



Online learning series: Green bonds – an innovative and efficient way of financing green investments

Module I: Green bonds – what, why & how

GIZ & SEB Strategic Alliance on Green Bond Market Development

The Strategic Alliance on Green Bond Market Development

Objective

Support the development of prosperous and sustainable green bond markets in G20 emerging economies

Approach

- 25+ technical workshops, roundtables & conferences
- Dedicated bilateral advisory support
- Knowledge products: Green Bond publication, webinars & online learning videos, global SF e-learning platform

Stakeholders

- Issuers
- Financial intermediaries
- Investors
- Policymakers & regulators
- External reviewers

Partners

Regional
implementat
ion
partners



Technical
partner

°CICERO



SEB's green and sustainable finance platform



Selected engagements as thought leader in the field

- One of the 14 founding banks setting up **The Green Bond Principles (GBP)**
- Member of **GBP Executive Committee** and External Reviewer working group
- **Public private partnership** with German GIZ
- Key advisor for the **joint position paper** on green bonds impact reporting launched at the OECD Green Investment Financing Forum in Paris 2017

Green Bond structural advice

5 Pillars of Green Bond Framework

- Definition
- Selection
- Traceability
- Transparency

Green Bond research

Monthly Green Bond
research *launched in
January 2017*



STA's sustainable finance e-learning

Sustainable finance e-learning
to be launched in 2019



CICERO Center for International Climate Research

°CICERO

CICERO is one of the world's foremost institutes for interdisciplinary climate research. The institute has played an active role in the IPCC since 1995. In recent years, CICERO has also been one of the pioneers of climate finance research.

Pioneers in Second Opinion Provision for Green Bonds

- First green bond (World Bank)
- First municipal green bond (Gothenburg)
- First corporate green bond (Vasakronan)
- First green sukuk (Tadau Energy)



°CICERO
Shades of
Green



CICERO's Director Kristin Halvorsen

Halvorsen was Norway's first female Minister of Finance.

GIZ – International Cooperation Services for Sustainable Development



- Public-benefit German federal enterprise providing services in international cooperation for sustainable development.
- Working with governments, international organizations, businesses, research institutions and civil society in around 120 countries .

develoPPP.de programme: GIZ on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ) works with the private sector to support innovative projects in developing and emerging economies for sustainable development.

Webinar I: Green bonds – What, Why & How

Content & learning objectives

- Background: Why green bonds
- What a green bond is
- The Green Bond Principles
- Global green bond market development
- Why issue and invest in green bonds?

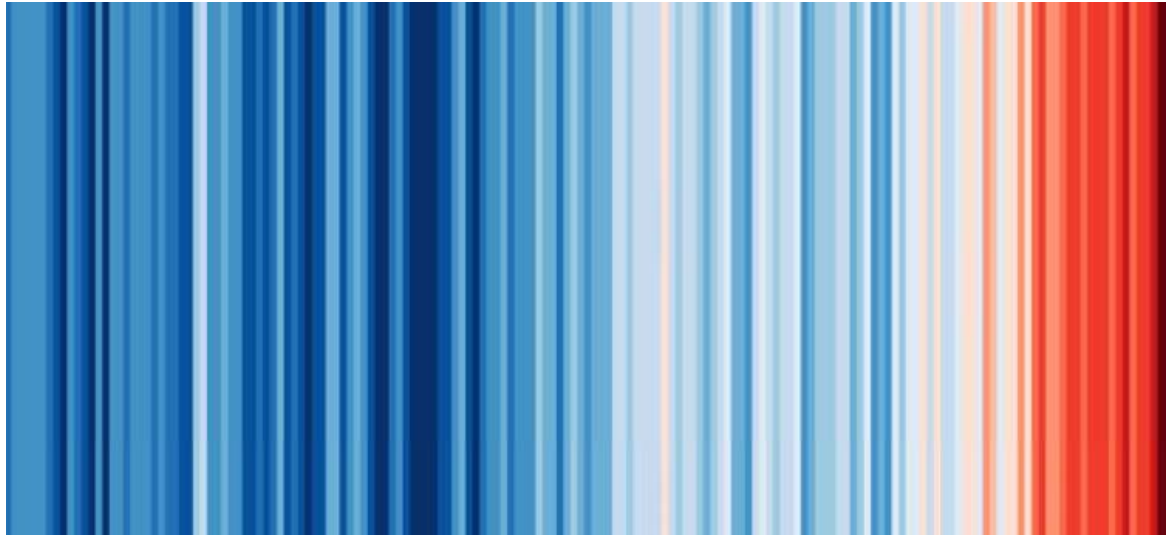
Part 1:

Background – Why Green Bonds?



