



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

Module II: Setting up a green bond framework

GIZ & SEB Strategic Alliance on Green Bond Market Development

Webinar II: Setting up a green bond framework

Content & learning objectives

The Green Bond Principles

The five pillars of a green bond framework

- Use of proceeds
- Process for project evaluation and selection
- Management of proceeds
- Reporting
- External review

The steps of a green structuring process

Market aspects & transaction considerations

- Market access
- Liquidity
- Pricing
- Allocation
- Marketing

Part 1:

The five pillars of a green bond framework

Recap: 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

Use of proceeds	Process for project evaluation and selection	Management of proceeds	Reporting	External review
<ul style="list-style-type: none">• Definitions of eligible projects• Mitigation• Adaption• Environmental	<ul style="list-style-type: none">• Key to obtain sufficient knowledge	<ul style="list-style-type: none">• Traceability and monitoring	<ul style="list-style-type: none">• Transparency• Impact reporting• At least annually	<ul style="list-style-type: none">• Evaluation through an independent external assessment
Green Bond Framework – Definitions and procedures				

Example of a green bond - Volvofinans Bank

TRANSPARENCY

To enable investors to follow the development and provide insight to prioritised areas, Volvofinans Bank will provide an annual Green Bonds investor letter which will include the following items.

1. A description of the Green Loan Portfolio including:
 - (a) impact reporting at portfolio level;
 - (b) information about the maturity profile of the Green Loan Portfolio;
 - (c) information about the average share of the total value of the vehicles in the Green Loan Portfolio that has been financed by Volvofinans Bank; and
 - (d) information about the share of Green Bond financing of the Green Loan Portfolio.
2. A selection of Eligible Project examples. A summary of Volvofinans Bank's Green Bond development.

Volvofinans Bank recognises the importance of impact reporting. Volvofinans Bank undertakes to include information in the Green Bonds investor letter about the reduced carbon footprint of the funded Eligible Projects at portfolio level in relation to relevant reference values.

- o biogas/natural gas vehicles
- o biogas/natural gas/petrol vehicles

¹ If criteria develop over time or if the referenced legislation is amended or superseded with respect to Environmental Friendly Cars, the definition of Environmental Friendly Cars for the purpose of Eligible Projects shall be amended accordingly.

SELECTION OF ELIGIBLE PROJECTS

selected in consensus by the Head of Treasury and the Head of (i.e. both departments have a veto). Approved loans and leases will form Volvofinans Bank's green loan portfolio ("**Green Loan Portfolio**"). The ambition of the Green Loan Portfolio at all times will be larger than the amount of outstanding Green Bonds. The share of Green Bond financing of the Green Loan Portfolio will be reported in the annual Green Bonds investor letter, see section 4 (**Transparency**)

at and funded, in
carbon and climate

Volvofinans Bank will provide an annual Green Bonds investor letter, see section 4 (**Transparency**)

1. A description of the Green Loan Portfolio including:

entirely or partially by non-fossil fuels, i.e.:

vehicles
vehicles
control hybrid vehicles
diesel hybrid vehicles
petrol hybrid vehicles

- o biogas/natural gas vehicles
- o biogas/natural gas/petrol vehicles

The five pillars of a green bond: Definition

A concept of simplicity built on five pillars

Definition	Self-defined		Pre-defined	
	+	-	+	-
	<ul style="list-style-type: none"> • Good flexibility • Encourages communication 	<ul style="list-style-type: none"> • Large range of definitions • May require in-depth knowledge 	<ul style="list-style-type: none"> • Universal • Efficient and comparable 	<ul style="list-style-type: none"> • May be rigid • May discourage communication
	Certificates PEFC/ FSC BREEAM/LEED			

1. Definition: Case study - Kommuninvest



- **Production and distribution of renewable energy** – such as wind, wave, solar, hydro, geothermal, bioenergy, biogas and excess heat – or conversion from fossil to renewable energy.
-

The five pillars of a green bond: Selection

A concept of simplicity built on five pillars

Definition

Use of
Proceeds

Selection

Process for
project evaluation

Committee w/ veto right

Limited mandate

Training certificate

2. Selection: Case study - Kommuninvest

3. SELECTION OF ELIGIBLE LOANS

Eligible Projects will, on an ongoing basis, be:

1. **identified** and verified by the environmental functions in Kommuninvest's member municipalities/county councils;
2. **selected** by the Treasury Departments in Kommuninvest's member municipalities/county councils, and submitted to Kommuninvest for approval as a Green Loan together with appropriate documentation according to Kommuninvest's instructions.

