

REFUND

Providing reliable metrics to assess the environmental sustainability of green bonds and funds



INSPIRATION

In the last decade, financial markets have witnessed a sharp increase in the number of sustainable and green investment funds. However, the growth in this sector has raised new risks, such as greenwashing, due to a lack of a general framework regarding the environmental performance of these financial products.

ESG criteria (Environment, Social and Governance) are already part of the investment decision process. Despite their ability to assess a financial risk, these metrics do not cover the whole environmental lifecycle of the economic activities arising from the underlying holdings of funds. As a result, the current ESG criteria show significant limits when it comes to quantifying the environmental impacts and benefits of these activities.

INNOVATION

The main objective of REFUND is to develop reliable environmental metrics in order to assess green funds and bonds with regards to their environmental sustainability and performance by using Life Cycle Assessment (LCA) methods. In particular, the research project led by LIST aims to quantify the extent to which these green financial instruments provide environmental benefits compared to conventional financial instruments.

LIST researchers will use their expertise in LCA to model the environmental lifecycle of activities arising from green bonds and funds. Green bonds are designed to support specific environmental projects. LIST will therefore develop an LCA database of benchmark activities that can be funded by bonds. Investment funds have a higher level of complexity because their portfolios include shares of listed companies from various sectors. The LCA analysis of funds will thus be conducted primarily at sectorial levels. A PhD thesis will be dedicated to the development of an innovative and operational methodology to assess the lifecycle environmental performance of funds in a large spectrum of economic sectors. In a second stage, LIST researchers will make use of the green bonds and funds LCA-based models to quantify the environmental impacts and benefits related to these financial instruments' activities, using specific methodologies and relevant lifecycle-based metrics (e.g. climate change, land-use).

IMPACT

By providing innovative LCA-based approaches to Sustainable Finance, REFUND will actively contribute to the current state-of-art, as well as to the common effort to develop more reliable metrics. In fact, this research project will enable the development of robust and transparent environmental metrics that could strengthen the sustainability and performance assessment of green financial instruments. Supported by an advisory board composed of several experts in Sustainable Finance from the private sector, REFUND will also disseminate its results with the actors of the financial sector calling for solutions. As a first step, REFUND will pave the way to follow-up projects targeting the development and combination of social metrics with environmental metrics in order to support the investment decision process with accurate ESG assessments.

Partners

EDHEC Business School (FR)

Financial Support

Fonds National de la Recherche

Contact

5, avenue des Hauts-Fourneaux
L-4362 Esch-sur-Alzette
phone: +352 275 888 - 1 | [LIST.lu](https://www.list.lu)

Enrico BENETTO (enrico.benetto@list.lu)
© Copyright July 2025 LIST

LUXEMBOURG
INSTITUTE OF SCIENCE
AND TECHNOLOGY

