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CLIMATE INVESTMENT FUNDS PRIVATE SECTOR FORUM RESULTS BOOK

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Istanbul, November 5, 2012: Key findings for investors and policymakers

On November 5, 2012, the Climate Investment Funds held its Private Sector Forum, as part of its flagship Partnership Forum bringing together key stakeholders to help developing countries pilot low-emission and climate-resilient development. Held in Istanbul and co-hosted by the European Bank for Reconstruction and Development, the Private Sector Forum gathered 200 experts and practitioners from around the world to identify ways to unlock private capital, exchange lessons from the private sector, and engage with entrepreneurs.

Bloomberg New Energy Finance partnered with the Climate Investment Funds for the Private Sector Forum. It offers the following summary of events and key findings from the Forum.

KEY FINDINGS FOR POLICYMAKERS, DEVELOPERS, AND INVESTORS:

- Total investment in clean energy technologies now exceeds \$1.5trn since 2004. Hundreds of millions of dollars more have been invested in other climate-related projects. Investment in both has withstood significant macroeconomic headwinds and proceeds thanks not only to continued government support, but to increasingly compelling fundamental project economics and investment security.
- Investment in adaptation has a clear economic rationale today, as business as usual operations are at risk of disruption due to environmental change. Changing business attitudes, however, still need support in the form of clear standards and specifications in order to drive greater investment.
- The Climate Investment Funds' successes to date have used both its own capabilities as a direct investor, and also leveraged the capabilities of financial intermediaries in investing in clean energy and climate projects.
- Matching expectations is a persistent challenge in climate finance. Early-stage technology investors and long-term asset owners have different risk profiles and different expectations of returns. Stakeholders must understand clearly not only their own needs and requirements as investors, but those of public and private counterparties.
- Innovation in clean energy and climate investment is not just in the technical aspects of physical systems; it is in the financial system as well. New financial instruments can play two roles: first, to support new technologies which will not attract debt at scale, and second, to lower costs for borrowers and therefore increase the competitive position of new and established clean energy and climate investment types. Multilateral banks can play a

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meaningful role in alleviating upfront risks, and new financing instruments for long-term assets can open new pools of capital.

- Public-private collaboration and partnerships are key to mobilisation of funds at scale and for market transformation. Neither the public nor private sector can mobilise funds without the other, and their cooperation will lead to greater capital flows than either sector could arrange on its own.
- Even with more than a trillion dollars deployed to date, there is ample room to re-imagine approaches - and outcomes - for climate finance. Neither public sector nor private sector capital alone can meet the challenges of adequately capitalizing climate finance goals – nor is one sector or the other purely suited to do so. Investments with long tenors and technology risk in addition to measurable financial and societal benefits require collaboration and a leveraging of each sector’s particular strengths in order to succeed.

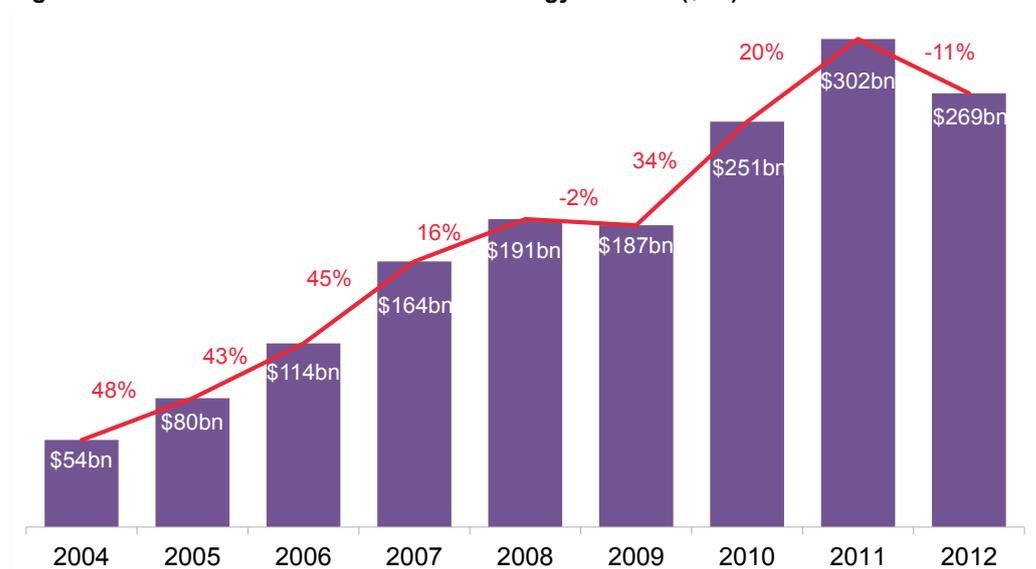
1. THE PRIVATE SECTOR IN ENERGY MARKET TRANSFORMATION