Eligible Projects will, on an ongoing basis, be:

3. **pre-approved** by Kommuninvest's Lending department

and, on a quarterly basis, be:

4. reviewed and **finally approved** by consensus vote in the Green Bonds Environmental Committee in terms of coherence with the criteria for Eligible Loans as defined in section 2 above. The Green Bonds Environmental Committee consists of representatives from the environmental function of two or more member municipalities/county councils, environmental experts from other relevant public sector organisations/academia/NGOs, as well as Kommuninvest's Management.

The five pillars of a green bond: Monitoring

A concept of simplicity built on five pillars

Definition

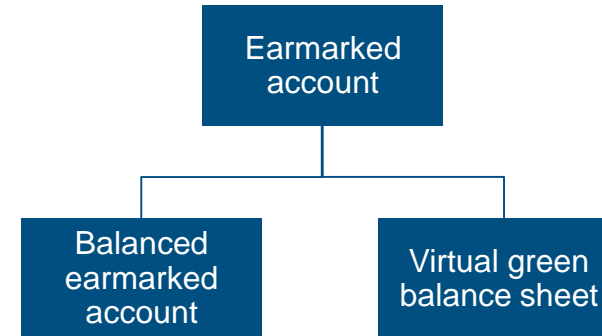
Use of
Proceeds

Selection

Process for
project evaluation

Monitoring

Management of
proceeds



3. Monitoring: Case study - Kommuninvest

The proceeds from Green Bonds issuance will be tracked by Kommuninvest in accordance with its internal instructions, and will be verified by an external audit firm.

For conservative purposes, and in accordance with Kommuninvest internal instructions, Kommuninvest will manage proceeds with an ambition for aggregate Green Bond Proceeds not to exceed total disbursements to Eligible Loans. Any excess amounts will be held in cash, Green Bonds, municipality and/or government risk with a minimum, average credit rating of A by Standard & Poor's or corresponding credit rating by another rating agency approved by Kommuninvest. If a financed Eligible Project no longer meets the eligibility criteria upon approval, Kommuninvest will remove it from the pool of Eligible Loans.

Kommuninvest will communicate on the nature of allocations to Eligible Projects in its Green Bonds Impact Report, see section 4 below. The allocations will be verified by an external audit firm.

The five pillars of a green bond: Reporting

A concept of simplicity built on five pillars

Definition

Use of
Proceeds

Selection

Process for
project evaluation

Monitoring

Management of
proceeds

Reporting

Transparency

External review

Assesment
through external
evaluation

4. Reporting: Case study - Kommuninvest



CONTENTS

Foreword By the Kommuninvest Green Bonds Environmental Committee	4
Executive Summary	6
Introduction	
Paris targets and the role of Swedish local governments	9
Kommuninvest – a provider of sustainable finance	10
Nordic position paper on Green Bonds impact reporting	13
Kommuninvest Green Bonds	
Green Bonds issuance	16
Use of proceeds	17
New and refinanced projects	18
Process for project evaluation and selection	19
Impact reporting 2017	
Impact results	21
Impact reporting methodology	22
Project-by-project reporting	26
Appendices	
Baselines for CO ₂ emissions	44
Collected data and climate impact calculation	46

Comparison figures relate to the preceding year (1 January–31 December 2016) unless otherwise stated.



