SUBMISSION TO CARBON POLLUTION REDUCTION SCHEME - GREEN PAPER

Name of organisation: Australian Securities Exchange (ASX)

Name of author: Anthony Collins

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ASX Limited
ABN 98 008 624 691
20 Bridge Street
Sydney NSW 2000
PO Box H224
Australia Square
NSW 1215

Telephone 61 2 9227 0777
Facsimile 61 2 9227 0772
www.asx.com.au

Carbon Pollution Reduction Scheme Green Paper Submission
Department of Climate Change
GPO Box 854
Canberra ACT 2601
Australia

By email: emissionstrading@climatechange.gov.au

Re: Carbon Pollution Reduction Scheme Green Paper

The Australian Securities Exchange (ASX) welcomes the opportunity to comment on the design options and preferred positions outlined in the Carbon Pollution Reduction Scheme (CPRS) Green Paper.

ASX's feedback is not extensive as it concurs with the vast majority of preferred positions on which it is appropriately qualified to comment.

The fundamentals of the proposed design (namely broad coverage, the central role of auctioning and the early issuance of carbon pollution permits) together with the sophisticated risk management practices of the larger compliance buyers in Australia, bodes well for a vibrant over-the-counter (OTC) and futures market to support the CPRS.

The early establishment of a forward market on carbon pollution permits (permits) will provide the most efficient means for firms to factor future carbon prices into their investment decisions.

Firms will not be able to make informed decisions in the absence of: robust forward prices; and the ability to transfer risk using financial market infrastructure, including clearing and settlement services to minimise their counter-party and settlement risks.

Legislative certainty regarding the key design features of the CPRS will be the catalyst for the introduction of standardised OTC and futures products. Forward pricing, however, will reflect some uncertainty until the 'supply constraint' for the first five years of the scheme is set in the first quarter of 2010.

Notwithstanding the proposed guidance anticipated in late 2008 in the context of the White Paper, the lack of certainty regarding the final supply constraint until the first

quarter of 2010 will contribute to greater volatility and transaction costs for market participants in the forward markets than would otherwise be the case.

An independent research report is tabled in Attachment 1. This report was completed by researchers from the Finance Discipline at the University of Sydney, and examines the effect of supply disruptions on market quality in the European carbon market.

The Government appropriately considers the CPRS is needed to provide certainty for the community and business irrespective of whether a global or even a developed country agreement is reached. Given this position, the Government should consider the merits of providing a definitive default position regarding the supply constraint (or as the Garnaut Review describes it 'our unconditional offer') together with the scheduled passage of legislation in the first half of 2009.

As was the experience in Europe, early trades have commenced in the OTC market prior to the finalisation of the scheme's design, commencement date and supply constraint. Significantly, these early trades have established a much needed starting point for factoring carbon prices into critical investment decisions and forward trading in carbon intensive sectors such as electricity.

Early trades illustrate that firms have significant risks (and opportunities) to manage notwithstanding the scheme's design has not been finalised. Given the cost of investment uncertainty, it is in Australia's national interest to provide legislative certainty regarding the design of the scheme, its start date and supply constraint as soon as possible.

Yours sincerely

Anthony Collins
General Manager
Emerging Markets

ASX Submission to Carbon Pollution Reduction Scheme Green Paper

In making this submission on the design options and preferred positions outlined in the Green Paper on 'Carbon Pollution Reduction Scheme' (CPRS), ASX has limited its response to those areas where it has relevant expertise and experience. We have not addressed all of the paper's sections, only those numbered below.

The focus of ASX's comments relate to how the design of Australia's emissions trading scheme (ETS) can enhance the ability of financial markets to:

- reduce transaction costs (the costs of buyers and sellers finding each other);
- facilitate price discovery and the transfer of risk (underpinning investment decision-making and capital raising); and
- minimise the prospect for counter-party and settlement default.

Wherever possible, ASX's response specifically addresses the design options and preferred positions outlined in the Green Paper.

3.4 Unlimited banking of permits would be allowed under the scheme.

3.5 The scheme would permit a limited amount of short-term borrowing by allowing liable entities to discharge up to a certain percentage (less than 5 per cent) of their obligations by surrendering carbon pollution permits dated from the following year.

The exact percentage should be subject to further investigation and should be considered in conjunction with decisions about the level of the initial scheme caps.

3.7 The scheme would have a price cap for the period 2010-11 to 2014-15.

The price cap would be set high enough above the expected permit price to ensure a very low probability of use. The precise level would be set taking into account all information about the scheme design and the expected abatement costs in the economy.

The price cap would be reviewed at the first review point, taking into consideration banking and borrowing arrangements, limits on the surrender of

international permits for compliance, the maturity of the market and future international linking commitments.

6.11 In order to facilitate a smooth start to the scheme and to minimise implementation risks, the Government would not allow Australian permits to be converted into Kyoto units for sale in and transfer to international markets in the early years of the scheme.

Unlimited banking will provide a smoother price path and less volatility than 'fixed budgets' for each compliance year. At this time a constraint on exporting Australian permits, which would expose the Australian market to greater volatility is also understandable as is making explicit the Government's policy response in the event of extreme pricing outcomes.

Considered in the context of each other, however, a temporary prohibition on exporting permits and a price cap are inconsistent with unlimited banking if the market places a higher future value on permits than the price cap (perhaps due to anticipated linkages with other Schemes).

Setting the price cap at a level unlikely to be reached is important. Any breach of the price cap (an option to opt out of the Scheme and bank permits for future use) will not only undermine the environmental integrity of the Scheme and the potential for linkages with other schemes but also diminish the effectiveness and value of forward markets.