Keynote speaker: [Michael Liebreich](#), Bloomberg New Energy Finance

Michael Liebreich, Chief Executive of Bloomberg New Energy Finance, presented data highlighting the state of clean energy and climate investment today, its dynamics over time, and what potential outcomes may be achieved in coming years.

Total investment in clean energy technologies now exceeds \$1.5trn since 2004. Hundreds of millions of dollars more have been invested in other climate-related projects. Investment in both has withstood significant macroeconomic headwinds and proceeds thanks not only to continued government support, but to increasingly compelling fundamental project economics and investment security (see Figure 1).

Figure 1: Global New investment in clean energy 2004–12 (\$bn)



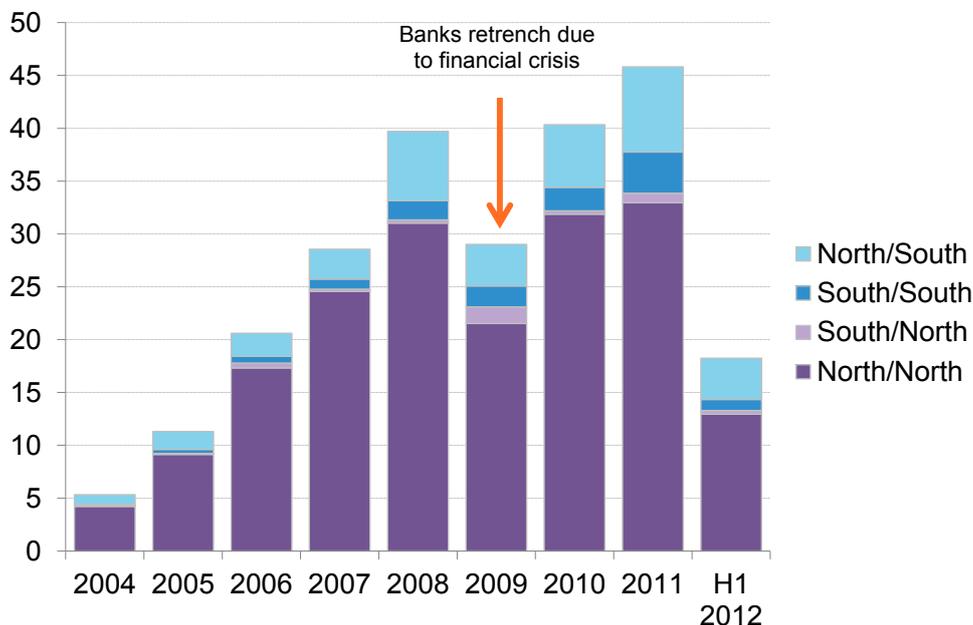
Source: Bloomberg New Energy Finance

Note: Includes corporate and government R&D, and small distributed capacity. Adjusted for re-invested equity. Does not include proceeds from acquisition transactions.

Capital flows are not even globally, however. Europe drove the early deployment of clean energy, with North America playing a leading role in 2008 and 2009. In 2011 and 2012, Asia became the largest region for investment and is the only region to show consistent growth in every year.

Cross-border investment, however, remains quite low as a portion of total investment flows (see Figure 2).

