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RÉPUBLIQUE FRANÇAISE

The regulation of CO₂ markets

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SUMMARY OF ADVICE

Promote a stabilized organization of the European CO₂ market by 2013, harmonizing the legal, accounting and tax framework

Advice no. 1: stabilize, while ensuring real transparency of the decision-making process, the main parameters of market organization during phase III by 2012, and especially the overall 2020 emissions reduction target, the rules governing the use of international offset credits, the rules on benchmarks as well as the main features of the auctions: nature of the products auctioned, volumes and calendar.

Advice no. 2: apply the same measures to the allowance derivatives market as the ones to be implemented under the directive on derivatives markets expected for mid-2010, following the communication from the Commission of 20 October, 2009.

Advice no. 3: exclude a new legal definition for allowances as financial instruments and promote a regulation of the European CO₂ market based on a framework adapted to its specificities.

Advice no. 4: ask the European Commission to propose a harmonization of the legal status of CO₂ allowances and international credits, in Europe, before the European CO₂ market enters into its third phase, making this work part of more extensive thought on the legal definition of public policy instruments in the environmental sector.

Advice no. 5: at European level, promote the quick adoption of the reverse charge mechanism for the trading of CO₂ allowances by all Member States in 2010. At French level, transpose into the national law the provisions required to implement the VAT reverse charge mechanism for operations on allowances, as soon as possible.

Advice no. 6: at French level, in the view of contributing to the international works underway, ask the Autorité des Normes Comptables (the French accounting standards authority) to define the national accounting treatment, in individual financial statements, of the operations on allowance derivatives and on the credits resulting from the flexibility mechanisms of the Kyoto Protocol and to initiate reflections on the evolution of the accounting treatment of allowances required by the shift towards allocations against payment. Make sure that the IASB publishes an accounting standard that applies to all emission allowances and credits before the European market enters into its third phase in 2013.

Ensure a better supervision of CO₂ market players

Advice no. 7: introduce, at European level, an authorization procedure for participation in the primary and the secondary markets, that is proportionate to the risks and adapted to the nature of market activities.

Advice no. 8: establish a working group made up of the administrations concerned, the Banque de France, the ACP (French Prudential Supervision Authority), the AMF (French Financial Markets Authority) and the CRE (French Regulatory Commission for Energy), with the assignment of defining the conditions of delivery of the authorization and the corresponding requirements.

Advice no. 9: introduce in greenhouse gas emission allowances registries a distinction between own accounts and accounts managed on behalf of third parties during the review of the regulation on registries, which should take place in 2011.

Advice no. 10: subject spot trading exchanges to a body of rules which should at least be similar to those laid down for Multilateral Trading Facilities on derivatives markets. This initiative should be taken as early as 2010 at French national level, without waiting for potential initiatives at European level.

Advice no. 11: at national level, establish, in the first half of 2010, a working group made up of the registry administrator, Tracfin, the AMF and the administrations concerned, in order to elaborate a national system aimed at enforcing and reinforcing, from 2010, the provisions controlling access to the national registry, laid down by the new European regulation on registries.

Advice no. 12: suggest that the European Commission integrates, in the next regulation on national registries, provisions aimed at ensuring the consistency of anti-money laundering checks undertaken by the 27 national registry administrators.

Improve transparency on market fundamentals

Advice no. 13: at European level, promote the creation of a single data consolidation and publication system regarding the supply of allowances.

Advice no. 14: at European level, promote transparency rules on the management of the New Entrant Reserves by Member States, through their disclosure at the same frequency as the one laid down for the disclosure of installations' emissions data and through the disclosure of the transactions made by Member States on allowances and offset credits. Promote also, at European level, a consolidated disclosure, by Member States at the end of the period of the volumes of allowances and offset credits banked towards the third phase by players holding an account in national registries.

Advice no. 15: promote the adoption of provisions enabling to impose sanctions on public authorities, should they fail to observe market rules.

Advice no. 16: at European level, improve information through a more frequent disclosure of emissions data by the large emitting installations, defined by thresholds, in an aggregate format at the national level for all sectors or at sector level for the whole European Union, subject to lighter verification rules in a way protecting confidentiality, ensuring fair competition and optimizing the cost-benefit ratio of this provision.

Elaborate an adapted market abuse framework

Advice no. 17: promote the elaboration of a European market abuse framework that is suited to the CO₂ market, governs the utilization of sensible and privileged information and covers all traded products as well as trading venues.

Advice no. 18: provide for sanction mechanisms for market manipulations by governmental and public authorities.

Advice no. 19: define as privileged information, on the CO₂ market, regulatory information on the supply of allowances and aggregate emissions data.

Advice no. 20: define and list as sensitive information, on the CO₂ market, data a given player has on its own activities or installations and likely to have a significant impact on market price. Regulators should be allowed to extend the list of sensitive information, if needed.

Advice no. 21: in order to protect the CO₂ market from market manipulation, give Regulator(s) the possibility of setting position limits, if they deem it necessary.

Set up a European system of supervision and oversight of the CO₂ market

Advice no. 22: continue to support the centralized auctioning platform in Europe, which would ensure the efficiency and facilitate the supervision of the primary CO₂ market. Put the case for a centralized oversight of auctions by an authority having real injunctive and disciplinary powers with respect to the auctioning authorities and the auction platforms.

Advice no. 23: implement a centralized European reporting system for all transactions on the CO₂ market and ensure that this information is made available to the regulation authorities identified.

Advice no. 24: consider, building on the implemented reporting system, the disclosure of aggregated data on transaction prices and volumes on the CO₂ market to market players.

Advice no. 25: evaluate the practicability of a “European Carbon Market Authority” with the European Commission and our main European partners.

Advice no. 26: set up, by 2013, a harmonized surveillance structure for the European CO₂ market that is based on three mainstays: i/ giving financial Regulators jurisdiction over the whole CO₂ market in all Member States and extending the remit of energy Regulators to the analysis of fundamentals and of interactions between the CO₂ market and energy markets; ii/ organizing cooperation between financial Regulators and energy Regulators; iii/ giving the European Financial Supervisory Authority the power to supervise the whole system, in cooperation with the Agency for the Cooperation of Energy Regulators. Ensure that this system is consistent with the oversight system to be proposed on the gas and electricity markets.

Advice no. 27: from 2010, give the Autorité des Marchés Financiers (AMF – the French financial markets authority) jurisdiction over the CO₂ spot market in France, organize cooperation with the Commission de Régulation de l'Énergie (CRE – the French Regulatory Commission for Energy) and extend the remit of the CRE to the analysis of the interactions between energy markets and the CO₂ market.

Favour international coordination on the regulation of CO₂ markets

Advice no. 28: take the debate on the regulation of CO₂ markets to the international stage within the framework of the G20 by 2012, relying notably on the works of IOSCO, the World Bank and ICAP.

INTRODUCTION

Half a century after the founding economic works of Ronald Coase on externalities in *The Problem of Social Cost* in 1960, the European CO₂ market has become the most successful example of a market of environmental instruments in the world. While the United States were forerunners in introducing an SO₂ permits market for the first time within the framework of the Clean Air Act of 1990, since 2005, the European CO₂ market has established itself as an indisputable reference.

However, in the past three years, the European CO₂ market has experienced a series of upheavals.

In April 2006, it experienced a dramatic fall in prices, following the revelation of a demand of the companies subject to the European trading system which was structurally inferior to the supply of allowances and due to the impossibility to bank allowances from phase I (2005-2007) to phase II (2008-2012).

In 2009, it was the vehicle of a massive Value Added Tax (VAT) fraud in Europe, which called for an urgent adaptation of the tax regime applicable to allowances in several Member States, and then at Community level.

In February 2010, the national registries of European allowances were the subjects of a hacking attempt, which required the intervention of a third party, in the person of the international registry administrator – the Secretariat of the United Nations Framework Convention on Climate Change.

In March 2010, the confidence of the market was shaken by the appearance on the European market of international credits that had already been surrendered by companies and could not be used again by the operators covered by the EU ETS legislation, following the decision of the Hungarian government to sell back such credits on the market. These shocks are different in nature and scale.

The first one was due to the market operating rules laid down during the first phase (2005-2007) of the European allowance trading system and to a deficit of information on market fundamentals.

The following two fall within the province of organized crime and, for that matter, are not specific to the CO₂ market. They had already occurred on other markets. One constitutes the most basic form of computer hacking, while the other is a case of tax evasion commonly observed with newly marketed products.

The fourth one is similar to an abuse of rights by a public authority responsible for the issue of allowances, when it should guarantee the integrity of the European market.

Nevertheless, the fact that these jolts occurred at short intervals and their recurrence raise some questions. They sustain deep-rooted suspicion regarding the reliability of the European CO₂ market. They contribute to reviving the opposition, expressed from the start by certain commentators and analysts, to the use of a market instrument to contribute to ensuring the protection of a universal public good: climate.

In the face of these events, the argument of novelty will not stand the test of time. Even if market participants agree on its efficiency, in the context of widespread suspicion towards markets, which arose from the financial crisis, new shocks or abuses on the CO₂ market, which would contribute to its moving away from its primary environmental objective (fraud, money laundering, market manipulations or excessive speculation), could lead to calling into question the instrument itself.

In this context, a fundamental issue for public authorities is to acquire the capabilities for improving their control and surveillance of the European CO₂ market and to lay down prudential rules and intervention methods to try and avoid any new significant shock.

When envisaging new regulation measures for the European CO₂ market, the issue is also to restore the confidence of economic players and citizens in what is now the only economic instrument for the reduction of greenhouse gas emissions to be implemented on a European scale.

As an economic instrument in the fight against climate change, the European CO₂ market is unlike any other.

The European CO₂ market is currently the only economic tool implemented by the European Union in order to fulfil its international commitments to reduce its greenhouse gas emissions by 2020, which were formally filed with the Secretariat of the United Nations Framework Convention on Climate Change in January 2010.

Other instruments to fight climate change will probably be implemented at national or European level, such as, for instance, a taxation system. However, the European CO₂ market is currently the only tool to guarantee a definite level for the optimized reduction of greenhouse gas emissions, on a European perimeter covering the 27 Member States. Ensuring that it runs efficiently is therefore a crucial issue for the credibility of the European commitments relating to climate.

After five years in operation, we raise the question of the ability of the European CO₂ market to fulfil its mission: to ensure a reduction of greenhouse gas emissions on a European scale through the emergence of a carbon price signal that is sufficiently high and strong to guide the actions of economic players.

The specificity of the European CO₂ market lies in the nature of the instruments traded. It must be observed that emission permits appear to be part of no known category of instruments which are the subject of contracts on traditional markets. The permit, or CO₂ "allowance", thus seems to draw from various categories: administrative rights, commodities and even financial instruments. When the market was established in 2003, an intense doctrinal debate thus took place in France and abroad simply to determine what an allowance was, and which market organization rules should follow from this. All in all, the question of the very nature of the market was being raised. This debate, which was a European one by nature, has not yet fully found a definite answer. It is indeed likely to be raised again in similar terms, due to the increased resort to tradable administrative rights in the field of natural resource management, of which CO₂ allowances are now the main examples, but which could find other manifestations in the future.

The specificity of the European CO₂ market also lies in its participants: small and medium-sized enterprises, which are not always familiar to the functioning of market instruments,

coexist alongside the traditional market participants. Authorities have the role of ensuring the protection of these agents, which entered the market by the sheer will of public authorities.

Most importantly, the European CO₂ market is a hybrid instrument which is torn between the terms of the twofold logic which governed its creation.

Firstly, this market is an instrument used by public authorities to reduce the greenhouse gas emissions of certain economic sectors in Europe: it is an administrative tool for capping emissions due to the externalities associated with them. This is the “cap” part of the system. Secondly, this market is an optimization tool: the possibility of trading CO₂ allowances among economic players is devised to limit the social cost of reducing emissions. This second characteristic is intrinsic to the market itself: this is the “trade” part of the system.

The possibility of trading allowances, and the market resulting from this, is therefore only one of the terms, justified by economic theory, of the European emissions reduction policy. It would have been possible to simply devise a European quantitative emissions reduction policy without trading, but its social cost would have been higher. The free trade of allowances thus serves the objective of reducing emissions, and not the other way around.

In the context of what we may call a “regulatory market”, regulation involves a twofold issue: the environmental regulation of the emission cap system is closely associated with the regulation of trade.

The notion of the regulation of the European CO₂ market entails, due to the specificity of the instrument, two main objectives.

The first objective is to ensure that the rules which govern the environmental objectives are observed, and notably that the series of fundamental mechanisms come smoothly into play: the annual allocation of CO₂ allowances to the companies concerned, the verification of the emissions recorded, the corresponding surrender of allowances and the possible imposition of sanctions in order to ensure that the installations subject to this system comply with these rules. Here, the term “regulation” seems to be referring to its original physical etymology which comes from automatic and industrial sciences: ensuring the smooth operation of the series of technical processes contributing to the operation of a complex device. This type of regulation can be described as environmental regulation and corresponds, in the Anglo-Saxon terminology, to the “cap” component of this market.

The second objective is to ensure the smooth and efficient operation of the trading system, referring here to a more economic definition of regulation. In the Anglo-Saxon typology, this second objective relates more to the element of “trade”: ensuring that the free trade of CO₂ allowances is performed under satisfactory conditions of efficiency and integrity, which are capable of ensuring the emergence of a robust carbon price signal, likely to guide the behaviours of investors.

From the outset, the European Legislator focussed its attention and efforts in a quite obvious way on the first objective. It thus endeavoured to lay the regulatory and administrative foundations to enable the market to operate, first as part of an experimental phase from 2005 to 2007, before a gradual intensification from 2008. At the same time, it adopted a “laissez-faire” approach for the second objective in order to favour the spontaneous and quick development of trade.

The market thus developed freely, without a legal definition of allowances and with no comprehensive body of public rules to control the participants, define potential abuses and lay down sanctions. Article 19 of Directive 2003/87/EC of 13 October, 2003 thus provides, in a highly symbolic way, that “any person may hold allowances”. From the start, the choice was therefore made not to reserve this market for professionals only – the companies governed by this system in accordance with regulations – but, on the contrary, to make it accessible to financial intermediaries and other market players, in order to favour its liquidity and efficiency

This light-touch approach to the regulation of trade on the European CO₂ market is in stark contrast to the approach now being considered in the United States, where it is evident that it will only be possible to establish a federal carbon market under very stringent conditions for the control and oversight of trade. As for the initial European approach, it now appears to be called on to evolve in the face of market developments and the ambition displayed by the European Union to establish a carbon market at the level of the OECD by 2015.

Due to the fact that they created this market, public authorities must pay special attention to its regulation.

The progressive financialization of the European CO₂ market throws new light on the issue of regulation.

The European CO₂ market remains a small market: the annual value of trading, which is in the region of 100B\$, barely represents one day of trading on the oil market. However, trading volumes multiplied by 20 in five years: it is developing exponentially. This quick growth, from a still modest notional trading value, leads to three consequences. The CO₂ market has now reached a critical volume and maturity, thus justifying that the light-touch regulation framework implemented at first be called into question. The CO₂ market is still young: it is therefore still time to endeavour to limit potential drifts which have already been observed on other markets. The CO₂ market must continue to grow: good market liquidity is an essential element of its efficiency and it is therefore important to provide for proportionate regulation measures could guide – not curb – its development.

Following the example of other commodity markets, the European CO₂ market is undergoing progressive financialization. The most part of CO₂-related trading in Europe is now performed using derivatives, whose underlying assets are the emission allowances allocated to the emitting installations. In addition, financial players are responsible for a highly significant share of trading activity on these products.

This evolution of the market is not open to criticism per se. The use of carbon financial products meets the actual requirement of certain players to protect themselves against the financial risk posed by the fluctuation of allowance prices, CO₂ having become one of several “inputs” in the production process of the industries concerned. Moreover, the development of carbon finance in general constitutes a critical issue in the long term. The Copenhagen Agreement mostly emphasized public financing measures for the fight against climate change: however, the redirection of private savings towards low-carbon investments constitutes one of the challenges posed by the transformation of economies in the face of the climate risk. It could thus imply an access by professional or individual investors to financial products related to the price of CO₂.

For all that, the recent development of structured products on CO₂ allowances, or the potential participation of new investors could noticeably upset the normal interplay of the fundamentals of this market and tend to modify the reflection framework on the regulation of the CO₂ market.

The regulation of the European CO₂ market must be part of a more extensive reflection framework in an international perspective

The European CO₂ market must be apprehended through its interactions with other markets. In fact, the price of one tonne of CO₂ is notably determined in relation to the price of other assets: upstream, it is partly correlated to the relative prices of fossil energies, oil, gas and coal. Downstream, it constitutes one of the drivers of the price of electricity in Europe. CO₂ allowances are consequently treated by industrial and energy players as one of the inputs of their production process. Moreover, by its operation, structure and agents, the CO₂ market is closely related to energy commodity markets. Consequently, it is advisable to appreciate the conceivable regulatory framework for the European CO₂ market in relation to the reflections initiated regarding these various markets, in particular the most accomplished ones which concern the gas and electricity markets.

As a very specific market which calls for specific answers, the European CO₂ market must nevertheless be part of a broader reflection, which has been largely initiated in Europe and at international level since the financial crisis. The questions to be raised on the regulation of the CO₂ market are more or less the same ones as for other commodity markets. In an enlightening way, the report of Jean-Marie Chevalier on oil drew attention to the need of devising regulation approaches which are capable of encompassing all *“financialized commodities”*, due to the *“evolution of these markets which were initially markets for hedging purpose among professionals towards investment (or “speculative”) markets which are increasingly open to individual investors and are exposed to fluctuations which are correlated or even similar to those observed on stock markets”*¹. It is obvious that due to their progressive financialization, certain commodity markets call for common answers, particularly at European level, notably in order to prevent inter-jurisdictional conflicts between financial and sectoral regulators. In this respect, the fundamentally European nature of the CO₂ market, compared with global markets, such as oil, or regional markets, such as agricultural commodities, constitutes an opportunity for the European Legislator.

Lastly, in the wake of the Copenhagen Agreement, reflections on the European CO₂ market cannot dispense with an international perspective. Firstly, the European market is now the main determining factor of the demand of international credits resulting from the flexibility mechanisms of the Kyoto Protocol – the Clean Development Mechanism and Joint Implementation – and should remain one of the most important ones, as the climate and energy package expressly provides for the use of this credits in the European system during its third phase (2013-2020). An international credits market has thus developed and now constitutes a fully-fledged component of the European CO₂ market, which also calls for the attention of the Legislator and Regulator. While the greatest uncertainty now weighs on the durability of these international systems in the future, several countries have recently undertaken to establish national or regional carbon markets (United States, Canada, Australia, New Zealand, Japan, South Korea, and Mexico). The question of the

¹ CHEVALIER (Jean-Marie), *Rapport du groupe de travail sur la volatilité des prix du pétrole* (Report of the working group on the volatility of oil prices), French Ministry of Economy, Paris, February 2010, 143 p.

interconnection of these markets and of the compatibility of the rules governing its functioning² will therefore be raised. The issue of the regulation of CO₂ markets will then arise on an international scale: structuring a dialogue with our international partners today could prevent the establishment of diverging regulation.

2010 promises to be a pivotal year for the European CO₂ market; the government has consequently entrusted an ad hoc commission with the mission of studying the regulation of this market.

The newly installed European Commission has included the issue of the regulation of the European CO₂ market in its work programme. The objective is indeed to succeed in elaborating a legislative proposal before the market enters into its third phase, from 2013.

However, for the time being, the European Commission has not determined through which channels it would address the issue. Within the framework of the climate and energy package, Article 12-1-a of Directive 2009/29/EC of 23 April, 2009 enjoined the European Commission to elaborate proposals to regulate market abuse practices on the European CO₂ market by 31 December, 2010³. In the same way, the revision of Directives 2004/39/EC of 21 April, 2004 concerning markets in financial instruments and 2003/6/EC of 28 January, 2003 concerning market abuse has been undertaken. It should be completed during the second half of the year 2010 or, failing this, in early 2011. Lastly, the services of the Commission in charge of the gas and electricity markets have announced a legislative proposal on the regulation of these markets from the last quarter of 2010.

This questioning by the European Commission in early 2010 reveals a fundamental issue: should the regulation framework governing the European CO₂ market be similar to that of financial markets or energy markets, or should an ad hoc framework be put forward?

Within this context, on 4 January 2010, the French government formed a dedicated mission to work on these issues, in order to enable it to quickly submit concrete proposals for the regulation of carbon markets⁴ to the new European Commission.

As a starting point, some definitions must be laid down.

The “European CO₂ market” designates the transactions – spot or derivatives - of CO₂ allowances and of already emitted international credits (excluding the primary emissions of international credits and the transactions of AAUs⁵), for which one of the counterparties is within the European Union or which takes place through a trading venue located on the territory of one Member States.

² As underlined by the report « Global carbon trading, a framework for reducing emissions », from Mark Lazarowicz, special representative of the British Prime Minister for the CO₂ markets, the interconnection of several cap-and-trade will require an harmonization of the monitoring reporting and verification rules, of the rules governing the use of international credits, of the banking and borrowing rules and of potential price regulation rules.

³ “The Commission shall, by 31 December 2010, examine whether the market for emissions allowances is sufficiently protected from insider dealing or market manipulation and, if appropriate, shall bring forward proposals to ensure such protection. The relevant provisions of Directive 2003/6/EC of the European Parliament and of the Council of 28 January 2003 on insider dealing and market manipulation (market abuse) may be used with any appropriate adjustments needed to apply them to trade in commodities.”

⁴ APPENDIX I – Engagement letter of the Minister of Economy, Industry and Labour.

⁵ Assigned Amount Units – see APPENDIX IV – The European CO₂ market – principles of functioning.

The “primary market” refers to the auctions of CO₂ allowances during the phase II and III of EU-ETS. It does not refer to the primary emissions of international offset credits.

The “secondary market” designates the transactions of already emitted CO₂ allowances or credits as well as the transactions of derivatives of forward contracts based on CO₂ allowances or international credits.

This task force was assisted by a committee of around fifty experts, bringing together representatives from trade associations, companies subject to the European emission allowance market, financial players, the regulation authorities concerned (the *Autorité des Marchés Financiers* – the French Financial Markets Authority and the *Commission de Régulation de l'Énergie* – the French Energy regulator) and members from the administration and civil society⁶. The commission also proceeded to the hearing of competent stakeholders, notably representatives from the three Directorate-Generals of the European Commission concerned⁷. The commission held seven meetings at the French Ministry of Economy, Industry and Labour between February and April 2010. In parallel, the President and Rapporteurs conducted a series of technical hearings and led three study missions abroad, in the United States, the United Kingdom and Germany. The present report presents the analyses and recommendations produced by this mission.

Firstly, the report analyses the objectives which governed the setting up of the European CO₂ market and studies the recent evolutions of the market in this light. It then comes back in detail to the fundamental question which must structure any consideration by the regulator: the one of the legal nature of allowances in relation to existing legal categories.

Secondly, the report deals with the issue of participation in the European CO₂ market: it looks at the conditions of access to the market and at the rules controlling its participants, and notably market intermediaries.

Thirdly, the work focused on the risks of abuse with which the European CO₂ market is confronted and on the need to improve the transparency of the market, both on its fundamentals and on the transactions being made.

Lastly, the report attempts to define a possible surveillance and regulation institutional architecture for the European CO₂ market.

⁶ APPENDIX II – List of the commission members.

⁷ APPENDIX III – List of persons heard by the commission and met by the President and the rapporteurs.

1 The European CO₂ market has grown considerably within a light, incomplete and heterogeneous regulation framework: an improved regulation is now required so that a robust and long-lasting carbon price signal may emerge in Europe

As a regulatory market, the European CO₂ market is highly original in relation to any other known market, due to the pre-eminent role of the public authorities, which govern its creation and all the steps of its operation. Any analysis of the regulation of this market cannot dispense with taking some time to consider its primary objectives, as laid down by the European Legislator: the objective of market regulation will precisely be to ensure that these objectives are fulfilled, throughout the functioning of the market.

The European Legislator favoured initially the development of this market rather than its regulation. As observed by the Charpin report⁸, neither Directive 2003/87/EC, nor its revised provisions within the framework of the climate and energy package in 2009, define a homogeneous regulation framework for the European CO₂ market, or a market supervision system. These original choices are now confronted with the very fast development of the market, which now appears to have reached a critical size that is important enough to legitimately raise the question of its regulation.

More generally, it is advisable to come back to a fundamental question: is the European CO₂ market currently able to fulfil its role of ensuring the emergence of the carbon price Europe needs to fulfil its emission reduction objectives?

1.1 The European CO₂ market is an instrument created by public authorities whose objective is to guarantee the reduction of emissions at lower cost: in this respect, the robustness of the price signal is decisive and must be preserved

The primary objective of the European allowance trading system is an environmental one; it must make it possible to fulfil the objective of reducing greenhouse gas emissions by putting an upper limit on the emissions of the players subject to this system. The European CO₂ market is primarily an instrument to set a cap on the volume of greenhouse gas emissions, before being a trading system. It is based on an emission reduction objective which has two distinctive features. Firstly, it is the result of political will, and the expression of the ambition of the European Union in the fight against climate change, within the framework of the Kyoto Protocol. In Community law, it is part and parcel of the commitment taken by the European Union to reduce its emissions by 20% by 2020 in relation to their level in 1990, and by 21% for the sectors subject to the allowance trading system between 2005 and 2020. The environmental objective constitutes the first mainstay of the emissions trading system, and the fundamental driver of the CO₂ price. Secondly, the fulfilment of this objective is, structurally speaking, a certainty which is acquired *ex ante*: global emissions are capped as part of a carbon budget which is definite, mandatory and that, in theory, cannot be modified. The reduction effort is then shared out among the industrial installations concerned.

⁸ CHARPIN, (Jean-Michel), BARBERIS (Jean-Jacques) and CELESTIN-URBAIN (Joffrey), *Rapport du groupe de travail sur les modalités de vente et de mise aux enchères des quotas de CO₂ en France* (Report of the working group on the selling and auctioning methods for CO₂ allowances in France), Paris, October 2009, p. 73 et seq.

Once the reduction objective has been set, the possibility of trading rights enable the emergence of a price signal that becomes a variable for microeconomic arbitrage in the sectors concerned, which will be taken into account for investment decisions. The possibility of trading allowances enables an optimal sharing out of emissions reduction efforts among agents, resulting in a reduction of the overall abatement cost in comparison with a simple system of administrative cap. The robustness and credibility of the price signal are thus fundamental elements of the efficiency of the trading system.

To fulfil its role efficiently, the price signal must meet a certain number of conditions.

Firstly, it must be robust and unique: it must be the same for all market participants and be a sufficiently credible reference to earn the confidence of market players and fulfil its role of guiding decisions of investment and of operational optimization.

Secondly, it must reflect both macroeconomic and microeconomic market fundamentals. In this respect, box no. 1 reviews the existing economic literature on the fundamental drivers of CO₂ prices in Europe.

Box no. 1 – The fundamentals of CO₂ allowance prices in Europe

The price of CO₂ allowances follows from several determining factors. In the last few years, a wealth of economic literature has been produced on this subject, of which a non-exhaustive overall picture is presented here. It is indeed essential to understand the mechanisms of price formation on this market in order to appreciate the elements discussed in the present report.

Traditionally, in accordance with Burtraw's fundamental analysis (1996) on the determining factors of the price of SO₂ and with the works of Springer (2003) and Kanen (2006), the main fundamental drivers of CO₂ prices consist in institutional or regulatory decisions, the relative prices of energy sources, climate events, the marginal abatement costs of agents, the evolution of their production and the level of economic activity. On one side, the supply of allowances indeed depends on the level of regulatory constraint imposed by the European Legislator. On the other side, the demand of allowances depends on several drivers, and particularly on the prices of fossil fuels (oil, coal, natural gas) and electricity, and climatic conditions. Ultimately, the price of CO₂ is determined at the equilibrium of the supply and the demand of the installations with opposite compliance net short and long positions⁹. These various variables are detailed below.

According to Kanen (2006), Christiansen et al. (2005), Bunn and Fezzi (2008) and Alberola et al. (2008), the prices of energy sources are one of the main variables driving CO₂ prices, notably due to the possibility for electricity producers to switch fuel between gas and coal. Power producers indeed carry out fuel arbitrages according to the gross operating margins of each type of power plant, which correspond to the difference between the selling price of electricity and the price of the production fuel. A comparison is thus made between the clean dark spread, which corresponds to the paper profit of a coal-powered installation, including the cost of CO₂, and the clean spark spread, which corresponds to the paper profit of a natural-gas-powered installation, including the cost of CO₂. The balance between the two variables determines the price of CO₂, according to which it is more or less profitable to

⁹ A position is defined as short when it records a deficit of allowances allocated with respect to actual emissions. A short installation can purchase allowances to bring itself into compliance. The opposite holds true for long positions.

switch from one fuel to another. For instance, according to Alberola and Chevallier (2008), between October 2005 and April 2006, the rise in the price of natural gas positively influenced the price of CO₂, by leading operators to carry out arbitrages in favour of coal. According to Kanen (2006), the price of Brent also constitutes one of the variables of the price of CO₂, since it is a fundamental indicator of the price of natural gas, as a large part of the price of natural gas supply contracts in Europe is indexed to the price of oil.

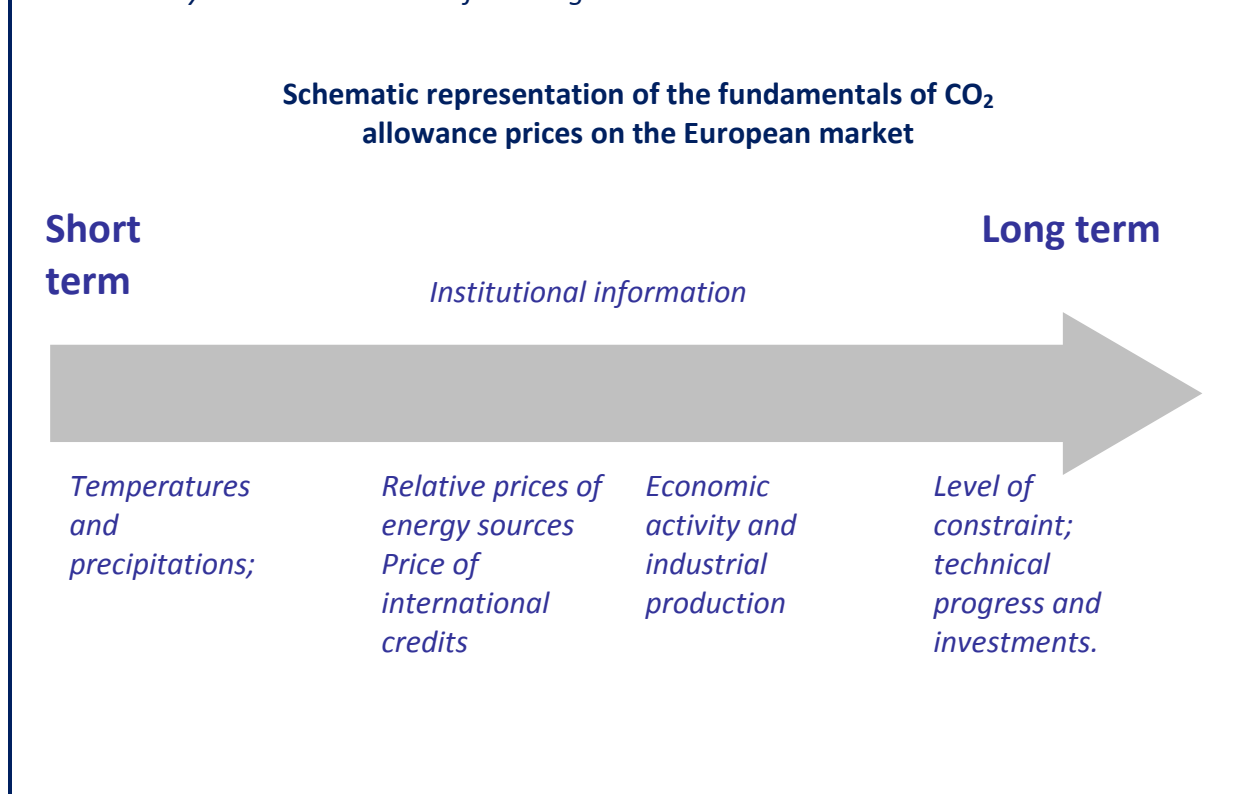
According to Mansanet-Batallet (2007), climatic conditions also have an impact on the price of CO₂, via energy consumptions. What emerges from this is that extreme climate events, i.e. rises (hot summers increase requirements in terms of air conditioning) and drops in temperature (harsh winters increase heating requirements) beyond a certain point, influence the prices of CO₂. A rise in electricity production results in higher emissions by the producers in the electricity sector and therefore increases the demand of allowances. Moreover, deviations of temperatures from the seasonal average also involve consequences which, according to Alberola and Chevallier (2008) are more important than those of extreme climate events. In this way, the colder the weather over a given year, the more the effects of temperatures on the changes of CO₂ prices are important (this is for instance empirically borne out in the case of the winter of 2006). The same author also observes that the main effect is not the extreme drop in temperatures itself, but rather the lack of anticipation of these variations by electricity producers.

Alberola and Chevallier (2008) also emphasize the influence of institutional events on the price of CO₂. The authors indeed observe that economic players are especially sensitive to any new institutional information and to compliance events, which notably accounts for the volatility events occurring on the regulatory dates which punctuate the operation of the system. In this respect, agents notably reacted in October 2006 to the announcement by the European Commission that allocations would be lower for the 2008-2012 phase.

Moreover, and this is one of their main contribution to pre-existing literature, Alberola and Chevallier (2008) demonstrate that the prices of CO₂ fundamentally vary according to the variation of industrial production in the sectors subject to the ETS. The price of CO₂ indeed depends on the marginal emission reduction costs of the installations covered, as the abatement choices made by industrial sectors have consequences on the price of CO₂. Moreover, industrial players can also adopt strategic behaviours to manage their allowance positions according to the level of output actually observed. The author observes the causality relation according to which a sector which combines a net short (long) compliance position and/or a rise (drop) in industrial production is a potential buyer (seller) of allowances and the impact on the price of CO₂ should be positive (negative). Alberola and Chevallier thus demonstrate the significant effect of the variation of the industrial production of three sectors on changes in the price of CO₂ in Europe: the combustion sector, the iron and steel production sector and paper pulp production, all three of which represent over 80% of all allowances allocated. In this way, the role played by the annual reconciliation of players' positions and the possible production peaks of given sectors is demonstrated.

Recent economic literature does not make determine the relative weights of these various factors, and on this point, existing economic analyses are divided. Battaler et al. venture a hierarchy estimating that the relative prices of energy sources and the arbitrage operations carried out on this basis constitute a more important price-determining factor than temperature variations. Moreover, Alberola et al. (2008) demonstrate that modifications in the strategies of agents during phase I were mostly the result of information shocks.

According to Rickels et al. (2007), the main determining factors of the price of CO₂ can be schematically summarized on the following time arrow:



What emerges from this analysis is that the ability of the price signal to reflect the fundamentals does not imply a unique direction, or a lack of volatility, as the price of CO₂ is naturally affected by the fluctuation of other variables. The volatility of prices on energy markets, and particularly on the gas market in particular, has indeed significant repercussions on the volatility of the price of CO₂ allowances.

Three main observations emerge from the analysis of the fundamentals of the price of CO₂, and they must contribute to shedding light on the choices to be made in terms of market regulation:

- the importance of the stability and quality of institutional information;
- how difficult it is to grasp the price formation mechanism on this market, which calls for the information to be made available to all agents, some of which do not have the capacity for analysis required to substantiate their expectations;
- the need for transparency on a certain amount of fundamental market data.

Thirdly, the price signal must be protected as much as possible from exceptional variations, which may be due to events extraneous to the market fundamentals, particularly in relation to the strategies of market players. In this respect, clear cases of market manipulations or collusive behaviours during auctions would be liable to distort expectations and would be detrimental to the predictability of the price signal, as well as to the reputation of the allowance system, and therefore to the confidence of market participants.

It thus appears that the main objective of the regulation and oversight of the CO₂ market is to guarantee the robustness of the price signal, making sure that it reflects market

fundamentals without distorting them and guaranteeing a sufficient level of information of market participants.

1.2 *The free organization of the European CO₂ market contributed to its rapid expansion, which was accompanied by a marked increase in its liquidity*

The European market now represents the most important component of the international CO₂ market and its share has grown steadily since 2005 (65-70% of volume and 70-80% in value in 2009). The carbon offset market related to the mechanisms of emission-reduction projects implemented by the Kyoto Protocol – international credits (CER and ERU¹⁰) – constitute the second component of the international market with nearly 30% of traded volumes. This market is divided into a primary market (in which agents acquire credits issued by a greenhouse gas reduction project) and a secondary market (on which credits previously issued are traded). The secondary market greatly developed in recent years, with the volumes traded being multiplied by 4.5 during the year 2008, a phenomenon which resulted from the European market entering into its second phase concomitantly with the first commitment period of the Kyoto Protocol. Most of the demand for international credits indeed comes from European companies: the operation and structure of the CER and ERU secondary markets are therefore very similar to that of the European allowance market. The analysis of the regulation issues relating to secondary international credits markets will therefore be fully integrated into the analysis of the European market.

The European CO₂ market has experienced a spectacular rise in volumes traded since its creation. In 2009, trading neared 66B\$ in notional amount for volumes exceeding 5 billion allowances traded on the various segments of the market¹¹. Between 2005 and 2009, the volume of trade was multiplied by nearly 20, while the value of trade was multiplied by 12, as shown in the following table.

¹⁰ Credits known as Certified Emission Reduction Units (CER) for the Clean Development Mechanism and Emission Reduction Units (ERU) for the Joint Implementation Mechanism.

¹¹ Let it be observed that part of the rise in the volumes traded in 2009 must also be interpreted within the context of the VAT fraud, as detailed below.

Box no. 1 – Evolution of trade on the European CO₂ market between 2005 and 2009*

Year	Volumes traded (millions of tonnes)	Value of transactions (millions of Euros)	Average price (euros)
2005	262	5,400	20.6
2006	828	14,500	17.5
2007	1,458	25,200	17.3
2008	2,731	61,200	22.4
2009	5,016	65,900	13.1

Source: Point Carbon

* Except OTC transactions without clearing.

Table interpretation: following an introduction stage between 2005 and 2007, which corresponded to the first phase of the market, the start of phase II (2008-2012) resulted in the volume of trade increasing almost twofold and in the value of trade increasing threefold between 2007 and 2008. In 2008 and 2009, the volumes traded continued to greatly increase (this increase should nevertheless be qualified in the context of the VAT fraud) and almost doubled, while the value of trade only experienced a moderate increase due to the considerable drop in prices observed following the peak of the economic recession, notably in the first quarter of 2009.

The liquidity of the European CO₂ market has greatly increased¹². However, the liquidity of the European CO₂ remains relatively lower than that of other commodity markets. The turnover ratio (the volumes traded in relation to the size of the underlying market¹³) is indeed of only 2.5 on the European CO₂ market, which remains low in comparison with the liquid commodity markets, on which turnover ratios are higher than 10 (oil market, gas market in the United States, electricity markets in Germany and in Scandinavian countries, in particular).

1.3 Apart from some regulatory shocks, the evolution of CO₂ prices has mirrored the evolution of the fundamentals and its volatility has remained lower than that observed on energy markets

Debates on whether it would be appropriate to implement mechanisms to regulate prices on the carbon market kept the idea alive that the volatility of this market was too high. The belief that the volatility of prices on the European CO₂ market is excessively high appears to be deeply entrenched, thus justifying the proposals to introduce floor price or ceiling price systems, as put forward notably by Poland within the context of negotiations on the climate and energy package under the French Presidency of the European Union in 2008¹⁴. Nevertheless, according to the existing economic and financial literature, which was

¹² APPENDIX V – Analysis of the evolution of liquidity on the European CO₂ market.

¹³ The size of the underlying market can be assimilated, for CO₂, with the allocation of allowances, i.e. 1.9 billion tonnes per year during phase II.

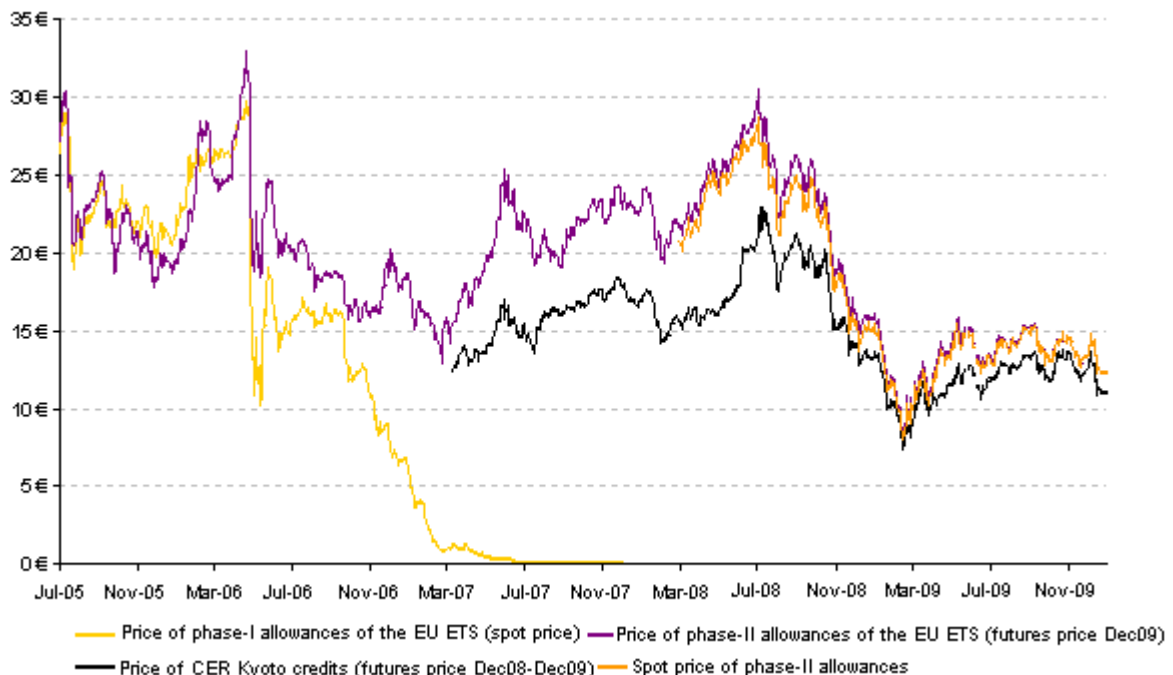
¹⁴ Poland had proposed to introduce a “floor” price and “ceiling” price system on the secondary market of CO₂ allowances: it was a matter, concretely, of organizing the fluctuation of prices within a band, delimited by a lower limit which went from 5 to 40€ between 2013 and 2020 and an upper limit which went from 65 to 100€

brought to the attention of this working group, although the volatility of CO₂ allowance prices on the European market is an established fact, nothing justifies that it should be described as excessive in comparison to other markets.

Box no. 2 – Fluctuations in the price of CO₂ allowances on the European market since 2005

Based on existing market data, the evolution of allowances prices (spot allowances, futures contracts and international credits) between 2005 and 2009 is presented below.

Evolution of allowance prices on the European market (2005-2009)



Source: Bluenext, ECX

The price of CO₂ experienced important fluctuations during phase I. It began at 8€ on 1 January, 2005 and rose to 30€ in July 2005, before entering a band of fluctuation contained between 20 and 25€ over the following half-year period and going back to its highest point of 30€ in April 2006.

The price then collapsed during the last week of April 2006, following the announcement of their actual emissions by the companies covered by the EU ETS legislation, which revealed a situation of over-allocation. On 15 May, 2006, the Commission confirmed an over-allocation of around 4% of the overall budget constituted by the addition of the National Allowance

over the same period. The observance of this range was to be ensured through market operations performed by an *ad hoc* institution which would have had its own funds, made up of a share of the auction revenues of Member States. The floor price was justified by the will to guarantee a long-term price signal and to reduce the impact of prices reaching a low point on the incentive to invest in “low-carbon” technologies. The ceiling price was more difficult to justify: it made it possible to put an upper limit on the cost of emission reduction objectives for companies, but actually led to an uncertainty regarding the final level of constraint, which could be adjusted later on. This system also came up against problems related to the common (and arbitrary) definition of the band to be adopted by Member States, which were similar to problems relating to the determination of the rate of a harmonized tax or the determination of a tutelary value, or range of values.

Allocation Plans (NAAP). Within a few days, the price thus brutally adjusted by over 50%, before varying within a band contained between 15 and 20€ until autumn 2006.

As observed by Alberola and Chevallier (2008), from the end of 2006, the price of allowances evolved in accordance with two separate and entirely unrelated principles: a drop tending towards zero of the price of phase-I allowances due the impossibility for operators of banking phase-I allowances to use them during phase II¹⁵; and a stabilization of the prices of phase-II futures contracts around an average of 20€.

From phase II onwards, the market evolved in 2008 within a band between 20 and 25€, before reaching its highest point ever recorded at 30.6€ on 30 July, and then initiating a continuous drop during the second six-month period of the year.

The price of CO₂ emission allowances on the European market fell to 8.2€ (low point recorded on 12 February, 2009, picked up again to reach 15.24€ on 4 September, 2009 and then stabilized within a band between 10 and 15€.

In early 2010, prices continued to evolve within a very narrow band between 13 and 14€.

Generally speaking, a genuine convergence of spot prices and futures prices (the difference observed corresponds to the financial cost of carry) can be observed, as a result of the role of arbitrageurs, which ensure that the price of allowance derivatives remains related to that of the underlying asset. As underlined by Uhrig-Hombourg et al. (2006), the liquidity of the derivatives market, like on other commodity markets, largely exceeded that of the spot market for CO₂ starting from December 2005, while price formation was ensured de facto by the ECX (London-based derivatives market) futures contract with an annual maturity date.

The derivatives thus makes it possible to discover the appropriate price signal in the medium and long term, by making it possible to access information for all existing maturity dates. The prices of futures contracts indeed provide information on the expectation, expressed at a later date and in accordance with the information available, of what the spot price will be on this same date. Futures prices are, in a way, indicators of future spot prices, which makes it easier to allocate resources through time and, in the case of CO₂, enables economic players to make a comparison between the price of carbon at a given moment and the marginal abatement cost of one tonne of CO₂.

Over the entire period during which the European CO₂ market has been in operation (i.e. 2005-2010), the most notable price fluctuations (price drops at the end of phase I and in 2009) can be explained differently: by regulations or by the economic climate. During phase I, the first peak in volatility¹⁶, corresponding to the sudden drop in prices in 2006, can be explained mostly by the conjunction of two regulatory factors: a situation of over-allocation of allowances discovered by operators which was related, at the time, to the lack of accurate data on the emission levels of the companies covered by the EU ETS legislation, and the restriction on carrying phase-I credits forward to phase II (banking). This combination led to a massive selling of allowances, resulting in a sudden drop in allowance prices tending towards zero.

¹⁵ It should be observed that according to Ellerman & Buchner (2009), the fact that the market price of CO₂ reached zero at the end of phase I did not stop this phase from enabling a substantial reduction of greenhouse gas emissions, contained between 50 and 100 million tonnes per year between 2005 and 2007.

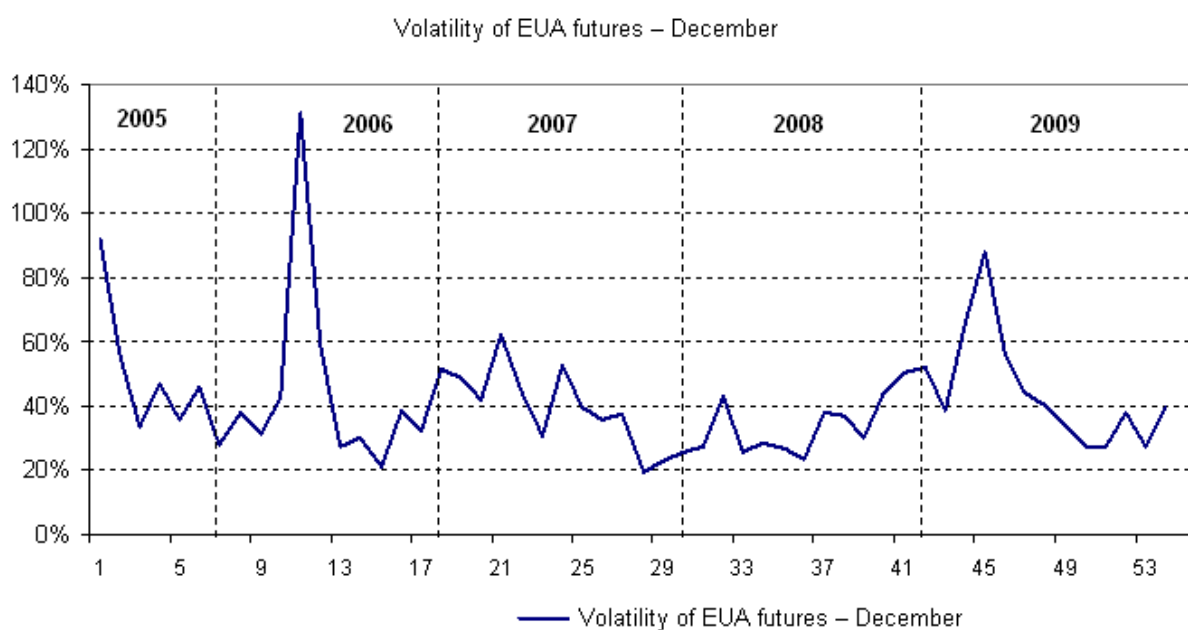
¹⁶ calculated as the standard deviation of prices over a given period and expressed in percentages

On the contrary, the strong price drop during phase II can first of all be explained by a shift in the supply-demand balance on the market caused by the economic crisis: the contraction of industrial production and energy consumption which accompanied the economic downturn in Europe indeed led to a reduction of CO₂ emissions by the installations subject to the EU-ETS, resulting in a lower demand for allowances. In addition to this “real” and statistically significant effect (let it be reminded that the elasticity of CO₂ emissions with respect to GDP is greater than 1), there was a “financial” affect, which contributed to furthering the drop in the average price of allowances, beyond the sole interplay of fundamentals. The imposition of more stringent conditions of financing on companies (more difficult and costly access to credit and financial markets) indeed led industrial operators to monetize their allowance “surplus” on the market to meet their cash flow requirements in the short term.

