while their trading on a regulated Romanian market depends on the compliance with the provisions of the Law No.297/2004 regarding capital market and the related regulations. Moreover, considering that gas emission allowances give their holder a claim right, being regarded as government-backed securities, we believe that – taking into account the national regulations and the Directive 2004/39/EC on markets in financial instruments (MiFID) – such allowances are securities.

1.2. European Union Carbon Emission Allowances

Carbon trading markets are not markets on which greenhouse gas is physically traded, but financial markets on which the following are traded: the right to emit a quantity of carbon dioxide (carbon dioxide emission allowances - EUA) and the proof to the fact that the emission of a certain quantity was avoided (certified emission reductions - CER).

Carbon emission certificates, herein referred to as EUA (European Union Allowances), as defined by the Directive EU ETS (Directive 2003/87/EC), are issued for installations that have a maximum limit for emissions under the EU Emissions Trading Scheme (EU ETS). The installation must have and send EUA and/or the carbon credits equivalent to the monitored carbon dioxide emissions until the annual reconciliation date. Each EUA unit is equal to the equivalent of a carbon dioxide metric tone.

Given the importance of the allocation process to the overall efficiency of any potential emission trading scheme, the process of allocating the carbon emission allowances (EUAs) in Europe has attracted world-wide attention.

EUAs are government-backed securities, issued and distributed by Member States governments according to the National Allocation Plans approved by the European Union. It is envisaged that National Allocation Plans be dropped starting with 2013 and a European Allocation Plan be used.

1.3. European Union Emissions Trading Scheme

The European Union Emissions Trading Scheme (EU ETS) is an institutional effort by the European Union to fulfil the obligations undertaken under the Kyoto Protocol. The EU ETS currently covers over 10,000 energy consuming facilities in the 27 member states. The Emissions Trading Scheme is not only a mandatory environmental requirement, but also an instrument to stimulate the competitiveness of the installations that are part of it.

On January 1st, 2005, the EU Emissions Trading Scheme was officially launched, only two years after the European Council adopted the EU Emissions Trading Directive (European Community, 2003). As a consequence of this formal start, the world’s largest ever market in emissions has been established, and European companies now face a carbon constrained reality in the form of legally binding emission targets. Within essentially one year, 2004, the international carbon market has gained momentum through
major policy developments and quick market responses, which among others have enabled the establishment of a framework for the EU carbon market.

In order to make sure that real trading emerges (and that CO$_2$ emissions are reduced), EU governments must make sure that the total amount of allowances issued to installations is less than the amount that would have been emitted under a business-as-usual scenario. For each Phase, the total quantity to be allocated by each Member State is defined in the Member State National Allocation Plan (NAP). The first and foremost criterion set out in the Directive is that the proposed total quantity is in line with a Member State's Kyoto target.

During Phase I, most allowances in all countries were given freely. This approach has been criticized as giving rise to windfall profits, being less efficient than auctioning, and providing too little incentive for innovative new competition to provide clean, renewable energy.

In the first phase (2005-2007), the EU ETS includes some 12,000 installations, representing approximately 40% of EU CO$_2$ emissions, covering energy activities (combustion installations with a rated thermal input exceeding 20 MW, mineral oil refineries, coke ovens), production and processing of ferrous metals, mineral industry (cement clinker, glass and ceramic bricks) and pulp, paper and board activities.

The second phase (2008-2012) expands the scope significantly: greenhouse gas reduction commitments are introduced and three non-EU members - Norway, Iceland and Liechtenstein - join the scheme. Aviation emissions are expected to be included from 2012. The inclusion of aviation is estimated to lead to an increase in demand of allowances about 10-12 million tones of CO$_2$ per year in phase two. According to verified EU data from 2008, the ETS saw an emissions reduction of 3 per cent, or 50 million tons, but it also included at least 80 million tons of “carbon offsets” which were bought as part of the scheme.

From the start of Phase III (January 2013) there will be a centralized allocation of permits, not National Allocation Plans, with a greater share of auctioning of permits.

In a first phase, allowances will be allocated per economy sectors of activity and then per installations that emit carbon dioxide. Subsequently, companies can sell and buy emission allowances based on how they achieve pollution targets.

Carbon credits are retired once used to demonstrate compliance with a scheme, and so cannot be ‘used twice’. In the case of offsets, these credits are retired by the organisation wishing to demonstrate carbon neutrality.