Figure 2: Cross-border investment volumes by regional flow, 2004 – H1 2012 (\$bn)



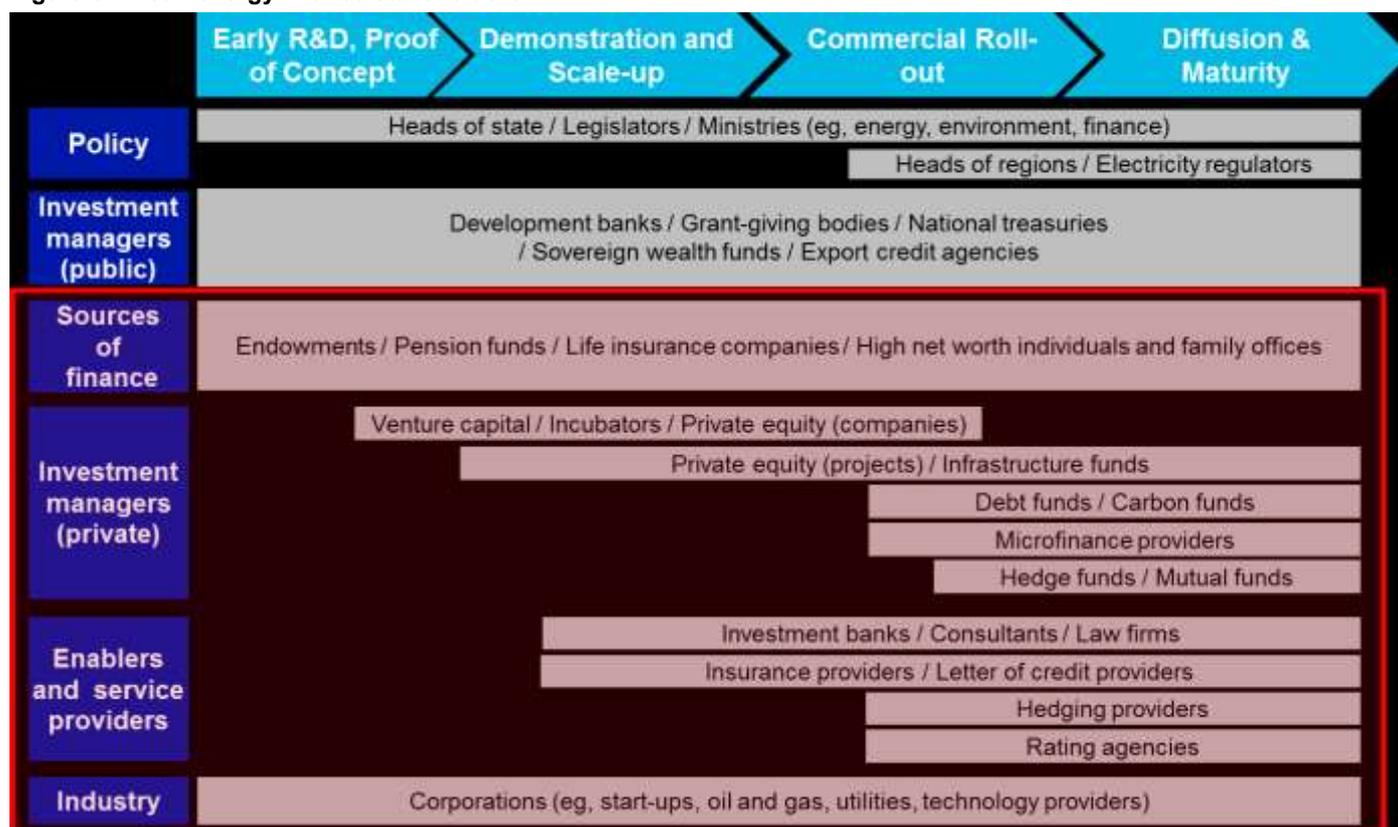
Source: Bloomberg New Energy Finance.

Note: New build asset finance for renewable energy projects only. Investment volumes show cross-border (or foreign) investments only. Domestic investments are excluded here.

Liebreich described the technology curves which govern the costs of wind and solar technologies as "unrelenting", and a sign of hope for investors: power generation from renewable technologies has never been so cheap and will never again be so expensive. While unstable prices mean variable revenues for manufacturers, ever-lower prices for equipment continue to push clean energy sources towards cost competitiveness without subsidy.

Liebreich closed with a map of the stakeholder landscape for clean energy investment. Not all stakeholders have a stake in every aspect of clean energy from R&D to diffusion and maturity. Some specialise in developing technology; others, in financing maturity at scale. Some groups, however - in particular policymakers and international corporations - are suited to, and chartered to, invest in climate finance at every stage.

