

FEATURES



FAIR WIND FOR ECO ABS

As a variety of links between the capital markets and environmental projects develop around the world, innovative solutions are being thrown up, such as forest-backed ABS and emissions allowance CDOs. **Helen Wray** examines what the securitisation market has to offer the green movement.

Climate change is now a big business; from the cars we drive to the clothes we wear and even the food we eat, an eco-friendly alternative is available to an increasingly socially responsible consumer market. It is perhaps no surprise, then, that far from only being the realm of environmental groups or individual activists, the world's largest financial institutions and firms are increasingly becoming involved in green projects too.

Morgan Stanley, for example, announced in October 2006 that it would invest US\$3bn in carbon initiatives over the next five years. It is expected that the majority of this investment will be covered as the bank's commodities trading department expands its carbon and emissions platform. The bank has also committed to investing in emissions reduction projects under the Kyoto Protocol's clean development mechanism (CDM) (see box).

Indeed, banks and corporations are in a position to make a real difference by funding green projects through the capital markets – and the securitisation sector is making significant inroads in developing new products in this area. For example, earlier this year, UniCredit Group (HVB) priced the third deal in its groundbreaking Breeze programme, which provides financing for wind parks (see *ISR May 2007, page 10*).

"The Breeze programme is attractive as a source of funding because we are in a position to raise huge amounts via the capital market for assets that on a standalone basis would not do so," says Dagmar Buhl, head of structured bond execution at HVB. "Offshore wind farms, for example, are huge sites with total investment costs of at least €6m (US\$8.1m), so the capital market is the perfect platform to raise such huge amounts. If financing is done via a single loan for each site or location, it becomes much more complicated and expensive."

The bank also announced its intention to expand the programme both geographically as well as to include solar and geothermal energy forms in securitisation deals. It has also been mandated for an offshore wind farm transaction.

Using securitisation as a tool to finance wind farms is a particularly good fit, as it is a relatively mature asset class offering long-term assets with a proven track record.

"The benefits of moving into those areas for all renewable energy sectors is the same as it is for wind energy, in that small to mid-sized companies do not really have access to other sources of capital," adds Buhl. "These types of financing deals are also attractive to investors because they receive an attractive coupon for very little risk. In addition, the methods of measuring wind have improved significant-



Parker: CDM securitisation is a type of project finance

ly in recent years, so participants have a solid database from which to predict wind over very long periods for different wind regions across Europe. Therefore, the risk involved with a wind farm portfolio due to the full cross-collateralisation in relation to the rating and the coupon is fair."

Most likely to replicate the typical structure of previous Breeze deals, Buhl expects two more Breeze transactions in the second half of this year, with one of the portfolios including solar energy. Furthermore, HVB will introduce a portfolio of geothermal energy in mid-to-late 2008. As well as extending its reach into different renewable energy sources, the bank is working on developing wind farm portfolios in countries outside of Germany, including Hungary, Poland, the Czech Republic and Croatia.

"The Breeze programme works well because Germany bought in early to the whole idea and seems to have a better understanding of how this type of deal can work," confirms Frances Hudson, global thematic strategist at Standard Life Investments. "Clearly, there is the potential in any of the alternative energies to utilise the securitisation

markets as the best way of obtaining funding – as long as the technologies have been proven to work, such as solar and wind energy."

There are two ways of using note proceeds to invest in a project that would generate emissions allowances under the Kyoto Protocol – CDM and joint implementation (JI). Crucially, if a polluter commits, for instance, to a wind farm project in a developing country, tradable carbon credits can be earned under the Kyoto Protocol's CDM.

