

Towards A Risk-Based Approach on Investment Needs for GHG Mitigation

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Green Finance Activities of KfW Group



World largest financier of climate and environment investments: US\$ 33 bln. in 2011
Instruments: grants – concessional and commercial loans – guarantees – equity – mezzanine



- **Leveraging private sector investment** is high on everybody's agenda
- **De-risking investment as the silver bullet?**
- Risks generally do not disappear! (see financial crisis 2007/08)
- Risks can be mitigated (e.g. insured) or be compensated by higher returns on investment at a respective cost
- Risk management on a project level using the investor's perspective: rather straight forward using available instruments

Objective of this presentation:

- Get an understanding of the total **costs of de-risking mitigation investments in developing countries**

Low Carbon Investment: What Matters?



Investment decision for reference or alternative technology

Investment and cost of capital

Operating (e.g. fuel) & maintenance costs

Revenue stream

Country, currency & technology risks



investment grants; concessional loans

reduction of fossil fuel subsidies

renewable premiums; tax breaks

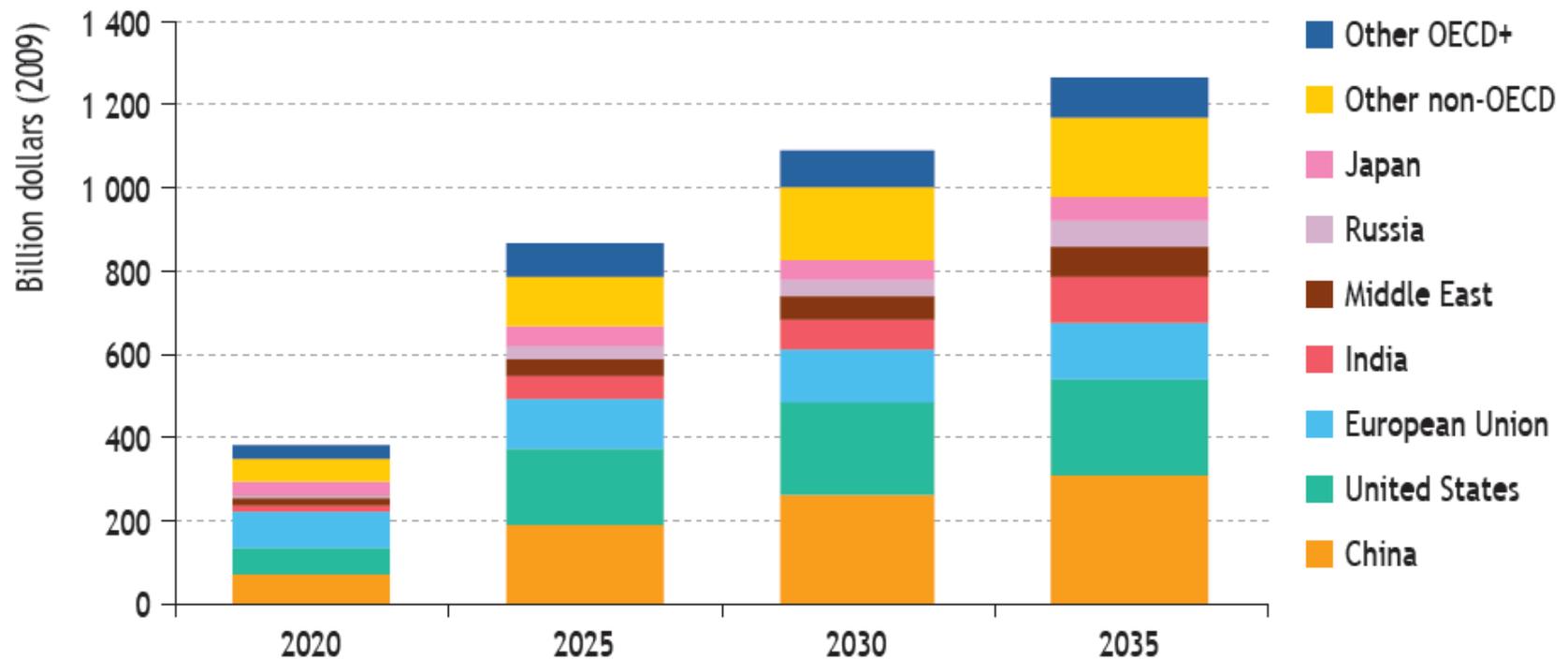
guarantees; public anchor investors

EXAMPLES FOR INSTRUMENTS FROM THE TOOLBOX

Regional Distribution Additional GHG Mitigation Investment



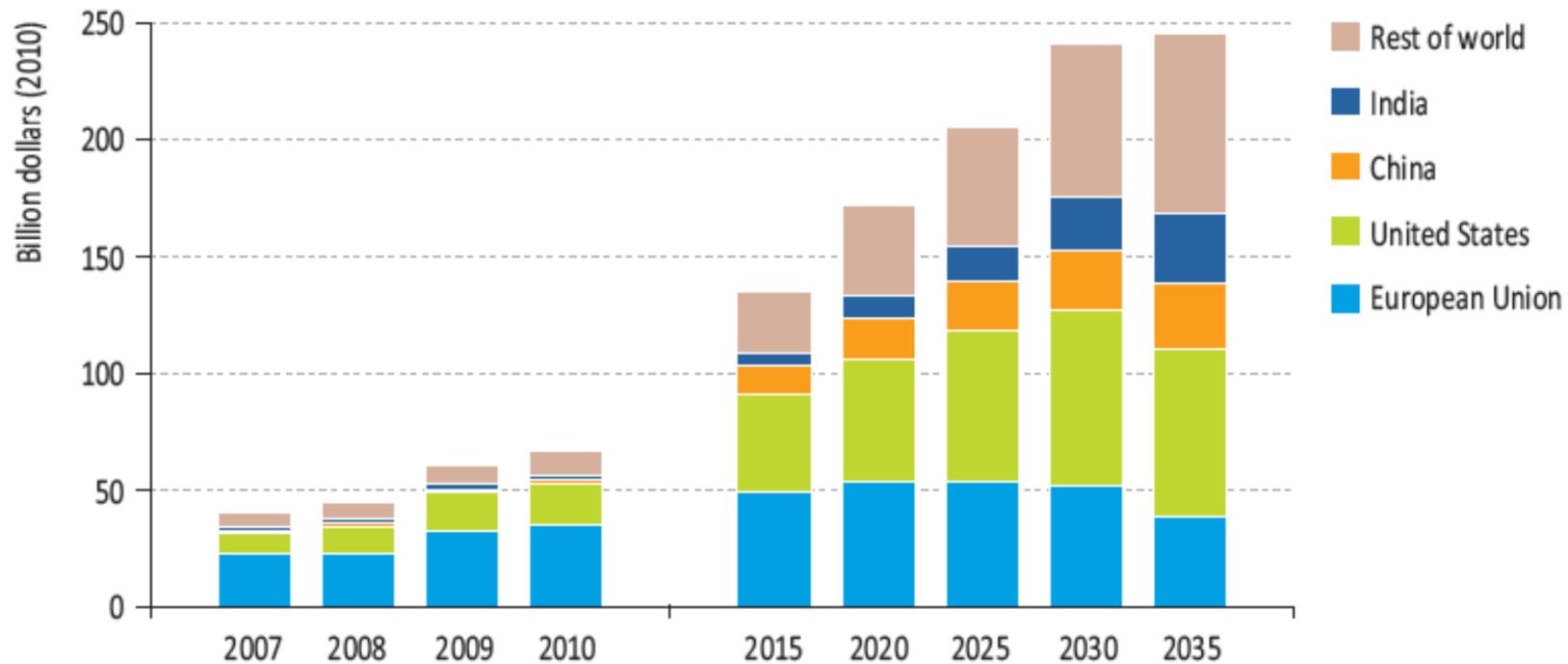
Annual additional spending on low-carbon energy technologies in the 450 Scenario relative to the Current Policies Scenario



