

Green Bonds and Investor Demand for Transparency

GBTP Workshop

Michaël Aklin, University of Pittsburgh
Vera Eichenauer, ETHZ
Andreas Kern, Georgetown
Alexander Vasa, IDB

December 13, 2022

Green bonds

- Green transition needed to reduce env degradation
- **Problem:** unleash funding for green tech + infrastructure
- Potential solution: **green bonds**
- Rapid increase: cumulative total of \$2t (CBI)
- Incentive: greenium. Voluminous literature on its existence and causes (Larcker and Watts 2020 vs. Dorfleitner et al 2020, Caramichael and Rapp 2022, Baker et al. 2022)
- Bottlenecks
 1. Not clear if greenium extends to lower rated issuers
 2. Proceeds: how are proceedings used *ex ante* and *ex post*

Why is this market under-developed?

→ Provision and credibility of information

Our questions

- General Q: does information collected by programs such as *Green Bond Transparency Initiative* increase investor interest in a GB? (Vasa et al 2022)
- Corollary Q: how strong is the effect of such info compared to returns or other structural challenges?
- Information of interest:
 - Internal compliance: yes, no, unknown
 - Reporting of proceeds: project-specific, general, none
 - Reporting of impact: yes, no, unknown
 - Standard reviews: various standards, none

Research design

- How can we explore a market w/ little data?
- Use a **conjoint experiment** embedded in *investor* survey
- Tool developed in marketing. Respondents choose between two products with randomly features (attributes) varying at random
 - Example: two electric cars with varying colors, size, cost
 - Respondent makes choices 3-4 times in a row
- Recovers the **average marginal component effect**: effect of modifying one attribute averaged over all other attributes (Hainmueller et al 2014)
 - Example: change in prob of selecting an electric car if color switches from red to blue

- Conjoint experiment with investors over choice of (corporate) green bonds in primary market
- Experimental lit tends to focus on willingness to pay (eg Heeb et al 2022)
- Advantage of conjoints:
 1. Allows us to benchmark various features against returns of bonds
 2. Offers more realistic settings (w/ caveats)
- Our variables of interest:
 - Yield/coupon
 - Location/jurisdiction of issuer
 - Type of project
 - Expectation of compliance

Imagine that you are given the choice over the following two green bonds. You are given information about each of them. Please select the one that you would be more likely to invest in.

	Bond A	Bond B
Coupon	[4%, 5%, 6%, 8%]	<i>idem</i>
Rating	[AA, A+, BBB, B+]	<i>idem</i>
Jurisdiction	[Brazil, Argentina, USA]	<i>idem</i>
Currency	[USD, BRL, MXN]	<i>idem</i>
Type of project	[renewable energy, green buildings, unknown]	<i>idem</i>
Does issuer have ESG compliance office?	[yes, no, unknown]	<i>idem</i>
International standards review	[ICMA Green Bond Principles, Climate Bonds Standard, Local taxonomies, European Green Bond Standard, none]	<i>idem</i>
Commitment to report Use of Proceeds	[Project-based, Portfolio of projects w/o individual project detail, none]	<i>idem</i>
Commitment to report impacts (eg tCO2)	[yes, no, unknown]	<i>idem</i>

Additional data to be collected

- Demographics
- Seniority/experience
- Type of investor

Challenges lying ahead:

- Non-random sampling
- Provide a realistic scenario

Beyond this: opportunity to understand how constraints among those most in need can be overcome

Thank you!

Michaël Aklin | aklin@pitt.edu

Vera Eichenauer | eichenauer@kof.ethz.ch

Andreas Kern | ak679@georgetown.edu

Alexander Vasa | alexanderv@iadb.org