

Bonds and Climate Change

Research Collaboration on Tracking Private Finance

Approach: a rapid transition to a low-carbon economy and climate resilient world

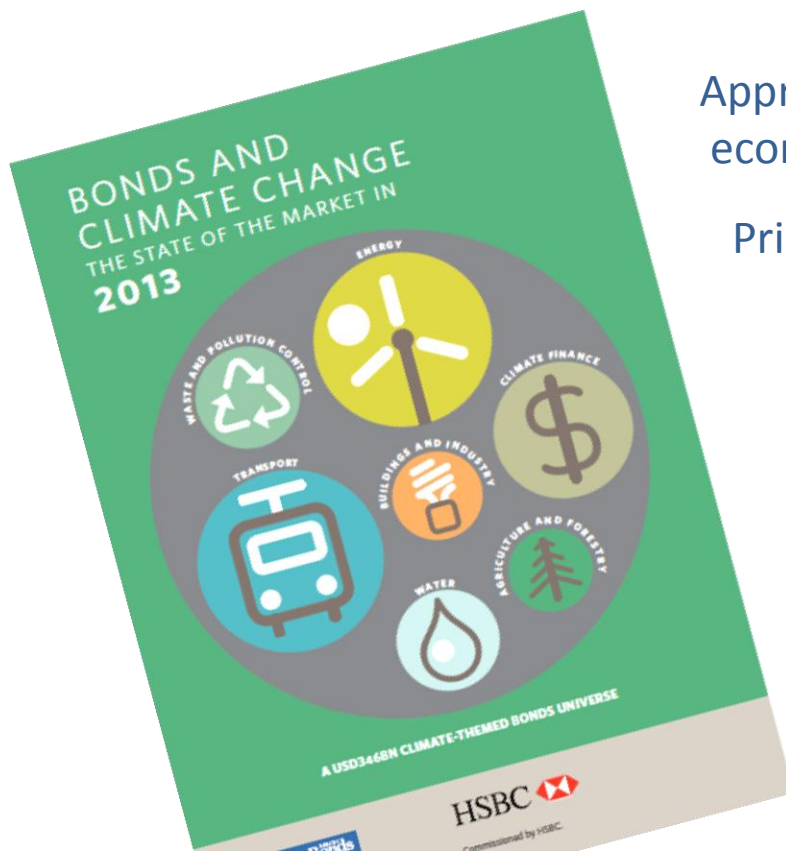
Priority assets not entities

Annual State of the Market

Listing on Bloomberg

Certification scheme

Warsaw | 13 Nov 2013



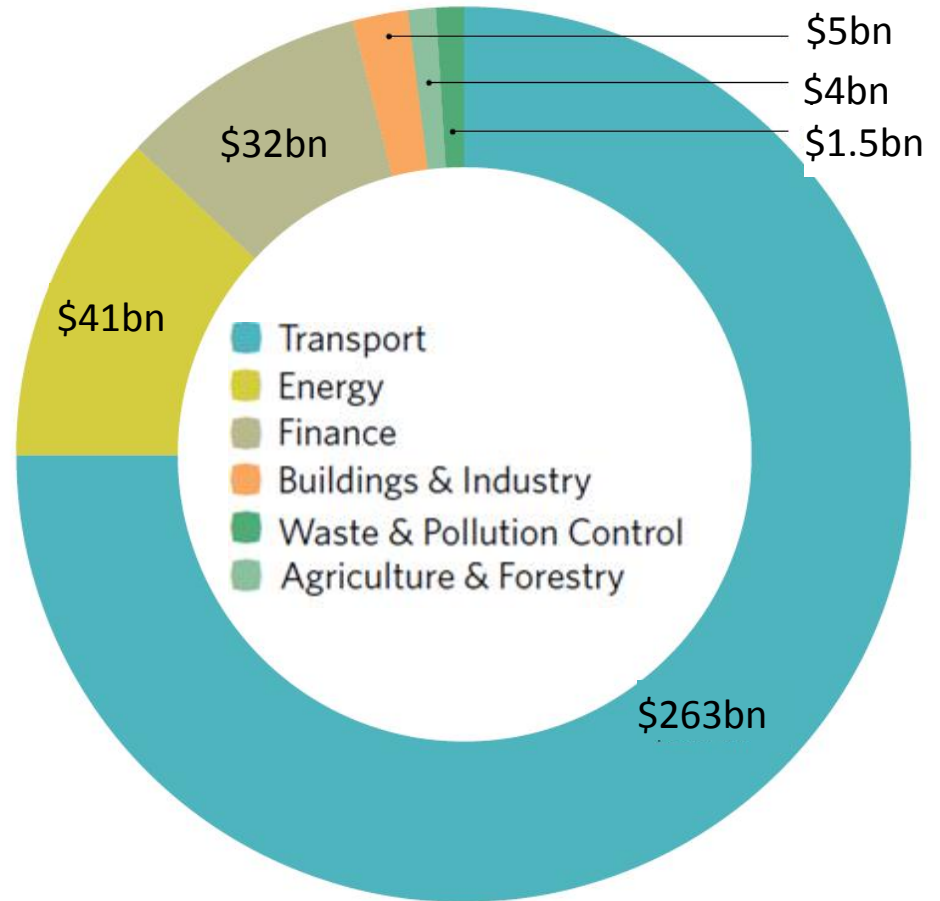
State of the Market

\$346 bn
TOTAL

CLIMATE-THEMED
BONDS OUTSTANDING

\$163 bn

INVESTMENT-GRADE
BENCHMARK-TYPE
BONDS OUTSTANDING



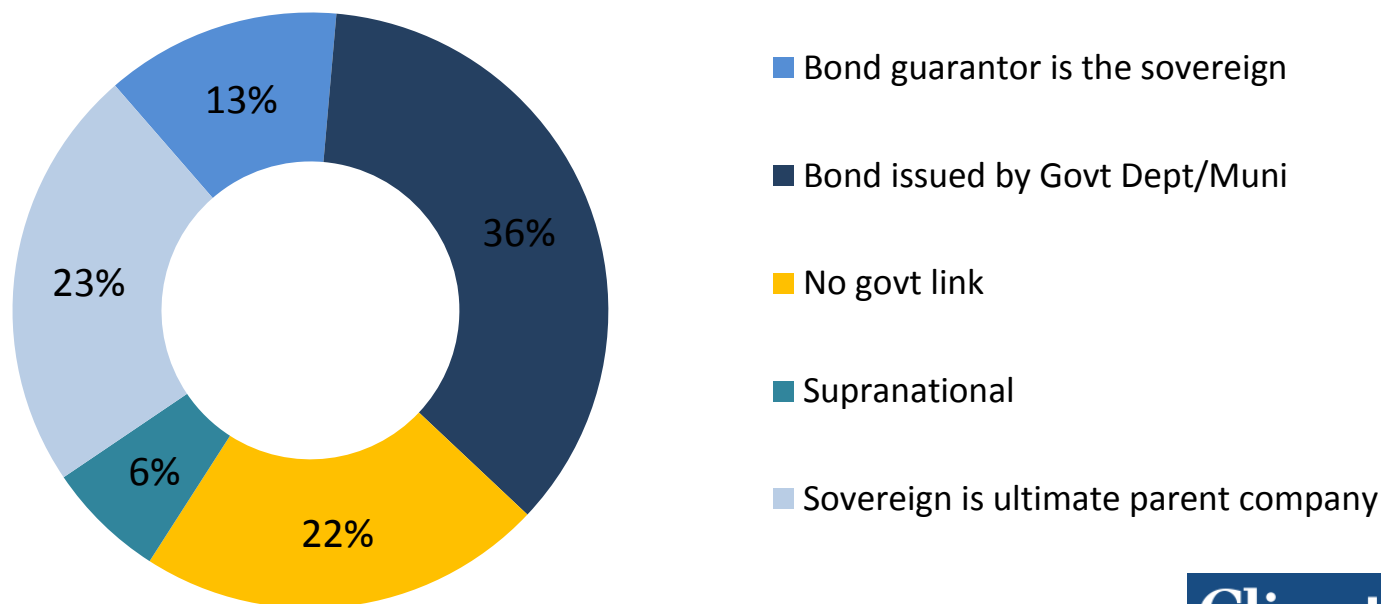
89% investment grade

China \$127bn (37%), then UK & France








25% increase in issuance

78% public-backed vs 22% private

- Line between public and private finance is blurred
- Bonds from mix of public institutions: companies owned by govts, supra-nationals, companies with govt as guarantor
- Some issuers had loans from govts – e.g. project bonds & DoE loans



Low-carbon, climate resilient transition

						