Source: WEO 2010

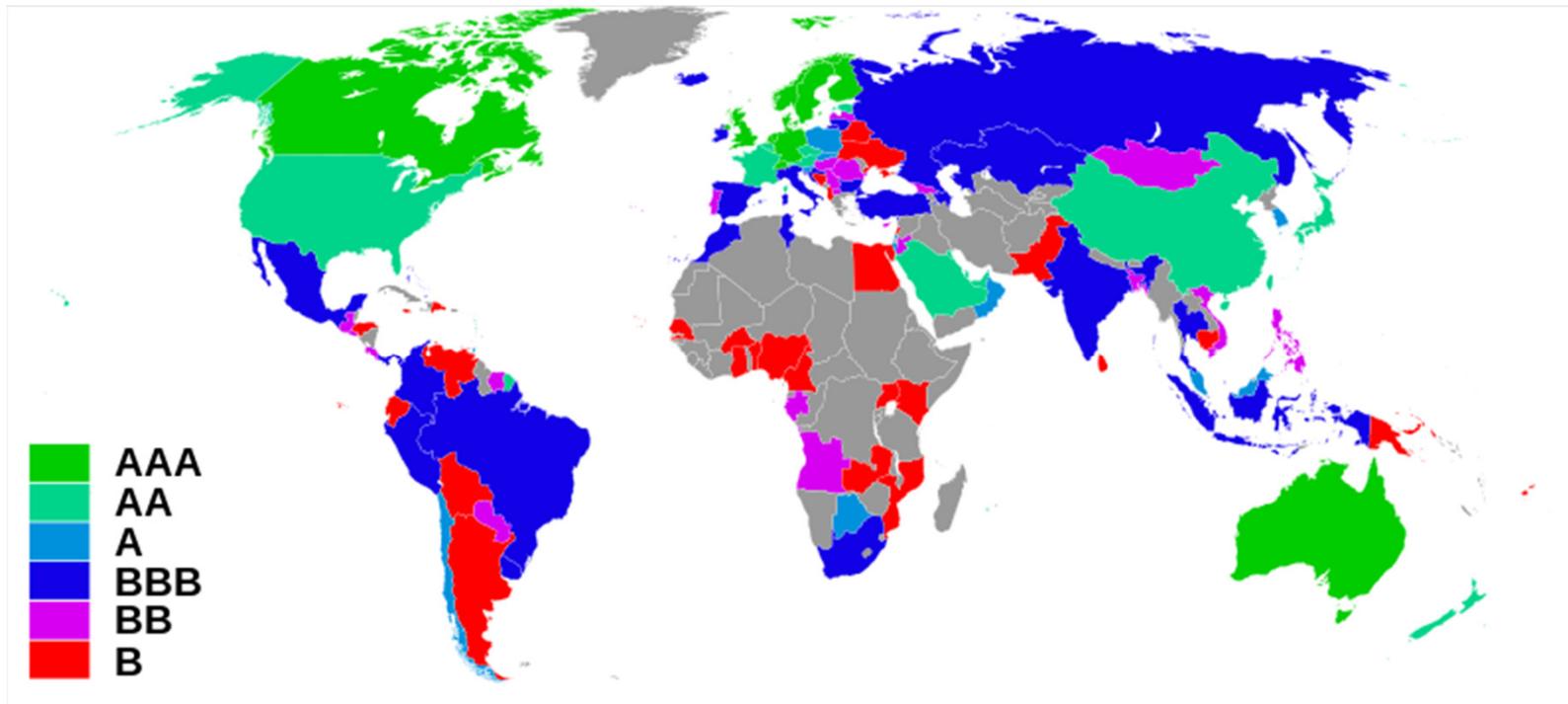
Regional Distribution Incremental Costs for GHG Mitigation

Global subsidies to renewables-based electricity and biofuels by region in the New Policies Scenario