Carbon credits are used by project developers as an additional revenue flow to the project. They also have value as collateral for loan finance, or to strengthen the financial structure of a project through sale to investment grade carbon purchasers.

Currently, the EU ETS only covers 45% of the carbon dioxide emissions at the level of the European Union, while 25% of the emissions that are not covered are produced by the transport sector, and 20% of greenhouse gas emissions are not carbon dioxide.

2. Carbon emissions trading in Europe

The trading market for CO$_2$ allowances has rapidly developed over the past years, having a tendency to maintain such development pace in the future as well, given the interest by the authorities in developing this market at European and international level as a way of actively responding to the climate change problem.

2.1. Allowances trading mechanism

Starting with January 1st, 2008, the National Allocation Plan establishes – for a period of five years and for each subsequent period of five years – the total number of greenhouse gas emission allowances allocated for the respective period and the total number of greenhouse gas emission allowances allocated to operators for each installation.

Following the approval of the National Allocation Plan, each operator must open an account with the greenhouse gas emissions National Registry through which greenhouse gas emission allowances held by every person are recorded, as well as all transactions with such allowances; all transactions are made electronically.

Greenhouse gas emission allowances can be transferred: between persons from member states of the European Community and persons from third-party countries, other than those belonging to the European Community, provided the greenhouse gas emission allowances are mutually recognized, based on international agreements.
Until the 30th of April each year, at the latest, each installation’s operator has the obligation to give back a number of greenhouse gas emission allowances equal to the total amount of greenhouse gas emissions discharged by the respective installation during the previous calendar year, based on the monitoring report analyzed by a certified independent verifier, while these allowances are subsequently cancelled. Greenhouse gas emission allowances may be cancelled at any moment, upon request by the person who owns them.

Regarding the EUA trading method, the two markets must be taken into consideration: the primary market and the secondary market.

So far, on the primary market EUAs were allocated free of charge by state authorities to the recorded polluters, according to the Annual Allocation Plan. By revising the Directive ETS, the European Commission has proposed that starting with 2012 the main allowances allocation method be auctioning.

On the secondary market, EUA trading is made both outside the regulated market (OTC) and on regulated markets. In 2006, the proportion regulated markets/OTC was ¼, while currently the proportion of trading on OTC markets is around 80%.

The main factors influencing the EUA price are: contract maturity and the number of allocated contracts.

Contract maturity slightly influences the EUA price. Considering that the EUAs from the first phase could not be transferred to the second phase, the EUAs allocated during 2005 - 2007 became valueless during the last 6 months of 2007. Contract maturity is conventionally defined; it does not depend on the characteristics of the supporting asset, as in the goods’ case, and can only be modified by the European authorities.

Considering that during the first phase a greater number of EUAs was issued and allocated than it was necessary to cover the needs of the polluting industries, the EUA price dramatically decreased towards the end of 2007. The over-allocation generates a decrease in the price, while under-allocation leads to an increase in the EUA price and to the significant diminishing of the polluting industries’ profit.

The number of EUAs issued by member states governments is fixed. Once the National Allocation Plan – which includes the total number of allowances and the allocations for each entity covered by the Plan – is approved at European level, the allocations cannot be modified. Post-allocation adjustments are not allowed; such adjustments were rejected by European bodies, as they would have caused distortions in the EUA price.

The EUA price depends on the state’s economic activity, the intensity of energy using, and the population number. Apart from the mentioned factors, the scenarios used in establishing the EUA price take into account the anticipated energy consumption and the energy policies in the field of carbon dioxide emissions.

OTC trading is made both spot and forward between large companies activating in the energy field. In the first phase of EUA trading, carbon emission allowances were OTC traded through forward contracts: the price was established upon contract signing, while payment was made upon delivery of the allowances at maturity, and it depended on the short term interbank interest rate (LIBOR). Transactions were negotiated directly between brokers or directly between contract parties as final beneficiaries.

The legal framework for EUA trading was developed by the International Swaps and Derivatives Association (ISDA), International Emissions Trading Association (IETA), and the European Federation of Energy Traders (EFET).

In the first trading phase, the transactions with derivatives based on EUAs (forwards, futures and options) represented 95% of the total volume on the European carbon market, while only 5% was traded on the spot market, due to the initial difficulties generated by the establishment of the national registries and by the allocations within the National Allocation Plan.

