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Barclays MSCI Green Bond Index

Bringing clarity to the green bond market through benchmark indices

Index Factsheet

January 2015

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The Barclays MSCI Green Bond Index provides a clear and independently evaluated measure of the global green bond market, setting a rigorous standard for this growing new asset class

Barclays MSCI Green Bond Index Methodology

The Barclays MSCI Green Bond Index family offers investors an objective and robust measure of the global market for fixed income securities issued to fund projects with direct environmental benefits.

An independent research-driven methodology is used to evaluate index-eligible green bonds to ensure they adhere to established Green Bonds principles and to classify bonds by their environmental use of proceeds.

Following consultations with leading green bond market participants, the indices were designed with the aim of offering index users the transparency required to measure a nascent but emerging fixed income asset class. Key features of the index include:

1. **Independent "Green" evaluation** of bonds by MSCI ESG Research to identify green bonds from the broader universe of self-labeled green securities.
2. Transparent **fixed income eligibility criteria** that mirror inclusion rules of flagship Barclays indices such as the Global Aggregate Index designed to ensure benchmark **representativeness** and **investability**.
3. **Granularity** and **global coverage** of the green bond market across region, sector, and local currency bond markets with available subindices along multiple fixed income dimensions and environmental use of proceeds

> The Green Bond Index is designed to be a useful performance measure for both dedicated "green" investors as well as other broad-based investors

Green Bonds as an Asset Class

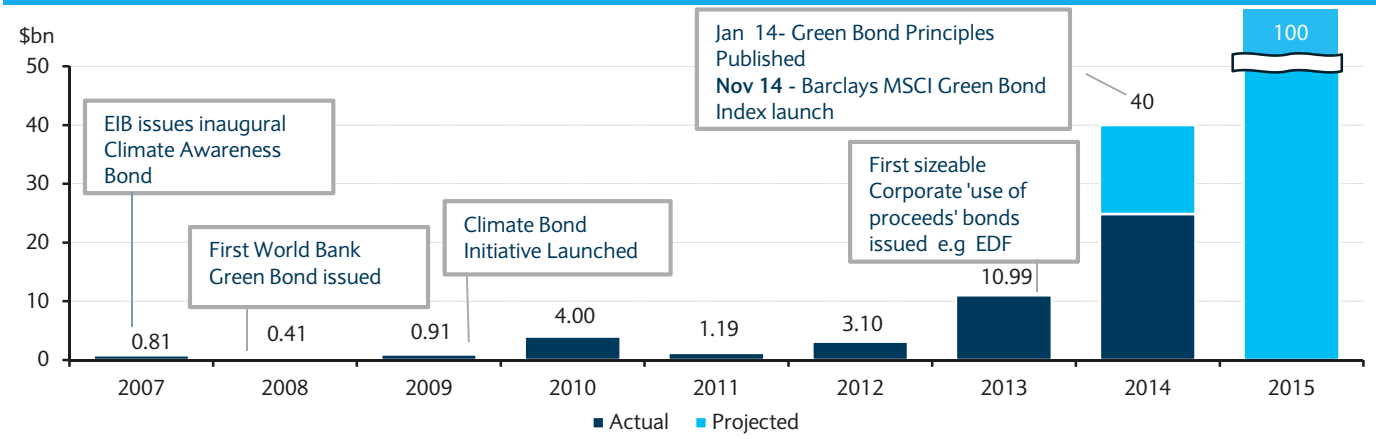
The green bond market is growing rapidly, with projected issuance of $40bn for 2014 (a four-fold increase from 2013) and $100bn for 2015*.

In just three years, the labeled "green" market has gone from modest issuance by a handful of development bank and supranational issuers to a burgeoning new asset class with an increasingly diverse investor base including dedicated "green" investors and other broad-based investors that consider these new bonds part of their expanding investment choice set.

Benchmark indices, such as the Barclays MSCI Green Bond Index are another important evolutionary step in providing further transparency to a market, giving investors a means to evaluate performance and assess risk.

*Climate Bonds Initiative

The Green Bond Market: From Niche to Mainstream



Source: Climate Bonds Initiative, MSCI ESG Research, Barclays Research

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Green Bond Index Eligibility and Classification

MSCI ESG Research has established clearly defined criteria for identifying green bonds and classifying them based on their use of proceeds

Green Bond Definition

1. Eligible Use of Proceeds

To be classified as a green bond, a security's use of proceeds must first fall within at least one of five eligible environmental categories: alternative energy, energy efficiency, pollution prevention and control, sustainable water, and green building. General purpose bonds are eligible if 90% of the issuer's activities (as measured by revenues) fall within one or more of the eligible MSCI environmental categories.

2. Process for Project Evaluation & Selection

An eligible green bond's prospectus or supporting documentation must clearly identify the specific criteria and process for determining eligible projects or investments.