Importantly, whilst the proposed price cap is not fully consistent with a market based mechanism, it will not significantly diminish the role of financial markets to help firms manage their expose to carbon price movements below the price cap.

4.5 Scheme caps would be set and announced for a minimum period of five years in advance at any one time. In the event that Australia's international commitment period extends beyond five years, scheme caps would be extended to the end of the commitment period.

4.14 At the end of 2008, in the context of the white paper, the Government would announce an approach for setting scheme caps for the period 2010-11 to 2014-15, consistent with the national emissions trajectory.

In early 2010, the Government would announce the finalised scheme caps for the first five years of the scheme (2010-11 to 2014-15) and 10 years of gateways beyond this period.

Setting the supply constraint as soon as possible for no less than five years should be sufficient to support a robust forward market. The supply constraint encompasses the scheme caps as well as coverage and the constraints on importing (and exporting) Kyoto units.

While up to six years of futures contracts are available for trading in the EU ETS, given the unlimited ability to bank European Union Allowances (EUAs), the majority of liquidity resides in the next calendar year where the price reflects the market's expectations of the supply constraint over future years (see Attachment 1).

The proposed five-year reviews and gateways provide a balance between providing some certainty for business while retaining a fair level of flexibility to reflect the outcome of on-going international negotiations on climate change.

Attachment 1 illustrates the severe price volatility and higher transaction cost consequences of two supply disruptions experienced during the EU ETS Phase I. Lack of certainty regarding the supply constraint, notwithstanding the proposed guidance anticipated in late 2008 in the context of the White Paper, will contribute to greater volatility and transaction costs for market participants than would otherwise be the case.

Ideally, the Government would fully define the supply constraint to coincide with the proposed passage of legislation in the first half of 2009. One way to achieve this outcome without undue burden on Australia's national competitiveness, is to confirm Australia's default position (or as the Garnaut Review describes it 'our unconditional offer') if no international consensus is reached on an agreement for the post Kyoto period.

The benefit of setting the supply constraint up-front is that it will reduce volatility and transaction costs in the forward markets and better inform investment decision making. With a default position market participants can, with enhanced confidence in the continuity of the scheme and knowledge of a supply constraint, make better informed decisions as to where they should 'hedge their risks'. This approach has precedence with its adoption for the EU ETS Phase III.

Even in a transition period and/or the absence of an international agreement, it is far better that Government provides a market based mechanism for firms to manage their risks (and opportunities) than fix a price for permits (a tax). In the absence of a market based mechanism, firms will not have the flexibility to manage their individual risks (or opportunities) at least cost.

The Government may appropriately consider the remainder of the Kyoto Period as a transition period for the larger task that will lie ahead of it after 2012. If so, then the core tenet of an emissions trading scheme, namely a market based price discovery mechanism (as opposed to a fixed permit price), should be introduced as soon as possible to inform investment. The early establishment of the CPRS will enable meaningful liquidity (risk transfer) to build prior to 2012.

7.3 Four auctions would be held each financial year, one in each quarter. The Government seeks stakeholder feedback on the relative risks of alternative models such as annual or weekly auctions.

7.5 The first auction would take place as early as is feasible in 2010, prior to the start of the scheme.

7.6 Four years of vintages would be auctioned (current vintage plus advance auction of three vintages).

7.7 The advance auction of future year vintages would occur once each year.

Quarterly auctions would be sufficient to underpin a robust and regular process of price discovery and avoid the administrative overhead of more frequent auctions.

The existence of robust forward markets, and a transparent futures market in particular, should inform those considering how best to participate in auctions and/or manage their price and funding costs through the use of derivatives.

The auctioning of future-year dated permits to underpin re-purchase agreements and the short selling of derivatives will benefit the efficiency of forward price discovery and risk transfer. The auctioning of future-year dated permits will also promote confidence in the continuity of the scheme and attract the risk capital of financial market participants who can provide liquidity that will reduce volatility and transaction costs.

7.10 Only those entities that receive free permit allocations would be allowed to sell them through double-sided auctions in the early phase of the scheme.

The proposed use of double-sided auctions in the early phase of the scheme to 'increase the size of the auction and the liquidity of the secondary market by discouraging hoarding' constitutes a secondary market for a restricted subset of market users and is unnecessary. The preferred position assumes (incorrectly) that the market infrastructure and liquidity providers needed to underpin the secondary and forward markets for permits will not be sufficient to service the CPRS in the first instance.

There is no shortage of existing over-the-counter (OTC) and exchange-based market and lending (repurchase) infrastructure as well as liquidity providers already involved in related energy, environmental and financial product markets, to efficiently inform and support the secondary and forward trading of permits.

The CPRS, due to its broad coverage, will be approximately 20 times the size of the next largest environmental product scheme in Australia in existence today.This critical mass bodes well for efficient secondary and forward markets.

The timely price signals and risk transfer facilitated by the forward market for permits will have greater significance for investment decisions than the periodic auctioning and secondary trade in permits (although these market mechanisms can not exist in isolation of each other).

12.2 State and territory governments are encourage to discontinue their market-based programs once the CPRS commences, as this is consistent with the Council of Australian Governments' complementary measures and streamlining agenda. The Government will continue to work cooperatively with the New South Wales, Australian Capital Territory and Queensland government to assist them in their development of appropriate transitional arrangements.

There are currently five Environmental Trading Schemes operating in Australia, one national scheme, the Mandatory Renewable Energy Target scheme (MRET) and four State-based schemes: the Victorian Renewable Energy Target scheme (VRET) the New South Wales Greenhouse Gas Abatement Scheme (GGAS) and Australian Capital Territory (ACT) GGAS equivalent, and the 13% Gas Scheme. The Victorian Energy Efficiency Trading (VEET) Scheme will commence in Victoria on 1 January 2009 and NSW and South Australia have announced plans to introduce their own versions of this scheme also from 1 January 2009.