2.2. European Carbon Markets

The overall carbon market continued to grow in 2008, reaching a total value transacted of about Euro 86 billion at the end of the year, double its 2007 value. Approximately Euro 63 billion of this overall value is accounted for by transactions of allowances and derivatives under the EU ETS for compliance, risk management, arbitrage, raising cash and profit-taking purposes. The second largest segment of the carbon market was the secondary market for CERs, which is a financial market with spot, futures and options transactions in excess of Euro 18 billion, representing a five-fold increase in both value and volume over 2007. These trades do not directly give rise to emission reductions unlike transactions in the primary market.
Currently, there are a great number of exchanges operating in the European Union on which EUAs can be traded: European Climate Exchange (ECX), European Energy Exchange (EEX), Energy Exchange Austria (EXAA), NordPool, Powernext, markets covering almost half of the traded EUA volumes. The main European markets in the context of the environmental product markets development in the European Union, starting with the commencement of the EU ETS, are presented below.

Figure 1: Structure of environmental product markets in the European Union

European Climate Exchange (ECX) manages the development and marketing of carbon financial instruments (ECX Carbon Financial Instruments - ECX CFIs) allowed for trading on the electronic platform of the ICE Futures exchange. ECX/ICE Futures is the most liquid Pan-European carbon emissions trading platform, attracting over 80% of the exchange volume traded on the market.

ECX provides carbon financial instruments (ECX CFI) which are listed and traded on ICE Futures. ECX CFIs are standardized instruments based on EUAs and other instruments (CER) which represent CO₂ emissions. Trading ECX CFI futures contracts allows the reduction of the risks of price modification upon EUA delivery on future dates.

Futures contracts options based on emission rights were launched in September 2006. Futures contracts are based on 1,000 allocation rights. The quotation is in Euro and Euro cent per metric tonne. The options are European type, exercised on the futures market, while the premium is paid/ received on the date the transaction is made.

The figure below presents the volumes of contracts listed on ECX, futures and options EUA contracts, as well as options and futures CER contracts from the beginning of the trading period, in 2005, to January 2009.

Figure 2: The evolution of the monthly volumes traded

Over 65 members signed up for trading ECX products – among them: ABN AMRO, Barclays, BP, Clayon, E.ON UK, Fortis, Morgan Stanley and Shell. Several hundred clients can access the market daily through banks and brokers.

European Climate Exchange (ECX), Chicago Climate Exchange (CCX) and Chicago Climate Futures Exchange (CCFE) are owned by Climate Exchange plc, listed on London Stock Exchange.
ECX manages the development of the contracts listed on the electronic platform of ICE Futures Europe. Contracts supervision and authorizing is done by the competent authority in the Great Britain, Financial Services Authority (FSA).

Futures and options contracts based on EUA allowances are settled through ICE Clear Europe which acts as a central counterparty to all trades and guarantees the financial performance of the ICE Futures contracts registered in the name of its Members.

Nord Pool Exchange is the sole energy market for Norway, Denmark, Sweden and Finland. It is the second largest trading market for EUA and CER. Nord Pool trades both spot and forward EUA: spot contracts (next day market) and forward contracts for 2008-2012.

European Energy Exchange (EEX) appeared after the merging of two energy exchanges in Germany. EEX, based in Leipzig, Germany, trades spot EUA, derivative financial instruments based on EUA (futures and options), electrical energy, gas and coal.

Climex Environment Exchange is a Dutch exchange owned by New Values B.V. known for trading environmental products and energy contracts offering spot trading for EUA and CER, auctioning for all carbon products: EUA (CO₂ emission allowances), CER (certified emission reductions), ERU (emission reduction units) and VRE (voluntary emissions rights), as well as auctions for electricity, gas and renewable energy allowances. Climex hosted all the on-line public governmental auctions for EUA organized so far and traded over 16 TWh amounting to Euro 450 million.

Climex traders do not trade directly between themselves; APX B.V. acts as a central counterparty for spot trading on Climex, also offering the advantage that participants do not have to check each other’s financial soundness, as APX guarantees EUA and CER carbon allowances payment and delivery.

The charts below present information on EUA contracts price and volume from the second trading period of the EU ETS.

![Figure 3: Price and volumes of EUA contracts](source: www.climex.com)

Carbon allowance (EUA) spot trading on Climex, which offers an on-line trading platform, started in July 2005. In 2007, the total volume on Climex increased to 7,001 kilotonnes, from 4,750 in 2006. The volume increase was due to the larger number of members and to the European carbon markets development. The carbon trading market is continuously developing, while from 2008 Climex also provides CER spot trading.

