

INSURANCE PRODUCTS CAN TRANSFER DELIVERY RISK IN THE CARBON MARKET, SAYS **JULIAN RICHARDSON**

# Protect and survive

**F**or the last five years or so, there has been a frenzy of activity in the carbon market; people raising funds, chasing projects and making investments. It has all been about creating and getting risk on to one's balance sheet. Now with a policy hiatus – indeed possibly a void – companies are taking the opportunity to consider how best to manage the risks they have accumulated in this time. More importantly, they are examining how to fulfil the promises they made to investors, bosses and, in some cases, their families.

This article will look at an important part of the risk management process – insurance. We will look at the effective use of this product both in terms of the types of risks to transfer, as well as some case studies to consider possible structures that might be employed. The important question is not 'whether to buy insurance', but 'what is the right amount' to buy?

Trading of carbon credits from the Kyoto protocol's clean development mechanism (CDM) and joint implementation (JI) projects shares the same underlying risks of any project. However, there are also additional risks associated with the carbon regulatory process and regime. Generally, these risks are aggregated and, in our view, poorly described as 'delivery risks'. They should more accurately be disaggregated and recognised as individual risks that lead to the non-delivery or late-delivery of credits. Non-delivery is a consequence, not a risk in itself – the risk is what caused the non-delivery. Is there a way to protect a CDM or JI project against those risks?

Most emission reduction purchase agreements allocate

**Table 1. Benefits offered by insurance**

- Monetises the future value of carbon credits;
- Protects against the non- or late delivery of credits;
- De-risks both carbon credit investors' and project owners' return profiles;
- Raises investors' ability to make future investments;
- Avoids project's need to raise extra upfront finance;
- Increases the proportion of debt and improves terms;
- Allows carbon credits to command more attractive pricing;
- Improves marketability of credits; and
- Enables new pre-purchasers to enter the market to take advantage of the discount between the forward and spot credit price and/or to guarantee a future supply of offsets.

the risk to either the buyer or the seller of the credits. There are, however, other parties to whom risks can be allocated. In allocating the risks, project developers, investors and carbon credit buyers should consider:

- who has the best opportunity to influence the risk;
- which is the most appropriate party to own the risk; and
- is the project fundamentally a good project that may be unlucky or is it just a bad project?

The insurance industry has always played a major role in the risk allocation process. Insurance is an important tool for

**Figure 1. Portfolio A**



**Figure 2. Portfolio B**



Figure 3. Portfolio A

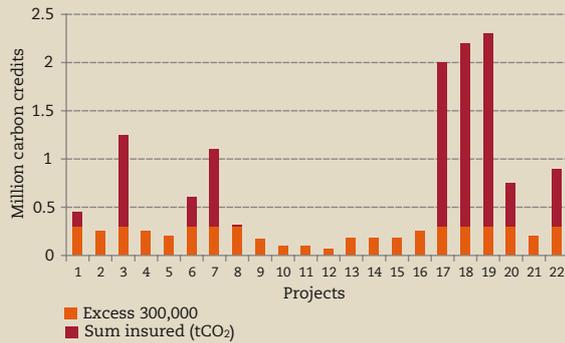
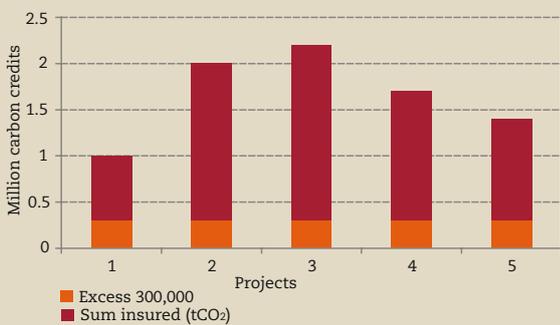