The multiplicity of trading schemes has resulted in fragmentation, reduced liquidity, uncertainty of future pricing and significant transaction and compliance costs for scheme participants. The Garnaut Review (and the Parer Review before it in 2002) convincingly argues that a single Australian Emission Trading Scheme would make all other schemes (apart for MRET over a transition period) unnecessary.

The Australian Government should do all that it can to provide a smooth and timely transition away from the multiplicity of the existing and proposed State based schemes and other non-complementary measures.

Other Points

ASX's previous submissions to the Commonwealth Government and the Garnaut Review have highlighted the importance of there being an interface to the national registry in order to efficiently facilitate clearing and settlement for secondary and forward markets.

The late development of stand-alone registries in the EU ETS, without an interface to a settlement service for over-the-counter trading, has given rise to inefficiencies in the related spot and forward markets. The lack of settlement infrastructure has also been detrimental to the existing environmental schemes in Australia such as the Mandatory Renewable Energy Target scheme and the NSW Greenhouse Gas Reduction Scheme.

The Australian equity market would not operate efficiently in the absence of CHESS and the Australian debt and energy (electricity and gas) markets would not operate in the absence of Austraclear. Similarly, a market with an annual value of approximately $8.4bn (420 Mt CO2-e x $20) will not work efficiently in the absence of a market based settlement service.

Existing ASX infrastructure (Austraclear) is well placed to provide safe keeping and settlement services for secondary and forward trades in permits. Austraclear could also support settlements resulting from the Government's auction of permits.

Given the lead times likely to be associated with interfacing settlement and trading systems to the national registry, it is important that this critical market infrastructure is available as soon as possible.

Attachment 1

The effects of EUA supply disruptions on market quality in the European carbon market

By Professor Alex Frino, Jennifer Kruk, and Dr. Andrew Lepone
Finance Discipline, University of Sydney, Australia

Executive Summary

The aim of this paper is to analyse the effects of two supply disruptions on market quality in the European carbon market. Specifically, we examine the effects of (i) the release of 2005 emissions data indicating an oversupply of EUAs for Phase I, and (ii) the restriction on banking Phase I EUAs for use in Phase II. Our key findings are as follows:

- The nearest to maturity futures contract (December 06 futures) experienced severe price volatility over a three week period as a result of uncertainty surrounding the supply of Phase I EUAs.
- Institutions trading the nearest to delivery contract incurred substantially higher transaction costs over the same period; however, higher transaction costs persisted after the event.
- Although not reported in this paper, severe price volatility and higher transaction costs were also experienced by Phase II futures contracts as a result of Phase I supply uncertainty.
- The European Commission's ban on banking Phase I EUAs for use in Phase II exacerbated the natural shift from trading Phase I to Phase II EUAs, subsequently causing Phase I EUAs to trade at less than €1 for most of 2007. Further, liquidity in the futures market shifted from the December 07 contract to the December 08 contract. The December 08 contract traded heavily from November 2006 onwards, even though Phase II EUAs did not begin trading in the spot market until early 2008.

Introduction

The European Union Emissions Trading Scheme (EU ETS) dominates the global carbon market. According to the World Bank, a total of 2,061 million tonnes of carbon dioxide ($MtCO_2$) were traded via the EU ETS in 2007, worth USD 50.39 billion.[1] This figure incorporates trading in the spot market (<2%), the options market (2-3%), and the futures/forward market (95%).

The EU ETS operates as a cap and trade scheme, where EU Member States set annual emissions targets for each phase of the scheme.[2] Following the approval of the European Commission, Member States allocate European Union Allowances (EUAs) to firms covered by the EU ETS. One EUA gives the holder the right to emit one tonne of carbon dioxide. Once allocated, firms buy or sell EUAs depending on their individual requirements.

Thus, supply and demand in the European carbon market operate within constraints set by the Member States and the European Commission. This creates a level of political risk not present in traditional markets. The primary source of political risk in carbon markets is the setting of emissions caps (the supply of EUAs) in relation to actual emissions. For example, setting emissions caps too high creates an oversupply of EUAs and will result in a very low carbon price. This prevents the scheme from working effectively, as the carbon price needs to be sufficiently high to encourage companies to reduce carbon dioxide emissions internally and encourage investment in alternate energy sources.[3]