Figure 3: Clean energy finance stakeholders



Source: Bloomberg New Energy Finance

2. AN ENVIRONMENT FOR BUSINESS ADAPTATION

Presenter: [Frances Way](#), Carbon Disclosure Project

Moderator: [Özlem Gürses](#), CNN Turkey

Panelists: [Wendy Poulton](#), General Manager Organisational Strategy, ESKOM

[Dr. Sibel Sezer Eralp](#), Regional Director, REC, and Co-founder of the Turkish Business Leaders' Group on Climate Change

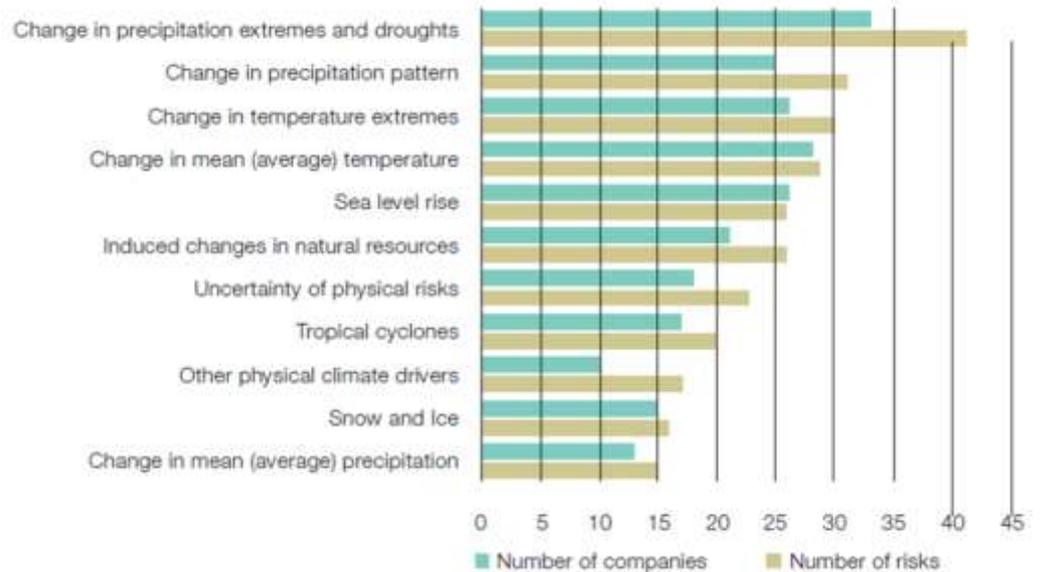
[Lola Vallejo](#), Adaptation Reporting Lead, UK Committee on Climate Change

[Patrick Karani](#), Founder and Managing Partner, BEA International

Investment in adaptation has a clear economic rationale today, as business as usual operations are at risk of disruption due to environmental change. Changing business attitudes, however, still need support in the form of clear standards and specifications in order to drive greater investment.

Carbon Disclosure Project

Insights into Adaptation by UK Companies



Source: Carbon Disclosure Project.

Note: Analysis of 89 FTSE 100 companies. 80% identify substantive risks to their business as a result of climate change.

Frances Way of Carbon Disclosure Project opened the session with insights into adaption from the perspective of large private corporations and investors. Many of the FTSE 100 companies identified risks to their businesses from climate change, with hundreds of individual risks in total (see above).

Carbon Disclosure Project

Private Sector Adaptation:
Emerging Experience from Global Business
Recommendations

- Communication
- risk assessments
- Risk reporting

In order to protect their investments, shareholders want to understand the risk climate change presents to their portfolios.

Companies are expected to demonstrate long-term resilience and in order to effectively respond to the risks and opportunities related to climate change, businesses need to be strategic, not reactive.

Source: Carbon Disclosure Project

Carbon Disclosure Project's guidance for business highlighted enhanced communication, improved risk assessments, and more thorough risk reporting as the best ways to protect business and shareholder interests (see above).

For Patrick Kirani, capital intensity is a persistent challenge even with falling costs. However, this intensity can be offset by lower-cost financing, driven by a harmonization of public and private goals, and clear standards and specifications.

Dr. Sibel Sezer Eralp put Turkey's strategies in context by stating that the country has had the highest percentage increase in emissions of any country since 1990. For her, executive engagement is a key to further climate finance, in order to extend "concern, understanding and knowledge" into long-term business plans.

Wendy Poulton of ESKOM mentioned that climate change is now directly evident in ESKOM's day-to-day operations, and with its impacts being felt, climate finance is subsequently more forthcoming from its financial partners.

