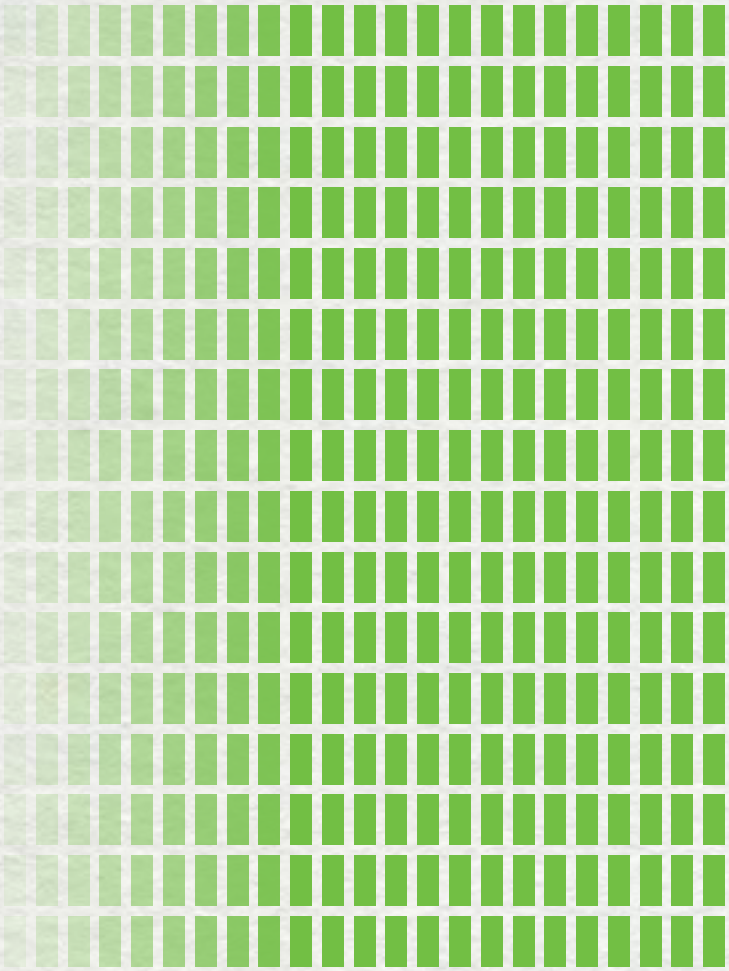


FINANCING CLIMATE RESILIENCE

PRACTICAL CONSIDERATIONS TO ENHANCE STRUCTURES IN PLACE TODAY

PETER REYNOLDS AND GAURAV KWATRA

MARKET NEEDS FIXING

Research suggests there is a material gap between the demand for, and supply of, funding for green investment. For example, the Development Bank of Singapore (DBS) estimates that annual demand of US$200 billion in Southeast Asia over the next 30 years will massively outstrip annual supply of US$40 billion.

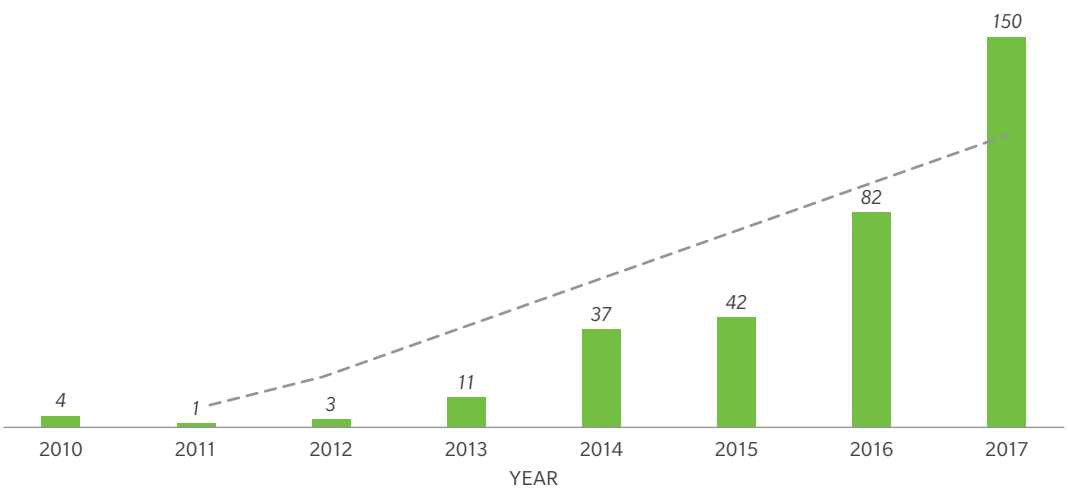
However, polling at the November 2017 G20 Green Finance Conference[1] in Singapore indicated otherwise. During the conference, the audience – composed of finance professionals in the green space – responded to a live polling question: "What is the biggest challenge to scaling up financing for green projects?"