CO₂ allowances were thus used by the companies covered by the EU ETS legislation as an instrument to achieve greater cash flow flexibility, thus giving the CO₂ market the role of a countercyclical financial shock absorber. This financial optimization strategy was made possible by the one-year interval between the free allocation of allowances by public authorities and the mandatory surrender of allowances by companies. In concrete terms, an operator may immediately monetize its allocation following the issue of allowances, by signing a futures contract to cover its expected requirements for the following year. This system thus resulted in an increased supply of CO₂ allowances. The current situation, which is due to the present state of the economy, is thus fundamentally different from the situation which prevailed during phase I, which was linked to regulatory factors. Moreover, let it be observed that the phenomenon of monetizing allowances for cash flow purposes, having an impact on prices is, here again, the consequence of the design of this market.

At a sub-period level, volatility has partly decreased since 2005. Seifert et al. (2008) explained the variability observed during the first phase of the market by the fact that operators, due to the immature nature of the market, lacked experience regarding the formation of their expectations. In this respect, it can be observed that price volatility on the European CO₂ market was relatively more important during phase I than during phase II, and more specifically during early periods, as shown by the graph below.

Graph no. 1 – Price volatility observed for CO₂ allowances between 2005 and 2009



Source: CDC Climat Recherche

Table no. 2 – Historical volatility over 15 days of CO₂ allowance prices during the second phase of the market (2008-2012)

		Spot BlueNext	Dec 09 ECX	Dec 10 ECX	Dec 11 ECX	Dec 12 ECX	Dec 13 ECX	CER (Reuters index)
2008	T1	29.4	34.2	33.6	32.9	31.8	-	28.4
	T2	25.0	23.9	23.8	23.1	22.9	21.9	20.2
	T3	38.2	38.4	38.0	37.4	37.3	36.1	40.9
	T4	49.0	46.3	46.2	45.3	44.8	40.1	44.8
2009	T1	72.4	72.9	73.1	74.8	70.6	65.6	68.4
	T2	43.8	43.0	42.9	42.4	40.6	37.8	38.7
	T3	30.8	31.3	30.9	30.3	29.7	27.5	25.4
	T4	35	29.7	34.9	32.9	32.2	30	33.4
2010	January	35.4	-	35.6	35.4	35.6	32.8	31.3

Source: CDC Climat Recherche

Graph and table interpretation: volatility appears to be relatively higher at the beginning of phase I (2005), and then stabilizes in early 2006, apart from the peak (over 150%) due to the announcement of the overall surplus of

the market. The end of the first phase (2007) is characterized by a relative drop in volatility, especially from the second half of the year. During phase II, it can be observed that volatility continuously increased in 2008 (except during T2 2008) before reaching the high point observed in February 2009, and then experiencing a marked drop during T2 and becoming gradually stabilized within a band contained between 30 and 35%.

The sub-annual volatility of prices on the European CO₂ market is explained by the design of the market, possible regulatory shocks as well as by the evolution of market fundamentals, especially the volatility of energy prices. Part of the volatility of the price of CO₂ appears thus to be due to the regulatory schedule governing the market. Price fluctuations can thus be observed at the three structural moments of activity on the market over the year: when allowances are allocated by the states to the companies subject to the market (28 February); when companies surrender their allowances to public authorities (30 April); and, lastly, when the emission data of the elapsed year is published annually.

Graph no. 2 – Price fluctuations observed on the spot market at the time when allowances are allocated each year



Source: Banque de France (Bank of France)

Graph interpretation: it can be observed that each year between 2006 and 2009, the annual allocation date (28 February, in the red circles) gave rise to a drop in prices. Once allowances have been issued, the companies covered by the EU-ETS monetize part of their allocation. After a catch-up effect, most of the fast rise in prices in the four following months is due to supporting effect of the demand from power producers who sell forward their electricity production mainly in Q2 and Q3 and hedge their allowances needs simultaneously.

A part of sub-annual volatility is also due to liquidity requirements, which correspond to the commonly observed dates on which deliveries fall due for allowance derivatives, in December and February. Lastly, volatility spikes can also be observed on the market on the occasion of regulatory shocks. An example of the sensitivity of the European CO₂ market to this type of event was given recently by the fluctuations observed following two decisions by the Court of First Instance of the European Communities (CFI) on 23 September, 2009¹⁷. Following these two decisions, which quashed two decisions of the Commission concerning

¹⁷ T-183/07 Poland / Commission (PL) (Integrated pollution prevention and control – Emissions trading system for greenhouse gas allowances – Allocation of allowances to Poland for the 2008-2012 period) and T-263/07 Estonia / Commission (ET) (Integrated pollution prevention and control – Emissions trading system for greenhouse gas allowances - Allocation of allowances to Estonia for the 2008-2012 period).

the Polish and Estonian National Allowance Allocation Plans (NAAP), the market anticipated an upward revision of the overall allocation of allowances of around 439 million allowances for the 2008-2012 period. Expectation behaviours led to a drop in the price of spot allowances of around 5% in one day (from 13.27€ to 12.76€). The market thus had a significant reaction, even though the additional allocation of allowances – that would have represented a modification of around 4% of the annual allocation of allowances in Europe¹⁸ - remained hypothetical. The increase observed over the three months which followed this episode was of 15%.

The volatility of the CO₂ price is also related to that of energy prices. Indeed, as the relative price of fossil energy sources constitutes one of the drivers of the CO₂ price, the volatility of energy prices (coal, gas, oil) has repercussions on that of the price of CO₂. This causal relation is apparent on the similar evolutionary trends of volatility levels (see table 3 below), as periods of high volatility for the prices of gas, coal and oil also correspond to periods of high volatility for the price of CO₂.

Although this analysis remains a difficult one to make, the CO₂ market does not appear to be currently characterized by an excessive volatility with respect to its various determining factors. The volatility of the price of CO₂ allowances is thus lower than the volatility observed on other energy markets, as shown by the following graphic and table. This lower volatility level can be explained, at least partly, by the market design, which is based on an annual balance between supply and demand, and not on a continuous balance like other markets. Nevertheless, according to Lautier and Simon (2008), the volatility of CO₂ prices and commodities, and energy commodities in particular, is largely higher than that of traditional financial assets¹⁹. It is also advisable to shed light, or even contradict, the accusation frequently levelled against derivatives markets, which are suspected of constituting a factor of volatility. Indeed, no correlation can be found on the European CO₂ market between the progressive financialization of the market and an increase in its volatility. As an example, while the share of allowance trading on the spot market was greatly reduced from June 2009, in favour of a more important share on the derivatives market, this phenomenon was not accompanied by an appreciable increase in price volatility.

¹⁸ Let it be observed that the market may have anticipated a more important increase, considering that the decision of the CFI could set a precedent for the actions based on the same grounds of six other Member States, which would lead to an increase of the order of 825M allowances.

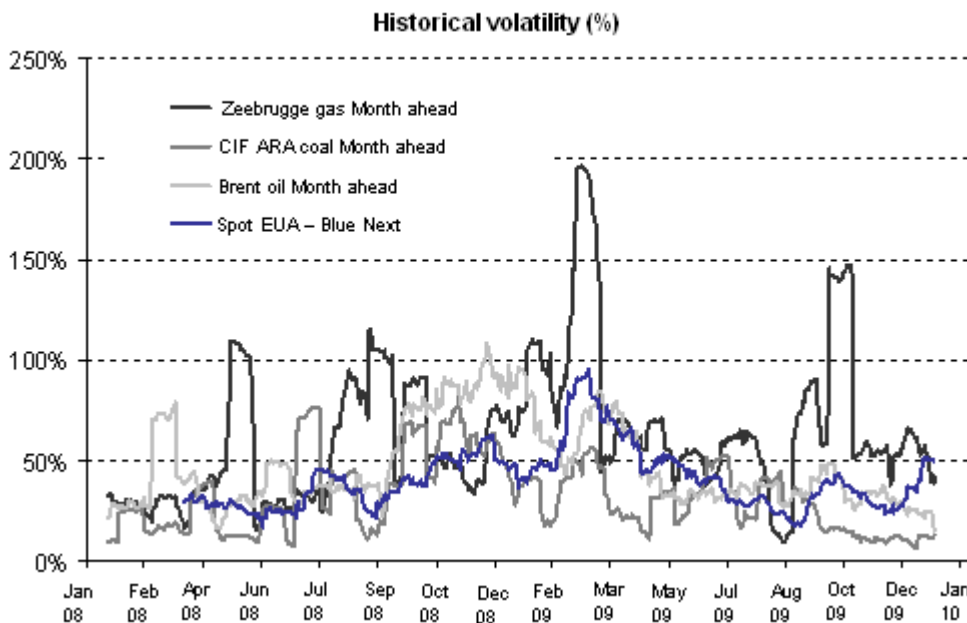
¹⁹ In 2007, according to *Lautier and Simon*, the annualized volatility in percentage on Euribor, for instance, was of 10.7%, while it was of 14.4% for the Euro Stoxx 50, and while the volatility observed for crude oil was of 26.4% and of 62.2% for natural gas.

Table no. 3 – Comparative historical volatility of CO₂ allowance prices and other commodities

		Spot price of CO ₂ BlueNext	Contract Dec 09 ECX	Zeebrugge gas Month Ahead	Brent oil Month Ahead	CIF ARA coal month Ahead	Electricity Powernext Futures (Base / Peak)
2008	T1	30	34	28	44	17	35 / 39
	T2	25	24	57	34	24	54 / 66
	T3	38	38	74	45	46	83 / 92
	T4	44	50	64	87	61	59 / 66
2009	T1	72	73	141	58	41	56 / 62
	T2	44	43	57	32	43	44 / 56
	T3	31	31	60	39	29	53 / 57
	T4	35	30	74	31	12	75 / -

Source: CDC Climat Recherche, according to Reuters and Bluenext

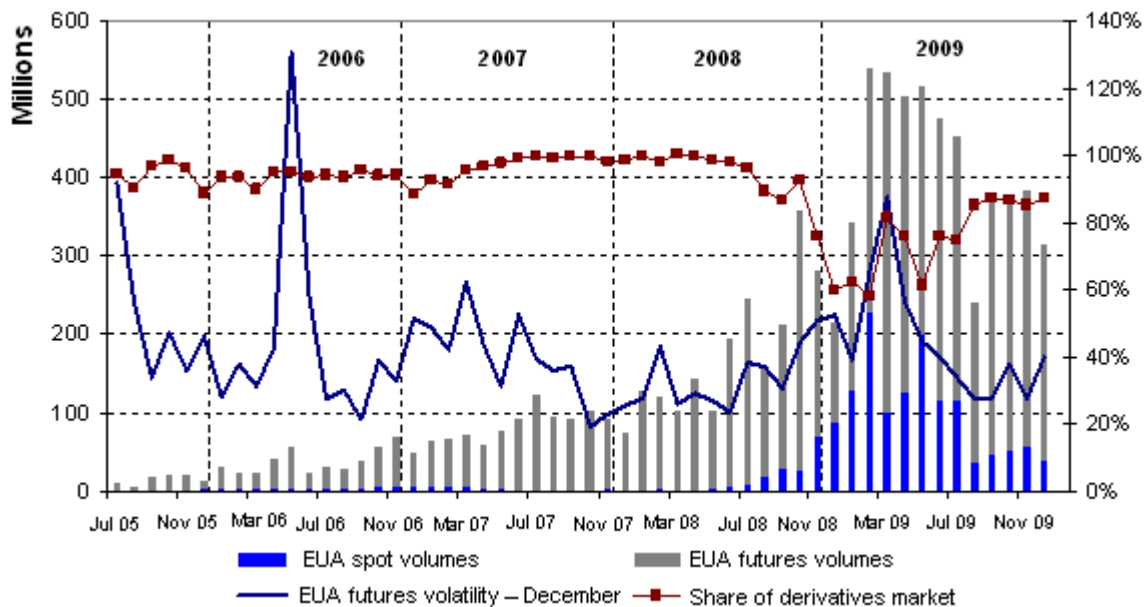
Graph n°3 – Comparative historical volatility of CO₂ allowance prices and other commodities



Source: CDC Climat Recherche, according to Reuters and Bluenext

Table and graph interpretation: both the volatilities of the spot and futures prices are lower than the volatility observed on other commodity markets. On average, during phase II of the market, the average volatility of spot allowances and futures contracts was lower by nearly 20% than the volatility of gas, by 15% than that of Brent, and by nearly 60% than that of electricity. However, it was slightly higher than the volatility observed for coal.

Graph no. 4 – Comparative evolution of volatility and volumes traded on the various market segments



Source : CDC Climat Recherche d'après BlueNext, ECX, EEX, Nord Pool, Climex

Graph interpretation: the volatility of the price of CO₂ appears to be relatively unrelated to the relative and absolute importance of the derivatives market. The increase in the volumes traded on the derivatives market between 2005 and 2008 did not result in increased volatility. On the contrary, the fall in early 2009 of the share of trading represented by the derivatives market corresponds to a high point in volatility.

1.4 In 2013, the European CO₂ market will be entering its third phase, within the context of an increased carbon constraint and of the emergence of a primary market

1.4.1 The auctioning of allowances starting in 2013 will significantly alter the structure of the European CO₂ market

The third phase of the European CO₂ market will be characterized by a noticeably increased constraint²⁰. The European commitment to reduce greenhouse gas emissions by 20% by 2020 in relation to their level in 1990 will lead to rationing the supply of allowances on the European CO₂ market. The constraint laid down for all sectors covered represents a budget of around 2 billion CO₂ allowances in 2013, which will go down linearly (-1,74% per year), until it reaches 1,72 billion allowances in 2020. The increased constraint imposed on the companies covered by the EU-ETS should, logically, result in an increase in the price of allowances, which could go, according to estimates made by analysts, from less than 15€/t in 2009 to over 35€/t in 2020. For that matter, this rise in prices should affect the market by the end of phase II, as the needs of electricity producers to cover their net demand for phase-III allowances should result in a higher demand for phase-II allowances²¹. It will reflect

²⁰ Directive 2009/29/EC of the European Parliament and of the Council of 23 April, 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas allowance trading scheme of the Community.

²¹ This additional demand will either concern phase-II allowances that electricity producers will be able to bank, or futures contracts that will mostly be provided by financial agents. These will hedge part of the resulting exposure through the purchase of phase-II allowances. In all cases, the demand for phase-II allowances will increase.

the expectations of operators, while the banking of allowances will henceforth be authorized for all Member States.

In terms of scope, phase III represents more of a gradual evolution than a structural one. The increase in the volume of allowances allocated, which is related to the inclusion of new sectors (aluminum, chemistry, maritime transport), will be in the region of 145Mt, i.e. 7% of annual allocations during phase II. To this will be added a 10% increase in the overall carbon budget starting from 2012, which will be related to the air transport sector becoming part of the system.

The main change, which will affect the market during phase III, will be the change from a free allocation of allowances to the installations covered by EU-ETS to their progressive auctioning. Auctions are aimed at improving the efficiency of the EU-ETS by limiting the distortions related to free allocations. They will make it possible to maximize the incentive to reduce emissions, which will no longer play only at the margin (as is the case with free allocations determined in accordance with historic emissions), but on the entire production and all emissions. Electricity producers will thus be forced to acquire all of the allowances they need to cover their CO₂ emissions through auctions starting from 2013²². The other sectors subject to allowances will enjoy a reduced auction rate of 20% in 2013, going up to 70% by 2020, or even a lower rate, depending on the benchmarks, for sectors considered to be exposed to the risk of carbon leakage²³. Overall, the existing economic and financial literature estimates that the share of allowances auctioned in relation to the overall allowance budget of the system for the year 2013 will be between 55 and 60%, i.e. a volume of 1 to 1.2 billion tonnes in allowances, which corresponds to a notional value in the region of 25B\$, according to the average expectations of analysts for the price of CO₂.

The auctioning of allowances will thus lead to the appearance of a “primary” market, as opposed to the “secondary” market on which allowances awarded or allocated free of charge are traded, which will play a major structural role with respect to the price signal. The working group chaired by Jean-Michel Charpin, whose report was made public on 1 October, 2009, made several recommendations regarding the design of auctions aimed at ensuring their efficiency and smooth functioning. The design of auctions is now being discussed by the European Union under the elaboration of the corresponding regulation, which will be published by 30 June, 2010.

Box no. 3 – The consequences of auctioning CO₂ allowances on the European CO₂ market starting from 2013

In addition to the structuring of a primary market, the transition to an allocation system through auctions will have several consequences for the secondary market, as summarized below.

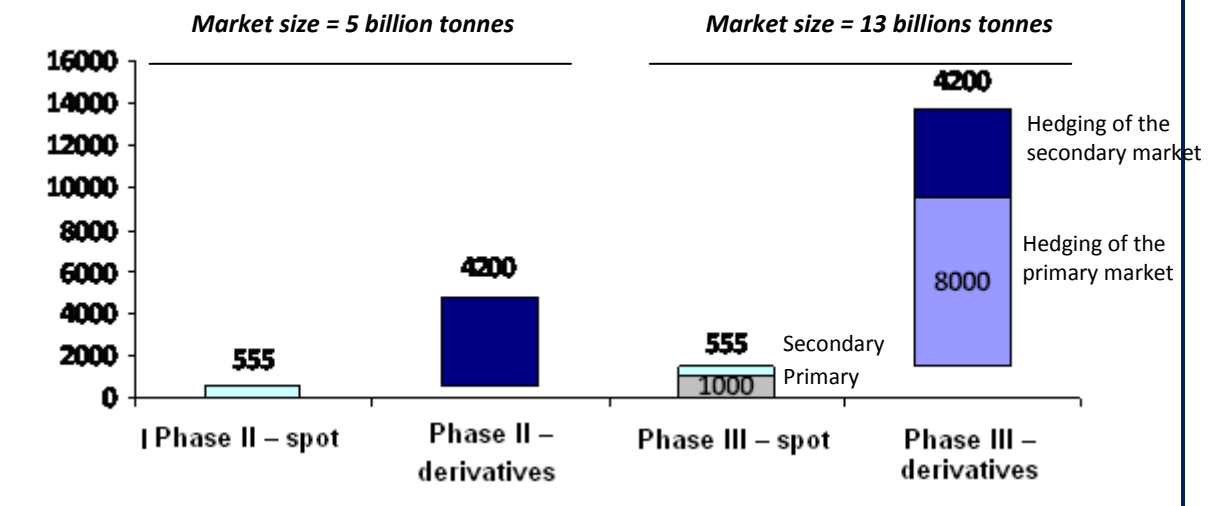
The modification of the allocation method will result in an increase in the annual volumes traded on the spot market from around 0.5-0.6 billion allowances in phase II (assessment after deduction of the impact of VAT fraud in 2009) to 1.5 to 2 billion allowances in phase III.

²² Let it be reminded that certain Member States (new Member States) benefited from transitional measures concerning their electricity production installations, that is to say from the principle of gradual auctioning from 2013 to 2020.

²³ Risk that the carbon constraint, linked to the capping of emissions, on companies covered by the EU ETS, and the corresponding costs, result in the relocation of the corresponding installations to countries where the carbon constraint is weaker.

The structure of the secondary market should not undergo any major changes during phase III. The futures market should thus continue to represent the great majority of trade, as the current ratio between the size of the spot market and that of the derivatives market is commonly observed on commodity markets. Should this ratio of 1 to 7 to 8 currently observed be maintained, the market could reach 10-15 billion allowances in volume traded each year during phase III, i.e. from 250 to 375 billion € traded in value.

Forecast of market size during phase III (2013-2020)



Source: Orbeo, CDC Climat Recherche

N.B.: the volumes of phase II correspond to the annualized volumes traded in the last 4 months of the year 2009, so as to reprocess the volumes of VAT fraud.

Graph interpretation: The creation of a primary market of 1-1.2 billion tonnes related to the sale of allowances through an auctioning procedure will result in an increase in the size of the derivatives market (8 billion tonnes, if we suppose that the size multiple between the spot market and the derivatives market remains constant), as players no longer need to only cover their net position, which corresponds to the difference between their allocations and emissions, but also their allocations for which they must now pay.

The transition to an auctioning system should result in increased intervention by small participants on the derivatives market: the number of regular (weekly at least) players on the market (currently estimated between 80 and 100) should logically increase. The uncertainty related to the results of auctions and the impossibility for certain players to cover all of their needs during auctions will automatically lead to an increased number of participants and operations on the market.

Moving to its third phase, the European CO₂ market should thus experience two main developments: the continuation of a sustained growth of trade in volumes and value and the participation of an increased number of market players, notably small industrial participants.

Strong interactions are to be expected between the primary and the secondary markets.

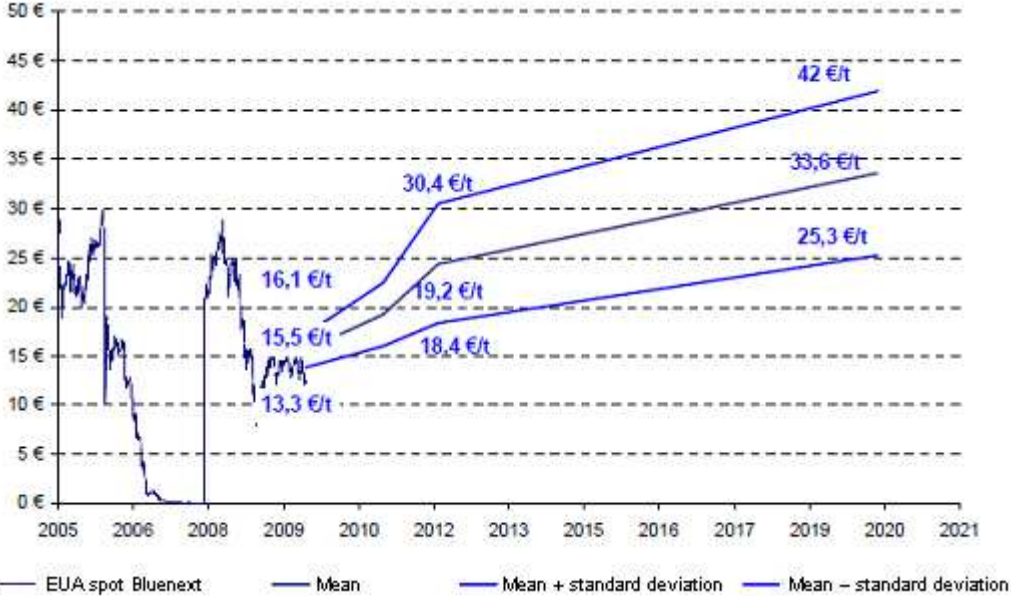
Insofar as over half of allowances will be auctioned, the price of auctions will have a structuring influence on the price of the secondary market. In addition, each auction will correspond to an injection of liquidity, which could result in lower prices on the secondary market. The auction experiments carried out during phase II in a certain number of European countries (concerning 383Mt of CO₂, i.e. 3.6% of overall allocations for the 2008-2012 period) notably shows the impact of auctions on the secondary market. Since the

volumes put up for auction every week during phase III will represent a significant volume, the potential impact on the secondary market could be important. However, it could be reduced by a high frequency of auctions, which would also reduce the risks of collusion and, consequently, the risks of crossed manipulations between the primary market and the secondary market. This risk, which is almost nonexistent today, will however constitute a potential risk during the third phase of the market.

1.4.2 High uncertainties now weigh on certain determining factors of the balance of the European CO₂ market during its third phase

The discrepancies observed in the price forecasts for the years to come show how difficult it is for economic players to stabilize their expectations within a context of high regulatory uncertainty. The main analysts recognized at European and international level currently disagree significantly on the expected prices of CO₂ allowances.

Graph no. 4 – Trend of price forecasts for European allowances (late 2009)



Source : EXC, Barclays Capital, Reuters, Deutsche Bank, Société Générale – Orbéo, Chevreux, Point Carbon

Graph interpretation: the discrepancies between expected prices on the European CO₂ market are very important. On average, based on the analyses available, the price of phase-III allowances should be of 24.4€ at the start of the period and of 33.6€ in 2020 (the price increase corresponds to the constraint gradually becoming more stringent).

These discrepancies are obviously due to underlying hypotheses (economic growth, relative prices of energies, for instance), but especially to the different views of analysts on the regulatory developments of the CO₂ market.

Indeed, a certain number of fundamental drivers of the supply of phase-III allowances have yet to become stabilized, less than three years before the entry of the market into its third phase. Three elements remain uncertain today, and will be clarified within the context of the implementation of the climate and energy package.

The first of these elements is the overall level of constraint, as the European Union has yet to make a final decision, according to the developments of international negotiations, on the possibility of increasing its overall abatement effort to 30% by 2020 in relation to the emission level in 1990. Such intensification would have notable consequences on the European permit market. Assuming that there is a homothetic distribution²⁴ of the reduction effort among the EU-ETS and the non EU-ETS sectors, the level of constraint on the sectors covered by the EU ETS legislation between 2013 and 2020 would go from -21% to -37%, i.e. less than 1.5 billion allowances allocated in 2020 (as opposed to 1.7 billion allowances in the -20% scenario).

The second element relates to the use of international credits (CER and ERU)²⁵. The rules concerning the overall quantity and the type of credits from project mechanisms which the companies covered by the EU ETS legislation will be able to use for compliance purposes during phase III constitute a notable element of uncertainty. The rules governing the use of credits resulting from project mechanisms will have important consequences on the equilibrium price of the European CO₂ market. The use of international credits also has an automatic bearish effect, the price of these credits being lower than the price of allowances, due to the relatively lower marginal abatement costs of the abatement projects implemented in developing countries compared to the marginal abatement costs of the sectors covered by the allowance trading system.

Lastly, the third element concerns the overall volume of allowances to be auctioned, which will depend on the method used to determine the volumes of allowances that will be allocated for free. This method should be based on *ex ante* reference systems or benchmarks. The Commission must adopt harmonized rules on a Community scale that include the definitions of benchmarks before 31 December, 2010. Benchmarks are defined for each type of product. These rules in question will have important consequences: the more or less restrictive nature of the benchmarks will limit the overall volume of allowances allocated free of charge, and therefore the overall volume of allowances auctioned.

²⁴ That is to say, assuming the reduction effort will be shared among sectors covered by the ETS and sectors outside the ETS in accordance with the distribution provided for the -20% effort.

²⁵ For the 2013-2020 period, it will be possible to use the remaining unused credits from the 2008-2012 period, on the remainder of a quantity corresponding to 11% at the most of the allocation for the 2008-2012 period. Let it be observed that the 11% limit may be raised for installations which received few free allowances during phase II. These provisions amount to putting an upper limit on the potential demand for Kyoto credits at a minimum of 1,510Mt over the 2008-2020 period. New entrants (including those from phase II which did not receive any free allowances and did not have the possibility of using CER/ERU during phase II) could be subject to a cap on the use of their credits of at least 4.5% of their emissions recorded between 2013 and 2020. The aviation sector could have the possibility of using a quantity of credits of at least 1.5% of its emissions recorded for the same period. If an international agreement is reached, the cap on the credits which can be used will rise up to 50% of the additional reduction efforts. However, this percentage will be discussed again as part of a joint decision. The authorized CDP "high-quality" credits, will need to come from countries having signed the international agreement, or which are related to the European market, starting from 1 January, 2013. The types of credits used during phase III could be limited with or without an international agreement. From 1 January, 2013, any decision on this subject will need to take effect from 6 months to 3 years following its promulgation. Operators will need to file a request with the proper authorities to convert credits into phase-III allowances before 31 March, 2015.

1.5 The European CO₂ market has become increasingly “financialized”: carbon could become a new financial asset class

The European CO₂ market is a market whose functioning is relatively easy to understand in terms of trade operations performed. It is structured around the compliance exercise and the related hedging requirements of operators. Notably, the derivatives traded are relatively standard. The market is mostly stimulated by a small number of players which are relatively easy to identify.

The recent period has shown an increased “financialization” of the CO₂ market. The development of structured financial products began, with, for instance, the introduction of structured products, similar to Collateralized Debt Obligation, making it possible to “securitize” project portfolios developed within the framework of the Clean Development Mechanism (CDM), that have different levels of approval by the CDM Executive Board of the United Nations, and therefore different risk levels²⁶. This type of product can raise issues in terms of risk valuation and, should their importance significantly increase, may pose risks of destabilizing the related market. In the case of CO₂, this risk also appears to be increased by the lack of maturity of the underlying market, which could worsen valuation problems.

Box no. 4 – The first structured products relating to CO₂

The first structured products relating to CO₂ were introduced during the second phase of the European market, and concern international credits (ERU and CER).

In principle, only three financial arrangements of the carbon Collateralized Debt Obligation (CDO) type were structured in 2008 (Switzerland and South Africa). The confusion on the markets caused by the Lehman bankruptcy in late 2008, and notably the collapse of the “standard” CDOs market “” put an end to the structuring of carbon CDOs.

The mechanism operates as follows:

An investment bank signs forwards contracts for the purchase of CER from different projects developed by various originators. The bank then sets up a structured product of the CDO type, which is secured by a project portfolio. This product is proposed to market players within the context of a private investment.

Investors having subscribed for the tranches of the carbon CDO receive an annual physical payment for 4 years (until 2012) in CERs, which correspond to the emission reductions actually recorded each year, in relation to the various projects of the portfolio. The portfolio is not actively managed. The carbon CDO is composed of 3 subordinate tranches: the “senior” tranche A represents X% (<50%) of the CERs actually issued (with a priority ranking over other tranches); the “intermediate” tranche B represents X% (50%) of the CERs actually issued, after the CERs of tranche A have been allocated; the “junior” tranche C corresponds to the remaining volume of CERs, which are allocated after tranches A and B.

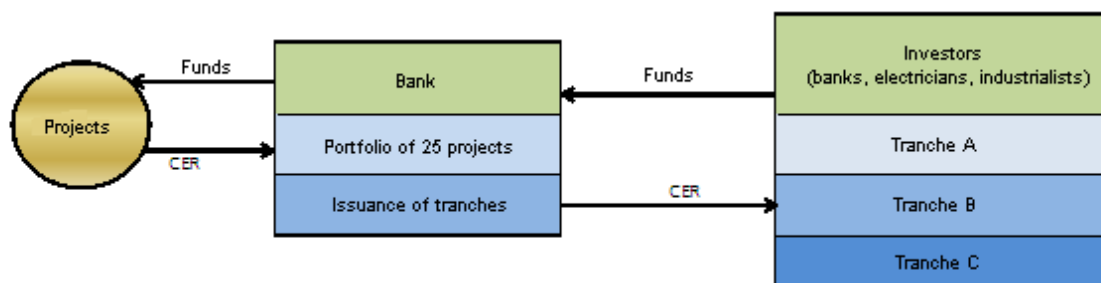
4 types of players are potential buyers of this type of products:

- operators covered by the EU ETS legislation, which can use the carbon CDO to hedge the risks relating to the primary market, particularly for those which do not have the means or

²⁶ In practice, a product of this type combines two types of risks: the risk of having projects invalidated and the risk of projects leading to emission reductions, and therefore to the creation of fewer credits.

- skills to directly take part in project origination or management and which can acquire through this means CERs which will enable them, ultimately, to ensure their own compliance;
- financial players, which actively participate in carbon markets. The carbon CDO represents, for these participants, either a hedging instrument if they invest in parallel in projects, or a speculation tool, notably if they subscribe for the riskiest tranche;
 - carbon funds: they raise the capital required to finance the Clean Development Mechanism projects. These funds can have several strategies. Some of them provide companies with credits to ensure compliance, while others are only aimed at making capital gains. In both cases, the senior tranche of the carbon CDO can constitute a source of international offset credits at a lower cost.
 - to a lesser extent, hedge funds which specialize in CDM projects. Hedge funds are notably likely to invest in the most junior tranches.

Simplified diagram of the arrangements of a structured product for international credits



Source: Banque de France (Bank of France)

The portfolio is made up of projects diversified along 4 dimensions: the countries of origin, the technology or methodology used (hydroelectricity, natural gas, wind energy, bio fuels, etc.); the level of approval by the Executive Board; (United Nations) the state of progress of the Project Design Document; and the consultants responsible for these documents. Let it be observed that incomplete information in the PDD lead to requests for clarification by the United Nations, which can have a significant impact on project deadlines. Within this context, the experience and expertise of the consultant are a decisive factor.

For a project portfolio concerning an amount in the region of 10M CERs (the investment bank retains part of the product from the start), the total amount of transactions would therefore be around 100M€ for this type of product.

In comparison with a "standard" structured product, a carbon CDO of this type is different on several notable aspects: the number of projects selected is relatively low, which results in a highly concentrated portfolio (as a comparison, the share of each signatory in a standard CDO is generally limited to a lower level, typically 2%); credit rating agencies are not called upon to assess the level of risk of the different tranches²⁷; the size of the riskiest tranche is

²⁷ Let it be observed the first credit rating agency dedicated to carbon, the Carbon Rating Agency, was created in 2008. Its purpose is to give a rating to the projects following from the Clean Development Mechanisms, notably by assessing the probability of a project being successfully completed and the amount of carbon credits it is liable to generate.

more important than in a standard CDO, in which its weighting coefficient does not generally exceed 10%.

This type of product appears to be particularly risky due to the difficulty of assessing associated risks, perhaps even more than with “standard” CDOs: as the primary market of international credits is relatively young, the available historical data is not substantial enough to enable a reliable measurement of the probability of projects not being carried out and of correlations of risks. The investors in this kind of products are not, in principle, involved in the development of CDM projects and, consequently, have little expertise in project assessment. As the rating of this type of product is not usually available from credit rating agencies, the choice of investing in this type of product requires that subscribers have confidence in the expertise of the bank to build the underlying portfolio. Consequently, it would be advisable to raise the question of their ability to model these products and develop appropriate risk management tools.

The development of options contract on the European CO₂ market also shows the financialization of this market. This development has been very rapid; the notional value of the put and call options contracts traded in 2009 was 434 million allowances, against 57 millions in 2007²⁸ (e.g. a multiplication by more than seven of the volumes in a two-years time). It shows the increasing sophistication of the hedging strategies of market players, which go beyond the sole use of futures and forwards contracts.

New investors, usual participants to other financial markets, hedge funds notably, could develop their activities on the European CO₂ market. In this respect, even though regulatory uncertainty has probably contributed to impeding the participation of these players to the CO₂ market, such a development appears to be likely in the future. The “advantages” of the CO₂ market are indeed similar to those which motivated the increased intervention of financial players on commodity markets. Firstly, CO₂ allowances constitute an inflation-hedging asset, in the same way as oil. Secondly, its higher volatility, in comparison with classical financial assets²⁹, enables traders to obtain higher returns. Lastly, the fundamentally bullish nature of the market, as the expected increase in the level of constraint should logically lead to a gradual rise of the price of CO₂, makes allowances an attractive investment.

The creation of carbon indexes could also encourage the participation of individual investors in the market³⁰. The sale of derivatives to individual investors thus raises the issue of protection and information of these investors, even though this evolution may appear to be desirable in the long run in order to favour flows of private savings towards instruments used in the fight against climate change.

These evolutions can appear worrying, inasmuch as they may seem to potentially be out of step with the primary environmental objective of this market. It is however advisable not to overestimate associated risks, as these expectations are notably only based on the back casting of comparable markets, although none of them is perfectly equivalent to the carbon market.

²⁸ Source: CDC Climat Recherche

²⁹ Such as securities and interest rates

³⁰ In this way, an ETF fund (exchange traded funds whose evolution mirrors that of their underlying index) was thus introduced in the United States in 2008 with, as its underlying asset, the performance of the price of European allowances. However, this ETF was liquidated in July 2009.

1.6 The ability of the European CO₂ market to ensure the emergence of a robust carbon price signal on the long-term does not appear certain as of today: the main parameters of market organization during phase III should be quickly stabilized

On the first phase (2005-2007), the setting of an emissions cap made it possible to ensure emissions reduction across sectors covered by the EU-ETS, despite the price volatility observed. According to the estimates made by *CDC Climat Recherche*, the mere fact that the 11,000 European installations concerned were governed by a system setting a cap on CO₂ emissions made it possible to actually reduce greenhouse gas emissions in Europe. Paradoxically, this reduction, which was in the region of 50 to 100Mt, was made possible even though the price of allowances had reached zero.

Nevertheless, beyond its primary objective of setting a cap on emissions, the question of the ability of the European CO₂ market to ensure the emergence of a long-term price signal that is sufficiently high to guide investment behaviours is raised. It is indeed essential that beyond the cap on emissions, the European CO₂ market also constitute an inducement to invest in low-carbon technologies.

In this respect, several elements, which were discussed previously, call into question the ability of the market to ensure the emergence of this long-term price signal. This is shown by the discrepancies between the forecasts made by analysts. It is interesting to observe that, given current conditions, the market should not be able to ensure the emergence, over the 2013-2020 period, of the minimum price level envisaged in France to fulfil the commitment of “factor 4”, i.e. reducing emissions by 75% by 2050 in relation their level in 1990. Let it be reminded that the Quinet commission³¹ had found that in order to fulfil this objective, the price of carbon would have to reach 100€/tonne in 2030, i.e. 32€ in 2010 and 56€ in 2020. In the light of existing forecasts, it appears that the European CO₂ market is currently unable to ensure the emergence of a price signal of this level. In this respect, a great number of the industrialists covered by the EU ETS legislation now declare that they make their long-term investment forecasts by relying more on the tutelary value of carbon than on the expected evolutions of the market price. The same observation is now made by British authorities, which are considering raising the level of an existing tax, the Climate Change Levy, which is paid by all companies, including those subject to the European allowance market, in order for it to play the role of a “floor price” for CO₂.

In this way, several voices recently rose to suggest that the market instrument be purely and simply abolished at European level, to be replaced by a tax system applicable to the entire European Union. It is advisable to be extremely careful here: calling into question the European CO₂ market to trade it for a hypothetical system does not appear to be a good policy. The proposal to establish a “floor price” for CO₂ is also made often, in order to make up for the alleged inability of the market to ensure the emergence of a stable minimum price signal. The criticisms made against the CO₂ market concern two points which must be distinguished: firstly, the stability of the price, and secondly, its level, and the economic incentives deriving from it.

It is imperative to address the fundamental causes which limit the ability of the European CO₂ market to ensure the emergence of a stable long-lasting price signal.

³¹ QUINET (Alain), *La valeur tutélaire du carbone (The tutelary value of carbon)*, Centre d'Analyse Stratégique (Center for Strategic Analysis), Paris, April 2009, 424 p.

The issue of the price level of CO₂ is linked to the carbon constraint imposed on operators, even though mechanisms can be envisaged to reduce uncertainties linked to the current economic climate. The price level of CO₂ first results from the scarcity organized by the allowance system and therefore from the upper limit set on emissions. It thus derives from a parameter related to the “cap” and not the “trade” aspect, which brings us back to the issue of whether the reduction objectives set are ambitious enough. The current low price level of CO₂ is thus mostly due to the impact of the economic crisis on emissions levels, which automatically reduced the constraint imposed on operators.

Nevertheless, this economic and temporary effect raises the question of the interest of a guarantee given to operators, in the form of a regulatory minimum price below which CO₂ allowances could not fall, and which could gradually increase through time so as to reflect the need for a more stringent carbon constraint on the economy. For an economic viewpoint, as underlined in the CHARPIN report, this type of proposal could constitute a major distortion of the market system, which is based on the establishing of volume quotas while allowing the price to fluctuate freely. Moreover, let it be observed that the proposal of a “floor price” often goes hand in hand with that of a “ceiling price”, for which there is no environmental or economic justification. The incentive value that this mechanism would have for operators could however be worth examining.

In practice, it could take the form of the introduction of a reserve price during auctions, below which the sale by auction would be cancelled, while environmental objectives would of course be maintained. For that matter, the European Commission is considering leaving open the possibility of introducing a reserve price, within the framework of the regulation concerning the organization of auctions, as recommended by the CHARPIN report. The primary objective of this provision is to protect auctions – and hence Member States’ revenues – from market manipulations. The reserve price system has the advantage, in comparison with a regulatory “floor price” introduced on the secondary market, of avoiding interventions by public authorities to support the price. Although it does not, by definition, cover the secondary market, it would in fact lead to putting a lower limit on the price of the secondary market: if the price on the secondary market became lower than the reserve price, operators would lose any interest in taking part in the auctions, which would lead to a reduced supply of allowances and consequently a rise in the price. If deemed necessary, the implementation of a reserve price could thus constitute an avenue worth exploring to ensure the long-term stability of the price signal on the European CO₂ market.

While the CO₂ market must be protected from excessive short-term volatility, it is above all essential to stabilize the regulatory framework: it will be impossible for a stable long-term price signal to emerge in a context marked by uncertainties on the fundamental design parameters of the market during phase III (2013-2020).

The definition, for phase III (2013-2020), of a European objective and, most importantly, the dispossession of Member States of their capacity to determine certain fundamental market parameters, through the National Allowance Allocation Plans (NAAP), constitute a definite progress in this respect, as does the extension of the trading period. Similarly, the gradual replacement of free allocations by a system of auctions against payment will contribute to improving its efficiency by limiting distortions.

For all that, it is crucial that the remaining elements of uncertainty regarding market organization during phase III be quickly cleared up.

The most important of these elements concerns the overall level of constraint: in accordance with the provisions of the climate and energy package, it depends on the results of international negotiations, that is to say on whether or not the agreement which will follow the Kyoto Protocol will be satisfactory. This decision is entirely political and can be affected by too many external parameters for the present report to be able to make a recommendation in this respect. Conversely, by reasoning today with a constant framework (i.e. an emission reduction objective of -21% for the European market), several major parameters of market design remain undetermined, including notably the organization of auctions, the allocation methods of free allowances and the possibility of using phase-II international credits during phase III. A decision-making process is scheduled to take place within the framework of the climate and energy package: it would be advisable to be highly careful not to depart from the schedule until 2013. It would be unthinkable for the main elements of market organization not to become stabilized at least one year before the start of the third phase. The European Commission and the future Presidents of the Council will need to make sure of this. Moreover, it is advisable to ensure that this process be as transparent as possible, in order to prevent the circulation of any inaccurate information on upcoming regulatory developments, which may have a real impact on the European CO₂ market. In this respect, special efforts by the European Commission, which is responsible for the comitology process through which these decisions will be made, will be required in the upcoming years.

Advice no. 1: stabilize, while ensuring real transparency of the decision-making process, the main parameters of market organization during phase III by 2012, and especially the overall 2020 emissions reduction target, the rules governing the use of international offset credits, the rules on benchmarks as well as the main features of the auctions: nature of the products auctioned, volumes and calendar.

The primary objective of the European CO₂ market is to ensure, at a lower cost, the fulfilment of an environmental objective. In this respect, during the recent period, it appears that the functioning of the market enabled to meet this objective. Variations in the price of CO₂ allowances, on the whole, reflected the variations of fundamentals, with the exception of some regulatory shocks which sometimes resulted in volatility peaks. The derivatives market, which accounts for the majority of transactions, appears to have contributed to the discovery of the price signal.

The European CO₂ market is about to undergo deep changes, notably because of new rules during phase III - especially the emergence of the primary market. It will also have to face the expected increase in the intervention of financial investors, which, for some of them, may contribute to dissociating the price of CO₂ from its fundamentals and increase the risk of the CO₂ market deviating from its primary role of climate change instrument.

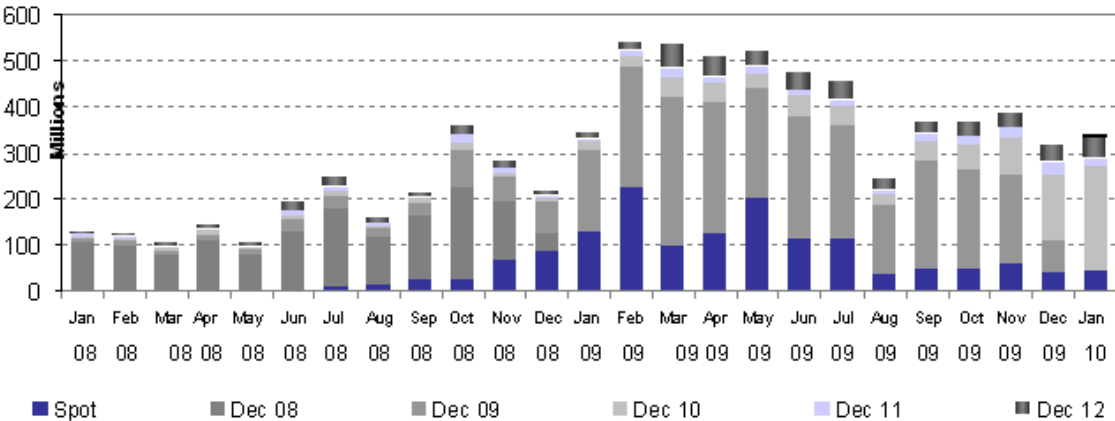
The main challenge faced by public authorities remains the ability of the European CO₂ market to ensure the emergence of a long-term price signal which is sufficiently strong. The priority is therefore to quickly stabilize the main parameters of market organization in the future, once an answer has been given to this fundamental issue, an appropriate market regulation and oversight framework could be set up, in order to protect the efficiency and integrity of the CO₂ market, in accordance to its original environmental objective.

2 The CO₂ market is now mostly a derivatives market; the current structure based on organized markets must be consolidated and the OTC market better regulated

2.1 Like commodity markets, the European CO₂ market is mostly a derivatives market, in which the share of spot transactions is low

Transactions on derivative products represent around 85 to 90% of trade on the European CO₂ market³². The transactions now carried out are divided into the trading of spot allowances and transactions on derivatives, of which European CO₂ allowances constitute the underlying asset: futures or forward contracts, swaps or options. The financial component of the European CO₂ market has thus become predominant. A similar evolution has been observed for several years on the main commodity markets, notably energy markets. The relative share of the volume of spot transactions versus the trading volume on the derivatives market is similar to that observed on commodity markets (except for oil markets, where this ratio is in the region of 1 to 35).

Graph no. 5 – Share of trade of futures contracts and spot contracts on European CO₂ allowances



Source: BlueNext, ECX, Reuters, EEX, Nordpool

Graph interpretation: from the start, the European CO₂ market has been characterized by an overwhelming proportion of allowance derivatives in trade, their relative share holding stable over 85% since the beginning of the second half of the year 2009. However, we can observe that the share of the spot market has strongly decreased since the end of the second half of the year 2009, following the uncovering of VAT fraud. However, let it be observed that this data does not include purely bilateral transactions, which, in principle, logically leads to minimizing the share of the derivatives market in relation to the spot market.

³² Ratio calculated based on the last 4 months of the year 2009, so as to avoid the distortion of the ratio caused by VAT fraud.