3. CLIMATE INVESTMENT FUNDS EXEMPLARS

The Climate Investment Funds' successes to date have used both its own capabilities as a direct investor, and also leveraged the capabilities of financial intermediaries in investing in clean energy and climate projects.

3.1. Success stories through direct investments

Panelists: **Paddy Padmanathan**, President and CEO, International Company for Water and Power Projects (ACWA Power - Saudi Arabia)

Gulnara Artambaeva, President and CEO of Central-Asian Electric Power Corporation (CAPEC - Kazakhstan)

ACWA Power's Ouarzazate solar thermal electricity project was one of 2012's biggest success stories for clean energy financing. CEO Paddy Padmanathan dove deep into the role played by the Climate Investment Funds in enabling Ouarzazate's successful financial close of more than \$1bn. The CIF's involvement as lender simplified a very complex project by automatically creating a logical investment framework for government and private bodies. Ultimately financed with 80% debt and 20% equity, CIF lending helped to reduce the project's energy costs by 25%.

Gulnara Artambaeva pointed to the CIF's involvement in financing Kazakhstan's district heating systems' updates. In a system where 70% of heating pipelines are 30 years old or older, much modernisation is needed. According to Artambaeva, \$60m in CIF financing enabled an 8% improvement in energy efficiency and 7% reduction in CO2 emissions.

3.2. Success stories through financial intermediaries

Panelists: **Kagan Aktan**, YapiKredi Turkey

Ture Oral, Project Finance Head, Denizbank

Javier Warman, Associate General Director for Strategic Planning and Sectorial Analysis, Financiera Rural (Mexico)

As financial intermediaries, established financial institutions in Turkey and Mexico are able to ensure that a flow of capital reaches appropriate projects, while also minimizing risk for parties involved. YapiKredi in Turkey has devoted 10% of its balance sheet to sustainable loans, according to Kagan Aktan. Denizbank sees challenges behind the highly regulated energy sector in Turkey, which needs to add at least 3GW of new power capacity every year to meet demand.

Javier Warman of Mexico's Financiera Rural elaborated his bank's role as an intermediary in climate finance: demonstrating successful projects which help reduce risk perception and help

create credit histories, as well allowing its recipients to then seek other capital elsewhere (see below).

Financiera Rural: Role in financial intermediary investment



Source: Financiera Rural

4. MATCHING EXPECTATIONS

Matching expectations is a persistent challenge in climate finance. Early-stage technology investors and long-term asset owners have different risk profiles and different expectations of returns. Stakeholders must understand clearly not only their own needs and requirements as investors, but those of public and private counterparties.

4.1. Policymakers, project developers, and investors

Moderator: [Nathaniel Bullard](#), Bloomberg New Energy Finance

Panelists: [Roberto Dumas Damas](#), Head of Social and Environmental Risk Assessment, Banco Itaú, BBA (Brazil)

[Honourable Dr. Wilbur Ottichilo](#), MP (Kenya)

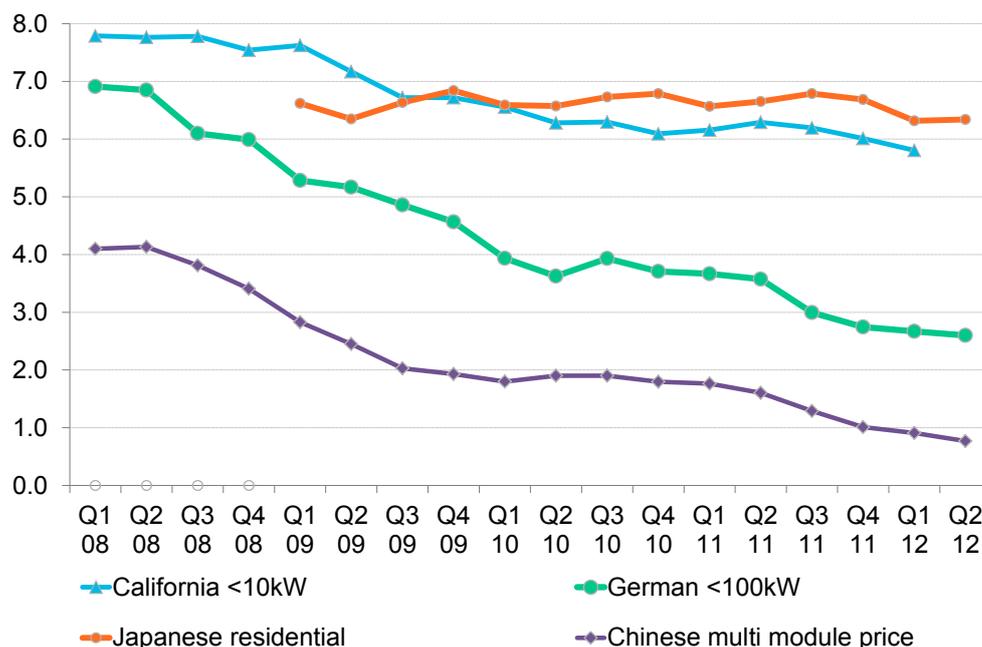
[Pasha Bakhtiar](#), Managing Partner, Willow Impact (United Arab Emirates)