<p>Transport: 263bn</p> <ul style="list-style-type: none"> - Rail, metro - li5bn China R - Evs - Biofuels - Rail FF excl. - Mature <p>Future:</p> <ul style="list-style-type: none"> - EVs: Tesla, auto mnfrs - Tripling of rail: Africa, CA HS 	<p>Finance: 32bn</p> <ul style="list-style-type: none"> - MDB programs - Conduits: EuroFIMA \$16bn, Indian Rail \$7bn, IREDA <p>Future:</p> <ul style="list-style-type: none"> - Munis - Banks - Corporates 	<p>Energy: 41bn</p> <ul style="list-style-type: none"> - Wind 24% - Solar 21% - Hydro 8% - Nuclear 32% - Biomass <p>Future:</p> <ul style="list-style-type: none"> - RE invest funds - Rooftop solar ABS - Utility ABS 	<p>Buildings & industry: 4.8bn</p> <ul style="list-style-type: none"> - LEDs 13% - Insulation - Energy star appliances: LG - EE munis - Retrofit - Green buildings <p>Future: Siemens, GE, Schneider Electric etc</p>	<p>Waste & pollution control: 1.4bn</p> <ul style="list-style-type: none"> - Recycling / recycled products / circular economy - Air filters - Landfill gas, WTE <p>Future:</p> <ul style="list-style-type: none"> - Corporate waste mngmt 	<p>Water</p> <ul style="list-style-type: none"> - Sustainable water mgmt - Efficient technology - Resilient infras. - Criteria difficult <p>Future:</p> <ul style="list-style-type: none"> - flood protection - water infra in drought-threat areas 	<p>Agriculture & Forestry: 3.8bn</p> <ul style="list-style-type: none"> - 88% paper /wood / forest mgmt - Afforestation - Organic seeds & fertilizers - Sweden, Portugal, USA <p>Future</p> <ul style="list-style-type: none"> - Climate-resilient ag

Investor shift driving demand



Principles for Responsible Investment

1000+ signatories representing
USD32trn AUM

Global Coalition on Climate Change

259 asset owners &
asset managers
representing
USD22trn AUM

Re-weighting to bonds post-2008

Appreciation of macro climate risk

SRI re-balancing from equities

Reputation (green marketing)

