Why Structuring is Important for CDM Development

By Justin Barrow & Yariv Cohen

The carbon market is emerging as the key mechanism for mobilising the trillions of dollars required to fight climate change. Investors in the market are justifiably focused on the risks associated with the carbon commodity and on how these risks impact medium-term investment decisions.

To import terminology from finance theory, the carbon markets contain both systematic risks (risks affecting the entire market) and unsystematic risks (risks specific to a particular project or entity). Systematic risks such as the impact of the recent financial crisis and the macro regulatory framework are extremely important and must be addressed at an appropriate level.

This paper focuses on unsystematic risks, how to manage them and how to reduce these risks for customers and investors. Development of more sophisticated risk management processes, tools and products is important because these will, over time, attract a broader range of investors and greater capital flows to help fight climate change.

Understanding the Risks in CDM

Only when a detailed understanding of the underlying risks in the development of a carbon project are fully understood can financial structuring be used to effectively address those risks and to simultaneously facilitate transactions that raise and transfer the necessary capital.

There are a number of key risks in the development of a carbon project and the easiest way to gain a clear understanding of those risks is to follow a 'carbon project value risk delivery curve'.

The link between the stage of development and the credit price demonstrates how important it is to have the ability to develop and manage a carbon project through end-to-end project management. As the project progresses through its stages, the carbon asset value increases (Figure 1).

However, underpinning this project development process are more complex layers of risk and buyers increasingly need to push for a greater level of scrutiny in order to assess the risk profile of the carbon projects or CERs they are purchasing (Figure 2). The combination of the development stage and all other specific characteristics of a project allow the buyer to value the project according to their individual needs and risk profile.

Market participants with the ability to identify and manage the project risks and to understand the buyer's risk profile will drive the growth of structuring activities, tailoring products that address the needs of all parties and hence creating value throughout the carbon life-cycle.

While understanding risk is a primary imperative, having a strong, on-the-ground and hands-on carbon project management capability is key to securing the CER delivery. Only with the necessary expertise and knowledge on regulatory frameworks and technical risks in an emissions reduction project can the delivery of CERs genuinely be achieved.

At the national level there are over 68 developing countries participating in the CDM. On the surface this diversity is impressive, but with diversity comes complexity, particularly for the buyer. Not only does the risk profile for investment vary across these different host countries, but each host country's infrastructure to support CDM project processes differs considerably. In addition, rules and regulations on CDM project developments covering taxation, CER ownership rights, floor pricing, grid feed-in tariffs, government funding and interpretation of 'sustainable development' vary from host country to host country and are often not-static.

China's success in supplying over 53% of global CERs is testimony, in part, to its phenomenal capacity to establish a clear and efficient process for host country approval. In the last three years it has invested in provincial and county level CDM centres, focused on capacity building and given strong guidance on tax and floor pricing regulations.

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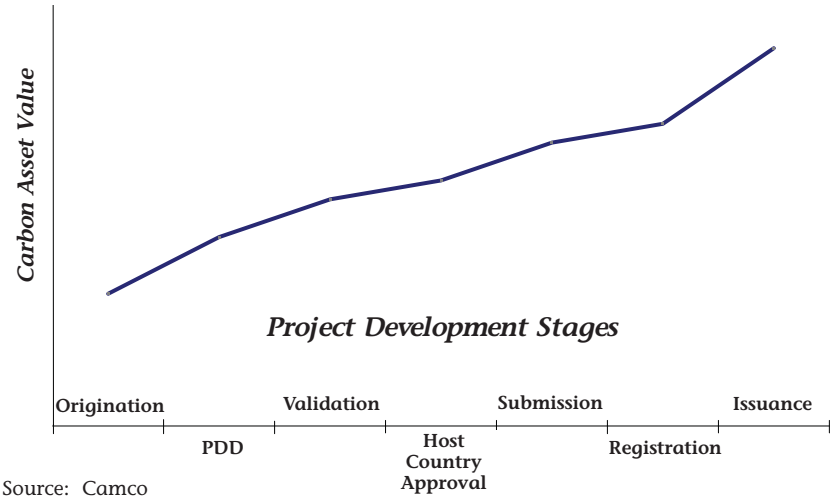
Sectors in which the CDM can be applied vary considerably. In its simplest form, this varies from renewable energy projects in the wind sector to complex industrial projects in the coal and cements sectors. Against each sector there are host country market conditions and inherent project risks which directly impact forward CER price variables. Coupled with this are the individual project registration challenges which can vary within a single sector, even within the same host country.