[Sherife AbdelMessih](#), Founder and CEO, Future Energy Corporation (Egypt)

The first panel discussed early-stage investments: new technologies, small deployments, and markets in which policy frameworks are just being established. For Dr. Wilbur Ottichilo, a member of the Kenyan Parliament, his main expectation of a climate finance or clean energy policy is to provide energy access to his citizens. He added that "we removed taxation [on clean energy equipment], we now see solar panels being sold on the street".

Pasha Bakhtiar and Sherife Abdelmessih, both investors in the Middle East, mentioned that falling technology costs provide them opportunities to invest in projects where financial returns are clear and immediate without subsidy (see Figure 4).

Figure 4: Photovoltaic (PV) solar system prices, 2008-Q2 2012 (\$/Watt)



Source: BSW-Solar, California Solar Initiative, Japan PV Energy Association, Bloomberg New Energy Finance.

Note: BSW-Solar publishes an average price for German systems below 100kW, minus VAT. This is shown above in dollars at the rate for the quarter, plus 19% VAT. Japanese data converted to dollars at exchange rate at the time.

Roberto Dumas Damas of Banco Itaú did point out, however, that as a financial institution he represents a fiduciary duty to shareholders - and that financial returns, in this structure, can trump social gains from climate finance goals.

4.2. Asset owners and asset operators

Moderator: Ethan Zindler, Bloomberg New Energy Finance

Panelists: Regina Mead, Managing Partner, Md4 (US)

Peter Greenwood, Executive Director, China Light and Power Holdings (Hong Kong)

Dima Rifai, Managing Partner, Paradigm Change Capital (UK)

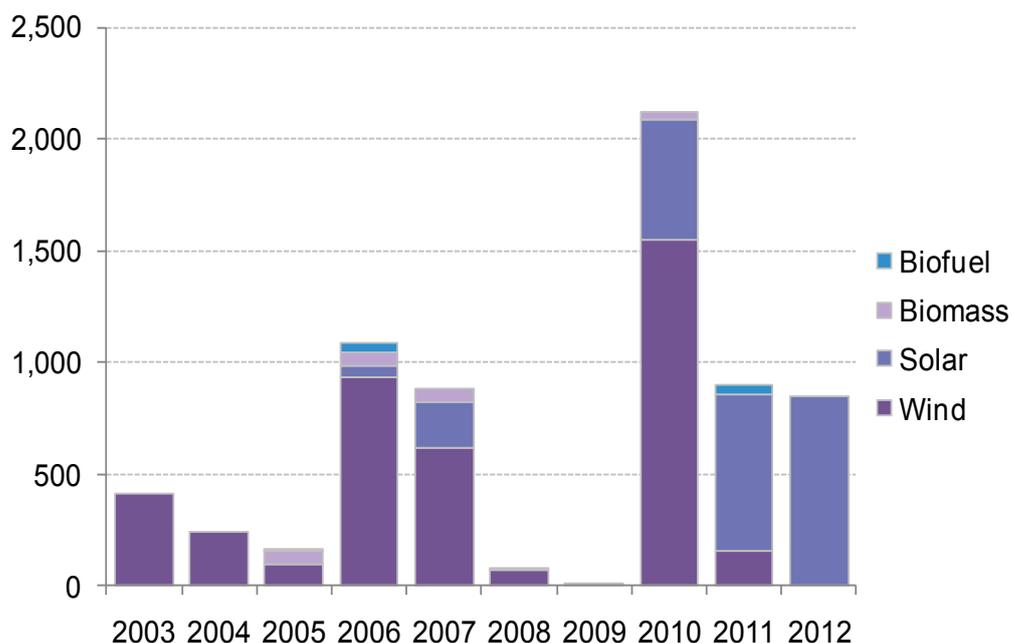
John Lynch, Managing Director, Head of Power, Utilities and Renewables for Europe, Middle East and Africa at Bank of America Merrill Lynch (UK)

