SUSTAINALYTICS

Sustainable bonds, social bonds, green bonds

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29 May, 2018

Introduction

Sustainalytics

Who We Are

» Sustainalytics is the largest pure-play investment research and ratings provider dedicated to RI and ESG research

» Over 25 years of experience in the fields of ESG & corporate governance research & analysis

» Over 385+ professional staff with more than half engaged in research

» Offices around the globe, providing local market knowledge

Asset Owners

Asset Managers

Green and Social Bonds

Agenda

» 1. Green, Social & Sustainability Bonds
» 2. Market Norms for Labelling
» 3. Benefits of Issuing a Labelled Bond
» 4. Advancing the SDGs
» 5. Building a Bond Framework
» 6. Second-Party Opinion Process
» 7. Examples of Second-Party Opinions

Green, Social & Sustainability Bonds

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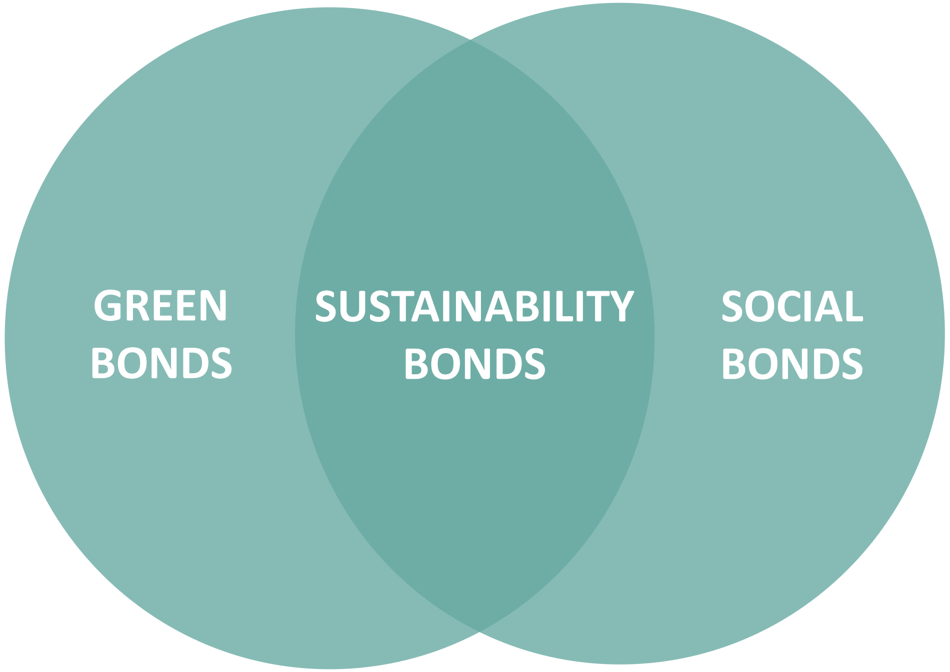
What: Green, Social and Sustainability Bonds

Similar to Regular “Vanilla” Bonds but with a Focus on Impact



GREEN BONDS

Debt instrument where proceeds (re)/finance projects, assets or business activities with meaningful positive ***environmental impact***.

EXAMPLE: Renewable energy; Energy efficiency; Water sustainability; Green buildings.

SUSTAINABILITY BONDS

Mixed Green and Social Use of Proceeds

SOCIAL BONDS

Debt instrument where proceeds (re)/finance projects with meaningful positive ***social impact***.

EXAMPLE: Access to healthcare; Access to education; Affordable housing; SME financing targeting vulnerable populations.

Green Bonds Principles 2017

- Voluntary process guidelines to encourage transparency and disclosure, and promote integrity in the development of the Green Bond market.
- Last update June 2017 by the International Capital Markets Association (ICMA)
- Four pillars of labelled green bond

Climate Bonds Initiative

ENERGY	TRANSPORT	WATER	LOW CARBON BUILDINGS	INFORMATION TECHNOLOGY & COMMUNICATIONS	WASTE & POLLUTION CONTROL	NATURE BASED ASSETS	INDUSTRY & ENERGY-INTENSIVE COMMERCIAL
Solar	Rail	Built (grey) infrastructure	Residential	Power management	Recycling	Agricultural land	Manufacturing
Wind	Vehicles	Green and hybrid infrastructure	Commercial	Broadband	Other Recovery	Forests (managed and unmanaged)	Energy efficiency processes
Geothermal	Mass transit		Retrofit	Resource efficiency	Disposal	Wetlands	Energy efficiency products
Hydropower	Bus rapid transport		Products for building carbon efficiency	Teleconferencing	Prevention	Degraded Lands	Retail and wholesale
Bioenergy	Water-bourne transport				Reuse	Other land uses (managed and unmanaged)	Data centres
Wave and Tidal	Alternative fuel Infrastructure				Pollution Control	Fisheries and aquaculture	Process & fugitive emissions
Energy distribution & management						Coastal infrastructure	Energy efficient appliances
Dedicated transmission						Land Remediation	Combined heat & power

Climate Bond Certified

Certification Criteria approved

Criteria under development

Due to commence

Social Bond Principles 2017

» Released in 2017 by the International Capital Markets Association (ICMA)

» Leading framework globally for issuance of social bonds

» Provides a set of principles for the social bond issuers to adhere to

How: Market Norm for Green, Social & Sustainability Bonds

Four Core Components

The Green Bond Principles 2017

The Social Bond Principles 2017

The Sustainability Bond Guidelines 2017

1. Use of Proceeds

2. Process for Project Evaluation /Selection

3. Management of Proceeds

4. Reporting

Eligible Use of Proceeds

Green Bonds

» Green Bond Principles: Categories

- Alternative Energy
- Energy Efficiency
- Buildings
- Transportation
- Land-use planning
- Water
- Pollution control

» Climate Bonds Standard: Taxonomies

- Solar
- Water
- Wind
- Low Carbon Buildings
- Low Carbon Transport
- Geothermal
- Marine Renewable Energy

» Customized Market Research

Social Bonds

» Social Bond Principles: Categories

» Customized Market Research

Social Impact Measurement

Examples of social impact performance indicators:

Example categories for use of proceeds	Sample social impact performance indicators
SOCIAL HOUSING	Number of mortgages provided as per regional government requirements
	Number of low-income individuals or families housed in social housing
EDUCATION	Number of students served by the buildings/facilities constructed
SOCIAL INCLUSION	Unemployment rate in region where job training programmes are offered
	Number of people enrolled in job training programmes
	Number of people from minority groups enrolled in language classes/programs
ECONOMIC INCLUSION	Proportion of microfinance, micro-enterprise, and SME loans successfully repaid
	Proportion of microfinance loan recipients with successful micro-businesses
	Number of people employed by micro-enterprises or SMEs
	Default rate of loan recipients

Benefits of Issuing a Labelled Bond

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Why: Benefits of Issuing a Green, Social or Sustainability Bond

» These bonds are very similar to, or the same as, traditional "vanilla" bonds, but provide several extra benefits as they allow the issuer to:

- Access a wider, more diverse investor base including "Responsible Investors" that have made RI commitments but may not typically invest in the issuer/region
- Highlight issuer's sustainability focus or communicate environmental/social commitments
- Enhance investor engagement
- Improve internal collaboration

» Most green and social bonds have been significantly oversubscribed.