Almost half (44 percent) answered "lack of environmental data," while 39 percent selected "lack of investible projects", and the remaining 17 percent chose "inconsistent standards." Neither "investor demand" nor "maturity mismatch" were picked. This phenomenon points to a paradox at the core of green finance: Top-down estimates suggest a huge need without being matched by sufficient bottom-up funding. Yet when investors were asked the same question, they focused on matters of data, project invisibility, or standards – clearly indicating that the issue for investors is a shortage of demand, rather than supply!

Simply put, the market at present isn't working, and needs fixing.

1 In collaboration with the Monetary Authority of Singapore and the United Nations Environment Program, the G20 Green Finance Conference was jointly organized by the Asia Securities Industry and Financial Markets Association (ASIFMA) and the Global Financial Markets Association (GFMA), and was held in Singapore on 15 Nov 2017.

Exhibit 1: Volume of green bonds issued since 2010



Source: Climate Bond Initiative

BOND MARKET AT PRESENT

With the significant mismatch between the top-down growing demand for the green finance and the insufficient bottom-up funding of green projects, a transformational shift is required to address the challenge of climate change. Green bonds are currently the most mature form of debt instruments dedicated to financing eco-friendly projects, and there has been a sharp growth in issuance in recent years. (See Exhibit 1).

However, green bonds are not appropriate for all climate change financing. There are other pools of funding available to finance green projects from various sources, including:

- **Government and State grants** – directly designed to encourage development in green investments, including subsidies, tax relief, and other benefits.
- **Multilateral Development Banks (MDBs)** – either specifically designed to operate in this field (for example, Global Environmental Facility and Green Climate Fund) or those increasing their "green" mandate (such as the World Bank, AIIB, among others).
- **Private-sector quasi-MDBs** – such as large foundations and other charitable funds.
- **Private-sector funding providers** – including those looking to diversify their investment portfolios (for example insurance companies looking to match long-dated liabilities), as well as more traditional financing mechanisms (such as banks, green private equity, and venture-capital funds).

Such funds are designed to specifically address green projects that would not receive stand-alone private sector funding. Each participant in these funding pools has different modalities (broadly, a mix of grants, debt, equity, and guarantees) available to finance such projects.

MATCHING AVAILABLE RESOURCES EFFECTIVELY

In our experience, access to and use of these funding pools has been relatively slow. Furthermore, the process to gain access to such funds is often frustrating for those looking to finance and develop climate resilience. Often, funding comes with onerous ongoing monitoring and reporting requirements that represent a hidden cost to the recipients.

While much of the discussion had been focused on the mismatch between the supply of funds and the global need, even where potential

| CASE **STUDY** |

FUNDING A CLIMATE-RESILIENT PORT IN NAURU

The Pacific island state of Nauru approached the Green Climate Fund (GCF) for funding assistance with the development of a climate resilient port, a project that was discussed at the 18th meeting of the GCF Board. The GCF agreed to grant financing of $26.9 million, with the project co-financed by the Asian Development Bank, and the Governments of Australia and Nauru. Though successfully funded, the project highlights key challenges faced in green financing:

- Identifying the green portion of the project: Like most infrastructure, the port requires regular redevelopment. However the frequency of such redevelopment needs has increased due to more adverse weather, caused by climate change. Clearly identifying how much of this change is caused by climate impact is subjective.
- Parsing between the development and climate portions of the cost: The proposal as presented in the public discussion at the GCF outlined the incremental cost of building a "climate resilient" port over a more standard port. Again, the precise calculation of the incremental costs is clearly somewhat subjective, and open to interpretation.
- Quantifying the benefits: The benefit stream outlined in the proposal is estimated to extend for 50 years. While the port is a critical infrastructure requirement for the 11,300 inhabitants of Nauru, placing a precise value on the benefits is clearly impossible.
- Accessing multiple funding sources: The project is funded by four different parties, all of whom have different processes and requirements to access the funds.
- Determining appropriate funding concessionality: The port is a commercial venture, and hence will be able to repay some of the funding cost over time from future revenue streams. As such, funders needed to determine the correct level of concessionality in funding so as to not distort the private market – and ideally "crowd-in" the availability of such funding.

supply of funding exists to meet the demand, the mechanism for matching projects with funds is not working efficiently. We believe the resolution of this issue – enabling efficient transmission of funds to the appropriate green projects – is key to meeting the challenges of climate change.

