Climate Finance

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Lund
INVESTMENT: Infrastructure capital spend is estimated to be marginally higher in a low-carbon scenario

GLOBAL INVESTMENT REQUIREMENTS; 2015 TO 2030, US$ TRILLION, CONSTANT 2010 DOLLARS

Indicative figures only
High rates of uncertainty

6000 billion USD needed a year

Cities in emerging/developing economies will be critical.

Final energy demand in the 4DS

Two-thirds of the growth in global energy demand to 2050 comes from cities in emerging and developing economies.
Background Report on Long-term Climate Finance

prepared for the German G7 Presidency 2015
by CICERO and Climate Policy Initiative
Climate finance flows in last five years have been significant despite economic crisis.

Global climate finance increased by 18% in 2014, more money than ever.

New Climate Economy Report: 6000 bn USD is needed a year.

Source: CPI
Climate finance has been growing strongly in developing countries

Source CPI

*In USD billion
Public actors drive the climate finance system but private investment dominates.

Source CPI
Private investment is the biggest potential source of climate finance

92% of private finance is invested domestically.

Source: CPI
Public frameworks and support are key

Private investors require robust and predictable regulatory frameworks

Public actors have a potent mix of policies, institutions and financial instruments that can balance costs and risks for private actors

A wide range of mitigation policies and instruments can drive low-carbon investment
New opportunities have emerged....

• Learning and public support has lead to reduced costs for most renewable energies

• Current low oil prices could present an opportunity to ‘level’ the playing field

...But a significant challenge remains

• Public support still favours brown investments
  – USD 490 billion in 2014 in subsidies for fossil fuel consumption
Physical impacts & policy measures could have major impacts on investors

Source: IPCC AR5 WG3 2014
Bank of England

• Climate change could trigger financial instability if it causes severe damage to balance sheets (households, corporates, banks etc)

• Economic impact is likely to be less severe if the financial system has distributed climate risk efficiently (insurance and reinsurance)

• Increased reliance on bioenergy and weather changes could impact volatility on food and energy prices
• Sudden and unexpected tightening of carbon emission policies could generate significant balance sheet losses and financial instability.

• An early redirection of private investments towards low-technologies is needed.

Oil and gas sectors alone account for 12.5% of FTS 100 index.
The Task Force on Climate-related Financial Disclosures (TCFD) will develop voluntary, consistent climate-related financial risk disclosures for use by companies in providing information to investors, lenders, insurers, and other stakeholders.

Complete its work by end 2016
Why are green bonds important for climate change?

• Green Bonds are debt instruments that channel investments into green or climate friendly assets or activities.
• Provide up-front capital for large green infrastructure projects
• Attractive for large institutional investors
• Significant potential for growth: only 0.07% of global market is green
2015 = 41.8 USD bn
2016 = 28.7 USD bn
Green Bond Principles (ICMA)

- The Green Bond Principles (GBP) – voluntary process guidelines to enhance transparency and disclosure, and promote integrity in the Green Bond market

  1. Use of Proceeds
  2. Process for Project Evaluation and Selection
  3. Management of Proceeds
  4. Reporting
Climate information for investors

World-leading provider of second opinions on green bonds

Insight from CICERO Second Opinions

- Governance matter
- Internal dialogue with environmental experts can benefit from issuing a green bond and obtaining a second opinion

Best practice in green bonds. Photo: Pixabay, Unsplash.
Do the selected project categories meet expectations for a low-carbon and climate-resilient future?

<table>
<thead>
<tr>
<th>Color</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dark green</td>
<td>Projects and solutions that realise the long-term vision of a low-carbon and climate-resilient future already today. Typically, this will entail zero-emission solutions and governance structures that integrate environmental concerns into all activities. Example projects include renewable energy projects such as solar or wind.</td>
</tr>
<tr>
<td>Medium green</td>
<td>Projects and solutions that represent steps towards the long-term vision, but are not quite there yet. Example projects include sustainable buildings with good (but not excellent) energy efficiency ratings.</td>
</tr>
<tr>
<td>Light green</td>
<td>Projects and solutions that are environmentally friendly but are not by themselves a part of the long-term vision. Example projects include energy efficiency improvements in fossil-based industry that result in short-term reductions of greenhouse gas emissions, and diesel-fuelled buses.</td>
</tr>
<tr>
<td>Brown</td>
<td>Projects that are in opposition to the long-term vision of a low carbon and climate-resilient future.</td>
</tr>
</tbody>
</table>
Figure 4: Number of CICERO second opinions by Shade of Green for each project type
Typical questions CICERO asks

• What are the issuer's climate and environmental policies, goals and achievements?
• Do the eligible projects include fossil fuel elements?
• Coordination of mitigation and adaptation activities?
• Will there be a lifecycle analysis of the projects?
• Policies towards subcontractors?
• Who selects the eligible projects? Are climate and environmental experts involved?
• Which information will be made available to investors and the public and how?
• Will there be any impact reporting?
"CICERO's second opinion was a key part of the green bond model developed for the first World Bank Green Bond together with SEB in 2008, which has helped the market diversify with integrity. We look forward to continuing our collaboration with CICERO to expand the opportunities for investors to support climate finance." - Heike Reichelt, Head of Investor Relations and New Products

“We look forward to continuing to benefit from CICERO’s climate expertise while sharing with them what metrics are most meaningful to investors. We have worked previously with CICERO on our impact reporting efforts in the green bond space and found they were able to interpret our needs as an investor and help us understand and evaluate environmental metrics.” - Ashley Schulten, Head of Climate Solutions
Major climate risk – water

- Sea level rise
- Droughts
- Extreme precipitation
Sea level rise

- Mainly a long term problem
- Vulnerable regions known

Several experts on sea level rise concerned about faster and larger sea level rise
Droughts – heat waves

Influences food production

Wild fires increase

Influences work productivity

Scientific literature on observed changes somewhat variable
Extreme precipitation

Will increase and observed to increase both in dry and wet regions

Precipitation on the wettest days will increase most
Extreme precipitation in populated areas

The extreme precipitation in Copenhagen 2. July 2011 caused damages for around 5 billion kroner

135 mm precipitation on 24 hours- 30 mm in 10 minutes

Frequent examples from other cities
Thank you