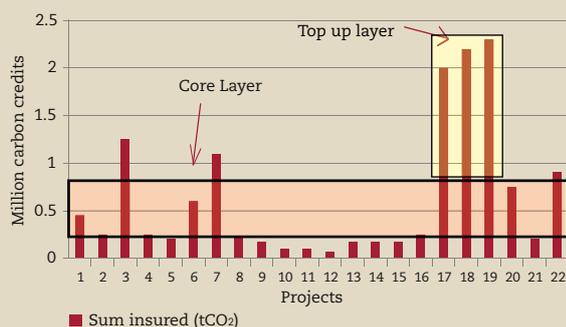
Figure 4. Portfolio B



any risk management strategy and adds value to companies' capital structure and capital providers' risk: return profile. It allows parties to transfer insurable risks they are unable or unwilling to take to a party more willing and able to bare them, especially those risks that can prevent a business from continuing and/or delivering its goals. Insurance should, therefore, be regarded as a form of contingent capital, as it is a contractual commitment to provide capital to a company after a specific adverse event occurs that causes financial distress – defined as the trigger.

All contingent capital financing is arranged on an ex-ante basis, providing a company with a capital infusion on an ex post basis. The company pays a capital commitment fee to the party that agrees in advance to purchase debt, equity or provide another form of capital following a loss. If no triggering event occurs, a company has no need for

Figure 5. Portfolio A



additional capital and the facility remains unused.

Since there is no need to provide capital upfront, insurance is potentially a very efficient financial instrument. In the context of CDM/JI projects, it helps the various parties involved to achieve their economic goals, by allowing for certain insurable risks to be transferred, thereby improving projects' risk profiles. This could be through a substantial increase in internal rates of return, a reduced likelihood of bad outcomes, or a more efficient mix of debt and equity capital. That is to say, by increasing the proportion of debt a company or project may have.

Many events leading to the non-delivery of carbon credits can be insured. We have identified in excess of 70 risks that may lead to non-delivery, of which some 46 were considered as insurable risks, each of which has the potential to be catastrophic to the buyer or seller.

Table 1 shows the benefits insurance can offer. All the functions of insurance in the table can be covered by a 'carbon delivery wrap', which also insures against all the insurable risks associated with emission reduction projects. It allows carbon fund managers, investors, project financiers, compliance buyers and suppliers, project companies and carbon traders to offset as little or as much excess 'non-delivery risk' as they want, depending on their risk appetite and tolerance.

One of the key elements in buying insurance is to buy the right amount. For example, with a portfolio expected to deliver 6 million carbon credits, an investor may still receive acceptable returns if the portfolio delivers, say, 5 million. If it delivers 4 million, the portfolio manager might still be able to keep investors on board for future investments, but possibly not. If it delivers less, then there is little chance the manager will keep investors' confidence for future funds and investments. The portfolio manager should then, having undertaken such a risk management assessment, buy insurance for the excess 'non-delivery risk' with a deductible, in this example of 2 million credits.

The following examples consider two different potential portfolios and applies different coverage structures to each as a case study to consider how each portfolio may optimise the level of insurance purchased.

Compare, for example, a large portfolio A with a wide range of project sizes, to a more concentrated portfolio B with less variability in project size. In this case study we will only consider the total limit value of the amount of cover.

Figure 6. Portfolio B

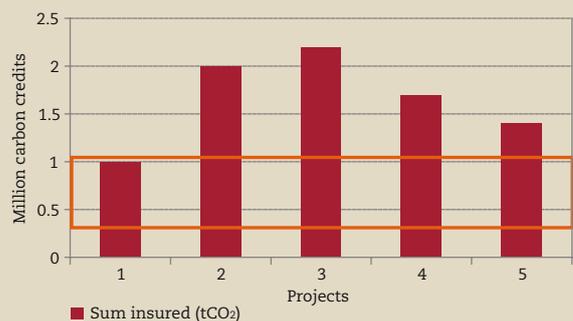
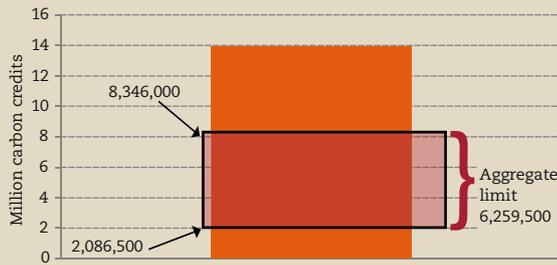


Figure 7. Portfolio A



Therefore, we assume that the breadth of coverage – that is to say, the range of risks covered – is consistent throughout. Let's have a look at some insurance options. All numbers are for illustrative purposes only.