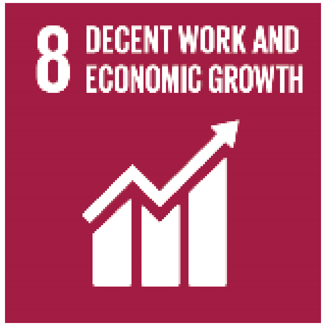
Advancing the UN Sustainable Development Goals

SBP Use of Proceeds	UN SDG	SDG Target Example
Access to financial services	1. No Poverty	1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance
Affordable Housing	11. Sustainable Cities and Communities	11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums
SME Lending	8. Decent Work and Economic Growth	8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services
Access to education	4. Quality Education	4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university
Socioeconomic advancement and empowerment	10. Reduced Inequalities	10.2 - By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.

SDGs example – Bancoldex Social Bond

Micro and small enterprise financing and financial inclusion

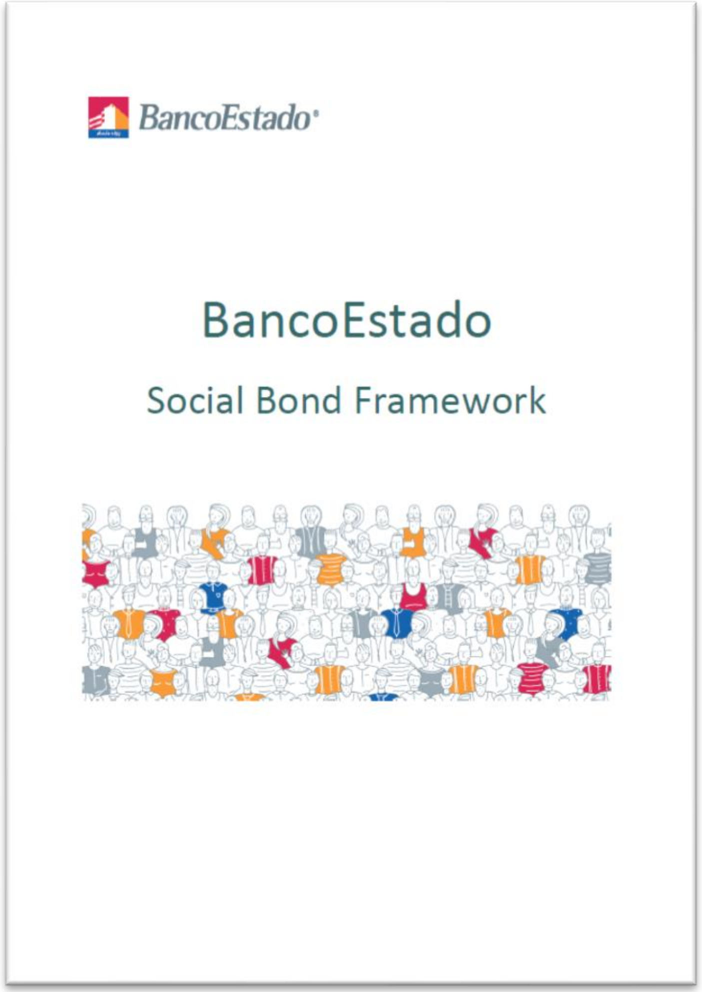
- Micro and small enterprise financing
- Rural business financing
- Victims of armed conflict-owned business financing
- Women-owned business financing



Building a Bond Framework

Building a Green or Social Bond Framework

- Communicate the rationale for issuing the bond and understand how the bond will advance the sustainability strategy or mandate
- Define the project portfolio for bond
- Define eligibility criteria for projects by referencing the Green and Social Bond Principles thematic areas
- Describe the process for project selection, identify an internal committee, and communicate the environmental and social risk mitigation process
- Describe how the proceeds will be internally managed and tracked
- Decide on reporting commitments



Process for Issuing a Labelled Bond (issuer)

Step 1	Step 2	Step 3	Step 4	Step 5
Review project portfolio	**Bring together internal teams**	**Develop Framework**	**Issue Bond**	**Allocation and Impact Reporting**
• Identify potential eligible project categories (new and refinancing) • Compare projects to thematic areas, and decide on eligibility criteria	• Define key internal contacts and teams • Collect necessary project information from internal teams	• Bring together information for all core components of the GBP / SBP and compile in the framework document • Gain internal sign off from all parties • Have an SPO written to assure investors of the bond's credentials	• Hold investor roadshows to explain the proceeds of the bond • Issue bond	• Collect data on allocation of proceeds and compile in a report to share with investors annually/ quarterly

Sustainalytics' Approach

How: Market Norm for Green, Social & Sustainability Bonds

Climate Bonds Verification

Second-Party Opinion (SPO)

- Work with issuer to align the bond framework with investor expectations and with the four pillars of the Green and Social Bond Principles (GBP) (SBP)
- Provide second-party opinion on the framework.
- **End deliverable**: A narrative offering prospective investors insight into the sustainability aspects of the bond proceeds and alignment with the strategy of the issuer and GBP/ SBP/Sustainability Bond Guidelines.

Main reasons issuers pursue a **Second-Party Opinion or Climate Bonds Certification** is to provide additional assurance that the bond is indeed going towards accepted, environmentally or socially impactful projects and in turn protect against potential reputational risk.

