SUSTAINABLE AND RESPONSIBLE INVESTMENT

Fixed Income assets

Contents

1 Introduction

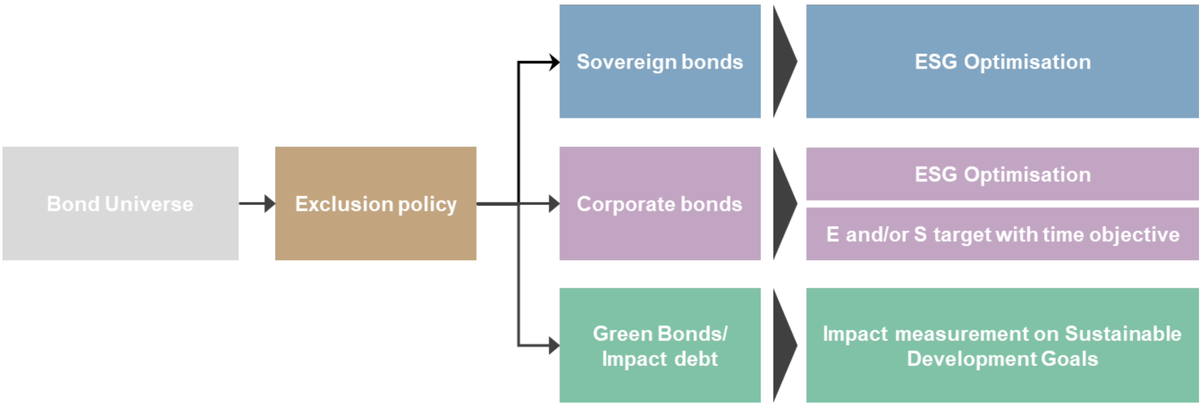
BLI has over 10 years of experience in sustainable and responsible investment in the bond markets, particularly through impact investments and microfinance.

BLI decided in 2010 to support the United Nations Millennium Development Goals[1] by launching its first closed-end microfinance fund, with the aim of tackling the poverty challenge head on. This eventually led to another two microfinance funds.

Ever since BLI signed the United Nations PRI in 2017, its bond management team has been working to establish an investment strategy that takes ESG factors on board and steers its open-end investment funds towards impact investing.

This has resulted in an ESG optimisation strategy that is based on a purely proprietary approach and that we have applied to sovereign issuers since 2019. We have simultaneously introduced an approach aimed at incorporating impact strategies into the way we manage our funds: liquid impact investing strategies via green bonds and alternative impact investing strategies via microfinance.
We have gradually established and implemented an ESG strategy for corporate issuers since early 2020.

The chart below provides an overview of the **framework** that BLI currently applies to optimise and assess the ESG rankings of our bond portfolios.



1 These goals were replaced in 2015 by the United Nations Sustainable Development Goals (SDG).

2 Organisation

The research process is coordinated by fund manager Jean-Philippe Donge and underpinned by a variety of different participants / sources:

- Internal participants:
  - Jean-Philippe Donge, Head of Fixed Income;
  - Maxime Smekens, bond strategist for emerging countries;
  - Jean-Albert Carnevali, corporate analyst;
  - SRI analysts.

- External sources:
  - Publicly available sources (FAO, INFORM, UNDESA, World Bank) for quantitative data on sovereign issuers.
  - MSCI ESG Research, primarily, for the reported corporate data we use to analyse corporate issuers;
  - Prospectuses and second party opinions for analysing the impact generated by green instruments;
  - BLI refers to specialist investment advisors for its alternative impact investment[2] data, mainly SIMA (Social Investment Managers & Advisors).

3 Methodology and promotion of ESG factors

3.1 Scope

The methodology set out below applies to the following bond funds:
- BL – Bond Emerging Markets Euro
- BL – Bond Emerging Markets Sustainable
- BL – Bond Euro
- BL – Corporate Bond Opportunities
- BL – Global Bond Opportunities

3.2 Exclusion policy

The exclusion policy applied to bonds is taken from the *Banque de Luxembourg Investments Exclusion Policy*. This document is available on the Banque de Luxembourg Investments website in the section on *Responsible Investing*.

The following companies are automatically excluded from our investment universe:
- Companies involved in **manufacturing controversial weapons** (anti-personnel mines, cluster bombs, depleted uranium and white phosphorus munitions, chemical and biological weapons);
- Companies involved in **serious controversies**, i.e. those placed on MSCI ESG Research's "red list" based on its analysis of controversies;
- Companies that do not comply with the **Principles of the United Nations Global Compact**;
- **Exposure to the coal industry**: companies on the Global Coal Exit list[3] will be completely excluded from our portfolios as from 30th June 2021. BLI's SRI Committee may grant an exception to green bonds issued by these companies (since such bonds follow sustainable transition targets).