Global Annual Temperatures 1850-2017 (Color-Coded)

Colour-Code Global Annual Temperatures



Source: Ed Hawkins, Climate Lab

1850

2017

Svalbard - the former Vantage Point of Glaciers

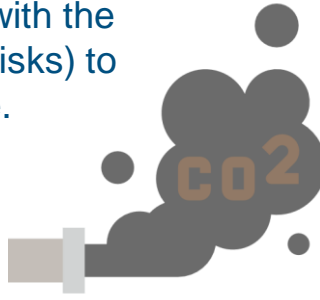


In Paris 2015, the world agreed to stay well below 2°C

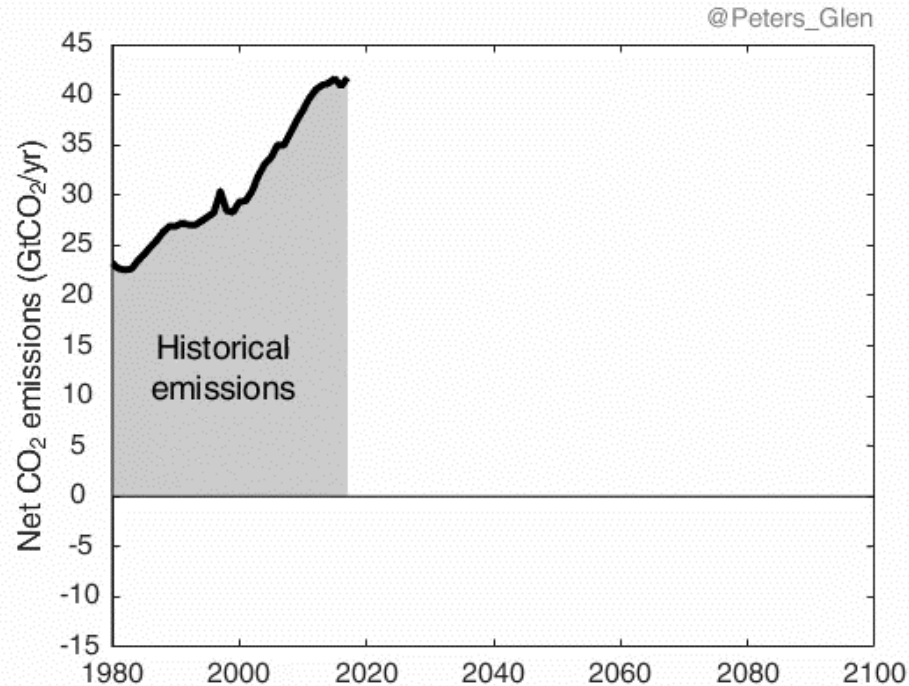


To stay well below 2°C, science tells us that...

... greenhouse gas emissions must go to zero within a few decades, or we need large-scale negative emissions (with the associated risks) to compensate.



Source: flaticon.com



Investors expect increased losses from extreme weather

Global losses from extreme weather rose by 86 percent from 2007 to 2017 (EU Commission).



Climate risks are financial risks



Business models need to change

TCFD | TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES



Governance

Disclose the organization's governance around climate-related risks and opportunities.

Strategy

Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.

Risk Management

Disclose how the organization identifies, assesses, and manages climate-related risks.