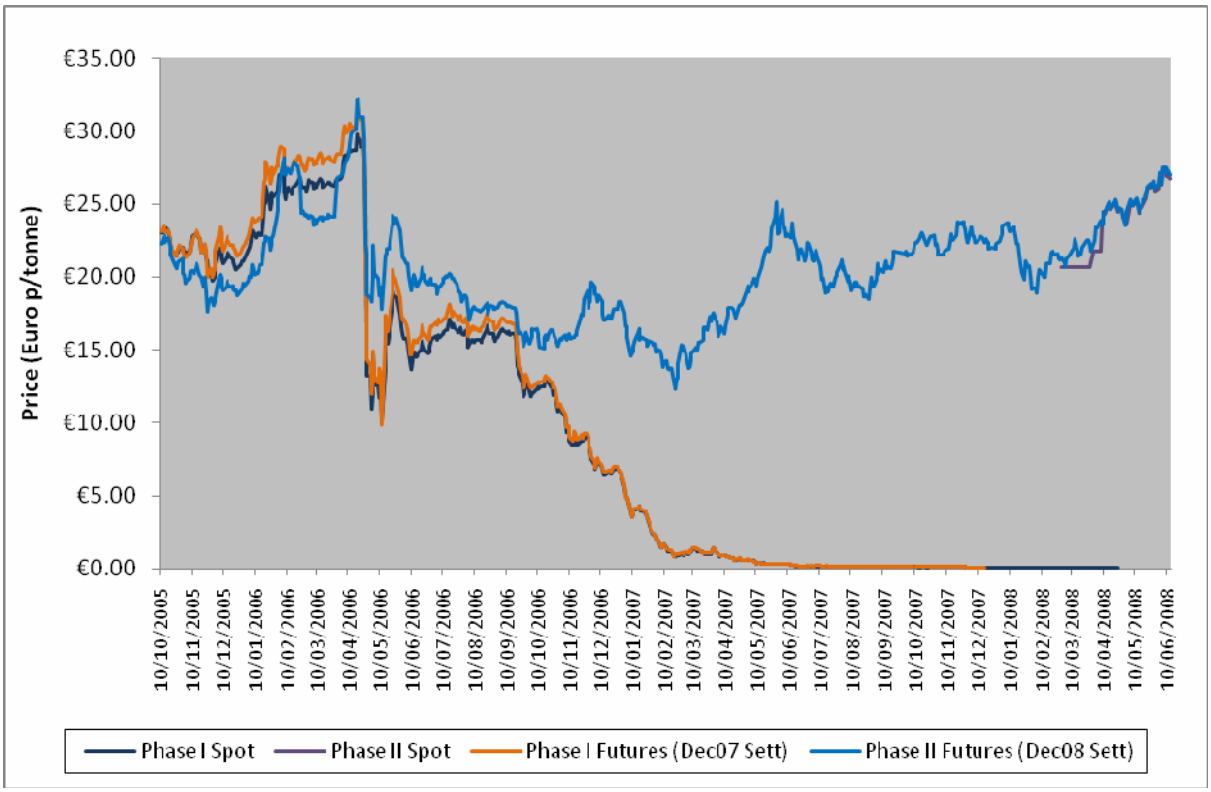
To date, the European carbon market has experienced two distinct supply disruptions. The first occurred with the release of 2005 emissions data in April/May 2006. The data showed that the market for allowances was long by 44 $MtCO_2$ in 2005, implying that emissions caps for Phase I were too high (i.e. an oversupply of EUAs).[4] This supply disruption was exacerbated by several Member States releasing their 2005 emissions data ahead of the official release by the European Commission. The second supply disruption occurred at the end of Phase I, as the European Commission had previously decided that Phase I EUAs were not fungible with Phase II EUAs. This created discontinuity in the supply of EUAs between phases.

To analyse the effects of these supply disruptions, we initially examine Phase I and Phase II carbon prices on the spot and futures market. We then examine the effects of each of the supply disruptions on the most liquid carbon market – the futures market. Specifically, we examine trading volume, price volatility, and transaction costs for carbon futures traded on the Intercontinental Exchange (ICE).[5] This paper utilises spot market data, provided by Bluenext, and ICE futures data, provided by Reuters and ICE, for the period 10 October 2005 to 16 June 2008. The data incorporate on-market trading in the spot market, and both on-market and off-market trading in the futures market.[6]

[1] See The World Bank: State and Trends of the Carbon Market 2008.
[2] The EU ETS is divided into three distinct phases. Phase I (2005 – 2007) is the trial period, Phase II (2008-2012) is the Kyoto Period, and Phase III (2013 – 2020) is the post-Kyoto period. Separate emissions caps are set for each phase.
[3] Kanen (2006) suggests that in order for fuel-switching prices to drive the long-term carbon price, the market must be short of allowances. The fuel-switching price is the carbon price that is needed to make gas-powered plants favoured over coal-powered plants.
[4] Kanen, J.L.M., 2006, "Carbon Trading and Pricing", Environmental Finance Publications, London.
[5] ICE futures represent approximately 80 per cent of exchange traded volume (World Bank, 2008).
[6] The Appendix contains a description of the data.

The carbon price: Spot and futures

Figure 1. The carbon price



Source: Bluenext, ICE Futures

Figure 1 illustrates the effect of an oversupply of EUAs on the carbon price in the spot and futures markets. The market first became aware that Phase I EUAs were net long in late April 2006, when several Member States released their 2005 emissions data ahead of the European Commission's official release date.[7] From April 19, 2006 to May 15, 2006 the Phase I spot price fell by approximately 50 per cent (from €29.68 to €13.65), as did the Phase I futures price (€31.50 to €15.75). A similar effect is observed in the Phase II futures price, although the decline in price is less dramatic (€32.25 to €21.45).

Figure 1 also documents the effect on the carbon price of not permitting banking of EUAs between Phase I and Phase II. From September 2006, spot and futures prices for Phase I EUAs drop off dramatically, remaining at less than €1 for most of 2007. The lack of price support for Phase I EUAs was exacerbated by the European Commission rejecting a French and Polish government proposal to permit banking of unused Phase I EUAs for use in Phase II.

[7] The European Commission released 2005 emissions data on May 15, 2006.