Little pricing differentiation at this stage



Investor Network on
CLIMATE RISK

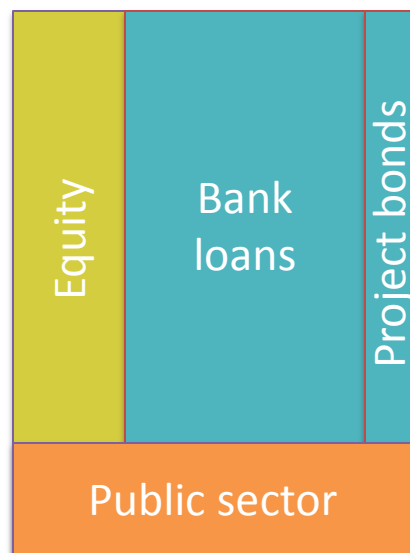


Investor Group on
Climate Change

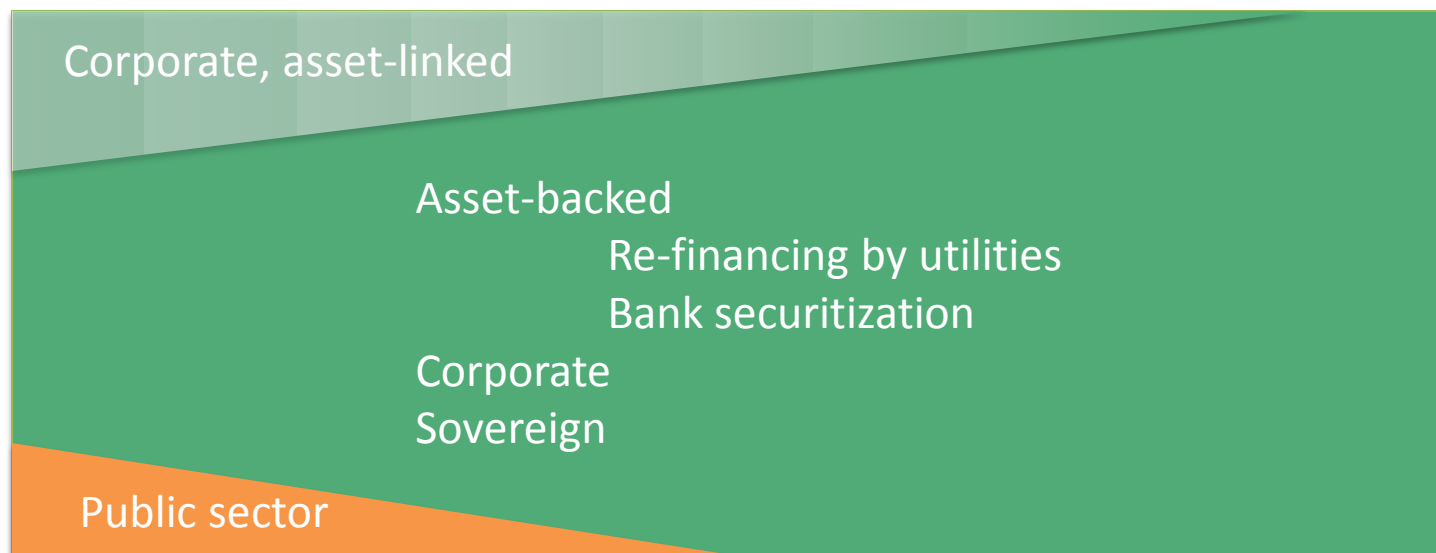


GLOBAL INVESTOR COALITION ON CLIMATE CHANGE

Bonds, re-fi, and the capital pipeline



High risk
Project finance
First 2-5 years



Low risk
Long-term holdings for long-term investors
15-25 years

Needed: scale, inv. grade ratings

Definitions

- Standards

Credit enhancement

- Public sector cornerstone issuers + investors
- MDB role to screen portfolios, support aggregation
- Tax incentives, retail pension investing incentives
- Risk weighting preferencing in Basel III

Aggregation

- Green securitization: regulation, transferability
 - Green mortgages
- Warehouse: regional conduits: Penn, UK, IFC-EIB
- Green covered bonds



Tracking issues

Definitions

Lack of clarity around priority climate investments: taxonomy / transition

Lack of asset-linking and transparency around use of proceeds

Re-financing conundrum – concerns about “double-counting”?

Private/public definitions: part-public ownership? Public sector guarantees?

