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Sommaire

- Présentation d'I4CE
- Introduction sur le marché des green bonds
- Quelle contribution du marché des Green Bonds au financement de la transition bas-carbone?
- Comment assurer l'intégrité environnementale de ce marché?

Présentation I4CE

I4CE – Institute for Climate Economics

- I4CE – Institute for Climate Economics est un think tank qui fournit aux décideurs publics et privés une expertise sur les **questions économiques et financières** liées à la transition énergétique et écologique.

- I4CE contribue à mettre en œuvre l'Accord de Paris, et à rendre au niveau mondial **les flux financiers compatibles avec un développement faiblement carboné** et résilient au changement climatique.

- I4CE a été fondé par la **Caisse des Dépôts** et l'**Agence Française de Développement**, et est soutenu par la Caisse de Dépôts et Gestion Maroc.

I4CE INSTITUTE FOR CLIMATE ECONOMICS
Une initiative de la Caisse des Dépôts et de l'Agence Française de Développement

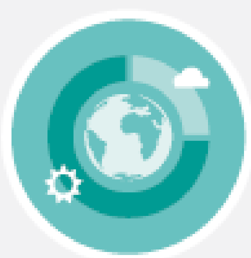
4 programmes

Industrie, énergie et climat

Analyser les politiques pour la transition bas-carbone des secteurs de l'industrie et l'énergie.

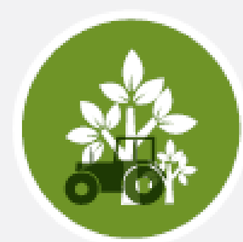
Villes, infrastructures et climat

Accompagner la transition vers des territoires bas carbone et adaptés au changement climatique.



Finance, investissement et climat

Faciliter l'intégration du changement climatique dans le processus de décisions financières



Forêt, agriculture et climat

Accompagner les filières agricoles et forestières dans leur prise en compte du changement climatique

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3 modes d'action

- **Produire de l'expertise au service de l'intérêt général**
  - Projets de recherche et d'étude
  - Publications d'expertise
- **Renforcer les capacités des acteurs économiques**
  - Diffusion et vulgarisation des connaissances
  - Conduite de projets de recherche-action
  - Organisation d'actions de formation
- **Contribuer au débat public**
  - Organisation d'événements (conférences, ateliers de travail, petits-déjeuners débat)
  - Réponses à des consultations publiques
  - Participation à des groupes de travail d'experts

Introduction: Green Bonds, kesako?

Introduction: Green Bonds, kesako?

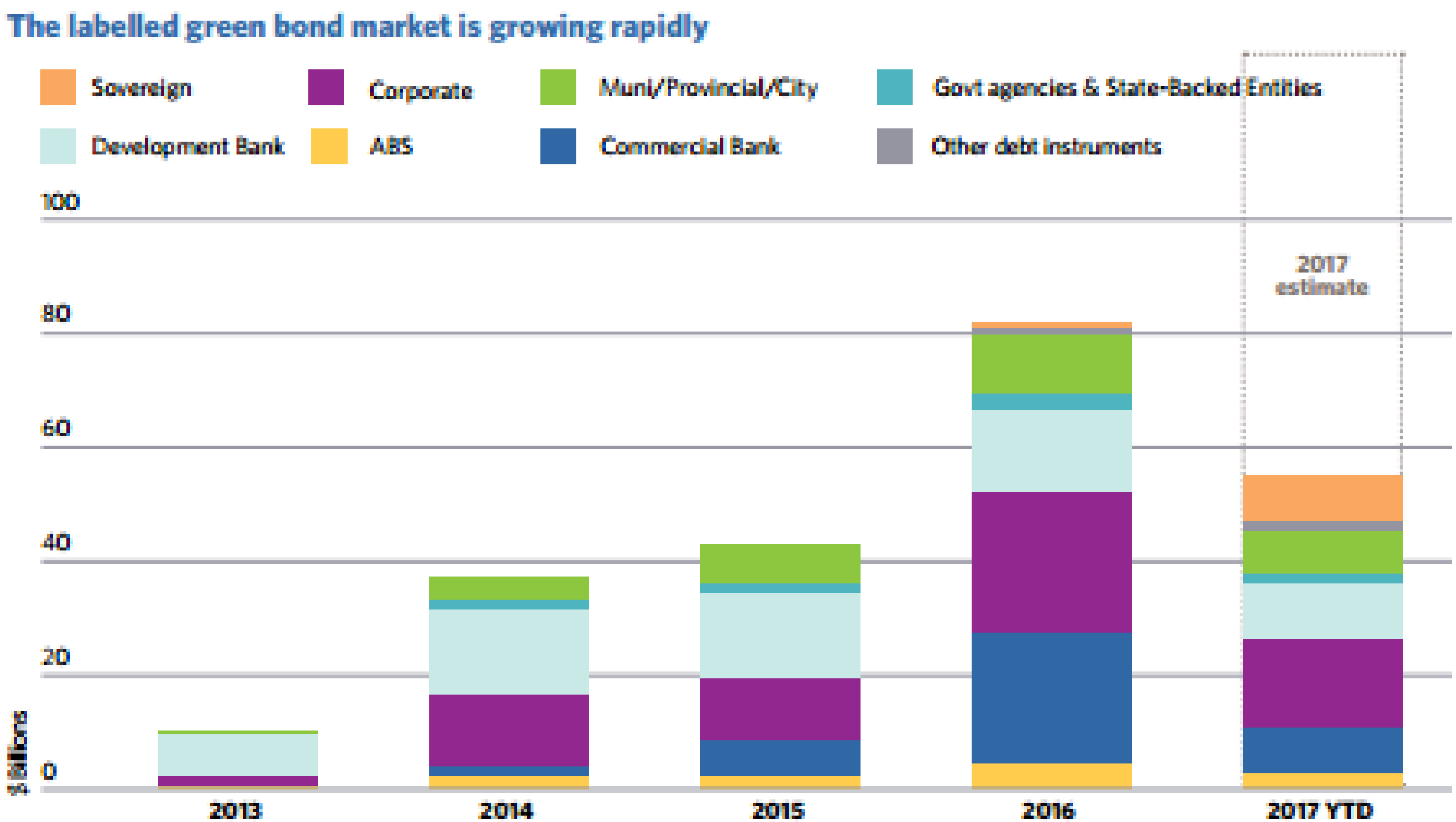
Fixed-income securities whose proceeds are used to finance environmentally sound projects