Box no. 5 – The various categories of derivative products on CO₂

Forwards: *a forward is a contractual agreement between two counterparties, within the framework of which one of the counterparties undertakes to deliver to the other one, at a future date, a certain volume of the underlying asset, the delivery date, possibly the place of delivery and the price being determined beforehand. For instance: player A undertakes to deliver 100,000 allowances to electricity producer B on 25 February, 2011, at a price of 19€/allowance. The term forward usually refers either to an OTC commercial forward contract (i.e. a forward contract with a physical delivery which is not centrally cleared) or an OTC financial forward contract (i.e. a forward contract which is settled in cash or centrally cleared).*

Futures: *futures contracts are standardized futures contracts traded on organized markets. On the CO₂ market, the most liquid contracts are the contracts traded on ECX with a maturity date in the month of December of the current year until 2013. They are traded in lots of 1,000 allowances.*

Swaps: *it is an OTC contract in which two counterparties agree to exchange streams of payment, and in relation to which no physical delivery occurs. The most common swap is the exchange of a predetermined fixed price for a variable price. For instance, player A purchases from bank B a swap which entitles it to a financial transfer that is equal to the difference between the market price and 17€/t.*

Options: *options give the right, but not the obligation, to purchase or sell the underlying asset at a predetermined price. Options are traded both over-the-counter and on organized markets.*

Spreads: *spreads are products which correspond to differences in prices between futures contracts with different maturity dates, or between different fungible products, for instance European allowances and international credits.*

The CO₂ derivatives market is definitely useful economically: it meets operators' needs to hedge themselves against price volatility and ensures market liquidity. By enabling operators to set a purchase or selling price in advance, the main function of derivatives is indeed to provide protection against price fluctuations of the underlying asset. They enable operators wishing to protect themselves against this volatility to transfer this risk to certain categories of market players – mostly financial players – which take on this risk in exchange for payment. Traditionally, the development of derivatives on a market thus corresponds to a volatility of the underlying asset that is deemed excessive. Therefore, the first derivative instrument on an energy commodity, in this case heavy fuel oil, was created in 1978, at a time when the price of petroleum products stopped being stable³³.

On the CO₂ market, hedging requirements mostly come and will continue to come from electricity producers. Nevertheless, hedging needs of industrial players should increase in phase III. Electricity producers indeed sell in advance a significant part of their electricity production. As the selling price is thus set for part of the volumes, electricity producers purchase in advance the inputs of electricity production (gas, coal, fuel oil), as well as the CO₂ allowances needed, in order to guarantee their margin levels. During phase II, because

³³ LAUTIER (Delphin) and SIMON (Delphine), *Marchés dérivés de matières premières (Commodity derivatives markets)*, 3rd edition, Economica, Paris, 550p.

of the free allocation of allowances, hedging requirements on CO₂ allowances only cover the differential between the projected emission level and the free allocation of allowances. During phase III, however, electricity producers will no longer receive free allocations and will therefore need to deploy their CO₂ hedging strategy on the entire scope of their expected emissions. As for industrial players, the progressive move to the auctioning of allowances will make them deploy their hedging strategy on a partial albeit increasing share of their emissions.

Table no. 5 – Share of electricity production sold in advance by RWE

<i>Production year</i>	<i>Share of RWE’s production already sold in the first quarter of 2010</i>
2010	>95%
2011	>70%
2012	>30%
2013	10%

Source: Deutsche Bank, RWE

Table interpretation: electricity producers sell their electricity production forward up to three years in advance. In this way, RWE has already sold, at a specified price, over 70% of the electricity it expects to produce in 2011, over 30% of its expected production in 2012 and 10% of its expected production in 2013.

Let it be observed that the volumes traded on the derivatives market, however, largely exceed the hedging requirements of industrial players. They are the expression of the dynamic hedging optimization strategies undertaken by electricity producers, but also of the existence of speculative activities. The volumes traded in 2009 on the derivatives market were thus in the region of 4 billion tonnes, which represents over five times the sum of the deficits of the installations in the electricity sector for the entire 2009-2012 period, i.e. ~700M tonnes³⁴. This difference reveals two elements of the strategy of the players operating on this market. Firstly, the most sophisticated companies covered by the EU ETS, first of all the electricity producers, adopt, through their trading subsidiaries, dynamic hedging adjustment strategies. They increase or reduce their level of hedging – i.e. the allowance volumes purchased through futures – according to the actual or expected evolution of market prices. Secondly, certain players trade on the CO₂ market on own account; these activities, which can be described as purely speculative, contribute nevertheless to market liquidity. Without any access to data on the transactions carried out, it is currently impossible to quantify the share of trade which these speculative activities account for.

However, the importance of the volumes traded in relation to underlying requirements is not specific to the CO₂ market. On the most liquid commodity markets, the volumes traded represent over 10 times the underlying market, considered in terms of production and consumption volume. This ratio is even greater (~35) on the oil market, which constitutes a good example of a highly financialized and liquid market. With a ratio of 1 to 2.5 between

³⁴ Deutsche Bank, *The Long and the Short of It: Power Sector Key to EUA & CER Prices*, 5 May 2009.

the volume of transactions carried out and the size of the underlying market – considered here as the volume of allowances allocated –, the CO₂ market remains a moderately liquid market in comparison with certain commodity markets.

2.2 The European CO₂ market structured itself around organized trading platforms through which most transactions are now performed

The European market freely and progressively structured itself around standardized trading platforms, whose market share has significantly increased since the beginning of the second phase (2008-2012). In 2007, transactions on trading platforms accounted for around 25% of trade in volume, before experiencing a continuous rise in 2008, until they reached a peak in the second quarter of 2009 at over 70%. A rebalancing has been in progress since then, and trading platforms currently represent around 60% of volumes traded. As for the international credits market (CER and URE), OTC transactions remain predominant³⁵.

The rest of transactions are carried out on the Over-the-Counter (OTC) market, which is divided into two components: the centrally cleared OTC market and the bilateral OTC market. An OTC transaction is a contractual agreement signed between two counterparties. Such a transaction, insofar as it concerns a derivative instrument, generates a credit risk for each counterparty. Indeed, should one of the two default and prove to be incapable of honouring its commitments, the other one may find itself in an unfavourable financial position³⁶.

In order to offset this risk, the two counterparties can organize a system of initial margin deposit and margin call to protect each one of them against a default of the other counterparty³⁷.

This system, known as clearing, can rely on a clearing house, which plays the role of a central counterparty by intervening between the seller and the buyer on each transaction. This system offers the best guarantees of market transparency and systemic risk management. Its use is therefore promoted by the recommendations of the G20 and the European Council.

The clearing of the transaction can also be managed directly by the two counterparties. This system offers better guarantees than a non-cleared transaction but remains less transparent and less secure in terms of systemic risk, than the use a central counterparty.

In addition to managing organized markets for spot transactions or derivative instruments, several exchanges also provide registration and clearing services on OTC transactions.

³⁵ Without taking into account purely bilateral OTC transactions, on which few data are available, cleared OTC transactions accounted for 66% of traded volumes against 34% for exchange trading.

³⁶ For example, it may need to purchase on the market, at a higher price, a volume of allowances it had previously purchased through a futures contract at a lower price from the defaulting party.

³⁷ On the spot market, a system of delivery vs. payment can also be utilized to mitigate counterparty risk.

Box no. 6 – Clearing houses and margin calls

The clearing of a transactions can be made directly between the two counterparties to the transaction or through a central counterparty (e.g. clearing house), which makes it possible to mutualise the risks and for the players to net the margin calls arising from the different transactions they contracted, hence reducing cash flow requirements.

With respect to firm futures contracts, the margin call procedure is broken up into an initial margin deposit, which must cover the maximum loss which can possibly be suffered in one day on the product in question, and a series of margin calls according to the evolution of the price of the underlying asset. In this way, as a simple example, for a forward sales contract of 100 allowances signed at a price of 20€/t (illustrative data) with a maturity date in 2012, with a maximum price variation within one day estimated at 2€/t, each of the parties to this transaction will make an initial margin deposit of 200€. The reference price used for the transaction is the price of futures with a maturity date in December 2012, traded on ECX. During the first day of trading, if the reference price increases by 1€, going from 20€ to 21€, the selling counterparty will need to make a margin call of 1€/t.

Should the price rise by 1€/t again the following day, and should the selling counterparty default, the buyer would be obligated to go back on the market to purchase a similar contract at a price of 22€/t. The margin call system makes it possible, as least in theory, to eliminate this risk, as the buyer will be credited each day of the price variation. In the event of a default of the seller, the clearing house will be able to cover the loss using the initial margin deposit, which will cover the price variation on the last day, since calculated on the basis of the maximum possible variation within one day.

Trading performed on trading platforms is systematically subject to clearing by a clearing house.

The setting up of margin calls requires that a reference price be determined; it will be used to calculate margin calls and therefore presupposes a certain degree of standardization of the contract cleared.

It also has a financial cost, i.e. treasury costs and management costs imposed on operators, as operators must manage their margin calls on a daily basis according to the evolution of the reference price.

If we combine exchange trading and OTC cleared, transactions on “organized markets³⁸” now account of 85% of the volumes traded on the CO₂ market. OTC transactions cleared account for 25% of trading volumes, while bilateral OTC transactions only account for around 15% of volumes³⁹.

Trading platforms and OTC transactions meet different needs on the CO₂ market. OTC transactions make it possible for operators on derivatives market to have access to risk

³⁸ The terms organized market designating here trading exchanges and clearing houses independent from an exchange.

³⁹ Without a reporting system for bilateral OTC transactions, this evaluation only constitutes an estimate by market operators of the importance of each segment

hedging products which are adapted to their needs. This need for “tailor-made” hedging products could appear to be less justified on the CO₂ market than on other commodity markets, due to the standardization of the underlying asset. Indeed, on the CO₂ market, there are no differences as regards quality or delivery points. The need for temporal adjustments is limited, as market operation is based on one-year periods.

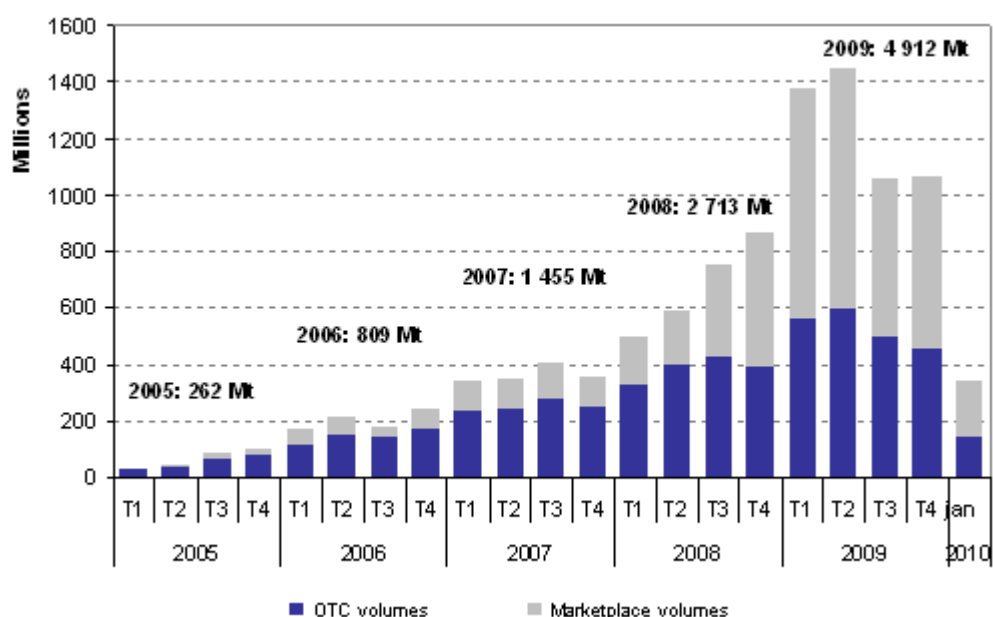
However, recourse to OTC market is justified by operators to carry out transactions with maturity dates in the distant future, for which no futures contracts are traded on exchanges, or for which liquidity is too low. On the CO₂ market, this is notably the case for maturity dates after the end of phase II (after 2012) or for transactions on the CER market, on which the liquidity of exchange trading remains low. In addition, the OTC market enables operators to carry out transactions for important volumes which, if they were performed on a trading platform, would have a significant impact on the market price.

Lastly, OTC transactions are considered by less sophisticated operators, on the derivatives market and the spot market alike, as an easier way of accessing the market than operations on organized markets.

Despite these explanations, the use of purely bilateral and non-cleared OTC transactions must be put in perspective with the financial crisis, which showed the risks associated with this kind of transactions, especially when they account for a large share of the market.

As for trading platforms, they give access to standardized and highly liquid products. They are thus used directly by relatively sophisticated operators to manage their hedging strategy. They are also useful to financial intermediaries who sell hedging products on the OTC markets as a source of liquidity to hedge their residual exposure.

Graph no. 6 – Share of OTC trading and exchange trading on the European CO₂ market



Source: Point Carbon

Graph interpretation: the relative drop in the share of exchange trading from the end of the second quarter of 2010 can be linked to the sudden drop in the VAT fraud phenomenon, which had artificially boosted the volumes traded, particularly on spot trading platforms.

Seven carbon exchanges have been created since the market was launched in 2005. Three of them are only active on the spot market: Climex in the Netherlands, Green Market in Germany and EEXA in Austria. Three others have developed both a spot market and a futures market: BlueNext in France, EEX in Germany and Nordpool in Norway. Lastly, in addition to a standard derivatives compartment, ECX, in the United Kingdom, created a spot-futures market with settlement and delivery occurring on D+2. This specific compartment, whose purpose is similar to that of a spot market, has, due to the principle of differed settlement and delivery, the status of a financial market for British authorities, and the national financial regulator (the Financial Services Authority).

Map no. 1 – Organized CO₂ markets in Europe



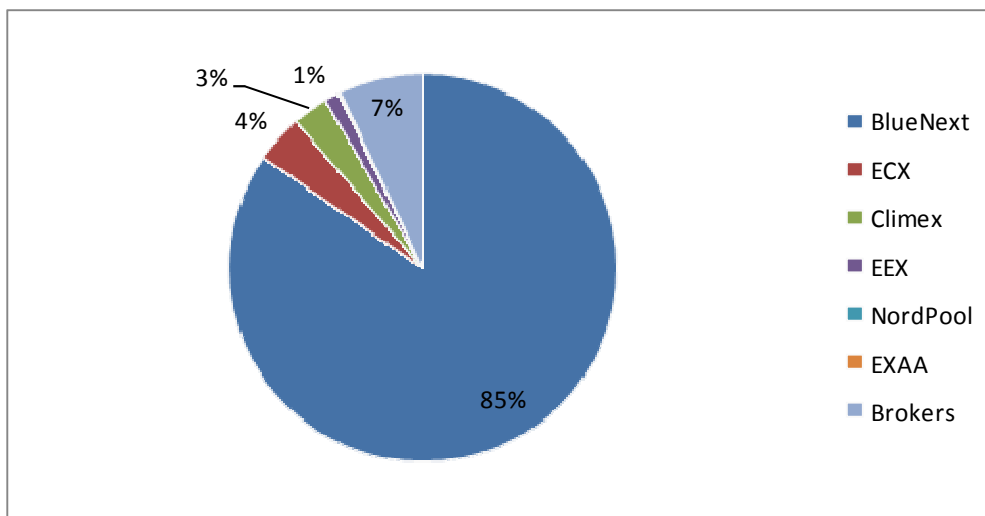
Source: BlueNext

N.B.: ECX is represented here as a derivatives market because, although one of the products traded – spot futures – has the role of a spot contract de facto, de jure, it is a derivative contract.

This fragmentation of CO₂ allowance trading venues in Europe could lead us to fear a dispersion of liquidity, which is only apparent. Indeed, ECX concentrates most of the transactions on derivatives trading exchanges, while BlueNext captured the great majority of the European spot market. Due to the predominance of derivative instruments, ECX thus accounts, by itself, for over 90% of trading operations carried out on organized markets, all products taken into account, in Europe. The Paris market now represents, with BlueNext, less than 10% of the total⁴⁰, but enjoys a situation of quasi-monopoly on the spot market (85% of volumes). Together, ECX and BlueNext concentrate 62% of the members participating in trade on trading platforms, as opposed to 24% for Nordpool (Norway) and 14% for EEX (Germany).

⁴⁰ In September 2009, the respective market shares of the various platforms, all products taken into account, were as follows: ECX 89.1%; BlueNext 8%; Nordpool 1.3%, Green Exchange 0.8%, EEX 0.7% and Climex 0.1%.

Graph no. 7 – Market shares of intermediaries on the spot market



Source: BlueNext

Graph interpretation: it can be observed that the share of brokers remains relatively low.

2.3 The existence of an OTC (Over-the-Counter) market appears to be inevitable: in the future, it must be better regulated, in line with the principles laid down by the G20 for derivatives markets

The preponderance of organized markets in the general sense of the word (trading platforms and the centrally cleared OTC market) is a factor of robustness and transparency, in relation to other markets where most transactions are carried out over the counter without clearing. This structure can be explained, at least in part, by the high level of standardization of the European CO₂ market. The market of international credits (CER) remains however predominantly an OTC market.

The consolidation of the preponderance of organized markets, and of trading platforms in particular, will be, for three reasons, a factor in improved market security. Firstly, due to the degree of standardization of the products traded, the importance of the volumes traded and the real transparency of prices and volumes which they enable, trading platforms play a fundamental role in the emergence of the price signal. Secondly, thanks to data centralization, they enable greater transparency for the transactions carried out by operators. Thirdly, by organizing for transactions to go through a clearing house, they make it possible to better manage counterparty risks, and favour a reduction of the systemic risk. In this respect, the French Senate, in its resolution of 7 December, 2009, drew the attention of French authorities to the possible relevance of imposing the obligation for all transactions on the European CO₂ market to go through a clearing house.

However, it appears necessary to maintain the possibility for market players to engage in OTC transactions, on both the spot market and the derivatives market. Firstly, on the derivatives market, going through a trading platform does not make it possible to meet the hedging requirements of certain operators for the less liquid contracts such as contracts on international credits and allowances futures with distant maturity dates. For instance, on

trading platforms, no futures contracts with dates of settlement and delivery later than December 2014 are currently traded. Moreover, the liquidity of futures for December 2013 and 2014, which are traded on most trading platforms, is currently low. Consequently, an operator wishing to hedge an investment project against the price risk for 2015 and beyond then will need to go through the OTC market.

Secondly, the standardized size of the lots traded on organized markets may prove to be too important in relation to their hedging requirements.

Nevertheless, central counterparty clearing is today considered, on the occasion of the reflections undertaken at the international and European level as a mean toward a deep reform of OTC markets, to the benefit of all participants including the less sophisticated ones. It is therefore necessary that the use of purely bilateral OTC transactions remains as limited as possible, bringing trading on the European CO₂ market in line with G20 recommendations, while taking into account the specific constraints the operators covered by the EU-ETS are subject to.

Let it be observed that the bill of Senators Feinstein and Snowe⁴¹ made the choice of proposing a ban on OTC transactions on the spot market in the United States. This proposal originated in the complete standardization of the product traded, with the intention of ensuring the greater transparency of trade and of protecting market players. Such a measure, however, could hinder access to the market for the smallest players, under acceptable cost conditions. Protecting them from possible counterparties can be done by other means than a ban on OTC transactions on the spot market, notably by enacting more stringent rules to control market players. The transparency required can be achieved by other means than a ban on OTC transactions, namely by establishing a reporting system for OTC transactions.

It is indeed essential to ensure a proper level of transparency on the OTC market and, for the OTC derivatives market, a sufficient control of risks. However, these issues are not specific to the CO₂ market but rather affect all derivatives markets. The financial crisis underlined their acuteness, by revealing the risks posed by certain derivatives markets, and mainly OTC derivatives markets, for the stability of the financial system.

Thought on the regulation of the carbon OTC market must therefore fall within the scope of the more comprehensive reflection process currently in progress on the regulation of derivative markets, which is based on the main principles defined by the G20 during the Pittsburgh Summit: i) the obligation to go through a trading platform and a clearing house for standardized contracts; ii) a reporting obligation towards trade repositories for OTC transactions which are not centrally cleared; and iii) more stringent capital requirements for contracts which were not centrally cleared. These general orientations were reaffirmed by the European Commission in its communication of 20 October, 2009, which presented its main lines of work for the regulation of derivatives markets⁴². With a view to being

⁴¹ APPENDIX VI – American bills on the regulation of the federal CO₂ market.

⁴² The Commission notably proposed to reinforce the management of the counterparty risk with i) the elaboration of a European regulatory framework for clearing houses, with provisions aimed at guaranteeing their stability, soundness and good governance; ii) obligations to resort to a margin call system for OTC transactions; iii) higher capital requirements for contracts which are not centrally cleared, in order to compel improved risk assessment and to encourage operators to go through a central clearing house. It also proposes

consistent with other derivatives markets, it is advisable to ensure that these recommendations are properly implemented for the European CO₂ market.

Advice no. 2: apply the same measures to the allowance derivatives market as the ones to be implemented under the directive on derivatives markets expected for mid-2010, following the communication from the Commission of 20 October, 2009.

to create central data registries on transactions, to impose obligations to notify all transactions to these registries (including OTC transactions), to standardize the legal and operational framework governing derivatives markets at European level and to impose an obligation to trade standardized products on trading platforms.

3 The absence of any common legal definition for CO₂ allowances across Europe generates uncertainty and leads to the fragmentation of the applicable regulatory framework; however, it does not appear pertinent to implement a new legal definition for allowances as financial instruments

The main difficulty as regards the legal understanding of allowances arises from its “dual use”, which corresponds to the initial choice made by public authorities of a tradable permit market mechanism. CO₂ allowances indeed constitute both a regulatory instrument making it possible to fulfil the environmental obligations imposed by the European Union Emission Trading System (EU ETS) and an instrument intended to be traded on the territory of the European Union⁴³. This theory of the “dual use” of allowances, which is justified by the neoclassical-inspired economic theory, represents a seemingly impossible challenge from a legal viewpoint. So much so that doctrine went as far as to consider that this new legal instrument constituted nothing less than a *“revolution in the traditional mode of relations between the administration and citizens”*⁴⁴.

The “dual use” of allowances, in turn, raises the question of the expression of this “dual nature” in a legal sense. Basically, CO₂ allowances are similar to both an administrative right, relating to the general public policy objective of reducing greenhouse gas emissions, and a tradable instrument, relating to the objective of economically optimizing the system. The legal definition chosen for allowances depends, in a way, on the respective importance that public authorities lend to each of these two objectives. By nature, allowances constitute a hybrid instrument, halfway between intangible assets and ordinary commodities, to which they resemble, as they represent one physical tonne of CO₂.

It must be observed that there is no European or international agreement on what an allowance is from a legal viewpoint. As neither international treaty law nor the Community Legislator ventured a definition, the one of movable property selected by the French Legislator is itself not without contradictions. Existing laws remain silent on this new legal instrument, limiting the regulation framework applicable to the European CO₂ market. More fundamentally, a common understanding of the nature of CO₂ allowances on a European and international scale and a more thorough legal harmonization now appear to be necessary to ensure the proper development of the market.

⁴³ In accordance with Article 12 of Directive 2003/87/EC and Article L229-14-II of the French environmental law, allowances may also be held by persons from countries outside the European Union, if they are mentioned in Appendix B of the Kyoto Protocol, and on the two conditions that the countries in questions ratified the Protocol and that a mutual recognition agreement was signed by the European Union.

⁴⁴ GIULDJ (Sylvie), *“Les quotas d’émission de gaz à effet de serre : la problématique de la nature juridique des quotas et ses implications en matière comptable et fiscale”* (Greenhouse gas emission allowances: the issue of the legal nature of allowances and its implications for accounting and fiscal matters), in *Bulletin Joly Bourse*, 1 January, 2004, no. 1, p 22.

3.1 Faced with the silence of international treaty and Community law, the national Legislator has opted for a protective legal definition capable of ensuring the development of trade

Paradoxically, the European and international CO₂ market massively developed, within the context of a notable lack of legal harmonization regarding the status of CO₂ allowances and its accounting and fiscal treatment.

3.1.1 No international public-law instrument currently defines CO₂ allowances

International treaty law is silent on the legal definition of CO₂ allowances or credits: the Kyoto Protocol, which is now supplemented by the European allowance trading system⁴⁵, does not indeed give a definition of CO₂ allowances. It only just laid down, originally, in Article 17, that *“the parties included in Annex B may participate in emissions trading for the purposes of fulfilling their commitments under Article 3. Any such trading shall be supplemental to domestic actions for the purpose of meeting quantified emission limitation and reduction commitments under that Article”*. Following this, tradable carbon credits within the framework of the Kyoto Protocol, Assigned Amount Units (AAU) and the credits resulting from the flexibility mechanisms (Emission Reduction Units – ERU – and Certified Emission Reduction Units – CER) did not receive any specific legal definition within the framework of international conventions⁴⁶. This unprecedented legal situation resulted in the elaboration of ad hoc solutions by international market players to make it possible to formalize contractual relations on international credits. In practice, the international OTC market for credits arising from the flexibility mechanisms organized itself freely based on the standardized contracts developed by market players within the framework of forums or international trade associations. An example of this is given by the operations carried out by the World Bank on behalf of the Kyoto Protocol’s Adaptation Fund.

Box no. 7 – The operations of the World Bank on behalf of the Kyoto Protocol’s Adaptation Fund

The Kyoto Protocol’s Adaptation Fund, which was instituted by the Marrakesh Agreements (decision FCCC/10/CP.7/2001/13/Add.1 of 21 January, 2002) is aimed at financing adaptation actions in developing countries. The fund is mostly financed through an innovative mechanism, taking the form of a tax on the credits issued within the framework of the Clean Development Mechanism of the Kyoto Protocol. In practice, any project resulting in the issuance of Certified Emission Reduction Units (CER) in developing countries is subject to a 2% tax. For instance, a project, which generates 100 t of additional emission reductions in a developing country, will only generate 98 CER for the project initiator.

The credits thus deducted under the mechanism are transferred to the Adaptation Fund in full ownership. The Fund must then “monetize” the credits held, i.e. sell them on the

⁴⁵ Let it be reminded that the European system supplements the Kyoto Protocol, i.e. part of the Assigned Amount Units (AAU) allocated to the States included in Annex B of the Protocol is converted into European greenhouse gas allowances, for the part of greenhouse gases which correspond to the national emissions of the industrial installations covered by the EU-ETS.

⁴⁶ (Dec. 18/CP.7., ann. § 1(c)) (16).

international market, in order to draw the resources used to finance its actions in developing countries.

In accordance with decision 28/CMP.1, the World Bank takes on the duties of trust officer for the Adaptation Fund. It thus takes on practical responsibility, notably, for the credit monetization operations, in accordance with the principles accepted by the council of the Adaptation Fund. The World Bank thus carries out transfer operations, along two main paths. Firstly, it puts the credits up for sale through several operations of a small volume (10,000 credits per day) on exchanges. As the choice was made to carry out spot operations, the World Bank decided to go through the market platform offering the most liquidity on this segment of the carbon market, i.e. BlueNext. Ten operations have been carried out to date, for around 2 million dollars. As these operations only make it possible to monetize small quantities of credits, the World Bank also carries out OTC transfer operations (100 to 200,000 credits per operation) by going through financial intermediaries, via a competitive selection procedure. The counterparties of the Bank, that is to say Barclays and Merrill Lynch at present, purchase credits on behalf of third party clients, with a predetermined price objective, under specific conditions of transparency. These operations have made it possible to bring in 18 million dollars.

The operations on the carbon market carried out by the World Bank on behalf of the Adaptation Fund

Month	Quantity	Price	Total Euro	Actual USD	Type	Dealer/Exchange	Settlement	Transaction Costs (Euro)		
								Per Trade (40)	Per Ton (.02)	Total
May	200,000	12.00	2,400,000.00	3,383,280.00	OTC	Barclays	Direct	-	-	-
May	200,000	12.10	2,420,000.00	3,411,474.00	OTC	Barclays	Direct	-	-	-
May	200,000	12.40	2,480,000.00	3,486,056.00	OTC	Barclays	Direct	-	-	-
June	100,000	11.40	1,140,000.00	1,594,632.00	OTC	Merrill Lynch	Direct	-	-	-
June	200,000	11.45	2,290,000.00	3,172,795.00	OTC	Merrill Lynch	Direct	-	-	-
June	200,000	11.50	2,300,000.00	3,186,650.00	OTC	Merrill Lynch	Direct	-	-	-
June	10,000	10.73	107,300.00	150,456.06	Exchange	BlueNext	BlueNext	40	200	240
June	10,000	10.84	108,400.00	151,998.48	Exchange	BlueNext	BlueNext	40	200	240
July	10,000	11.80	118,000.00	150,886.80	Exchange	BlueNext	BlueNext	40	200	240
September	10,000	13.51	135,100.00	198,774.05	Exchange	BlueNext	BlueNext	40	200	240
September	10,000	13.40	134,000.00	195,707.00	Exchange	BlueNext	BlueNext	40	200	240
September	10,000	13.42	134,200.00	195,999.10	Exchange	BlueNext	BlueNext	40	200	240
September	10,000	13.39	133,900.00	195,560.95	Exchange	BlueNext	BlueNext	40	200	240
September	10,000	13.39	133,900.00	195,560.95	Exchange	BlueNext	BlueNext	40	200	240
September	10,000	13.39	133,900.00	195,560.95	Exchange	BlueNext	BlueNext	40	200	240
September	10,000	13.00	130,000.00	191,230.00	Exchange	BlueNext	BlueNext	40	200	240
Total	1,200,000		14,288,700.00	20,088,821.34				400	2,000	2,400

* 10,000 euros were deducted and not converted to USD for BlueNext Fees (left in CDC Account).

Source: Directorate General for Treasury

In this way, in November 2009, the World Bank had monetized 1.2M credits, for a total of over 20 million dollars. In the absence of any legal definition of allowances, to carry out these operations, the World Bank in fact relied on standardized contracts developed by a recognized international trade association, the International Emissions Trading Association (IETA).

The various projects to organize regional or national carbon market across the world have chosen heterodox legal definitions for allowances, or hesitate as to which category to affiliate them with. In this respect, Appendix VII takes stock of the state of the debate on the legal definition of allowances in the main OECD countries and within the 27 Member

States of the European Union. It can currently be observed that neither Russia, nor South Korea, nor Japan, nor the United States nor China has made a definite choice regarding the legal framework applicable to CO₂ allowances. Only Brazil may choose to explicitly establish a connection between the credits resulting from the flexibility mechanisms of the Kyoto Protocol and the notion of securities. As for Australia, it appears to be heading towards the choice of considering allowances as movable property, in the same way as New Zealand. Lastly, the United States seem to be tempted to maintain the ambiguity which prevails within the framework of the federal SO₂ market, i.e. a designation which takes the form of an “authorization to emit”.

3.1.2 There is currently no harmonized legal status for CO₂ allowances in Europe: however, the MiFID (Markets in Financial Instruments Directive) has harmonized the status of part of the allowance derivatives which are regarded as financial instruments

The European Legislator has not laid down a specific and harmonized legal status for CO₂ allowances and international credits. Indeed, for its adoption, Directive 2003/87/EC of 13 October, 2003 did not decide on a legal definition of allowances, whether it is an ad hoc definition or an affiliation of this new instrument with existing legal categories. Article 3 of the aforementioned directive simply lays down that: “for the purposes of this Directive the following definitions shall apply: a) “allowance” means an allowance 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 this Directive and shall be transferable in accordance with the provisions of this Directive”. What arises from the various articles of the directive is that the European Legislator merely defined the characteristics of CO₂ allowances, i.e.:

- i) the monopoly of public authorities on its issuance;
- ii) the accounting for movements by public authorities or their representatives;
- iii) a fixed validity period and the mandatory partial surrender to public authorities every year;
- iv) mandatory possession to maintain an industrial activity;
- v) the asset value of allowances;
- vi) the transferability to any legal or natural person which meets the conditions to open an account with a national registry.

The European Legislator thus left the principle of subsidiarity with the task of settling the tricky legal question of the status of CO₂ allowances. The amendment of Directive 2003/87/EC within the framework of the climate and energy package, which was adopted in December 2008, left this situation unchanged. Moreover, there is no trace of any explanation on the legal nature of allowances in the recent communications of the European Commission.

The absence of any European standard resulted in a certain heterogeneousness of the legal status of CO₂ allowances among the various Member States of the European Union, although most of them did not decide on a specific legal definition. It can be observed that several European States made a choice by default, i.e. a definition of CO₂ allowances in relation to what they are not. Such is notably the case for the Federal Republic of Germany, where the Legislator expressly confirmed that CO₂ allowances were not securities. As for the

United Kingdom, it decided not to give a specific definition of CO₂ allowances, confining itself to using the terms of the primary European legislation, while underlining the close relation which exists between the “allowance” instrument and the tax system. Romania alone defined allowances as financial instruments. A great number of Member States have not resolved the question yet: Bulgaria, Estonia, Finland, Ireland, Lithuania, Poland, Slovakia, Italy, Slovenia and Sweden. Greece and Belgium alone affiliated allowances with the category of administrative rights. Lastly, Austria, Denmark, Spain, Malta and the Netherlands made the more or less explicit choice of affiliating allowances with the category of property.

However, the status of part of CO₂ allowance derivatives is harmonized in Europe, as these products pertain to the category of financial instruments under Article 38, paragraph 3 of regulation 1287/2006/EC of 10 August, 2006, implementing the MiFID 2004/39/EC concerning markets in financial instruments⁴⁷, on the condition that they meet one of the following characteristics:

- i) they can be settled in cash;
- ii) they are traded on an organized market;
- iii) or they are comparable to a contract traded on a regulated market or an MTF, standardized and the subject of a clearing procedure, whether it be based on a central counterparty or performed bilaterally⁴⁸.

However, it can be observed that the primary European legislation itself is not entirely harmonized, as the MiFID lays down provisions applicable to “*authorizations to emit*”, while Directive ETS 2003/87/EC speaks of “*allowances to emit one tonne of carbon dioxide equivalent*”.

In law, and as regards this definition, allowances derivatives that does not meet the above-mentioned conditions, pertain to the category of forward commercial contracts and not to that of financial instruments.

⁴⁷ “For the purposes of Section C(10) of Annex I to Directive 2004/39/EC, a derivative contract relating to an underlying referred to in that Section [added by us: including authorizations to emit] or in Article 39 shall be considered to have the characteristics of other derivative financial instruments if one of the following conditions is satisfied:

- a) that contract is settled in cash or may be settled in cash at the option of one or more of the parties, otherwise than by reason of default or other termination event;
- b) that contract is traded on a regulated market or an MTF;
- c) the conditions laid down in paragraph 1 (see following footnote [added by us]) are satisfied in relation to that contract.”

⁴⁸ The conditions laid down in paragraph 1, to which the third condition of paragraph 3 refers, are the following: “a) it meets one of the following sets of criteria:

- i) it is traded on a third country trading facility that performs a similar function to a regulated market or an MTF;
- ii) it is expressly stated to be traded on, or is subject to the rules of, a regulated market, and MTF or such a third country trading facility;
- iii) it is expressly stated to be equivalent to a contract traded on a regulated market, MTF or such a third country trading facility;

b) it is cleared by a clearing house or other entity carrying out the same functions as a central counterparty, or there are arrangements for the payment or provision of margin in relation to the contract ;

c) it is standardized so that, in particular, the price, the lot, the delivery date or other terms are determined principally by reference to regularly published prices, standard lots or standard delivery dates.

3.1.3 *The accounting treatment of CO₂ allowances has not been harmonized at the international and European levels*

The accounting treatment of allowances has not been harmonized at international level.

Indeed, the International Accounting Standards Board (IASB) has made no specific recommendation on the accounting treatment of allowances. In June 2005, IFRIC interpretation 3 of December 2004 concerning emission rights was indeed withdrawn by the IASB. This withdrawal was the consequence of the problems posed by the accounting definition chosen, which created discrepancy issues between assets (originally measured at fair value, then depreciated if necessary when the recoverable amount was inferior to the book value; such is the model usually chosen by companies for the treatment of their intangible assets) and liabilities (recognized at the fair value of emission rights on the date of emissions, for the allowances to be returned, and at the amortized cost, for the subsidy received). In the case in point, the standard adopted by the IASB resulted in assets being measured at the current market price on the date on which rights were allocated and in liabilities being measured according to the various market prices corresponding to the dates on which the emission data of a company were made public. The following box summarizes in a simplified way the approach that the IASB was envisaging.

Box no. 8 – The accounting treatment of CO₂ allowances envisaged by the IASB in 2004

Allowances received free of charge	<p>Non-depreciable intangible assets measured at fair value on the allocation date</p> <ul style="list-style-type: none"> • Subsequent measurement: cost or revaluation in equity capital <p>Subsidy for liabilities used for the bottom line in accordance with a systematic procedure</p>
Allowances purchased	<p>Non-depreciable intangible assets measured at the purchase price</p> <ul style="list-style-type: none"> • Subsequent measurement: cost or revaluation in equity capital
Obligation to "return" allowances according to CO ₂ emissions	<p>Provision measured at the fair value of allowances at the end of the trading day (variations in bottom line)</p>
Surrender of allowances in N+1	<p>Outflow of assets in return for the provision</p> <p>Balance on bottom line if allowances are measured at cost</p>

Source: Deloitte et Associés

In the absence of any international system of reference, several accounting treatments of CO₂ allowances in the balance sheet of companies may be accepted, on the condition however that they be applied consistently and that they be presented in the appendix of the statement of accounts. In collaboration with the Financial Accounting Standards Board, in 2009, the IASB reopened discussions on the accounting treatment of emission rights; in this respect, a standard should be made public in the second half of the year 2011.

The recognition of allowance derivatives is, however, governed by international accounting standards. In the case in point, standard IAS 39 provided for the recognition of allowance derivatives at fair value while providing for two exceptions:

- own-use contracts, which remain accounted for off the balance sheet and possibly give rise to a provision;
- for positions resulting from hedging operations (subject to strict documentation and tests proving the reality of hedging).

This exception system is important for the companies covered by the EU-ETS legislation. It makes it possible for them to prevent the use of allowance derivatives for the sole purpose of compliance management, and not for speculative purposes, from resulting in variations in the statement of income, by preventing these instruments from being recognized at fair value.

In France, the accounting treatment of emission allowances in individual financial statement was the subject of an emergency opinion by the *Comité des Normes Comptables (CNC – the French accounting standards committee) in 2004, and of a recommendation in 2009*⁴⁹. The CNC elaborated recognition instructions as intangible assets. The allocation of allowances thus gives rise to a measurement of assets as intangible assets at market value (market value on the date of allocation, free of transfer costs), with no subsequent revision of this value, except for depreciation. In return, the company recognizes a subsidy (recorded at amortized cost). As soon as the CO₂ emissions of the company become known, the company records liabilities corresponding to the allowances to be surrendered to the State at the end of the fiscal year, in return for a charge, and includes the subsidy in the bottom line to the same extent. As long as CO₂ emissions remain limited to the authorizations granted (i.e. the actual emissions remain lower than initial allocation), the impact on the bottom line is neutral. The allowances held remain measured at the entry price (market value at the time of allocation). At the end of the multiyear plan, the allowances to be surrendered due to the surplus of free allowances are lost: however, this has no impact on the bottom line, as they are covered by the subsidy which remains to be recovered. The company can also sell these allowances again on the market in order to prevent the rights from becoming valueless; it then makes a capital gain equal to the selling price. In all other cases, the balance (allowances not covered) is measured at market price. The main virtue of this solution is to prevent the statement of income of companies from being affected by fluctuations in the price of CO₂, which would notably be entailed by an accounting treatment of allowances at fair value. The following box summarizes in a simplified way the approach adopted in France.

⁴⁹ Opinion 2004-C of 23 March, 2004 of the emergency committee of the CNC and recommendation no. 2009-R-02 of 5 March, 2009 of the CNC.

Box no. 9 – The accounting treatment of CO₂ allowances in France

Allowances received free of charge	Non-depreciable intangible assets measured at market value on the allocation date, recognized in annual tranches Subsidy for liabilities used for the bottom line in proportion to emissions and the assignment of allowances allocated free of charge
Allowances purchased	Non-depreciable intangible assets measured at the purchase price
Obligation to "return" allowances according to CO ₂ emissions	Provision measured for the amount of allowances on the assets side Increased by the fair value of the additional allowances that will need to be purchased in the case of a deficit, after taking into account (for a null value) the allowances to be surrendered which will come from the surplus of free allowances for the remaining period of the plan and which have not been recognized yet
Surrender of allowances in N+1	Outflow of assets in return for the provision

Source: *Deloitte et Associés*

However, the applicable accounting framework may have to change. Indeed, the standards applicable in France were notably devised within the framework of a free allocation of allowances to companies. The transition for certain installations covered by the EU ETS legislation to an allocation against payment starting from 2013 will logically call for an adaptation of the accounting framework applicable under national law. At the same time, two loopholes currently mark the accounting framework. Firstly, the accounting status of operations on allowance derivatives is not specified. Secondly, the two-abovementioned opinions of the CNC are only valid for European greenhouse gas allowances, and not for the international credits (ERU and CER) resulting from the flexibility mechanisms of the Kyoto Protocol.

3.1.4 The national French Legislator is the only one in Europe to have chosen a legal definition inspired by civil law, giving CO₂ allowances the benefit of existing protective laws making it possible for the market to develop

As a hybrid instrument, CO₂ allowances could have been affiliated with different existing legal categories, as demonstrated by the heated doctrinal debate which took place from 2003 to 2005 when European directives were integrated into the national legal order. The present report is not aimed at going over the details of the possible categories of affiliation, which were ruled out by doctrine at once. As an example, let it be observed that it was impossible to consider allowances as a private civil right, i.e. a right to claim, because a right to claim is a property right which consists in a legal relation between two people, in accordance with which one, the creditor, who is entitled to the right to claim, has the right to demand something from the other, the debtor. Insofar as allowances do not give any rights on state property in return for being held, they cannot be considered as a right to

claim. The following table confines itself to outlining the categories immediately ruled out by doctrine and the legal reasons, which led to dismissing them.

Table no. 6 – CO₂ allowances and existing legal categories under French law

<i>Legal categories</i>	<i>Main reasons having led to rule out an affiliation of CO₂ allowances with these categories</i>
<i>Intellectual property right</i>	<i>Allowances are not defined by an operating monopoly for the holder of the right.</i>
<i>Contract (such as, for instance, a contract for the delivery of commodities, to be delivered on the maturity date of the contract).</i>	<i>Allowances do not constitute a right to claim</i>
<i>Debt security</i>	<i>Allowances do not represent a debt, even in relation to the state.</i>
<i>Right to claim (not embodied in a security)</i>	<i>Allowances do not represent a debt, even in relation to the state.</i>
<i>Capital securities</i>	<i>Allowances do not give a proportional right to the proceeds of the liquidation of assets or to the dividend.</i>

Source: rapporteurs according to Denton, Wilde and Sapte

These categories being ruled out at once for obvious reasons, the main question concerned the affiliation of allowances with three types of existing legal instruments: administrative rights, financial instruments and property in the sense of civil law.

3.1.4.1 Allowances could have been affiliated with the category of administrative rights

The strong presence of public authorities in all stages of operations on allowances constitutes a rather strong legal characteristic militating in favour of affiliating them to the rather loose category of administrative rights. The supporters of this definition put three main arguments forward.

Allowances constitute the expression of sovereign international obligations of a state to reduce emissions on its territory. CO₂ allowances are therefore consubstantial with the national and European obligations taken on in accordance with the provisions of the Kyoto Protocol.

CO₂ allowances may be considered as an administrative instrument to cap emissions, that is to say as an authorization integrating a restrictive injunction in terms of both quantity and time⁵⁰. However, this authorization has the originality of providing individual flexibility of use for the operators covered by the EU ETS legislation, due to its transferable nature.

⁵⁰ Those supporting this theory base their assertions on the interpretation given by the French Council of State of the nature of milk quotas within the framework of the Common Agricultural Policy (CAP), in the decision EC, *D'Hérerville*, 29 July, 1994, which considered these instruments as an administrative method for setting a cap on production. Let it be reminded, however, that milk quotas are not transferable.

CO₂ allowances have a probative function: they are indeed a constituent element of the authorization held by industrial operators to engage in activities on the territory of the European Union. Therefore, for some public law specialists, CO₂ allowances cannot be separated from the permanent authorization of a polluting installation. In this respect, it must be observed that most of the installations concerned by the European Union emission trading system are also governed by EC Directive no. 96/61 of 24 September, 1996 concerning integrated pollution prevention and control, and therefore, under national French law, by the legislation on ICPE (*installations classées pour le protection de l'environnement* – classified installations for environmental protection) of Articles L. 511-1 et seq. of the French environmental law⁵¹.

The affiliation of allowances with the legal category of administrative rights was therefore based on several sound legal arguments. The transferable nature of allowances, for that matter, would not have constituted an obstacle to a definition as an administrative right, as French administrative and civil courts have recognized the tradable nature of certain administrative rights in their respective decisions for a long time⁵².

However, the affiliation of CO₂ allowances with the legal category of administrative rights appeared, in several respects, unsatisfactory. Indeed, the property of an allowance only constitutes a consequence of the authorization held by an industrial operator and differs from usual administrative authorizations on which the participation to an economic activity depends. CO₂ allowances also have the specificity of letting the operators covered choose their management method for the administrative constraint imposed on them. Each company indeed has the possibility of reducing its emissions and/or to purchase or transfer allowances to the other market participants. Legally, this point marks a fundamental difference with other types of transferable administrative rights, which, as a rule, are issued for a specific use, unlike CO₂ allowances. They can indeed be purchased or transferred by anyone, according to the buyer's wishes, be returned to the state or not, for compliance purposes, in return for CO₂ emissions or to be simply cancelled. Finally, a legal definition of allowances as administrative rights would have introduced a difference in nature between them and international credits (CER and ERU). Indeed, international credits, which are issued when an emissions reduction is established, do not constitute administrative instruments to cap emissions but rather flexibility instruments used by companies to comply with their cap: an affiliation of these instruments with the category of administrative rights could have appeared of limited legitimacy.

⁵¹ The legal intertwining of the two systems, for that matter, is demonstrated by the possibility offered to Member States by Community law of integrating the greenhouse gas emission authorization procedure and the procedure laid down in the abovementioned IPPC directive. In this respect, the French environmental law specifies that the authorization required under Article L. 512-1 of the French environmental law is a substitute for the authorization to carry out activities subject to the trading system (Art. 229-6, amended).

⁵² See notably: CAA, Nantes, 14 June, 2000, no. 97NT00823, *Ministère de l'Environnement, Cahu* and EC, 26 February, 1990, *Bambi Fruits, RFJ*, 4/1990, no. 378, p. 252 as regards the transfer of authorizations to operate IPCEs. See also: Court of Cassation, 4 May, 1983, Bull civ. III no. 103.

3.1.4.2 *The legal definition of allowances as financial instruments was dismissed; however, allowance derivatives fall into this category*

Allowances are not financial instruments or securities under the French monetary and financial law. Indeed, in accordance with Articles L.211-1 and L.211-2 of the abovementioned law, allowances cannot be affiliated with any of these two categories. As a general rule, allowances are not affiliated with financial instruments as defined in the national legal order, because they do not give the right to capital or to voting rights, they do not constitute claims in relation to their issuer, they are not issued by Undertakings for Collective Investment in Transferable Securities (UCITS) and they are not futures instruments.

The decision to exclude allowances from the category of financial instruments is mainly justified by the difference in nature between allowances and the legal instruments defined by the French monetary and financial law. Doctrine, which is divided on the question of the legal definition of allowances, proved to be unanimous on this point.

The choice of ruling out the definition as a legal instrument was also driven by a political imperative: to avoid putting the main instrument of the European climate policy, *de facto*, in the same category as financial instruments in the usual sense, which is associated with a legal framework devised to be applied to financial operations, and not to industrial operations.

On the other hand, the French monetary and financial law expressly lays down that allowances can serve as the basis of futures financial instruments. Article D211-1 A thus provided that: *“the financial contracts mentioned in paragraph III of Article L. 211-1 are: [...] 7. Option contracts, firm futures contracts, swap contracts, agreements on future prices and any other futures allowances relating to climate variables, cargo rates, authorizations to emit⁵³ [underlined by us] or to inflation rates or other official economic statistics, which must be settled in cash or can be settled in cash at the request of one of the parties, otherwise than by reason of default or other termination event”*. Moreover, in accordance with Article D-211-1.A.II: *“For the purposes of Article L.431-7, the following also constitute futures financial instruments: option contracts, futures contracts, swap contracts and any other forward commodity contract or authorization to emit [underlined by us], other than those mentioned in paragraph I, and on the condition that they be subject, following trading, to registration by a recognized clearing house or to recurrent margin calls”*. Consequently, futures financial instruments based on emission allowances are governed by the scheme for financial instruments specified in Articles L. 431-1 et seq. of the French monetary and financial law. By introducing this specific provision in the French monetary and financial law, the French Legislator was taking note of the will of the European Legislator to set up a market that would be open to outside market participants and to financial innovation, in accordance with the economic efficiency principles which governed its setting-up.

3.1.4.3 *The French Legislator deliberately chose a legal definition of allowances inspired by civil law*

Within the framework of the integration order of the abovementioned directive, the French Legislator defined European allowances in Article L 229-15 of the French

⁵³ It can be noticed that the French Legislator used the same terms as MiFID, without a harmonization, in the national law order, with the provisions of the French environment law.

environmental law: “I. – The greenhouse gas emission allowances allocated to the operators of installations authorized to emit these gases are movable property [underlined by us] which are exclusively materialized by a registration in the account of their holder at the national registry mentioned in Article L. 229-16. They are tradable, can be transferable from one account to another and give identical rights to their holders. They can be transferred from the moment they are issued, subject to the provisions of paragraph II of Article L. 229-12 and of Article L. 229-18.” In accordance with the provisions of the French Civil Code, in France, CO₂ allowances thus constitute movable property by law⁵⁴, are the subject of property rights, must be registered on an account, are tradable and give identical rights to their holders.