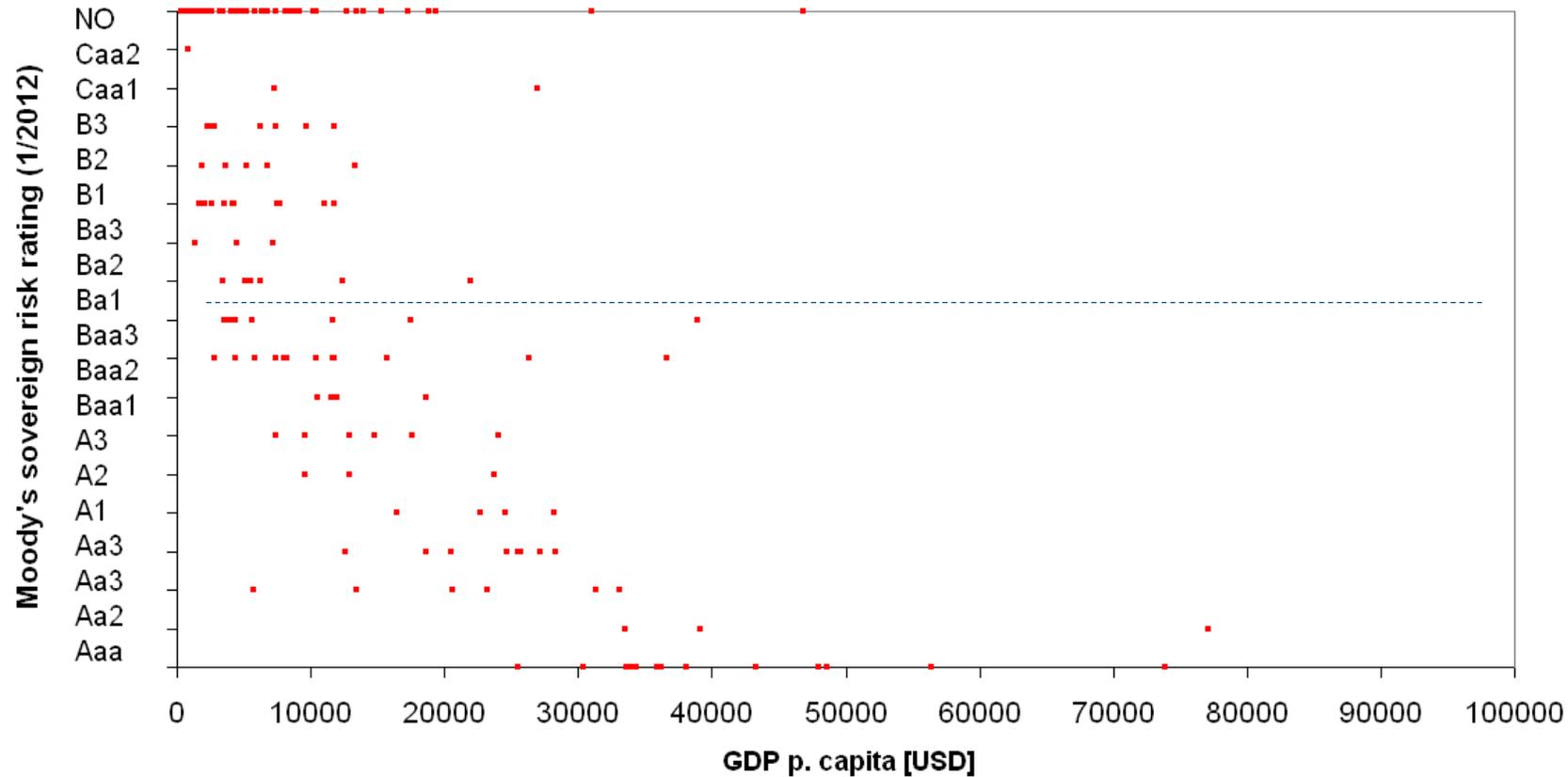
Source: WEO 2011

Standard & Poors Sovereign Bond Country Rating (4/2012)