- **Same characteristics** as ‘normal’ bonds (senior secured, unsecured…)
- **With an additional commitment** from the issuer to finance at least the same volume of environmentally investments with the proceeds
- Eligible investments for the ‘use of proceeds’ **defined in the ‘green bond framework’** disclosed before issuance

Opportunity analysis	Structuring + framework	External review	Roadshows	Issuance	Monitoring and reporting
+ consulting? + investment bank?	+ investment bank	By an external reviewer	+ investment bank	+ investment bank	Validation by an external reviewer ?

Finance and Sustainability divisions involved in the whole process

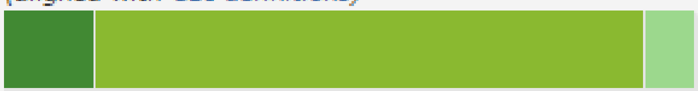
A growing market…



Source: Climate Bonds Initiative

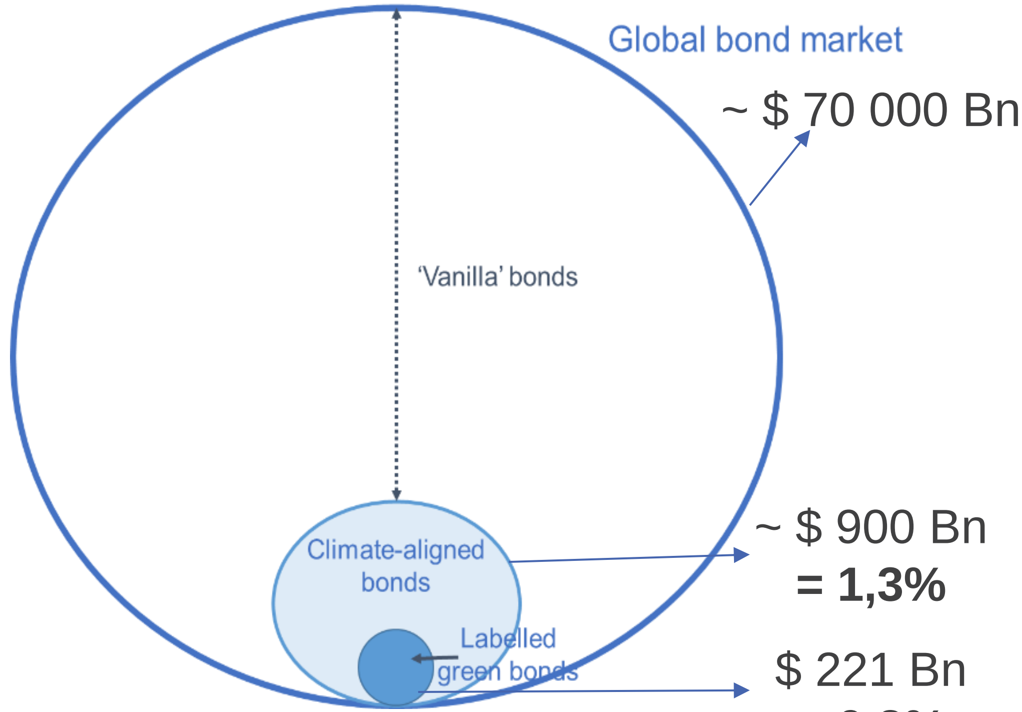
… but still a niche

2017 Issuance *(aligned with CBI definitions)*	**$103.3bn**



Certified Climate Bonds	**$16.7bn**
Labelled green bonds aligned with CBI definitions	**$86.6bn**
Labelled green bonds not aligned with CBI definitions (and excluded from 2017 Issuance)	**$8.8bn**
2016 Total	**$81.6bn**
2017 Estimate	**$130bn**

