PwC Sustainability & Climate Change Services

Carbon Valuation Post 2012

19th October 2010

Policy uncertainty and the balance sheet

As the climate negotiations plod along to Cancun, businesses with investments in carbon projects or portfolios of carbon contracts are now feeling the impact of policy uncertainty on their balance sheets. The use and treatment of CERs (Certified Emissions Reductions from CDM projects) post-2012 is contentious, and decisions by the CDM Executive Board and the European Commission are affecting the willingness of investors to develop new projects as well as the value of carbon contracts. A carbon fund hit the headlines earlier this month after it cut the expected delivery of credits from its portfolio of purchase contracts by 25%.

The Kyoto commitment period and Phase II of the EU Emissions Trading Scheme (EU ETS) ends on 31st December 2012. In Phase III of the EU ETS the overall emissions cap is at least reasonably clear, even if many of the details around the allocation method and auctioning are outstanding. But, for the CDM, there are a number of fundamental questions about the role of the CDM and the use of CERs post-2012.

- Will the CDM continue to operate post-2012 as it is today – approving methodologies, reviewing and registering projects, suspending auditors and issuing CERs (albeit slightly dysfunctionally) – and will the delays at the CDM Executive Board continue to affect volume forecasts?

- How will the EU restrict the use of CERs in the EU ETS; will CERs from particular countries or particular projects (such as HFC_{23} or other industrial gas projects) be limited; how would those limits apply (on existing projects or future investments, will limits apply from 1st January 2013 or at the end of project crediting periods, will the CERs be discounted)?

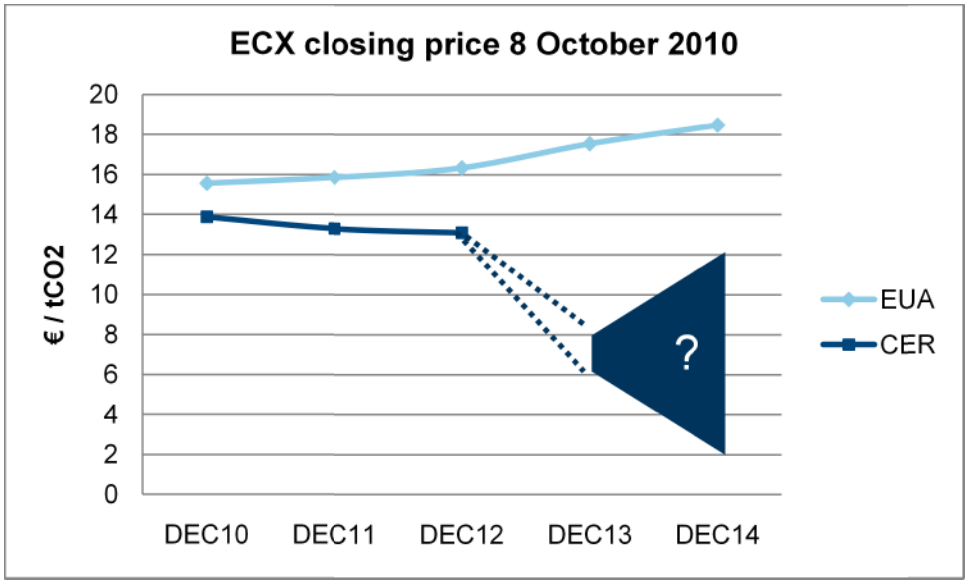
International Accounting Standard (IAS) 39 provides rules for the treatment of financial instruments such as forward contracts to buy or sell CERs or EU Allowances (EUAs). Companies holding credits for compliance only must apply the 'own-use' for these forward contracts if the contracts were entered into, and continue to be held, for the receipt / delivery of allowances to meet the company's own compliance requirements. The 'own use' exception results in these forward contracts being accounted for as executory contracts rather than derivatives. However, contracts which fall outside the 'own use' exception (likely examples include those entered into by investment banks, carbon funds and some compliance players who actively trade carbon), must be treated as derivatives held at fair value through profit and loss.

At the most basic level, the key variables in valuing a contract to buy primary CERs from a CDM project are price, volume and timing.