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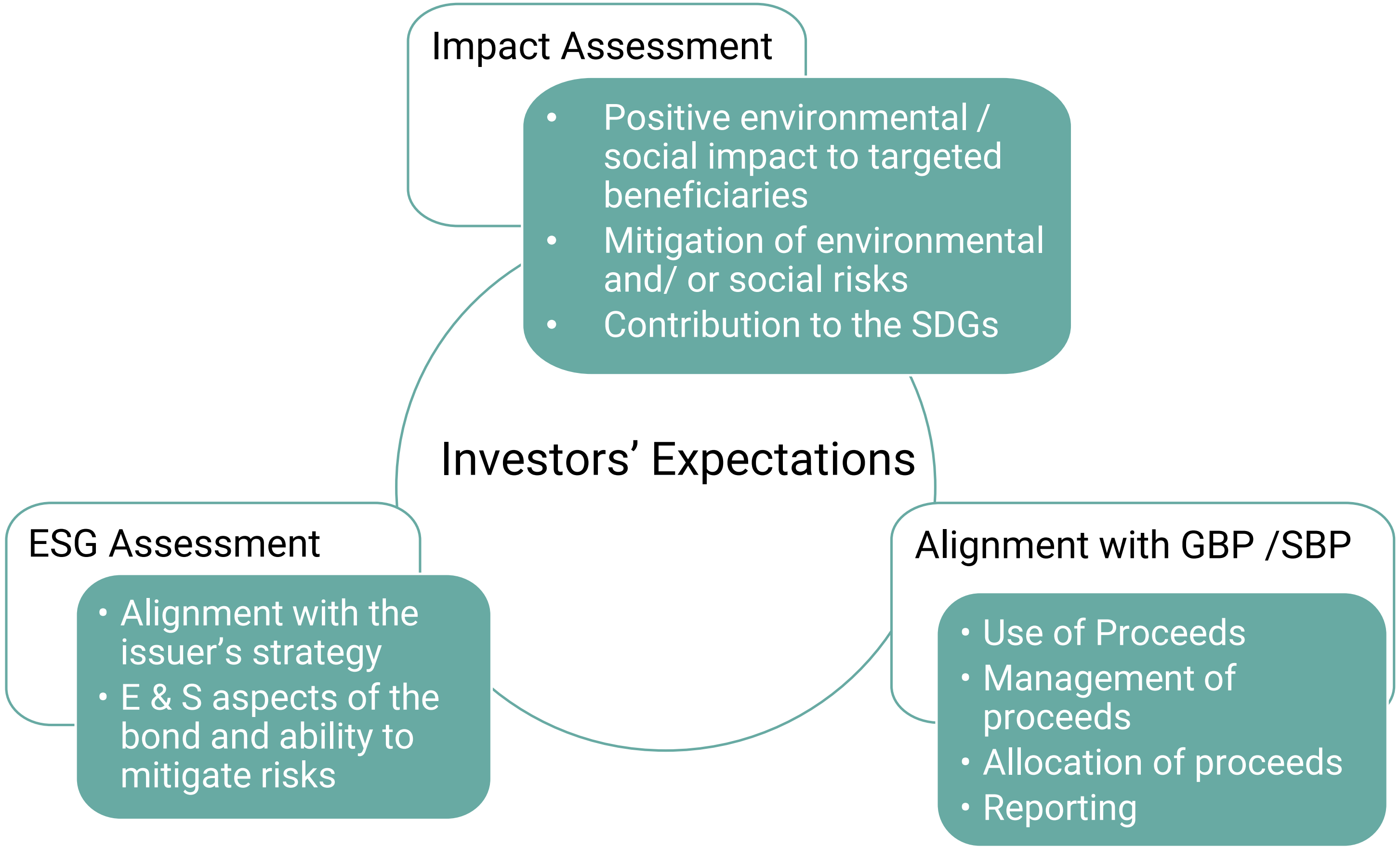
Sustainalytics' Approach to Providing Opinions

Leveraging our expertise with investors we take a holistic approach



Sustainalytics' Approach to Impact Assessment

Two-step Impact and Risk Methodology

Assessment	Rationale for the investor	Benefit to the investor
Step 1: Does the project create positive impact?	Provides the investor with the trust that the positive impact is meaningful and in alignment with objectives set.	Allows the investor to demonstrate positive impact
Step 2: Does the issuer have measures to manage and mitigate Environmental and social risks	Provides the investor with the trust that the project does not have unintended negative impact or is at high risk of controversies	Provides the investor with assurance that potential negative impact is managed, avoiding reputation risk

Sustainalytics' Second-Party Opinion Process

A typical engagement includes

Step 1 – Kick-off Meeting

- Understand issuer's bond and sustainability objectives
- Understand eligibility criteria and eligible projects (scope)
- Understand management and reporting process
- Identify relevant documents for evaluation

Step 2 – Evaluation

- Evaluate use of proceeds, eligibility criteria
- Evaluate management of proceeds process
- Evaluate KPIs, reporting process and frequency
- Review issuer's ESG strategy
- Draft an opinion

Step 3 – Feedback

- Provide draft SPO to client to review
- Provide draft document to Sustainalytics' Sustainability Bonds Review Committee
- Receive feedback from client and the review committee
- Set up follow-up call if required

Step 4 – Final Document

- Finalize evaluation
- Update opinion
- Receive client sign-off

Step 5 – Marketing

- Provide marketing support during roadshows and investors meetings
- Coordinate press release

Post-Issuance Reporting

Maintaining integrity and further growing the market

- Post-issuance reporting is critical to ensure the integrity of the market.
- **Allocation Reporting:** reporting to investors on how bond proceeds are allocated.
- **Impact Reporting:** In addition, both recommend issuers report on the expected impacts of the projects.

