

## Are «green» bonds efficient in reducing cost of borrowings for company's ecological projects?

**Sergei D. Smirnov**, postgraduate student

<https://orcid.org/0000-0003-4392-7861>; SPIN-code (RSCI): 6791-3910

e-mail: [smirbox@gmail.com](mailto:smirbox@gmail.com)

**Andrei L. Bulgakov**, Cand. of Sci. (Econ.)

<https://orcid.org/0000-0001-6999-4515>; SPIN-code (RSCI): 5026-4223

e-mail: [z3900207@mail.ru](mailto:z3900207@mail.ru)

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### Abstract

**The subject/topic.** The article addresses the issue of reducing cost of debt for ecological projects with green bonds. **Goals/Objectives.** The primary aim of this research is to reveal the interest rate discount «green» bonds have compared to conventional bonds. A decrease in cost of funding is a key element of «green» financial markets mechanism that improves investment quality of environmental projects. **Methodology.** The study uses statistical and regression analysis of more than 7,2 thousand bond primary placements for 2016-2020 years with total volume exceeding 6 trillion USD. Among them are 91 «green» bond issues with total volume of 84 bn USD. Cbonds and Bloomberg databases are primary sources of financial data for this study. **The Results.** Green bonds tend of have interest rate 0,3% lower compared to conventional bonds owing to sufficient demand from responsible investors. This result is the same for several different sub-samples of data that confirms its sustainability. **Conclusions/Significance.** The discount in interest rate that «green» bonds have allows reducing cost of funding for environmental projects making them more economically viable and attractive for companies. This mechanism persisting in global bond markets facilitates fulfillment of sustainable development goals (SDGs) defined by United Nations. **Application.** However, Russian bond market still doesn't have this mechanism working properly since there are no responsible investors as a self-sufficient class.

**Keywords:** «green» bonds, bonds pricing, responsible investment, ecological impact, corporate social responsibility.

### References

1. Dorofeev, M.L. (2020), "Distinctive features of cost of capital on green bond market", *Eco*, no. 5 (551), pp. 62-76.
2. Emets, M.I. (2020a), "Modeling the green bond yield on bond offering", *Finance and Credit*, vol. 26, no. 12 (804), pp. 2858-2878.
3. Emets, M.I. (2020b), "Green bond premium: literature review and perspectives", *The Eurasian Scientific Journal*, vol. 12, no. 2, pp. 39.
4. "Dmitry Aksakov: Russia is expected to face sufficient growth of responsible investment", TASS, available at: <https://tass.ru/interviews/10463195> (Accessed 03.08.2021).