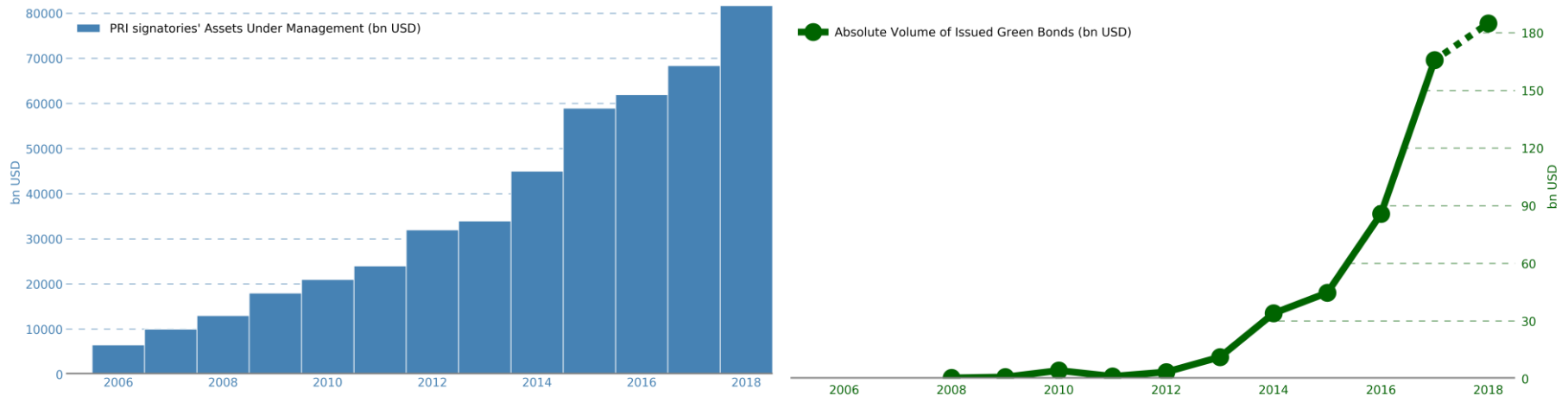
Metrics and Targets

Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

Source: Task Force on Climate-related Financial Disclosures

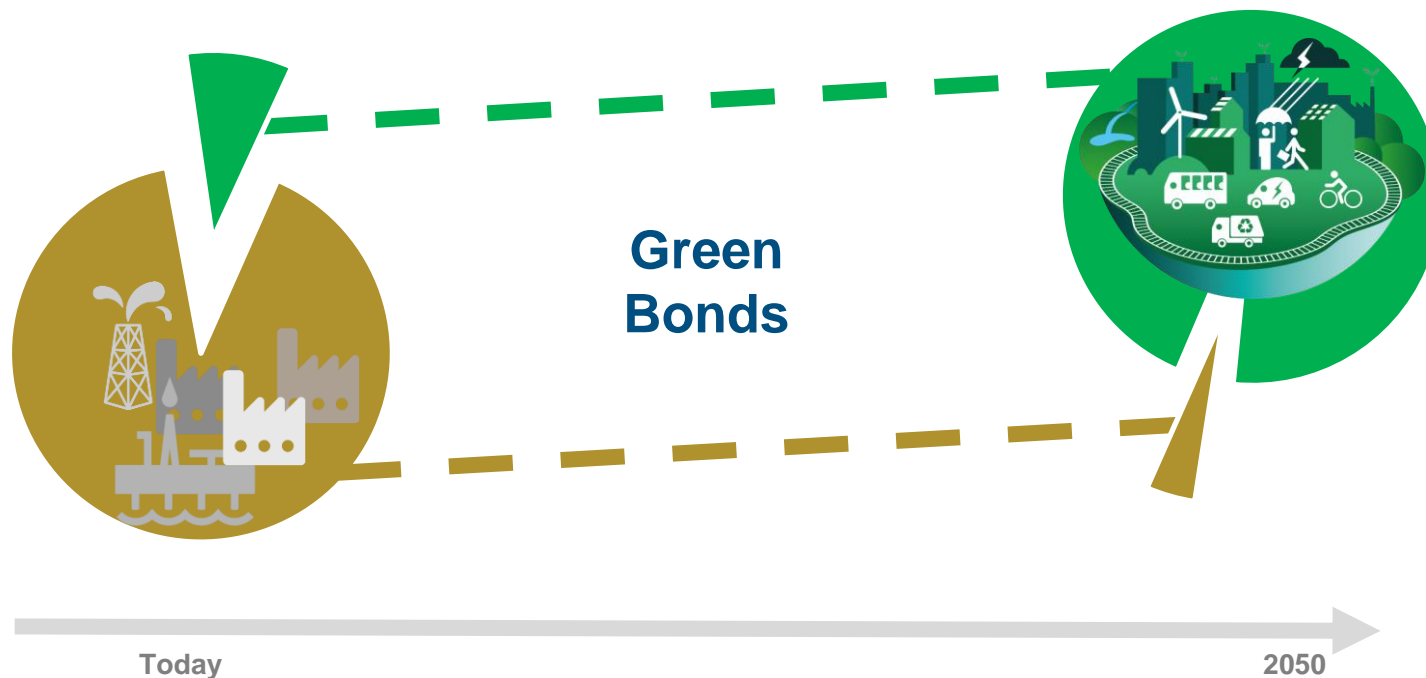
Investors are increasingly paying attention to sustainability (ESG)