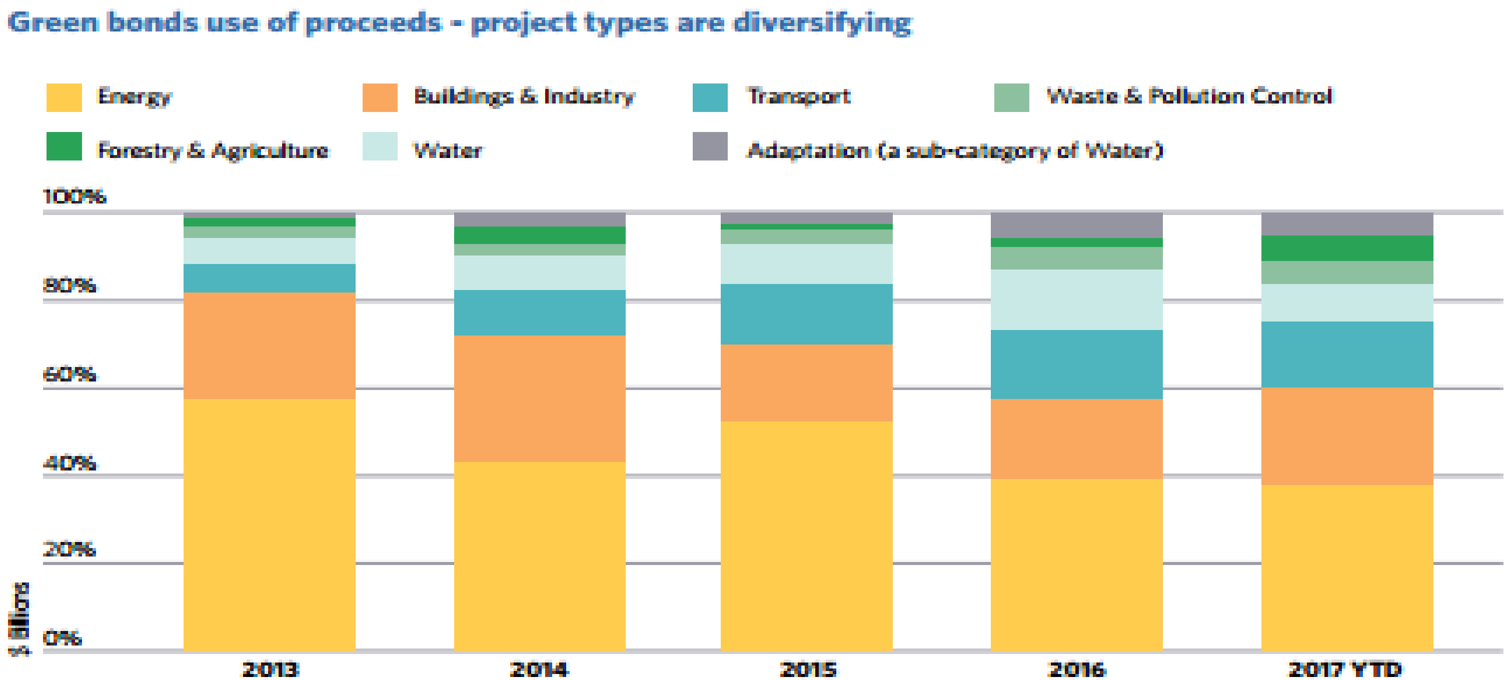
Source: Climate Bonds Initiative

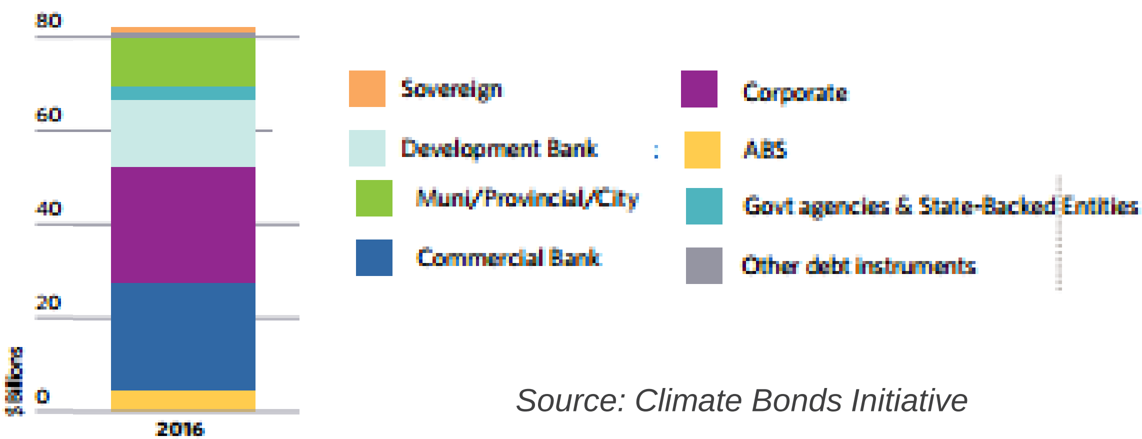


Source: I4CE

NB: Climate-aligned bonds = bonds matching CBI definition for a green