

Report on Bachelor / Master Thesis

Institute of Economic Studies, Faculty of Social Sciences, Charles University

Student:	Anna Kortusová
Advisor:	Evžen Kočenda
Title of the thesis:	Financing Climate Action: The Pricing of Green Bonds and Its Determinants

OVERALL ASSESSMENT (provided in English, Czech, or Slovak):

Please provide your assessment of each of the following four categories, summary and suggested questions for the discussion. The minimum length of the report is 300 words.

Contribution

This thesis investigates the market with the so called „green bonds“and provides a detailed analysis of a yield differential between green and equivalent conventional bonds in the secondary market. In order to perform a valid detailed analysis, a matching of green bonds with synthetic conventional bonds is performed and estimation is executed (more assessment in Methods).

The key contribution is the evidence of a small negative premium associated with green bonds (“green premium”) resulting from a considerable demand from value-seeking investors. In other words, when compared to conventional bonds, the investors are willing to pay a small premium for the green feature of the green bonds and absorb their lower yields. Specifically, the yield of green bonds is found to be on average 1.12 basis points lower than that of their conventional counterparts.

Further contribution is an analysis of the characteristics that are behind the variation in the magnitude of the green premium. Substantial increase in the premium is linked to the external verification of the bond’s green credentials and assurance on its post-issuance allocation report. Further, decrease in the green bond’s yield occurs when proceeds are used to finance new projects, while refinancing of the existing projects results in an increase in the bond’s yield. An interesting and important finding is that the premium on green bonds does not appear to vary with respect to issuers’ exposure to environmental risk.

The results of the thesis are based on a meticulously executed and very detailed analysis. They provide interesting insights on how the green bonds are priced on a secondary market. The quality and contribution of the thesis is on par with the best theses that I have been reviewing so far.

Methods

The very rich sample consists of the daily data on 1,949 green bonds over the period from 2010 to 2019. From this sample bonds are chosen so that characteristics of green bonds match those of conventional bonds in order to obtain two sets of green and conventional bonds that could be used for analysis. After a detailed investigation and careful selection, the working (final) dataset consists of 94 matched triplets of green and conventional bonds. The process alone merits quite an appreciation of the extent of data work.

The analysis is then performed as a fixed effects panel regression of the yield spread, and specific characteristics are included in regression. This is a best practice in this area of research. Several stages to assess green bond premium determinants are employed. Number of robustness checks is performed. The analysis is performed flawlessly and shows familiarity of a student with the field. The tested hypotheses are developed in a special section. They are well reasoned, advocated and linked to a proper literature and evidence.

Literature

The literature review section summarizes the current state of research in the field. It is quite exhaustive, and it is also conveniently divided into several parts. The section is not only a standard literature review, but it offers quite useful overview that provides further motivation and justifies the

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analysis. Literature is reviewed not only from the perspective of the green bond pricing in the secondary market but starts with the issues related to the green bond pricing in the primary market. Then it reviews in a great detail various determinants of green bond prices. Hence, the literature is reviewed in a detail and covers all relevant papers and angles.

Manuscript form

The manuscript conforms to formal requirements for the master thesis. It reads well and the flow and grammar are fine. The results are presented with enough detail. Introduction is short but clear, to the point and it motivates well the researched topic. Introduction is further complemented by a detailed section introducing a reader to the green bonds. Data are fully described. Hypotheses are clearly stated in a separate section of the text – plus, the null hypotheses are correctly specified in a negative form. Tables and figures are presented in an organized and legible manner. Appendix provides additional information that is correctly placed there in order not to inflate the text. References are complete.

Summary and suggested questions for the discussion during the defense

The thesis represents a solid piece of empirical work on the subject of green bond pricing that was, so far, not fully analyzed yet. Plus, it accounts for the recent period of the green bonds surge. The results of the Urkund analysis do not indicate significant text similarity with other available sources. In my view, the thesis fulfills the requirements for a master thesis at IES, Faculty of Social Sciences, Charles University, and I recommend it for the defense and suggest a grade A.

SUMMARY OF POINTS AWARDED (for details, see below):

CATEGORY	POINTS
<i>Contribution</i> (max. 30 points)	29
<i>Methods</i> (max. 30 points)	30
<i>Literature</i> (max. 20 points)	20
<i>Manuscript Form</i> (max. 20 points)	20
TOTAL POINTS (max. 100 points)	99
GRADE (A – B – C – D – E – F)	A

NAME OF THE REFEREE: *Evžen Kočenda*

DATE OF EVALUATION:

Digitally signed (29.08.2020)
Evžen Kočenda

Referee Signature

EXPLANATION OF CATEGORIES AND SCALE:

CONTRIBUTION: *The author presents original ideas on the topic demonstrating critical thinking and ability to draw conclusions based on the knowledge of relevant theory and empirics. There is a distinct value added of the thesis.*

METHODS: *The tools used are relevant to the research question being investigated, and adequate to the author's level of studies. The thesis topic is comprehensively analyzed.*

LITERATURE REVIEW: *The thesis demonstrates author's full understanding and command of recent literature. The author quotes relevant literature in a proper way.*

MANUSCRIPT FORM: *The thesis is well structured. The student uses appropriate language and style, including academic format for graphs and tables. The text effectively refers to graphs and tables and disposes with a complete bibliography.*

Overall grading:

TOTAL	GRADE
91 – 100	A
81 - 90	B
71 - 80	C
61 – 70	D
51 – 60	E
0 – 50	F