Figure 1: Illustrating the relationship between the stage of project development and the carbon asset value



Source: Camco

Closely linked to the sectors in which a project can operate is the need to find financially strong, well organised and responsive in-market project owners or developers. This can only be achieved with any sense of credibility by operating a local team. To maintain CER supply in the carbon market, the CDM needs operational projects. This is imperative even with clear opportunities to benefit from carbon financing and secure project registration.

In the current economic climate, finding and working in close partnership with developers who have an appetite for project construction and financing is crucial. It is at this level, where there is an increasing need for pre-payment and debt or equity financing, that structuring has a pivotal role to play.

Technology, methodology and additionality risks, while distinctly different in their own right, are invariably closely linked. These risks are the fundamental ingredients for the Project Design Document (PDD) which is the pivotal document for demonstrating that any particular project meets the regulatory requirements of the CDM Executive Board (EB) and can be registered.

The risks at this stage in the development of a carbon project are as varied as they are complex. A project and a methodology go hand in hand, but it is important not to over simplify this selection process. On the one hand, where there is a project, there is not always a methodology, in which case an entirely new methodology has to be written and approved; and on the other, even when there is a methodology there is the very real need to understand the risks linked to potential requests for 'deviations' or 'revisions'. Equally, the potential time limitations of any one methodology may dramatically alter project applicability as methodology changes are introduced. The ability to act and respond quickly in these situations is crucial.

Incumbent with every project registration is the in-market research and analysis needed to pre-screen and select projects that demonstrate additionality – a critical process that by definition decreases the risk at the point of registration. This is not easy to do. It requires in-depth ability to scrutinise financial internal rate of returns, barriers to implementation (which are invariably linked to technology experience and finance availability), technology penetration (identifying suitable technologies that drive innovation against common practice) and to ensure compliance with local laws and regulations.

This tightening of project registration adds to an already complex and risky process. Nonetheless, in the context of the carbon market it is often perceived that the PDD is the 'Holy Grail' and that once a project is registered, the rest is just plain, risk-free sailing. This is far from the truth and a foolhardy assumption to make.

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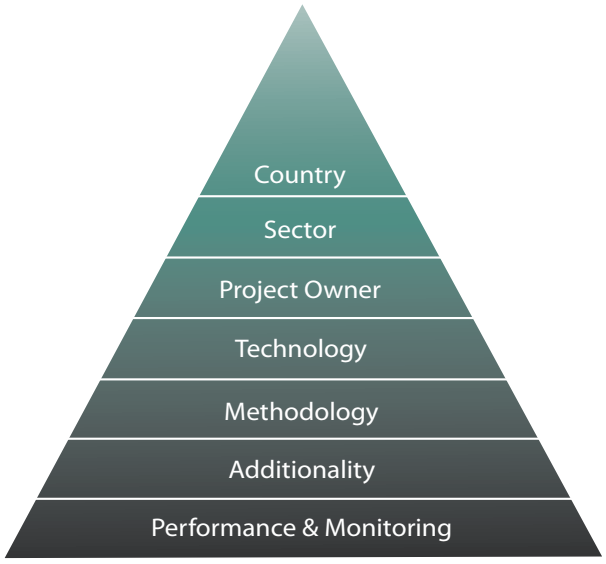
Once a project is registered it still needs to undergo verification and be subject to on-going and regular performance checks against the monitoring plan. A project that issues CERs one year will not necessarily, left to its own devices, issue CERs the next year; and post-registration there are very real technical risks that need to be tackled in project operations to ensure consistent CER issuance