PRI Signatories' Assets under Management (bn USD) Absolute Volume of Issued Green Bonds (bn USD)



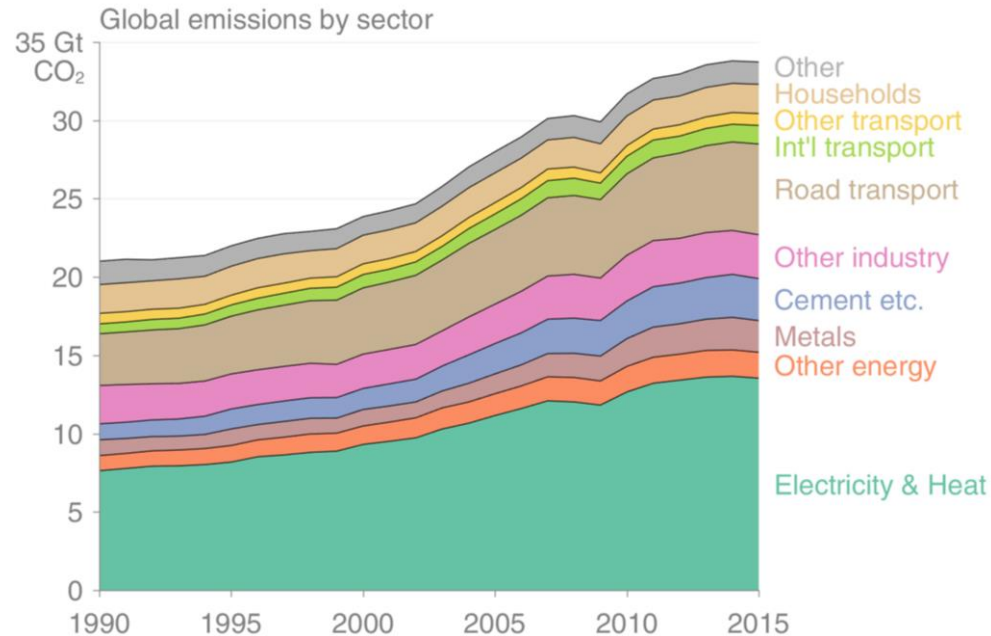
Source: PRI, CBI and SEB

Transition to sustainable economies provides investment opportunities



Source: CICERO

Greening electricity, heat and transportation is key



Source: folk.uio.no/roberan
Data: IEA, Andrew 2018

Green solutions are scalable



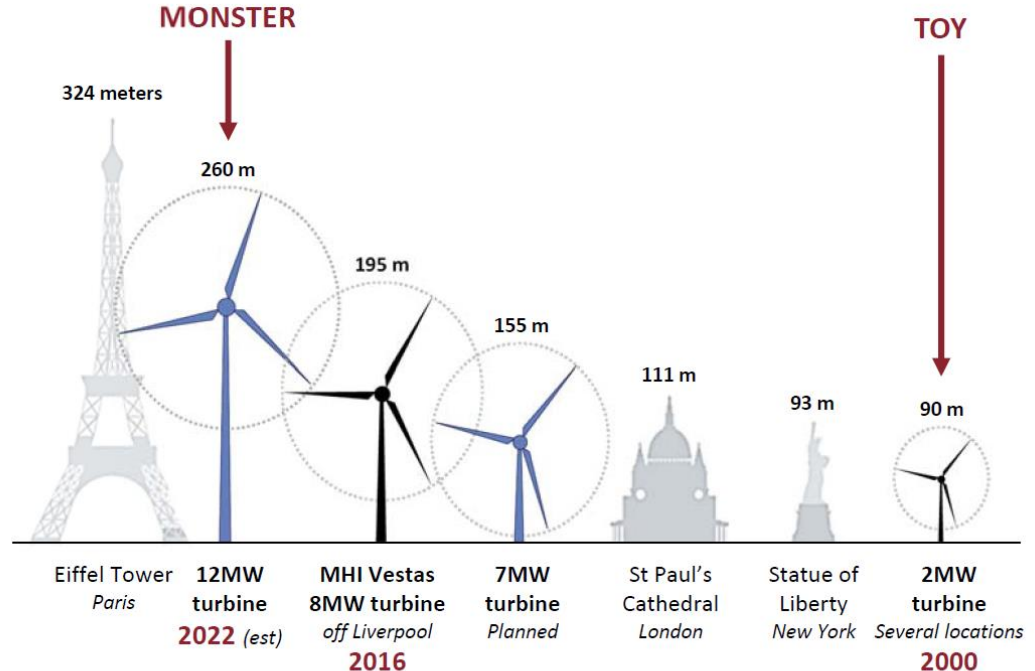
New rail lines
ADIF-Alta
Velocidad