3.3 Corporate bonds

3.3.1 ESG research and optimisation

Besides applying the exclusion strategies described above, **ESG considerations are also factored into each investment recommendation prepared by the analysts** prior to optimising the portfolio

[2] Alternative impact instruments such as investments in microfinance bonds or in bonds issued by micro, small and medium-sized enterprises (MPME) in developing countries
[3] The list of excluded companies and the methodology are available at https://coalexit.org/

with the best mix of traditional bonds and green bonds. BLI's approach to analysing corporate bond issuers takes into consideration operating, solvency and liquidity parameters enabling it to gauge whether or not a bond is attractive from a buy&hold perspective. **A company is therefore appraised from two distinct angles (financial and non-financial) in order to produce an investment recommendation**.

In practice, we factor in a whole set of indicators such as:

- MSCI ESG Research scores;
- carbon emission intensity per unit of revenue (scopes 1 & 2);
- MSCI's controversies indicator (red, orange, yellow, green);
- exposure to certain sensitive sectors (tobacco, alcohol or fossil fuels);
- ESG momentum and MSCI's ESG opinion.

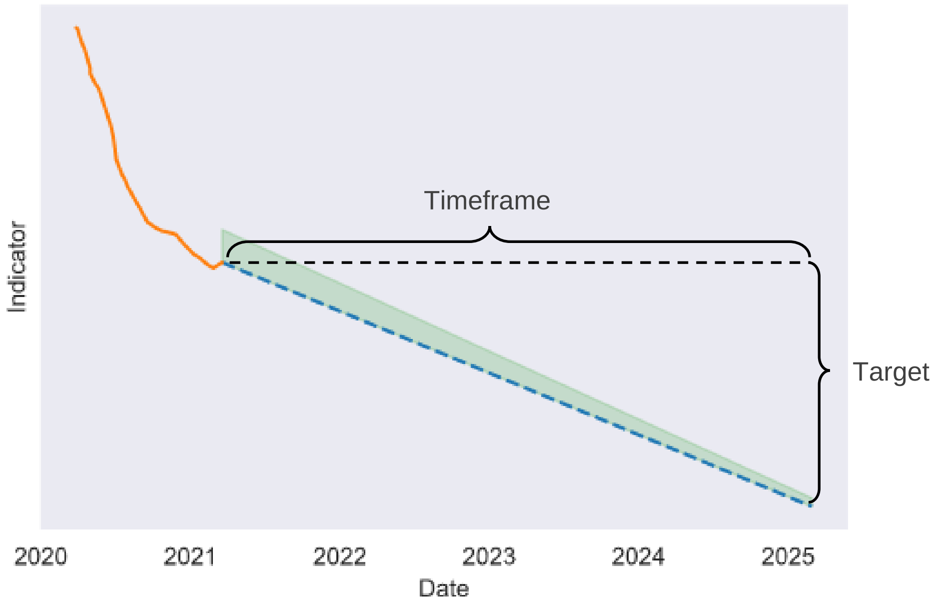
This qualitative analysis of an issuer's ESG profile is weighted when assigning a rating to it, just as its financial indicators are. All this information is documented in the rating and incorporated into the analysis of a bond issue's risk/return ratio. An issuer will not be considered as an investment candidate if it is deemed too high-risk from an ESG perspective.

3.3.2 Improvement targets set for E and/or S factors

If a corporate bond is not classified as either a green bond or positive impact bond, **the investment management team will set targets for each portfolio aimed at improving an indicator within a specific timeframe** (e.g. a target to improve carbon intensity within a period of 5 years).

By setting a target and trajectory for one or more indicators, as shown in the chart below, we are able to ensure that our portfolio promotes environmental (E) and/or social (S) values in tangible terms. These targets are also applied across the investment universe, which will have already been filtered by way of our strict exclusion strategy (described above).

The chart below shows an example of targets set for E/S indicators. The dotted line indicates the targeted trajectory we have set for the weighted average value of a given indicator in a portfolio. A 10% degree of tolerance is accepted in efforts to achieve this target (shown by the shaded area of the chart).



The indicator's real value relative to the target set is assessed on a half-yearly basis.
If a half-yearly intermediate target has not been achieved, the fund manager will have 3 months to align the indicator with the next target set.

The objectives of the different funds are described in detail in the annex on page 9 of this document.