bond, either labelled or not as green by the issuer
Labelled green bonds = bonds labelled as green by the issuer

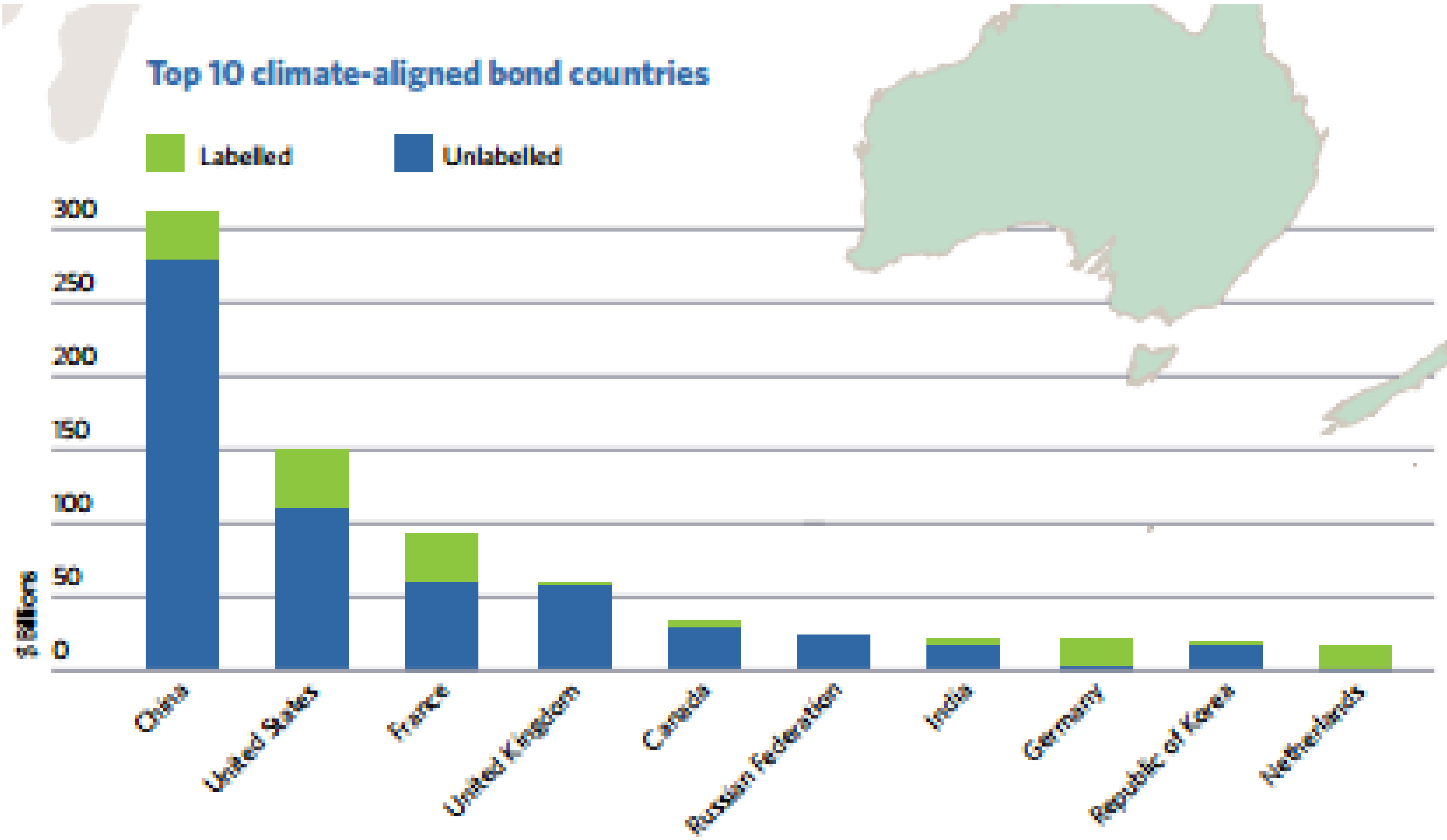
What and who are green bonds financing?