**Electric and
hybrid cars**
Volvofinans



Flood defenses
Nederlandse
Waterschapsbank



Source: Reuters, GMO

Part 2:

What is a green bond?



What is a green bond?

Green Bond Definition



Green bonds are any type of **bond instrument**

Same underlying mechanisms as regular bonds

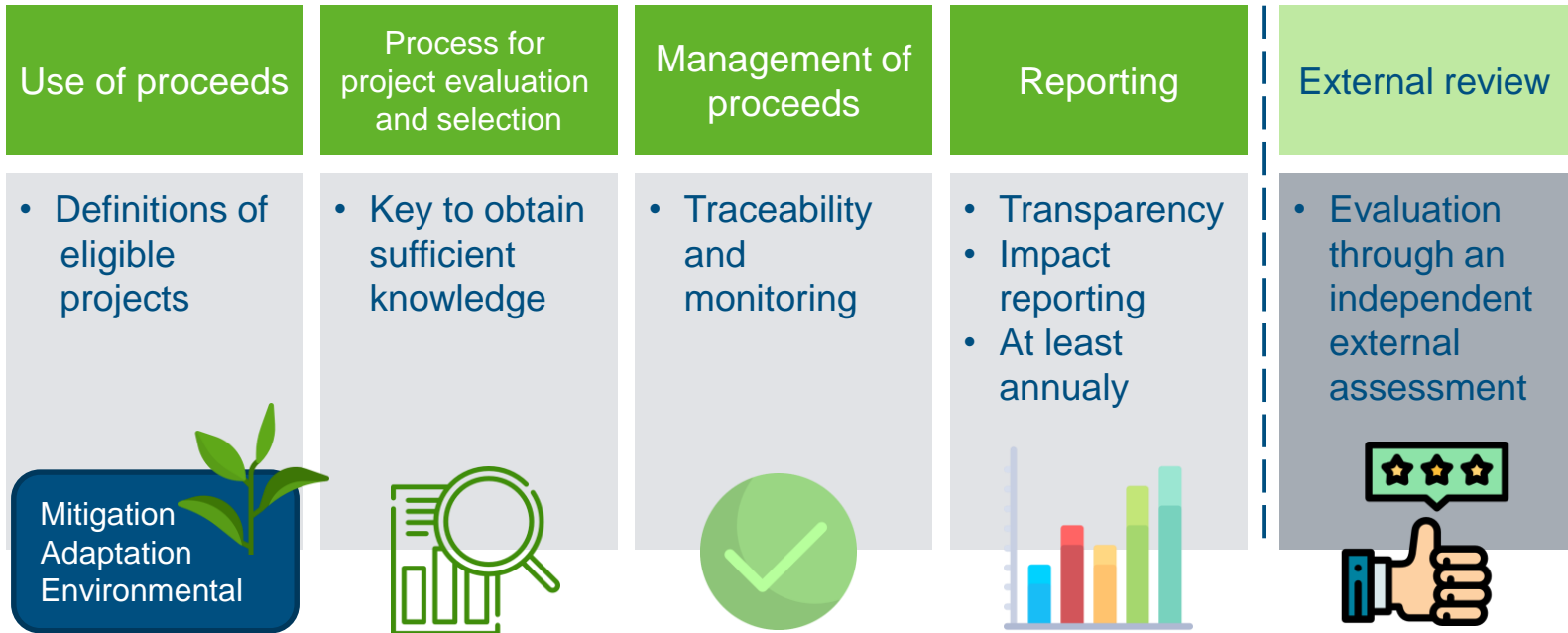
where the **proceeds** will be **exclusively** applied to finance or re-finance, in part or in full, new and/or existing **eligible Green Projects**