The Legislator made the choice of affiliating European CO₂ allowances, as well as the credits resulting from the flexibility mechanisms of the Kyoto Protocol (international CER and ERU credits), with an existing category of civil law, by making allowances property. In principle, this decision was not an obvious one to make and could appear to be relatively bold, inasmuch as European directives do not even give a legal definition of allowances. *De facto*, CO₂ allowances are however similar to property by some of their characteristics, which are compatible with the traditional legal attributes of property in the national legal order: the *usus* (right of use), which is exercised within the limits imposed by administrative constraints (obligation to surrender allowances); the *abusus* (right of disposal), which finds its expression in the right to transfer the allowances held to anyone; the *fructus* (right of enjoyment), which cannot be exercised in the case in point, as allowances do not generate profits, like other consumer goods. Allowances also meet the conditions of the distrainable nature of property, in accordance with civil execution procedures. Let it also be observed that the limited validity period of allowances does not in itself prevent a legal definition as property, since the permanent nature of the right of property is not incompatible with the limitation of its validity through time for wasting assets. The principle of perpetuity inherent to the principle of property does not make it impossible to envisage temporary property rights, which would only last as long as their object remains. Therefore, the precarious nature of allowances is not an obstacle to its appropriation.

For all that, the parallel between CO₂ allowances and property in the sense of civil law is not self-evident, beyond the ethical debate that this issue may have legitimately caused, and which was notably relayed by certain non-governmental organizations which deemed that such an assimilation of property to pollution rights was inconceivable. Let it be observed that the American federal Legislator thus voluntarily ruled out the possibility of establishing a property right on SO₂ allowances, as though wishing to better underline their “moral content”, while still providing for the possibility of transferring them among owners and the operators of the installations concerned as well as any other person legitimately holding them⁵⁵. In addition, from a strict legal viewpoint, defining CO₂ allowances as property appears to be open to criticism on several accounts. Doctrine by public law specialists put forward one major argument against the definition of allowances proposed by private law specialists. According to them, the state does not have the authority to create property rights within the framework of the fulfilment of its public-service mission, which is justified by the protection of the general interest, in this case, the fight against climate change. The

⁵⁴ Article 516 of the French Civil Code lays down that “property is divided into movables and immovables” and Article 517 of the same law specifies that “property is movable by its nature or by determination of law”.

⁵⁵ *Clean Air Act* § 403 (b) [42 USC 7651 (b)].

transferable nature of allowances does not make it possible to deduce the substantial legal definition as property, as transferability only constitutes an incidental element of the system, which is primarily the expression of the will of public authorities to reduce greenhouse gas emissions. In this way, a definition of allowances as property, and all of the guarantees related to property associated with them, can appear to be in contradiction with the sovereign power of public authorities to decide, in the name of the general interest, to go back on the authorization to emit granted to allowance holders. By turning allowances into property rights, public authorities thus limit their own capacity to modify the objectives of the climate policy through time. In this respect, it can be observed that the definition of allowances as movable property implies, for instance, the practical consequence of a subjection to the rules of expropriation and of fair and necessary compensation associated with property under civil law⁵⁶. Therefore, doctrine by public law specialists dismissed the very idea of the possibility of an appropriation of administrative rights in the sense of civil law, and instead chose to define allowances as administrative “securities” which the companies concerned would hold. Consequently, allowances would appear to be similar to commercial securities, with which they share several characteristics, including notably, as observed by Patrick Thieffry⁵⁷, the formalities of their allocation methods, abstraction in relation to the conditions which gave rise to their allocation and, lastly, the fact that their holder is entitled to the right they give.

The decision of the national Legislator was mostly guided by the will to ensure the protection of trade by bringing CO₂ allowances under the protective scope of existing civil law. The main advantage of defining allowances as movable property is indeed that this ensures that all of the provisions of the Civil Code relating to property protection and transfer methods will apply. In France, the transfer of spot allowances is performed according to the system for the sale of property, either over the counter, or through an intermediary (financial or not), or on a trading platform, whose rules are freely determined by the managing entity, which interposes itself between the seller and the buyer according to its own rules. However, let it be observed that the general principle of application of the ordinary system for the sale of property to CO₂ allowances admits of a certain number of exceptions. In this way, unlike under ordinary law, the transfer of ownership of greenhouse gas emission allowances is not executed in the national legal order by the sole effect of a consensus of wills. Indeed, the French environmental law provides that “*the transfer of ownership of allowances results from their registration, by the administrator of the national registry, on the account of the beneficiary (...)*” (Article L. 229-15-1, par. 2 of the French environmental law). However, the main principles of general civil law as regards property apply to allowances. For instance, allowances may be transferred but may also, as intangible movable property, be pledged. In the event of a failure to pay the debt secured, the creditor will thus be able to have a court order the sale of the allowances under pledge or their preservation for payment. Choosing the legal framework of movable property thus seems to have reassured the participants of the CO₂ market. Although it is impossible to establish a direct causal relation between the two phenomena, we may still probably observe that, in

⁵⁶ In practice, assuming that European regulations make it possible, France would thus only be authorized to decide to remove the allowances already allocated to the installations covered by the EU ETS legislation before their maturity date on the express condition of compensation.

⁵⁷ THIEFFRY (Patrick), “La titrisation des quotas de gaz à effet de serre” (The securitization of greenhouse gas allowances), in *Bulletin du droit de l’environnement industriel*, 2007.

the last five years, the spot market developed the most in the Member State which chose the legal category that protected allowance trading the most.

3.2 In accordance with existing legal rules, the derivatives market alone is covered by the scope of financial regulation, leaving the spot market in a legal vacuum: however a new legal definition for allowances as financial instruments does not appear to be a pertinent solution

The absence of any legal definition of spot allowances in Europe entails an important consequence for the regulator: the absence of any rule regulating this market besides those that its players freely set for themselves. The question of the possible implementation of a new legal definition of allowances, which would make it possible to integrate them into the existing modes of regulation in Europe, may thus legitimately be raised.

3.2.1 The CO₂ spot market is free from any regulation or surveillance organized by public authorities

In accordance with the existing rules of positive law at Community level and, therefore, in the national legal order, a majority of the allowance derivatives market is part of the proven regulation framework of financial markets. The European regulation framework for financial markets is currently based mainly on two elements: the directive concerning Markets in Financial Instruments known as MiFID (Directive 2004/39/EC of 21 April, 2004⁵⁸) and the Market Abuse Directive known as MAD (Directive 2003/6/EC of 3 December, 2002⁵⁹). Allowance derivatives defined as financial instruments alone currently fall within the scope of financial regulation defined by the abovementioned directives. Moreover, apart from Regulated Markets, financial markets are inconsistently covered by their respective provisions. In this way, in France, Bluenext Futures, which is not a Regulated Market but a Multilateral Trading Facility, is not covered by MAD or by the obligations to communicate or publish data on transactions laid down by MiFID⁶⁰. Therefore, the European regulation framework for financial markets only applies to part of the transactions observed on the CO₂ market, although it is true that these transactions currently represent a large share of trading operations in Europe.

Therefore, the spot and forward commercial contracts markets do not currently fall within the scope of the provisions of the financial directives. By definition, they are not directly applicable to them, since spot allowances and forward commercial contracts have not been legally defined as financial instruments. Similarly, none of the abovementioned directives and none of the instruments integrating them into the national legal order provide for an extension of some of the provisions establishing the European financial regulation framework to the spot market of allowances. This situation poses a twofold problem: *de jure*, the spot market is almost free from any public rules to protect it from market abuse,

⁵⁸This directive strives towards two main goals: protecting investors and the integrity of financial markets, by laying down harmonized requirements for the activity of authorized dealers and promoting equity, transparency, efficiency and the integration of financial markets. In addition, the definition of the entities which offer services on behalf of third parties on financial instruments as investment firms entails that these entities, as well as credit institutions which are not investment firms, are subject to the Anti-Money Laundering directive (AML) (Directive 2005/60/EC of 26 October, 2005), which imposes on the entities covered – particularly investment firms and credit institutions – general duties of care with respect to their clientele.

⁵⁹ It establishes a definition of market abuses and defines a prevention system in relation to them. This directive only applies to financial instruments traded on a regulated market in at least one Member State.

⁶⁰ BlueNext's market rules are nevertheless close to the ones of a regulated market.

fraud and money laundering or guaranteeing the equitable treatment of the various players. Due to the close relation between the spot market and the derivatives market, the absence of any rules on the spot market is also liable to weaken the regulation and monitoring of the derivatives market. For that matter, it can be observed that certain countries made the choice of remedying this situation through indirect means: in the United Kingdom, the market platform ECX (ICE group) thus authorizes operations on allowances with a settlement and delivery after 48 hours, which made it possible, following a positive opinion from the Financial Services Authority, to consider these spot allowances as derivative instruments, and to apply the rules relating to this status to them.

3.2.2 The implementation of a new legal definition for allowances as financial instruments would lead to the whole market being governed by the well-trying financial regulatory framework, but it would have to be accompanied by several special dispensations and would constitute a real change of paradigm for the CO₂ market

3.2.2.1 In the face of the situation of legal vacuum observed on the spot market, an option would consist in envisaging the implementation of a new legal definition of allowances as financial instruments

CO₂ allowances share several characteristics with certain financial instruments. Under the French monetary and financial law, financial securities are defined according to three main legal criteria. They are issued by a legal person governed by public or private law, and possession of the title gives rights of a financial nature to its owner over the issuer, for instance rights to income or to a dividend. The exclusive nature of the issuance by a designated person, the state in this case of CO₂ allowances, is thus a factor of convergence with financial instruments. Allowances are also similar to securities due to their scriptural nature: allowances are only materialized by a registration on an account – this registration is both the substance of the property right on the allowance and the evidence of this right, as the transfer of ownership is related to the entry on the account of the buyer, in accordance with the principle of the individualization of expendable goods. Lastly, like financial securities, allowances are tradable instruments. With respect to these three criteria, it would be tempting to put CO₂ allowances in the same category as securities, for instance. However, this would fail to take into account a fundamental difference between allowances and financial instruments: the possession of a CO₂ allowance does not give any financial rights over the issuer, in the present case the state. This difference of a legal nature appears to be fundamental to preclude the possibility of putting CO₂ allowances in the same category as existing financial instruments. If this solution were chosen, it would at least call for the creation of a new sub-category of financial instruments under Article L 211-1 of the French monetary and financial law.

The implementation of a new legal definition as financial instruments would offer the advantage of making it possible to immediately apply the well-trying financial regulation framework to the CO₂ market. As a first analysis, this solution seems to afford a certain number of advantages. In addition, it is relatively simple to implement: it would require adding CO₂ allowances to the list of financial instruments featured in Annex I of the MiFID, within the framework of its revision, which is scheduled to take place in 2010.

3.2.2.2 *The legal and practical consequences of implementing a new legal definition of allowances as financial instruments must however lead to ruling out this solution*

Implementing a new legal definition of CO₂ allowances would constitute a real change of paradigm for the European market, which would become, *de facto*, a segment of the European financial market. Such a choice is obviously a political one to make. However, it is advisable to apprehend what its practical consequences would be. The implementation of a new legal definition of CO₂ allowances as financial instruments would cause for the entire corpus of financial regulation to become applicable to the European CO₂ market. Appendix VIII synthesizes all of the rules currently applicable to financial instruments, but which do not apply to CO₂ allowances. With respect to this analysis, three main observations can be made.

Extensive sections of the financial regulations applicable to financial instruments would not be relevant in the case of CO₂ allowances, for instances if they were assimilated with securities. The most pertinent case is undoubtedly that of the “Prospectus” corpus, which is mainly aimed at informing the public within the context of financial securities being offered to the public. Similarly, all of the provisions applicable to takeover bids appear to be entirely unsuited for the “allowance” instrument. Consequently, the implementation of a new legal definition of CO₂ allowances as financial instruments would require, in practice, extensive work to polish up the applicable Community and national financial regulations, in order to determine the relevance of applying these provisions to CO₂ allowances on an individual basis. It is notably clear that the provisions of the French Commercial Code relating to securities, which are defined as financial securities, which give identical rights to each category, could not be extended to allowances. The Legislator would therefore be putting itself in the situation of having to establish an exception system to the applicable financial regulations, which now have the virtue of being relatively consistent as a whole.

The implementation of a new legal definition of CO₂ allowances as financial instruments would also have consequences on the management of their “carbon compliance” by the companies covered by the EU ETS legislation. It is indeed advisable to mention that financial regulations were elaborated to be applied to financial operations, and not to industrial operators. Most industrial players now adjust their allowance requirements on the spot market within the context of bringing themselves into compliance. In the absence of any financial operation being performed on allowances, it may appear disproportionate to subject them to all of the rules applicable to the handling of financial instruments. Moreover, under national law, a new legal definition as a financial instrument would cause for all post-trade rules to apply, without them really being appropriate, and even though they have yet to be harmonized under European law.

The implementation of a new legal definition of CO₂ allowances as financial instruments would not necessarily have consequences on the applicable international accounting standards: if it was to be made, such a modification could prove to be detrimental to the companies covered by the EU ETS legislation, as regards national standards. Indeed, under international standards, the accounting nature of an instrument is not based on its legal nature, but on the rights and obligations its entails. A new legal definition of allowances as financial instruments, under both Community and national law, would not automatically lead to a new definition of allowances as financial assets in terms of accounting. In order to be described as financial assets under the IFRS standards, greenhouse gas emission allowances must indeed meet the definition of a financial asset under accounting standard

IAS 32.11⁶¹. As allowances do not intrinsically meet, through the rights and obligations they contain, any of the criteria which would justify defining them as financial assets for accounting purposes, it appears unlikely that they would be redefined as financial assets under international standards. However, as the national accounting standard is more directly derived from the existing legislation, a new legal definition of allowances as financial instruments could result in a modification of the applicable treatment for national accounting and in a fundamental separation between the international standard and the national standard.

In the theoretical event of a new definition of allowances as financial instruments leading to a modification of their accounting treatment, practical consequences could be important for the companies covered by the EU ETS legislation, whose statement of income would be exposed to the volatility caused by a treatment of net exposure at fair value, as detailed in the following box.

Box no. 10 – The potential consequences of the implementation of a new definition of CO₂ allowances as financial instruments from an accounting point of view

The definition of allowances as financial assets in the sense of the IFRS accounting standards would entail, until at least 2013, the application of the IAS 39 standard, unless the European Union actually adopts the IFRS 9 standard (published on 12 November, 2009), which is aimed at replacing the previous standard, and unless the company then decides to apply it in advance.

Assets:

In principle, in both cases (IAS 39 or IFRS 9), the allowances allocated, if they were defined as financial instruments, would be recognized at fair value on the balance sheet. Indeed, there is little chance that they could be recorded at the amortized cost under standard IAS 39, as they cannot be put in the category of held-to-maturity investments (HTM) or of loans and receivables, because they are not subject to specific or determinable payment (HTM) and/or are not listed on an active market (loans and receivables). The same would hold true under IFRS 9, as greenhouse gas emission allowances do not mean the definition of an ordinary

⁶¹ For the purposes of the IAS 32 standard, is considered to be a financial asset in the accounting sense “any asset that is: a) cash; b) an equity instrument (i.e. share or other) of another entity; c) a contractual right: i) to receive cash or another financial asset from another entity; or ii) to exchange financial assets or financial liabilities with another entity under conditions that are potentially favourable to the entity; or d) a contract that will or may be settled in the entity’s own equity instruments and is: i) a non-derivative for which the entity is or may be obliged to receive a variable number of the entity’s own equity instruments; or ii) a derivative that will or may be settled other than by the exchange of a fixed amount of cash or another financial asset for a fixed number of the entity’s own equity instruments (...).” Greenhouse gas emission allowances do not fall within a) (they are not cash) or b) (they are not shares) or d) (they are not contracts settled in the entity’s own equity instruments). Only c) remains. But the instrument itself does not give the right to receive cash (only to extinguish an obligation corresponding to a number of allowances issued). It is tradable in return for cash on an active market (like shares), but does not appear to correspond however to the notion of a purchase or sales contract of a non-financial instrument (IAS 39.5). Indeed, it is not the right to purchase or sell CO₂ allowances though a futures contract. It is the immediate possession of such allowances. It therefore appears inappropriate to define them as financial assets under IFRS standards (this is probably the reason why the IFRIC and IASB opted for the solution of intangible assets).

loan (i.e. an asset giving a right, on predetermined dates, to cash flows only corresponding to the payment of principal and of the interests on this principal).

Consequently:

Under IAS 39: in cases where allowances are held and not used for speculative purposes, their changes in value would be recorded in the entity's own equity instruments – apart from any possible depreciation which, in this case, would affect the statement of income. In the case where allowances are held for speculative purposes, their changes in value would be entered in the statement of income.

Under IFRS 9, whether they be held for speculative purposes or not, allowances are recorded by default at fair value and by the statement of income. Indeed, as they are not the entity's own equity instruments, they cannot benefit by the alternative method making it possible to record their fair value variations as the entity's own equity instruments.

Lastly, if they were considered as derivatives, they would be measured at fair value by the statement of income, unless they were described as hedging instruments.

Liabilities:

As regards the liabilities relating to actual emissions, they appear to fit the definition of financial liabilities. Indeed, under IAS 32.11 “a financial liability is any liability that is a contractual obligation to deliver cash or another financial asset to another entity (...)”. Under IAS 39, these liabilities which are not issued for speculative purposes are, by default, measured at amortized cost. However, as their redemption price varies, there could be an incorporated derivative to be recorded separately. Failing this, their initial effective interest rate would need to be subject to recurring new measurements, which would entail an adjustment of their net book value. The company could also have the option of measuring them at fair value by the statement of income, notably in order to achieve symmetry with the record of the emission rights held in the assets (which are also measured at fair value by the statement of income, in this case).

Conclusion:

If the allowances purchased or received and recorded in the assets and liabilities corresponding to actual emissions were defined as financial instruments, companies could choose (in order to avoid accounting discrepancies between assets measured at fair value by the statement of income, or by Other Comprehensive Income⁶², and liabilities measured at amortized cost) to apply the option with a measurement at fair value by the statement of income to both the rights held in the assets and the allowances to be surrendered recorded in the liabilities as financial debts. This option would make it possible to treat the entire position, including any possible hedging derivatives, in accordance with the method of fair value by the statement of income, the consequence of which would be the volatility caused in the case of significant net exposure.

Source: Price waterhouse Cooper

Implementing a new legal definition of allowances as financial assets would therefore result, from an accounting point of view, in exposing the results of the companies covered by the EU ETS legislation to the volatility in the price of CO₂ allowances, which would not

⁶² Other Comprehensive Income refers to the fluctuations in the value of the assets or liabilities of the company, which are directly recorded in the entity's own equity instruments.

necessarily faithfully represent the activity and the financial situation of the company, even though their participation in the European permit market is the result of a regulatory obligation.

The implementation of a new legal definition of CO₂ allowances as financial instruments therefore appears to have disproportionate consequences in relation to the aim pursued that is to say improved regulation of the spot market. It is indeed advisable to mention that the spot market actually accounts for less than 15% of CO₂ allowance trading in nominal value on the European market. The special positioning of the Paris market on the spot market must not lead, through the distorting effect of a magnifying glass, to overestimating risks and, consequently, to the extreme solution of a new legal definition as financial instruments. In this respect, elaborating an exception system from start for CO₂ allowances within the complex system of European financial regulations appears to be a disproportionate action. As most of our European partners did not venture a legal definition of allowances, taking the idea of a new definition as financial instruments to the Community level also appears to be difficult to achieve in the short term, assuming that this solution is even practicable.

The elaboration of an *ad hoc* regulation framework based on the various relevant elements of financial regulations, and of the framework currently being elaborated on energy markets, appears to be preferable. As the application of part of financial regulations, and of the regulations of energy markets, or of some of their principles, to the components of the CO₂ market which do not have the status of markets in financial instruments appears to be relevant (i.e. the CO₂ spot market and the market of commercial forward contracts), it is advisable to choose a proportionate approach, by selecting the relevant provisions in a well-targeted way. The elaboration of this *ad hoc* regulation framework can be performed by two means: either by extending the scope of existing directives or through specific legislative means. The main recommendations of the present report are elaborated on this basis.

Advice no. 3: exclude a new legal definition for allowances as financial instruments and promote a regulation of the European CO₂ market based on a framework adapted to its specificities.

3.3 CO₂ allowance laws must be harmonized in order to guide the development of these markets, ensure their stability and remedy the risk of regulatory arbitrages

3.3.1 At Community level, it would be desirable to harmonize the legal status of allowances and related tax rules before the market enters into its third phase

The lack of harmonization of the legal framework applicable to CO₂ allowances in Europe is detrimental to market stability.

The lack of any European legal definition of allowances and the related accounting and fiscal consequences certainly did not prevent the European CO₂ market from developing. However, the freedom of choice given to states as regards the legal framework applicable to the CO₂ spot market now appears to pose a twofold problem. Firstly, it is a factor of uncertainty for operators, and notably for the companies covered by the EU ETS legislation, in the context of a market where regulatory stability is of primary importance, as shown by the extreme sensitivity of prices to regulatory “shocks”. Secondly, it is liable to favour behaviours of legal and tax optimization by some Member States for strategic purposes. The

recent example of Romania demonstrates this: on 23 February, 2010, the Romanian equivalent of the *Autorité des Marchés Financiers* (the French financial markets authority) thus decided to implement a new legal definition of CO₂ allowances as financial instruments. This decision was immediately interpreted by market players as a measure of tax optimization, the trading of financial instruments being zero-rated for VAT, for the purposes of developing a national trading platform, Sibex.

The free development of the voluntary offset credits market also creates risks. This type of credits is not of a regulatory nature. They do not have, contrary to European allowances and the international credits, a legal definition. The guarantees of environmental integrity they offer can be weak, as they are not always subject to monitoring procedures as robust as regulatory ones that vouch for them corresponding to actual emissions reduction. The mix-up between the regulatory and the voluntary markets poses risks. Giving the same legal definition to the two categories of credits could thus undermine the perception of the integrity of the regulatory market itself.

Nevertheless, the lack of a legal and accounting framework for voluntary credits poses risks to their potential users, *i.e. companies not necessarily covered by the EU-ETS but engaged voluntarily in an effort to reduce emissions. A reflection on the legal and accounting standards should be undertaken, at the European or even international level.*

A harmonization of the legal status of CO₂ allowances and of its fiscal treatment should be undertaken at Community level. In this respect, it appears necessary for the European Commission to be able to propose a legal harmonization of the status of CO₂ allowances before the market enters into its third phase starting from 2013.

It now appears difficult to give an opinion on the legal definition of CO₂ allowances, which should be adopted at Community level. No affiliation of CO₂ allowances with existing legal categories is entirely satisfactory. The definition chosen by the French Legislator may have constituted an important element to increase the security of spot transactions, but it may not appear to be pertinent to some of our European partners.

It is indeed advisable to place this debate in the more general context of the proliferation of related instruments in environmental matters. Several Member States have, for instance, developed similar mechanisms in the environmental sector, for instance the system of energy savings certificates introduced in the United Kingdom or in France. Outside the environmental sector in the strict sense of the word, within the framework of the common fisheries policy, the issue of making catch quotas transferable was recently raised. As a happy consequence of the smooth operation of the European CO₂ market and of the demonstration it was able to make of its ability to reduce greenhouse gas emissions in Europe, new instruments of the same type could be developed in the future. For that matter, doctrine took note of this proliferation of “transferable administrative rights”, which often have difficulty fitting into existing legal categories. Consequently, the issue goes beyond the determination of the legal framework applicable to CO₂ allowances in Europe and can provide an opportunity to create a new legal category, which would be liable to apprehend the specificity of these mechanisms in relation to existing legal categories. It would therefore appear rash to prematurely settle this fundamental debate now by proposing to simply affiliate CO₂ allowances at Community level to an existing legal category.

Advice no. 4: ask the European Commission to propose a harmonization of the legal status of CO₂ allowances and international credits, in Europe, before the European CO₂ market enters into its third phase, making this work part of more extensive thought on the legal definition of public policy instruments in the environmental sector.

3.3.2 *It is essential that resolute diplomatic action be taken to eliminate any risk of CO₂ VAT fraud in Europe in 2010*

The year 2009 was marked by a case of large-scale VAT fraud on the European CO₂ market.

In practice, these actions took the form of a “carousel” fraud, whose mechanism is explained in the following box.

Box no. 11 – The mechanism of VAT fraud on the European CO₂ market in 2009

The mechanism at work was that of a “carousel”-type VAT fraud, which was based on the tax system applicable to cross-border transactions between two countries of the European Union. The entities accused purchased high volumes of allowances from suppliers located in another Member State and then sold them again on the national market: the purchase of rights from a foreign country gave rise to immediate tax levy and deduction by the buyer, in accordance with the reverse charge mechanism, i.e. with no actual cash outflow accompanying the VAT declaration.

When allowances were sold again to a buyer on the national market, it was very easy for a dealer to charge this tax without paying the amount to the Treasury department of the Member State concerned. As there was no upstream VAT to be charged, the tax thus evaded, but which had generally been paid by its client (usually a broker), constituted pure profit if it could disappear without trace. As for the administration, it had no means of immediate cross-checking, which would have made it possible for operators set up in France to monitor allowance purchases and intervene in due course. This fraud was all the more easy as emission allowances are intangible rights whose circulation is especially easy to organize due to their intangible nature. Indeed, checks are easier with the trade of tangible property, which is notably subject to export declarations and can be subject to checks on physical deliveries.

This fraud proved to be all the more effective as the liquidity of the market made it possible to quickly carry out operations on very important volumes. Although the amount of potential frauds cannot currently be precisely assessed, we can take note of the striking concomitance between the suspension of the VAT system applicable in France on the spot market at the end of the second quarter of 2009 and the correlative fall in the volumes traded, on the one hand, and the transactions carried out through market platforms, on the other hand.

The phenomenon of VAT fraud originated in the tax system applied to the CO₂ spot market, i.e. the application of a VAT system which, however, does not apply to intangible financial instruments, to the trading of CO₂ spot allowances⁶³.

⁶³ For the purposes of the implementation of VAT, allowances indeed constitute intangible movable property, whose transfer, when it is performed against payment by an operator covered by the EU ETS legislation acting in this capacity, constitutes a provision of service in accordance with the combined provisions of Articles 2, par. 1c) and 25 a) of directive no. 2006/112/EC relating to the common system of VAT. During the 75th meeting of the VAT Committee held on 14 October, 2004, the delegations of the Member States unanimously agreed that this provision of a service was not covered by the exemption mechanisms available within the country, as laid

Faced with this fraud, the French tax authorities published, on 10 June, 2009, a directive (3-L1-09), which resulted in the implementation of a taxation system which is zero-rated for VAT⁶⁴ which eliminated the risk of carousel fraud. The directive published by the tax authorities leads to exempting of VAT, with no option possible, operations on allowances which are considered as intangible movable property, and whose transfer is assimilated with a service that falls within the scope of VAT.

Following this, the European Union reacted by proposing a specific VAT system for operations on CO₂ allowances, the implementation of which was left in the hands of each Member State. At the ECOFIN Council meeting of 2 December, 2009, the Member States approved the proposal of the Commission of a directive amending Directive 2006/112/EC as regards the optional and temporary application of the reverse charge mechanism to the delivery of certain goods and the provision of certain services which present a risk of fraud. In practice, this proposal gives Member States the possibility of instituting a reverse charge mechanism instead of the exemption system: operations would go back to being taxable, but VAT would be instantly settled and deducted by the buyer, which would offer a neutrality system⁶⁵. The envisaged modification of the VAT system regarding transactions on allowances would therefore automatically prevent this type of fraud⁶⁶.

However, the risk of fraud will only be completely covered when all Member States have incorporated the directive instituting a reverse charge mechanism for operations on CO₂ allowances. Although most important Member States which are active on the CO₂ market are envisaging, or have already implemented, the measures required, the survival of the previously applicable VAT system in one Member State only would entail the possibility for the same fraud mechanism to be used again, although on a less important scale. As this episode seriously called into question the integrity of the European CO₂ market, it is advisable to advocate, from 2010, the implementation of the new tax rules in all Member States. French authorities having been the first ones to give a reaction on the subject in 2009, this provision should be rapidly integrated into the national legal order. At the same time, it would be advisable to raise the awareness of our European partners, which have yet to adopt these types of measures of the stakes they involve for the integrity of the European CO₂ market. Let it be observed that the risk of this type of fraud spreading to other related market now appears to be real: the attention of European authorities should be drawn to this point.

down in Article 131 to 136 of the present VAT Directive, and that its place of taxation was determined by the provisions of Article 56, par. 1 a).

⁶⁴ Operations on allowances and credits are covered by the same exemption as operations on securities, other than custody and management, as laid down in Article 261-C-1 e) of the French General Tax Code. The tax treatment chosen is that of derivative products described in directive 3L-1-06. The French VAT exemption system has no consequences on the operators covered by the EU ETS legislation as regards the exercise of their rights to VAT deduction and the calculation of their ratio of liability to payroll tax. The remuneration received by intermediaries acting in the name and on behalf of third parties for the purchase or sale of these rights is also exempted from VAT, but however provides a possibility of option regarding liability to tax.

⁶⁵ Let it be observed that if allowances were to be defined as financial instruments, their transfer among operators would become exempt, but would affect the deduction entitlement of the seller. As regards intermediaries, their remuneration would also be exempt, except in the case of an option, from liability to tax on commissions.

⁶⁶ Transactions between two parties would systematically be carried out without any payment of VAT by the buyer, which would prevent any fraud of the “carousel” type. In October 2009, Spain implemented this proposal, imitating the Netherlands, transferring payment of the tax from seller to buyer.

Advice no. 5: at European level, promote the quick adoption of the reverse charge mechanism for the trading of CO₂ allowances by all Member States in 2010. At French level, transpose into the national law the provisions required to implement the VAT reverse charge mechanism for operations on allowances, as soon as possible.

3.3.3 *In the short term, an international accounting standard must be elaborated: it can serve as the foundation of harmonization work at national level on the legal nature of allowances and credits*

The lack of any international consensus on the nature of CO₂ allowances and credits could also hinder the development of carbon markets in the future. In this way, for example, the decision of a state to define all CO₂ allowances as financial instruments and the decision of the French Legislator to define allowances as intangible movable property may limit the operations of a French player in this state. At a time where most OECD Member States expressed being in favour of the development of national and regional carbon markets and of their gradual linking, the need to reach an international consensus on what CO₂ allowances and credits are is becoming urgent. The European Union thus put forward the idea of an OECD-wide CO₂ market by 2015. This is one of the necessary conditions of the development of these markets in the future. The choice of the French Legislator, if our partners followed it, would for instance raise several questions in itself. As observed by Patrick Thieffry, movable property is generally governed, under private international law, by the *Lex rei sitae*, i.e. the law of the place where they are located. This solution raises an especially delicate question of private international law, known as “changes in the connecting facts”, which arises when the element of affiliation adopted by the conflict of laws rule experiences a movement or modification, the property being transported from one country to another. Must the legal nature of emission allowances and the legal framework of the operations relating to them thus be apprehended with respect to the law of the country of issuance or of the country of destination? For the purposes of protecting the interests of third parties, it is commonly agreed that “*the local legislation thus firstly defines the things which are the subject of appropriation*”. However, this solution appears to pose a problem in the case in point, as an allowance entered in the French registry after being issued in another participating country would not have the same legal nature as an allowance issued in France. We can observe here the problems which may be posed, in the future, by the lack of international coordination on what CO₂ allowances constitutes for the proper development of the market.

In practice, the promotion of an international consensus on the very nature of CO₂ allowances and the legal consequences relating to it is likely to be difficult, particularly in the post-Copenhagen political context. In this respect, two avenues are worth exploring.

Firstly, an international agreement on the accounting definition of emission allowances and credits within the framework of the IASB would be liable to favour, in the long run, a meeting of minds, accounting considerations being based on the observation of the very nature of the instrument treated. It is therefore advisable to support the work process initiated by the IASB to achieve an international recommendation on the accounting treatment of allowances before the market enters into its third phase taking into account the objective of financial stability. Secondly, the accounting framework applicable to CO₂ allowances should be quickly completed within the context of the second phase of the market, so as to remedy the flaws currently observed.

Advice no. 6: at French level, in the view of contributing to the international works underway, ask the Autorité des Normes Comptables (the French accounting standards authority) to define the national accounting treatment, in individual financial statements, of the operations on allowance derivatives and on the credits resulting from the flexibility mechanisms of the Kyoto Protocol and to initiate reflections on the evolution of the accounting treatment of allowances required by the shift towards allocations against payment. Make sure that the IASB publishes an accounting standard that applies to all emission allowances and credits before the European market enters into its third phase in 2013.

4 Although the principle of an open market is to be preserved, market participants must be better regulated, in order to ensure the integrity and efficiency of the market as well as the protection of operators' interests

4.1 *The CO₂ market has developed without access restrictions, thus favouring the increasing participation of market intermediaries*

From the onset, the European Legislator has chosen not to reserve the CO₂ market only for operators covered by the allowance trading scheme. In this way, Article 19 of Directive 2003/87/EC of 13 October, 2003 provides that: *“any person may hold allowances”*. This choice was motivated by the intention to foster a rapid development of market liquidity by enabling a great number of operators to participate in the market. As regards the evolution of the traded volumes, this objective has been fully met. The principle of an open access has favoured the participation of operators which have no regulatory obligations to cap their emissions, in addition to the companies covered by the EU ETS legislation. These operators intervene as intermediaries, offering services or products for compliance optimization or hedging to those covered. Some operators also intervene on their own account, for speculative purposes. Therefore, with the operators covered by the EU ETS legislation, financial intermediaries and operators with a similar function and even states, the European CO₂ market is characterized by the great variety of its participants.

4.1.1 The operators covered by the EU ETS legislation are diverse and the way they intervene on the market is highly heterogeneous

The European market imposes obligations on the installations covered (which fall within the categories defined by the amended Directive 2003/87/EC), and not on companies. Therefore, the CO₂ market concerns large companies, and even European or international groups which operate a great number of installations, just as well as small and medium-sized businesses (SMEs), whose activity is limited to the operation of one or two installations.

Large electricity producers (50% of allowances allocated for less than 5% of installations) have developed sophisticated activities to intervene on the CO₂ market through their existing trading entities. This organization enables them to intervene in a highly active and concomitant way on the energy and carbon markets, so as to integrate CO₂ into their hedging strategy, but also with the aim to carry out trading operations on their own account. Their interventions take place jointly on organized markets and Over-the-Counter (OTC) markets. Some European electricity producers have also developed activities on international credit markets, in relation to the Clean Development Mechanism (CDM) and the Joint Implementation Mechanism (JI), in order to reduce their compliance costs, thus covering part of their allowance requirements through the purchase of international credits. These activities can take several forms, such as the creation of carbon funds taking part in the development of emission reduction projects generating credits in developing countries, or in economies in transition, or the simple purchase of previously issued credits. The trading entities or subsidiaries of electricity producers also deal with third parties, whether they be subsidiaries from the same group, clients of industrial activities or any other category of third parties. In practice, it can however be observed that although the compliance or hedging services offered by electricity producers only represent a small share of all operations handled by their trading subsidiaries, a certain number of them benefit from the

of their trade relations with operators covered by the EU ETS legislation to carry out all or part of the CO₂-related market operations required by these operators.

Big industrial players and important players of cogeneration (45% of allowances allocated for 15 to 20% of installations) participate to the CO₂ market in heterogeneous ways. The level of sophistication of these operators is indeed highly variable. Large oil groups, as well as some industrial players, rely, for the CO₂ market, on the sophisticated trading capabilities they have developed on markets of their main business. On this point, they are comparable to the large companies of the electricity sector. The others actors have mostly limited themselves to the implementation of strategies to optimize compliance costs, for instance by carrying out swap-type operations on allowances and international credits. Lastly, the majority of the rest of these operators intervene through simple transactions, generally performed over the counter, aimed at hedging their net position. On average, they appear to be far less active on the CO₂ market than large electricity-producing companies.

Box no. 12 – An example of compliance management by a large industrial group

The industrial group in question, whose anonymity shall be preserved here, implemented a comprehensive compliance management strategy for over 200 installations. Once emission reduction measures have been implemented, for instance by improving the productivity of its installations and by using fuels which generate lower emissions, the company intervenes on the market of European allowances and international credits in order to minimize the cost of the carbon constraint, and not to take speculative positions. It carries out operations for volumes of a few dozen million tonnes per year, either over the counter with ten or so counterparties (industrial players or banks), or anonymously on market places such as BlueNext.

It mostly carries out simple operations. In addition to the purchase or sale of allowances or credits, a typical operation is a swap between European allowances and international credits. The purpose of this type of operation is to allow the company to take advantage of the price gap which exists between these two types of allowances which, although they are partially fungible, have different price-determining factors; the maximum price spread was observed in April 2008, i.e. over 20%. The company then transfers European allowances to acquire ERUs, by reinvesting the proceeds from the sale of the European allowances. By taking advantage of the price gap, the company holds a larger quantity of allowances at the end of the operation. Similarly, it carries out so-called “repo” operations, that is to say the sale of spot credits while purchasing the same quantity for forward delivery, taking advantage of the price spread.

Small and medium-sized companies (5% of allowances allocated for nearly 80% of installations) are hardly – or not – active on the CO₂ market. The main intervention modality of these operators consists in intervening on the market through financial intermediaries, or other similar operators, mostly in order to achieve, in a straightforward way, regulatory compliance and, in rare cases, for financial optimization purposes. These financial intermediaries are usually investment firms and banks, as most important European banks have developed rapidly growing carbon activities on behalf of third parties (i.e. Barclays, Orbéo – Société Générale, BNP-Paribas, Deutsche Bank, etc.).

4.1.2 *Operators which are not covered by the EU ETS legislation also intervene on the CO₂ market as intermediaries, or on their own behalf*

A first category of operators – trading entities – mostly intervene on the market by selling hedging products to third parties or by taking positions on their own account. In this way, they contribute to providing liquidity and to assuming the risks that other operators, especially those covered by the EU ETS legislation, do not wish to take.

Several large investment banks thus have become key operators on the CO₂ market. They have developed dedicated structures, expanding their market activities on commodities, and particularly fossil energies, thus using intervention methods similar to those developed by electricity producers. Their activity on the market can be divided into three components. Firstly, they offer to their clients intermediation⁶⁷ services and products to bring their installations into compliance, as well as hedging products for the associated risk. Secondly, some of them intervene in order to hedge their own positions, which result from their activities of CDM or JI projects origination and development within the framework of Kyoto flexibility mechanisms⁶⁸. Thirdly, they carry out trading activities on their own account. In the absence of any data, it is currently difficult to precisely determine the respective shares of the various activities.

In addition to the trading entities of the companies covered by the EU ETS legislation, traders specialized in energy or agricultural commodity markets also play an active role on the CO₂ market. Companies such as Vitol, Trafigura or Cargill thus intervene as counterparties for hedging operations and/or directly on their own behalf.

Lastly, financial players such as hedge funds and insurance or reinsurance companies are also active on the CO₂ market, although to a lesser degree.

A second category of operators, not covered by the EU ETS, legislation plays a role of pure intermediation on the CO₂ market, ensuring that the interests of sellers and buyers meet. Some important brokers (ICAP, Evolutions), who traditionally intervene on financial and commodity markets, have logically developed activities on the CO₂ market. They intervene especially on the derivatives market, by searching for counterparties on behalf of market players willing to carry out Over-the-Counter operations. Most transactions, which go through these intermediaries, are centrally cleared.

In addition to these traditional participants, new specialized players appeared on the CO₂ market. These operators are generally small. They play especially an active role on international credit markets, as intermediaries between project developers and credit buyers. They mostly or exclusively intervene on the spot market.

Lastly, on the international credit markets, some companies have also specialized (in competition with banks and the trading entities of electricity producers) in origination activities, i.e. the construction of international credit portfolios, which may then be transferred to companies covered by the EU ETS legislation. The main European players

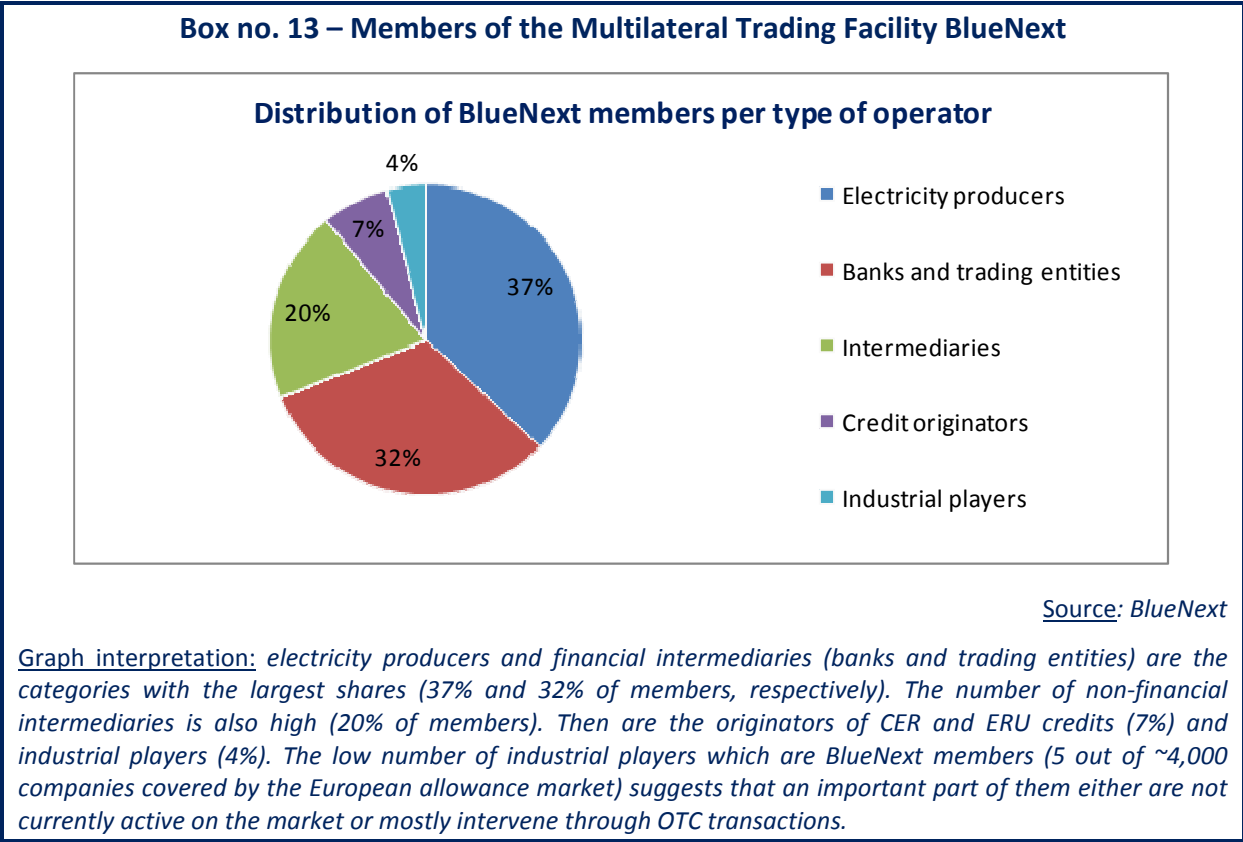
⁶⁷ Including market-making activities in order to develop market liquidity.

⁶⁸ This is especially the case for a French company like ORBEO, which merges the financial management activities on allowances of the Société Générale and the origination activities of the Rhodia company.

currently are EcoSecurities, Camco, Trading Emissions and Tricorona. These companies play different roles in the value chain, intervening either as the partners of project developers (or even directly as project developers, taking responsibility for managing the project origination and credit purchase component), or more exclusively as carbon funds, confining their intervention to purchasing credits from the developer.

Even though, in terms of volumes, trading platforms constitute the primary intervention channel on the CO₂ market, this latter remains highly intermediated as, out of the 4,000 companies covered by the allowance trading system, BlueNext only has 114 members, including around 45 of the companies covered by the EU ETS.

The typology of BlueNext members illustrates the organization of the market, as detailed in the following box.



4.1.3 The principle of open access to the market shall be maintained, but implies an assessment of the risks it involves and the implementation of adapted solutions to reduce them

The principle of open access not restricted to the companies covered by the Community allowance scheme shall be maintained. In addition to the objective of developing liquidity, the participation of financial players, capable of assuming market risks, is essential to satisfy hedging requirements for the price risk⁶⁹ of the companies covered by the EU ETS legislation, and most importantly electricity producers. In fact, the lack of any financial players and the resulting difficulties that electricity producers would have to hedge themselves against price risk would be liable to cause a rise in electricity prices, as the consequence of the inclusion of a risk premium in the electricity prices applied to their clients by electricity producers.

⁶⁹ Risk related to the price fluctuations of allowances.

Moreover, limiting the market to companies covered by the EU ETS legislation would be likely to give excessive market power to the largest of them. Therefore, after envisaging restricting the market to the companies covered, US bills for the regulation of the CO₂ market⁷⁰ acknowledge now that this would constitute a risk-aggravating factor. The history of manipulations on commodity markets in the United States (British Petroleum, Enron) – which cannot however be directly applied to the CO₂ market – has indeed shown that manipulations had been realized by financial players as well as companies which physically intervene on the market and benefit from dominant positions. Besides, a restriction of the market to companies covered by the EU ETS would be likely to be just a facade: circumvention strategies could be carried out (for example, the acquisition of a small installation covered by the EU ETS legislation by a financial operator). It would also create a discrepancy with the growing interweaving of financial and physical spheres on electricity markets, as certain financial players have the possibility of mobilizing real assets (power plants).

Nevertheless, the opening of the market and the structure similar to a financial market it has favoured create some risks. Firstly, the major role played by intermediaries in the functioning of the market raises the question of their solidity and efficiency, but also the issue of the protection and guarantees that their clients, especially the companies covered by the EU ETS legislation, may be expected to receive. This first issue concerns the regulation of intermediation or of the supply of products or services related to allowances. This question should be extended to individual investors if it comes that these latter participate to the market. Secondly, excessive risk taken by operators trading on their own account may cause a destabilization of the market, should these operators not have enough equity capital to absorb the losses suffered on the market and should the inability to honour the contracts signed with their counterparties entail financial replacement costs for these counterparties. Some operators, which both carry out trading activities on their own account and make transactions with third parties, may therefore potentially create a systemic risk, especially some large-sized intermediaries dealing with many counterparties. Thirdly, the opening of the market creates the risk that operators may use the market for fraudulent or criminal purposes. This risk materialized with VAT fraud, and also involves potential risks as regards money laundering. Therefore, the challenge here is to control the good character of participants.

4.2 An important share of the participants in the CO₂ market is not regulated: a proportional regulation of the players which create a risk to other players could be introduced, in order to ensure the integrity and efficiency of the market

4.2.1 Only a part of players are subject to a regulatory framework for the exercise of their activities

⁷⁰ APPENDIX VI – American bills on the regulation of the federal CO₂ market.

4.2.1.1 “Traditional” financial players are covered by financial regulations, including notably the Markets in Financial Instruments Directive (MiFID)

In the absence of any specific rules regulating the CO₂ market, only the operators covered by financial regulations are regulated, insofar as they provide investment services⁷¹ on derivative instruments legally considered as financial instruments. For this, derivative instruments must meet one of the two following conditions: (i) being liable to be settled in cash on the initiative of one of the parties, (ii) being traded on a regulated market or a Multilateral Trading Facility⁷². Therefore, under European law, for instance, forward contracts with a physical delivery and traded over the counter, which will hereinafter be referred to as commercial forward contracts, do not have the status of financial instruments. In France, the definition of financial instruments is broader, as it includes centrally cleared forward contracts, either via a clearing house or through margin calls between the two counterparties.

Therefore, when they intervene on CO₂-related financial derivatives, financial players (credit institutions or investment firms) are covered by financial regulation and particularly by the MiFID⁷³ (Directive 2004/39/EC of 21 April, 2004), whose purpose is to protect the interests of clients of financial players and to preserve the integrity and efficiency of markets in financial instruments.

⁷¹ The following activities are defined as investment services and activities by Section A of Annex I of the Markets in Financial Instruments Directive (MiFID) 2004/39/EC: reception and transmission of orders in relation to one or more financial instruments, execution of orders on behalf of clients, dealing on own account, portfolio management, investment advice, underwriting of financial instruments and/or placing of financial instruments on a firm commitment basis, placing of financial instruments without a firm commitment basis, operation of Multilateral Trading Facilities (MTFs).