Sample Annual Report

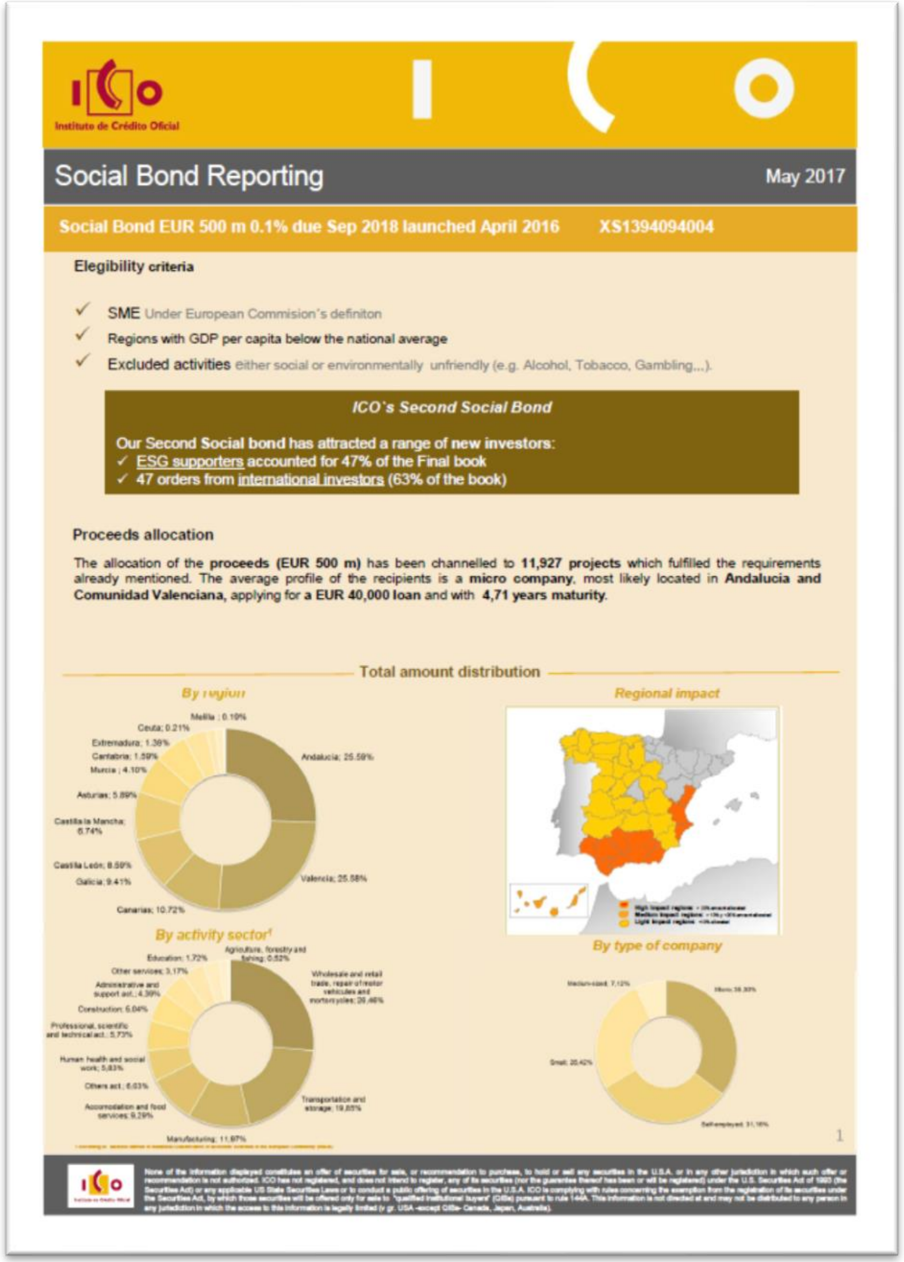
Instituto de Crédito Oficial Social Bond Reporting

» ICO releases annual reporting on the allocation and impact of its social bond

» Describes how the use of proceeds aligns with the bond's eligibility criteria (SMEs, regions with low GDP, and exclusionary criteria)

» Provides the total amounts distributed by region, activity sector, and type of company

» Makes all reports publicly available on its website


Instituto de Crédito Oficial

Social Bond Reporting May 2017

Social Bond EUR 500 m 0.1% due Sep 2018 launched April 2016 XS1394094004

Elegibility criteria

- ✓ SME Under European Commision's definiton
- ✓ Regions with GDP per capita below the national average
- ✓ Excluded activities either social or environmentally unfriendly (e.g. Alcohol, Tobacco, Gambling,...).

ICO's Second Social Bond

Our Second Social bond has attracted a range of new investors:
- ✓ ESG supporters accounted for 47% of the Final book
- ✓ 47 orders from international investors (63% of the book)

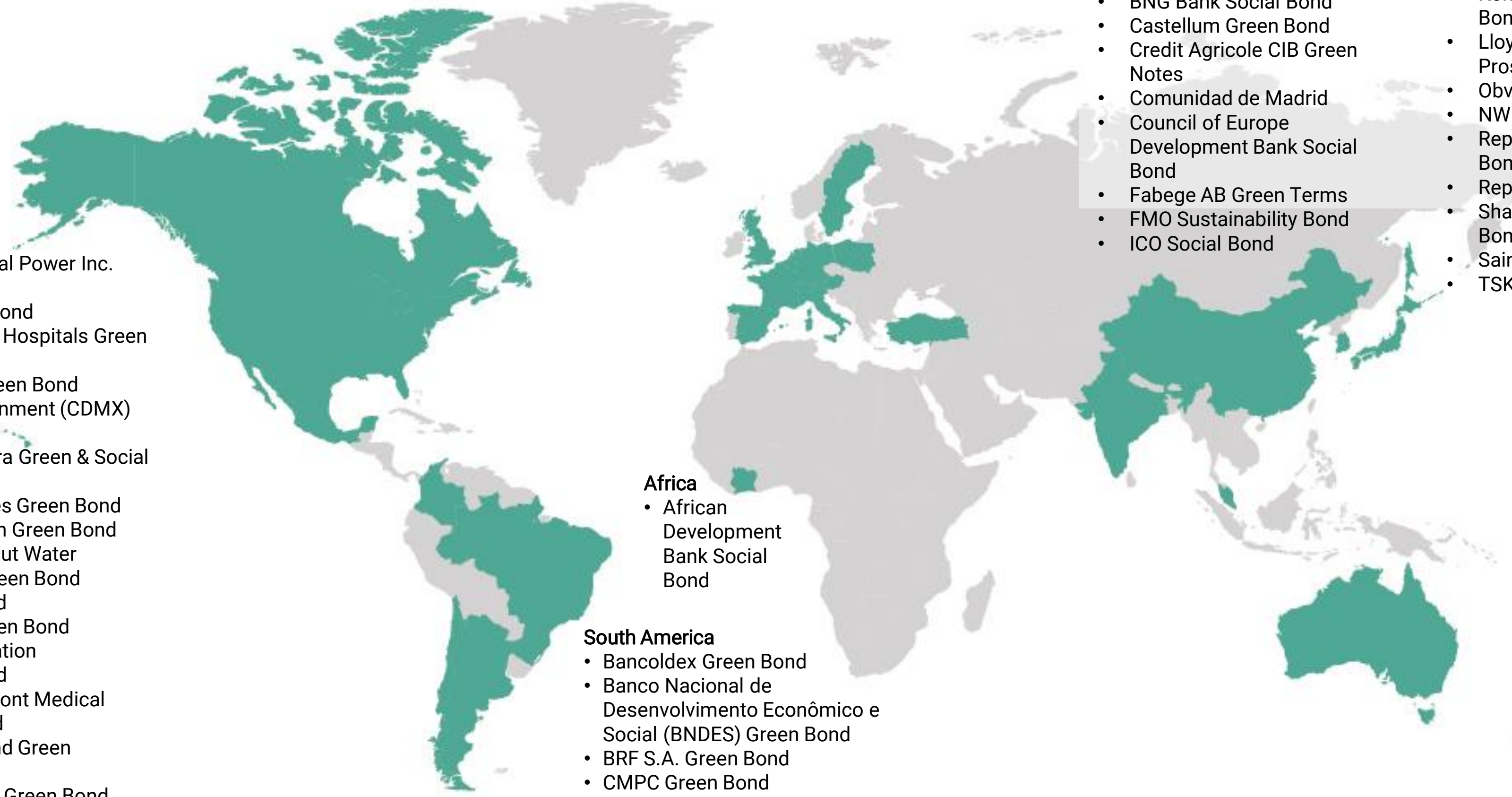
Proceeds allocation

The allocation of the **proceeds (EUR 500 m)** has been channelled to **11,927 projects** which fulfilled the requirements already mentioned. The average profile of the recipients is a **micro company**, most likely located in **Andalucia** and **Comunidad Valenciana**, applying for a **EUR 40,000 loan** and with **4,71 years maturity**.