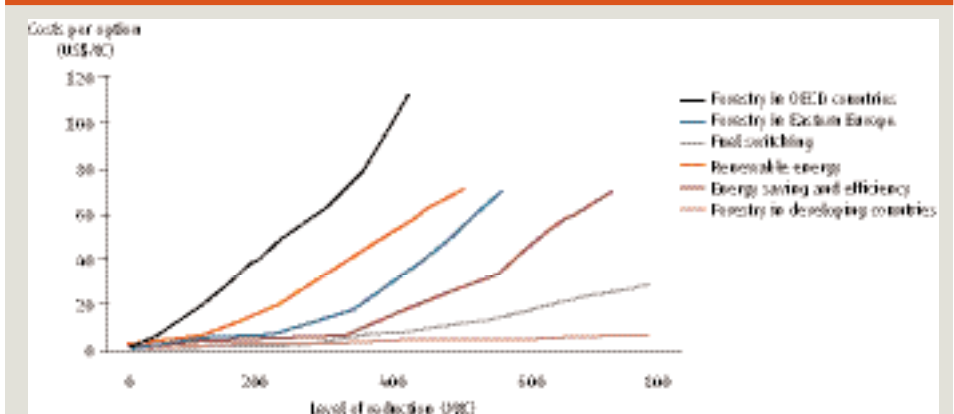
"Using securitisation to finance projects under the CDM is essentially a type of project finance, where a note issue will fund a project, which will in turn generate allowances that can then be sold into the market to generate a return for investors," says Ed Parker, a partner at Mayer Brown Rowe & Maw. "Alternatively, instead of offering them to the market immediately, these allowances could be held on to in anticipation of prices going up."

Buhl notes that working with carbon abatement initiatives under the CDM may be an option for HVB in the future, but for now the bank is concentrating on developing its existing programmes.

According to recent figures from the World Bank, China dominated the CDM supply side in 2006 with a 61% market share of volumes transacted, followed by India at 12%. Meanwhile, Asia led with an 80% market share, while Latin America accounted for 10% of CDM transactions overall with Brazil alone at 4%.

"The fact that CDM projects under the Kyoto Protocol have a tenor of seven years is a big advantage, particularly for companies in Brazil where it is challenging for them to set up financing," says Maurik Jehée, vice president, carbon markets at ABN AMRO in Brazil. "Companies now have the opportunity to develop a financing project – such as landfill projects or biomass projects – with a five to six-year long-term contract, as a result of

ABATEMENT COSTS BY OPTION (US\$/TC)



Source: Lehman Brothers

FEATURE: ECO SECURITISATION

selling their future CERs [Certified Emissions Reductions] on a forward basis at least up to 2012.”

Long-term forestry projects also lend themselves well to the structured finance markets, as a recent initiative has shown. The Eco-Securitisation Research and Development Programme (Eco-Sec) was established in mid-2006 by the International Finance Corporation with backing from the UK Department for International Development (see *ISR* October 2006, page 5).

Eco-Sec sets out to test the technical feasibility and likely development impact of eco-securitisation, by examining its potential role in the financing and/or re-financing of sustainable forestry in the developing world. Eco-Sec is currently at the interface between the first and second stage of a three-stage process, according to Simon Petley, a director at Eviromarket, the firm completing the study.

The first stage of the process, a Proof of Concept Study, explores and mirrors existing securitisation processes to identify the commercial incentives and barriers that would lead to the development of an Eco-Sec securitisation transaction. The report outlines opportunities for links between sustainable forestry management and the capital markets – specifically, the links between native tropical rainforests and securitisation.

Based on the final outcome of this initial stage, subsequent projects will explore concept development and finally identify and promote measures that would act as market catalysts. “Our original remit from the IFC and UK Government was to explore the feasibility and potential impact of an instrument linking organisations involved in the ecologically sustainable management of diverse, slow growing tropical forests with competitive long-term financing from the capital markets,” says Petley.

The growth characteristics of native forests – which grow slowly and have a wide diversity of trees, thus producing different types of wood over a long time frame – are very different to the characteristics displayed by man-made plantations, which tend to grow the same type of wood consistently and quickly. The finance of plantations has typically been undertaken by equity funds and approximately US\$36bn is already invested in forestry assets around the globe, with the US accounting for two-thirds of this total. Securitisation techniques can be better applied to fund native forest projects in countries across Central and South America and Africa.

“The ‘forest-backed bonds’ that we envisage will offer investors exposure to a range of securitised cashflows,” continues Petley. “The key point behind our study is that natural growth forests in particular are not cor-



Jehee: possible to match debt with carbon credit income

rectly priced by the market and they have a lot of additional value – such as carbon storage and biodiversity – which may become better priced by the market in the future.”