Source: Climate Bonds Initiative

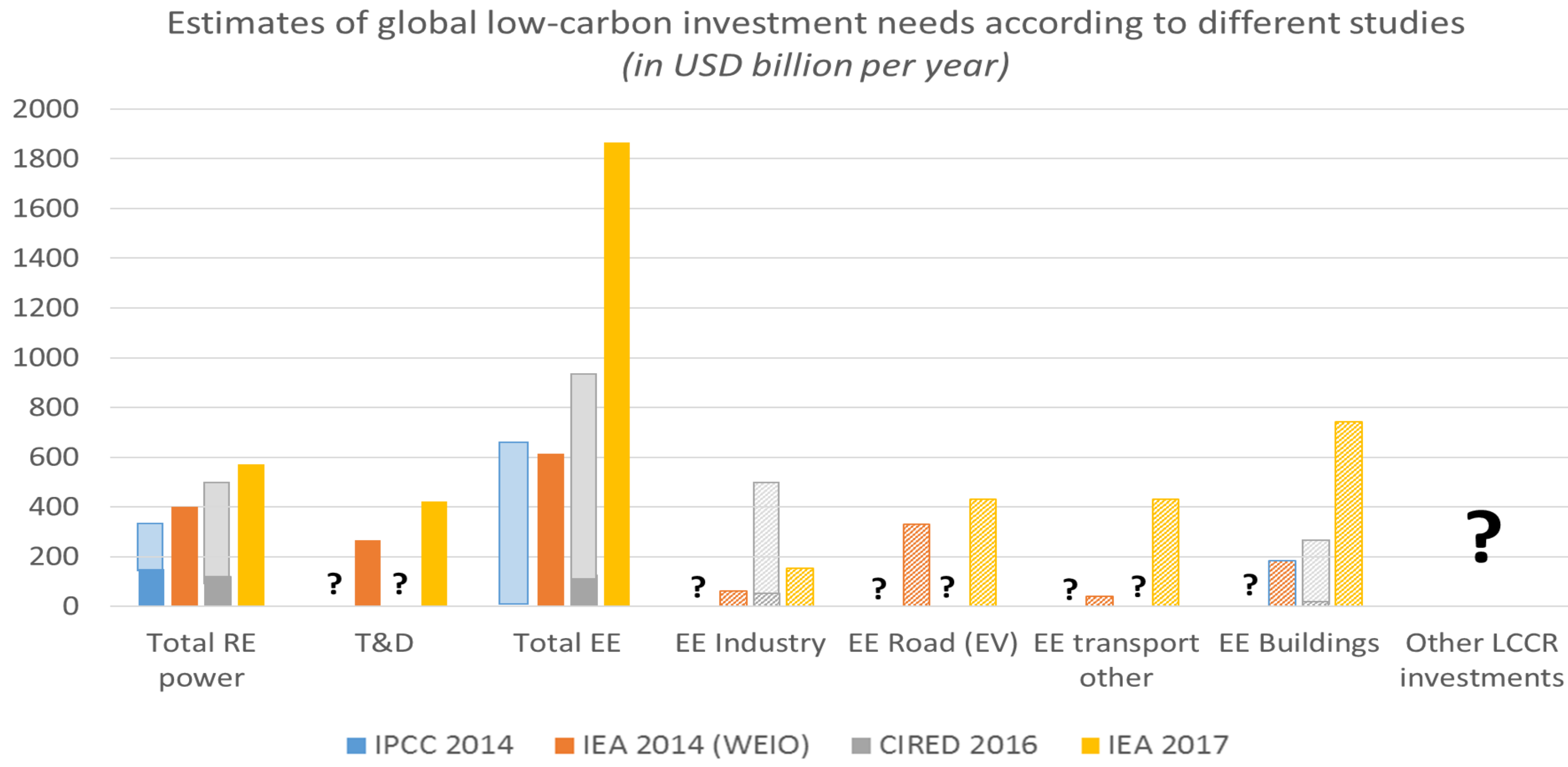
How are France and Europe positioned in the Green Bond market?



Source: Climate Bonds Initiative

Which contribution of the Green/Climate Bond market to the financing of the low-carbon transition?