3.4 Sovereign bonds

3.4.1 Seeking to optimise the ESG score

Issuers are subject to a non-financial analysis on which basis they will be assigned an ESG score that the investment team will incorporate into its own analytical process and selection of individual issuers. The aim is to **obtain an average ESG score above that of an index representative of the universe**.

3.4.2 Proprietary methodology for rating sovereign issuers

A **proprietary approach aimed at monitoring an issuer's sustainability risks and promoting its ESG attributes has been developed** specifically for sovereign bonds. The raw data on which the ESG model is based is already aggregated at state level, so only sovereign entities are subject to our ESG rating system (using the methodology described below).

Our sovereign ESG rating system aims to assess the sustainability of a country's government, its economy, and the reforms it introduces.
A robust framework has been established for this purpose and includes:
- a fundamental score based on quantitative ESG data (level 1);
- a momentum score assigned based on continuous analysis of each country's qualitative data (level 2).

The approach used to calculate the overall ESG rating therefore involves **combining a fundamental score, which remains relatively stable over time, with a momentum score, the aim of which is to reflect the analysed country's ESG momentum.**

The strategist cross-references the proprietary rating assigned to the financial data with the ESG rating in order to identify which issuers are of the best quality from both a financial and ESG perspective. If two issuers offer similar fundamentals and returns, the investment team will opt for the issuer with the better ESG score.

Level 1: fundamental ESG score

Level 1 corresponds to a country's quantitative fundamental ESG score. This refers to **how well a country ranks on the environmental, social and governance front.**

The investment team uses various databases[4] to identify the different indicators (aggregated or raw) it considers most relevant. These indicators are selected based on how reliable their sources are, how relevant they are to an ESG analysis, and how frequently they are updated[5].

Level 2: ESG momentum score

One must be able to **factor in all ongoing trends, whether favourable or unfavourable,** in order to obtain the most exhaustive overview possible of a country's ESG profile (and associated risks). **The quantitative information required for a full analysis often corresponds to lagging data; we have therefore opted to supplement our analysis with continuous and systematic monitoring of qualitative information** (recent events, articles, etc.) **on each country obtained from specific sources that are deemed reliable.**

We are able to **streamline our research and, above all, carry out objective comparisons of our data** on recent events/reforms/population sentiment **by making use of the progress made in the**

[4] Sources vary depending on the purpose of the indicator in question. Below is a list of the sources used most frequently: United Nations Office for Disaster Risk Reduction / United Nations Food and Agriculture Organization / International Labour Organization, WHO-UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene / Global Health Observatory, WHO / databank of World Development Indicators, World Bank / Skills Towards Employability and Productivity (STEP), World Bank / Country Statistics Bureau.
[5] A detailed list of the indicators used for each E / S and G factor is available on request.

fields of artificial intelligence and language processing. We thus apply a fine-tuned universal language model to each ESG criterion (ULMFIT[6] and RoBERTa[7]).
Country-specific analyses focusing on ESG criteria are incorporated each week into the ULMFIT model, which will then classify them as being more or less positive according to the analyst's opinion based on their assessment of the ESG criteria involved.

This level 2 analysis makes it possible to continually monitor an emerging country's relative sustainability and to see if a lasting trend - positive or negative - in a given country might lead to an improvement or deterioration in its fundamentals in the medium term.
This method helps us to understand why a given country's ESG score has improved or deteriorated. We are thus able to build up our own interpretation of a country's situation and take a decision to invest or divest in the medium term.

Establishing an aggregate ESG rating by country

Each country's final score for each of the pillars analysed (Environmental, Social and Governance) is calculated as the weighted sum of the two scores (fundamental and qualitative/momentum) obtained for each pillar.

The qualitative score tends to be volatile as ESG themes cover a wide range of topics and the amount of data available for analysis may differ from one period to the next. We factor this in by ensuring that the weighting assigned to the qualitative score for each pillar (E, S and G) depends on the number of sentences analysed over the period (the score is updated on a monthly basis).
We determine this weighting by comparing the number of sentences recorded over the period for a given country and specific theme (E, S or G) with the number of sentences identified over the period for the region (e.g. in Argentina's case, we consider Latin America) and the pillar in question.
If the number of sentences recorded for a given pillar exceeds that of the reference sample, the qualitative score will carry a heavier weighting, and vice versa.

Once the scores have been aggregated for each pillar (E, S and G), a final rating is then calculated for each country. The sovereign ESG rating must also reflect any risks that may arise in the future. So, when aggregating the three scores (E, S and G), we assign a higher weighting to the Governance pillar while the Environmental and Social pillars will be weighted equally.