The first option offers individual insurance policies for each project with a 10 per cent deductible. This provides coverage for the whole of each project's carbon credit risk – other than the small minimum retention level per project – irrespective of each project's size (see figures 1 and 2, page 24).

This option provides the highest level of coverage – with both a low attachment point and a full loss limit on each project – but it will, therefore, incur the highest insurance premium. Portfolio A is unlikely to be affected by the loss of one or more of the smaller projects. Portfolio B, which has fewer projects, all of which are a similar size, may well be impacted by the loss of just one project.

The second option offers individual insurance policies

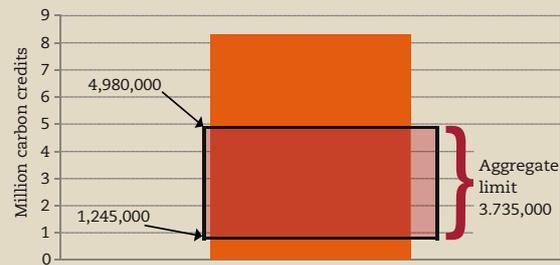
## The important question is not 'whether to buy insurance', but 'what is the right amount to buy'

for each project, but with a fixed 300,000 carbon credit deductible per project. It still provides full loss limits per project, but has a fixed retention per project resulting in a variable percentage deductible (see figures 3 and 4, page 25).

In portfolio A, the effect of the fixed 300,000 carbon credit retention is to remove small projects from the coverage, thereby reducing the insurance premium. As noted above, it is unlikely that the loss of one of these smaller projects will significantly affect the overall portfolio performance. This option is, therefore, more appropriate if you have a portfolio with a low reliance on small projects. For portfolio B, the same 300,000 carbon credit fixed retention is a higher per cent retention than in the first example and so will reduce premium spend.

The third option offers a single limit excess coverage between 300,000 and 1 million carbon credits. Therefore, it provides a limit that can be used on any project but only once. The previous examples would have allowed the specified limit to be used multiple times. A hybrid of these options may also be created where limits may be reinstated at a pre-agreed price, up to a specified number of times (see figures 5 and 6, page 25).

Figure 8. Portfolio B



This option further reduces the insurance premium compared with the previous option by limiting coverage to levels that you reasonably think might be manageable, while still protecting the portfolio from individual major losses. This type of coverage is appropriate when the risk of a major loss on a large project is perceived as having an impact, but multiple losses are extremely remote. Under this option, both portfolios still have projects exceeding the agreed limits. If a total loss on any of these major projects was a material possibility, a cost-effective option may well be to purchase additional top-up protection to cover these 'peak exposures' as a separate policy, as shown on portfolio A. A high excess layer can often be a cheap way to protect peak exposures.

The fourth option is often referred to as a period aggregate stop loss. It provides full loss limits per project, but with an overall portfolio aggregate retention and a portfolio aggregate loss limit over an agreed period. With the aggregate retention attaching at say 15 per cent of expected portfolio carbon credit deliveries and covering up to, say, 55–60 per cent of expected portfolio deliveries, this option provides both sufficient capacity against possible losses in total, as well as broad coverage (see figures 7 and 8).

This option maximises the underlying portfolio benefits and, therefore, reduces premium spend per credit. It is most appropriate for portfolio A, where there is a large portfolio with a varied range of projects. Therefore, the chance of the aggregate limit being breached by only one or two losses is remote.

The above examples show the efficient structuring of insurance products to de-risk a portfolio that allows the benefits detailed in table 1 to be realised.

In conclusion, significant risks are now being inefficiently held on participants' balance sheets when they should be effectively managed to ensure investors' risk-adjusted returns are optimised. Insurance has a role to play in this risk management process and insurance covers have been specifically developed to remove one of the most important groups of risks, namely those leading to the non- or late-delivery of credits. Such protections against late/non-delivery will additionally improve the liquidity of future forward carbon credit transactions further benefitting both buyers and sellers alike. ●

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