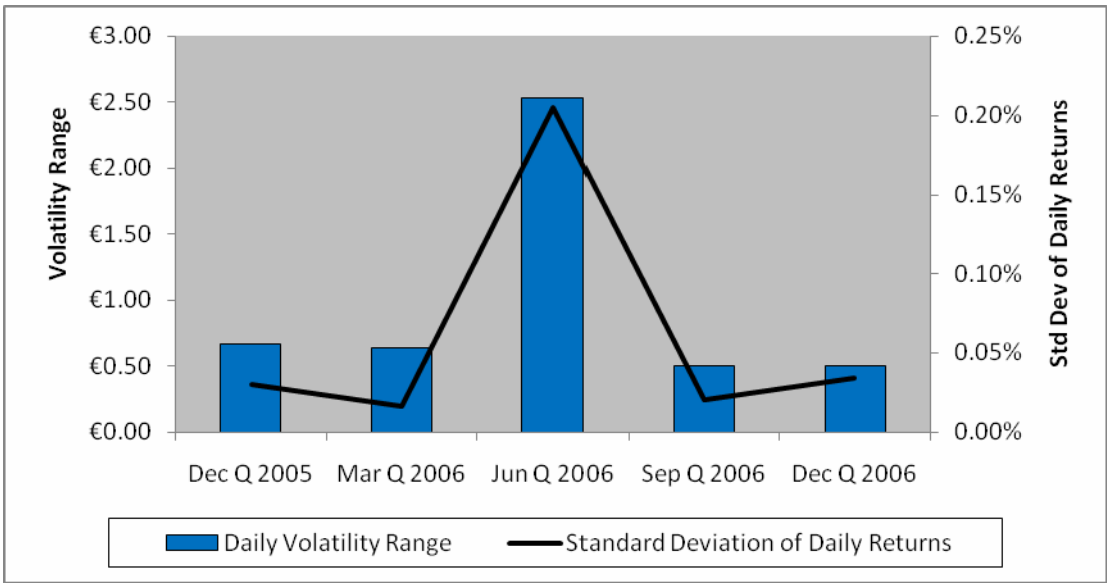
Supply disruption #1: Oversupply of Phase I EUAs

To observe the effects of the oversupply of Phase I EUAs on market quality, we examine price volatility and transaction costs surrounding this event. We focus on the nearest to delivery ICE futures contract at the time of the supply disruption, December 06 futures.[8]

1. Price volatility

Excessive price volatility is detrimental to any market as it increases transaction costs and reduces investor confidence. We measure price volatility in two ways - the daily price range in Euro and the standard deviation of daily returns. Figure 2 reports the average daily price volatility in each quarter.

Figure 2. Average daily price volatility: December 06 futures

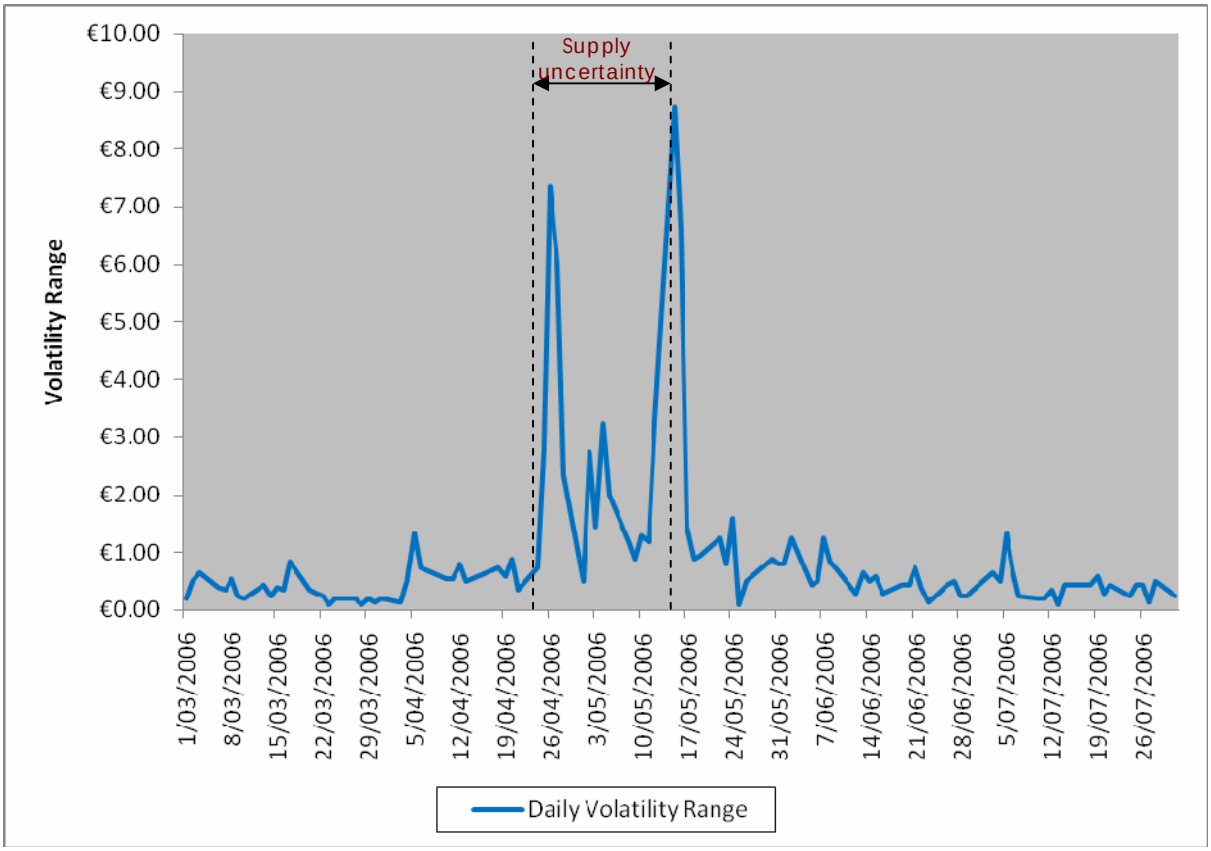


Source: Reuters

Both measures of price volatility reported in Figure 2 indicate that volatility is highest in the June Quarter 2006. During this quarter, the average daily price range is €2.53 (approximately 50 times the minimum tick), and the average standard deviation of daily returns is 0.21 per cent. The documented increase in price volatility demonstrates one adverse impact of an oversupply of allowances on the carbon futures market. To examine the effect on volatility in detail, Figure 3 plots the daily price range for December 06 futures from April 1, 2006 to June 30, 2006.