The objective: finance the transition…



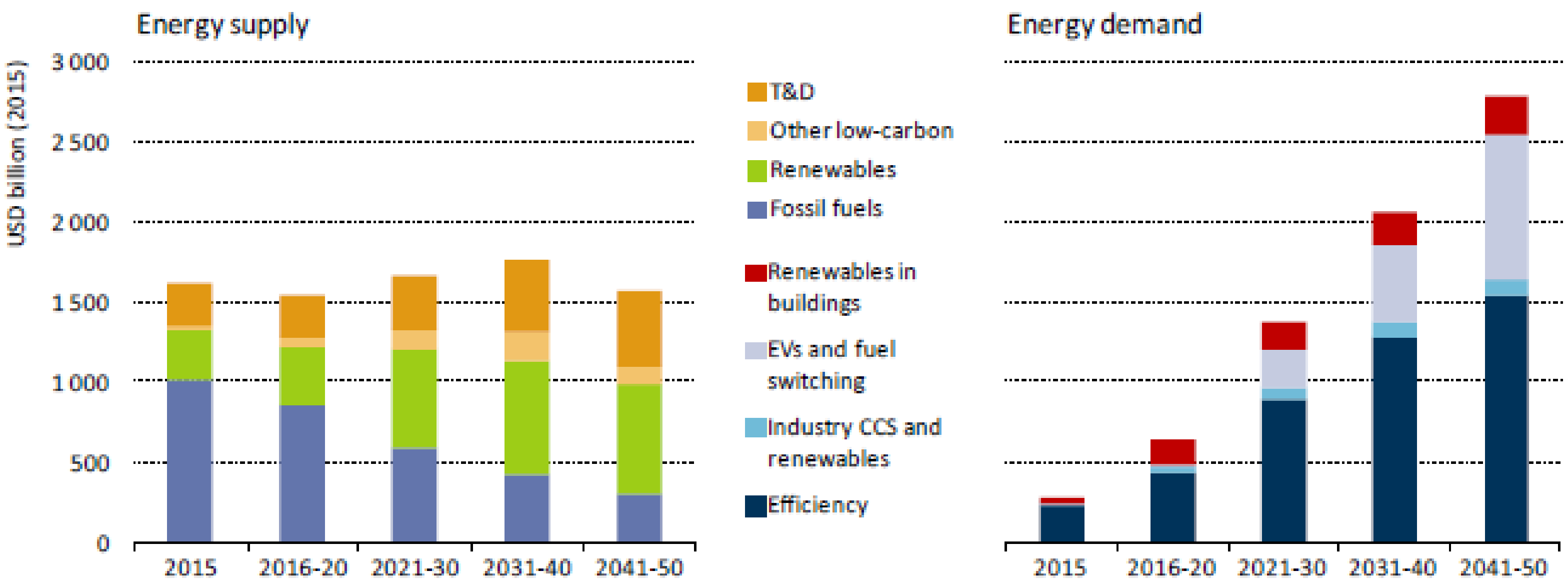
Source: I4CE analysis, 2017

NB: Figures correspond to annual global needs, calculated as total needs on the considered period divided by the number of years considered. Time horizons differ depending on sources - IPCC: 2010-2029, IEA 2014: 2014-2035, NCE 2014: 2015-2030, CIRED 2016: 2020-2035, IEA 2017: 2016-2050. Sectoral perimeters and methodologies also vary depending on studies.

NB 2: the light part of bars represent the gap between minimum and maximum estimates for reports synthetizing results from several studies or modelling (IPCC and CIRED).

… by redirecting financial flows…

Figure 5 : Average annual global energy supply- and demand-side investment in the 66% 2°C Scenario



Note: T&D = transmission and distribution; EVs = electric vehicles; CCS = carbon capture and storage.

Key message • The level of supply-side investment remains broadly constant, but shifts away from fossil fuels. Demand-side investment in efficiency and low-carbon technologies ramps up to almost USD 3 trillion in the 2040s.

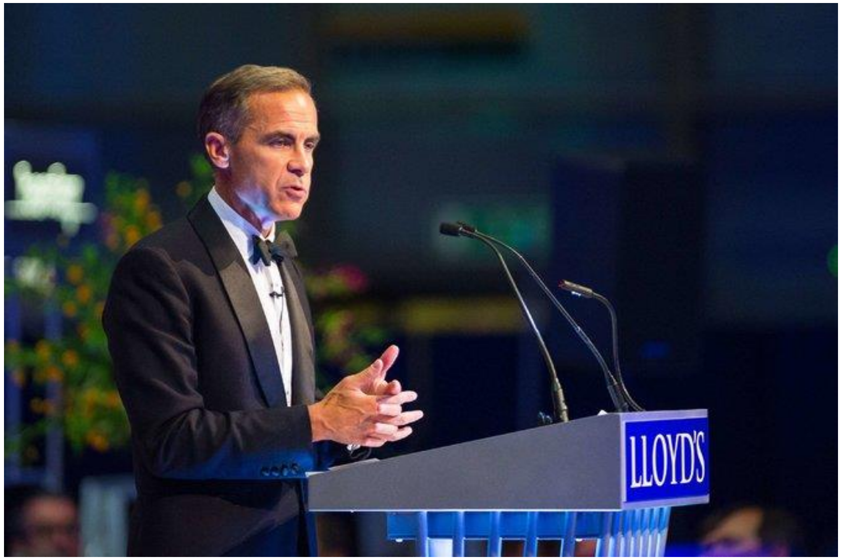
Source: (OECD/IEA and IRENA 2017)