The second session of Meeting Expectations focused on long-term asset owners and investors, in particular term lenders and utilities.

Two investors - Regina Mead of Md4 in the US, and Dima Rifai of Paradigm Change Capital in the UK - both stressed the need for new approaches in considering the viability of long-term assets, and perhaps even new financial mechanisms to drive investment such as specific bonds (See figure 4). Institutional investors, according to Rifai, have more desire to incorporate sustainable investment strategies in portfolio planning, including climate finance.

Peter Greenwood of CLP, one of Asia's largest asset owners, stated clearly three risks: costs are still higher than conventional power sources; that costs may not continue to come down, and that poor resource measurement or simply environmental variability have created the equivalent of "fuel risk" for clean energy.

Figure 5: Clean project bonds 2003-H1 2012 (\$m)



Source: Bloomberg New Energy Finance

5. INNOVATIVE FUNDING AND FUNDING INNOVATION

Moderator: **Josue Tanaka**, Managing Director, European Bank for Reconstruction and Development

Panelists: **Woochong Um**, Deputy Director General, Regional and Sustainable Development Department, Asian Development Bank

Dimitris Tsitsiragos, VP, Middle East & North Africa, Europe & Central Asia, International Finance Corporation

Sean Kidney, Co-founder, Climate Bonds Initiative

Innovation in clean energy and climate investment is not just in the technical aspects of physical systems; it is in the financial system as well. New financial instruments can play two roles: first, to support new technologies which will not attract debt at scale, and second, to lower costs for borrowers and therefore increase the competitive position of new and established clean energy and climate investment types. Multilateral banks can play a meaningful role in alleviating upfront risks, and new financing instruments for long-term assets can open new pools of capital.

Innovative technologies often require innovative financing, and at the very least, a deep, broad, and committed pool of financiers willing to assign and assume risk. Offshore wind projects, which can exceed \$1bn in debt alone, can require more than a dozen involved financial parties.

For executives Woochung Um of the Asian Development Bank (ADB) and Dimitris Tsitsiragos of the International Finance Corporation (IFC), opportunities abound but process still requires caution. As Um points out, "securitisation is not our forte" and therefore, ADB cannot tumble headlong into making loans and expecting to then sell debt. For Tsitsiragos, the challenge is to allow local capital to make key investments while still providing IFC's de-risking and cost-lowering expertise.

For Sean Kidney of the Climate Bonds Initiative, innovative funding should take the form of new ways to envision traditional, "ordinary" asset financing of infrastructure and buildings, an asset class which survived the financial crisis of the past four years largely intact though impaired by banks' own balance sheets.

6. REIMAGINING APPROACHES AND OUTCOMES

Facilitators: [Nathaniel Bullard](#), Bloomberg New Energy Finance
[Joumana Asso](#), Senior Private Sector Development Specialist,
Climate Investment Funds

The Private Sector Forum closed with an "Un-conference" - a session in which all participants explore challenges and opportunities in climate finance in an open, discursive format. Re-imaginings of climate finance included:

- New potential policies concerned more with stability than generosity
- New stakeholders (in particular sub-national and local governments)
- New ways to educate a widening group of market participants, both on technical standards and skills, and on up-to-the-minute assessments of the competitiveness of incumbent and emerging energy technologies.
- The interplay between public and private institutions is key to consistent and comprehensive market transformation.

Even with more than a trillion dollars deployed to date, there is ample room to re-imagine approaches - and outcomes - for climate finance. Neither public sector nor private sector capital alone can meet the challenges of adequately capitalizing climate finance goals – nor is one sector or the other purely suited to do so. Investments with long tenors and technology risk in addition to measurable financial and societal benefits require collaboration and a leveraging of each sector's particular strengths in order to succeed.

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