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SEB

Green Bond Market Update

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A decade of Green Bonds



Green Bond market ecosystem and investor sentiment

Drivers overview

Economic

- Climate stress a financial risk
- Action vs. business as usual
- Allocation to resource efficiency

Regulatory environment

- Increasing focus on the need of climate financing
- Recognition of financial stability risk
- Market incentives

Regional benchmarks

- Challenges and opportunities differ
- Regions are at different stages in the transition

International initiatives

- UNPRI
- ✓ COP21
- ✓ G20 Green Finance Study Group



6	Green Bond Funds - examples								
•	SSgA	•	BlackRock						
۰.	AXA	•	Allianz						
۰.	Calvert	•	Amundi						
۰.	Mirova	•	Colombia Threadneedle						
	Storebrand / SPP	۰.	Erste AM						
•	SEB	۰.	NN						
G	Green Bond listings								
•	Oslo	•	Amsterdam						
	Nasdaq Stockholm	•	Borsa Italia						
•	London	•	Johannesburg						
	Luxembourg	•	Mexico City						

Riga

 Paris 	•	Lisbon
Green Bond indices		
 Solactive 		
 Bloomberg/ MSCI 		
 S&P/Dow Jones 		
	 Paris Green Bond indices Solactive Bloomberg/ MSCI 	Paris Green Bond indices Solactive Bloomberg/ MSCI

BAML

Source: www.unpri.org

Shenzhen

- Shenzhen / Luxembourg
- Various China Green Bond indices

Global Green Bonds issuance: 2017 (YTD) and cumulative





Source: SEB analysis based on Bloomberg/BNEF and SEB data. YTD through October 10.

Source: SEB analysis based on Bloomberg/BNEF and SEB data

Cited in: SEB (2017) The Green Bond 4Q(1)

Figure 2. Total cumulative issuance (USD Bn) and # of issuers

Issuance by year and by sector



Source: SEB analysis based on Bloomberg/BNEF and SEB data. YTD through October 10.



Figure 12. Sector shares, issuance 2010-2017

Source: SEB analysis based on Bloomberg/BNEF and SEB data. YTD through October 10.

League table for global Green Bond underwriting



Top 10 Green Bond Underwriters 1 Jan 2016 - 31 Aug 2017 (USD bn)



Source: Bloomberg

Top 10 Green Bond underwriters 1 Jan 2007 - 31 Aug 2017 (USDbn)



Source: Bloomberg

Green Bond issuance by currency







Source: SEB analysis based on Bloomberg/BNEF and SEB data. YTD through August.

Country league table 2017

Figure 5. Geographic distribution of green bond issuance in 2017 (USD Bn)



Figure 3. Top 10 countries in 2017, incl. Supranational (USD Bn)

Rank	Region	Issuance	2017 Trajectory YTD
1	UNITED STATES	25.4	
2	CHINA	19.0	~~~
3	FRANCE	17.0	\
4	SNAT	8.0	
5	GERMANY	6.7	
6	MEXICO	4.0	
7	SWEDEN	3.3	~~~
8	NETHERLANDS	3.3	
9	SPAIN	3.1	
10	INDIA	2.8	~~~~

Source: SEB analysis based on Bloomberg/BNEF and SEB dat. YTD through October 10.

Note: Country of Domicile classifications and terminology from Bloomberg used. SUPRANAT = Supranational; Taiwan = Chinese Taipei. Top issuers labelled in chart for illustration.

Source: SEB analysis based on Bloomberg/BNEF and SEB data. YTD through October 10.

Cited in: SEB (2017) The Green Bond 4Q(1)

Market drivers

Drivers of green infrastructure investments and green bond financing				
Investors	•	ESG integration and sustainable investments demand		
	•	Risk-adjusted return (alpha, beta, or hedging strategies)		
Economic Forces	•	Local air and water pollution across Emerging and Developing Economies as well as OECD		
Economic Forces	-	Avoided health care costs, labour market and productivity benefits, fuel savings, trade benefits		
Technology Forces	•	Cost-down curves in renewables, batteries, IT, fintech		
recimology Forces	-	Scaling up of electric vehicles and enabling infrastructure (smart grid, HDVC, charging, storage, etc.)		
C it.	•	Energy security (investing in renewables to lessen import needs or to protect military supply chains)		
Security	•	National security (climate stress as a threat multiplier)		
	•	Green infrastructure investment demand to meet challenges of the 21st century		
Bankable Pipelines		(population growth, growth of middle class, rural to urban, resource efficiency and circular economy)		
•	-	Green investment policy frameworks (price on CO ₂ , removal of Fossil Fuel subsidies, support for green projects, green infrastructure banks)		
	•	Green infrastructure policies driven by national interest – bottom up (NDCs, 114 countries have renewable energy policies, 66 for transport)		
Policy Alignment	-	Top down environmental agreements COP21, SDGs, ICAO, Montreal Protocol		
roacy Augminent	-	Attention to climate risk and green finance from Financial Stability Board, Central Banks, G20, Finance Ministries, Departments of Defense		
	•	EU High Level Expert Group report on Sustainable Finance		
	-	Sustainability preferences of millennials		
Social Forces	•	Divestment movement		
	•	Civil society initiatives and pressure		
Green Bond	-	Market-led or government initiatives (ICMA, CBI, G20, EC + China, India, Japan, Indonesia, Singapore, etc.)		
Specific Source: SEB analysis	•	Financial sector innovation (investors, banks, ratings agencies, issuers, data providers, market ecosystem)		

Global Green Bond Market Evolution & Scenarios for Q4 2017 (USD Bn)



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