… for 2 main reasons:

Investment needs and Paris Agreement

Article 2.1.c: « This Agreement […] aims to strengthen the global response to the threat of climate change […] including by: […] (c) Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.”

Ensuring financial stability



3 categories of climate-related risks faced by the financial sector:

- Transition risks
- Physical risks
- Litigation risks

Which categories of LCCR investment needs may bonds finance?

	Range of annual investment needs (USD bn)	Relevant bond instruments
Renewable power generation	USD 250 to 570 bn	- Corporate or SSA bonds issued by utilities (+ some project developers) - Project bonds for the largest projects
T&D	USD 270 to 420 bn	- Corporate or SSA bonds issued by utilities - Project bonds?
EE in industry	USD 60 to 150 bn	- Corporate bonds issued by large corporates - Bonds usually not fitted for SMEs financing
EE in transport excl. EVs and infra	USD 40 to 430 bn	- Corporate bonds
EVs	USD 330 to 430 bn	- asset-backed securities / Financial bonds
EE in buildings	USD 180 to 740 bn	- asset-backed securities / Financial bonds - Corporate bonds for large real estate companies
Clean Transport infrastructure	No specific estimates of investment needs publicly available in studies assessed	- Corporate or SSA bonds - Project bonds?
Agriculture, Forestry & Land-use		Not in the scope of studies assessed
Adaptation		

Obstacles to bond issuance specific to LCCR assets

Type of Bonds	Principal Obstacles
Corporate or SSA bonds	- **The lack of pipeline of LCCR investments** - To some extent, the risk perception of corporate bonds issued by pure-player project developers
Project Bonds	- **The lack of pipeline of LCCR investments** - The risk perception of LCCR investments relative to other investments, and as a consequence, the cost of financing LCCR assets. The generally long-term profitability horizon of LCCR assets.
Financial Bonds	- **The lack of pipeline of LCCR loans** - The lack of tagging of ‘green’ loans in banks’ balance sheets
ABS	- **The lack of pipeline of LCCR investments and LCCR loans** - The lack of standardization of LCCR loans - The lack of historic data on LCCR investments

A green bond is not a magical instrument to increase financial flows directed towards LCCR investments…

- **In the current regulatory and institutional context, little potential to contribute to increasing financial flows directed towards LCCR investments beyond what would have occurred without labelling**
  - ➢ Labelling a bond as green **does not modify the risk profile** of the bond / issuer for investors
    - ✓ In the future, could if the regulatory and institutional context changes and issuing a green bond occurs in the context of an alignment of the issuer's strategy with a 2°C trajectory
  - ➢ Labelling a bond as green **does not carry a non-negligeable price premium**, and may not in the future
    - ✓ Therefore it doesn't change financing conditions for project developers
  - ➢ Labelling a financial bond as green **does not allow to 'make space' specifically for additionnal LCCR loans**, given how financial green bonds are structured for the moment

… but it is a great instrument to track bonds financing LCCR investments

- **It nevertheless brings non-financial benefits:**
  - **it eases the process of tracking ‘green’ investment opportunities for investors**
  - **it contributes to accelerating the elaboration of a climate strategy in the issuing entity,**
  - **it contributes to ‘anchoring’ this strategy in the organization and its processes**

As a result, the market should be pushed towards:

- **Ensuring its environmental integrity, and notably defining ‘green’ as an alignment with a LCCR transition / 2°C trajectory**
- **More systematically labelling climate-aligned bonds as ‘green’**
- **Fostering the development of a securitization market for LCCR assets**

Supply

- **More generally, pushing for the ‘mainstreaming’ of climate issues into financial decision-making**