[8] Figure 6 in the following section breaks down trading volume by contract maturity and shows that at the time of the supply disruption, on-market liquidity is concentrated in December 06 futures.

Figure 3. Daily price volatility: April 1, 2006 to June 30, 2006



The area identified by the dashed lines in Figure 3 incorporates the time from which the market first became aware of a potential oversupply of Phase I EUAs (April 24) to the day the European Commission released 2005 emissions data (May 15). Severe price volatility persisted over these three weeks; however, Figure 3 documents two distinct volatility spikes. The first volatility spike (€7.35) occurs on April 26, when several Member States leaked their 2005 emissions data. The second volatility spike (€8.75) occurs on May 15, when the European Commission officially released 2005 emissions data for the entire scheme.

Figure 3 documents persistently high volatility and two extreme volatility spikes during a period of supply uncertainty, highlighting another detrimental outcome of supply disruption in the carbon market.[9]

2. Transaction costs

The bid-ask spread provides a direct measure of the round-trip cost of a transaction. In addition to a narrow bid-ask spread, traders require sufficient depth at the best bid and ask to accommodate their trades and to minimise market impact costs. Figure 4 reports the quoted bid-ask spread and the number of contracts available at best bid and best ask prices for December 06 futures.

[9] Severe price volatility is also documented in Phase II futures.