The monitoring systems must work in accordance with the monitoring plan and if they do not, then a

project can encounter further delays due to a need to submit for a 'revision' or to change the monitoring system itself. In this respect, and in addition to the technical knowledge in the CDM procedures and understanding of its increased complexity, the availability of an experienced local team becomes essential.

Thorough due diligence and continuous follow up of project operations is important for the completion of the carbon cycle that leads to issuance. Project owners usually have a core business to attend to (steel, cement, power generation, etc) and carbon is only a secondary activity. Besides having a financially robust project owner with a good operational track record and capacity, the project developer will have to fill in the knowledge gaps necessary to achieve carbon generation and delivery.



Source: Camco

Figure 2: Primary criteria that influence the risk assessment & value of a project

The message here is clear: Buyers benefit from understanding these complex layers of risk, but more importantly, in an increasingly diverse and crowded market, they must be confident that the carbon project risks in which they are investing are being managed by companies that have the following:

- Expertise and track record to navigate and respond to these risks on their behalf.
- An organisational structure and operational capacity to identify and develop those carbon projects from origination to issuance.
- A framework and technical knowledge to ensure the risks within any highly customised commercial structuring product are implicitly understood.

Using Structuring to Price Risks

Following a detailed risk analysis, structuring is a means to reduce the above risks in a multitude of ways. The structuring process eliminates or considerably reduces price risks and enables the gaps in risk propensity to be bridged, most notably between end clients (compliance or secondary buyers) and sellers. Successful structured products require adequate information and, within the context of CDM development, a stage is now being reached where enough data can be gathered to enable informed transactions.

One of the key benefits of structuring is that it allows market players to leverage from portfolio diversification. By creating a pool of projects with different sector, technology, methodology and performance risk profiles it

Camco/Standard Bank Transaction

Facts at a glance ...

- 5.8m CERs
- Multiple projects
- 55% of volumes registered
- 3 tranches
- Auction process
- Closed on the 27/8/08

is possible to minimise the overall buying risk, increase the probability of delivery and create premium price uplift. This process suits buyers as it provides an increased level of delivery probability and it benefits sellers who should prefer to avoid the financial risks of a fully guaranteed delivery transaction from a single project.

The second structuring tool which is highly relevant to the carbon market is tranching. Tranching allows for a given carbon asset portfolio to be divided up and categorised. Offering tranches out to compliance buyers at different levels benefits those companies because it allows them to buy more closely to the different risk scenarios under which they operate. It allows sellers to leverage on these different price scenarios, and risk for both parties is aggregated by creating tranches of higher delivery probability credits, underpinned by those with a lower delivery probability. A tranched approach to risk management must only be applied with detailed knowledge of the underlying asset portfolio and a deep understanding of end-buyers needs. Camco's Standard Bank transaction was a prime example of this type of successful commercial structure (Box above).

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As the carbon market matures, there are other features within structured finance that will add stability to the market and will help manage the various price risks. Using a 'floating price' structure that is linked to an index is useful in a market downturn and an increased use of options to further reduce risk can be anticipated.

Conclusion

Structuring, by nature, is based on highly customised products and relies heavily on an understanding of fundamental carbon market risks. Good structured transactions reduce and eliminate primary market risks by allowing buyers and sellers to access the expertise of intermediaries who have a stake in the success and ultimate delivery of credits.

Since this understanding can only be gained by experience, there will be a unique advantage to companies that have completed such transactions. The market is evolving very rapidly and the use of new innovative structures will become the norm. This will have a positive influence on capital flows to projects and enhance the benefits from the CDM. ●

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