Visibility

Incomplete data: prices, amount outstanding, Fx rates, yield etc

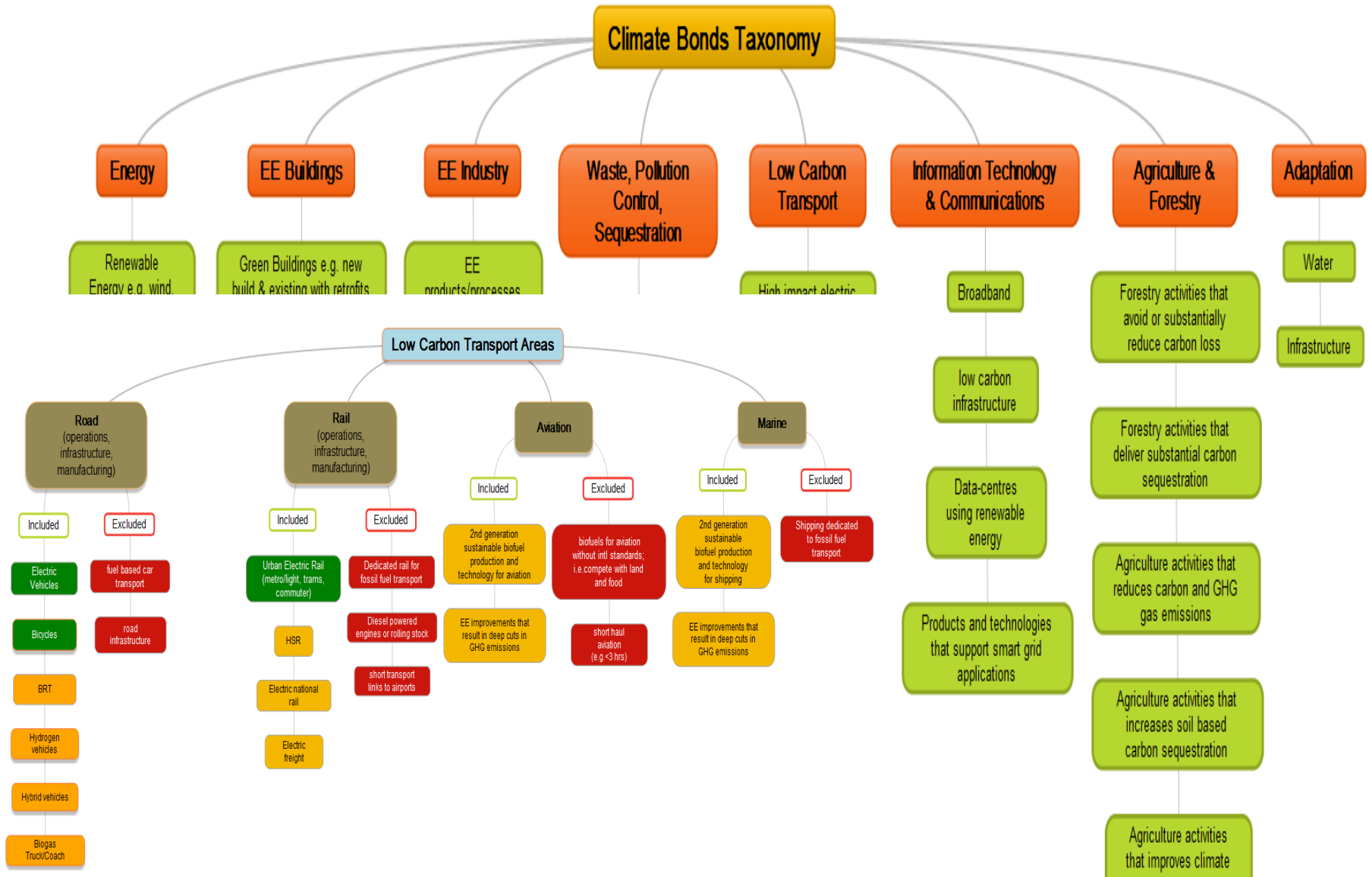
Lack of visibility of private placements

Lack of geographic flow data: country of reg. doesn't show finance destination (or origin!)

Timeliness

Annual snapshot deep-dives need automating to ensure currency

Taxonomy



Climate Bond Standards



Industry
Advisory
Group



\$11tn Climate Bond Standards Board

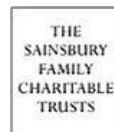


Technical
Working Groups



Funders

Verifiers



SIEMENS



European Bank
for Reconstruction and Development

ARUP



Climate Bonds INITIATIVE

www.climatebonds.net

www.climatebonds.net/taxonomy



Climate Bonds INITIATIVE