⁷² It should be noted that the last condition results from an extension of the definition of financial instruments under domestic French law, to include some forward financial instruments accepted by a clearing house, or giving rise to recurring margin calls for the sole purpose of clearing-termination.

⁷³ Credit institutions are regulated in accordance with Directive 2000/12/EC of 20 March, 2000, but the provisions of the MiFID are applied to them as regards their activities of provider of investment services.

Box no. 14 – The applicable rules under the Markets in Financial Instruments Directive (MiFID)

The MiFID regulates investment activities and services concerning financial instruments. These activities and services include the reception and transmission of orders, the execution of orders on behalf of third parties, dealing on own account, investment advice, individual management, the underwriting or placing of financial instruments and the management of a Multilateral Trading Facility. It applies to investment firms as well as to credit institutions providing investment services.

The MiFID lays down obligations to ensure the quality of execution of the operations carried out by market players and to preserve the integrity and efficiency of markets in financial instruments. The exercise of these activities requires an authorisation as an investment firm, delivered if the company is in compliance with a set of rules aimed at ensuring its strength, providing guarantees regarding its competence and protecting its clients. The company must be managed by at least two directors⁷⁴, who are of sufficiently good repute and have enough experience to ensure a sound management of activities⁷⁵. The identity of the shareholders or owners of the entity must also be known⁷⁶. Investment firms are also subject to ongoing obligations to ensure the proper execution of operations and the integrity of the market.

The entity is subject to operational requirements to ensure the quality of execution of the operations: the prevention of conflicts of interests among its various activities and clients and the use of appropriate resources, systems and procedures to ensure the continuity and regularity of its activities. It must keep a record of all services provided and all transactions made. It must take measures to protect the property rights of its clients.

In France, investment firms and credit institutions which provide investment services are authorised by the Autorité du Contrôle Prudentiel (ACP – the French prudential supervision authority), following the recommendation of the Autorité des marchés financiers (AMF – the French financial markets authority) or, for some services, the approval of the activities programme by the AMF. The ACP and AMF are also responsible for monitoring the observance of these rules, as well as those stemming from the directives on equity capital and the fight against money laundering. In the event of breaches, they can impose sanctions on the entity and withdraw its authorisation.

In addition, the provision of investment services is regulated by strict rules of conduct towards clients, regarding the information given to clients on the products or operations offered⁷⁷ and the verification of their knowledge and experience concerning the investment products offered⁷⁸. It is especially subject to obligations to execute orders on terms most favourable to the client⁷⁹. The implementing arrangements of these rules vary according to the type and level of sophistication of the client.

⁷⁴ Allowing for exceptions.

⁷⁵ Article 9 of the MiFID (2004/39/EC).

⁷⁶ Article 10 of the MiFID (2004/39/EC).

⁷⁷ Article 19 of the MiFID (2004/39/EC).

⁷⁸ Article 19 of the MiFID (2004/39/EC).

⁷⁹ Article 21 of the MiFID (2004/39/EC).

Moreover, these same operators are subject to obligations concerning capital adequacy, which are defined by the Capital Requirements Directive (CRD – Directive 2006/49/EC of 14 June, 2006)⁸⁰. These obligations aim at ensuring that the institution holds enough capital to absorb any potential loss resulting from its market activities and enable the continuation of its operations and the protection of its clients. By establishing a connection between the amount of capital that must be held by the institution and the value of the amounts exposed to a risk, these provisions constitute a financial constraint on the institution taking risks and also constitute a constraint for the taking of important positions on the market. Lastly, these operators are also subject to the obligations regarding the fight against money laundering laid down by the Anti-Money Laundering Directive (Directive 2005/60/EC of 26 October, 2005).

These financial players are regulated as investment firms whereas their activities on the spot market or on commercial forward contracts, however, are not, since these activities are not legally considered as investment services activities. For this type of transactions, these financial players are therefore not covered by obligations to inform clients or of proper execution. Nevertheless, most operators apply the same processing methods as for transactions on “financial” derivative instruments and spot transactions or forward commercial transactions.

4.2.1.2 Other intermediaries and traders are not covered by a European regulation framework

Traders specializing in commodity markets, as well as the trading subsidiaries of electricity producers or industrial players, which are predominant players on the CO₂ market, are not covered by financial regulations, even when they intervene on derivative financial instruments. The MiFID indeed provides for exemptions for legal persons whose main activity consists of dealing on own account in commodities or commodity derivatives⁸¹. It also provides for exemptions for persons that provide investment services on commodity derivatives to the clients of their main activity. This exemption only applies on the condition that the activity of these persons is incidental in relation to the main economic activity of the group to which they belong, and that this main economic activity does not consist in the provision of investment services⁸². The exemption from MiFID leads to an exemption from the directives on capital adequacy and prevention of money laundering. It can be explained by the nature of commodity markets, which are usually reserved for professionals, and on which issues concerning clients’ protection are not the same as with financial markets. Let’s observe, however, that the exemption scheme in question is currently being debated within the review process of the MiFID, which may also lead to modifying the scope of the legal definition of an investment firm.

Nevertheless, some national regulators in Europe have implemented a specific regulation framework for commodity traders as well as for the trading subsidiaries of electricity

⁸⁰ These obligations aim at ensuring that the institution holds sufficient capital to absorb any potential loss resulting from its market activities and, consequently, to ensure the continuation of its operations and the protection of its clients. In addition, by establishing a connection between the amount of capital that must be held by the institution and the value of the amounts exposed to a risk, these provisions impose a financial constraint on the institution taking risks and there constitute a constraint for the taking of excessive speculative positions.

⁸¹ Article 2.1 (k) of the MiFID (2004/39/EC).

⁸² Article 2.1 (i) of the MiFID (2004/39/EC).

producers or industrial players that are exempted from the MiFID. In the United Kingdom, the Financial Services Authority (FSA) has thus created a specific authorisation, with reduced obligations in comparison with the obligations imposed by the MiFID⁸³.

Moreover, entities that only intervene on the spot market, or on transactions on commercial forward contracts which are not financial instruments, are not regulated by specific rules, aimed at ensuring the proper execution of operations and at preserving the integrity and efficiency of the market. It is therefore possible, for any company, to offer services that are similar to investment services, or to deal with counterparties on the CO₂ spot market, without having an authorisation and therefore having to prove its ability to carry out these operations properly. In addition, these companies are not subject to any obligations concerning equity capital or to any rules for the protection of their clients' interests. Lastly, they do not have to observe vigilance requirements in order to fight money laundering. The following table summarizes the regulation framework applying to each type of operator.

Table no. 9 – Regulation framework applying to the main types of operators on the European CO₂ market⁸⁴

<i>Type of entity</i>	<i>Existing regulation framework</i>
Credit institutions and investment firms.	They are governed by the provisions of the MiFID as regards the provision of investment services, by obligations concerning their equity capital (CRD 2006/49/EC) and by the obligations relating to the fight against money laundering (Directive 2005/60/EC). Yet, activities and services concerning spot allowances or commercial forward contracts on allowances are not regulated.
Traders specializing in commodities.	Not covered by a regulation at European level.
Trading entities of electricity producers and industrial players.	Not covered by a regulation at European level.
Brokers who intervene on derivative instruments legally considered as financial instruments.	They are governed by the provisions of the MiFID as regards the provision of investment services, by obligations concerning their equity capital (CRD 2006/49/EC) and by the obligations relating to the fight against

⁸³ Commodity trading entities, which are exempted from the MiFID, are subject to a specific regulation system. This system provides for reduced obligations in comparison with those imposed on financial companies. It includes capital adequacy obligations, with different calculation methods than those applying to investment firms, and a system to monitor the fulfilment of these obligations and give a warning in the event of a failure. Commodity trading entities are also subject to an obligation to make a quarterly report to the FSA regarding their statement of accounts, their statement of profit and loss and the adequacy of their capital, to make a six-monthly report on the management of capital belonging to clients and, lastly, to submit an annual accounting report. This system does not include an obligation to report the Value At Risk (VaR), but the accredited entity must be able to provide this information to the FSA if required.

⁸⁴ It should be noted that operators, which are now of minor importance – hedge funds and insurance companies – are not taken into account here.

	money laundering (Directive 2005/60/EC). Yet, activities and services concerning spot allowances or commercial forward contracts on allowances are not regulated.
Brokers and traders who intervene only on the spot market, or within the framework of commercial forward contracts, which do not have the status of financial instruments.	Not covered by a regulation at European level.
Credit originators.	Not covered by a regulation at European level.

4.2.2 *The introduction of conditions of access to the primary market in 2013, which are by the European Legislator in the European auctioning regulation, constitutes an adjustment of the principle of full open access to the market: it seems likely to ensure the integrity of auctions*

Strict control of access to auctions will be necessary during phase III, insofar as auctions will constitute the main means of accessing liquidity. From 2013, or even as early as 2011-2012 in the event of early auctions, auctions may constitute a way of acquiring quickly important volumes of allowances for fraudulent operators.

During the preparation of the draft regulation concerning the organization of auctions, the European Commission has envisaged to introduce strict regulations regarding access to auctions, which would only apply to the entities covered by the EU ETS legislation and to regulated entities, which are subject to provisions concerning clients' protection similar to those laid down by the MiFID and to obligations concerning the fight against money laundering and financial criminality. It provides for a preliminary verification of the good repute of the members of the platform(s), as well as for a check of indirect participants (i.e. which intervene via a member of the platform(s)). The participants to the auctions will thus need to be registered in the European Union and to be part of one of the categories listed in the following box. These proposals constitute an adjustment of the initial principle of full open access to the market.

Box no. 15 – Categories of operators eligible to auctions during the third phase of the market

In the draft regulation concerning the organization of auctions, only the following categories of entity would have access to auctions:

Entities covered by the EU ETS legislation: *companies covered by the EU ETS legislation or their subsidiaries, airline companies or their subsidiaries, associations of companies covered by the EU ETS legislation or of airline companies participating in auctions on behalf of their members.*

Credit institutions and investment firms covered by MiFID and the Anti-Money Laundering Directive, *taking part in auctions on their own account or on behalf of clients that fall within one of the categories of operators authorized to take part in auctions.*

Traders specializing in commodity markets and who intervene only on their own account (which are exempted from MiFID under the exemption laid down in Article 2(1)(i) or which can provide services to the clients of their main activity (i.e. the trading subsidiaries of large energy groups, which are currently covered by the exemption laid down in Article 2(1)(k) of MiFID). In this last case, they will only need to provide access to the auctioning platform(s) to the clients of their main activity and to get the authorization of a Member State, subject to the implementation of measures to protect their clients similar to the measures defined by MiFID and of protective measures against money laundering and tax evasion.

The European Commission reserves the right to authorize the participation of other types of operators, but on the strict condition that they present sufficient guarantees to protect the market against financial criminality.

France must set an example by implementing a robust system for the authorisation of the entities willing to take part in the auctions during phase III. Inasmuch as the granting of the authorisation will depend on the observance of provisions similar to financial regulations – the implementation of the rules for the protection of clients and investors laid down in the MiFID and the implementation of anti-money laundering measures – a central role could be given to the ACP, which is already responsible for accrediting credit institutions and investment firms, following the recommendations of the AMF. A working group will be needed at national level, as soon as the European regulation is adopted, to elaborate a robust and efficient authorisation system for the participation in auctions during phase III, which it will be possible to extend to the secondary market. It would be necessary that this work is a full part of a more comprehensive analysis of the means of controlling access to the entire CO₂ market, primary as well as secondary markets.

4.2.3 *On the secondary market, it appears necessary to control unregulated players: an authorisation system for unregulated intermediaries could be implemented*

The hybrid nature of the CO₂ market, which is a mix between a financial market and a commodity market, raises the issue of the need to regulate the spot market and transactions on commercial forward contracts. The Community Legislator decided to implement a regulation framework to protect investors on financial markets whereas goods and commodity markets are usually not subject to such provisions. However, it should be underlined that participation in some commodity markets is regulated: that is particularly the case for gas and electricity markets, on which the supply of products to end clients depends on the obtaining of a specific authorisation. As for the CO₂ market, it presents specificities that cast new light on this issue.

The lack of any framework regulating some of its operators generates a risk to the efficiency, stability and integrity of the CO₂ market.

Firstly, retail clients intervene on the CO₂ market, contrary to wholesale commodity markets, which are market of “professional” players. This raises the issue of protecting the interests of these operators. In the same way as with financial markets, this issue results from the asymmetry of capabilities and information between intermediaries and their clients, an asymmetry that differs from that observed on markets of professional players. Part of the companies covered by the European allowance market is indeed made up of small and medium-sized businesses (SMEs), most of which intervene on the OTC market and therefore through intermediaries. In order to protect the interests of these operators, it first appears

necessary to ensure that they receive sufficient information on the transactions made. If simple sale and purchase operations on spot allowances may pose a lower risk due to their simplicity, commercial forward contracts could happen to be more complex instruments, which may call for the provision of minimum information to the clients that subscribe for them, in the same way as financial forward contracts, to which they are identical *de facto*. It then appears necessary to provide guarantees to these operators regarding the expertise of the intermediaries with which they deal and the ability of these intermediaries, through the setting up of a proper structure, to carry out the operations efficiently. Lastly, it is a matter of protecting them from the conflicts of interests to which a given intermediary may be exposed, between the interests of its various clients, or between its own account activities and those on behalf of third parties. This can be illustrated by the so-called practice of “front-running”, in which a trader, knowing that it will execute a transaction for a third party takes first a position on his own account, so that the position taken on its own account benefits from the first one. An example of this could be the purchase of allowances on one’s own account before purchasing an important volume of allowances on behalf of a client, thus enabling the trader to benefit by the price increase caused by the second operation, which could however lead to raising the cost of the operation for the client.

Secondly, the nature of the traded asset, an intangible allowance, raises issues regarding the protection of operators’ property rights. It indeed makes it easier for an operator covered by the EU ETS legislation to transfer the allowances it has been allocated to a third party that will manage them on its behalf. This possibility of delegating management responsibilities can be problematic for the protection of property rights, when a transfer of allowances accompanies it to a registry account managed by the intermediary. Indeed, national registries only apply the notion of own account. This lack of any distinction between own account and account of third parties has major consequences since the allowances’ ownership is exclusively materialized, *de jure*, by their registration in the registry in the account of the initial beneficiary. Therefore, the registration by an operator (under a transaction on behalf of one of its clients) of allowances belonging to the client, in an account for which it ensures management responsibilities, transfers automatically the ownership of allowances from the client to the operator. Consequently, the clients’ property rights would not be enforceable in the event of a dispute or bankruptcy. In addition, a loan of allowances is impossible to trace. Therefore, differentiating, within registries, third party accounts from own accounts appears necessary in order to protect players’ property rights. Introducing the notion of third party accounts will enable a market participant to entrust the management of an account and allowances credited to it to a third party, while keeping ownership of the allowances. This provision could be introduced in the reform initiative for the regulation on national registries in 2011. Moreover, it would improve transparency on transactions recorded in the registries. In addition to the insertion of this provision, it is also necessary to force intermediaries to protect the property rights of their clients, and to keep an enforceable record of the transactions made, which will be opposable in the event of a dispute.

Thirdly, the intangible nature of the traded assets and the easy access to the market facilitate the participation of fraudulent operators, which may justify the introduction of an obligation, for the Regulator, to control the grounds for participation of a new operator. The risks posed by the easy access to the market were revealed by the VAT fraud. The CO₂ market differs from commodity markets, in which the tangible nature of the traded products

generates entry costs (e.g. acquisition of assets for the production, the transportation or the storage) to participate in the market.

The issue concerning the protection of market participants and of their rights appears to be all the more critical as the switch to an auctioning system during phase III could result in increased intervention by small participants on the OTC market. It is indeed likely that small participants, who are currently able to cover most of their compliance requirements with the initial allocation and mostly carry out operations on the spot market to adjust their net position, will not directly, or even indirectly, take part in auctions due to the related costs. Consequently, they should logically turn to the secondary market. Because of the entry costs on organized markets, especially in terms of cash flow, small participants may thus mostly resort to bilateral OTC trade during the third phase of the market, i.e. commercial forward contracts which are not covered by financial regulations.

The issues raised, and the associated risks, differ according to the nature of the activities performed on the market.

Three main categories of activities must be distinguished:

- The first category is the purchase and sale of allowances or credits, or of hedging products, by companies covered by the EU ETS legislation or by market players that intervene in the development of CDM and JI projects, in order to manage regulatory obligations or to hedge themselves against price risk. Transactions carried out here reflect an underlying physical position of players. They do not entail any particular risks: on the contrary, it is a matter of ensuring that these transactions can take place under appropriate conditions of efficiency and equity.
- The second category concerns activities on behalf of third parties, i.e. intermediation activities. This category includes among others the following: i) purchase and sale of allowances and credits to enable a client or counterparty to meet its compliance requirements, ii) the sale of hedging products, iii) the execution of orders on behalf of a client on an organized market, iv) the reception and transmission of orders from a client, v) the management on behalf of a client of a portfolio of allowances or credits belonging to this client, vi) advisory services regarding operations relating to allowances or credits.

On the CO₂ market, these activities are mostly undertaken by financial institutions and brokers, notably with clients covered by the EU ETS, which may either be large-sized entities (professional clients according to MiFID classification⁸⁵) or small and

⁸⁵ The MiFID makes a distinction between three types of clients: eligible counterparties, professional clients and retail clients. The following are considered to be eligible counterparties: investment firms, credit institutions, insurance companies, UCITS and their management companies, pension funds and their management companies, other financial institutions authorized or regulated under Community legislation or the national law of a Member State, undertakings exempted from the application of this Directive under Article 2(1)(k) and (l), national governments and their corresponding offices including public bodies that deal with public debt, central banks and supranational organizations. Large companies which individually meet at least two of the following criteria shall be considered as professional clients: the total of the statement of accounts is higher than 20 million Euros, net sales are higher than 40 million Euros, equity capital is higher than 2 million Euros. Even when a company does not meet the previous criteria, it may request to be regarded as a professional client if it is a regular participant which meets two of the following criteria: i) it has carried out transactions, in significant size, on the relevant market at an average frequency of ten per quarter over the previous four quarters; ii) the size of its financial instrument portfolio, defined as including cash deposits and

medium-sized businesses (retail clients according to the same classification). Commodity traders and the trading subsidiaries of electricity producers also perform activities on behalf of third parties, but they do so mostly – although not exclusively – with professional clients and subsidiaries of the group to which they belong.

These activities raise the most important issues of protection of the functioning of the market and of clients' interests, especially because they involve the participation of retail clients. However, with these activities, the risk of destabilizing the market by excessive risk-taking is theoretically nonexistent: the intermediary does not entail a price risk, and its positions are usually hedged. For instance, the sale of a forward contract with a maturity date in December 2010 will be accompanied by the forward purchase of this same contract, either on the organized market (so-called back-to-back operations) or from a third-party.

- The third type of activity is trading on own account, in which market players take open positions in order to benefit from the evolution of the CO₂ price, or carry out arbitrage transactions⁸⁶, in order to make a profit. The companies intervening on their own account are mainly investment banks, commodity traders, the trading subsidiaries or electricity producers and hedge funds.

Operations on own account can be performed both on exchanges and over the counter, with third parties. However, in this latter case, the counterparties usually are “sophisticated” operators (or professional clients for the purpose of MiFID): other investment banks, commodity traders, trading subsidiaries of electricity producers. Due to the sophistication of the operators that usually intervene in operations on own account, the issue of the protection of clients' interest is less serious than with activities on behalf of third parties. On the other hand, as these activities are risky in essence, they raise issues as regards the destabilization of the market, notably in the event of a possible failure by an entity that would involve a systemic risk.

As the same operators usually jointly carry out operations on their own account and on behalf of third parties, the question of the prevention of conflicts of interests between these two types of activities is also raised.

The distinction between own accounts and third party accounts is not always trivial. The same sale operation of a forward contract to a counterparty can be considered as an operation on a third-party account or on own account, depending on whether the player takes an open position on the market. Beyond the nature of the activity, regulation issues must therefore be considered in relation to explicit parameters: the nature of the client or counterparty (i.e. professional or retail client) – and the resulting protection requirements – and the materialization of a market risk or not.

It appears necessary, in order to protect both the efficiency of the market and its participants, to improve the regulation of operators, proportionally to the risks they generate, and therefore in a different way depending on the nature of the activities.

financial instruments, exceeds 500,000 Euros; iii) it works or has worked in the financial sector for at least one year in a professional position, which requires knowledge of the transactions or services envisaged. Other clients are considered to be retail clients.

⁸⁶ For instance, the purchase of a forward contract with a maturity date in December 2011, followed by the sale of a forward contract with a maturity date in December 2012, in order to benefit by a price differential that is lower than the financial spread of the allowances concerned.

In the event where, within the framework of the review of MiFID, existing exemptions regarding commodity traders as well as the trading subsidiaries of electricity producers or industrial players were to be amended, the scope of the regulated activities would be significantly extended for the CO₂ market⁸⁷. Such a provision would be quite substantial for the CO₂ market, as these operators are among the most active ones. It would enable the enforcement of measures to ensure clients' protection and proper execution and to impose obligations of capital adequacy as regards the equity capital of operators, should they prove to pose, due to their central position on these markets⁸⁸. Such a measure must however be considered within a more comprehensive analysis of all commodity markets.

However, a deletion or a modification of the exemption of MiFID for commodity traders, as well as for the trading subsidiaries of electricity producers or industrial players, would not fully fill regulatory gap identified, as the other intermediaries, who only intervene on the market of spot allowances and commercial forward contracts, would remain unregulated.

An authorisation system could therefore be established, for entities that are currently unregulated and intervene on the CO₂ market (exchanges or OTC market).

The scope of the authorisation could be defined in relation to the categories of activities previously identified. As an example, a simplified procedure (simple registration) could be envisaged for: i) the entities covered by the EU-ETS which only intervene for compliance purposes or to hedge their net position in allowances, ii) the operators which only intervene on their own account, unless they trade in a frequent and organized way outside of any organized market by trading with third parties and iii) the entities which intervene with third parties from the same group.

The introduction of authorisation would first serve the objective of ensuring that the entry of a new operator does not destabilize the functioning of the CO₂ market. It could therefore take the form of a procedure to verify their competence, experience and integrity, the existence of a proper internal organization and the availability of sufficient financial means. The constraint of financial strength could be met through an obligation of holding sufficient initial capital. A more thorough analysis will be needed to determine whether market participants in question pose a systemic risk, which would justify imposing sufficient capital requirements in the strict sense.

It would then be aimed at introducing rules regarding good conduct and the protection of clients' interests: obligations to prevent conflicts of interests, to inform clients, of proper execution and to protect their property rights. These rules could be adapted to the client's level of sophistication, drawing inspiration, for instance, from MiFID classification – which may evolve – of clients into three categories: eligible counterparties, professional clients and retail clients.

⁸⁷ It would indeed make it possible to regulate all entities which intervene on financial derivatives markets, i.e. 70% of the volumes traded on the CO₂ market.

⁸⁸ Although commodity traders pose a lower systemic risk than large financial institutions since they have a less central role within the financial system, a risk is still present, due to the strong interconnections which exist between these operators and financial institutions, as well as among these operators themselves. They indeed take significant open positions on the market (the Value At Risk of large electricity producers is thus similar to that of investment banks which intervene on commodity markets). The possible failure of an important trader could therefore have an impact on its counterparties, or even on the financial institutions to which it is indebted, and lead to destabilizing the operators which intervene on the relevant market.

Lastly, it could provide for obligations of vigilance, with respect to counterparties, in order to fight money laundering.

Considering the lower complexity of the spot market, the introduction of a specific authorisation would allow, contrary to a pure and simple extension of the provisions of MiFID, to lay down obligations that are proportionate to the risks identified, and could be better suited to the practices of some of our European partners. In order not to create multiple authorisation systems, if the decision is made to partially review the exemptions of MiFID through the creation of a specific authorisation procedure, the two systems could be merged.

In order to ensure the consistency of checks and to prevent the authorisation system from being used to limit access to the market on arbitrary grounds, it is essential that the rules governing its issuance and the obligations they involve be consistently defined at European level. The duties of authorising market players and of monitoring the observance of inherent obligations could however be entrusted to national authorities. Given the structurally European nature of the CO₂ market and in order to facilitate the integration and development of carbon finance across the entire European Union, a European passport should be instituted to enable an entity authorised in a given country to carry out business in the rest of the European Union. In addition, a single authorisation procedure for participation in the primary market and the secondary market should be defined. Due to the similarity with the MiFID authorisation for investment firms, the authorisation and monitoring methods could be inspired by the existing methods on financial markets. In France, a central role could thus be given to the *Autorité de Contrôle Prudentiel* (ACP – the French prudential supervision authority).

Box no. 16 – An example of possible authorisation methods for activities on behalf of third parties on the CO₂ market

Considering the similarity of the objectives pursued, the authorisation system could introduce obligations and rules inspired by the principles laid down by MiFID, while adjusting them to the specificities of the CO₂ market and the level of risk. The issuance of the authorization could be dependent on:

- *A verification of the good repute and experience of directors;*
- *The identification of stakeholders;*
- *The definition of a minimum level of skills required on the CO₂ market, in order to avoid potentially destabilizing interventions;*
- *The presentation of a business plan on the CO₂ market;*
- *The availability of the financial means required for the performance of the activities envisaged;*

In addition, the entities to which an authorisation has been granted could be subject to the following rules and obligations:

- *Rules for the prevention of conflicts of interests and internal control;*
- *Rules of general conduct aimed at guaranteeing the quality of execution of the operations and at ensuring that clients are properly informed;*

- *Keeping a record of all services provided and all transactions carried out;*
- *The implementation of measures aimed at protecting clients' property rights;*
- *Obligations of vigilance with respect to the clientele, inspired from those laid down by the Anti-Money Laundering Directive, but proportionate to the specific risks on the CO₂ market;*
- *In addition, the authorisation could possibly include initial capital requirements and/or obligations regarding the sufficiency of capital in relation to the level of risk exposure⁸⁹.*

Regulated operators, under MiFID, or under a new regulation on commodity markets including equivalent provisions, should be exempted from the need to be accredited; however, they should be subject to equivalent obligations concerning the operations carried out on the CO₂ market. Indeed, even though they are regulated, investment firms are not covered by obligations of proper execution or regarding the information of clients for operations carried out on the spot market or commercial forward contracts, as the provisions of MiFID only apply to transactions in financial instruments.

On the international credit market, it seems relevant to limit the scope covered by the authorisation to activities regarding the sale and purchase of credits with European players. Indeed, submitting the origination activities of European players to regulatory constraints could put them in a position of competitive disadvantage in relation to non-European entities. Symmetrically, however, any non-European entity wishing to purchase or sell credits with European entities should be given an authorization.

In addition to the objective of protecting clients and the market, the introduction of authorisation would also enable to establish a clear and sound framework for intervention on the CO₂ market, which would be liable to facilitate the development of new operators on the market.

Advice no. 7: introduce, at European level, an authorisation procedure for participation in the primary and secondary CO₂ markets that is proportionate to the risks and adapted to the nature of market activities.

Advice no. 8: establish a working group made up of the administrations concerned, the Banque de France, the ACP (French Prudential Supervision Authority), the AMF (French Financial Markets Authority) and the CRE (French Regulatory Commission for Energy), with the assignment of specifying the conditions of delivery of the authorization and the corresponding requirements.

Advice no. 9: introduce in greenhouse gas emission allowance registries a distinction between own account and account managed on behalf of third parties, during the review of the regulation on registries, which should take place in 2011.

⁸⁹ It is indeed possible for unregulated operators to make transactions with third parties on forward contracts to sell or purchase allowances. In this case, their clients face a counterparty risk, which is all the greater as these operators intervene, by definition, in transactions which are not centrally cleared. Imposing capital requirements on unregulated operators would therefore provide additional guarantees of financial soundness and stability to the operators covered by the EU ETS legislation which use the services of these entities. This proposal would also restore a certain equity between the entities covered by MiFID and CRD and the others, as the different treatment currently given to these other operators does not appear to be justified by a fundamental difference of exposure to the counterparty risk.

4.2.4 A regulatory framework is needed for spot trading exchanges

On the derivatives market, exchanges are subject to a strict regulation framework defined by the MiFID. First of all, they must be accredited as a market undertaking or an investment firm and are subject to the resulting obligations described above. In addition, they are governed by specific rules related to the status of the exchange they operate, which can either be a Regulated Market or a Multilateral Trading Facility (MTF). Derivatives trading exchanges are subject to obligations to monitor the transactions made and the observance, by exchange members, of the market trading rules. They must therefore monitor the transactions carried out in order to detect any possible market abuses or breach of the market conduct. They are also subject to an obligation to notify the surveillance authority of any important breach, of any action liable to disrupt the smooth operation of the market or of any behaviour that may be indicative of market abuse. The status of regulated market imposes a stricter regulation of activities, notably as regards the authorisation of the market undertaking and the conditions for participants to access the market⁹⁰. Administrative authorities – in France the AMF and the ACP – are responsible at national level for ensuring that these rules are properly applied and, in the event of any breach, they can impose sanctions and suspend the authorisation of the entities concerned. In Europe, nearly all derivatives exchanges have the status of regulated market: ECX, EEX, and Nordpool. For historical reasons relating to the creation of the wholesale electricity market in France, BlueNext Derivatives opted for the status of MTF. In practice, however, the market rules defined by this platform are similar to those which govern the operation of a regulated market.

However, no European regulation framework applies to spot exchanges. In this way, BlueNext is accredited as an investment firm only for its activity of operating a multilateral trading facility on CO₂ derivatives.

Consequently, the market rules of spot markets result from the contractual rules laid down by the market undertaking, or from the implementation of rules defined by national law. In this way, in France, BlueNext introduced on its spot market (BlueNext Spot) rules of a contractual nature regarding access to the market and the regulation of market practices, which are similar to MiFID. The categorization as a member of BlueNext Spot thus depends on the approval of an internal committee, which verifies the good repute of directors, the adequacy of financial resources, the adequacy of internal organizational arrangements and the trading ability of the relevant entity and its employees. This audit is based on records. Due to the opening of the cash account, the *Caisse des Dépôts et Consignations* (the French Deposit and Consignment Office) performs this verification. In addition, members undertake

⁹⁰ To acquire the status of regulated market, the market undertaking must obtain a specific authorization which is dependent on the verification of the good repute and experience of the company directors and on the observance of operational or management requirements (Articles 36 to 39 of the MiFID). The market undertaking must lay down strict rules regarding the approval of financial instruments for trading (Articles 40-41). Access to regulated markets is open to entities which have been accredited as investment firms or credit institutions by the proper authority of the country of origin and which, on this account, hold an EEA passport. For legal persons which do not hold an EEA passport, the regulated market must verify (Article 42) that they present sufficient guarantees of good repute, that they have a sufficient level of trading ability and competence, adequate organizational arrangements where applicable and sufficient financial resources for the role they are to perform on the market (Art. 42). In addition, regulated markets are subject to the application of the Market Abuse Directive (Directive 2003/6/EC of 28 January, 2003).

contractually to observe a code of good practice aimed at ensuring the integrity of the market and at protecting it from market abuse. If a breach of these rules is suspected, BlueNext is authorized to carry out an audit and, where appropriate, to suspend a member.

To fill this regulatory gap, other Member States, and notably Germany, have defined surveillance methods for the platforms of the spot market under national law.

Box no. 17 – The regulation framework of trading platforms defined by national law in Germany

The provisions laid down by national law in Germany have extended the regulation framework of regulated markets in financial instruments to the spot market.

Firstly, the German Exchange Act of 2007 (Börsengesetz) has extended the implementation of rules governing regulated markets in financial instruments laid down by the MiFID to regulated spot markets.

Secondly, the German Legislator has introduced on regulated spot markets the same threefold supervision system, which already exists on regulated markets in financial instruments.

- the supervision of the regulated market itself comes under the authority of the Lander where the trading platform is located. For the EEX exchange, the Ministry of Economy and Labour of the Land of Saxony (Sächsische Staatsministerium für Wirtschaft und Arbeit, SMWA) is thus responsible for monitoring the implementation, by the regulated market, of the rules laid down by the German Exchange Act.

- the monitoring of trade comes under the authority of a surveillance body (Handelsüberwachungsstelle), which is specific to the regulated market and is responsible for ensuring the daily monitoring of transactions. This body is under the direct authority of the Ministry of Economy and Finance of the relevant Land and is therefore independent from the market undertaking.

In this way, in the case of the EEX exchange of Leipzig (Saxony), a department made up of four people under the authority of the Ministry of Economy and Labour of the Land of Saxony is responsible for monitoring the market on a daily basis. This surveillance concerns both the spot market and the derivatives market. Each regulated market has its own Disciplinary Commission, which is also under the authority of the Ministry of Economy of the relevant Land and is autonomous from the market. The inquiry and disciplinary procedures concerning market manipulations are thus carried out at the level of the regulated market directly, under the supervision of the federal office for the regulation of financial services (BaFin). Insider operations are directly in the competences of the BaFin. Therefore, when there is a suspicion of incident, insider trading or market manipulation, this body is under the obligation to notify the BaFin, in accordance with Article 7 of the Exchange Act (Börsengesetz – BörsG), including when the spot market is concerned.

Lastly, in May 2009, CO₂ allowances were integrated into the scope of Article 20a, on the prohibition of market abuse, of the federal law relating to transactions in securities (Wertpapierhandelsgesetz, WpHG). By simply including allowances in the scope of Article 201, the prevention and disciplinary system for market abuse was thus extended to the spot market.

The lack of any regulation at European level weakens the control of the integrity and efficiency of the European CO₂ market. There is no European system to guarantee the soundness and efficiency of spot exchanges. Similarly, there are no rules at European level on the conditions of access to the market, which would be liable to ensure the integrity, financial soundness and trading abilities of the members of exchanges. Lastly, there are no obligations for the market manager to monitor the transactions made. Even in the case where strict contractual rules have been laid down by the manager of the exchange, the investigative and monitoring powers of the market undertaking are obviously less comprehensive than those of a surveillance authority. Indeed, as they are based on contractual rules and not on the legislation, they ultimately rely on the good will of members to abide by them. Moreover, the disciplinary powers of an exchange trading platform are limited to suspension or exclusion from the market and cannot lead, as it is the case under financial regulations, to legal or administrative proceedings. In addition, a strictly contractual framework could be problematic in the event of a dispute between a member and the exchange. Lastly, the lack of any European legislation leads to heterogeneous regulation methods among European countries, depending on national laws, which is liable to favour regulatory arbitrages by operators.

Regulating spot exchange appears to be necessary to ensure the smooth operation of the market and to gain the confidence of participants. As the issues relating to the stability and soundness of market undertakings, the good management of operations and market monitoring appear to be similar on the spot and derivatives markets, appropriate rules could be at least similar to those laid down by the MiFID for multilateral trading facilities. Access to the trading platform could be limited to the operators covered by the EU ETS legislation and their subsidiaries, investment firms and credits institutions, as well as to the persons authorised as described above. The manager of the spot market could also be subject to an obligation to monitor the transactions carried out and notify the surveillance authorities of any important breach of its rules, of any situation liable to disrupt the smooth operation of the market or of any behaviour that may be indicative of market abuse.

Advice no. 10: subject spot trading exchanges to a body of rules which should at least be similar to those laid down for Multilateral Trading Facilities on derivatives markets. This initiative should be taken as early as 2010 at national level, without waiting for potential initiatives at European level.

Awaiting the implementation of a European regulation framework, a provisional initiative should be taken at national level to regulate spot trading exchanges on the spot market, and specifically BlueNext Spot. Except if new rules for the regulation of trading platforms on the spot market were to be laid down in the MiFID, a European directive would be necessary to implement the previous recommendations. In this case, a coming into force before 2012 is unlikely, as the legislative process could at best take place in 2011. Yet, France has a peculiar responsibility concerning this issue since the main exchange on the spot market in Europe, i.e. BlueNext Spot, is established on its national territory. In addition, France cannot stand for long behind other countries regarding the level of regulation of trading platforms on the spot market. To fill this regulatory gap, France could therefore take the initiative of defining a national regulation framework, which could at least be in line with the systems set up by other European countries. It would then be destined to be replaced by European provisions.

4.3 The integrity of market players must be checked more closely, notably in order to combat money laundering

4.3.1 *Up until now, access to the secondary market was based on the principle of complete openness; VAT fraud has demonstrated the risks associated with this principle*

The European Legislator has not created a legal basis to make the verification of the good repute of market participants a condition to open an account in the national greenhouse gas emission allowance registries, even though these registries are, *de facto*, the front door of the CO₂ market. Consequently, only information on the identity of the account holder may be requested by the registry administrator, and the only grounds for refusing to open an account are the holding of 99 accounts by the person concerned, or the refusal to abide by the requirements regarding security and the use of the electronic interface. Therefore, current provisions do not enable to refuse to open an account in the registry and/or to close one, notably for purposes of fighting fraud or money laundering. This free access to the registry caused for a heterogeneous group of legal persons, whose corporate purpose has little to do with the CO₂ market, or even for natural persons, to hold accounts.

The regulation of market participants therefore ultimately relies on the operators subject to the obligations of control laid down by the Anti-Money Laundering Directive and, for this reason, remains incomplete. The Anti-Money Laundering Directive (Directive 2005/60/EC of 26 October, 2005) forces credit institutions and investment firms to check the identity and the nature of their clients or counterparties' activities and, in doubt, to refer the matter to anti-money laundering services. However, as a significant part of the operators of the CO₂ market is not part of the categories mentioned (i.e. industrial players, trading subsidiaries, as well as intermediaries and service providers for third parties which are only active on the spot market), they are not subject to these obligations. More specifically, access to a spot exchange is not subject to the anti-money laundering mechanism, although such a check can be performed by the platform on a contractual and voluntary basis. For instance, in the case of BlueNext, this obligation applies due to its capacity as an investment firm. Moreover, to become a member of BlueNext Spot, it is also necessary to open a bank account with the *Caisse des Dépôts et Consignations* (CDC – the French Deposit and Consignment Office). Therefore, the entity concerned will also be submitted to the verification performed by the CDC under the Anti-Money Laundering Directive.

Box no. 18 – Greenhouse gas emission allowances registries

The role of emission allowance registries is to materialize the ownership of greenhouse gas allowances by a book entry and to ensure the traceability of each allowance, and therefore of each tonne of CO₂. They thus constitute the material accounting structure on which the EU ETS operates. Opening an account in the registry is mandatory for the companies covered by the EU ETS legislation, which must hold an operator account, and is essential for any operator, apart from the companies covered, wishing to intervene on the CO₂ market, which must then open a personal account. GHG emission allowance registries thus are the only way of gaining material or physical access to the CO₂ market.

An account can include the various types of carbon assets: European allowances and Kyoto credits (specifically ERUs and CERs). Traceability is ensured by giving a serial number to each allowance.

Each European country now has its own registry, each registry being linked to the international registry managed by the United Nations Framework Convention on Climate Change, the International Transaction Log (ITL), which ensures the computing and monitoring of all carbon assets created within the framework of the Kyoto Protocol. The ITL constitutes the reference registry, as each operation in a national registry must be validated in real time in the ITL. The European Commission has also created a registry at Community level, the Community International Transaction Log (CITL), in order to ensure the monitoring of the operations carried out within the framework of the EU ETS and the observance of European rules. From 2012, the structure of European registries will undergo a major evolution, with the unification of all registries within a common structure. However, the administration of the registry will remain under the individual authority of Member States.

The management of national registries falls within the remit of public authorities – in general, the ministries of the environment, which may delegate management duties. In this way, in France, the Ministry of Ecology, Energy, Sustainable Development and the Sea has delegated the management of the registry to the Caisse des Dépôts et Consignations (CDC – the French Deposit and Consignment Office). The methods for delegating this public-service mission to a third party are not the subject of any specific rules. States are therefore responsible for ensuring that these rules are properly implemented, or even for regulating delegation methods through contractual agreements or conventions.

The risks generated by full open access to the registry and thus to the CO₂ market materialized with the episode of VAT fraud in 2009, which illustrated the vulnerability of the market to fraudulent practices. It results from the combined effects of open access, the intangible nature of allowances and the liquidity of the market, which made possible to reach high transaction volumes. Although the modification of the VAT system applied to allowances should enable to eliminate the risk of VAT carousel fraud, the risk associated with other fraudulent practices, such as money laundering, is still present⁹¹. This risk especially concerns the spot market: due to the time-lag between the conclusion of the transaction and the delivery, a derivatives market is of less interest for money laundering, even though the risk cannot be ruled out. The international credit market (CERs and ERUs) could emerge to be especially “attractive” for money laundering, as it allows, by nature, to transfer securities on a larger geographical area than the European Union only. The occurrence of other significant, fraudulent or criminal perversion of the CO₂ market would be likely to seriously jeopardize the very legitimacy of this tool in the fight against climate change.

It is therefore essential to check the integrity of participants more closely. Such intensification must first involve an increased control of participants when accessing the registry, which is a prerequisite for any operator to enter the market. It could also be based on the stepping up of the obligations of control imposed on operators by intermediaries themselves.

⁹¹ There are suspicions that VAT carousel fraud operations might have also consisted in money laundering. As part of the investigations carried out across the European Union on VAT carousel fraud, the Norwegian authorities recently arrested individuals for both VAT fraud and money laundering.

4.3.2 Reinforcing the control of players could be first performed through the registry: the provisions recently adopted to that effect could be reinforced from 2012 by national provisions and, in the medium term, by a consolidation of the European system

Greenhouse gas emission allowance registries constitute an effective tool to ensure the control of the good repute of participants. New provisions allowing reinforcing the control of access to the registry have thus been laid down by the new regulation on registries, which was adopted through a committee procedure by the vote of the Climate Change Committee on 17 February, 2010. The text now gives the registry administrator the ability to refuse the opening of an account and to suspend or close an account. The applicant may appeal the decision before the authority designated under national law, which will be able to quash the decision of the registry administrator or to substantiate it through an investigation aimed at proving fraud, money laundering or the financing of terrorism, or through any other means provided under national legislation. It also opens up the possibility of sharing information, at European level, with the relevant authorities and judicial bodies, including Europol and the European Anti-Fraud Office (EAFO). Lastly, it will enable registry administrators to warn the relevant national authorities (for example, Tracfin in France) against trade operations on unusually important volumes.

The new Regulation on the registry thus opens up the way for strengthening the control of access to the market, according to an approach similar to that of the existing mechanisms to fight money laundering. Moreover, it provides for the immediate implementation of these provisions following the official publication of the regulation in the Official Journal of the European Union.

Once the regulation comes into force, it will be necessary to significantly reinforce the system at national level. First of all, it will be necessary to determine the relevant authority responsible for upholding or quashing the decision of the registry administrator to refuse to open an account. The authority in question will need to have a good knowledge of the CO₂ market, but also of the methods of fighting financial crime. The next step will be to define, under national law, the possible grounds for refusing to open an account. An extension of these grounds appears to be essential since the only condition currently provided by the European regulation is the existence of an investigation for criminal financial actions concerning the entity requesting to open an account. Indeed, the units responsible for these investigations – in France, Tracfin – are not authorized to communicate on ongoing investigations, except with legal authorities. Two methods can be envisaged to define the grounds for refusing to open (or suspending) an account. The first one would be to base the refusal on substantiated grounds. The second one would be to base the refusal on a simple suspicion or doubt, in the same way as the entities covered by the anti-money laundering scheme must refuse, on their own initiative, to establish a business relation or to carry out an operation if they have doubts concerning one of their clients.

A solution could consist in applying the entire anti-money laundering scheme to the registry administrator, but the operational consequences must be weighed against the importance of the risks. Indeed, the anti-money laundering scheme was first devised to prevent the injection of funds in the banking network by placing them in an account, which is the starting point of any money-laundering network. The use of the CO₂ market for money-laundering purposes would be part of a process according to which funds which have already entered the banking network circulate once the first barrier of the check performed

by a financial institution has been broken through. The check performed at the level of the registry would therefore only be a second-level barrier, which would require to be adjusted for this purpose and whose specific details must be defined more precisely.

Advice no. 11: at national level, establish, in the first half of 2010, a working group made up of the registry administrator, Tracfin, the AMF and the administrations concerned, in order to elaborate a national system aimed at enforcing and reinforcing, from 2010, the provisions controlling access to the national registry, laid down by the new European regulation on registries.

Box no. 19 – The obligations relating to the fight against money laundering laid down by the French monetary and financial law

The natural and legal persons subject to the obligations relating to the fight against money laundering are under an obligation to check the identity of potential clients with whom they are envisaging to establish a business relation and to then perform a close examination of the operations carried out (Articles 561-5 and 561-6).

Control modalities may be adjusted according to the assessment of the risk generated by the counterparty (Articles 561-9 and 561-10). If they are unable to identify their client or to obtain the information requested, they are under an obligation not to carry out operations or to put an end to the business relation (Article 561-8). The information on clients' identification must be kept for a five-year period (Article 561-12).

They are subject to an obligation of notification to the national financial intelligence unit, in this case Tracfin, if they suspect tax fraud, money laundering or the financing of terrorism and they shall avoid carrying out any operation when in doubt (Articles 561-15 and 561-16).

They are under an obligation to set up internal risk assessment and management systems regarding money laundering and the financing of terrorism and to train their staff to observe the above-mentioned obligations (Articles 561-32 and 561-33).

In the medium term, the system for regulating access to the registry will need to be reinforced and harmonized at European level, in order to prevent certain operators from entering the market through the registries of the most lenient states in terms of control. The provisions adopted within the framework of the new regulation on registries indeed give Member States the responsibility of defining the operational anti-money laundering scheme. This situation is unsatisfactory. It carries the risk of causing important differences among Member States regarding the soundness of the control system and its operational implementation, which may weaken the control of access to the market as a whole. Let's remind that France is in a special situation, having entrusted the administration of the registry to the *Caisse des Dépôts et Consignations* (CDC – the French Deposit and Consignment Office), which has true expertise in this area. This is not the case for several registry administrators in Europe, and the ability of certain ministries of the environment, or of agencies in their sphere of influence, to perform this type of check efficiently may be questioned. Operators with fraudulent intentions will thus be able to enter the CO₂ market by opening an account in the national registry of the state that performs the least stringent check. It is therefore essential, during the next review of the regulation on registries, to work towards reinforcing the control system introduced by the regulation adopted on 17 February, 2010, by laying down sound and consistent rules at European level. France,

which played an active role in raising the awareness of its European partners of the issues concerning access control, will need to continue to be a driving force on this matter. In this respect, a homogenization of practices among registry administrators will be needed. This will involve express provisions to ensure that each registry administrator has the experience necessary to fight against money laundering (or that it relies on the relevant national services). Similarly, audit and, if necessary, disciplinary powers with respect to registry administrators that do not abide by the rules laid down will need to be implemented.

Advice no. 12: suggest that the European Commission integrates, in the next regulation on national registries, provisions aimed at ensuring the consistency of anti-money laundering checks undertaken by the 27 national registry administrators.

4.3.3 In addition, rules to control the integrity of players, inspired by anti-money laundering financial regulations, could be imposed by the authorisation governing intermediation activities on the spot market

It is essential that the control of the integrity of the market relies not only on the registry administrator, and that the various operators and intermediaries on the market play a role in it. Indeed, a control at various points on the chain is required and in line with the approach adopted on financial markets, whereby each investment firm and each credit institution is responsible for performing its own checks.

The exemption of a large part of market players from any obligation of control and vigilance with respect to their clients constitutes a risk factor. In accordance with the AML, or Anti-Money Laundering Directive (Directive 2005/60/EC of 26 October, 2005), on the CO₂ market, only entities with the status of investment firms or credit institutions are governed by obligations of vigilance with respect to their clientele and by obligations to notify the relevant authorities when in doubt. Therefore, brokers which do not intervene on the regulated derivatives market and traders exempted from the MiFID are not subject to this obligation. It is therefore possible, through an entity which is not subject to the application of the directive and to which an operator subcontracts the management of allowance operations, to be exempted from any control requirements. This regulatory gap appears to be all the more harmful as, following the episode of VAT fraud, any new incident of this type would be likely to undermine the credibility of the market on a long-term basis.

Consequently, it is necessary to subject market players and brokers who are currently not covered by the AML directive to similar obligations of vigilance with respect to their clientele and to obligations to notify the relevant authorities. As the intended scope is the same, this obligation could be included in the authorisation system proposed above to regulate activities on behalf of third parties on the CO₂ market.

5 Increased transparency for market fundamentals and improved regulatory stability are required to ensure the robustness of the price signal and the confidence of participants in the market

A high level of transparency regarding the fundamental components of the supply and demand of allowances is essential to the efficiency of the functioning of the CO₂ market. The imperative of transparency constraint raises a double issue. By enabling operators to have a better grasp of the balance between supply and demand, it conditions the robustness of the price signal, which can therefore reflect market fundamentals more precisely. It also allows reducing the information asymmetry among the various market players. The issue of transparency affects the two components of market equilibrium: i/ the supply of allowances, which is related to regulatory decisions concerning the maximum amount of allowances allocated to operators, as well as to the international credits on the market, and which currently constitutes the greatest source of uncertainty regarding the fundamental equilibrium of the market; ii/ the demand of allowances, which is mainly related to the greenhouse gas emissions of the installations covered by the EU ETS.