He adds that these new revenue opportunities are attracting speculative interest at this stage, so a tranching instrument including natural forest plus a flow of income from alternative sources, such as plantations, makes sense. Although the development of traditional asset-backed structures involving land is attractive from a security point of view, property rights over forestry are a major consideration; land and use rights in tropical areas are a complex issue.

There are currently seven separate forestry projects around the world that are in a position to generate Kyoto-compliant carbon credits, according to Eviromarket’s Petley. “We are looking at the potential of generating carbon credits under the CDM project,” he says. “The key issue with forestry projects and carbon trading remains the permanence with which trees remove carbon from the atmosphere – whether they die, get cut down

EU EMISSIONS TRADING SCHEME

The EU emissions trading scheme (ETS) was launched on January 1 2005 as part of the EU’s climate policy towards its Kyoto Protocol commitment to reduce CO₂ emissions from some 12,000 pollutants across Europe to 8% below 1990 levels by 2012 and 20% by 2020. The first phase of the scheme began on January 1 2005 and is due to run until December 31 2007, when phase two will begin and run until 2012.

One inherent problem with the scheme’s initial stages was that too many allowances were given away, leading to a surplus in the market. This, along with the inability to carry forward unused allowances from phase one to phase two, meant that most utilities had already hedged their positions for the whole of phase one going into 2007. Consequently, the price of allowance

certificates dropped from a peak price of almost €30/tC in April 2006 to less than €1 by spring 2007.

“Theoretically, carbon should be trading in line with other energy markets and it certainly hasn’t done that,” observes Frances Hudson, global thematic strategist at Standard Life Investments. “The chances of prices as low as this deterring anybody from polluting is low, as it is no deterrent at all. Another philosophical problem with it is the assignment of credit between the companies – nothing should be given out, people should have to buy it, which might help on the pricing side because there is no rigour at all. It might work in terms of a market and you might get people trading it, but in terms of the environment it is pretty much a non-starter.”

As for phase two, the EU Commission notes that meeting Kyoto commitments will be severely

compromised if more allowances are to be issued by member states than the likely quantity of actual emissions. As *ISR* went to press, decisions made so far on 19 national allocation plans set the annual cap at 5.8% below 2005 verified emissions on average.

In addition, there will be a tighter constraint within phase two, as the penalty for non-compliance will rise from €40 currently in place to €100. Phase two will also allow the carry-over of credits.

However, many question marks still surround the potential for a market post-2012 – although this is changing. “The uncertainty surrounding whether there will be a market after 2012 is already decreasing rapidly,” notes Jehee at ABN AMRO in Brazil. “The EU has made a clear statement that the EU scheme will continue after 2012, as they have committed to reductions of at least 20% by 2020. However,

allocations are not finalised yet, so it is not enough for large companies to commit to buying large number of CERs at this stage because they do not know the level that they will be responsible for at the end.”

The Linking Directive creates a link between the EU ETS and the Kyoto Protocol’s two other flexible mechanisms: the clean development mechanism (CDM) and joint implementation (JI). Polluting companies can earn additional tradable emissions credits through funding CDM projects in the developing world through the transfer of emissions-reducing technology. Conversely, JI is the protocol’s mechanism for participating installations in an emissions trading scheme, to earn tradable emissions credits for investing in emission reduction projects in other countries with their own emissions reduction targets.

or burn, trees eventually give out the carbon they have taken up during their growth phase. The Kyoto process accommodates this by allowing developers to generate 'temporary' carbon credits, which provide the holder with cover for their emissions over a specified period, after which time a replacement credit must be purchased or emissions reduced. The uses and applications of these temporary credits are still being explored by the market."

In addition to the more traditional environmental finance securitisation deals, a more esoteric structure could be on the cards in the form of emissions allowance CDOs, backed by a pool of emissions certificate delivery streams. Rumours about such a deal began last year, but seemed to disappear following the pricing downturn in the carbon market (see box). This situation, however, is likely to change shortly.

"The EU emissions trading scheme (ETS) market will be kick-started once again when Phase II begins," predicts Parker at Mayer Brown. "The question is to what extent could those credits become an asset type in themselves; for example, are we going to see managed transactions ramping up with emissions credits?"