Climex Alliance Platform provides a pan-European carbon spot exchange for trading EUA allowances under the EU ETS scheme. The regional partners of the platform are: Climex owned by New Values based in Holland, SENDECO2 based in Spain, Vertis Environmental Finance based in Hungary and STX Services based in Holland and APX Power Limited based in Great Britain and APX B.V. in Holland which act as central counterparty.

Over 7 million EUA allowances have been traded through Climex Alliance, 2 million out of which were OTC traded, and settled through APX Group.

The highest price since the European market appeared in 2005 was over Euro 30 per tonne, while the lowest was Euro 0.5 per tonne. The value of the carbon dioxide allowances transactions worldwide was US dollar 60 billion in 2008, representing an 80% increase as compared to the previous year.
3. CO₂ emission allowances trading in Romania

As an EU member state, Romania had the obligation to prepare an allocation plan for 2007, which was the last year from the first trading period, as well as a plan for the second trading period 2008-2012.

3.1. CO₂ emission allowances allocation in Romania

On January 16th, 2008, the Romanian Government adopted the Romanian National Allocation Plan for 2007 and 2008-2012 through a government decision. National allocation plans establish for each member state the "ceiling" or the limit from the total CO₂ quantity that the installations included in the greenhouse gas emission allowance trading scheme can emit, specifying the exact number of emission allowances that each of them will receive.

According to the National Allocation Plan, the ceiling allocated to Romania for 2007 is 74.8 millions of emission allowances, while the annual average for 2008-2012 is 75.9 million emission allowances. The National Allocation Plan is the document establishing the total number of greenhouse gas emission allowances at national level, as well as per each sector and each installation.

On December 13th, 2006, Romania submitted the National Allocation Plan to the European Commission for approval. The plan was revised – according to the decisions by the European Commission that approved the document at the end of October 2007 – by decreasing the national ceiling for 2007 with 10.8% and for 2008-2012 with 20.7%. These reductions are applied proportionally for each installation, with no differences, through the National Allocation Plan, both for the national ceiling, and for the reserve of new-comers and for all the installations included in the greenhouse gas emission allowance trading scheme.

At the end of 2007, Romania disputed the EC decision at the European Court of Justice. Romania requested the annulment of the EC decision to reduce CO₂ emission ceilings with 20.7%, as “the decision is not sustainable” and it might affect – by cost increasing – the environmental investments that industrial manufacturing companies have to make; it seems that the energy industry, where costs will increase significantly, will be affected the most. Other industries, such as cement industry, glass industry and paper industry, will also be affected. Apart from Romania, a large number of other EU member states have issued objections regarding the measures that the European body was to make public in view of reducing CO₂ emissions with 20% in 2020 as compared to 1990; however, the European Commission has refused any compromise regarding the plan proposed to the 27 EU member states in order to reduce greenhouse gas emissions in the EU, reminding the three objectives of the European body: competitiveness, sustainability and safety of purchasing.

The European ceiling for the period 2008 - 2012 is 2.08 billion tones of emissions annually. As regards Romania, the national allocation ceiling for 2008-2012 is 379,721,760 total allowances for the five years, respectively 75,944,352 allowances annually, representing 3.6% of the European ceiling. The situation is as follows per activity sectors:

<table>
<thead>
<tr>
<th>Sector</th>
<th>Allowances allocated 2008 – 2012</th>
<th>Number of installations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>208,674,068</td>
<td>146</td>
</tr>
<tr>
<td>Mineral oil refineries</td>
<td>28,818,122</td>
<td>9</td>
</tr>
<tr>
<td>Productions and processing of ferrous metals</td>
<td>61,654,319</td>
<td>15</td>
</tr>
<tr>
<td>Chalk</td>
<td>4,908,313</td>
<td>5</td>
</tr>
<tr>
<td>Production of cement</td>
<td>41,251,885</td>
<td>7</td>
</tr>
<tr>
<td>Manufacture of glass</td>
<td>1,618,308</td>
<td>7</td>
</tr>
<tr>
<td>Manufacture of ceramic</td>
<td>1,753,842</td>
<td>28</td>
</tr>
<tr>
<td>Production of pulp and paper</td>
<td>2,449,411</td>
<td>10</td>
</tr>
</tbody>
</table>


Out of the 229 installations, eight companies – the biggest polluters in Romania – will receive over half of the national greenhouse gas emission allowances, according to the trading scheme published by the Environment Ministry. Considering the number of allowances allocated for the period 2008-2012, these are: Mittal Steel Galaţi - approximately 71 million allowances, Turceni Energy Supply Complex - 34 million, Rovinari Energy Supply Complex - 28 million, Electrocentrale Deva - 20 million, Craiova -

An operator using an installation included in the allocation scheme can be in one of the following situations:

- it emits a carbon dioxide quantity which is lower than the allocated amount and can sell the exceeding allowances on the market, without any restraints;
- it emits a carbon dioxide quantity which is higher than the allocated amount, so he must either buy allowances on the market or diminish the activities that generate emissions;
- it emits within the allocated ceiling, therefore he does not need to sell or buy allowances.