5.1 Public authorities must reduce the regulatory uncertainty weighing on the CO₂ market through improved transparency and a clarification of the rules relating to the supply of allowances

The CO₂ market currently suffers from a significant lack of transparency and stability concerning the determining parameters of the supply of allowances.

During phase II of the market, this lack of transparency mainly concerns two determining factors of supply: the state of the New Entrant Reserves (NERs) and the rules concerning the banking of international credits for phase III (2013-2020). The main component of supply – i.e. the volumes allocated by each country to the existing installations covered by the EU ETS legislation – is indeed known for most countries, as National Allowance Allocation Plans (NAAPs) determine the quantity of allowances to be received by each existing installation before the beginning of the period.

However, uncertainties continue to weigh on allowance allocation methods, and even on the NAAPs themselves. Firstly, the ongoing disputes between the European Commission and eight Member States regarding their NAAPs create significant uncertainty for the overall supply of allowances during phase II, as their settlement could cause for the overall ceiling to be raised by 90Mt per year (i.e. by over 4.5%)⁹². Secondly, uncertainties regarding the implementation methods of the NAAPs or the NAAPs themselves have led certain states,

⁹² On 23 September, 2009, the European Court of First Instance quashed the decision of the European Commission regarding the allocation of allowances for phase II of Estonia and Poland, following the appeals lodged in 2007 against the rejection by the European Commission of the NAAPs of these two countries, which it considered to be insufficiently restrictive. The European Commission appealed this decision on 3 December, 2009, before the Court of Justice of the European Union, thus deferring the quashing of the decision. Six other countries have also contested the decision of the Commission: Bulgaria, Hungary, Latvia, Lithuania, the Czech Republic and Romania. For all 8 countries, the difference between the allocations requested by states and the allocation agreed to by the European Commission is in the region of 165Mt/year. Poland withdrew its motion to have the cap on its emissions raised by 75Mt.

including France⁹³, to fully or partially defer the allocation of allowances by several months. However, these uncertainties are inherent to the very management of the allowance trading system during phase II, with a sharing of responsibilities between the European Commission and Member States, and go far beyond the mere issues of transparency.

A definite lack of clarity exists regarding the management by Member States of their New Entrant Reserves, which is detrimental to the grasp of market equilibrium by participants.

Under Article 11, paragraph 3 of Directive 2003/87/EC, each NAAP provides for the creation of a reserve of unallocated allowances which may be progressively distributed to new entrants, i.e. to installations that have obtained an authorization to operate after the approval of the NAAP. They can either consist in the extension of an existing installation or in the creation of a new emission-generating installation. The volume of allowances kept in the NER of each Member States evolves dynamically, according to the arrival of new entrants in the system, to the possible transfer to the NER of allowances which had been reserved for installations which shut down during the period⁹⁴, and to possible allowance acquisition programmes by states. At the end of the period, i.e. in 2012, it will be possible to sell the allowances possibly remaining in the reserve on the market, to convert them back into Assigned Amount Units (AAUs), or to cancel them.

The aggregate size of the various NERs makes them a significant determining factor of the supply of allowances, which may have an appreciable influence on the price, especially at the end of phase II.

Over the entire 2008-2012 period, the overall size of NERs was estimated by the Deutsche Bank⁹⁵ at 539Mt, i.e. 5% of the allowances allocated over 5 years. More importantly, due to the twofold impact of the crisis, which led to lower requirements by new entrants and to an increase in the installations shut down, the NERs of Member States should find themselves, at the end of the period, with an overall surplus. The surplus of all NERs at the end of the period, which was estimated by the Deutsche Bank at 234Mt, i.e. over 10% of the allowances allocated in 2012, could therefore, if it was sold off by states on the market, contribute to significantly increasing the supply of allowances.

Yet, the management of NERs by Member States remains a black box for operators, due to the lack of organized and directly available information.

Although an amount of allowances in the reserve is provided for each country by the CITL, it does not systematically reflect all movements. In the absence of any publication of clear data on the inflows and outflows of allowances in the NERs, analysts have indeed no solution but to attempt to piece together the net movements of allowances, based on the Community registry. The consolidation of information is also made difficult by the breaking up of data in the documents provided by the 27 Member States, in their national languages and in formats that are not always consistent. The transparency of data on the situation of the NER should however improve with the implementation of a new functionality between the national registry and the

⁹³ Due to the insufficient size of the New Entrant Reserve, Article 8 of the Amending Finance Law of 30 December, 2008 provided for the auctioning off of allowances taken from the free allowances allocated to electricians, and to use the proceeds of these sales to finance the purchase of allowances to be placed in the NER. The uncertainty weighing on the possibility of implementing the system provided led France to defer the delivery of allowances to electricians in 2009; they were only allocated in December.

⁹⁴ The transfer to the NER of the allowances of installations having shut down is not automatic and results from the rules laid down by states, which may also choose to sell these allowances on the market or to convert them into AAUs.

⁹⁵ LEWIS (Marc), and CURIEN (Isabelle), *An ABC of the NER: a closer look at the Phase-2 Reserves*, 26 February, 2010, Deutsche Bank.

Community registry enabling to monitor the inflows and outflows of the NER more precisely. An additional step could be taken with the disclosure by states of the volumes of allowances from the NER to be allocated to already registered new entrants. Moreover, a certain number of rules conditioning the management of the NER have been left for Member States to decide (for instance, the management of allowances from closed down installations, or the way of managing surplus of the NER at the end of the period) and have not systematically been defined or published by states. However, the Commission recently asked Member States what their intentions were regarding the handling of the allowances possibly remaining in the NER at the end of the period (cancellation, sale by auction, conversion into AAUs) and the handling of the allowances allocated to installations which close down. Indeed, Article 9 of the amended Directive 2003/87/EC provides that the Commission shall publish, by 30 June, 2010, *“the absolute Community-wide quantity of allowances for 2013, based on the total quantities of allowances issued or to be issued by the Member States, in accordance with the Commission Decisions on their national allocation plans for the period from 2008 to 2012”*.

In order to remedy this lack of transparency, states could introduce a publication of the state of their New Entrant Reserves. States could therefore publish: the initial volume of the NER, the current volume of allowances present in the NER, the inflows and outflows since the beginning of the period, as well as their intentions regarding the allowances of installations which closed down during the period. This data should be updated regularly, at least once a year, in line with the operational schedule of the European allowance market, and published according to consistent methods.

It also appears necessary to improve transparency regarding the market operations carried out by states. The compliance strategy of states within the framework of the Kyoto Protocol has an important potential impact on the European CO₂ market. “Short” states (those whose emissions are superior to their objective) have indeed the possibility of acquiring international credits, which are eligible in the EU ETS, to bring themselves into compliance. Consequently, considering the volumes at stake⁹⁶, the balance between the supply and demand of international credits largely depends on the purchasing strategy of public authorities. Better visibility regarding the strategy of important purchasing countries would make possible to effectively clarify the state of demand on the international credit market.

It could also be noticed that Member States can be large-sized operators on the European allowance market, notably in the auctions during phase II. Moreover, no European rule currently prevents a state from carrying out purchasing transactions on the market – for instance, when there is a need for additional allowances in New Entrant Reserves.

In addition, to ensure that this data is efficiently made available to the public, a consolidation and publication system for the information relating to the supply of allowances could be implemented at European level, allowing the public and any market player to be quickly provided with an overall picture of the supply of allowances.

Moreover, an effort should be made by all Member States to clarify the rules which have yet to be laid down regarding both the management of the NER and the conditions of use of international credits.

⁹⁶ It should be reminded that the acquisition programme of the Japanese government is in the region of 100 million tonnes.

Phase III, by transferring the responsibility for defining part of the parameters of the supply of allowances from Member States to the European Commission⁹⁷, should result in a significant improvement of transparency on supply fundamentals of supply. For that matter, Article 10a of the amended Directive 2003/87/EC explicitly determines the quantity of allowances reserved for new entrants and lays down the principle of the auctioning of the possible remaining amount at the end of the period.

Moreover, during phase III, strict obligations will need to be imposed regarding the publication of information relating to the auctioning methods of allowances and the allowances allocated free of charge to the sectors exposed to carbon leakage. During phase III, the scope of drivers of the supply of allowances will indeed be extended to the organizational methods of allowance auctions. The foreseeable and permanent nature of the auctioning schedule will be essential to enable operators to get ready and to limit regulatory uncertainties and shocks. Therefore, the recommendations made by the working group chaired by Jean-Michel Charpin should be reiterated here: determining, well before the auctions take place, the auctioning schedule and the volume of auctions, and authorizing a modification of this schedule only in exceptional cases and in accordance with predetermined rules. To enable operators to have visibility regarding all parameters of the supply of allowance, the data on the free allocation of allowances to the sectors exposed to carbon leakage will also have to be published well before the beginning of phase III.

Advice no. 13: at European level, promote the creation of a single data consolidation and publication system regarding the supply of allowances.

Advice no. 14: at European level, promote transparency rules on the management of the New Entrant Reserves by Member States, through their disclosure at the same frequency as the one laid down for the disclosure of installations' emissions data and through the disclosure of the transactions made by Member States on allowances and offset credits.

Promote also, at European level, a consolidated disclosure by Member States, at the end of the period, of the volumes of allowances and offset credits banked towards the third phase of the market by players holding an account in national registries.

5.2 The action of public authorities must comply with the need to protect the stability of the CO₂ market

Even though regulatory uncertainty is inherent to a system created by the government, public authorities must be careful to preserve the regulatory stability of the CO₂ market as much as possible.

The principle of regulatory stability first implies to clarify rules. If it is impossible to avoid for some uncertainties to remain regarding the operation of the market during phase III, they will need to be cleared up early enough before the phase begins, in order to avoid the situation in which rules still need to be defined during the period, as during phase II. In particular, the schedule of the committee procedure to prepare phase III will need to be scrupulously followed, and the rules concerning the conditions of use of international credits will need to be quickly clarified.

⁹⁷ The allocation of free allowances, specifically, will no longer be decided, during phase III, by each Member State, as it was during phase II, but at European level.

Box no. 20 – The committee procedure towards phase III

30 June, 2010

- Assessment by the European Commission of the risk of “carbon leakage⁹⁸”;
- Publication of the total quantity of allowances for 2013 and consequently for the entire 2013-2020 period;
- Determination of the organizational methods of auctions;

31 December, 2010

- Publication of the total volume of allowances to be auctioned;
- Determination of the definition of a new entrant;
- Laying down of the rules regarding the methods of free allocation to the sectors exposed to carbon leakage;

31 March, 2011

- Assessment of the impact of free allocations on the volumes auctioned.

More importantly, public authorities must be careful to consider the stability of the CO₂ market to be a categorical imperative and to prevent any twisting of the operating rules of the market to their advantage. Hungary’s decision to put back on the market allowances which had already been surrendered by the Hungarian installations covered by the allowance scheme, in early 2010, is a good illustration of the risks that the decisions of public authorities – or even, in this case, the exploitation of what may be regarded as a regulatory gap – may pose for market stability. The issue raised by possible large-scale optimization strategies by states could become especially critical during phase III, if a decentralized platform system is chosen for the auctioning of allowances, which would leave states the possibility of taking advantage of the schedule and allocation methods to attempt to maximize proceeds from the auctions.

Box no. 21 – Putting back on the market of international credits that have already been surrendered

On 11 March, 2010, the Hungarian government revealed that it had sold off international credits (~1.7 million tonnes) surrendered by Hungarian installations covered by the EU ETS legislation, during the period separating them, in accounting terms, from being permanently cancelled in the national registry.

This operation formally observes the rules regulating the EU ETS, despite the fact that the “primary” contract expressly mentions that the use of these credits for several different compliance periods is forbidden. In principle, the cycle for the acquisition and use of Kyoto credits is supposed to end on 30 April of each year, which is the date on which installations must bring the number of allowances and credits they hold into alignment with their emissions over the previous year. Yet, these credits present the specificity, according to the accounting practices of the Kyoto Protocol, of being temporarily “trapped”, for a two-month period following their surrender by companies, in one of the accounts held by the state,

⁹⁸ The risk that the constraint related to the capping of emissions (carbon constraint) imposed on the companies covered by the EU ETS legislation, and the costs induced, may lead to relocating the installations concerned to countries in which the carbon constraint is lower.

before being permanently neutralized in the retirement account, without leading automatically to a transfer of ownership. The credits used by the companies covered by the EU ETS for regulatory compliance pass indeed, on 30 April, through the “holding account” of the state (Article 53 of Regulation 2216-2004 of 29 December, 2004), before being transferred on 30 June to a “retirement account” of the state, in which they are permanently neutralized (Article 59). During this two-month interval (between 30 April and 30 June), the state theoretically has the possibility of making transactions in the holding account, before credits become irrevocably frozen (the accounting rules of the Kyoto Protocol, when applied in the context of the European allowance system, do not a priori prevent a state from freely disposing of the credits which flow through one of the accounts it holds in the national registry). It can therefore replace the credits surrendered by European companies with other Kyoto units, in this example Assigned Amount Units, which are the “carbon currency” traded among the signatory states of the Kyoto Protocol. The only requirement is for the volume of the Kyoto units transferred to the retirement account to be the same as the volume surrendered by the companies covered by the EU ETS legislation. The interest of this operation is obvious: it makes it possible to replace a realizable product which is continuously traded on the market for a price between 11 and 12€/t (international credits) by a product (the AAU) with low liquidity and whose price is much lower than 10€/t.

However, the structure of registries, and notably the specificity of the accounting system for cancelling credits (two-month window), was clearly not devised to enable states to monetize the credits surrendered by companies in this way. Consequently, although the resale of used international credits is not illegal a priori, in fact, it is comparable to a twisting of the rules and procedures allowed by the Kyoto Protocol.

More seriously, such an operation means that two types of international credits will coexist on the same market – those which may be surrendered and used again on the market and credits which have already been surrendered, which may only be used again outside the European market, and which may be identified by their serial number only.

However, almost inevitably, these credits were sold off to European players, to the detriment of the last buyer on the market, which unknowingly holds international credits, which cannot be used, and are therefore worthless.

In this way, on 16 March, BlueNext announced that surrendered international credits had been traded on the trading platform and acquired by buyers that were unaware of their nature. Following this announcement, and to prevent the market from collapsing, BlueNext decided, on 17 March, to suspend its activities relating to the trade of international credits (“Spot CER on Central Market and OTC Platform, Outright Spread CER/EUA on Central Market, Implied Spread CER/EUA on Central Market”).

On the initiative of France, a provision was laid down by the review of Regulation 2216/204 of 21 December, 2004 on the system of registries to prevent the transfer of an already surrendered international credit within the European allowance market. This provision will come into force when the regulation is published in the Official Journal of the European Union, i.e. in August 2010, subject to the technical developments required. In the mean time, the European Commission has decided to restrict the surrender of allowances by companies to the period from 19 to 30 April. To prevent already surrendered international credits from being traded on organized markets, carbon exchanges have indeed implemented a system that automatically freezes international credits that have already been surrendered upon the

identification of their serial number. This measure is aimed at sparing them the trouble of having to continuously update the list of already surrendered international credits in their system and at temporarily limiting the possible supply of surrendered credits.

Lastly, the European Commission is planning, notably following the intervention of France, to envisage provisions which would also prevent the transfer of already surrendered credits outside the European market.

Part of the solution lies in filling the regulatory and technical gaps identified. The European Commission notably committed to do so to resolve the problem of surrendered international credits.

In any case, the “market power” of states is inherent to the regulatory nature of the CO₂ market. It is therefore necessary for public authorities to follow a strict discipline concerning their actions on the market, but also for the regulation framework to provide for the possibility of imposing sanctions and seeking injunctive relief in the event of a breach of the rules or if the rules regulating the operation of the market are twisted by public authorities, Member States or the European Commission, which would imply the existence of some form of supranational regulation.

Advice no. 15: promote the adoption of provisions enabling to impose sanctions on public authorities, should they fail to observe market rules.

5.3 The CO₂ market would benefit from increased transparency regarding the demand of allowances, by publishing aggregate data on the emissions of the largest installations more frequently

The CO₂ market suffers from a lack of transparency regarding demand, which is a volatility factor for the price of allowances. The CO₂ market starkly differs from commodity markets such as the gas market or, even more so, the electricity market, on which the balance between supply and demand materializes on a continuous basis. The emission data of the installations covered by the EU ETS legislation is indeed only made public once a year, when the surrender is performed. In practice, the European Commission publishes emission data as soon as installations whose aggregate amount of emissions of the previous year represent at least 80% of total emissions produced this year have made their report. This threshold of 80% is usually reached as early as 1 or 2 April. The full emission data is then published at the end of the surrender period⁹⁹, i.e. 15 days after the date of surrender of 30 April. To analyze market equilibrium, understand price dynamics and optimize their compliance strategy accordingly, the operators covered by the EU ETS legislation can therefore only rely on the emission data of the previous year and on forecasts for the current year. This forecasting exercise is relatively complex, as the demand of allowances depends on a great number of parameters, whose analysis is delicate in itself. The consequence of this situation is that it has naturally led investment banks to develop and offer their clients services to analyze the fluctuations of the market price¹⁰⁰.

⁹⁹ The data on annual verified emissions for 2008 was thus published on the site of the European Commission on 11 May, 2009.

¹⁰⁰ Market analysis has made significant progress in the last five years, and several financial institutions are now a reference (Orbeo, Barclays, Deutsche Bank, notably).

This way of operating created definite uncertainty regarding the balance between supply and demand. This is shown by the existence of significant differences between analysts’ predictions, which remain until the publication of verified emission levels. In this way, the differences between the predictions of various analysts regarding the emission levels in 2009 were still, in early 2010, of nearly 200Mt, i.e. 10% of the annual allocation, as shown by the following table.

Table no. 10 – Forecasts of emission data for 2009 by the main analysts

Analysts	Date of publication	Estimate of emissions for 2009 (Mt)
Barclays	17 March, 2010	1,897
Deutsche Bank	10 January, 2010	1,900
Orbeo	22 March, 2010	1,984
CDC Climat Recherche	February 2010	2,090
Maximum difference		193

Source: Barclays, Deutsche Bank, Orbeo, CDC Climat Recherche

This lack of transparency undermines the strength of the price signal and constitutes a factor of uncertainty and volatility. It increases the risk of discrepancy between the market price and its fundamentals and can cause appreciable adjustments in the price of allowances when emission levels are published. The sudden collapse of the price of allowances at the end of phase I revealed the inability of the market to anticipate the surplus of allowances which cannot be carried forward, and constitutes an extreme example of this, although the crash can also be explained by other elements. In addition, this situation increases the structural asymmetry of information between the smallest operators covered by the EU ETS legislation, which are dependent on the analyses published by financial analysts, and the large operators covered, such as electricity producers, which concurrently hold the advantage of the information resulting from the size of their industrial base and sophisticated capacities for the analysis of market fundamentals. Such an asymmetry of information is not reprehensible in itself – it also shows the capacity of certain operators to invest in the development of capacities for analysis – but it can pose a problem if it becomes a barrier to the participation of the smallest operators.

This lack of transparency could have even greater consequences as regards volatility during phase III. The higher level of constraint could indeed increase the sensitivity of the market to the uncertainty that currently weighs on the balance between supply and demand. The poor level of information on the state of the demand of allowances could fuel the appearance and circulation of rumours among market players and thus lead to peaks in prices.

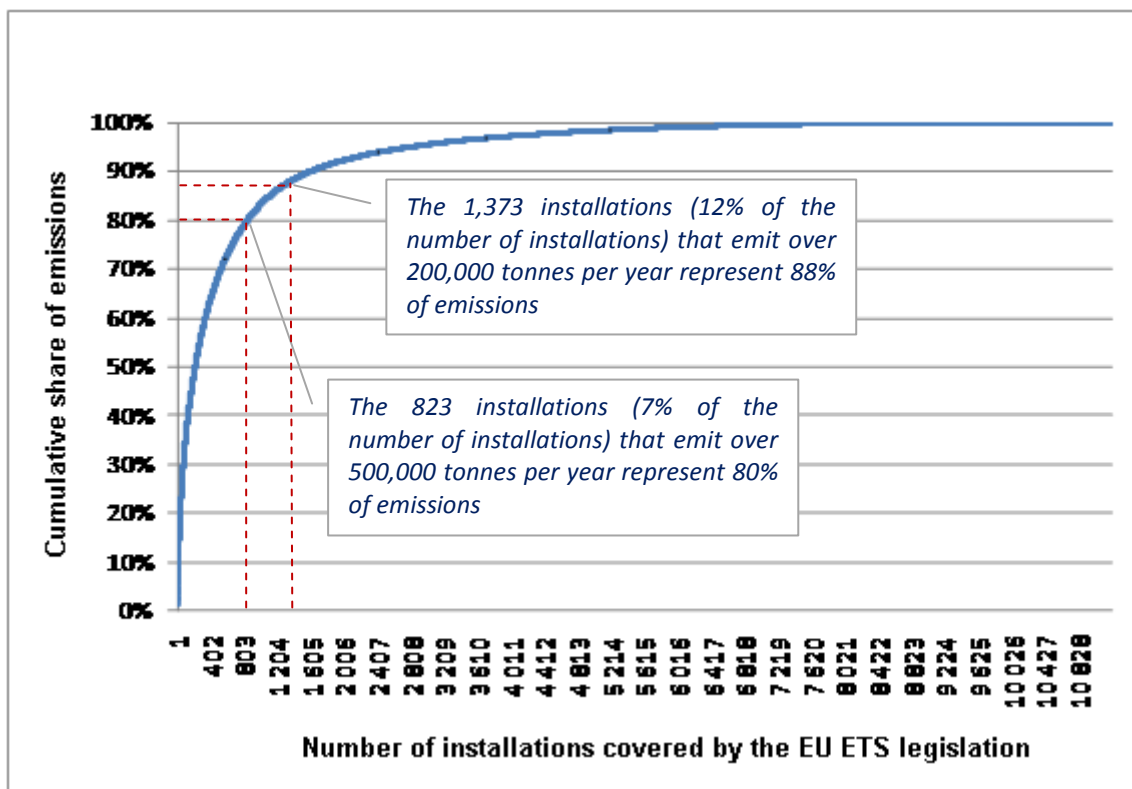
To improve the transparency of the market and consolidate the strength of the price signal, a publication system for intermediate data on emission levels could be established¹⁰¹. A balance will be needed for the operational implementation of this principle between its cost and the relevance for the market of the information thus disclosed. It is also essential not to undermine the confidentiality of some industrial information.

¹⁰¹ The improvement of transparency regarding the state of demand will however depend on the capacity of operators for analyzing this additional information in a relevant way.

Therefore, in order to reduce the cost of the system and its consequence as regards competition, this measure could be limited to the largest emitting installations and provide for simplified audit methods. New obligations regarding the publication of emission data would indeed lead to increased costs for the companies covered by the EU ETS legislation – internal costs related to the data measurement and production process, or even audit costs charged by an external auditor, if the same audit rules as those applying to the annual reporting of emission data were to be implemented. In fact, these additional costs should be relatively low, at least for large companies that perform an almost continuous monitoring of the factors determining emission levels. For the main part, they should result from the possible additional audit costs charged by an external auditor. As an example, the European Commission had estimated, as part of the environmental impact assessment of the climate and energy package, that the additional cost of increasing the frequency of publication to one every six months for installations which generate over 500,000t of emissions would be of 2 to 2.5M€, for the external audit costs alone, i.e. an additional cost of 0.1c€ per tonne emitted. For that matter, it had given its approval to this provision, which had been rejected by some Member States due to the opposition of the industrial players covered by the EU ETS legislation. However, to reduce the cost of such a system for the operators covered, and inasmuch as very large installations account for the great majority of emissions (7% of installations represent 80% of emissions), the publication of intermediate emission data could be limited to installations which exceed a specific given emissions' threshold. A balance will be needed between the size of the installations subject to these obligations and the mandatory frequency of publication of emission data (for instance, every three or six months). If necessary, exemptions could also be provided for installations in which the assessment of emission levels is more difficult – and therefore longer and more expensive – for instance for emissions generated by industrial processes.

It would also be necessary to define a scheme of simplified audit methods for sub-annual emission data in comparison with the rules governing the production and audit of annual data. The collection of sub-annual emissions data follows a different aim compared to the publication of annual emissions data. In the first case, the aim is to produce information that is sufficiently reliable to steer the market towards equilibrium for the current period. In the second case, the accuracy of the data produced and its audit are crucial, because they condition the environmental integrity of the system.

Graph no. 8 – Cumulative distribution of the size of the installations covered by the EU ETS



Source: CITL, CDC Climat Research

Graph interpretation: the x-axis represents the cumulative number of installations, while the axis of ordinates represents the cumulative share of overall emissions of the sectors covered by the ETS that the X installations with the largest emission levels account for. Therefore, the 823 largest installations, which correspond to the installations whose emissions exceed 500,000t, cumulatively represent ~80% of the entire emissions of the installations covered by the European allowance market.

Box no. 22 – The audit and reporting process for emission data in France

Emission data must be declared by the installations covered by the EU ETS legislation to the service responsible for the inspection of classified installations (IIC – inspection des installations classées), through the annual declaration tool for polluting emissions, by 15 February of each year.

This data must have been the subject of an audit performed by an organization accredited for this purpose. Emission data is calculated or measured based on a methodology defined according to the type of installation.

The IIC then performs a check of the data communicated by installations before 15 March.

The overall emission data of French installations is consolidated by the Directorate General for Energy and Climate (DGEC – Direction Générale de l’Énergie et du climat), which carries out audits and can ask the IIC to perform additional checks.

The data is then transferred, following its validation and before 1 April, to the national registry and is used as a reference for the compliance period. The installations covered by the EU ETS legislation only have access to their own verified emission data.

The data thus collected at CITL level is made public as soon as the number of installations having made their declaration is sufficient (around 80% of the overall EU emissions), that is to say in early April.

The compliance period ends on 30 April, which is the date by which installations must have surrendered the allowances corresponding to their verified emissions.

To preserve the confidentiality of the activity of operators, intermediate emission data should be published at an aggregate level, at the level of sectors or sub-sectors, and ideally for each country separately. This condition is essential in the eyes of the industrial players covered by the EU ETS legislation, to prevent information on their activity or industrial strategy from being made available to their competitors through individualized emission data, on top of the information already communicated within the framework of the compliance period. Aggregate emission data could be centrally disclosed at European level. If data disclosure is performed at national level, a harmonized data publication format should at least be imposed. The data consolidation system should follow strict rules to ensure the confidentiality and anonymity of the data processed.

Advice no. 16¹⁰²: at European level, improve information through a more frequent disclosure of emission data by the large emitting installations, defined by thresholds, in an aggregate format, at the national level for all sectors or at sector level for the whole European Union, subject to lighter verification rules, in a way protecting the confidentiality, ensuring fair competition and optimizing the cost-benefit ratio of this provision.

¹⁰² The emission data of airline companies should be processed in a specific way, from the moment they enter the market in 2012.

6 A prevention and disciplinary framework for market abuse, that is suited to the specificities of the CO₂ market, must be implemented to reduce the risks of market manipulation and insider dealing

In the same way as on financial or commodity markets, two types of market abuse can be distinguished.

The first one consists in market manipulation: these manipulations are aimed at deceiving other market players regarding the state of supply and demand, for the benefit of their instigator, who takes positions to take advantage of the induced evolution of market price.

European regulations include false information (active or passive) in the concept of manipulation, even though the circulation of incorrect or misleading information, such as the withholding of information whose publication could have a significant influence on the price of the instruments concerned, is not necessarily associated with the taking of a position.

The second abuse consists in the use by an operator of inside information which has an influence on the price of the asset and which has not been disclosed to other players. The player concerned can thus take advantage of a situation of asymmetry of information.

These two types of abuse raise different issues as regards their impact on the functioning and the efficiency of the market. Market manipulations are likely to undermine the robustness of the price signal, by cutting it off from its fundamentals, and so the very efficiency of the economic instrument which the allowance market constitutes. The case of insider dealing is markedly different: it does not jeopardize the robustness of the price signal, but it results in a case of inequality among market players. Nevertheless, the two types of abuse have that in common that they undermine the integrity of the environmental instrument which is liable to undermine the confidence of participants and citizens in the CO₂ market.

The risk of market abuse on the CO₂ market is difficult to assess *a priori*. By definition, cases of market abuse can only be revealed by an authority with sufficient investigative power and which can rely on data analysis and collection systems regarding the transactions carried out. As an indicative example (but a true comparison with the CO₂ market is not directly relevant), in the United States, the oversight ensured by the Commodity Futures Trading Commission (CFTC) since it was created in 1974 has led to 25 administrative sanctions and to 42 indictments against individuals or companies for manipulations on commodity markets. The most emblematic case concerns manipulations of the propane market in the United States by BP North America: the proceedings taken against BP were settled out of court by the payment of a fine of 303M\$ in 2007.

6.1 *Although the risk of manipulations on the CO₂ market has apparently not materialized yet, it remains real*

6.1.1 *Even though the risk of a massive squeeze appears to be relatively low, the CO₂ market could be exposed to manipulation strategies*

Market manipulation can result from various strategies, which may or may not involve the existence or formation of a dominant position: acquisition of a dominant position in order

to squeeze the market, strategies aimed at creating an upward or downward price variation (“momentum ignition”), manipulations of the order book or diffusion of false information.

The risk of acquisition and utilisation of a dominant position to squeeze the market appears to be limited by the high liquidity and the moderate concentration of the market.

A squeeze consists in causing for prices to artificially rise by creating or by giving the impression of, through the acquisition of a very large position, a situation of scarcity on the market. To perform this manipulation, a player takes, for instance, a very large long position on the futures market (it purchases forward large volumes of allowances) and, at the same time, acquires important volumes on the spot market. When the date of settlement and delivery of the forward allowances approaches, the player in question does not close its position, thus forcing its counterparties to deliver the volumes of allowances requested. Scarcity or the anticipation of scarcity then pushes prices upwards, both on the futures market and the spot market, as those holding short forward positions attempt to close their positions, or to acquire the allowances enabling the physical delivery of forward contracts. This price increase enables the operator to make large profits by selling its allowances or forward contracts at a very high price.

On the CO₂ market, an operator could, in particular, try to squeeze the market on two occasions:

- when the delivery date of futures contracts traded on exchanges approaches, i.e. in December of each year. Squeezing the market would require to take a massive long position on both the spot market and the futures market (purchase of spot and forward allowances), so as to make it difficult for the counterparties which have sold the allowances forward to perform their delivery;
- when the date for the surrender of allowances approaches, by accumulating very large volumes of allowances on the spot market, so as to make it difficult for the companies covered by the EU ETS legislation that have a net deficit¹⁰³ to acquire sufficient volumes of allowances to fulfil their compliance obligations.

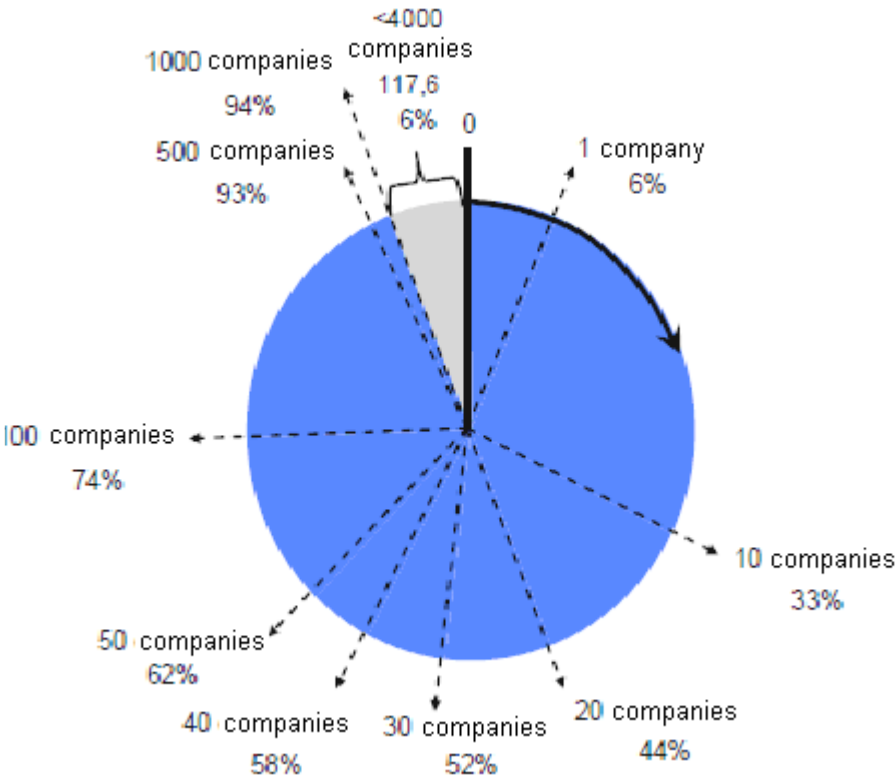
While the regulatory obligation to surrender constitutes a notable risk factor, however, the characteristics of the CO₂ market seem to reduce the risk of a squeeze. Indeed, even though the concentration of the market remains significant, in fact, no operator finds itself in a natural dominant position, which would increase the risk of a squeeze. In this way, while the 10 most important companies alone account for a third of the allowances allocated, the larger European emitter, i.e. the German electricity producer RWE, “only” represents 6% of the overall budget of allowances allocated. The risk of abuse of a dominant position thus appears to be notably lower than on the gas and electricity markets, which are monopolistic or oligopolistic by nature. In addition, the risk of a market squeeze during the regulatory surrender of allowances is limited by the liquidity of the market and the introduction on the market, on 28 February, of the allowance of year n+1 before the date of surrender, on 30 April, of year n. This operating rule makes it difficult for an operator seeking to squeeze the market to accumulate enough allowances, by increasing twofold the volumes required

¹⁰³ Their emissions exceed the allowances allocated or already acquired.

for the operation or by forcing it to accumulate very quickly, between 28 February and 30 April, a very important quantity of allowances¹⁰⁴.

The position that must be acquired to squeeze the market can be estimated at several dozen million tonnes¹⁰⁵. It would thus require mobilizing important funds, i.e. several hundred million euros, and taking a large exposure to market risk.

raph no. 9 – Concentration of emitters on the European carbon market during phase II



Source: CDC Climat Recherche

Graph interpretation: clockwise, the current level of concentration of underlying assets can be observed: 20 companies hold nearly half of the overall allowances allocated on the market; none of them appears to be in a position close to a natural monopoly.

However, the possibility of players engaging in more subtle strategies to influence the price of allowances appears to be quite real. A first type of strategy consists in accumulating (hoarding) allowances with the purpose of causing an increase in prices. Its approach is similar to a squeezing strategy, but its magnitude is more limited. In theory, this strategy

¹⁰⁴ This risk reduction factor will not exist for the last surrender of phase II, i.e. 30 April, 2013, unless early auctions for phase III before 2013 were to compensate for the lack of injection of liquidity caused by the allocation of allowances for the following year.

¹⁰⁵ A player wishing to squeeze the market would need to accumulate several dozen million tonnes of allowances. For a company covered by the EU ETS legislation, this market position would need to be taken in addition to its own compliance needs; i.e. a company emitting 50Mt each year, and receiving on this account an allocation in the same region, would need to acquire an additional 10Mt on the market.

could be undertaken in a cross-market perspective on both the CO₂ and electricity markets, with the purpose of increasing, through the price of CO₂, the price of electricity on the wholesale market, in order to increase the profits related to electricity marketing activities. In practice, however, the moderate correlation between the prices of CO₂ and electricity appears to limit this theoretical risk¹⁰⁶.

The practicability of such a strategy is, in the same way as with the squeezing strategy, limited by the liquidity of the market and the allocation of the allowances of the following year before the surrender. Another type of strategy, known as “momentum ignition”, consists in a player triggering, through purchases (or sales) of allowances or forward contracts for unusually large volumes, a similar and mimetic momentum of purchases (or sales) by other market players, enabling it to then resell (purchase) allowances or forward contracts at a higher (lower) price. This type of strategy is all the more efficient as the player concerned is supposed to have an advantage in terms of relative size and information (which could notably be the case for the largest emitters), or as it is structured around an exogenous event which is likely to modify the market equilibrium. The price fluctuations observed in the context of the British auctions, which are presented in a box below, could be a concrete example of such manipulations. The relative concentration of the CO₂ market, not at the underlying level, but at the level of the positions taken by the main operators, constitutes a risk factor here. Although the lack of any data on the transactions carried out makes it difficult to perform a precise assessment, largest market participants could each account for 5 to 15% of the transactions carried out¹⁰⁷, such a position giving them a certain power to intensify, or cause, price fluctuations. However, such manipulations remain difficult to apprehend and prove, and it is not always possible to make a distinction between what falls within the province of market abuse and what consists in taking a speculative position, which is not reprehensible in itself.

The risk of manipulations involving the taking of relatively large positions appears to be greater on the international credits market, as it is tighter and more concentrated than the European allowances market. The size of the secondary international credit market is indeed five times smaller than that of the European allowance market: over the last 4 months of the year 2009, the volumes traded on the international credits market were of ~300Mt, as opposed to 1,600Mt on the European allowances market. The increased risk of dominant positions – or positions that are sufficiently important to give rise to market manipulations – caused by this relative tightness is, in addition, amplified by the fact that the international credits market is a market of flows and not stocks. Since credits are issued when the corresponding reductions are verified on CDM projects and are progressively surrendered by companies for compliance purposes, there is no reserve of liquidity that could be mobilized in the event of price peaks. On the other hand, the risk is reduced by the fact that this market is not organized based on a regulatory obligation to surrender. A rise in

¹⁰⁶ According to the analyses performed by Orbeo, the correlation between the price of CO₂ and the price of electricity is not significantly higher than the correlation between the price of CO₂ and other asset classes (stock market). Calculated based on daily price data since 2008, the correlation between the price of CO₂ and the price of electricity is of 42%, as opposed to 35% with the price of oil (WTI index), 32% with the DJSTOXX index, 25% with the rate of the euro and 15% with the price of gas.

¹⁰⁷ In the working group chaired by Jean-Michel Charpin on the methods for the sale and auctioning of CO₂ allowances, GDF Suez had indicated it was part of the ten most active operators, with 230Mt traded each year (taking into account CRE credits and allowances), i.e. 5% of overall volumes.

the price of international credits would automatically result in the demand of operators being transferred to the European allowances market for the compliance exercise.

Like any market organized around trading platforms, the CO₂ market is exposed to manipulations of the order book. These manipulations, known as spoofing or layering, consist in placing an order, or a series of orders with different price levels, which are not intended to be filled, but to give a false impression of demand (supply), while an order intended to be filled is placed in the opposite direction (buying or selling). This last order is finally filled under more attractive price conditions, due to the artificial demand (supply) generated by the first orders that were then cancelled. These practices are the subject of increased scrutiny by the regulatory authorities supervising financial markets¹⁰⁸ and could very well concern the CO₂ market.

The CO₂ market is also exposed to the risk of players manipulating daily closing prices on organized markets, so as to increase the value of their portfolios of OTC contracts. Numerous OTC contracts are indeed indexed to the fixing price of futures. This situation could encourage a party in a contract of an especially significant size to manipulate these fixings to obtain more favourable contractual conditions. Let it be observed, however, that on the European CO₂ market, this risk is limited by the duration of the fixing period, which lasts for ten minutes (as opposed to two minutes for oil contracts, for instance), making any manipulation of this type more difficult.

Lastly, the CO₂ market could also be affected by the dissemination of false information by an operator. Considering the relative fragmentation of the underlying assets, this risk does not concern information relating to a given installation or company so much as it does concern the aggregate data on emission levels, at the level of a country or of the entire European Union, or even data relating to the supply of allowances (such as, for instance, data concerning the NAAPs). Thus, the circulation of incorrect information on the annual emission data, as the period for surrender approaches, could have a destabilizing effect of which an operator may take advantage.

6.1.2 The appearance of new investors on the CO₂ market could contribute to increasing the risk of manipulations in the future

The increasing financialization of the market could increase the risk of manipulations, with the entry on the market of investors such as pension funds or hedge funds, which have the financial capacity to take large positions.

Only a small number of hedge funds currently appear to be active on the CO₂ market, which can be explained by the relative lack of maturity or depth of the market, by the level of regulatory uncertainty, by the lack of historical data on its correlations with commodity markets, or by the non-eligibility of allowances as collateral, which constitutes a constraint for access to credit¹⁰⁹.

¹⁰⁸ See the warning of the Financial Services Authority in Market Watch no. 33 of August 2009: http://www.fsa.gov.uk/pubs/newsletters/mw_newsletter33.pdf.

¹⁰⁹ Typically, hedge funds would be liable to develop three types of strategies on the carbon market, but each one of them has met obstacles. The marked influence of the institutional calendar and works on carbon price and the various exogenous shocks experienced by the market tend to distort the theoretical correlation relations with commodities, thus preventing the implementation of efficient correlation arbitrage strategies. Managers have a rather blurred view of the market, due to the many regulatory uncertainties concerning phase III, thus handicapping the taking of directional positions, as part of a fundamental approach. Lastly,

However, the low activity of hedge funds on the CO₂ market is not intangible. The stabilization of the regulatory framework and the increase of liquidity could favour their increase in importance with a view to diversifying their activity or to developing a niche strategy. New asset classes indeed fundamentally attract hedge funds, as the development of innovative strategies enables managers to enjoy the advantage of the new entrant. Following the example of other commodity markets, the development of carbon indexes could notably facilitate the entry of this category of market players. It could also favour the intervention of pension funds, whose participation could have a real impact on price.

While these investors can contribute to market liquidity, notably because they more easily take different positions than those of other participants, and even positions that go against the general trend, their appearance on the CO₂ market could be a risk factor. First of all, the ability of these players, which are currently under no obligations concerning their equity capital and massively take advantage of the leverage effect¹¹⁰, to take large positions on the market could contribute to a certain procyclicality of the market, or even increase the risk of market manipulation. As an illustration, the data collected in the United States by the Commodity Futures Trading Commission (CFTC) on the positions taken by various types of participants on commodity contracts provide an element of comparison regarding the capacities for intervention of this type of investor. On 16 March, 2010, the open long and short positions¹¹¹ of the participants of the category “Money Manager” – which comprises market players which intervene on the market for non-commercial purposes or for purposes other than the supply of hedging products, including pension funds and hedge funds –, on the most important oil contract traded in the United States on NYMEX, the Light Sweet Crude Oil, were respectively in the region of 17B\$ (long positions) and 2B\$ (short positions)¹¹². By comparison, the open position on the futures contracts on CO₂ traded on the main trading platforms, i.e. ECX, EEX and Nordpool, is in the region of 4B€¹¹³.

In addition, their intervention could cause a systemic risk, related to the size of these operators, to their use of an important leverage effect and to their interdependences with investment banks, which ensure their access to credit through their prime brokerage activities. Moreover, their intervention could result in a stronger correlation between the CO₂ market and other financial markets, as these operators usually carry out arbitrage operations on several financial asset classes (stock markets, commodity markets, rate markets), thus leading to increased correlation between the various asset classes. Their intervention would thus be likely to cause a decorrelation between the price of CO₂ and market fundamentals, which could undermine the primary objective of robustness and representativeness of the price signal.

volatility arbitrage is dependent on the good equilibrium of the option market and on its liquidity. Now, the fact that the option market is not very developed and the preponderance of volatility buyers create a distortion of implicit volatility, making such a strategy impracticable.

¹¹⁰ The leverage effect refers to the ability of operators to take important positions based on an initially low capital contribution, through a high level of indebtedness and the massive resort to derivative products.

¹¹¹ Long position: forward purchase. Short position: forward sale.

¹¹² The long and short positions on the Light Sweet Crude Oil contract traded on the NYMEX of the Money Manager category were respectively of 213,617 contracts of 1,000 barrels and of 43,198 contracts of 1,000 barrels, while the price of futures contracts was in the region of 80\$/barrel.

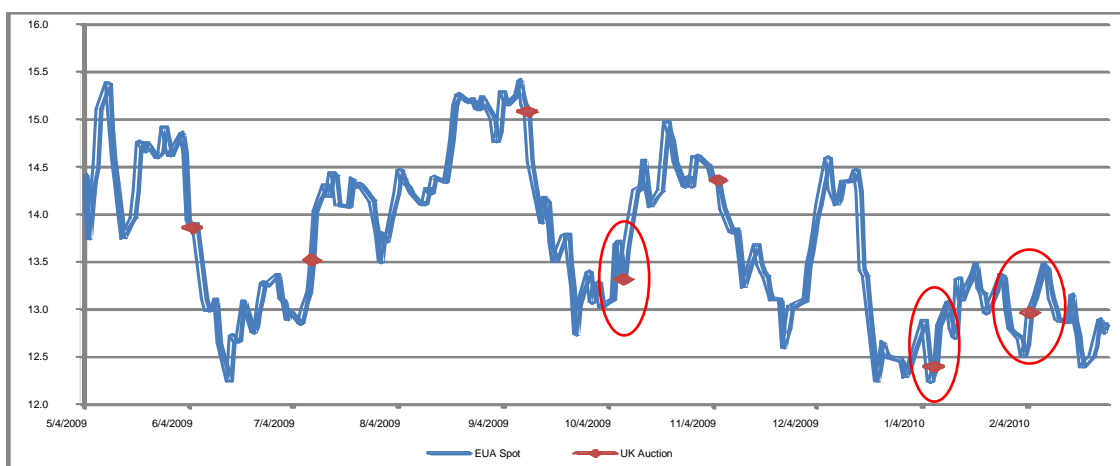
¹¹³ According to the data communicated by CDC Climat Recherche, the open interests for all forward contracts (December 2010, December 2011 and December 2012) traded on the main trading platforms in Europe on the CO₂ derivatives market were, in late January, of 296Mt, i.e. 4B€ for an average price of 13.5€/t.

6.1.3 *The creation of a primary market during phase III will involve specific risks, which may be limited by the organization methods of auctions*

The organization of auctions will involve specific risks, but also risks of combined manipulations on the secondary and the primary markets, as underlined by the CHARPIN report. A first risk is posed by collusion strategies, leading to a distortion of the auctioning price. A second type of risk is the use of auctions to implement hoarding or squeeze strategies, through the capture of important volumes during auctions, with the purpose of driving prices upwards on the entire CO₂ market. Lastly, players could engage in strategies aimed at causing, through sales of significant volumes of allowances before the auctions, a drop in price on the secondary market and therefore in the auctioning price, to then acquire the volumes of allowances previously sold off at a more attractive price. The price fluctuations observed in the context of British auctions could be indicative of such strategies.

Box no. 23 – The price fluctuations in the context of British allowance auctions during phase II

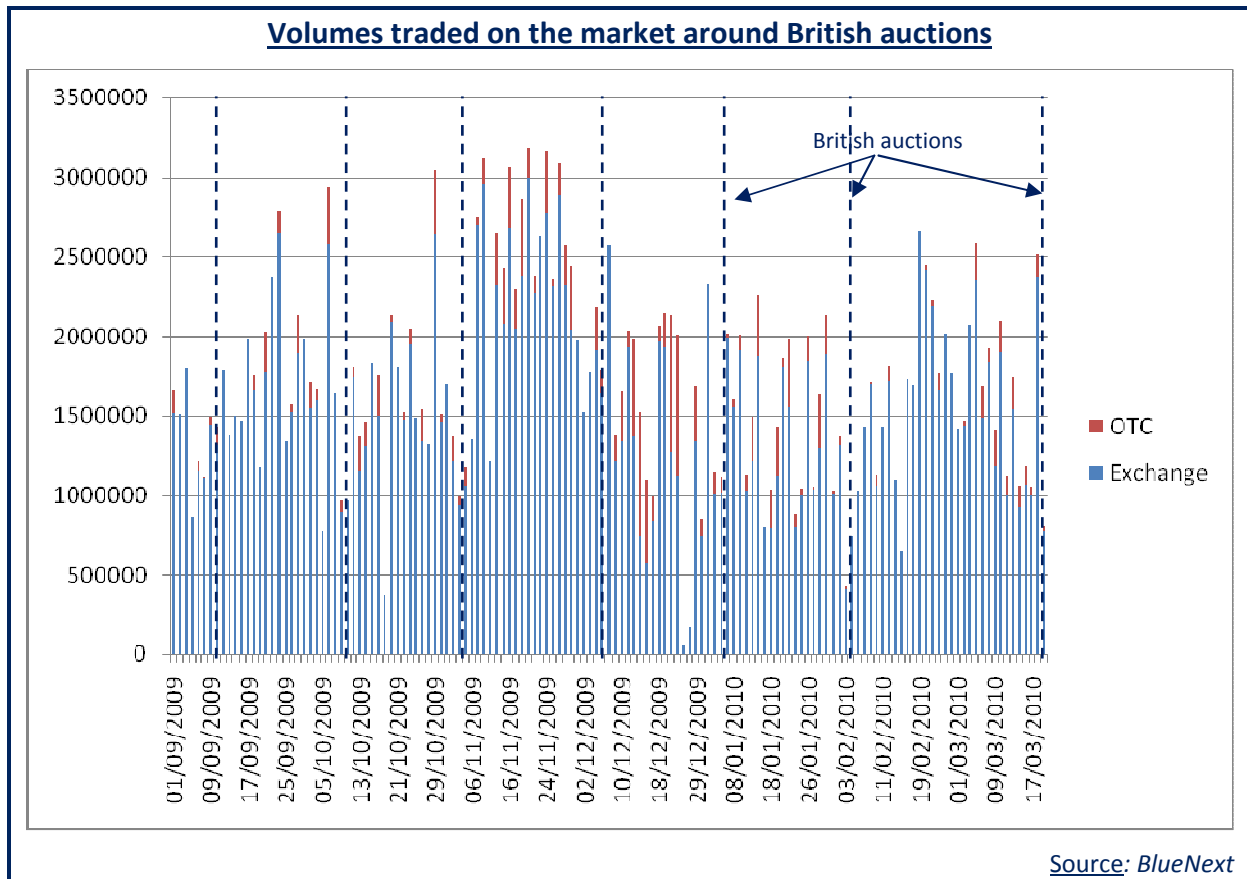
Evolution of the spot price of allowances around the auctions



Source: *The World Bank*

Graph interpretation: the blue curve describes the fluctuations of the spot price (BlueNext): the red dots correspond to the auctions organized by the British Debt Management Office. British auctions are intended to account for 7% of the national allocation, i.e. 85M allowances. Overall, the United Kingdom has held 9 auctions since 2008, for average volumes of 4.2M allowances – which represents over 20% of the volumes traded on the market every day. Relatively significant market fluctuations can be observed right before several auctions; this is especially visible for 3 auctions in November 2009, January 2010 and February 2010. For these three auctions, the price of allowances significantly dropped – by 25c€ to 1€ - during the days preceding the auction, and then significantly rose again during the days following the auction. These price fluctuations could result from marked selling strategies by operators before the auction in order to cause a downward price variation, and then purchase allowances at a lower price during auctions, which will then be sold off at a higher price a few days later, when the price returns to a natural higher level.