Demand

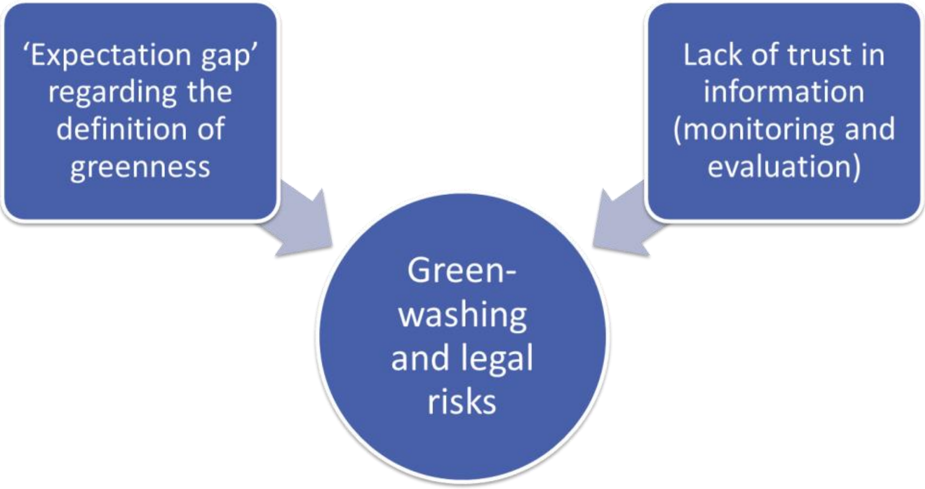
=> for concrete proposals, read I4CE’s reports to be published in December !

Ensuring the environmental integrity of the market

Ensuring the environmental integrity of the green bond market is key

- Currently the main role of green bonds is to provide information to stakeholders
  - **For investors**, to track 'green' investment opportunities for investors
  - **For issuers**, it contributes to accelerating the elaboration and 'anchoring' of a climate strategy
  - **For governments and other stakeholders**, to track a part of 'green' financial flows

- **BUT** :



Aggravated by the ongoing diversification

Challenge 1: no single definition of ‘green’

Characteristic	Green Bonds Principles	Climate Bonds Standard	China Catalogue	CICERO’s Rating
Region of application	Worldwide	Worldwide, but mainly OECD	China	Worldwide, but mainly Europe
Share of the volume of the green bond market	Most green bonds claim adherence to GBP	~15% of the market in 2016	~40% in 2016 (of which 66% aligned with the CBS)	~60% of green bonds undergo external review (of which 70% by CICERO)
Criteria for eligibility assessment	Broad sectoral categories, no explicit eligibility criteria	Sub-sectoral eligibility criteria for some sector with quantitative thresholds for some sub-sectors	Sub-sectoral eligibility criteria based on compliance with national regulations and standards	No strict eligibility criteria, but granular assessment of LCCR alignment
Exclusion criteria	N/A	Nuclear, fossil fuels, etc.	N/A	N/A

Challenges to an harmonization of ‘green’ definitions

- Divergent expectations from green bond purchasers
  - ➢ From impact investors to mainstream investors
- Different national circumstances
- Uncertainties in decarbonization trajectories
- Need to avoid « lock-in » effects
- Difficulty of setting a definition in a dynamic world
  - ➢ Need to remain flexible to be able to take into account technological developments
- Assessment of ‘greeness’ of the issuer or the issuance?

➡ **Issues to be taken into account in the current discussion on setting a european standard**

Challenge 2: no formal overseeing of ‘green’ labelling procedures

Type	Key actors	Existing market standards	EU regulatory frameworks
‘second-opinion’	CICERO, Oekom, Sustainalytics, Vigeo	Only very broad guidance under ISO 20700	Unregulated
Certification (ex-ante)	Climate Bonds Initiative	Climate Bonds Standard 2.1 (December 2015)	Unregulated
Verification (ex-post)	Enst&Young, KPMG, PwC	International Standard (ISAE) 3000	Auditing and professional services firms are regulated.
Ratings (ex-post)	Moody’s, Oekom, S&P, CICERO	N/A	Credit rating agencies are regulated in by the European Securities and Markets Authority (ESMA)

Challenges related to external review and reporting processes

- Voluntary principles vs. legally binding rules
- Overview of external reviewers
  - Ensure reliability of assessment and competencies
- Comparability vs depth and usefulness of information
- Reporting of environmental impact indicators
  - Choice of such indicators; harmonization?
- Cost vs. precision and exhaustive nature of assessment
  - A mid-way between what is done now and CDM's MRV procedures?

Summary of suggested next steps

Definitions

- Clarify objectives
- Science-based definitions

- Clarify climate strategies
- Endorse/create standards

Market

Governments

- Enhance transparency
- Keep extra costs in check

- Drive best practices
- Mandate disclosures
- Other regulations

Procedures

Take away messages

1. The role of the Green Bond market is first and foremost to ease the identification of bonds financing ‘green’ investments
2. Little potential to improve financing conditions by itself
3. Thus, it is key to ensure the ‘green’ labelling targets investments aligned with the LCCR transition
4. To ensure environmental integrity the ‘labelling’ process should be more supervised
5. But attention should be put on ensuring transaction costs are kept low to increase supply

Over to you!

Soon to be published : 2 new reports on the green bond market, focusing on financial additionality and environmental integrity of the market

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