The Impact of Corporate Green Bonds on Stock Returns

**Abstract**

I replicate with a different and bigger dataset the analysis of Flammer (2020) on financial markets’ response to the issuance of corporate green bonds, which are debt securities whose proceeds are used for projects with a positive impact on the environment and/or climate. As these bonds are getting more traction on the financial markets, it is interesting to analyse their impact on the stock price of traded companies.

Like Flammer, I find a positive response for the issuance of green bonds in the period from 5 days prior to the first announcement until 10 days following it. However, when analysing first-time issuers separately from seasoned-time issuers, I find a bigger response for the latter ones, while Flammer finds no significant response for them. Moreover, for first-time issuers, I find a significant impact on a different time window, in the period from 20 to 11 days prior to the announcement.

I propose possible explanations for the difference in results.

# Introduction

After the first climate-focused bond by the European Investment Bank in 2007, the World Bank issued the first “green” bond in 2008[[1]](#footnote-1). Worth SKr 3.35 billion (USD 440 million), this security was meant to:

* Meet the Scandinavian pension funds’ interest for a simple fixed-income product supporting climate-focused projects;
* Attract investors willing to invest sustainably and responsibly;
* Innovate climate finance;
* Show financial markets that developing countries will be affected by climate change but can tackle it.

In 2010, another member of the World Bank, the International Finance Corporation, and other public entities such as municipalities, governments and agencies issued USD 4 billion of green bonds. In 2013, private corporations started issuing this kind of debt securities too, resulting in USD 10 billion of green bonds issued worldwide during that year alone.

After starting this new trend across financial markets, the World Bank is now a small player in a sector that is expected to raise USD 250 billion in 2020[[2]](#footnote-2), notwithstanding the impact of the pandemic on the bond market and without considering other USD 70 billion of social and sustainability bonds in the same year.

In January 2014, the International Capital Markets Association introduced some principles that “recommend transparency, disclosure and reporting” for the issuance of green bonds in order to provide markets with the information and transparency that are required for these financial products. According to the Green Bond guidelines provided by the International Capital Markets Association, the four components of a green bond are:

* Use of Proceeds: definition and description of the eligible project categories
* Project evaluation and selection: description of the decision-making processes
* Management of Proceeds: guaranteeing that no projects or assets that do not comply with the stated use of proceeds will be financed nor refinanced
* Reporting: description of reporting intentions, including impact reporting

According to the International Capital Markets Association, projects financed through the issue of green bonds should provide “clear environmental benefits” that must be quantified by the issuer whenever feasible.

In order to give a clearer picture of the possible categories under which the use of green bonds’ proceeds can fall, the International Capital Markets Association specifies that green projects include:

• renewable energy (including production, transmission, appliances and products);

• energy efficiency (e.g. new and refurbished buildings, energy storage, district heating, smart grids, appliances and products);

• pollution prevention and control (including reduction of air emissions, greenhouse gas control, soil remediation, waste prevention, waste reduction, waste recycling and energy/emission-efficient waste to energy);

• environmentally sustainable management of living natural resources and land use (including environmentally sustainable agriculture; environmentally sustainable animal husbandry; climate smart farm inputs such as biological crop protection or drip-irrigation; environmentally sustainable fishery and aquaculture; environmentally-sustainable forestry, including afforestation or reforestation, and preservation or restoration of natural landscapes);

• terrestrial and aquatic biodiversity conservation (including the protection of coastal, marine and watershed environments);

• clean transportation (such as electric, hybrid, public, rail, non-motorised, multi-modal transportation, infrastructure for clean energy vehicles and reduction of harmful emissions);

• sustainable water and wastewater management (including sustainable infrastructure for clean and/or drinking water, wastewater treatment, sustainable urban drainage systems and river training and other forms of flooding mitigation);

• climate change adaptation (including information support systems, such as climate observation and early warning systems);

• eco-efficient and/or circular economy adapted products, production technologies and processes (such as development and introduction of environmentally sustainable products, with an eco-label or environmental certification, resource-efficient packaging and distribution);

• green buildings which meet regional, national or internationally recognised standards or certifications.

From this list of green projects categories, we can confirm that companies choosing to issue green bonds are constrained in regards to the projects they choose to finance.

Given the need of transparency and in order to ensure that the criteria for a green bond are met, corporations can obtain a certification from a third party that ensures the proceeds finance only green projects.

The Climate Bonds Initiative is an international not-for-profit organization that issues rigorous scientific criteria in order to receive its

Bonds and loans which are verified to conform with the[Climate Bonds Standard](https://www.climatebonds.net/standard/about) are called Certified Climate Bonds. The Standard contains rigorous scientific criteria which are consistent with the 2 degrees Celsius warming limit declared in the 2015 Paris Agreement.

In order to receive the Certification mark, a prospective issuer must appoint an [Approved Verifier](https://www.climatebonds.net/certification/approved-verifiers), who will provide assurance that the bond meets the Climate Bonds Standard’s requirements. The [Climate Bonds Standard Board](https://www.climatebonds.net/standard/governance/board) provides the final confirmation of all Climate Bond Certifications.

The Climate Bonds Standard allows Certification of a bond prior to its issuance, enabling the issuer to use the Climate Bonds Certification Mark in the bond marketing efforts and investor roadshows. After the bond has been issued and allocation of the bond proceeds has begun, the issuer must confirm the Certification by obtaining another assurance (the "Post-Issuance") report and providing that to the Climate Bonds Standard Board.

The Scheme acts as a universal adapter across jurisdictions. It incorporates the Green Bond Principles and Green Loan Principles and  is aligned with the proposed EU Green Bond Standard and the guidelines and rules in China, ASEAN, Japan, India and other countries and regions.

Literature agrees that if green bonds brought no benefit, companies would refrain from issuing this kind of security, as it entails a greater level of transparency and costs together with a binding restriction on the use of proceeds.

# The dataset

I don't know the entirety of green bonds available on Refinitiv’s database From 2013 to 2019 , in order to have the biggest possible data set from the beginning of the issuance of green bonds things until the last are complete financial year full point point dot

# The dataset

# The analysis

# Conclusions

# Bibliography

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1. International Bank for Reconstruction and Development, The World Bank (2015) [↑](#footnote-ref-1)
2. Unicredit Bank (2020). [↑](#footnote-ref-2)