To ensure transformative and efficient change, the various pools of funding will need to be combined in more creative ways. This will require the effective functioning of a complete "ecosystem" of participants in the market, ranging from public to private and often crossing international boundaries.

BREAKING DOWN THE BARRIERS

First and foremost, to strengthen green policies and catalyze green projects, the various challenges and barriers to entry must be recognized. (See Exhibit 2).

Many green finance recipients find it difficult to articulate their needs and the green benefits of their projects, as they are not familiar with the highly specific financial terminology and/or may come from an engineering or infrastructure background.

The relatively early stage of green finance is also challenging for recipients as they lack the historical track records to quantify positive outcomes for potentially transformative ideas, often resulting in higher risks. Moreover, because the investments are often in unproven early-stage startups, R&D funding carries a much higher risk premium, given the higher degree of uncertainty and longer-term potential payout, hampering the initial catalysis phase.

On the other hand, funding providers also face a number of additional challenges besides the shortcomings in language, operations, and processes. There is no efficient secondary market for green investments, leading to longer-term exposure required to be held on the balance sheet (both national and private), making the need for careful consideration of such investments all the more important.

Plus, the global benefits for the public sector and MDBs are hard to align with potentially high local costs. Given the wide breadth of potential projects, there is no "common currency" used to compare across the various projects.

WHAT CAN BE DONE?

There are tangible ideas that should be considered now to improve the functioning of the market today. These can be categorized broadly into three types of initiatives, with examples of each included below:

1. Make funding recipients better counterparties.

   Develop a set of detailed online education resources designed to equip those seeking funding with the skills needed to communicate with potential funding providers, and carefully assess funding offers once those are made.

   Market participants come together to develop more standardized funding mechanisms, in addition to green bonds, that can then be traded. Such approaches may include newer digital funding tools, such as "initial coin offerings" or crowd-funding.

2. Make funding providers better partners for those requiring funds.

   Develop a common application process and an online platform for projects to be presented. This will allow the interested parties to view the range of possible projects without needing to complete multiple applications.

   Wherever possible digitize the application process and consider using the newer tools of 21st-century finance such as blockchain, initial coin offerings, and digital contracts.

   Produce a set of operational target standards for each of the funding providers, and track and compare each to the benchmarks to allow for learning.

Exhibit 2: Illustration of root challenges to financing climate resilience today

		RECIPIENTS	FUNDING PROVIDERS
1	LANGUAGE	• Lack financial jargon and terminologies to clearly articulate their needs • Lack financial understanding to assess the different options available in the market	• Lack investment strategy to clearly articulate their risk appetite, especially how to balance financial returns with a "second bottom line" • Lack of common definition of "green" (for example, carbon storage and capture is both seen as good and damaging to different groups)
2	OPERATIONS	• Dealing with many options and multiple funding providers, all with: – Different recipient assessment criteria (often manual and slow) – Inefficiency in managing funding platforms • No ex-ante view on whom to approach first	• Processes not adapted to financing green projects; often a very formulaic financing perspective on a relatively subjective topic • Scarce resources available that combine climate science and financial expertise
3	PROCESSES	• Material – and costly – ongoing reporting requirements on climate impact, with different requirements for each funding source	• Slow and bureaucratic processing of funding requests (for example, board-level approval with little standardization) • Unclear regulatory framework and volatile inter-governmental support

Source: Marsh & McLennan Companies

3. Improve the information flow between the two sides.

   Set up a platform for sharing market data on green projects, on which external ratings can be developed. This would need to include an agreed-upon approach to quantification of second bottom-line risk – that is, the volatility in potential project success – to carefully manage this new form of risk.

   Build new digital solutions to simplify and track project impact efficiently, so as to provide the data in a timely fashion for the performance-monitoring needs of providers, while not over-burdening recipients.

Addressing climate change is clearly an era-defining global challenge. Effective financing of such projects by multiple parties is essential to overcoming the challenge. As such, careful development and growth of effective transfer mechanisms is critical.

Peter Reynolds is a Hong Kong-based Partner in the Finance and Risk Practice and **Gaurav Kwatra** is a Singapore-based Principal in the Finance and Risk Practice at Oliver Wyman.