If an organized, safe and accessible carbon allowances market does not exist, the installations included in the national allocation plan can be penalized in case they exceed their annual allocated ceiling; penalties can be as high as Euro 100/ carbon dioxide tonne. Similarly, the installations that have a surplus of allowances cannot use them efficiently. The solution to avoid either penalties or losses is precisely purchasing, respectively selling allowances on an organized market.

3.2. CO2 emission allowances spot market

The administrator of the National Registry in Romania is the National Environmental Protection Agency (NEPA). The Registry only includes the transfers of allowances and units as stipulated in the Kyoto Protocol; no details can be found regarding the transactions made by operators which represented the basis for the actual allowances transfer. All transfers are made electronically and are recorded.

The national registries’ role is to check whether the parties making allowance transfers meet a number of minimum requirements:

- both parties have opened accounts with the registry and such accounts are functional;
- the party that is about to make the transfer actually owns the number of allowances to be transferred and such allowances were not already transferred;
- the party that is about to receive the allowances agrees with the transfer.

With regard to the volume and number of greenhouse gas emission allowances transfers, made among domestic operators as well as between domestic and foreign operators, the following transfers were identified within the Romanian National Registry during 2008: 49 transfers between Romanian and foreign operators on the ETS market, amounting to 8,031,199 emission allowances, and 38 transfers among Romanian operators, amounting to 816,560 emission allowances.

The Romanian National Securities Commission (RNSC) qualified these instruments as securities even in April 2009; however, RNSC subsequently suspended the approval, in order to clarify certain technical and legal aspects regarding the trading of such allowances on the capital market. At the end of February 2010, the capital market authority issued a new approval that also included regulations regarding the intermediaries allowed to participate in such transactions. According to the new approval, the rendering of financial investment services and activities involving greenhouse gas emission allowances will only be carried out through authorized intermediaries. As an exception, the operators of polluting installations, to whom emission allowances are allocated, will be able to make transactions with such instruments by themselves using their own accounts.

The qualifying of emission allowances as securities results in the necessity of clarifying some problems caused by the inconsistencies in the Law No.297/2004 regarding the capital market and the legislation related to greenhouse gas emission allowances. Below is a non-exhaustive list of aspects that need clarifying as well as potential solutions:

1. ensuring unitary registration of emission allowance transactions on a regulated market by clarifying the issues related to depositing, recording, settling and clearing that would guarantee the end result of such transactions on a regulated market, considering that the Law No.297/2004 regarding the capital market stipulates that all categories of securities traded on a regulated market or within an alternative trading system should be deposited with and recorded by an authorized central depository, while Government Decision No.780/2006 stipulates that the national registry is a sole, standardized and secured electronic database administered by the National Environmental Protection Agency that records and oversees all greenhouse gas emission allowances transactions.

We believe that the best solution in order to ensure the unitary registration of allowances is the interconnection between central depositories in Romania and the greenhouse gas emissions National Registry, similar to the parallel way of trading government securities on the capital market and on the interbank market. Unlike government securities that are traded exclusively using the mechanism without the financial instruments pre-validation, we believe that such a mechanism cannot be used for emission
allowances, considering the National Registry’s obligation to check whether the party that is to make the transfer actually owns the number of allowances to be transferred and such allowances are not already transferred.

2. the terms and the way of admitting such allowances on a regulated market should be tailored, as through Government Decision No. 60/2008 approving the National Allocation Plan, the Romanian Government established the number of greenhouse gas emission allowances for 2008-2012 allocated to each installation where one or more activities in the targeted sectors are carried out, while the National Environmental Protection Agency – through the national registry – issues a part of the total number of allowances corresponding to each year in the period 2008-2012 and in the subsequent 5-year periods, until February 28th of the respective year.

According to the Law No.297/2004, securities admission for trading on a regulated market will be done after the publication of a handout by RNSC. In our opinion, these securities should be exempted from such provisions.