Is the price right?

The market's response to the uncertainties identified above is reflected in the price for EUAs and secondary CER's. The forward curve for EUA's extends to 2014, but the value of CER's post-2012 is much less clear (see chart). IAS 39 stipulates that the best evidence of fair value is a quoted price in an active market and then a business should *mark to market*. This is straightforward for EUAs to 2014 and secondary CERs up to 2012. However, there is a lack of clarity around the regulatory

regime for CERs post-2012. Consequently, there is a dearth of market data or bid/ask spreads for post-2012 CERs, so it can be argued that there is no active market to refer to. In this situation, an alternative valuation approach is needed to establish fair value, which under IAS 39 can be *mark to model* or by using an alternative reference price.



As per IAS 39, valuation techniques include using recent arm's length transactions between knowledgeable, willing parties if available, reference to the current fair value of another financial instrument that is substantially the same, discounted cash flow analysis and option pricing models. The objective of any valuation technique should be to establish what the transaction price would have been on the measurement date in an arm's length exchange motivated by normal business considerations. Therefore, the technique used should make maximum use of market inputs and rely as little as possible on entity specific inputs. Finally, businesses have to ensure that the valuation techniques they propose are acceptable to auditors and regulators.

In the absence of much publicly available information about price points for post-2012 secondary CER transactions, some have referred to the World Bank '*State and Trends of the Carbon Market*' report published annually. This notes prices in the range of €6-8. An obligation or contract to purchase CERs from a project developer in 2013 will therefore be fair valued negatively if the reference market price for the secondary CER less than the purchase price.

How much, and when?

The other key variables in the valuation equation are volume and timing. Buyers of non-guaranteed primary CERs will typically quantify a number of risks to estimate the volume they expect to be delivered. While these risk adjustment methodologies may vary, they typically include technology, regulatory and project implementation factors. But buyers are now asking whether the delivery of some of their risk adjusted volumes for Phase II will be delayed to 2013 and whether restrictions on the use of particular CERs will further undermine their value.

Installations in the EU-ETS have until 30 April 2013 to surrender credits for Phase II of the scheme. To 'qualify' for the higher Phase II price, the CER must be delivered by that date. For the 20 largest CER issuance requests, the average time lag between the end of a project monitoring period and the start of the 'period for requesting review' by the CDM EB is 257 days. Given that the 'period for requesting review' lasts 28 days, this suggests that it currently takes approximately nine and a half

months from the end of the monitoring period to issuance of the CERs. So if this is the length of the delay at the end of Phase II, only activity up to July 2012 could be monitored and issued prior to the end of April 2013. Credits generated from project activity after that point could only be used for compliance in phase III of the EU ETS and should be valued at the post-2012 price. Buyers may therefore need to discount further their risk-adjusted volumes for 2012. It remains to be seen whether these time lags get worse, as we approach this crucial cut off point.

On top of the issuance bottleneck faced by all CDM project developers, the EB has recently singled out HFC_{23} projects for further scrutiny. The CDM EB has all HFC_{23} projects under review effectively putting a moratorium on the issuance of CERs from a group of projects that makes up roughly 70% of the current CER supply. A UN working group on these projects is expected to report to the Executive Board in November 2010 at the earliest.

The European Commission is also considering how to restrict or exclude CERs generated by HFC_{23} and/or other industrial gas projects in phase III of the EU ETS. There is therefore significant uncertainty in both the eligibility of certain credits post-2012 and the supply of CERs up to that point. Jos Delbeke, Director of the Commission's Climate Action department, announced on 19 October that the Commission would publish a proposal in the run up to the climate summit in Cancun, which will set out how CERs from industrial projects will be restricted.

The demand and supply uncertainty could materially affect the future value of CERs in a portfolio, and therefore the volume and price assumptions currently used may not be appropriate. Businesses with portfolios of forward contracts for CERs therefore need to monitor decisions and actions of the European Commission and the CDM EB and revalue their forward contracts accordingly.

The effect of this uncertainty is a fall in new CDM project investment in a market that now appears moribund.

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