Sample Opinions

Global Green, Social and Sustainability Bond Projects

150+ projects from diverse issuers from 30 countries



Europe
- Alpha Trains Green Bond
- BNG Bank Social Bond
- Castellum Green Bond
- Credit Agricole CIB Green Notes
- Comunidad de Madrid
- Council of Europe Development Bank Social Bond
- Fabege AB Green Terms
- FMO Sustainability Bond
- ICO Social Bond
- Kutxabank Social Bond
- Kommunalkredit Social Bond
- Lloyds Helping Britain Prosper Bond
- Obvion N.V. Green Storm
- NWB Bank Social Bond
- Republic of Poland Green Bond
- Repower Green Bond
- Shanks Group Plc Green Bonds
- Sainsbury Green Loan
- TSKB Sustainability Bond

North America
- American Municipal Power Inc. Green Bond
- Apple Inc. Green Bond
- Kaiser Foundation Hospitals Green Bond
- New York MTA Green Bond
- Mexico City Government (CDMX) Green Bond
- Nacional Financiera Green & Social Bonds
- Port of Los Angeles Green Bond
- Port of Long Beach Green Bond
- State of Connecticut Water Revolving Fund Green Bond
- SFPUC Green Bond
- Sound Transit Green Bond
- Starbucks Corporation Sustainability Bond
- University of Vermont Medical Center Green Bond
- Ygrene Energy Fund Green Securitized Bond
- Renovate America Green Bond

Africa
- African Development Bank Social Bond

South America
- Bancoldex Green Bond
- Banco Nacional de Desenvolvimento Econômico e Social (BNDES) Green Bond
- BRF S.A. Green Bond
- CMPC Green Bond
- Fibria Green Bond
- Suzano Papel e Celulose S.A. Green Bond

Asia-Pacific
- City Developments Limited
- Development Bank of Japan Sustainability Bond
- DBS Green Bond
- Greenko Green Bond
- Jain Irrigation Systems
- Korea Development Bank Green Bond
- Link REIT Green Bond
- Mitsubishi UFG Green Bond
- National Australia Bank Limited Social Bond
- QBE Insurance Group Green Bond

Green & Social Bonds

Sample Projects

Region	Company	Description	Use of Proceeds
	Apple	Technology company	Renewable energy, green building improvements and certification, energy and water efficiency, resource conservation and use of greener materials
	Starbucks	Coffee company	Sustainable coffee purchases, loans to smallholder coffee producers and sustainable agriculture support centers
	Sound Transit	Regional transit system for Greater Seattle area	Construction of new electric and commuter railways and an express bus service
	Renovate America	Financial services firm supporting sustainable upgrades	Home improvement products that generate renewable and alternative energy and improve water and energy efficiency
	BRF	Brazilian food conglomerate	Projects related to improving energy efficiency, waste and water management, reducing GHGs and raw material use and generating renewable energy
	Suzano	Brazilian pulp and paper company	Sustainable forestry and conservation initiatives and projects related to renewable energy, conservation, water management and energy efficiency
	BNG	Dutch public sector bank	Loans to social housing associations based on their sustainability performance
	Lloyds Bank	British retail and commercial bank	Loans to SMEs and agricultural enterprises
	Caja Rural de Navarra	Spanish co-op bank	Loans to finance projects and activities focused on environmental sustainability and creating a positive social impact in local communities

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Green & Social Bonds

Sample Projects

Region	Company	Description	Use of Proceeds
	TSKB	Turkish development bank	Climate mitigation and adaptation initiatives as well as sustainable infrastructure projects
	MTR Corporation	Hong Kong Railway operator	Sustainable upgrades to the public transport system and infrastructure and initiatives to improve biodiversity, conservation, water and waste management
	Mitsubishi UFJ Financial Group	Japanese bank and financial services company	Wind and solar power projects
	Greenko	Indian clean energy owner and operator	Financing of wind farm and hydropower projects
	National Australia Bank	Australian bank	Loans to organizations that have been awarded the Employer of Choice for Gender Equality citation (EOCGE) by the Workplace Gender Equality Agency
	City Developments Limited	Singaporean property developer	Green bonds to fund the retrofit of Republic Plaza, its flagship building in Singapore

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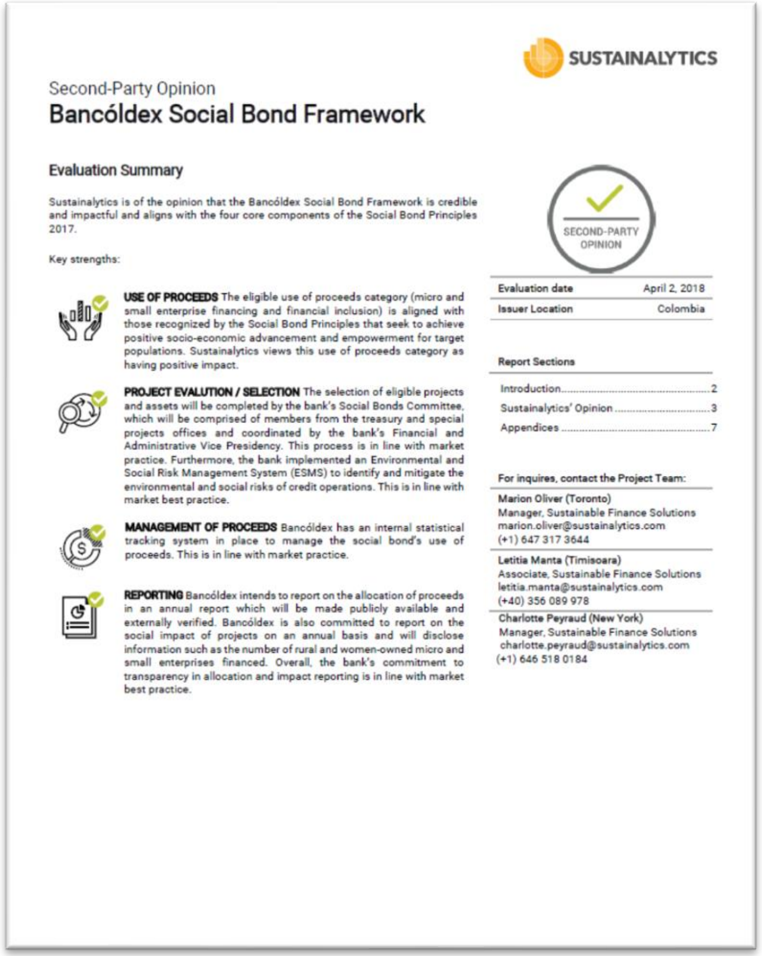
Sample Social Bond Project

