Breaking down barriers

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The growing emphasis on market-based incentives to spur low-carbon investment is creating a need for specialists with a unique combination of skills – and the world’s leading universities need to develop similarly interdisciplinary programmes to meet the needs of the environmental finance marketplace, says Mark DeAngelis

The causes and adverse effects of climate change, and the proliferating national goals of energy security and independence, have combined to force the global community to seek to curb emissions of greenhouse gases and design and implement alternative means of cleaner and more secure energy production. The pursuit of this shift has caused governments, international organisations, NGOs, private institutions and individuals to look beyond more traditional command and control regulations to a set of policies, market-based mechanisms and other incentives designed to mobilise the private sector and channel investment towards the low-carbon economy.

The successful design, implementation and operation of this multifaceted and evolving response to these challenges, however, requires private and public sector managers who have expertise and training in a diverse set of subject areas, specifically economic and political analysis, finance and analytics, science and technology, and markets and regulation. It is therefore incumbent upon the global educational community to do its part and to move toward a truly multidisciplinary approach to education in environmental finance and related fields.

The early years in the environmental finance markets were no different from other emerging markets. That is, market participants came from various backgrounds with various types of expertise and entered the markets for a variety of reasons. As a result, most participants were forced to learn on the job and pick up the skills they did not already possess. It was clear that the successful firms and individual participants were those that possessed a deep knowledge of a transferable subject area from prior experience and were nimble enough to supplement their skills with individuals possessing that missing expertise.
As the environmental finance markets mature and grow, and become more organised and professional as a result, market participants, as the direct consumers of the ‘educational product’ – as employers of university and business school graduates – must apply pressure and give direction to our educational institutions to think about the environmental finance markets in new and multidisciplinary ways.

It is from real life experience in the markets, including our successes and our challenges, that such pressure and direction must come. Towards this end, skills and expertise are required in the following four subject areas, derived from the dissection and analysis of the various stages of a typical environmental finance investment made under the Kyoto Protocol and similar market-based environmental incentive systems:

- **Economic and political analysis** – a global understanding of the myriad economic, political and other issues which define and surround these challenges and goals;
- **Finance and analytics** – to structure creatively and effectively participate in and capitalise on the various policies, mechanisms and other incentives implemented to address these challenges and goals;
- **Science and technology** – an understanding of the underlying science and technology of these challenges and issues and the associated responses to them; and
- **Markets and regulation** – a deep understanding of the complex, inter-connected global markets and regulatory structures on which these policies, mechanisms and other incentives rely for their orderly and efficient functioning.

When analysing the six stages of a typical project’s lifecycle – investment prospecting; due diligence and planning; negotiation, documentation and signing; construction and commissioning; operation, maintenance and oversight; and monetisation and exit – and the general functional activities required to successfully complete each particular stage, it is evident that all four subject areas highlighted above are required in most, if not all, stages of a project’s lifecycle.

Accordingly, any successful future manager, investor, service provider or regulator operating in the environmental finance market will need a deep understanding of the relevant issues at each stage and a comprehensive set of skills to resolve such issues effectively, manage the development process and bring the project or investment to a successful exit.

In addition, the results of this analysis are amplified if a market participant is managing not one investment, but rather a portfolio across sectors, geographic areas and under multiple systems of regulation or incentive. It is, as a result, only through successful development and exit of these investments and portfolios that these market-based mechanisms will function effectively and achieve their intended environmental benefits.

While the analysis is presented from an investment manager’s perspective, the same skills, expertise and knowledge are required by, for example, consultants or advisers providing guidance, or by government officials regulating, overseeing or approving such transactions. In addition to their discrete area of responsibility or expertise, all parties involved in the process
must understand the broader market mechanism in which these investments or transactions are operating in order for the system to function efficiently and scale to its needed size.

“We must build into our educational system a multidisciplinary approach to environmental finance”

For example, unless the regulators approving and overseeing these investments understand that regulatory clarity, consistency, guidance and response time are integral to an investment’s success (ie, its return), then it will be increasingly difficult for managers to attract the amount of capital needed.

Furthermore, the results of the analysis are equally applicable and instructive to other types of environmental investment opportunities outside of the Kyoto regime, including, for example, a North American renewable energy development project or a Chinese clean-technology company investment. The role of education is therefore a critical component to the ultimate success of these innovative policies, incentives and market-based mechanisms.

The identification of the underlying components of a new, cutting-edge educational approach to environmental finance and related areas is the first step in filling the existing gap. The next step is to identify and encourage the select group of global universities that, on the undergraduate and graduate level, have the breadth of teaching, research and reputation to structure and implement such programmes successfully.

In addition, due to the multidisciplinary nature of this approach, it also requires universities whose administration and faculty have the desire and ability to work across disciplines to enable the required integration and synchronisation of these independent fields of study into a cohesive educational programme with integrated coursework and faculty. And finally, the strength, depth and relevance of programmes of this nature require the direct and immediate involvement of private and public sector participants who will continuously inform the programme’s directors of developing trends and requirements in the market so that the programme can evolve, ensuring that its graduates are ready to hit the ground running upon graduation.

Needless to say, there are many barriers to the success of such a new educational approach to environmental finance and related fields. First, there are a limited number of global universities with the scope to offer a multidisciplinary programme of this nature. Nevertheless, it is incumbent on those that have the breadth of programme to lead in this area and, through the use of consortia or other means, incorporate those universities which perhaps have deep subject matter expertise in certain of the required subject areas.

Second, while most large universities like to stress their multidisciplinary approach to education, the execution of this strategy is often stymied by structural, budgetary or personality conflicts in the academic ranks which make true collaboration difficult. To overcome these challenges, the administration and faculty leadership will need to take the lead on eliminating structural impediments to working together and diffusing any personality conflicts.
And finally, as in so many institutions, there often exists at the university level an underlying resistance to change the way of thinking or of delivering education. As it relates to environmental finance, this challenge is inextricably linked to the broader discussion and debate around how we as a global community handle the challenge of climate change and promote energy security. However, the academic community has often demonstrated thought leadership in this space and, with the help and support of private and public sector actors pressing for these programmes, such thought leaders can begin to change internal academic thinking and process regarding cutting-edge education in environmental finance.

The environmental finance market is currently facing significant economic and political challenges. Nevertheless, as we determine international, regional and domestic means of achieving climate and energy security goals, we must consider how we train the leaders, investors, managers and regulators of the future.

In particular, we must recognise the unique set of skills and expertise that these new approaches require, and build into our educational system a multidisciplinary approach to environmental finance. EF

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