Figure 4. Average market depth and bid-ask spread: December 06 futures

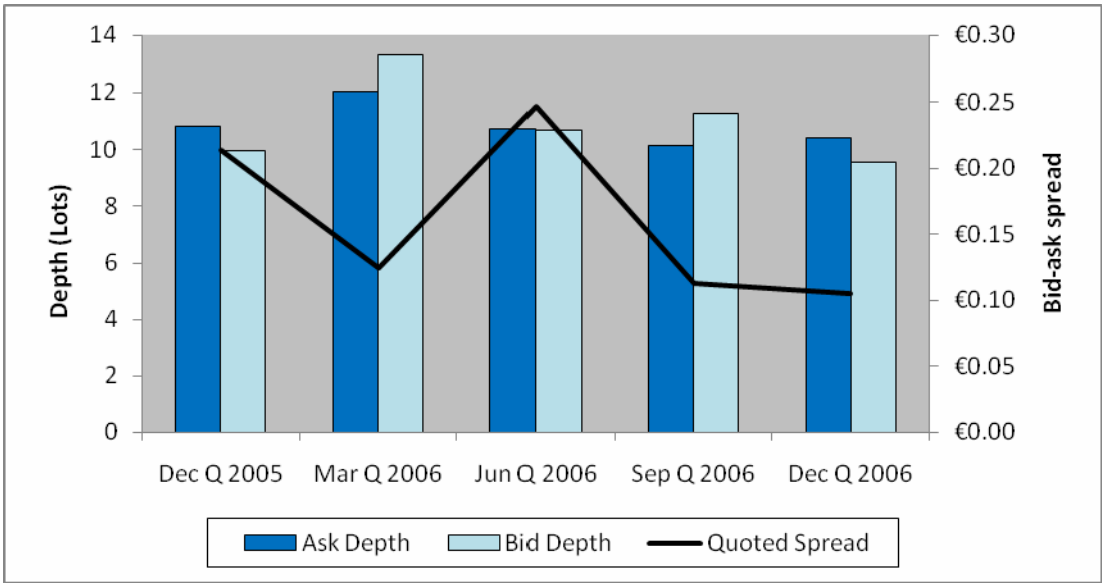


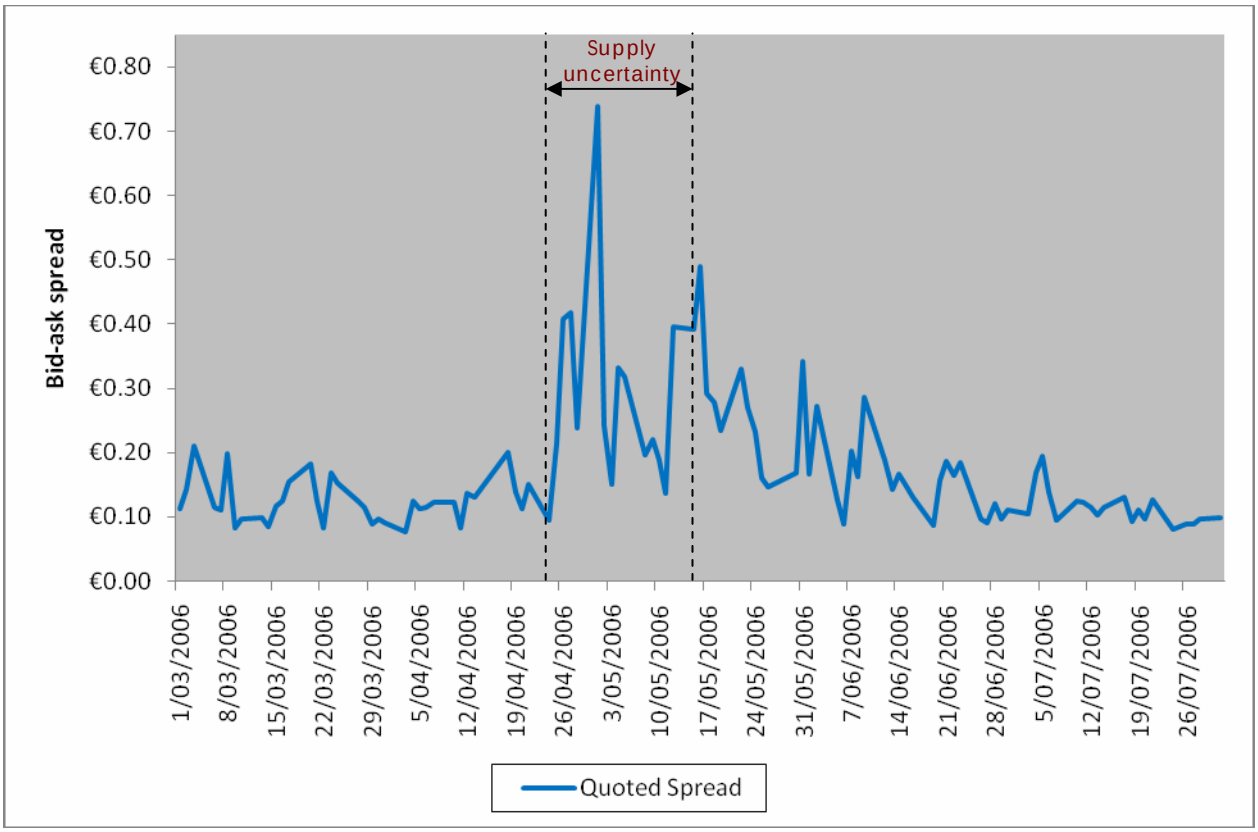
Figure 4 shows that market depth was unaffected by the oversupply of Phase I EUAs. This is unusual considering the extreme price volatility at the time. However, in the months following the supply disruption an increasing proportion of futures transactions were executed off-market.[10]

Excluding the June Quarter 2006, the quoted bid-ask spread decreases monotonically over time. Figure 4 shows that the bid-ask spread is widest during the June Quarter 2006.[11] The average bid-ask spread during this quarter is €0.24, approximately five times the minimum tick of €0.05.[12] The June Quarter bid-ask spread is approximately twice that of the March Quarter, representing a sharp increase in transaction costs for traders executing market orders. This again provides evidence of the far-reaching implications of a supply disruption in the carbon market.

To examine the bid-ask spread in detail, Figure 5 plots the average daily bid-ask spread for December 08 futures from April 1, 2006 to June 30, 2006.

[10] See Figure 6 in the following section.
[11] This is consistent with theoretical models of the bid-ask spread, which predict that the spread should widen in response to increased information asymmetry. See Easley, D. and M. O'Hara, 1987, "Price, trade size, and information in securities markets", *Journal of Financial Economics* 19, 69-90.
[12] On 27 March, 2007 the minimum price increment decreased from €0.05 to €0.01.

Figure 5. The bid-ask spread: April 1, 2006 to June 30, 2006



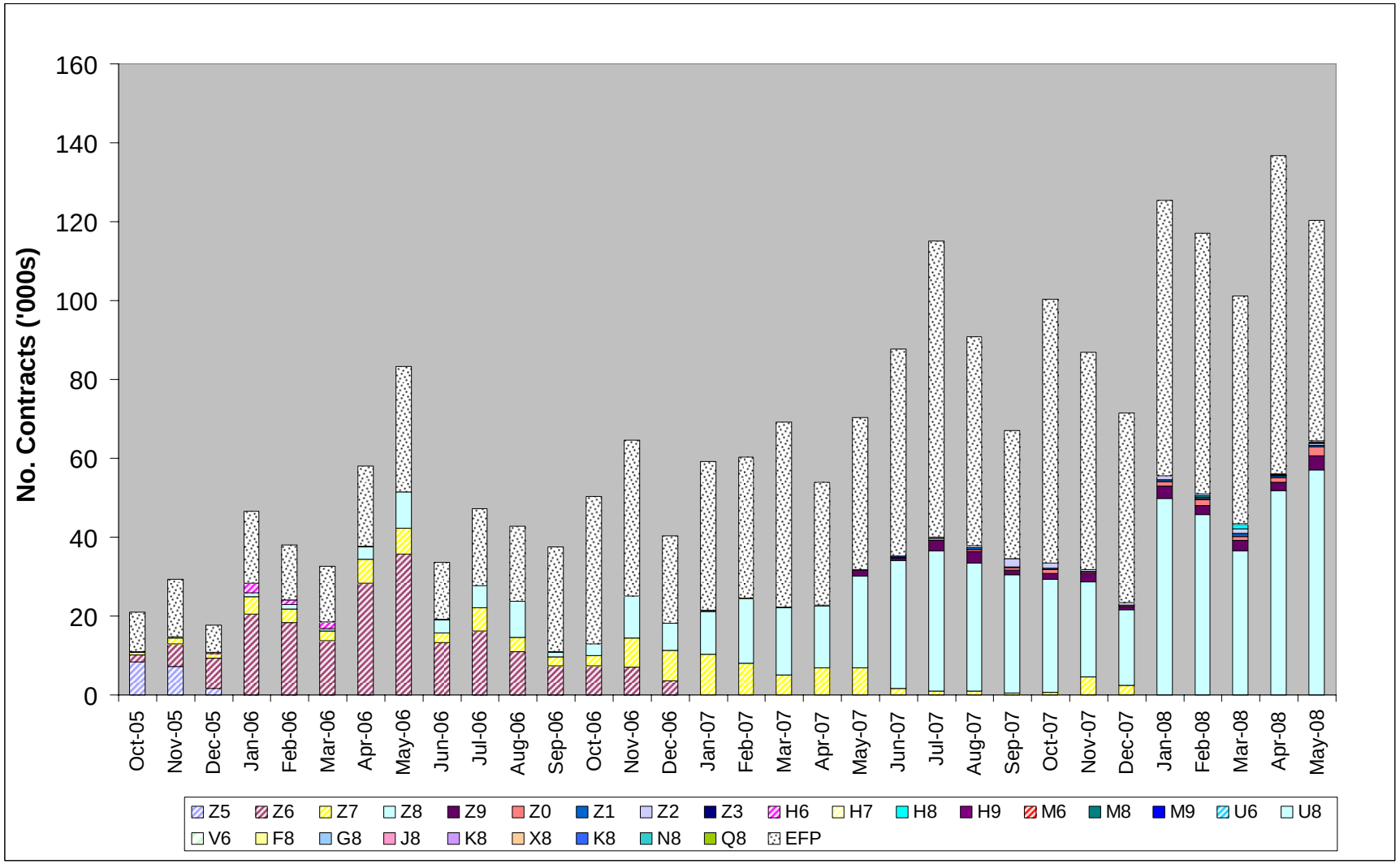
As with Figure 3, the area identified by the dashed lines in Figure 5 incorporates the time from which the market first became aware of a potential oversupply of Phase I EUAs (April 24) to the day the European Commission released 2005 emissions data (May 15). The bid-ask spread is considerably wider over this period and remains wide after the event, suggesting that supply uncertainty increases transaction costs for a sustained period in the carbon futures market.[13]