Bancoldex Social Bond Second-Party Opinion



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Second-Party Opinion

Bancóldex Social Bond Framework

Evaluation Summary

Sustainalytics is of the opinion that the Bancóldex Social Bond Framework is credible and impactful and aligns with the four core components of the Social Bond Principles 2017.

Key strengths:

USE OF PROCEEDS The eligible use of proceeds category (micro and small enterprise financing and financial inclusion) is aligned with those recognized by the Social Bond Principles that seek to achieve positive socio-economic advancement and empowerment for target populations. Sustainalytics views this use of proceeds category as having positive impact.

PROJECT EVALUTION / SELECTION The selection of eligible projects and assets will be completed by the bank's Social Bonds Committee, which will be comprised of members from the treasury and special projects offices and coordinated by the bank's Financial and Administrative Vice Presidency. This process is in line with market practice. Furthermore, the bank implemented an Environmental and Social Risk Management System (ESMS) to identify and mitigate the environmental and social risks of credit operations. This is in line with market best practice.

MANAGEMENT OF PROCEEDS Bancóldex has an internal statistical tracking system in place to manage the social bond's use of proceeds. This is in line with market practice.

REPORTING Bancóldex intends to report on the allocation of proceeds in an annual report which will be made publicly available and externally verified. Bancóldex is also committed to report on the social impact of projects on an annual basis and will disclose information such as the number of rural and women-owned micro and small enterprises financed. Overall, the bank's commitment to transparency in allocation and impact reporting is in line with market best practice.

SECOND-PARTY OPINION

Evaluation date	April 2, 2018
Issuer Location	Colombia

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Highlights

Sustainalytics determined Framework aligned to the Social Bond Guidelines 2017, and:

- The bank's sustainability strategy is aligned with the Colombian National Development Plan 2014-2018
- Proceeds will support some of Colombia's most vulnerable groups and improve their financial inclusion within the country
- ESMS process in line with market best practice
- Projects will provide a positive contribution to advancing select SDGs

Use of Proceeds

1. Micro and small enterprise financing: loans to micro and small enterprises in Colombia

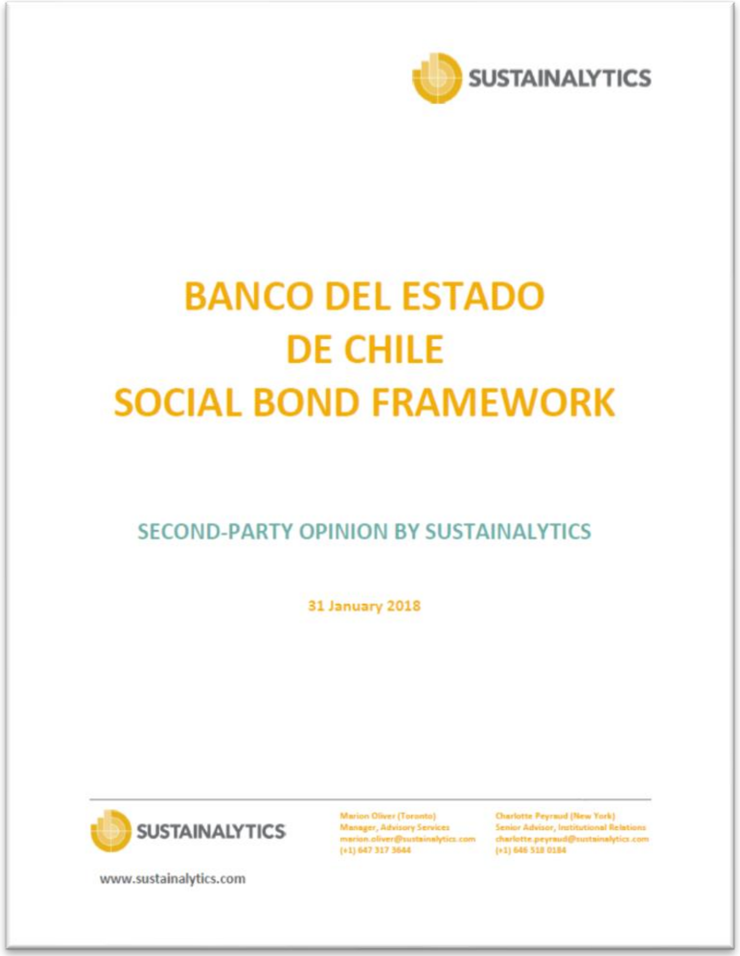
2. Rural business financing: Loans to businesses located in remote areas of Colombia as defined by the National Department of Planning

3. Women-owned business financing: Loans to women-owned businesses in Colombia

4. Victims of armed conflict-owned business financing: Loans to businesses owned by victims of armed conflict in Colombia defined by Colombian law and international humanitarian law

Sample Social Bond Project

Banco del Estado de Chile – Second-party opinion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BANCO DEL ESTADO
DE CHILE
SOCIAL BOND FRAMEWORK

SECOND-PARTY OPINION BY SUSTAINALYTICS

31 January 2018

SUSTAINALYTICS

www.sustainalytics.com

Highlights

BancoEstado is wholly owned by the Republic of Chile and was created in 1953 for the purpose of providing financial services, with an emphasis on the unbanked and on micro, small and medium-sized enterprises .