It is however difficult to prove that this consists in market manipulations, as the line between manipulations and a correct anticipation of market fluctuations is hard to draw. For that matter, no systematic peaks can be observed in the volumes traded before auctions, as shown by the graph below.



However, the influence on the risk of manipulations on the secondary market remains uncertain. On the one hand, the setting up of the primary market will lead to an increase in the volumes¹¹⁴ traded, especially on the derivatives segment, which will reduce the risk of manipulations related to the utilization of dominant positions. On the other hand, it could facilitate the implementation of strategies of predation of large volumes of allowances. In addition, should an important volume of allowances not be put up for early auctions before 2013, the transition to the auctioning of allowances could lead to losing the benefit of the early cash contribution constituted by the allocation of the allowances of the year n+1 before the surrender of year n, thus increasing the risk of a market squeeze.

However, the risk of manipulations based on the primary market could increase due to a higher concentration of participants in comparison with the secondary market. It should indeed be noticeably higher, as auctions will mostly concern electricity producers at first. Since auctions will concern 50% to 60% of the overall allocation, the most important operator will thus account for around 12% of needs (as it currently represents 6% of the allocation). Representatives from the electricity production sector also underline the risk that the monopolizing of auctions by a small number of financial players may lead to cases of abuse of a dominant position, inasmuch as only spot allowances or similar assets¹¹⁵ were to be auctioned. This concern is based on the fact that electricity producers, which need to hedge themselves against the price risk in the medium term, appear not to have sufficient

¹¹⁴ Annual volumes of trade could thus go from 5B tonnes to 10-15B.

¹¹⁵ The possibility of putting spot-futures up for auction, that is to say contracts with a delivery a few days after the transaction is concluded, is also envisaged.

treasury capacity to acquire spot allowances a long time¹¹⁶ in advance. They could therefore cover a large part of their needs through forward purchases, to whose financial intermediaries would be counterparties. Financial intermediaries would then use auctions to hedge their exposure to the price risk, by acquiring through auctions and banking the allowances corresponding to the forward sales.

The design of auctions will play a key role to limit the risk of manipulations. In the spirit of the proposals of the CHARPIN report, it should indeed be aimed at mitigating the risk of market abuse. A high frequency of auctions and a small size of lots would increase the difficulty of any strategy to capture a high volume of allowances by an operator, and consequently of the implementation of a hoarding or squeeze strategy. They should also reduce the impact of auctions on the secondary market, notably through strategies aimed at driving the price on the secondary market downwards prior to an auction. Lastly, the format of one-round sealed auctions would make mitigate the risk of collusion, as would the random solving of tight bids, which would make any collusion strategy riskier, as participants would not be sure they would be served. Lastly, the possibility of cancelling an auction in the event where the price is unusually low would make it possible to counter successful manipulation strategies.

In conclusion, even though the risk of market abuse is difficult to assess *ex ante* and although it is probably lower than on markets such as the gas or electricity markets¹¹⁷, it cannot currently be dismissed. Allowance allocation methods, the liquidity and openness of the market certainly contribute to reducing the risk of a massive market squeeze, a strategy which, apart from a limited number of famous cases¹¹⁸, rarely materialized on financial and commodity markets, due to the financial risks involved. The CO₂ market is none the less exposed to other types of more subtle manipulations. In addition, the risk of market manipulations could increase in the likely case of increased participation by alternative investors, such as hedge funds, in the CO₂ market.

6.2 The most obvious risk of insider dealing, a notion whose definition is delicate on the CO₂ market, concerns information of a regulatory nature

Another category of market abuse is insider dealing, which refers to the use by an operator of information which has not been made public and which can have a noticeable influence of the price of the asset traded.

6.2.1 The prohibition of insider dealing was developed within the framework of securities markets

The notion and ban of insider dealing has its origins in traditional financial markets: its purpose is to avoid asymmetries of information between insiders, which have the advantage of internal and non-public information on the issuers of securities, and other investors. The

¹¹⁶ Electricity producers, inasmuch as they sell their electricity production up to three years in advance, cover their allowance needs up to three years in advance through forward purchases.

¹¹⁷ In addition to the lower concentration of the underlying market, the functioning of the market based on an annual – and not instantaneous – equilibrium and the lack of manipulations based on the use of physical assets reduce the risk of manipulations on the CO₂ market, compared with classic commodity markets such as the gas or electricity markets.

¹¹⁸ Are worth mentioning the case of the squeeze organized by Porsche on Volkswagen shares in 2008, the squeeze organized for several years over the 1986-1995 period by Sumitomo on the copper market and the squeeze of the American propane market in 2003.

prohibition to use inside information has been the subject of numerous debates, as shown by the abundance of economic literature. In fact, this notion is a specificity of financial markets. Beyond the simple argument of equity among operators, the debate primarily concerns the risks related to the notion of inside information¹¹⁹.

The European Legislator has extensively defined the prohibition to use inside information on financial markets in relation to three main criteria. Under Article 1, paragraph 1 of the Market Abuse Directive 2003/6/EC of 23 January, 2003, inside information is considered to mean [some elements underlined by us] *“information of a precise nature which has not been made public, relating, directly or indirectly, to one or more issuers of financial instruments or to one or more financial instruments and which, if it were made public, would be likely to have a significant effect on the prices of those financial instruments or on the price of related derivative financial instruments.”* The three main criteria for defining inside information are therefore its precise nature and non-public nature and its potential influence on the price of a financial instrument.

The national Legislator has defined the outline of inside information more precisely. In this way, Article 621-1 of Book VI, Title II, Chapter I of the General Regulation of the *Autorité des Marchés Financiers* (AMF – the French financial markets authority) has refined the notions of the “precise nature” of information and of its “significant effect¹²⁰”. In substance, inside information is notably likened to the determining elements on which the decision of an investor is based. This definition was the subject of an important doctrinal debate, although it was hailed as being more explicit than the texts previously in force¹²¹. The decisions of the AMF, as well as the established case-law of the Court of Cassation, have also largely contributed to defining the notion of inside information more precisely. We will confine ourselves to presenting a few examples taken from recent decisions here. The notion of the precise nature of information was notably detailed: for instance, it must be of a certain

¹¹⁹ Abundant economic literature has discussed the issue of the prohibition of insider dealing from the point of view of informational efficiency. The first significant works on the subject go back to 1966 with the works of Henry Manne “Insider Trading and The Stock Market”. The opponents of the notion of abuse of inside information argue that this type of information contributes to improving the efficiency of markets: it enables to quickly transfer, in the price of the listed instrument, the information of which an insider has been made aware. The freedom to use this type of information would constitute a financial incentive to analyze the operation of companies to assess their value, thus improving the information disclosure process. The advocates of the prohibition to use inside information put forward the principle that the obligation to publish inside information leads to the same informational transfer, without the drawbacks of insider dealing. They also underline that, without the prohibition of insider dealing, the risk of adverse selection could discourage non-insiders from participating in the market or lead them to request a risk premium, thus increasing the financing cost of the companies concerned.

¹²⁰ Article 621-1 of the General Regulation of the AMF: Information is deemed to be precise if it mentions a set of circumstances or an event which occurred or may occur and if it makes it possible to draw a conclusion as regards the possible effect of these circumstances or of this event on the price of the financial instruments concerned or of the financial instruments related to them. Information which, if it was made public, would be liable to have a significant effect on the price of the financial instruments concerned or on the price of derivative financial instruments related to them is information that a reasonable investor would be liable to use as one of the bases of its investment decisions.”

¹²¹ Article 1, paragraph 1 of regulation no. 90-08 of the French Securities and Exchange Commission thus provided that inside information should be defined as “non-public, precise information concerning one or more issuers, one or more securities, one or more transferable forward contracts, one or more listed financial products which, if it was made public, could have an effect on the price of the security, contract or financial product concerned”.

quality and present a high level of certainty. The disciplinary commission considers, for example, that information is be precise enough, according to the provisions of Article 621-1 of the General Regulation of the AMF, if it involves the existence of a project which is sufficiently definite among the parties to have reasonable chances of being successfully completed, regardless of the existence of unknown factors regarding the actual completion of this project. The non-public nature of the information is also assessed for each individual case, as is the criterion of the “significant effect”. For instance, the announcement of the project of a company to make a friendly takeover bid can be considered to be likely to have a significant effect on the price of a security concerned by the bid, as can information relating to the impending nature of an assignment of an interest in the capital of a company.

6.2.2 On commodity markets, the need to protect the confidentiality of some economic decisions taken by players poses limits to the notion of inside information

The European Legislator has chosen a specific definition of inside information for commodity derivative instruments, which is clarified further under national law. In accordance with Article 1, paragraph 1 of the Market Abuse Directive 2003/6/EC of 23 January, 2003 [some elements underlined by us]: *“in relation to derivatives on commodities, ‘inside information’ shall mean information of a precise nature which has not been made public, relating, directly or indirectly, to one or more such derivatives and which users of markets on which such derivatives are traded would expect to receive in accordance with accepted market practices on those markets”*. The definition chosen is therefore close to the one developed for other financial instruments. In addition to the criteria of the precision and non-public nature of information, there is a third criterion, which is more difficult to grasp: the information that market users expect to receive in accordance with market practices. For that matter, these last two elements are not defined. Under national law, however, the General Regulation of the AMF clarifies these criteria. Article 621-2 adapts this definition of inside information and complements the provisions of the directive with two alternative conditions: the users of the markets concerned should expect to receive such information in accordance with accepted market practices when this information is “periodically made available to their users or [underlined by us] made public in accordance with the law, regulations, market rules, contracts or specific practices of the underlying commodity market or of the market in derivative instruments on commodities concerned”. In spite of these clarifications, and in the absence of any established case-law on the subject, the notion of inside information appears difficult to grasp, and is in fact limited to the case where information, which is usually communicated to market players or communicated to them in accordance with the law is withheld. In the case of the CO₂ market, we can imagine the theoretical case in which a company, for instance, did not submit its annual declaration of verified emissions – while it was under an obligation to do so under the provisions of the French environmental law – and wrongly took advantage of this situation to carry out an operation on the market. The whole difficulty lies in the application of this definition to individual cases: for example, it is not in any way evident that the unexpected closing down of an industrial installation during the year would fall within one of the categories defined under national law.

In principle, and from a theoretical point of view, some information relating to the activity of the companies covered by the EU ETS legislation may be considered to fall within the

category of inside information, in accordance with the definitions previously set out, because they risk having a significant influence on the price of European CO₂ allowances.

For all that, the price on the CO₂ market results from the behaviours of all operators covered by the EU ETS legislation: in a way, each operator is an “insider”, inasmuch as its actions (decision to close down an installation, to modify production processes), and therefore any related information, will have an influence on the CO₂ price. The extent of this influence depends on the relative importance of this operator on the market. An obligation for an operator to communicate inside information concerning its own activity could therefore only be justified in order to remedy an asymmetry of information which does not result from the nature of operators, but from their relative ability to influence the price.

This situation is an invitation to define the scope of inside information differently on the European CO₂ market.

Firstly, any overly broad definition of information which is considered as inside information on this market could lead to imposing an obligation to communicate to competitors information relating to the activity or investment strategy of the operator concerned. Some operators could reasonably aspire to keep this information confidential in order to protect their commercial interests. It must be underlined that confidentiality issues regarding the activities of participants are more important in the industrial sectors covered by the European allowances market. These sectors are indeed subject to more acute competition issues than regulated sectors such as the energy sector.

Secondly, a company covered by the EU ETS legislation could reasonably wish to carry out a transaction based on certain internal information, for instance for the sole purpose of hedging the change in the exposure to the price risk induced by a sudden event. The non-disclosure of this information to other operators would thus be justified by the concern to prevent the position of this company from becoming public. It would indeed raise the risk of the market taking advantage of the situation to carry out an arbitrage operation on this operator, making it pay a higher price for its intervention on the market.

The definition of inside information on the CO₂ market should therefore be proportionate and aim to exclusively deal with extreme cases of asymmetry, which may cause, due to their extent, an equity problem, or even constitute a barrier to the participation of the smallest operators. The ongoing deliberations on the gas and electricity markets shed light on this approach.

The notion of sensitive information could be preferred to the very notion of inside information concerning the own activities of operators, sensitive information referring to information concerning an event which is liable to have a significant influence on the market price and to consequently result in a very strong asymmetry of information among the various operators. The notion of inside information appears to be ill-suited, insofar as information on the own activity of an operator is, by definition, inside information.

6.2.3 The will to regulate the use of inside information more stringently on the European gas and electricity markets is based on the existence, on these markets, of strong asymmetries of information related to its concentration

The European Commission has initiated work to define an *ad hoc* regulation framework on the gas and electricity market, following the adoption of the Third Energy Package in 2009. For that matter, it envisages its possible extension to related markets such as the CO₂

market. The Third Energy Package (Directives 2009/72/EC and 2009/73/EC) defined a European framework for the monitoring of wholesale gas and electricity markets by sectoral regulators. It gives investigative power to sectoral regulators and provides for their cooperation with the authorities supervising financial markets and competition authorities. It also imposes data conservation obligations on operators. However, it still appears to be inadequate in the context of the increasing influence of wholesale prices on retail prices, of the regionalization of the wholesale market (while regulators remain national), and of the fragmentation of the market into various applicable regulation systems. Therefore, the European Commission is currently working on the transparency and integrity issues of the gas and electricity markets, which include the question of insider dealing. For this, it relies on the works of the Committee of European Securities Regulators (CESR) and the European Regulators' Group for Electricity and Gas (ERGEG)¹²².

The CESR and the ERGEG have recommended the implementation of an *ad hoc* system for the use of sensitive information. It is based on precise and explicit obligations to publish information. The criterion of the public nature implied the definition of this information as insider information¹²³. This system could draw inspiration from the market rules laid down by power exchange of Nordic countries, NordPool, which forces market participants to communicate extensive information as regards their own electricity production, transmission and consumption activities and assets.

Box no. 24 – The obligations to publish information on the NordPool electricity market

The market rules of the trading platform NordPool prohibit the use of inside information, which has the same definition as the one laid down by the Market Abuse Directive (MAD – 2003/6/EC) for commodity markets. They also impose precise obligations to publish information, defining explicitly the inside information that market players must expect to receive.

In this way, they force any market participant to communicate the following information when it concerns an activity or asset (especially relating to electricity production, consumption or transmission, which the participant holds, controls or for whose equilibrium it is responsible):

- any planned outage, limitation, expansion or dismantling of capacity, in the next-6 weeks period of more than 100MW for one generator, consumption or transmission facility or more than 200MW for one production station, including changes of such plans;*
- any planned outage, limitation, expansion or dismantling of capacity of more than 400MW, for one production station, consumption or transmission facility for the current calendar year and three calendar years forward, including changes of such plans;*
- any unplanned outage or failure relating to more than 100MW for one generator, consumption or transmission facility and more than 200MW for one production station including updates on such outages or failures;*

¹²² “CESR and ERGEG advice to the European Commission in the context of the Third Energy Package - Response to Question F.20 – Market Abuse” <http://www.cesr-eu.org/popup2.php?id=5270>.

¹²³ In accordance with the definition of inside information give by MAD, i.e. information which market participants would expect to receive in accordance with accepted market practices on those markets.

- any other information that is likely to have a significant effect on the prices of one or more listed if made public;

Market rules provide for the following exemptions from the obligation to publish:

- information regarding the Market Participant's own plans and strategies for trading;
- information regarding the Market Participant's installations and business strategies in respect of Allowances;
- information that a Client Representative receives in this capacity as such regarding a Client, as well as any other information conveyed by a Client to a Client Representative related to the Client's pending Orders.
- information regarding another Market Participant that a Market Participant receives from a contracting party when contemplating or entering into a Non-Exchange Trade.

The information must be communicated to the market through a specific information system (Urgent Market Messages – UMM) within 60 minutes following the event generating the information.

Source: NordPool

In the balance between protecting the confidentiality of information on the activity of participants and limiting the asymmetry of information, the emphasis put on the second element appears to be justified on the gas and electricity markets by the existence of particularly marked asymmetries among operators. As part of their recommendation, the CESR and the ERGEG thus underline that “as stated in the final report of the Commission's Sector Inquiry [on the electricity market], there is a general perception that generation data of vertically integrated incumbents is first shared with affiliates and not necessarily at all with other market participants, which undermines confidence in the wholesale markets. This kind of information asymmetry is linked to a poor level of transparency and may lead to market abuse”.

6.2.4 On the CO₂ market, the major risk is posed by regulatory information and consolidated emissions data which must be considered as real inside information: only a limited amount of information on the activity of operators may be defined as sensitive

On the CO₂ market, two types of information, the use of which may be covered by specific obligations, must be distinguished. Firstly, endogenous information, which results from the own activity of a player (such as data on the level of its industrial activity) and which, due to its potentially significant influence on the market price, might be considered as sensitive. Secondly, information which is exogenous to the activity of a market participant, information of a regulatory nature in particular, which might be considered as inside information.

A first question is raised concerning the regulation of the use, by market players, and by those covered by the EU ETS legislation specifically, of information that is endogenous to their activity and relates to sudden events in particular. Indeed, increasing the frequency of disclosure of emissions data could improve overall information of market players and reduce the asymmetry of information among the large emitters and the others. Nevertheless, as this disclosure obligation is imposed with a fixed frequency, it would not make it possible to immediately reveal to the market a specific event which is likely to have a significant influence on the price level such as, for example, the outage of a large emitting installation,

or a delay in the development of an important Clean Development Mechanism project. Therefore, it would not prevent the exploitation by an operator of a strong asymmetry of information.

Due to the fragmentation of emitters and the fact that the market functions on an annual rhythm, few specific events, on the scale of a market participant, are likely to significantly influence the price of CO₂. On the European allowance market, the largest emitting installation indeed only accounts for 1.5% of annual emissions, and only 15 out of 11,000 installations each account for more than 0.5% of overall emissions. Consequently, only large-scale exceptional events on a very limited number of installations (or of installations intervening as a substitute for other installations covered by the EU ETS legislation) are likely to have a significant influence on the price of allowances, and could justify an obligation to inform the market.

The concentration is higher on the international credit market, with the largest project accounting for 3% of the credits currently issued each year for all projects registered with the specialized bureau of the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC). However, only 15 out of over 2,000 projects each account for over 1% of the credits issued each year. Only large-scale events on a small number of important projects could therefore have a significant impact on the price of international credits. In addition, this risk is currently reduced by the stringent project validation process of the UN, and by the verification of the emission reductions obtained, which introduces a high level of transparency on the primary market of international credits.

Consequently, on the CO₂ market, there appears to be a limited amount of information that is endogenous to the activity of operators and is liable to cause a major asymmetry of information. In this respect, the CO₂ market appears to be in a rather different situation than the one prevailing on the gas and electricity markets, where the asymmetry of information is important and where a small number of operators can find themselves in a position to hold non-public information on events which may considerably modify the equilibrium, and therefore the price, of the market¹²⁴.

Table no. 11 – Distribution of the installations covered by the European allowances market according to their relative size

<i>Relative size of the installations (emissions in 2008 in % of overall emissions of the European allowances market)</i>	<i>Number of installations</i>
1% to 1.5%	5
0.5% to 1%	10
<0.5%	>11,000

Source: CITL, CDC Climat Recherche

¹²⁴ Due to the functioning of the market based on an instantaneous equilibrium and on the marginal production cost of the last plant called, as well as to the greater share of the generation capacity that the largest plants represent.

Table no. 12 – Distribution of the CDM projects registered with the UNFCCC according to their relative size

<i>Relative size of projects (credits issued each year by the project in % of the total credits issued by all projects registered with the UNFCCC)</i>	<i>Number of projects registered with the UNFCCC</i>
3% to 3.5%	1
2.5% to 3%	3
2% to 2.5%	2
1.5% to 2%	2
1% to 1.5%	7
0.5% to 1%	15
<0.5%	2032

Source: CDC Climat Recherche, according to the UNEP Risoe data for March 2010

On the other hand, a certain amount of information of a mainly regulatory nature could be considered as inside information. In particular, information relating to the conditions of the supply of allowances (for instance, allowances auctioning methods during phase III), and aggregate emissions data at the level of a country or of the entire European Union¹²⁵, are liable to cause major situations of asymmetry of information which may be used, in their own interest, by market participants. As an illustration, as the consolidation of emissions data is a relatively long process, certain people, notably within the public administrations responsible for this mission and registry administrators, consequently hold, before the surrender of allowances on 30 April of each year, data concerning highly significant shares of the emissions of all installations covered by the EU ETS. The direct use of such information by an operator to take a position on the market, or its communication to a market player, would create a clear situation of illegitimate asymmetry of information. Unfortunately, some precedents have been observed on the CO₂ market. From March-April 2006, the European market indeed experienced a situation of “asymmetrical informational shock”, as the European Commission having determined that the market would probably be “long” by 4% at the end of the first period. The price was then highly volatile until May 2006, before beginning to drop in October 2006, reaching 1€/t CO₂ in February 2007. It is more than likely that some market players had been made aware, before their competitors, of the information held by the Commission, which contributed to increasing the volatility of prices and enabled them to take advantage of this situation by selling their allowances earlier.

On the CO₂ market, it is therefore advisable to distinguish inside information and sensitive information. Inside information appears to relate more to information of a regulatory nature or relating to aggregate emissions data on an extensive range of installations, and

¹²⁵ By definition, this information concerns very important volumes. Without mentioning the consolidated data at EU level to which Community authorities have access, German installations account for over 20% of the total allocation, while the United Kingdom, Poland and Italy account for around 10%.

which is held by public authorities, than to information relating to an installation or project held by market players.

6.3 The prevention of market abuse should rely on a framework concerning the entire CO₂ market

It is essential to protect the CO₂ market from market abuses by an appropriate regulation framework. First of all, it is an economic necessity. The robustness of the price signal must be protected from market manipulations, which may cut the price of CO₂ off from its fundamentals, thus undermining the economic efficiency of the allowance scheme and resulting in an unjustified increase of compliance costs for EU ETS operators. Mitigating the risk of market abuses is also essential to encourage participation the market and the development of market liquidity, by ensuring fair trading conditions. Secondly, it is a political necessity to ensure the permanence of the EU ETS. The materialization of this risk by the revelation of a massive manipulation, by one or several operators, of the CO₂ market, which would cause an unjustified financial transfer from some EU-ETS operators or market players to the originators of the manipulation, could lead to calling into question the existence of the allowance trading scheme. Considering the social benefit of this economic instrument and the current lack of trust in markets, it would be dangerous to bank on the sole self-regulation of the market and on the limitation of risks by its design only.

A market abuse framework defining cases of market abuse and making it possible to impose sanctions on their perpetrators thus appears to be necessary. For that matter, the European Legislator asked the European Commission (Article 12-1 of the amended Directive 2003/87/EC) to perform, by 30 December, 2010, an analysis of the risks of market abuse and, in this respect, to examine the need to implement appropriate regulatory provisions¹²⁶.

Existing regulations are currently inadequate given the risks the CO₂ market is facing. In the absence of any specific regulations, regulations against market abuse indeed stem only from Market Abuse Directive (Directive 2003/6/EC of 28 January, 2003) alone, which, in its current state, is unsuitable for dealing with possible abuses on the CO₂ market.

The MAD only applies to financial instruments – i.e. derivative products – listed on a regulated market¹²⁷. While it consequently covers the trading platforms ECX, EEX and Nordpool, which have the status of regulated markets, multilateral trading facilities (such as BlueNext Derivatives), the OTC market and the spot market fall outside its remit. Therefore, market abuses on the spot market would only be considered as such under the MAD due to their effect on the price of futures contracts traded on a regulated market. As regards the exclusion of multilateral trading facilities from the scope of the directive, the situation might change: the review of the directive, which should be completed in the year 2010, could lead to an extension of its scope.

¹²⁶ Article 12.1a: “The Commission shall, by 31 December 2010, examine whether the market for emissions allowances is sufficiently protected from insider dealing or market manipulation and, if appropriate, shall bring forward proposals to ensure such protection. The relevant provisions of Directive 2003/6/EC of the European Parliament and of the Council of 28 January 2003 on insider dealing and market manipulation (market abuse) may be used with any appropriate adjustments needed to apply them to trade in commodities.”

¹²⁷ Under Article 1, paragraph 13 of Directive 93/22. The list of regulated market is published every year by the OJEU. On the CO₂ market, it includes ECX (ICE), EEX, Nordpool, but not BlueNext. For the articles concerning insider dealing, financial instruments which are not allowed on regulated markets but whose value depends on an instrument allowed on regulated markets are also included in the scope of the directive.

In addition, its current provisions appear to be partly unsuited to the CO₂ market and its specificities. Firstly, it does not define the notion of inside information on specific markets. Apart from the generic definition of this notion for financial instruments¹²⁸, the directive indeed only gives a specific definition for commodity derivatives. Secondly, it only imposes obligations to disclose inside information on the issuers of these instruments¹²⁹. This notion, which is specific to markets in financial instruments, is not relevant on the CO₂ market: neither market participants (including the companies covered by the EU ETS legislation), nor states can be considered as the issuers of allowance derivatives.

A market abuse framework, which covers the entire CO₂ market, including the spot market, and which is suited to its specificities, must therefore be implemented. Firstly, it will need to cover all products, whether they are derivative instruments or spot allowances or international credits, and all trading venues. Secondly, it will need to provide an appropriate definition of market manipulations on the CO₂ market, providing for cases of manipulations involving the taking of combined positions on the spot market and on the derivatives market. In fact, the modifications to be made to the definition of market manipulations as laid down by MAD, and presented in the box below, could be minimal, provided the spot market is taken into account. Lastly, due to the regulatory nature of the market, the regulation framework should make provisions to prohibit market abuses performed by government authorities and public authorities.

The regulation framework should deal with the issue of the use of inside or sensitive information. Firstly, it appears necessary to define as inside information the information concerning the supply of allowances, as well as the information on aggregate emission data¹³⁰. The disclosure of this information to the market must be governed by principles and rules ensuring clear and non-discriminatory access to this information by participants. Improper disclosure of such information, and its use, before it is disclosed, to intervene on the market, must be absolutely banned.

As regards the treatment of sensitive information that is endogenous to the activity of market players, two options can be envisaged.

The first possibility would be a generic definition, inspired by the general definition under the Market Abuse Directive, i.e. any information that is liable to have a significant effect on market equilibrium.

The second possibility would consist in an explicit definition of certain types of information deemed to be sensitive and which operators would be under an obligation to immediately communicate to the market. This obligation would need to be complemented by the prohibition of any intervention on the market before the disclosure of the information. In practice, only a limited range of information appears to be, *a priori*, covered by this definition. As an illustration, it could consist in the long-term outage of large emitting installations, or which are an alternative to large emitting installations (e.g. the closing down of a nuclear plant).

¹²⁸ Article 1, paragraph 1 of Directive 2003/6/EC.

¹²⁹ Article 6 of the Directive 2003/6/EC.

¹³⁰ A reference to a threshold could be introduced.

Considering the work performed at European level on the regulation of electricity markets, it is likely that the regulation framework of electricity markets will include similar, or even more ambitious, obligations to publish.

Given the empirical nature of the definition of sensitive information, the Legislator would be justified to give the Regulator the possibility of extending or amending the list of information deemed sensitive, for the sake of the balance between the cost and efficiency of the regulatory obligations thus laid down.

**Box no. 25 – The definition of market manipulations under the Market Abuse Directive
2003/6/EC**

Article 1, paragraph 2, “market manipulation” shall mean:

Transactions or orders to trade:

- which give, or are liable to give, false or misleading signals as to the supply of, demand for or price of financial instruments, or

- which secure, by a person, or persons acting in collaboration, the price of one or several financial instruments at an abnormal or artificial level, unless the person who entered into the transactions or issued the orders to trade establishes that his reasons for so doing are legitimate and that these transactions or orders to trade conform to accepted market practices on the regulated market concerned;

Transactions or orders to trade which employ fictitious devices or any other form of deception or contrivance;

Dissemination of information through the media, including the Internet, or by any other means, which gives, or is likely to give, false or misleading signals as to financial instruments, including the dissemination of rumours and false or misleading news, where the person who made the dissemination knew, or ought to have known, that the information was false or misleading.

In particular, the following instances are derived from the core definition given in points a), b) and c) above:

Conduct by a person, or persons acting in collaboration, to secure a dominant position over the supply of or demand for a financial instrument which has the effect of fixing, directly or indirectly, purchase or sale prices or creating other unfair trading conditions;

The buying or selling of financial instruments at the close of the market with the effect of misleading investors acting on the basis of closing prices;

Taking advantage of occasional or regular access to the traditional or electronic media by voicing an opinion about a financial instrument (or indirectly about its issuer) while having previously taken positions on that financial instrument and profiting subsequently from the impact of the opinions voiced on the price of that instrument, without having simultaneously disclosed that conflict of interest to the public in a proper and effective way. The definitions of market manipulation shall be adapted so as to ensure that new patterns of activity that in practice constitute market manipulations can be included.

Advice no. 17: promote the elaboration of a European market abuse framework that is suited to the CO₂ market, governs the utilization of sensible and privileged information and covers all traded products as well as trading venues.

Advice no. 18: provide for sanction mechanisms for market manipulations by governmental and public authorities.

Advice no. 19: define as privileged information, on the CO₂ market, regulatory information on the supply of allowances and aggregate emissions data.

Advice no. 20: define and list as sensitive information, on the CO₂ market, data a given player has on its own activities or installations and likely to have a significant impact on market price. Regulators should be allowed to extend the list of sensitive information, if needed.

6.4 The regulation framework for market abuse could provide for the possibility of introducing position limits or maximum bid-size

The introduction of prudential measures, in the form of position bidding limits or maximum bid-size, could also be envisaged. Position limits and maximum bid-size are aimed at setting a cap on the number of allowances or derivative instruments that a given investor may hold and therefore at preventing market manipulations based on dominant positions. They may also be aimed at limiting the positions taken by an operator on the secondary market, or at limiting the number of allowances that an operator may acquire during auctions.

As a comparison, it must be underlined that the introduction, in the United States, of position limits on energy commodity markets, as put forward by the Commodity Futures Trading Commission (CFTC), is the subject of increased attention and interest. In the United States, position limits exist on most agricultural commodity markets, and their introduction goes back to the adoption of the Commodity Exchange Act in 1936. They are accompanied with exemptions for positions taken for hedging purposes, whether to hedge physical positions or positions resulting from the sale of a hedging product to a third-party participant. However, the CFTC never imposed federal position limits on energy markets¹³¹. The approach of the CFTC concerning position limits on energy markets has recently evolved, notably following the sudden rise in oil prices in 2008, which may have partly resulted from the speculative activities of certain players, although this has never been proved quantitatively. The CFTC thus published, on 14 January, 2010, a proposal aimed at introducing position limits on the main energy markets (oil, domestic fuel-oil, natural gas and gasoline). It provides for a combination of position limits on both aggregate positions

¹³¹ It entrusted trading exchanges with this task, in accordance with a regulation introduced in 1981 which forces exchanges to determine position limits in the absence of any federal limits. This is how position limits were established by the NYMEX on forward oil contracts. This constraint was successively reduced by a CFTC regulation in 1999 (authorizing trading exchanges to replace limits on positions which do not concern the current month by warning thresholds beyond which the trading platform may request information from the operator concerned), and then by the Commodity Futures Modernization Act (CFMA) of December 2000, which further weakened the position limit system by letting exchanges choose between quantitative position limits and warning thresholds.

and positions concerning a specific maturity date or contract. The proposal maintains the exemption commercial players benefit from when using futures contracts for the purpose of hedging the risks resulting from their activities on physical markets. However, the sellers of hedging products would now only benefit from a partial exemption enabling them to hedge their risks outside the current month, provided they do not engage in speculative activities.

Box no. 26 – Position limits on energy markets proposed by the Commodity Future Trading Commission (CFTC)

The following positions limits were proposed by the CFTC on 14 January, 2010:

- *an aggregate position limit (i.e. concerning a given product – for instance, oil – on all trading platforms, all contracts whose underlying asset is the product in questions and all settlement methods – in cash or via physical delivery) set for all maturity dates at 10% of open interest for the first 25,000 contracts and at 2.5% beyond that;*
- *an aggregate position limit for a given maturity date equivalent to 2/3 of the limit, all maturity dates taken into account;*
- *for contracts with a physical delivery, a limit on open positions during the last month of listing equal to 25% of volumes available for delivery;*
- *a position limit for each trading platform equal to 30% of open interests.*

Source: CFTC, Directorate for Energy

However, the setting of position or control limits is a complex process, whose efficiency relies on two prerequisites.

The first one is for the oversight authority to develop an understanding of market operation that is sufficiently refined to set the limit at an appropriate level. The ceiling must indeed be set at a level that is sufficiently low to effectively prevent the concentration of positions, without unduly limiting the capacity of operators to intervene on the market. Insofar as, following the example of the American system, it appears justified to provide for an exemption for the companies covered by the EU ETS that intervene on the market for hedging purposes only; the constraint would mostly concern entities that intervene on the market to propose hedging products or for speculative purposes. By limiting the activities of these operators, an overly low ceiling could prove to be detrimental to the development and liquidity of the market. The setting of position limits – maximum bid-size – at an efficient level thus requires having precise quantitative information on the positions taken by players and thus presupposes the existence of a data reporting system towards oversight authorities as regards transactions and positions.

The second one is that the regulator must be able to enforce the limits enacted. The verification that market participants observe limits calls for the precise and continuous monitoring of the transactions carried out and the positions taken by operators. This monitoring must be performed on all trading venues, the most relevant information being the aggregate position taken by an operator for all the contracts traded. It is here a matter of being able to assess the position taken by a given operator on all contracts with a delivery date in December 2011 and traded on ECX, EEX, Nordpool, BlueNext and even the OTC market. The oversight authority must also be able to identify the bypassing strategies, which may lead, for example, an operator to build a position exceeding the limit determined by intervening under various identities, or via a series of intermediaries, which may hide its

identity. A reporting system for transactional data is thus also essential for the regulator to be able to enforce the limits laid down. To enforce federal position limits on agricultural commodity markets, the CFTC relies on a reporting system on the positions taken by market players, the Large Trader Reporting Program, which is presented in the following box.

Box no. 27 – The Large Trader Reporting Program of the Commodity Future Trading Commission (CFTC)

The CFTC set up an extensive system to collect data on the positions taken by market players, from exchanges, clearing houses, brokers and directly from traders.

First of all, exchanges must communicate confidential information on the aggregate positions and trading activities of each of their members to the CFTC. Every day, long and short positions, and the operations performed by each member are reported by the trading exchange to the CFTC, for each type of contract and for trading on one's own account and trading on behalf of third parties separately.

However, data which only concerns the members of an organized market does not, in itself, make it possible to identify the positions taken by traders on the market: the position of a member of the organized market is the combination of the positions of many of its counterparties, when this member intervenes on behalf of third parties. In addition, a trader wishing to take an important position on the market can go through several members of a trading exchange at the same time.

Therefore, in addition to the reporting obligation imposed on trading platforms, the CFTC introduced a daily obligation to declare traders' positions when they exceed a certain threshold determined by the CFTC. This obligation is imposed on both trading exchange members and brokers. In this way, a broker with a client whose position on a given contract exceeds the threshold set by the CFTC would be under an obligation, at the end of the day, to declare all the positions taken by this client on all contracts with the same underlying asset.

Data thus collected is published every week by the CFTC, in an aggregate format for each type of operator.

This twofold reporting system, which applies to both trading platforms and intermediaries acting on behalf of third parties, thus enables the CFTC to have a relatively accurate view of traders' positions each given day.

Source: CFTC

Moreover, limits that only concern the positions taken on trading platforms or organized markets could have the pernicious effect of transferring transactions to OTC markets, which are not subject to position limits. To be efficient, position limits should therefore apply to both trading platforms and the OTC market and rely on a reporting system for all transactions.

These considerations thus lead to favouring, at least initially, the implementation of a transaction reporting system that will enable the Regulator to improve its understanding and knowledge of the strategies and positions taken by market players. The Regulator will then be able, as needed, to determine quantitative position limits at appropriate levels, making it possible to mitigate the effects of possible market manipulations without undermining market liquidity. They could limit: i) the position taken by an operator in

relation to the entire open interest on the CO₂ market and in relation to the open interest for a given maturity date and/or ii) set a limit for the position taken by a player on the spot market and for all forward contracts with physical delivery during the current year, to be determined in reference to the size of the underlying market (i.e. the number of allowances allocated).

In order to enable the Regulator to deal with situations of market manipulation, the regulation framework envisaged could nevertheless already give the regulator the power to set position limits, if it deemed that such provisions were necessary to protect the market.

Advice no. 21: in order to protect the CO₂ market from market manipulation, give Regulator(s) the possibility of setting position limits, if they deem it necessary.

7 An integrated market supervision framework should be quickly implemented for the European CO₂ market

The supervision of the CO₂ market raises a certain number of complex issues.

The oversight of a “classic” market typically involves five main missions: controlling the accuracy of information in relation to market fundamentals; controlling market and post-trade infrastructures; monitoring trade, in order to detect possible cases of market misconduct; controlling the proper implementation of rules of conduct by market players, and especially by intermediaries; and taking disciplinary action against those breaking the rules in force following a check or inquiry.

While these aspects are all relevant on the European CO₂ market, specific issues complement them.

Firstly, the operational methods for the surveillance of transactions differ from those of a classic financial market. While they are, in this latter case, based on an approach aimed at identifying unusual fluctuations on certain assets among the many securities listed, the surveillance of the CO₂ market calls for an analysis of a market as a whole, which derives from physical or industrial underlying assets, and whose price, as well as the strategies of its participants, result from a process of fundamental equilibrium between the supply of allowances, which is predetermined, and the demand, which result from a series of “real” drivers. In this respect, the CO₂ market is similar to commodity markets. It is also a market on which the number of products traded is very low (in practice spot allowances, international credits and allowance derivatives with various maturity dates).

Secondly, as the European CO₂ market is a regulatory market, its surveillance must take into account the issues relating to the control and imposition of sanctions on the behaviour of national public authorities, and be able to ensure that Member States fulfil their obligations¹³².

Lastly, from 2013, the supervision of the European CO₂ market will need to integrate the setting up of a primary market for the auctioning of allowances. Any thought given to the oversight of the European market must take this evolution into account. In this respect, on the date where the present report was handed in, a fundamental uncertainty remained as regards the organization system of auctions. The draft regulation proposed by the European Commission had indeed not been the subject of a vote by the Climate Change Committee yet. The elaboration of the draft regulation was delayed by the systematic opposition of a minority of Member States to the option of a single auction platform. The project that was

¹³² This role is now, at least in theory, entrusted to the European Commission, which is responsible for enforcing the rules regarding the cap on CO₂ emissions. In this way, during phase I and II of the market, the European Commission carried out an arbitrage operation on the determination of the National Allowance Allocation Plans (NAAPs), and initiated, as needed, proceedings for failure to fulfil their obligations against the states violating the rules of Directive 2003/87/EC. Let it be reminded that the European Commission thus decided, in 2009, to stop the allocation of allowances to French electricity producers, challenging the system which has been implemented by French authorities within the framework of Article 8 of amending finance law no. 2008-1443 of 30 December, 2008 for the year 2008, under which the principle of the allowances allocated free of charge to this sector was abandoned, in order to remedy the calibration flaws of the new entrant reserve.

finally proposed by the European Commission is in surprising contrast to the preparatory work, which seemed to ensure continuity with the proposals of the CHARPIN report.

The issue of the supervision of the European CO₂ market can be envisaged in relation to four main questions.

First of all, it is necessary to determine how to organize the surveillance and supervision of the primary market and secondary market. Secondly, there is the issue of the appropriateness of a possible separation between the oversight of the derivatives market and that of the spot market. Thirdly, the issue of the institutional structure is raised: which regulator(s) should be entrusted with the oversight of the market? Several solutions can be envisaged: making the CO₂ market part of the remit of the financial regulator(s), of the energy regulator(s), dividing responsibilities between these regulators, or installing one or several *ad hoc* oversight authorities. Lastly, it raises the issue of the appropriate level of surveillance: European or national. The answers to all these questions will determine the desirable oversight framework for the European CO₂ market.

7.1 As European and national positive law stand at present, no authority has jurisdiction over the entire European CO₂ market and the spot market is not governed by any common supervision rules

A mission for the surveillance of the European CO₂ market has been entrusted to the European Commission¹³³. While the Commission currently fulfils this duty via an annual report on the operational state of the market, it does not however enjoy any general and systematic powers of intervention¹³⁴, and therefore only has its traditional power of initiative. Furthermore, its right to impose possible sanctions on a Member State is limited to the traditional action for the failure to fulfil obligations. The mission it is thus entrusted with and, consequently, the means available for its fulfilment are thus much inferior to those usually implemented for the surveillance of financial markets. As observed by the CHARPIN report: “These gaps can only be filled in an inventive manner by the European legislator, who has no explicit mandate per se in the directive to set up an institutional and regulatory framework to regulate the market”. Indeed, it is striking to observe that when it decided to create the first European regulatory market, the European Legislator made the choice to limit the powers of the European executive branch. This observation is all the more striking as the European CO₂ market was almost entirely built, at least for its first two phases, on the principle of subsidiarity. The choice to decentralize a very important part of the constitutive elements of the market (for example, the definition of National Allowance Allocation Plans), which may induce uncooperative and potentially destabilizing behaviours by Member States, has not been offset by increased powers given to the European level.

However, a significant part of the European CO₂ market is supervised, as a market in derivative financial instruments, by national financial regulators. The scope of surveillance

¹³³ Under Article 10.5: “the Commission supervises the operation of the European carbon allowance market”. It is responsible for submitting an annual report to the European Council and Parliament on the functioning of the market, the implementation of auctions, market liquidity and volumes traded. The role of the Commission is simply to consolidate the information communicated by Member States, two months before the year ends.

¹³⁴ Under Article 29.1, should there be evidence of obvious problems in the operation of the market, the Commission shall submit a report to the European Council and Parliament, accompanied by proposals aimed at improving the transparency of the market as well as its operation.

by financial markets authorities, as defined by the MAD and the MiFID, is limited to exchanges: regulated markets – such as the ECX market in the United Kingdom – or Multilateral Trading Facilities (MTFs) – such as BlueNext Futures. The provisions of the Market Abuse Directive, and consequently the powers that it gives to the competent authorities, only concern regulated markets¹³⁵. MTFs are covered in a less stringent way by the obligations of surveillance imposed by MiFID on MTFs themselves, with an obligation to notify the proper authorities when they suspect cases of fraud or market abuse. However, the next review of the MAD should, probably extend its scope to MTFs. Derivatives exchanges thus fall within the remit of the authorities supervising financial markets. As the main part of exchange trading is currently in London (the trading platform ECX in itself accounts for nearly half of the volume traded¹³⁶), the British Financial Services Authority in fact, mostly supervises the European allowance derivatives market.

On the other hand, the spot market and the market of commercial forward contracts are largely exempt from any oversight by the regulatory authorities of the financial or energy markets. In France, under Article L.621-1 of the monetary and financial law, the remit of the *Autorité des Marchés Financiers* (AMF – the French financial markets authority) is strictly limited to financial instruments. In this respect, the French situation appears to be especially unsatisfactory, notably in relation to the regulation and supervision of the Paris-based exchange: BlueNext. Indeed, in accordance with existing provisions, the AMF formally approves market rules and control their implementation, on the derivatives market compartment of BlueNext only, but not on the spot market compartment, even though the latest accounts for the major part of traded volumes¹³⁷. Similarly, the national energy regulator, the *Commission de Régulation de l'Énergie* (CRE – the French Regulatory Commission for Energy), does not have jurisdiction to handle the CO₂ spot market. The monitoring and surveillance mission of the CRE, which is given concrete expression by the exercise, if needed, of its investigative and disciplinary powers, is indeed limited to the electricity and natural gas markets¹³⁸.

The situation is however different in Germany, as shown in box 18. On the one hand, the scope of the article of the federal law on transactions in securities relating to the prohibition of market abuse has been extended to CO₂ allowances. On the other hand, the obligations of surveillance of regulated markets which, under the German law on exchanges¹³⁹, are incumbent upon the exchanges themselves, cover both the spot and the derivatives market. Therefore, the spot market is, *de jure*, covered by the threefold German supervision system for regulated markets: i) a direct surveillance of transactions is carried out by a supervisory body specific to the regulated market, independent from the market company operating the trading platform and dependent upon the supervisory authority of the trading platform, i.e.

¹³⁶ Trading platforms account for 50 to 60% of the volumes traded on the market, and ECX accounts for 90% of the volumes traded on trading platforms.

¹³⁷ In 2009, the volume of trade for the spot contract on European allowances listed on Bluenext was of over 12.5 billion euros (i.e. 1,000Mt of CO₂), as opposes to over 4.4 billion euros in 2008. Forward contracts on European allowances, all maturity dates taken into account, represented 2.4 million euros (i.e. 185,000 tonnes) in 2009, as opposed to 39 million euros and 1.6Mt in 2008.

¹³⁸ Article 28 of law no. 2000-108 of 10 February, 2000 relating to the modernization and development of the public electricity service sets out the areas of competence of the CRE in a restrictive way.

¹³⁹ German Exchange Act of 2007 (“Börsengesetz”).

the Ministry of Economy of the *Länder*¹⁴⁰ where the platform is located, ii) a supervision of the regulated market, in the sense of MiFID by the Ministry of Economy of the *Länder* and iii) a supervision of the proper implementation of the rules concerning market abuse by the Federal Financial Supervisory Authority (BaFin). Direct responsibility for conducting inquiries and imposing sanctions also falls within the remit, for the first one, of the surveillance body and, for the second one, of a disciplinary commission specific to the regulated market.

Nevertheless, the main part of the CO₂ spot market remains unsupervised by public authorities, as BlueNext accounts for almost all spot transactions performed on exchanges (over 85%).

The lack of any surveillance over a significant share of the market increases the risks of market abuse and market misconduct. It also constitutes a factor of suspicion, by market participants and by public opinion in general, as regards the functioning of the European CO₂ market.

Moreover, the lack of oversight of the spot market undermines on the oversight of the derivatives market, as the competent regulatory authorities lack visibility on an entire share of the market.

7.2 The European CO₂ market should be the subject of integrated oversight organized around a central registry for transactions

7.2.1 The surveillance of auctions and the supervision of the secondary market should be coordinated

The setting up of auctions will have very important consequences on the operation of the European CO₂ market, and the interactions between the two market segments will be constant. This thus raises the issue, on the one hand, of the oversight of the primary market itself and, on the other hand, of the coordination between the oversight of the primary market and that of the secondary market.

The option of a single auction platform, which is advocated by France, would facilitate the oversight of the primary market by a simple and efficient system. Beyond the economic arguments in favour of a single auction platform, this solution would also be much preferable from the regulator's point of view. It would make the surveillance of the process relatively easy to devise and implement, and would reduce the risks related to auctions.