The five pillars of a green bond: External review

A concept of simplicity built on five pillars

Assessment of
sustainability
aspects

Verification of
procedures

Certification

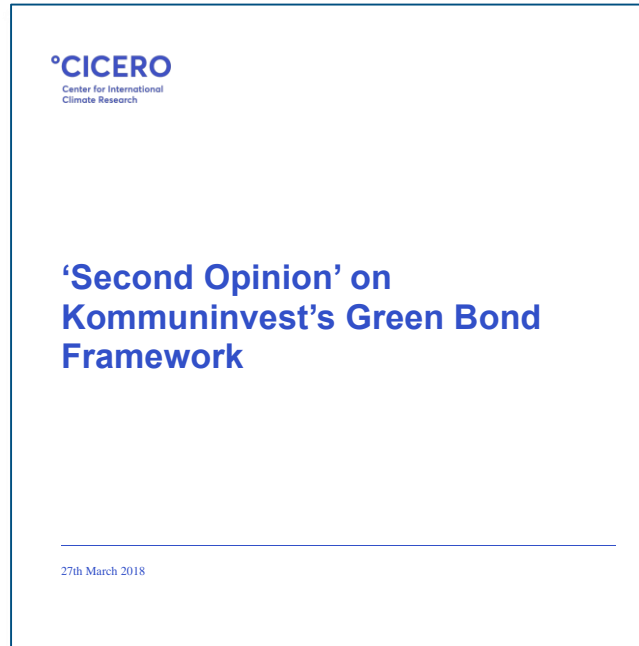
Second opinion

Audits

Assesment through

Ratings

4. External review: Case study - Kommuninvest



Part 2:

The steps of a green structuring process



The steps of a green structuring process

Step	Action	Responsibility
1	Kick-off meeting with relevant representatives from finance, environment/sustainability, legal and communications departments	Issuer & structural advisor
2	First draft green bond framework for the issuer	Structural advisor
3	Tailor the framework to match the ambitions and preferences of the issuer	Issuer & structural advisor
4	Prepare information package to the independent external reviewer, potentially including: <ul style="list-style-type: none"> • Environmental vision, goals, strategies and policies (external and internal) • Internal working guidelines • Information on technologies • Routines for impact measurements 	Issuer (with guidance from the structural advisor)

The steps of a green structuring process cont.

Step	Action	Responsibility
5	The framework and information package are sent to the independent external reviewer	Structural advisor
6	A draft external review and a set of questions is delivered by the external reviewer	Independent external reviewer
7	Response to the independent external reviewer <ul style="list-style-type: none"> • Answers to the questions (+extra material and/clarifications if needed) • Adjustments to framework (if desired) 	Issuer (with guidance from the structural advisor)
8	A call is arranged with the independent external reviewer and the issuer	Structural advisor
9	Final external review is delivered	Independent external reviewer
10	Prepare communication strategy, investor presentation, transaction strategy and open a separate account	Issuer (with guidance from the structural advisor)
11	Investor road show followed by the inaugural green bond transaction	issuer (with guidance from the structural advisor / underwriter)

Part 3:

Market aspects and transaction considerations

Market aspects and transaction considerations

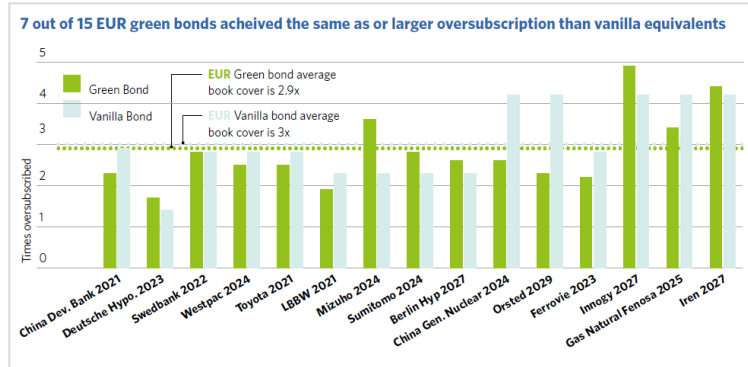
Five market aspects to consider:

- Market access
- Liquidity
- Pricing
- Allocation
- Marketing

Market access

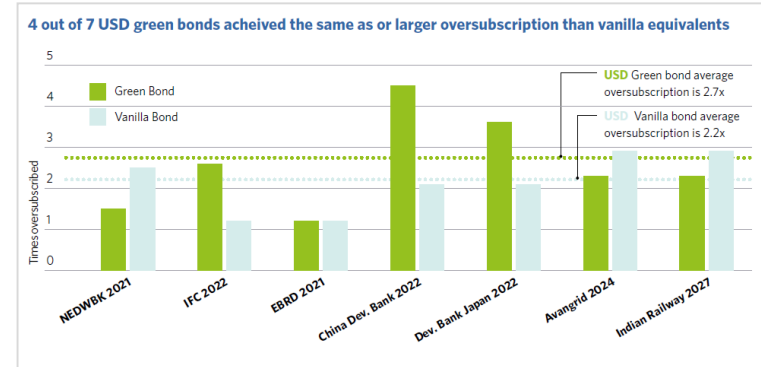
Investor diversification

- Number of investors
- Geographical reach



Issuance flexibility

- Maturity
- Currency
- Volume
- Format



Source: Green bond pricing in the primary market: October - December 2017 Prepared jointly by the Climate Bonds Initiative and the International Finance Corporation.

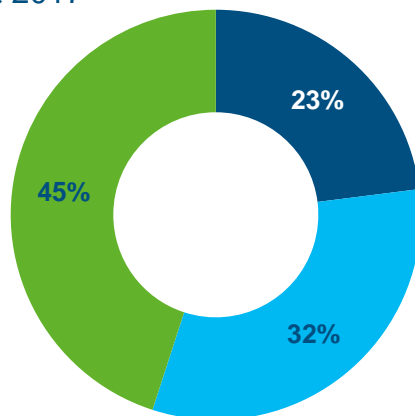
Liquidity

- Poor
- Asymmetric
- Frustration and loyalty

Pricing

Primary market

New issue premiums for green bonds in our sample, 2016 & 2017



- On the curve
- Inside curve
- Outside curve

Source: Green bond pricing in the primary market: October - December 2017. Prepared jointly by the Climate Bonds Initiative and the International Finance Corporation.

Secondary market

Percentage of bonds tightening by a greater percentage than their corresponding index after 7 and 28 days

	2016 & Q1 2017		Q2 2017		Q3 2017		Q4 2017	
	7 days	28 days	7 days	28 days	7 days	28 days	7 days	28 days
EUR	79%	76%	85%	75%	100%	91%	53%	64%
USD	59%	65%	50%	33%	43%	43%	33%	25%

EUR Green bonds - Spread changes compared with baskets of vanilla bonds

Bond	Spread change 1 week	Spread change 1 month, basket	Greater than basket	Spread change 1 month	Spread change 1 month, basket	Greater than basket
China Gov. Bank 2021	-5.28	-1.11	✓	-6.56	-5.23	✓
Deutsche Hypo. 2023	1.31	0.10	✗	-0.56	-0.69	✗
Swedbank 2022	-1.01	-2.70	✗	-3.18	-5.34	✗
Wolpax 2024	-5.57	-2.70	✓	-7.72	-5.34	✓
Togata 2021	1.16	-0.92	✗	-3.11	-3.73	✗
LBFW 2021	-3.69	-5.28	✗	-0.60	-6.97	✗
Mitsubishi 2024	-7.33	-5.28	✓	-8.53	-6.97	✓
Santander 2024	-2.29	-5.28	✗	-4.34	-6.97	✗
Banco Hypo 2027	-1.60	-5.28	✗	-5.78	-6.97	✗
China Gov. Nuclear 2024	-17.32	-4.73	✓	-18.96	-9.93	✓
Orsted 2029	0.29	-4.73	✗	-9.86	-9.93	✗
Ferrovial 2023	0.29	-0.92	✗	-0.15	-3.73	✗
Intercity 2027	-7.21	-4.73	✓	-19.08	-9.93	✓
Gas Natural Fenosa 2025	5.44	-4.73	✗	2.52	-9.93	✗
Iren 2027	4.32	-4.73	✗	-2.76	-9.93	✗