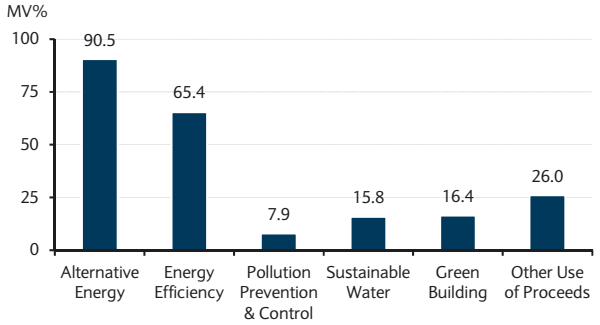
3. Process for Management of Proceeds

A formal process to ring-fence net proceeds must be disclosed in the bond prospectus or supporting documentation.

4. Requirements for Ongoing Reporting

At issuance, the issuer must either report on eligible projects or state its commitment to report within one year of issuance. Reporting will be monitored and bonds can be removed if the issuer fails to report at least annually.

Green Bond Index by Use of Proceeds



Note: Use of Proceeds classifications are not mutually exclusive; a Green Bond may fund multiple projects

Source: Barclays, MSCI ESG Research, data as of November 28, 2014

MSCI Use of Proceeds Classifications

1. Alternative Energy

Products, services, or infrastructure projects supporting renewable energy and alternative fuels.

- Wind
- Solar
- Geothermal
- Small hydro
- Biogas
- Biofuels
- Biomass
- Waste energy
- Wave tidal

2. Energy Efficiency

Products, services, infrastructure, or technologies addressing the demand for energy while minimizing environmental impact.

- Demand-side mgmt
- Battery
- Fuel cells/hydrogen systems
- Smart grid
- Industrial automation
- Energy storage
- Superconductors
- Nat. gas combined heat & power
- LED lighting
- Environmental IT
- Compact fluorescent
- Insulation
- Hybrid/electric vehicles
- Clean transportation infrastructure
- IT Optimization

3. Pollution Prevention & Control

Products, services, or projects that support pollution prevention, waste minimization, or recycling to alleviate unsustainable waste generation.

- Env. remediation
- Waste treatment
- Waste reuse & recycling
- Conventional pollution control

4. Sustainable Water

Products, services, and projects that attempt to resolve water scarcity and water quality issues, including minimizing and monitoring current water use and demand increases, improving the quality of water supply, and improving the availability and reliability of water.

- Water infrastructure & distribution
- Rainwater harvesting
- Smart metering devices
- Drought-resistant seeds
- Desalinization
- Waste water treatment

5. Green Building

Design, construction, redevelopment, retrofitting, or acquisition of 'green' certified properties, subject to local building criteria.

- Green certified properties (LEAD, BREEAM, etc.)
- Uncertified green property (top 15% on energy efficiency, etc.)

Other

Other environmental activities that do not fit into the categories above, including climate resilience projects (flood relief, mitigation) and sustainable forestry/afforestation.

For more details on index rules and inclusion criteria, please refer to the index primer ***Barclays MSCI Green Bond Indices (November 2014)***

Fixed Income Eligibility Criteria

Additional Barclays Aggregate Index fixed income criteria are applied, aiming to ensure the Green Bond Index is representative and investable.

Green Bond Fixed Income Eligibility Criteria

Sector

Corporate, government-related, and securitized bonds are eligible for the Green Bond Index.

Currency

The Barclays MSCI Green Bond Index is a multi-currency benchmark that includes local currency debt markets tracked by the Barclays Global Aggregate Index. USD-only and EUR-only Green Bond Indices are also available as flagship benchmarks.

Amount Outstanding

Fixed minimum issue sizes are set for all local currency markets matching Barclays Global Aggregate and US Aggregate Indices.

- **USD**: 250mn
- **CAD, EUR, CHF, AUD**: 300mn
- **GBP**: 200mn
- **JPY**: 35bn
- **SEK**: 2.5bn
- **CZK, THB**: 10bn
- **NZD, SGD**: 500mn
- **CLP**: 100bn
- **KRW**: 500bn
- **DKK, NOK, PLN, ZAR, ILS, HKD, MYR**: 2bn

Credit Quality

The green bond index includes only investment-grade bonds using the middle rating of Moody's, S&P, and Fitch.

Coupon Type

Includes fixed-rate securities only.

Maturity

The flagship index does *not* have a 1-year minimum time to maturity and the index holds bonds until final maturity.