Sustainalytics found the framework to be aligned with the Social Bond Principles and…

- Targeted vulnerable populations have been clearly defined and government definitions are referenced
- BancoEstado has developed an internal process for assessing loans that follows the IFC Environmental, Health, and Safety Guidelines, this is in line with market best practice

Use of Proceeds

1.Micro, small and medium-sized enterprises (MSMEs): loans to MSM enterprises in Chile according to government definitions

2. Women entrepreneurs : projects supporting women-owned businesses

3. Social housing: Projects supporting social housing, with household income defined by the Ministry of Social Development

4. Access to banking services and technological support to financial inclusion: projects supporting access to financial services for the elderly and disabled

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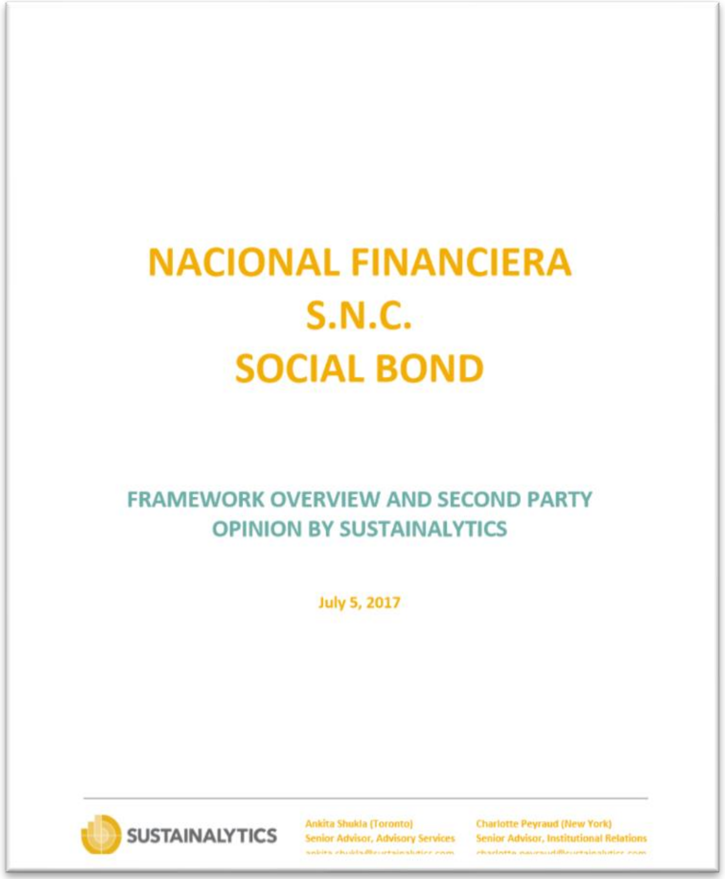
Sample Social Bond Project

NAFIN – Second-party opinion



NACIONAL FINANCIERA
S.N.C.
SOCIAL BOND

FRAMEWORK OVERVIEW AND SECOND PARTY OPINION BY SUSTAINALYTICS

July 5, 2017

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Senior Advisor, Advisory Services

Charlotte Peyraud (New York)
Senior Advisor, Institutional Relations

Highlights

NAFIN was created in 1934 for the purpose of helping to finance important socio-economic development within the country.

NAFIN previously issued 2 green bonds the social bond was fully subscribed in 18 minutes and 6x oversubscribed. Became first to be listed on Mexican Stock Exchange.

Use of Proceeds

Access to essential services: education, job training, and financing and financial services for low-income and underserved populations

Employment generation: microfinance and financing targeted at micro, small and medium enterprises (MSMEs)

Advancement and empowerment of women: credit to women entrepreneurs who want to expand their businesses

Resource efficiency: (e.g. energy, water) installation of products/technology to provide cost savings for low-income households

Natural disaster recovery: economic recovery of individuals and MSMEs impacted by natural disasters

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Thank you

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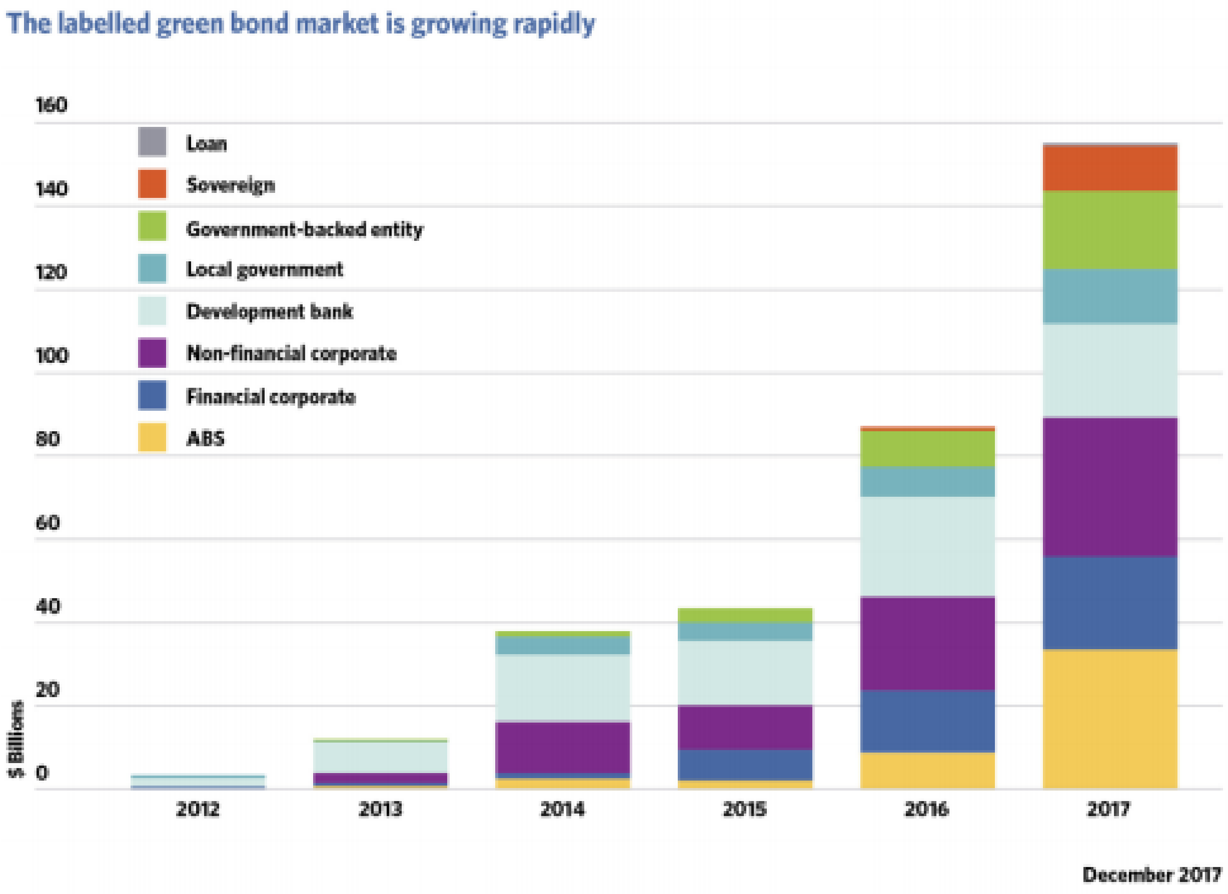
Labelled Bond Market