USD Green bonds - Spread changes compared with baskets of vanilla bonds

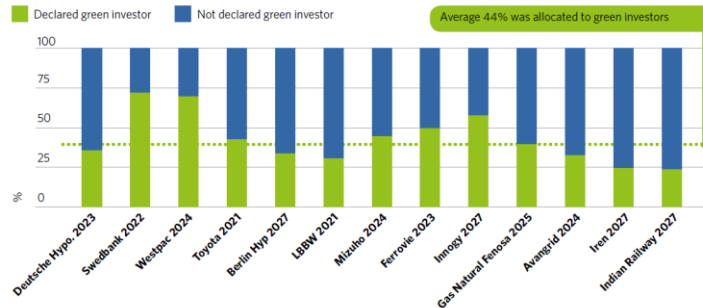
Bond	Spread change 1 week	Spread change 1 month, basket	Greater than basket	Spread change 1 month	Spread change 1 month, basket	Greater than basket
NEOWIN 2021	-22.60	-0.54	✓	-22.60	-0.76	✓
IFC 2022	n/a	-1.35	✗	2.60	1.40	✗
EBRD 2021	1.80	-1.35	✗	1.80	1.40	✗
China Dev. Bank 2022	-0.86	-0.72	✓	-1.87	-1.10	✓
Dev. Bank of Japan 2022	-19.80	-0.72	✓	-6.20	-1.10	✓
Axaprod 2024	n/a	-3.38	✗	0.51	-6.84	✗
Pioneer Finance Corp 2027	4.02	-0.02	✗	4.08	-1.68	✗
Indian Railway 2027	0.01	-13.15	✗	0.27	-13.42	✗

Source: Green bond pricing in the primary market: October - December 2017 Prepared jointly by the Climate Bonds Initiative and the International Finance Corporation.

Allocation

Extract from Deal Review

44% of green bonds were allocated to green investors

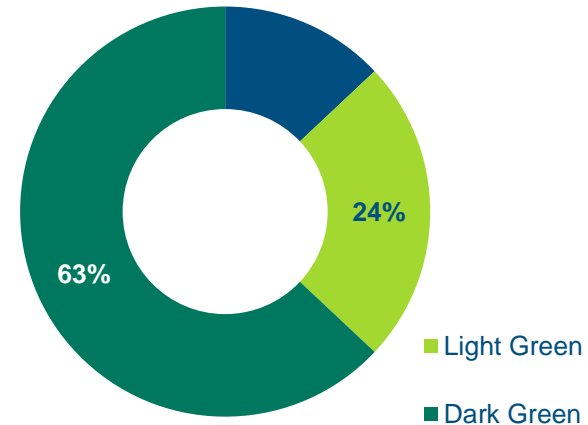


Half of the green bonds in our sample over the last three quarters have been allocated to green investors

Observation period	% of green bonds allocated to green bond funds	Developed Markets	Emerging Markets	No. of bonds in sample
Q2 2017	54%	62%	25%	13
Q3 2017	47%	54%	33%	16
Q4 2017	44%	46%	24%	13
Averages	48%	54%	27%	

Source: Green bond pricing in the primary market: October - December 2017 Prepared jointly by the Climate Bonds Initiative and the International Finance Corporation

Investor Allocations – Green



Part 4: Wrap-up

Module II: Setting up a green bond framework

Learnings

- The Green Bond Principles
- The five pillars of a green bond framework
- The steps of a green structuring process
- Market aspects & transaction considerations

What's next

- Webinar 3: Safeguarding: Definitions, impact reporting & external review

Module 2: Setting up a green bond framework

More information

- ICMA: The Green Bond Principles 2018
- Impact Reporting:
 - Green Bonds – Working towards a Harmonized Framework for Impact Reporting (Dec 2015)
 - Nordic Public Sector Issuers: Position Paper on Green Bonds Impact Reporting (Oct 2017)
 - Case study: Kommuninvest
 - Green bond framework
 - Second opinion
 - Impact report
- Climate Bonds Initiative: Green Bond Pricing in the Primary Market (Q4 2017)

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