He explains that emissions allowance CDOs would use CDO technology in order for an SPV to issue bonds where the proceeds would be used to ramp up a portfolio of credits or emissions allowances rather than bonds. However, instead of looking at the credit quality, it will be the future price that will be

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assessed – particularly as people start chasing after a limited resource, he notes.

Jehee agrees: "The difficulty in predicting pricing levels is another reason why companies will find securitisation attractive. By setting up a long-term contract to fix pricing – or at least a minimum price for a longer term – and using that for fund raising, you have the possibility to match the flow of your debt and the income of your carbon credits."

However, not all participants are as optimistic. Standard Life's Hudson highlights that the EU ETS is currently not the best foundation for developing new instruments. "The major problem with the EU ETS in terms of securitisation is that the current car-

bon trading market in Europe is dislocated with a break in 2008 and there is no certainty as to what will happen after 2012," she says. "Together, these factors mean that the EU ETS does not really lend itself to setting up major securitisation transactions, as it offers little scope in the amount of bonds that can be issued – you need at least to know that the scheme will be there in four years' time."

Some market participants note that the emergence of carbon-specific credit opportunity fund-type vehicles may emerge, where the proceeds of the notes could be used to trade in and out of the emissions credit market in order to make use of longer-dated bonds.

"For the first time ever, there is a lot of investment going into projects that really do reduce carbon emissions," notes Jehee. "Putting a price on the environment has attracted a lot of attention from the capital markets for these types of projects."

Applying pricing methodology to green markets is not without its problems, however. In addition to problems arising from the allocation of allowances, CDM projects have been widely abused, according to Hudson. "Countries like China have taken millions of pounds as payment for CDM projects," she explains. "However, one of the ways in which they have done this is to build plants/factories that will pollute and then taken the money to close them down – which is clearly doing no real good. There is an opportunity there and you can't really blame people for exploiting it."

Furthermore, in recent months there has been extensive speculation in the UK's financial press as to whether these projects are actually helping reduce emissions. Questions have been raised as to the validity of the voluntary scheme and how far this goes in reducing emissions, as there is no single recognised audit scheme in place.

Many spectators believe these doubts and problems with the first phase will be ironed out over time, particularly if the US enters into a cap and trade system like the EU ETS or it places restrictions on other carbon emissions, either at a national or state level – perhaps with a linking directive to Europe.

"When the US Federal Government moves forward on federal greenhouse standards, this trend will not only accelerate but also lead to a significant re-evaluation of how fossil fuels are consumed," suggests Peter Fusaro, chairman and founder of Global Change Associates. "This will give rise to more energy efficiency than many can imagine. Environmental financial products for reductions of carbon dioxide, sulfur dioxide and nitrous oxide will accelerate trading in these three markets, coupled with a robust and growing renewable energy credit markets."

ENVIRONMENTAL CONTROL BONDS DEBUT IN THE US

Developments in the US environmental market came earlier this year as Potomac Edison Environmental Funding and Monongahela Power Environmental Funding launched the first environmental control bonds (ECBs) from US power companies (see *ISR May 2007, page 10*). The underlying collateral in ECBs represents the right of the issuer to collect environmental control charges (ECCs) from residential and business customers. Proceeds from the sale will be used in part to finance

environmental control equipment, such as the construction and financing of a flue gas desulphurisation plant for the greater West Virginia, Maryland and Virginia metropolitan area.

The deals are notable for being the first time that proceeds from utility offerings will be used to finance an environmental project. Analysts at Moody's note that the deals are based on the support of the West Virginia legislation, which permits utilities to recover the environmental control costs relating

to installation of environmental control devices by issuing ECBs. Funds collected from West Virginia customers through a surcharge will be dedicated to the repayment of those bonds.

Florida, Wisconsin and Utah have all passed legislation to allow their respective state-sanctioned power companies to collect such tariffs. Florida has stated its intention to use the proceeds to recover costs associated with hurricane damage, while Wisconsin and Utah, like West Virginia, are looking to fund capital

construction projects. "We are honored to have this opportunity to assist West Virginia in leading the nation by implementing an innovative way to get low cost funds for important projects affecting the climate," states Joseph Fichera, chief executive officer of Saber Partners, who acted as financial adviser for both deals. "The bonds solve part of the escalating costs utilities and their regulators face in meeting government environmental standards, without overly burdening electricity customers."