3. greenhouse gas emission allowances validity

Currently, according to Government Decision No.780/2006, greenhouse gas emission allowances are valid for the emissions during 2008-2012, which were recorded in the National Registry. Therefore, starting with January 1st, 2008, these allowances are valid for a period of 5 years and for each subsequent 5-year period. This means that the securities which can be admitted for trading on a regulated market have a maximum maturity of 5 years and 4 months. After the expiry of such period, the administrator of the National Registry shall cancel the emission allowances that are no longer valid for the respective period.

Sibiu Exchange (SIBEX) intended to introduce the direct trading of greenhouse gas emission allowances as early as October, but the commencement of the transactions with such products was delayed until the clarification of the issues related to the trading and clearing of these securities. In March 2010, the BSE Board of Directors approved the greenhouse gas emission allowances admission to trading on the Bucharest trading market.

3.3. $CO_2$ emission allowances futures contracts

Carbon dioxide emission allowances have been traded as supporting assets since December 2009 on SIBEX, through futures contracts with one day time of maturity and physical delivery the following day. If an organized, safe and accessible carbon allowances market does not exist, the installations included in the National Allocation Plan can be penalized in case they exceed their annual allocated ceiling; penalties can be as high as Euro 100 per carbon dioxide tonne.

The same is the case for the institutions having a surplus of allowances that they cannot use efficiently. The solution for avoiding penalties for some and losses for the others, proposed by the Sibiu Monetary Financial and Commodities Exchange, consists of the purchasing, respectively selling of $CO_2$ emission allowances futures contracts with one day time of maturity and delivery of the supporting asset.

SIBEX is the only market in Romania that is authorized to trade $CO_2$ emission allowances, while the guaranteeing and clearing of transactions is done through Romanian Clearing House Sibiu (RCH). Futures contracts for 100 allowances (100 tonnes of carbon) are traded on this market, which are executed at maturity by actual delivery, for the RON price negotiated on the market. Trading of such allowances is done through the participants on the Sibiu market.

All intermediaries trading on this market have accounts with the National Registry of the greenhouse gas emissions, where RCH also has an account.

A client who wants to sell allowances must transfer them in the account of an intermediary who will then transfer them in the RCH account. This will credit the account opened by the intermediary on behalf of his clients with the respective quantity of allowances, which will be available for selling as futures contracts.

A client who wants to buy allowances will deposit their counter value with an intermediary who is a participant in the Sibiu market, who will transfer that amount in the account opened with RCH. When giving the purchasing orders, each market participant will be constrained by the amount of money it has in his account with RCH. Following the transactions, RCH will make the clearing the next day and the delivery of the allowances to the intermediaries who, in their turn, will transfer the allowances and the money to their clients.

The idea for this solution came from the European exchanges that implemented it a few years ago. Although there is an interest for such transactions, the market is currently blocked because the issues related to the VAT collection for these allowances are not clarified.
By implementing this type of transactions, SIBE X wanted to attract new categories of market investors, create a new liquidity center and generally increase the volumes traded on the market.

In the European Union, the approach to the fiscal treatment applicable to greenhouse gas emission allowances transfer is different. While states such as Sweden, Belgium, Denmark and Italy have qualified the allowances as securities, the other member states have qualified them either as financial instruments or as commodities.

In 2009, as a result of the large frauds committed in the European Union, some states took inflexible measures: France decided to exempt allowances from VAT collection, Great Britain applies 0% VAT, while Holland chose "reversed taxation", requiring that the tax be paid by the buyer, upon purchasing.

4. Conclusions

The results obtained in the first phase of the EU ETS programme showed that in case of using allowances trading markets, significant reductions are achieved on the EU budget, as compared to the aggregated level of taxes collected from greenhouse gas emitting industries, as well as the achievement of the targeted goal of reducing the total CO2 emissions. At the same time, carbon contracts and carbon financial instruments trading markets have turned out to be extremely profitable, given the rapid increase of participants in such markets.

Carbon dioxide emission allowances have been traded as supporting assets since December 2009 on the Sibiu Exchange, through futures contracts with one day time of maturity and physical delivery the following day.

Considering the herein analysis, we believe greenhouse gas emission allowances to be securities that can be admitted for trading on a regulated market. As shown above, allowances are claim rights issued as government-backed securities, with a maximum maturity of 5 years and 4 months, starting with January 1st, 2008. There is still an issue to be clarified: the fiscal treatment in what regards the value added tax applicable to such allowances.

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