Within this context, the European Commission had proposed a specific two-level system for the supervision and monitoring of auctions, which provided guarantees, without however creating a supervisory authority with real powers.

At the first level (European), the Commission proposed that an independent supervisory entity be responsible for ensuring that the auctioning rules were observed and that the auctioning process was conducted properly. The accredited entity (in practice, a private auditor), acting on behalf of Member States, would be selected through a competitive tender. It would be in charge of monitoring the compliance of the exchange selected for the auctions, to the auctioning regulation and to the specifications of the purchase agreement. The missions of the auction monitor would also include analyzing the implementations of the auctions, and could made recommendations aimed at improving auctioning methods.

¹⁴⁰ In this case, the, the Ministry of Economy and Labour of the Land of Saxony (Sächsische Staatsministerium für Wirtschaft und Arbeit, SMWA) for the EEX exchange platform.

However, its powers remained limited to identifying the problems encountered during the auctioning process and to making a report to Member States and the Commission if a problem is observed.

At the second level (national), the Commission proposed to entrust the supervision of auctions, as a regulated market, to the national financial regulator of the Member State in which the single auction platform would be located. The national financial regulator would be responsible for preventing the risks of money laundering, financing of terrorism and market abuse. Coordination would be organized between the competent national authority of the Member State in which the auction platform would be located and the central auction monitor.

This plan appears to be relatively easy to implement: it made it possible to rely on the remit of a national financial regulator while introducing a European oversight over the auctioning system that would have been transparent for all operators. In practice, however, the system proposed by the European Commission entrusts most of the responsibility for supervising auctions to a single national regulator, and only gives very limited powers to the supervisory authority at Community level. This simple system fit well the system of a single auctioning platform, which raised fewer risks than a system organized according to the principle of subsidiarity.

Within the context of a decentralized organization of auctions, the introduction of increased supervision over auctions at European level appears to be all the more necessary. In the draft regulation officially submitted to Member States, the European Commission finally proposed the setting up of a common auction platform, but left the Member States wishing to set up a national platform the possibility to do so. In practice, if it is adopted, this plan is likely to lead to the setting up of seven to eight auction platforms in Europe.

The coexistence of several platforms, or even of several different auctioning systems¹⁴¹, would obviously be a risk-increasing factor for the primary market. The proliferation of uncooperative behaviours, or even of strategies to bypass regulations, by the states participating in the auctions, with a view to capturing the primary market, or to maximizing the proceeds from auctions, must obviously not be ruled out.

Consequently, if a decentralized organization of auctions were to be adopted, it would, first of all, be essential to lay down strict and harmonized rules, in order to reduce the risk of regulatory competition among different Member States and to ensure the integrity of the market. It would then be advisable to consolidate the supervision system at European level, in order to be able to monitor the observance of these rules by both states and the platforms themselves, and to impose sanctions in the event of a breach.

Two options could be envisaged.

The first one would be the setting up of a centralized European entity in charge of supervising auctions, which would have strong disciplinary and injunctive powers. This organization could not be limited to a private entity selected through an invitation to tender:

¹⁴¹ Let it be reminded that in Europe, two auctioning systems, whose principles are very different, currently coexist: auctions via carbon exchanges (Germany, Netherlands, Austria, Ireland) and auctions via an intermediation system by operators specifically selected to participate in auctions on their own account or on behalf of other market players (United Kingdom, Netherlands).

it would need to be a supranational organization, with genuine prerogatives of public authorities.

The second one would be to significantly reinforce the prerogatives of the European Commission by giving it strong injunctive powers with respect to auction platforms, and even Member States.

Advice no. 22: continue to support the centralized auctioning platform in Europe, which would ensure the efficiency and facilitate the supervision of the primary CO₂ market.

Put the case for a centralized oversight of auctions by an authority having real injunctive and disciplinary powers with respect to the auctioning authorities and the auction platforms.

In all cases, the oversight of the primary market and of the secondary market should be closely coordinated. From an economic viewpoint, separating the oversight of the primary market from that of the secondary market does not appear to make any sense, as they are both an integral part of a same system: the European CO₂ market. The price of emissions on the primary market will notably be determined by the price prevailing on the secondary market. Yet, the appropriateness of entrusting the supervision of auctions and the surveillance of the secondary market to a single entity is not obvious. Indeed, in addition to the usual work to analyze and supervise transactions, there is a specific need for the analysis and surveillance of the conditions under which the auctioning procedure is carried out, which could be performed by a different operator, provided that the supervisory authority of the secondary market has access to the results of auctions and, if needed, within the framework of a thorough inquiry, on the details of an auction – for instance, the details of the offers made by operators (proposed prices and associated volumes). Regardless of the scenarios of organization of the auctions in Europe, it will be essential for the authorities in charge of supervising auctions to communicate all the information available to the authorities responsible for supervising the secondary market, at both European and national level.

7.2.2 The oversight of the spot market and the derivatives market should be entrusted to the same authority

In practice, the spot market and the derivatives market for CO₂ represent one single market. While, from an economic viewpoint, they fulfil different purposes, since the spot market is a compliance management market and the derivatives market is a risk-hedging market, in practice, the only fundamental difference between the derivatives market and the spot market for CO₂ is the date of settlement and delivery of allowances. In both cases, transactions are aimed at resulting in a physical delivery that will ultimately enable operators to meet and optimize their compliance requirements. The development of allowance options, which can be observed, slightly moderates this observation, but is not sufficient to make it invalid. This situation clearly sets the CO₂ market apart from commodity markets, on which the spot market is a physical market separate from the derivatives market and involves specific issues regarding the quality of products and the use of facilities for production, storage, transport, interconnections, etc.

Consequently, entrusting the surveillance of the spot market and the derivatives market to a single authority is justified by efficiency requirements. Foreign examples shed some light on the matter. In the United States, the Feinstein-Snowe bill explicitly provides to entrust

the Commodity Futures Trading Commission (CFTC) with the mission of supervising both the spot market and the derivatives market¹⁴². In the United Kingdom, the decision made by the Financial Supervision Authority to recognize allowances with a deferred settlement-delivery beyond 48 hours on ECX as financial instruments was, according to British authorities themselves, largely motivated by considerations of appropriateness. It allowed the FSA to remain in charge of the oversight of the entire market. The American and British systems started from the same assessment: the interactions between the physical / spot CO₂ market and the derivatives market are so important that placing the two segments under the surveillance of two different authorities would considerably reduce the efficiency of market supervision. In practice, it thus appears to be more operationally sound for the entire market to be supervised by the same authority, which would notably ensure an efficient cross-segment monitoring. This provision alone could constitute a safeguard against attempts at cross-market manipulations between the spot market and the derivatives market.

The remit of the supervisory authority should also be extended to the OTC market. It is indeed essential to have a single authority having comprehensive view of the functioning of the market and of all its segments, regardless of trading venues, all the more so since the OTC market currently accounts for 40% of the volumes traded.

7.2.3 Regardless of the institutional choice made, oversight authorities should rely on a collection system of transactional data.

The fundamental condition of efficiency of any oversight system is for regulatory authorities to have access to transactional data. For that matter, this issue is not specific to the European CO₂ market and has notably been the subject of specific proposals by the European Commission within the framework of its communication COM(2009) 553 of 20 October, 2009 “*Ensuring efficient, safe and sound derivatives markets*”. In this document, the European Commission observed that the lack of transparency of transactions with respect to regulatory authorities had constituted one of the major brakes on the surveillance of derivatives markets regarding systemic risks and market abuse. On the basis of existing law, let it be reminded that today, only investment firms are subject to obligations to keep the data concerning financial instruments¹⁴³. Moreover, investment firms alone are subject to reporting obligations to financial regulatory authorities, and exclusively for transactions concerning instruments admitted to trading on regulated markets¹⁴⁴.

For the purpose of improving transparency, the European Commission has notably proposed to implement a system of central registries for transactions on derivative products. For the Commission, it would notably be a matter of imposing on market players the obligation to declare to central registries their positions and all transactions that are not centrally cleared (bilateral). Data on the transactions carried out on exchanges or cleared through clearing houses could be directly provided by these entities. In practice, for the European Commission, reporting obligations should therefore mainly weigh on exchanges (regulated markets and multilateral trading facilities) and clearing houses, but also on brokers, which would be responsible for making regular reports on the transactions for which they act as an intermediary.

¹⁴² APPENDIX VI – American bills on the regulation of the federal CO₂ market.

¹⁴³ Directive 2004/39/EC, Article 25, paragraph 2.

¹⁴⁴ Directive 2004/39/EC, Article 25, paragraph 3.

All or most transactions on derivative products should thus be covered by a reporting system to central registries. Transactional data would then be made available to national financial regulators, under the supervision of the European Securities and Markets (ESMA).

During the year 2010, the European Commission should elaborate legislative proposals on the constitution, regulation and supervision of central registries, and propose to improve the transparency on transactions, within the framework of the review of MiFID (Directive 2004/39/EC on markets in financial instruments), for all derivatives markets, including commodity derivatives.

A central registry of transactions on the European CO₂ market should be introduced before the market enters into its third phase. It is indeed advisable to capitalize on the proposals of the European Commission on central European registries, by promoting the implementation of this type of system on the European CO₂ market.

In order to make it possible to apprehend the entire market, it would be advisable to ensure the reporting of transactions regardless of trading venues (organized and OTC markets). On the OTC market, and especially on the spot market, definite and specific volume thresholds, which would trigger the reporting obligation for transactions, could be implemented, in order not to subject small installations to expensive obligations concerning transactions on very small volumes (thus having no potential impact on the market), within the context of mere compliance adjustments, which are generally performed once a year.

Furthermore, in order to improve efficiency, it appears possible to envisage the setting up of a central registry shared with other markets related to the European CO₂ market, and notably the gas and electricity markets. This would make it possible to benefit from economies of scale and to facilitate cross-analysis work by the regulatory authorities of the CO₂ and energy markets.

Advice no. 23: implement a centralized European reporting system for all transactions on the CO₂ market and ensure that this information is made available to the regulation authorities identified.

In order to favour the efficiency of the price formation process, making consolidated information on transactions available to market players could be considered. Exchange could thus be under an obligation to publish, under acceptable commercial conditions and in real time or in near-real time, selling and buying prices and the importance of trading positions expressed in these prices (pre-trade transparency). The MiFID lays down such pre-trade and post-trade transparency obligations, but only on organized stock markets¹⁴⁵. Although access to information both before and after trade is currently deemed satisfactory by market players, the introduction of a guarantee of a regulatory nature aimed at ensuring the efficient diffusion of the price signal appears to be justified, inasmuch as its robustness is one of the essential elements conditioning the effectiveness of the CO₂ market. The publication of consolidated and anonymous data on post-trade information (transaction prices and volumes) could rely on the reporting system of transactions to regulators, while ensuring the confidentiality required on the transactions carried out.

Advice no. 24: consider, building on the established reporting system, the disclosure of aggregate data on transaction prices and volumes on the CO₂ market to market players.

¹⁴⁵ Articles 29 and 30 of the MiFID (Directive 2004/39/EC) for MTFs; Articles 44 and 45 for regulated markets.

7.3 The oversight of the European CO₂ market should turn to good account the comparative advantages of existing authorities: a cooperation should be implemented between the financial regulator and the energy regulator

The debate regarding the choice of the proper regulatory authority raises the issue of whether to affiliate the CO₂ market to the scope of financial regulations, energy market regulations or of an *ad hoc* framework. The points discussed in the present report tend to demonstrate that the European CO₂ market involves specificities that call for the elaboration of an appropriate regulation framework, even if it is largely inspired by the provisions on financial markets, or even energy markets. For all that, the question of the comparative advantages of three conceivable institutional solutions to ensure the supervision of the European CO₂ market must be raised: to entrust this mission to a new *ad hoc* entity, to a financial regulator, to an energy regulator, or to divide responsibilities between the two. For that matter, none of these solutions rules out any of the choices which may be made as regards the appropriate level of surveillance – national or European.

7.3.1 The creation of an ad hoc European supervisory authority for the European CO₂ market appears to be intellectually appealing but difficult to put into practice before 2013

The creation of an oversight authority that is entirely specific to the CO₂ market appears to be appealing after a first analysis. This option would have a symbolic significance: it would also have the objective merit of creating a tool that is entirely suited to the specificities of the European CO₂ market to ensure its operational oversight.

It would only make sense at European level: at first sight, the European nature of the CO₂ market militates in favour of an integrated surveillance and supervision structure at Community level. Unlike energy markets, which are made up of a group of interconnected national markets, the CO₂ market knows no geographical differentiation. As for the price signal of CO₂, it is European by nature, the balance between the demand and supply of allowances being found at the level of all installations covered by the EU ETS legislation. All of these arguments thus militate in favour of a single supervisory authority of the European CO₂ market and of a single auction platform. As the market oversight architecture is not fully organized at present, the European Legislator is facing with a blank page, on which it could draw the outline of a single supervisory authority.

The creation of a specific European supervisory authority for the European CO₂ market could thus be envisaged. In practice, it would cover the scope of both the regulatory organization of the allowance trading scheme (cap-related elements) and the supervision and surveillance of the market (trade-related elements). This “European Carbon Market Authority” would be in charge of elaborating the operating rules of the market, within the framework provided by the Legislator. It would be in charge of the operational surveillance of the primary and secondary markets and of all their segments, and would have injunctive and disciplinary powers with respect to operators. It would ensure the centralization of data on market fundamentals, in collaboration with the entities responsible for data management on the gas and electricity market, and of information on transactions, in collaboration with the entities or authorities responsible for data management on financial markets. Lastly, it would be in charge of analyzing market fundamentals. In order to improve efficiency, it

would need to cooperate, in a formalized way, with the future European Energy Market Authority.

In the short term, the setting up of this authority, intellectually appealing as it may be, appears to be difficult. It would involve the creation of an entirely new oversight structure, without capitalizing on the experience and know-how of national, and notably financial, regulators. Given the heaviness of the European legislative agenda as regards climate, the creation of this “European Carbon Market Authority” could thus be rendered difficult in the next two years. Firstly, the creation of such an authority would only be relevant on the condition that it is entrusted with the responsibility for all segments of the European CO₂ market (primary/secondary; spot market/derivatives market). It would thus have the consequence of taking the surveillance of the derivatives market away from national financial authorities, even though these authorities have the greatest stock of experience and skills on the subject. Therefore, it is uncertain that the creation of an entirely new structure would provide real guarantees of effectiveness for the operational oversight of the market. Secondly, it would call for the creation of a new entity, which would need to have operational means for market supervision. At the very least, we can question the practicability of such a solution in the short term, which is to say before the market enters into its third phase in 2013. This observation is all the more realistic as the agenda for the implementation of the climate and energy package is especially full until 2012, and as the European Commission has just begun reorganizing itself to give the new Climate Change Commissioner the means required to fulfil its missions. Most importantly, it would be advisable to prevent this proposal, which does not appear to receive the spontaneous support of the main Member States, especially Germany and the United Kingdom, from being the focus of European debates, and from blocking any progress on other issues with higher priority for the European CO₂ market, such as the introduction of the regulation framework itself. While it is advisable to quickly implement an efficient system for the regulation of the European CO₂ market before 2013, promoting the creation of an entirely new regulation authority could thus appear to be counter-productive. This point should be the subject of more in-depth discussions with the European Commission, the next states to hold the Presidency of the Council (Belgium, Hungary, Poland), but also our European partners.

These arguments must not lead us to dismiss the idea of a new European authority for the regulation of the European CO₂ market: they certainly are an invitation to think about the actual missions it could be entrusted with.

Nevertheless, they lead us to favour an approach which relies on the existing regulatory authorities in Europe, which have the powers, rules and means required to carry out daily market surveillance operations, launch immediate inquiries and impose sanctions, without ruling out consolidation at European level for certain missions.

Advice no. 25: evaluate the practicability of a “European Carbon Market Authority” with the European Commission and our main European partners.

7.3.2 *The supervision of the European CO₂ market should turn to good account the comparative advantages of the existing regulatory authorities on financial and energy markets*

Entrusting the supervision of the CO₂ market to the financial regulator alone or to the energy regulator alone would not fully turn to good account their comparative advantages and respective skills.

A priori, the current structure of the market, which is mainly composed of derivative products, militates in favour of entrusting market supervision to the financial regulator. In this respect, entrusting the responsibility for the spot and commercial forward contracts segments to the financial regulator would actually give it the means to fulfil the surveillance mission it already performs on the derivatives market, by giving it access to the information it currently lacks to efficiently supervise the derivatives market. The financial regulator also has experience and proven capabilities for identifying abusive or fraudulent behaviours on organized markets, and has developed methods for analyzing transactional data and identifying risks, as well as the procedures required to launch immediate inquiries. Lastly, entrusting it with the mission of regulating market structures and intermediaries comes quite naturally, as it already fulfils these missions on the derivatives market. However, the financial regulator does not have a thorough knowledge of the physical CO₂ market, or the skills required for the monitoring of other similar markets, whose operation influences the formation of carbon prices and which could be the subject of cross-market manipulations. At national level, an example of this situation is given by the *Autorité des Marchés Financiers* (AMF – the French financial markets authority), which currently has jurisdiction over agricultural derivatives markets (wheat, corn, colza). The context is admittedly different, as regards the type of products traded, the volumes at stake (let it be reminded that traded volumes of these products in France represents between 0.1% and 0.5% of the American market) and the dynamics of the market (in France, the agricultural derivatives market is strongly correlated, except for corn, to the price fluctuations of the instruments listed at the Chicago exchange). Yet, the national financial regulator acknowledges some persistent problems as regards the surveillance of these markets, notably due to the difficulty of grasping the operation of a derivatives market, and identifying possible cases of market abuse, in the absence of a thorough understanding and knowledge of market fundamentals and transactions on the spot market. Now, due to the real interdependence between the prices of energy and the price of CO₂ allowances, it appears necessary for the regulation and surveillance of the CO₂ market to be performed in coordination with that of the gas and electricity markets, in a complementary way.

Conversely, entrusting the surveillance of the CO₂ market to the energy regulator would make it possible to enjoy its expertise concerning the energy markets similar to the CO₂ market. At national level, the following box gives an overview of the current areas of competence of the *Commission de Régulation de l'Énergie* (CRE – the French Regulatory Commission for Energy).

Box no. 28 – The missions of the *Commission de Régulation de l'Énergie* in France

The supervisory role of the Commission de Régulation de l'Énergie (CRE – the French energy regulator) concerning the French electricity markets was based, until recently, on the provisions of the law of 13 July, 2005, which limited its remit to organized markets. The law of 7 December, 2006 entrusted it with an extended supervisory mission, covering all transactions on the French gas and electricity markets, including the spot market, the derivatives market, organized markets or OTC transactions¹⁴⁶. The area of competence of the CRE thus extends to: electricity and natural gas, bilateral transactions, interventions on exchanges and cross-border transactions, for all maturity dates, short-term markets and long-term contracts, to all counterparties of the French wholesale market, regardless of their nationalities, to contracts with physical delivery as well as financial products.

The supervisory mission of the CRE is now structured around the analysis of fundamentals and of the transactions made on the market.

A highly organized prerogative to access market information follows from the supervisory mission. This prerogative is also based on several provisions at Community level¹⁴⁷. The supervisory mission is indeed based on an extensive right of access to information on transactions and market fundamentals, as well as on the possibility of exchanging information with the European counterparts of the CRE, subject to reciprocity¹⁴⁸. Consequently, in 2008, after consulting the market players concerned, the CRE set up a data collection system limited to intermediaries (trading exchanges and brokers). Such a system actually covers over 90% of electricity transactions, except for bilateral transactions, and reduces the burden imposed on operators by making market intermediaries responsible for the collection. This continuous data collection process can be complemented, as needed, by one-off collection operations related to bilateral transactions. This system has made it

¹⁴⁶ Art. 28 of the law of 10 February, 2000 amended by the law of 7 December, 2006: [The CRE] “shall supervise, for electricity and natural gas, the transactions carried out among suppliers, traders and producers, the transactions carried out on organized markets as well as cross-border trade. It shall ensure the consistency of the supplies of suppliers, traders and producers with their economic and technical constraints.”

¹⁴⁷ Article 40-1 of Directive 2009/72/EC of the European Parliament and of the Council of 13 July, 2009 concerning common rules for the internal market in electricity: “Member States shall require supply undertakings to keep at the disposal of the national authorities, including the national regulatory authority, the national competition authorities and the Commission, for the fulfilment of their tasks, for at least five years, the relevant data relating to all transactions in electricity supply contracts and electricity derivatives with wholesale customers and transmission system operators.”

¹⁴⁸ Article 33 of the law of 10 February, 2000: “For the fulfilment of the missions it is entrusted with, the Commission de Régulation de l'Énergie may gather all the information required from the ministries of economy and energy, from the operators of public electricity transmission and supply systems, from the operators of natural gas transmission or distribution facilities and the operators of liquefied natural gas facilities, and from the other companies intervening on the electricity or natural gas market.” Article 35 of the law of 10 February, 2000: The obligation of professional secrecy does not prevent the communication by the Commission de Régulation de l'Énergie of the information or documents it holds to the relevant commissions of the Parliament having jurisdiction over energy or to an authority from another member State of the European Union whose remit is similar to that of the Commission de Régulation de l'Énergie, subject to reciprocity and on the condition that its members and officers be subject to the same obligations of professional secrecy as those laid down in the present article.”

possible, in fact, to improve the public information available, beyond the elements made available within the framework of organized markets.

The CRE has the power to submit cases to the Competition Authority¹⁴⁹ as well as a disciplinary power, which is primarily aimed at system operators, but also extend rather generally to all users of energy systems, facilities and installations¹⁵⁰.

In practice, the CRE notably carries out analyses of the evolution of the fundamentals of market prices and of its determining factors. As an example, we can mention the audit it performed on the models used by EDF to determine the value of its nuclear and hydraulic power production installations, or the study of the gas price differentials between PEG Nord and Zeebrugge in November 2008. The CRE also has the capacity to launch immediate inquiries, as during the recent episode of the peak in the price of electricity on the French market on 19 October, 2009. This event had notably revealed the need to improve the transparency and reliability of forward-looking data on production installations and especially on unplanned plant outages. Since then, the transparency of the market has seemed to improve, notably due to the initiatives undertaken by the Union Française d'Électricité (UFE – the French Electricity Union): projected firm power in the short term since 1 July, 2009, projected firm power in the short and medium term for production units of over 100MW from mid-2010, publication of unplanned outages within 30 minutes from late 2010.

Considering the system implemented on the energy and gas markets, it would therefore be conceivable, in theory, to entrust the surveillance of the CO₂ market (spot market and derivatives market) to the energy regulator. This plan would make it possible to benefit from an integrated approach of energy and CO₂ market oversight. By definition, the energy regulator would be, for instance, better able to identify the formation of open positions on the various markets by a single operator for the purpose of manipulation. Yet, this option does not appear to be entirely satisfactory: it amounts to denying the deeply financial nature of the CO₂ market, and would call for the energy regulator to acquire supervisory skills specific to this market, which have already been partly developed by the financial regulators. Lastly, the missions supervising market structures and intermediaries currently fall within the remit of financial regulators.

In conclusion, it would therefore be advisable, in order to ensure the efficient surveillance of the CO₂ market, to organize the cooperation between the regulatory authorities of the financial and energy markets. This approach would indeed make it possible to turn to good account the comparative advantages and respective skills of the two entities. Let it be reminded that the organization of coordination between the financial regulator and the energy regulator is already provided for by the European legislation concerning the electricity market. Article 37-4.b of Directive 2009/72/EC of the European Parliament and of

¹⁴⁹ Article 39 of the law of 10 February, 2000: *“The president of the Commission de Régulation de l'Énergie refers to the Competition Authority the cases of abuse of a dominant position and the practices hindering the free exercise of competition of which it is aware in the electricity and natural gas sectors.”*

¹⁵⁰ Article 40 of the law of 10 February, 2000: *“The Commission de Régulation de l'Énergie may, either as a matter of course, or at the request of the ministry of energy, of a professional organization, of an authorized users association or of any other person concerned, take disciplinary action against any failure observed on the part of the operators of public electricity transmission and supply systems, of the operators of natural gas transmission or distribution facilities or of the operators of natural gas storage facilities or of liquefied natural gas facilities, or of the users of these systems, facilities and installations.”*

the Council of 13 July, 2009 concerning common rules for the internal market in electricity provides, within the framework of the provisions relating to the areas of competence of energy regulators: “for this purpose, the regulatory authority shall have at least the following powers: [...] to carry out investigations into the functioning of the electricity markets, and to decide upon and impose any necessary and proportionate measures to promote effective competition and ensure the proper functioning of the market. Where appropriate, the regulatory authority shall also have the power to cooperate with the national competition authority and the financial market regulators or the Commission in conducting an investigation relating to competition law.” In practice, there are two conditions to this coordination between the financial regulator and the energy regulator. Firstly, it calls for both regulators to have access to all the information necessary, notably concerning the fundamental determining factors of prices and the transactions carried out on the market. Secondly, it is advisable to define a clear distribution of roles and responsibilities among regulators. The following scheme is proposed: the financial regulator would be responsible for the monitoring of transactions, the identification of market abuses, the control of the compliance of participants and market structures with the regulations related to market conduct and intermediation, and would be responsible for conducting potential inquiries and disciplinary proceedings. As for the energy regulator, in addition to its own missions, it would be responsible for i) analyzing market fundamentals, ii) analyzing the consistency of the transactions carried out with market fundamentals and the constraints and positions of operators, as well as for iii) identifying and analyzing possible cases of cross-market abuses on the CO₂ market and energy markets. The modes of cooperation between financial regulators and energy regulators should be provided for in sufficient details by the Legislator, and transposed into a framework agreement, such as a Memorandum of Understanding (MoU), which could clarify in concrete terms the operational modes of cooperation and information exchange. This general operating principle could be adopted regardless of the surveillance structure set up, as detailed above.

7.4 A decentralized surveillance structure which is based on the network of national financial and energy regulators and supported by a Community coordination body should be set up by 2013

Regardless of the structure chosen, the European nature of the CO₂ market militates in favour of a harmonized supervision at European level.

From an operational point of view, a system with several national surveillance authorities without any central steering or coordination would risk resulting in heterogeneous rules or inconsistent implementation of these rules in the various states, in increased market surveillance costs and reduced efficiency, and in possible regulatory arbitrages, due to possible loopholes or problems in the cooperation among authorities. For market players, an oversight by a single entity would probably be advantageous in terms of the clarity and simplicity of the rules applicable. As regards the reporting of market information, a European surveillance system would also be more practical and less expensive for market players.

Nevertheless, in the likely event that the setting up of a “European Carbon Market Authority” will prove difficult to implement in the short term, and will therefore require to rely on existing surveillance systems (regulatory authorities of the financial and energy markets), the distribution of the supervisory missions between the national and European

level defined on their core markets will be imposed to the oversight architecture of the CO₂ market.

Although the current trend is to gradually increase powers at European level, the institutional supervisory structures for the financial and energy markets continue to operate in a decentralized way, with operational supervision performed by national authorities, while European entities or authorities have a role of coordination and elaboration of standards and rules, although the future European Securities and Markets Authority has more extensive powers of injunction with respect to national authorities, financial institutions and bodies and of arbitration of disputes among national regulators¹⁵¹.

Consequently, France could advocate a decentralized surveillance structure, but coordinated at European level. The difficulties involved in the setting up of a single European supervisory authority for the European CO₂ market should not, in any case, lead to maintaining the status quo, i.e. a full decentralization, with little coordination, of the oversight of the European market, divided among national financial and energy regulators. A practicable midway solution would be to lay down harmonized rules at European level to build a consistent oversight architecture. It could be based on three mainstays.

The first mainstay would consist in giving national financial regulators the power to supervise the entire CO₂ market – including the spot market and commercial forward contracts – in all Member States and to extend the remit of energy regulators to the missions relating to the analysis of fundamentals and of the interactions between energy markets and the CO₂ market (including the identification of cross-market manipulations).

The second mainstay would consist in providing for the mandatory coordination of financial regulators with energy regulators, and for its general implementation methods (joint access to information, exchange of data on transactions and the evolutions of fundamentals, participation of the energy regulator in inquiries). Given the European nature of the CO₂ market, the organization of cooperation should not only be performed between the financial regulator and the energy regulator of a same country, but also among all members of the two regulatory networks. As an example, the *Autorité des Marchés Financiers* (AMF – the French financial markets authority) could have to investigate on market manipulations on BlueNext involving companies from other European countries than France as well as cross-market strategies on the CO₂ and electricity markets and requiring, in this respect, the support of the energy regulator of the countries in question. The mode of cooperation

¹⁵¹ Let it be reminded that the EFSA should be responsible for defining technical standards to ensure the consistent implementation of European legislation. It would also be responsible for the proper implementation of Community laws. In the case of emergency situations on financial markets, as part of its remit, the EFSA could make decisions which would directly apply to supervisors, or even financial institutions, to restore the financial stability, the orderly operation or the integrity of markets, including suspending the activities of a financial institution. More importantly, the EFSA should have the power to arbitrate disputes among national supervisors. The EFSA could evaluate national supervisory practices in a timely manner. Within this framework, which includes disputes within a college of supervisors, the EFSA would have the power to make individual binding decisions, until the cessation of activities. However, in this case, it would not have any self-tasking powers.

between the financial and energy regulators will thus need to be organized at the level of network leaders: the future ESMA for financial regulators and ACER for energy regulators.

The third mainstay would consist in taking advantage of the setting up of the European Securities and Markets Authority (ESMA) to organize the coordination of the European supervision of the CO₂ market. ESMA will indeed be given specific powers (namely, on credit rating agencies), which may foreshadow the implementation of a sectoral supervision. In this case, ESMA could be given additional powers on the European CO₂ market and create an internal department for the surveillance of this market. In practice, beyond the powers that should be given to ESMA:

i/ it would be entrusted with a mission for the overall oversight of the functioning and evolutions of trade on the European CO₂ market, in coordination with ACER;

ii/ all of its prerogatives for the definition of technical standards and the verification that Community laws are properly implemented, as well as its injunctive and arbitration powers would be extended to the spot market and to the market in commercial forward contracts on CO₂ allowances;

iii/ it would have access to all the transactional data collected within the framework of the central registry;

iv/ in coordination with the European Commission, it would guarantee proper cooperation between the entity responsible for the surveillance of the auctions held within the framework of the auction platform(s) and the competent financial regulator(s).

The specific regulatory nature of the CO₂ market also calls for strong coordination and cooperation between the authority responsible for elaborating the operating rules of the allowance trading scheme – i.e. the Climate Change Commissioner of the European Commission – and supervisory authorities, i.e. ESMA and ACER.

This oversight architecture has the advantage of being practicable in the short term, while observing all the principles previously defined: the integrated surveillance of the primary market and the secondary market (spot market and derivatives market), a close cooperation between financial regulators and energy regulators, and the implementation of a European supervision of this system.

According to this scheme, the regulatory powers for the organization of the EU-ETS, i.e. cap-related elements, would strictly remain within the remit of the European Commission.

Advice no. 26: set up, by 2013, a harmonized oversight structure for the European CO₂ market that is based on three mainstays: i/ giving financial Regulators jurisdiction over the whole CO₂ market in all Member States and extending the remit of energy Regulators to the analysis of the fundamentals of the CO₂ market and of interactions between the CO₂ market and energy markets; ii/ organizing cooperation between financial Regulators and energy Regulators; iii/ giving the European Financial Supervisory Authority the power to supervise the whole system, in cooperation with the Agency for the Cooperation of Energy Regulators. Ensure that this system is consistent with the oversight system to be proposed on the gas and electricity markets.

7.5 *As a precaution under national law, from 2010, the Autorité des Marchés Financiers (French Financial Markets Authority) should be entrusted with the supervision of the spot market and coordination with the Commission de Régulation de l'Énergie (French Regulatory Commission for Energy) should be established*

A European oversight structure of the CO₂ market is unlikely to be implemented before the market enters into its third phase (2013). Consequently, in the absence of any European legislation, the loopholes identified in the regulation system will remain. This situation appears to be especially unsatisfactory in France, where the main spot market platform is located, even though BlueNext properly supervises the trade organized within its structure, under applicable law (see above). France thus has a specific responsibility on this matter and should set an example in advance, by promoting, at national level, the system envisaged at European level; all the more so as certain countries, including Germany, have already taken similar measures under national law.

In this respect, and as a protective measure, the oversight of the CO₂ spot market should be quickly entrusted to the *Autorité des Marchés Financiers* (AMF – the French financial markets authority) and cooperation with the *Commission de Régulation de l'Énergie* (CRE – the French Regulatory Commission for Energy) should be organized. The remit of the CRE could also be extended to the analysis of the interactions between the transactions made on the CO₂ market and market fundamentals, and to the identification of cross-market abuse on the CO₂ and electricity markets. The practical implementation methods of this recommendation should be defined during the year 2010.

Advice no. 27: from 2010, give the Autorité des Marchés Financiers (AMF – the French financial markets authority) jurisdiction over the CO₂ spot market in France, organize cooperation with the Commission de Régulation de l'Énergie (CRE – the French Regulatory Commission for Energy) and extend the remit of the CRE to the analysis of the interactions between energy markets and the CO₂ market.

CONCLUSION

The European CO₂ market has recently experienced a series of incidents which, although they occurred on the fringe of the market itself and do not constitute market dysfunctions as such, contributed to reopening the debate on the ability of a market tool to fully play its role as an economic instrument for the optimized reduction of greenhouse gas emissions in Europe.

Experts are unanimous in considering that, the environmental objective being determined by public authorities, the resort to the market to optimize its implementation is the best solution, provided the integrity and efficiency of the market are ensured.

It has thus appeared necessary, after five years of experience, to reconsider the issue of market regulation and oversight.

Moreover, the third phase of the market is drawing near: it is therefore high time that we discuss the means to properly regulate the functioning of this market.

The present report, an exercise hitherto untried, is meant as a first contribution to the debate, in the spirit and continuation of the CHARPIN report that, for that matter, had explicitly raised the question of the regulation of the market.

Its recommendations fall within a resolutely European perspective: stabilizing the European regulatory framework, harmonizing the legal status of CO₂ allowances, improving the regulation of market participants through the introduction of an European authorization for participation in the CO₂ market, strengthening the criteria to access national registries, implementing a European market abuse framework, defining inside and sensitive information on the CO₂ market, improving the information provided to market players and regulators on market fundamentals and transactions and, lastly, setting up an integrated market supervision architecture.

While the debate on the regulation of financial markets and energy markets is making progress in Europe, it is essential not to miss the opportunity of taking the measures required to ensure a better functioning of the European CO₂ market. The review of financial directives, the work on the gas and energy markets and the possible review of the directive on the organization of the European allowance market will all give the occasion to discuss the matter in 2010 and 2011.

As part of this conclusion, it is also advisable to adopt a resolutely international perspective: other CO₂ markets will be created in the years to come. The idea has made significant headway in the United States and the European Union is hoping for the formation of an OECD-wide carbon market in 2015.

Everything remains to be done: it is a unique occasion for the European Union to define, with its main partners, common principles for the supervision and regulation of these markets.

This is one of the conditions for the gradual linking of regional CO₂ markets in the future.

Consequently, it appears necessary to develop and use, as early as this year, international forums to discuss the development of carbon markets, which may constitute arenas for

exchange for the purpose of harmonizing, at international level, the operating and regulatory principles of CO₂ markets.

The initiative launched in March 2010 by the World Bank, which takes the form of multilateral discussions among the representatives of developed countries and developing countries, could be one of those forums. It could favour the emergence of an international consensus on the functioning of carbon markets. An authority such as the International Carbon Action Partnership could also constitute an efficient vehicle for discussion and exchanges.

At the same time, it appears necessary to put the issue of CO₂ markets on the agenda of international regulation: the International Organization of Securities Commission (IOSCO) could be mobilized for this purpose.

Lastly, a political impetus will be necessary for the debate to make progress by 2012 and the end of the first commitment period of the Kyoto Protocol: armed with the decisions made in Pittsburgh, the G20 could thus constitute an appropriate arena for discussion to enable the matter to make headway in the upcoming years.

Advice no. 28: take the debate on the regulation of CO₂ markets to the international stage within the framework of the G20 by 2012, relying notably on the works of IOSCO, the World Bank and ICAP.

APPENDIX

Appendix I – Letter of Mission from the Ministry of Economic Affairs, Industry and Employment



LE MINISTRE

PARIS, LE

Monsieur le Président,

Les marchés du carbone, en permettant de donner une valeur économique aux émissions de gaz à effet de serre, sont un élément central des politiques de lutte contre le changement climatique. Ils sont aujourd'hui un outil adapté aux grands émetteurs, qu'il s'agisse d'Etats ou de sites industriels. Ils sont complémentaires d'un outil fiscal de type « contribution carbone », qui a pour objet d'inciter à une réduction des émissions diffuses.

Certains analystes estiment que 5 % seulement des émissions mondiales sont aujourd'hui intégrées dans un marché du carbone organisé, au niveau national ou régional. Si l'on s'en tient aux projets de législation en cours d'examen dans de nombreux pays développés ou émergents, 35 % des émissions mondiales pourraient être couvertes d'ici 2020. Les marchés du carbone sont donc appelés à se développer massivement.

L'Union européenne est le leader incontesté des marchés carbonés, grâce au système ETS (Emission Trading System) déployé sur plus de 11 000 sites industriels européens dès 2005. Suite à l'adoption du paquet climat-énergie sous présidence française de l'Union Européenne, ce marché se trouvera pérennisé au-delà de la deuxième période qui prend fin en 2012. Il bénéficiera, en 2013, d'une nouvelle dynamique, grâce à une modernisation de ses règles de fonctionnement (attribution d'une large part de quotas aux enchères, complément gratuit alloué sur la base de référentiels, inclusion de nouveaux secteurs comme l'aviation).

Pour autant ces marchés sont pénalisés par un manque de régulation manifeste. Les quotas d'émission n'ont pas aujourd'hui de statut juridique au niveau européen. Objets hybrides, à mi-chemin entre marchandises classiques et instruments financiers immatériels, les quotas ont notamment pu engendrer des risques de fraude objectifs. Si les dérivés sur quotas sont aujourd'hui soumis aux directives financières, les échanges au comptant échappent quant à eux à tout cadre réglementaire réellement approprié.

C'est pourquoi je souhaite proposer rapidement à la Commission européenne qui prendra ses fonctions dans les prochaines semaines des modalités opérationnelles de régulation des marchés du carbone.

Monsieur Michel PRADA
Président du Comité droit financier de Paris EUROPLACE
39, rue Cambon
75001 PARIS

A cette fin je souhaite que vous preniez attache avec les principaux acteurs financiers et industriels européens afin de proposer diverses mesures de régulation des marchés du carbone susceptibles d'être adoptées au niveau communautaire. Je souhaite également que vous puissiez sensibiliser nos partenaires européens et la Commission européenne à l'intérêt des solutions proposées.

Vous pourrez notamment vous appuyer sur le rapport de M. Jean-Michel CHARPIN, inspecteur général des finances, et sur les travaux du comité de place finance carbone, mis en place par Jean-Louis Borloo, ministre d'Etat, ministre de l'écologie, de l'énergie, du développement durable et de la mer, et moi-même le vendredi 4 décembre 2009.

La Direction générale du trésor et de la politique économique se tient à votre disposition en tant que de besoin pour vous aider dans vos travaux.

Je vous remercie de me remettre vos propositions d'ici trois mois, afin que je puisse ensuite saisir les autorités européennes compétentes.

Je vous prie de croire, monsieur le Président, à l'assurance de ma considération distinguée.

Accueil des Nobel, d'accepter cette mission importante -


Christine LAGARDE

Appendix II – Members of the commission

Entity	Representative
Companies covered by EU ETS	
<i>Electricité de France</i>	Philippe Huet, Jean-Yves Caneill
<i>Gaz de France Suez</i>	Christine Faure-Fédigan
<i>SNET / EON</i>	Stéphane Morel, Sivane Soumagnac
<i>Powéo</i>	Jean-Christophe Cheylus
<i>Lafarge</i>	Gaëtan Cadero, Vincent Mages
<i>Veolia VETRA</i>	Denis Daumal
<i>Total</i>	Brigitte Poot
<i>Air Liquide</i>	Olivier Imbault
<i>Arkema</i>	Nicolas de Warren
<i>Saint-Gobain</i>	Eric Pretelat
<i>Bouyer Leroux</i>	Roland Besnard
<i>Air France</i>	Marc Verspyck
Financial players	
<i>BlueNext</i>	Serge Harry, Neolida Olouman
<i>Orbeo</i>	Philippe Rosier
<i>LCH Clearent SA</i>	Pierre-Dominique Renard, Delphine Feyrit
<i>Natixis Environnement et Infrastructure</i>	Philippe Germa, Thierry Carol
<i>BNP Paribas</i>	Amine Bel Hadj, Sylvain Goupille, Jérémie Pellet
<i>Barclays</i>	Christian Fringhian
<i>Sagacarbon</i>	Marie Boutefeu, Stéphane Colin
<i>TFS</i>	Vincent Remay
<i>Deutsche Bank</i>	David Villedieu, Isabelle Curien
Authorities of Regulation	
<i>AMF</i>	Edouard Vieillefond, Wayne Smith, Julien Terramorsi, Stéphane Fekir
<i>CRE</i>	Fadel Lakhoua, Eliot Romano
<i>Banque de France</i>	Celine Bazard

Trade associations	
<i>Cercle de l'Industrie</i>	Jacques Leflon
<i>Association française des entreprises privées</i>	Nicolas Boquet, Francis Desmarchelier
<i>Mouvement des entreprises de France</i>	Philippe Chauveau
<i>Association française des marchés financiers</i>	Dominique Depras
<i>European Federation of Energy Traders</i>	Alexandre Marty
<i>Fédération Bancaire Française</i>	Jean-François Jondeau
Qualified personalities	
<i>Denton Wilde Sapte</i>	Sena Agbayissah
<i>Inspection générale des Finances</i>	Jean-Michel Charpin
<i>Université Paris Dauphine</i>	Delphine Lautier
Public authorities	
<i>Direction Générale du Trésor</i>	Henri Lamotte, Xavier Bonnet, Etienne Oudot de Dainville, Jean-François Ouvrard, Thomas Lambert, Gilles Petit
<i>Direction Générale de l'Énergie et du Climat</i>	Pierre-Franck Chevet, Pascal Dupuis, Héléne Le-Du, Joffrey Célestin-Urbain
<i>Direction Générale de la Compétitivité, de l'Industrie et des Services</i>	Frédéric Lehman
Registry administrator	
<i>Caisse des Dépôts et Consignations</i>	Olivier Guittet
Caisse des Dépôts et Consignations	
<i>CDC Climat</i>	Pierre Ducret, Jean-Pierre Sicard
<i>CDC Climat Recherche</i>	Benoit Leguet et Emilie Alberola

APPENDIX III – Persons auditioned or met by the President and the rapporteurs

Persons auditioned par la commission

Entity	Representative
European Commission	
DG CLIM	Yvonne Slingenberg, <i>Head of Unit</i>
DG MARKT	Valérie Ledure, <i>Policy Maker</i> , Securities Market Bertrand Legris, <i>Policy Maker</i> , Securities Market
DG TREN	Andras Hujber, <i>Policy Maker</i>
Paris EUROPLACE	
Michel Collet, president of Paris Europlace’s commission on CO ₂ and energy Carole d’Armaillé, Communication director Laure Romanet, Chargée de mission	
Auditors	
Christine Colleu, <i>Partner</i> , Paris IFRS Centre of Excellence, Deloitte & Associés Laurence Rivat, <i>Partner</i> , Audit Middle Market, Deloitte & Associés, member of the <i>International Financial Reporting Interpretations Committee</i>	
Autorité des Normes Comptables (ANC)	
Géraldine Viau-Lardennois, Deputy director	

Persons met by the President and the rapporteurs

Entity	Representatives
<i>Member of Parliament</i>	
Fabienne Keller, Senator Philippe Marini, Senator, rapporteur Général de la commission des finances	
<i>Administrations</i>	
Audrey Sudara-Boyer, deputy head of the Investment, financial crime and sanctions Unit - Directorate General for Treasury Isabelle Bui, deputy head of the housing and general interest activities Unit, Directorate General for Treasury Henri Nguyen, Head of Institutional Department, Tracfin Jean-Loup Caruana, Air quality Unit, Directorate General of Energy and climate	
<i>Audit and consulting firms</i>	
Julien Razungles, <i>Senior Manager</i> , Audit Middle Market, Deloitte & Associés Ariane Amiot, <i>Directeur, Accounting Consulting, Services</i> , PricewaterhouseCoopers Jad Zoghbaib, <i>Advisory</i> , PricewaterhouseCoopers, Ecobilan Charlotte Galais, <i>Senior Manager</i> , Accounting Consulting Services Frédéric Dinguirard, <i>Managing Director</i> , Andal Conseil	
<i>Trade unions and NGO</i>	
Jean-Pierre Bompard, <i>Délégué Energy, Environment and sustainable development</i> , CFDT Morgane Créach, <i>Director for International affairs</i> , Réseau Action Climat Sébastien Godinot, <i>Friends of the Earth France</i> Yann Louvel, <i>Friends of the Earth France</i>	
<i>Market participants</i>	
Alexandre Borde, <i>Managing Director</i> Carbonium	

Missions abroad

Entity	Representatives
USA	
Authorities of regulation	
<p>Mary Shapiro, <i>Chairman</i>, Securities and Exchange Commission Gary Gensler, <i>Chairman</i>, Commodities Futures Trading Commission (CFTC) Dan M. Berkovitz, <i>General Counsel</i> (CFTC) Cyrus Amir-Mokri, <i>Senior Counsel to the Chairman</i> (CFTC) Eric Juzenas, <i>Senior Counsel</i> (CFTC)</p>	
Treasury	
<p>Timothy Geithner, <i>Secretary of the Treasury</i> Lael Brainard, <i>Under Secretary of the Treasury for International Affairs nominee</i></p>	
International financial institutions	
<p>Dominique Strauss-Kahn, <i>Managing Director</i>, International Monetary Fund Joëlle Chassard, <i>Manager, Environment Department</i> (Carbon finance), Banque Mondiale Ivan Zelenko, <i>Head of Derivatives and Structured Finance</i>, Capital Markets Department, Banque Mondiale</p>	
Congress	
<p>Matthew Nelson, <i>Congressional Staffer</i>, Senator Dianne Feinstein Jeff Baran, <i>Counsel</i>, Committee on Energy and Commerce</p>	
United Kingdom	
Authorities of regulation	
<p>Lord Turner of Ecchinswell, <i>Chairman of the Financial Services Authority, Chairman of Government Committee on Climate Change</i> David Kennedy, <i>Chief Executive du Government Committee of Climate Change</i> Tom Corcut, <i>Senior Economist</i> (Markets Division), <i>Office of the Gas and Electricity Markets</i> Ian Marlee, <i>Partner Trading Arrangements</i> (Markets Division), <i>Office of the Gas and Electricity Markets</i></p>	
Treasury	
<p>Jonathan Taylor, <i>Managing Director</i> (International and Finance Directorate) Nikhil Rathi, <i>Director, Financial Regulation and Markets</i> (International and Finance Directorate) Rebecca Laurence, <i>Team Leader</i> (Environment, Food and rural affairs)</p>	

Hannah Gurga, <i>Adviser</i> (International and Finance Directorate) Zviito Zinyowera, <i>Securities Markets Policy, Financial Strategy Team</i>
DECC
Niall MacKenzie, <i>Head</i> (National Carbon Markets) Sarah Resouly, <i>Team Leader</i> (EU-ETS)
Financial players
Paul Sizeland, <i>Director of Economic Development</i> , City of London Marc Mourre, <i>Managing Director, Vice Chairman</i> (Commodities Division), Morgan Stanley Olivia Hardridge, <i>Vice-President</i> (structuring carbon and cross-commodity transactions Europe and North America), Morgan Stanley Matthew Farrow, <i>Head</i> (Energy, Transport and Planning) Confederation of British Industry
Germany
Authorities of regulation
Dr. Hannelore Lausch, Executive Director, Securities Supervision and Asset management, BaFin Christian Pawlik, Head of Section, Securities supervision, BaFin Volker Zuleger, Deputy head of division, State competition authority, State regulatory authority, Banks and exchanges, Saxon State Ministry for Economic Affairs, Labour and Transport. Wolfgang Von Rintelen, Director Legal and Compliance, Head of Market Surveillance, EEX
Ministry of Finance
Dr. Rolf Wenzel, Director General, Financial Market Policy Peter Goerss, Head of Division, stock market and securities M. Kahmann, Head of the Energy, agriculture, maritime affaires and environment Unit Carsten Ostermann, Chargé de mission Nigel Kinnarney, Energy and Environment policy in the EU, chargé de mission
Ministry of Environment
Meike Söker, Legal issues Environment, Energy, climate protection, emissions trading
Financial players
Daniel Wragge, Head of policy communication, EEX