Growth of Labelled Bond Market

Near exponential growth over last decade



2017 in numbers

USD155.5bn – total green bond issuance

78% growth on 2016[iii]

1500+ issues

37 countries of issuance on all **6** continents

239 different issuers

146 new issuers

USD10.7bn – largest single green bond

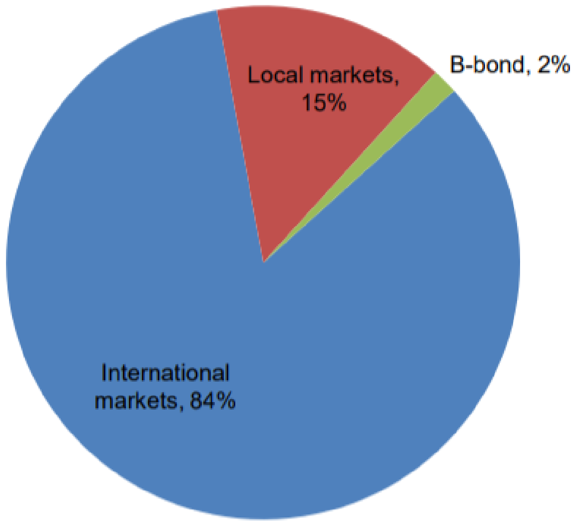
3 sovereign green bonds

Source: Climate Bonds Initiative, Jan 2018

Latin American Climate-aligned Bond Issuances

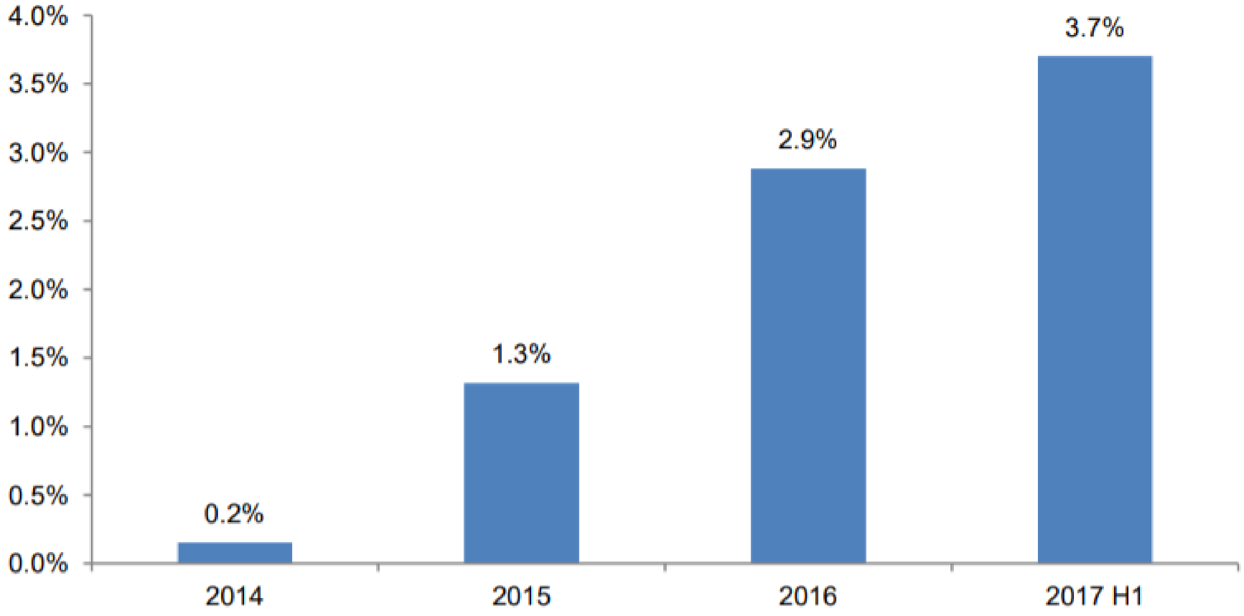
Majority issued in international markets, but remain small percentage of overall issuance, 2014-2017

LAC climate-aligned bond issuances by market, 2014-2017 YTD
(Percentage)



Source: ECLAC Washington Office, on the basis of data from LatinFinance and the Climate Bonds Initiative.

Bonds with a green focus as a share of LAC total bond issuance in international markets
(Percentage)

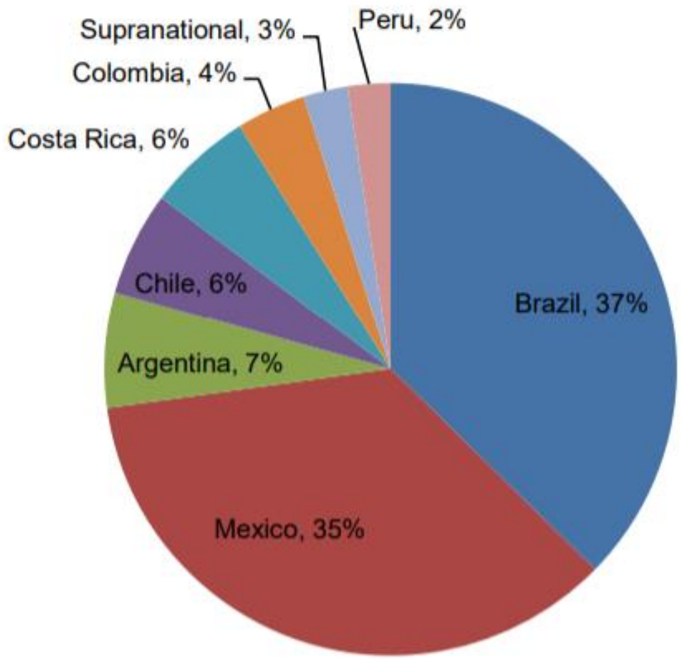


Source: ECLAC Washington Office, on the basis of data from LatinFinance.

Latin American Climate-aligned Bond Issuances

LAC climate-aligned bond issuances by country, 2014-2017 YTD

(Percentage)



Source: ECLAC Washington Office, on the basis of data from LatinFinance and the Climate Bonds Initiative.

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