Main difference is that only pre-defined projects can be financed

and which are aligned with the **four core components** of the **Green Bond Principles**

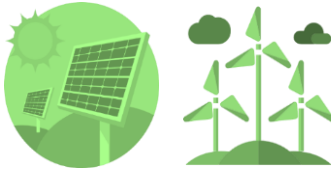
Green Bond Frameworks ensure that green projects are defined and that the issuers deliver on their promise

The Green Bond Principles

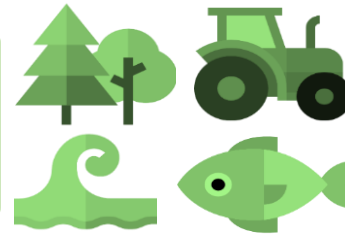


What do green bonds finance according to the GBPs?*

Renewable
Energy



Environmentally
Sustainable
Management of
Living Natural
and Land Use



Sustainable
Water and
Wastewater
Management



Energy
Efficiency
and inclusive
Green
Buildings



Terrestrial and
Aquatic
Biodiversity
Conservation



Eco-Efficient
and/or Circular
Economy
Adapted
Products,
Production
Technologies
and Processes



Pollution
Prevention
and Control



Clean
Transport



Climate
Change
Adaptation



Picture Source: flaticon.com

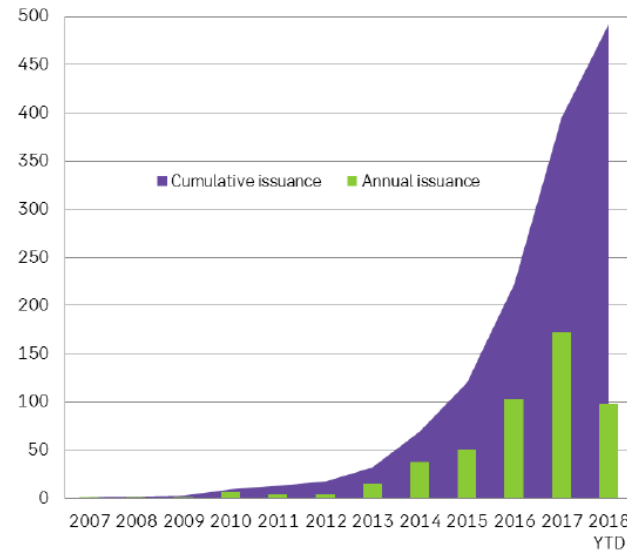
Part 3:

Green bond market development



Green Bond market surging – annual and cumulative issuance

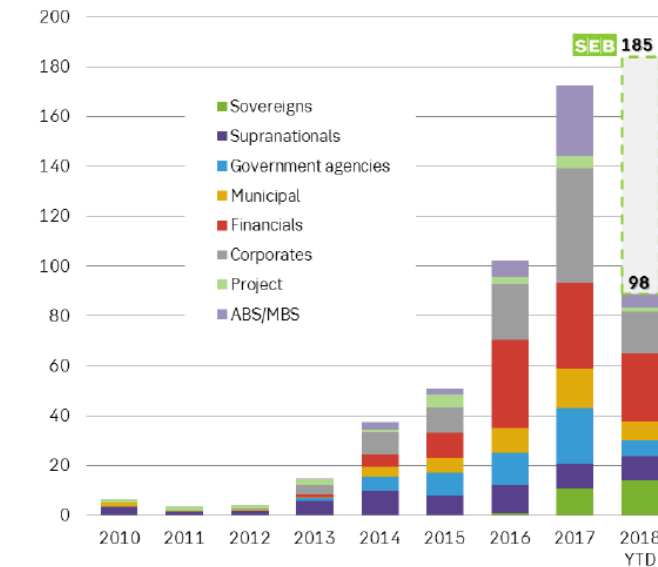
Figure 1. Total Cumulative Issuance (USD Bn)



Source: SEB analysis based on Bloomberg and SEB data

Green Bond market growth and sectors of the market shifting

Figure 3. Green bond market growth (USD Bn) by sector



Source: SEB analysis based on Bloomberg and SEB data. SSA: Sovereign, sub-sovereign (municipal/regional), Supranational and Agency.

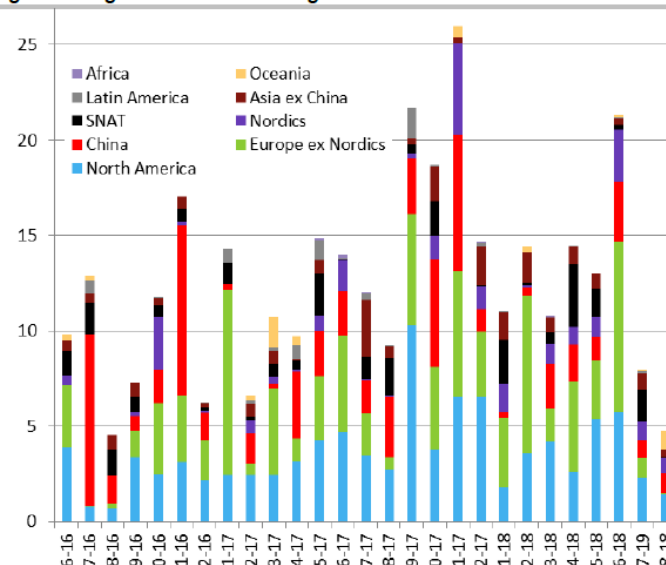
Green Bond issuance by region and country

Figure 7. Top 15 geography by issuance in 2018, incl.

Rank	Geography	YTD 8/2018 (\$ Bn)	Rank Change YoY	Issuance Volume Δ YoY
1	UNITED STATES	23.3	=	-3%
2	CHINA	11.4	=	-25%
3	SNAT	9.6	+1	23%
4	FRANCE	9.3	-1	-37%
5	BELGIUM	6.1	NEW	∞
6	SPAIN	4.9	+4	124%
7	SWEDEN	4.6	=	57%
8	CANADA	3.8	+5	139%
9	NORWAY	3.5	+18	1869%
10	GERMANY	3.4	-5	-11%
11	NETHERLANDS	2.8	-5	-16%
12	INDONESIA	2.0	NEW	∞
13	SOUTH KOREA	1.7	+7	322%
14	JAPAN	1.6	+1	176%
15	ITALY	1.5	-3	-19%

Source: SEB analysis based on Bloomberg and SEB data

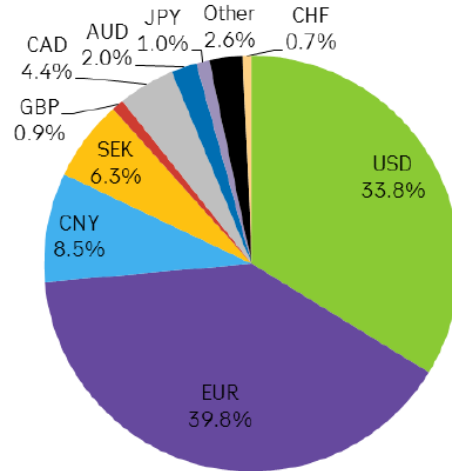
Figure 8. Regional distribution of green bond issuance