Monthly Index Rebalancing

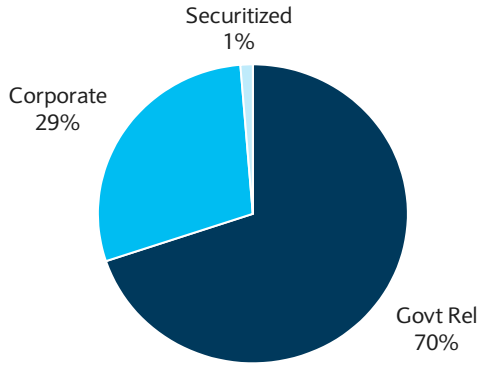
Index Rebalancing Date

The Barclays MSCI Green Bond Index is rebalanced on the last business day of each month. New issues will not be added to the statistics universe until after the Green Bond Evaluation Date.

Green Bond Evaluation Date

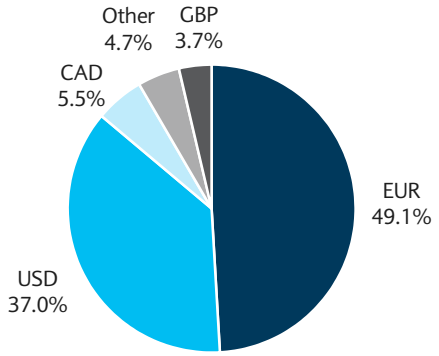
The formal list of green bonds evaluated and identified by MSCI ESG Research is updated on the 25th calendar day of each month. MSCI evaluations must be completed by the evaluation date to qualify for inclusion at the next index rebalancing.

Barclays MSCI Green Bond Index by Sector



Source: Barclays, MSCI ESG Research, data as of November 28, 2014

Barclays MSCI Green Bond Index by Currency



Source: Barclays, MSCI ESG Research, data as of November 28, 2014

Largest Green Bond Index Eligible Issuers

Ticker	Issuer Name	Sector	MV%
EIB	EUROPEAN INVESTMENT BANK	SUPRANATIONAL	19.7
KFW	KFW	AGENCY	9.3
GSZFP	GDF SUEZ	UTILITY	9.1
IFC	INTERNATIONAL FINANCE CORP	SUPRANATIONAL	6.9
BRKHEC	SOLAR STAR/TOPAZ SOLAR	UTILITY	6.3
IBRD	WORLD BANK (IBRD)	SUPRANATIONAL	6.2

Source: Barclays, MSCI ESG Research, data as of November 28, 2014

For more details on index rules and inclusion criteria, please refer to the index primer ***Barclays MSCI Green Bond Indices (November 2014)***

Barclays MSCI Green Bond Index family

Flagship Indices	Available Subindices					
	Use of Proceeds	Currency	Sector	Maturity	Credit Quality	ESG/SRI
Barclays MSCI Green Bond Index	Alternative Energy	USD	Government-Related	0-1 Yr	Aaa	Ex CCC, Ex Red IM
Bloomberg Ticker: GBGL	Energy Efficiency	EUR	Supranational	1-5 Yr	Aa	Ex Nuclear Power
	Pollution Prevention/Control	GBP	Agency	5-10 Yr	A	
US Green Bond Index	Sustainable Water	CHF	Local Authority	10+ Yr	Baa	
Bloomberg Ticker: GBUS	Green Building	CAD	Corporate	1+ Yr		
	Other	AUD	Industrial	1-10 Yr		
Euro Green Bond Index		SEK	Utility			
Bloomberg Ticker: GBEU		JPY	Financial Institutions			
		Other	Securitized			

About Barclays MSCI Environmental, Social, and Governance (ESG) Fixed Income Indices

The Barclays MSCI Green Bond Index is part of the broader Barclays MSCI ESG Fixed Income Index family. Since 2013, Barclays and MSCI have collaborated on a market-leading family of rules-based fixed income benchmark indices that incorporate measures of ESG risk and involvement. The broader set of Indices include a range of investment-grade Global, USD-, EUR-, and GBP-denominated aggregate and corporate index benchmarks reflecting three different ESG investment themes:

- **Barclays MSCI Socially Responsible (SRI) Indices** negatively screen issuers that may be involved in business lines or activities that are in conflict with investment policies, values, or social norms.
- **Barclays MSCI Sustainability Indices** positively screen issuers based on MSCI's ESG Ratings, which are a "best in class" assessment of how well an issuer manages ESG risks relative to its industry or peer group.
- **Barclays MSCI ESG Weighted Indices** use ESG ratings and ESG ratings momentum to overweight/underweight issuers within an existing Barclays index.

Index users seeking **bespoke index solutions** that incorporate alternative ESG criteria (negative screening, ratings-based selection and weighting, etc.) can contact Barclays or MSCI for further information on customization options that can be tailored to a specific ESG investment criteria or constraint.

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June 2013

Barclays MSCI ESG Fixed Income Indices

A New Market Standard for Environmental, Social, and Governance Investing

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