Supply disruption #2: Banking restriction on Phase I EUAs

The effects of the banking restriction are best observed by analysing trading volume. Figure 6 documents on- and off-market monthly trading volume for the ICE Futures EUA contract. The underlying asset of this contract is 1,000 EUAs.[14] On-market trading takes place on the ICE electronic trading platform (WebICE) and off-market trading occurs via the ICE Exchange For Physical (EFP) facility.[15]

[13] The bid-ask spread also widens for Phase II futures. These results are available on request.
[14] Full contract specifications are provided in the Appendix.
[15] The average proportion of daily on-market volume to daily off-market volume is 39.04 per cent.

Figure 6. Total monthly trading volume: On-market and off-market



Source: Reuters, ICE Futures. Phase I contracts are shaded and Phase II contracts are solid colour.

The banking restriction on Phase I EUAs exacerbated the natural shift from trading Phase I to Phase II contracts. Figure 6 documents a severe deterioration in on-market trading activity for December 07 futures during 2007, consistent with the rapid price decline depicted in Figure 1. Subsequently, December 08 futures are by far the most liquid contract. December 08 futures are traded heavily on-market from November 2006, even though Phase II EUAs did not begin trading on the spot market until early 2008.[16] These patterns in trading volume provide evidence that the banking restriction prematurely diverted liquidity away from the nearest to delivery contract and into the contract with the greatest supply certainty.[17]

Two additional patterns in trading volume arise in Figure 6. First, on-market trading activity is concentrated in the December expiry contracts, coinciding with annual emissions audits. Second, even though Phase III caps are currently unknown, there were four on-market trades executed in December 13 futures on June 5, 2008.

[16] This provides evidence that price discovery occurs in the futures market.

[17] In October 2006, the European Commission announced they would enforce stricter emissions caps in Phase II, creating additional supply certainty (and hence price support) for Phase II contracts. See Alberola, E., Chevallier, J., and B. Chèze, 2007, "European carbon prices fundamentals in 2005 – 2007: The effects of energy markets, temperatures, and sectoral production", *Working Paper,* Universitè Paris X-Nanterre.

Appendix

1. Data

The data used in this paper are sourced from Bluenext, ICE, and Reuters. The Bluenext data describe trading in the spot EUA market. Each trade record in the Bluenext data contain fields which document the date, time stamp, product, trade price, and trade volume associated with each trade. The ICE data describe daily on-market and off-market trading in the ICE Futures EUA contract. Each trade record in the ICE data contain fields which document the date, daily total volume, daily screen volume, daily Exchange for Physical (EFP) volume, daily open interest, and the daily settlement price for all December contracts. The Reuters data describe on-market trading in the ICE Futures EUA contract. Each trade record in the Reuters data contain fields which document the date, time, price, volume, best bid price and volume, and best ask price and volume associated with each trade. Bid and ask quotes are the prevailing best quotes immediately prior to the trade.

2. Contract specifications

Table A1. Contract specifications for ICE Futures EUA contract

Contract	ECX CFI futures
Unit of trading	1 lot = 1,000 CO2 EU Allowances (EUAs) 1 EUA = entitlement to emit 1 tonne of CO2 or equivalent
Minimum trade size	1 lot
Quotation	Euro (€) and Euro cent (c) per metric tonne
Tick size	€0.01 per tonne (€10 per lot)*
Max. price fluctuation	No limit
Contract months	Monthly – September 2006 to March 2008 (Phase I) Yearly – December expiries 2008 to 2012 (Phase II)
Expiry day	Last Monday of contract month
Trading hours	07.00 – 17.00 UK local time
Settlement price	Trade-weighted average during the daily closing period (17.00-17.15) with Quoted Settlement Prices if liquidity is low.
Settlement and delivery	Physically settled. Transfer of EUAs in a national registry three days after last trading day (LTD+3 delivery)
Margin	All open contracts marked-to-market daily

Source: www.theice.com and the Handbook of World Stock, Derivative & Commodity Exchanges 2007

*The tick size decreased to €0.01 from €0.05 on 27 March, 2007.