Source: SEB analysis based on Bloomberg and SEB data. SNAT: Supranational

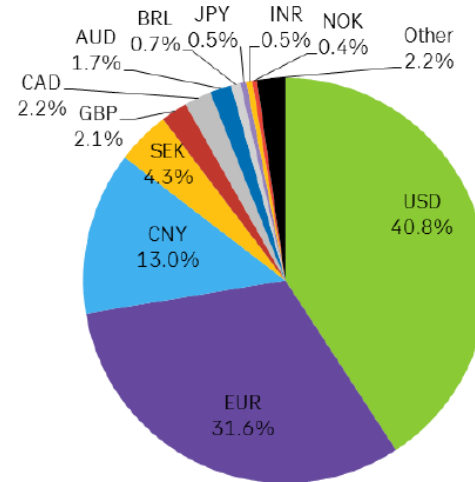
Global Green Bond market by currency

Figure 11. 2018 YTD green bond issuance by currency



Source: SEB analysis based on Bloomberg and SEB data

Figure 12. Cumulative green bond issuance by currency 2007-2018



Source: SEB analysis based on Bloomberg and SEB data. SNAT: Supranational

Part 4:

Why issue and invest in green bonds?



Implementing sustainability in financial systems

Investment Principles

- Principles for Responsible Investments (PRI)
- Montreal Carbon Pledge
- Equator Principles

Sustainable Financial Products

- Green/social bonds
- Green/social loans
- Securitization
- Microfinancing
- Indices & ETFs
- Green funds
- Green listings
- YieldCos
- Venture Capital
- Crowdsourcing

Policies & Regulation

- European Commission's Action Plan on Financing Sustainable Growth
- China's Green Bond Guidelines and Catalogue (2015)
- Vietnam's Directive on Promoting Green Credit Growth and E&S Risk Management (2015)
- Brazil's Resolution of E&S Responsibility for FIs (2014)

Reporting

- Task Force on Climate-related Financial Disclosures (TCFD)

The green bond market ecosystem



Value proposition of green and sustainable bonds

Investors

- Risk-Adjusted Return with Environmental Impact
- Achieve intelligence on climate related issues inside existing management structure
- Risk management
- Climate stress
- Regulations
- Technology transition
- Live your values → competitiveness

Issuers

- Strengthen the financial position
- Investor diversification
- Deepened dialogue
- Enhanced issuance flexibility
- Targeted internal dialogue between operations (projects), Finance and Management, extended to Investors
- Financial articulation of a sustainability strategy
- Live your values → competitiveness

Society

- Mobilize human capital inside finance for society goals

Part 4: Wrap-up

Webinar I: Green bonds – what, why & how

Learnings

- Background: Why green bonds
- What a green bond is
- The Green Bond Principles
- Global green bond market development
- Why issue and invest in green bonds?

What's next

- Webinar 2: Setting up a green bond framework
- Webinar 3: Safeguarding: Definitions, impact reporting & external review

Webinar 2: Setting up a green bond framework

More information

- UN Sustainable Development Goals
- Paris Climate Agreement & Nationally Determined Contributions
- UNEP Inquiry: [The Financial System We Need](#) (2015) & [Annual Overview 2017](#)
- [Task Force on Climate-related Financial Disclosures \(TCFD\)](#): Final Report & 2018 Status Report
- [High Level Expert Group's Final Report](#) & [EU Action Plan on Financing Sustainable Growth](#)
- [ICMA: The Green Bond Principles 2018](#)
- [SEB's latest Green Bond research](#)
- [CICERO's climate finance work](#)

How to contact us

Ben Powell, Senior Banker, Climate & Sustainable Finance, SEB

T: +47 2282 6675

E: ben.powell@seb.no

I: www.seb.se/mb

Harald Francke Lund, Head of Second Opinions, CICERO

T: +47 996 45 324

E: hfl@cicero.oslo.no

I: www.cicero.oslo.no

Christine Majowski, Project Manager, Sustainable Finance, GIZ

T: +49 6196 79 7277

E: christine.majowski@giz.de

I: www.emergingmarketsdialog.org | www.develoPPP.de