5. Chava, S. (2014), "Environmental Externalities and Cost of Capital", *Management Science*, vol 60, no. 9, pp. 2223-2247.
6. "2019 Green Bond Market Summary", (2020), *Climate Bonds Initiative*.
7. "Green bonds market summary – Q3 2020", (2020), *Climate Bonds Initiative*.
8. Dixon, R. (15 June 2010), "A framework for monitoring the performance impact on a global equity portfolio", *Mercer*, available at: [www.mercer.com/articles/1382280](http://www.mercer.com/articles/1382280).
9. Fatica, S., Panzica, R. and Rancan, M (2019), "The Pricing of Green Bonds: Are Financial Institutions Special?", *Publications Office of the European Union*, Luxembourg.
10. *Financing Climate Futures: Rethinking Infrastructure*, (2018), OECD, The World Bank/UN Environment, Paris.
11. Gabbi, G. and Sironi, A. (2005), "Which factors affect corporate bonds pricing? Empirical evidence from Eurobonds primary market spreads", *The European Journal of Finance*, vol. 11, issue 1, pp. 59-74.
12. Ghouma, H., Ben-Nasr, H. and Yan R. (2018), "Corporate governance and cost of debt financing: Empirical evidence from Canada", *The Quarterly Review of Economics and Finance*, vol. 67C, pp. 138-148.
13. Goldstein, M.A., Hotchkiss, E.S. and Pedersen, D.J. (2019), "Secondary Market Liquidity and Primary Market Pricing of Corporate Bonds", *Journal of Risk and Financial Management*, vol. 12(2), pp. 1-17.
14. Harrison, C. (2021), "Green Bond Pricing in the Primary Market (H2 2020)", *Climate Bonds Initiative*.
15. Heinkel, R., Kraus, A. and Zechner, J. (2001), "The Effect of Green Investment on Corporate Behavior", *The Journal of Financial and Quantitative Analysis*, vol. 36, no. 4, pp. 431-449.
16. "Green Bond Principles", (2018), *ICMA*.
17. Jones, E.P., Mason, S.P. and Rosenfeld, E. (1984), "Contingent Claims Analysis of Corporate Capital Structures: An Empirical Investigation", *Journal of Finance*, vol. 39, issue 3, pp. 611-25.
18. Karpf, A. and Mandel, A. (2018), "The changing value of the 'green' label on the US municipal bond market", *Nature Climate Change*, no. 8, pp. 161-165.
19. Khan, M. (2019), "Corporate Governance, ESG, and Stock Returns around the World", *Financial Analysts Journal*, vol. 75, issue 4, pp. 103-123.
20. Magnanelli, B.S and Izzo, M.F. (2017), "Corporate social performance and cost of debt: the relationship", *Social Responsibility Journal*, vol. 13, no. 2, pp. 250-265.
21. Menz, K.M. (2010), "Corporate Social Responsibility: Is it Rewarded by the Corporate Bond Market? A Critical Note", *Journal of Business Ethics*, vol. 96, no. 1, pp. 117-134.
22. Merton, R.C. (1974), "On the Pricing of Corporate Debt: The Risk Structure of Interest Rates", *The Journal of Finance*, vol. 29, no. 2, pp. 449-470.
23. Murray, S. and Nikolova, S. (2021), "The Bond Pricing Implications of Rating-Based Capital Requirements", *Journal of Financial and Quantitative Analysis*, pp. 1-58.
24. Oikonomou, I., Brooks, C. and Pavelin, S. (2014), "The Effects of Corporate Social Performance on the Cost of Corporate Debt and Credit Ratings", *Financial Review*, vol. 49 (1), pp. 49-75.
25. Partridge, C. and Medda, F.R. (2020), "The evolution of pricing performance of green municipal bonds", *Journal of Sustainable Finance & Investment*, vol. 10 (1), pp 44-64.
26. Pérez, A., García de los Salmones, M.d.M, and López-Gutiérrez, C. (2020), "Market reactions to CSR news in different industries", *Corporate Communications: An International Journal*, vol. 25, no. 2, pp. 243-261.
27. Sharfman, M.P. and Fernando, C.S. (2008), "Environmental Risk Management and the Cost of Capital", *Strategic Management Journal*, vol. 29 (6), pp. 569-592.
28. Sheng, Q., Zheng, X. and Zhong, N. (2021), "Financing for sustainability: Empirical analysis of green bond premium and issuer heterogeneity", *Natural Hazards*, vol. 107 (3), pp. 2641-2651.
29. Statman, M. and Glushkov, D. (2009), "The Wages of Social Responsibility", *Financial Analysts Journal*, vol. 65, no. 4, pp. 33-46.

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30. Stellner, C., Klein, C. and Zwergel, B. (2015), Corporate social responsibility and Eurozone corporate bonds: The moderating role of country sustainability, *Journal of Banking & Finance*, vol. 59C, pp. 538-549.

31. “THE 17 GOALS”, *United Nations. Sustainable Development Goals*, available at: <https://sdgs.un.org/goals> (Accessed 03.08.2021).

32. Zerbib, O.D. (2019), “The effect of pro-environmental preferences on bond prices: Evidence from green bonds”, *Journal of Banking & Finance*, vol. 98(C), pp. 39-60.

#### **About authors**

*Sergei D. Smirnov*, Postgraduate student of Finance and Credit department, the Faculty of Economics, Moscow State University, Moscow.

*Andrei L. Bulgakov*, Candidate of Sci. (Econ.), Senior Researcher, Finance and Credit department, the Faculty of Economics, Moscow State University, Moscow.