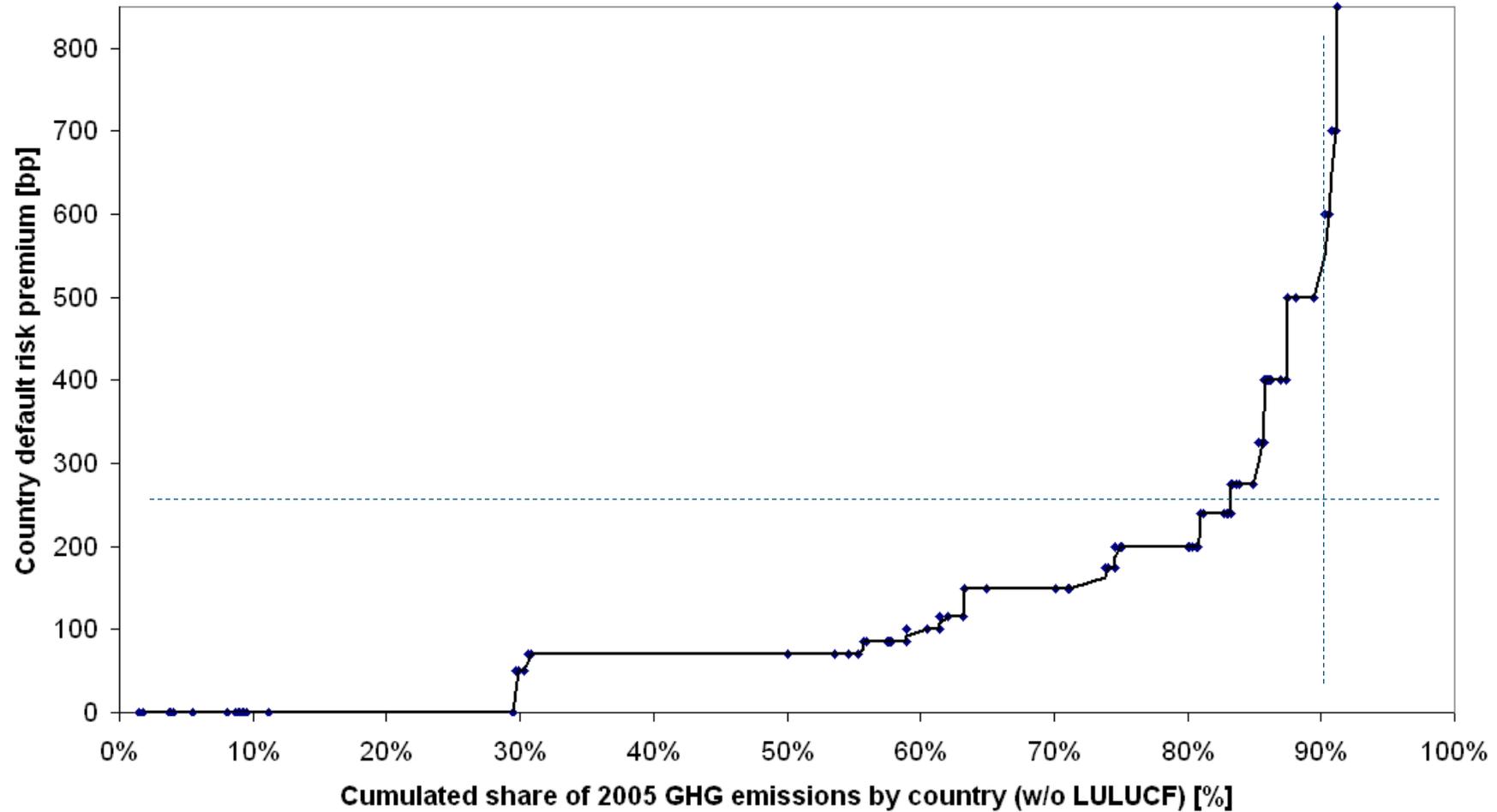
Source: Wikipedia based on Standard & Poors, 4/2012

Relation: GDP per Capita and Country Rating



Data source: WRI and Prof. Damadoran - NYU (1/2012); <http://pages.stern.nyu.edu/~adamodar/>

Roughly 80 % of Global GHG Emissions (w/o LULUCF) in Investment Grade Countries



Data source: Prof. Damadoran - NYU (1/2012): <http://pages.stern.nyu.edu/~adamodar/>

The Approaches: Leveraging Private Sector GHG Emission Mitigation Investment



I. Mobilise private capital for Public Sector Investments

Example Instruments:

Agency/MDB Bonds
NAMA Bonds
Public Private Partnerships
Structured Funds

KfW Group:

- Gov. backed KfW bonds
- PPP Project / DeveloPPP
- GCPF / Green f. Growth Fund

II.a Support re-direction of private sector mitigation investments

Example instruments:

Feed-in tariffs
Concessional loans
Loan guarantees
Green credit lines

KfW Group:

- Wind offshore loans
- Supporting PPA
- Concessional loans
- Sectoral budget support
- EE/RE credit lines

II.b Guided private sector mitigation investments

Example instruments:

Carbon markets
Regulation
Demonstration & advisory
Voluntary initiatives

KfW Group:

- Carbon Fund
- Capacity Development in financial sector
- IDFC Network

integrated approaches essential

- Roughly **80% of current GHG emissions** (w/o LULUCF) are in investment grade countries ⇒ Regulation/carbon markets: **Private sector**
- **Country risks for 10% of incremental WEO2009 investment** are excessive ⇒ **Public grant or local finance**
- Investments needs for „**clean energy access for all**“ according to WEO 2011 are approx. US\$ 50 bln p.yr. (2010 – 2030) from different sources

Focussed approaches required in each of the three fields:

- **Energy access in LDCs**
- Dedicated **cost-effective mitigation policies in emerging economies and OECD**
- Improving and maintaining **investment attractiveness** of countries

Thank you for your attention!