We overweight the Governance pillar as we believe emerging countries above all require political stability and need to build (and maintain) infrastructure (a viable road network, an energy distribution grid) in order to be able to implement lasting social or environmental reforms.

We thus obtain an aggregate score corresponding to a country's relative sustainability.

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[6] The ULMFIT model was developed by Jeremy Howard and Sebastian Ruder. The researchers introduce their model with the following words:
"We propose Universal Language Model Fine-tuning (ULMFiT), an effective transfer learning method that can be applied to any task in NLP, and introduce techniques that are key for fine-tuning a language model."
Visit this webpage for more information: https://arxiv.org/abs/1801.06146. It was implemented thanks to the Python fastai library.
[7] The neural network RoBERTa is a BERT-enhanced (Google) Facebook model. Visit this webpage for more information: https://ai.facebook.com/blog/roberta-an-optimized-method-for-pretraining-self-supervised-nlp-systems/. It was implemented thanks to the Python HuggingFace transformers library.

3.5 Impact investing

3.5.1 Investment process

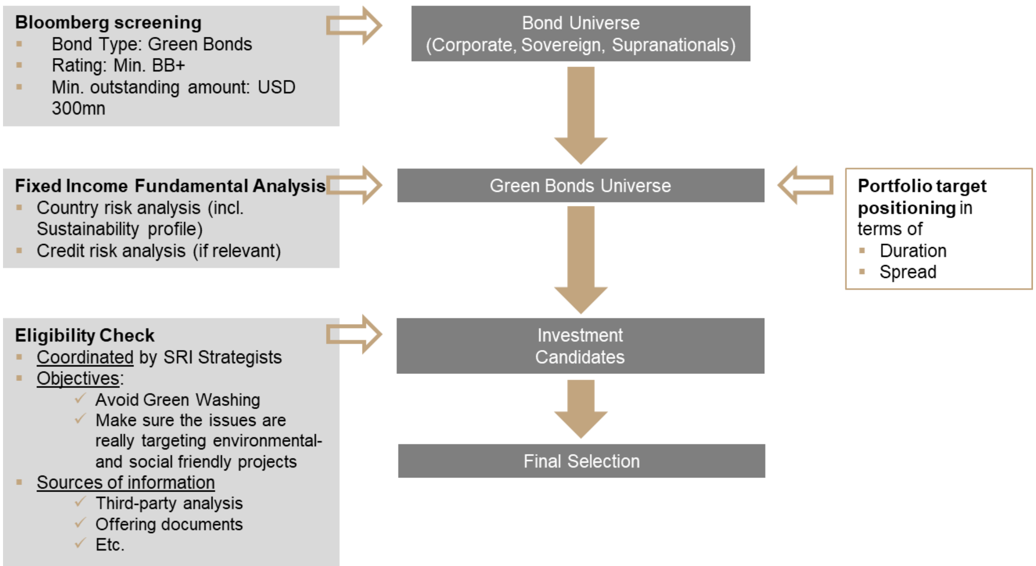
We distinguish between the following types of impact bonds:
- **alternative impact instruments** such as investments in microfinance bonds or in bonds issued by micro, small and medium-sized enterprises (MPME) in developing countries;
- **green bonds** which help to promote awareness of climate and environmental sustainability issues.

3.5.2 Liquid impact: green bonds

This asset class emerged relatively recently but the investment universe worldwide is beginning to gain a certain scale. Issuers consist primarily of governments or supranational entities which issue such bonds for the purpose of funding large-scale projects, but companies also issue them to fund energy transition projects. Such bonds tend to be denominated in strong currencies (EUR or USD).

It is essential to dedicate enough time and resources to carrying out a thorough analysis of such bond issues to ensure they do actually meet impact investing criteria and are consistent with the portfolio's targeted positioning.

BLI's current methodology is summarised below:



3.5.3 Alternative impact: microfinance

We believe it makes sense to include microfinance and alternative impact bonds in a portfolio as **this asset class offers a combination of steady returns and social impact**. It has been demonstrated that microfinance constitutes a **real source of diversification and that it improves a portfolio's risk-reward profile** since:
- it tends to be less volatile than the market (a decorrelation effect);
- the micro-entrepreneurship business model is a more resilient one (a lower default rate).

Before investing in microfinance, it is essential first of all to analyse the issuers, beneficiaries and underlying projects involved. BLI therefore works alongside specialised external advisors who factor in our key investment criteria (minimum issuance amount, rating, type of project, region, etc.), present us with a list of eligible bond issues, and continually monitor the investments selected.

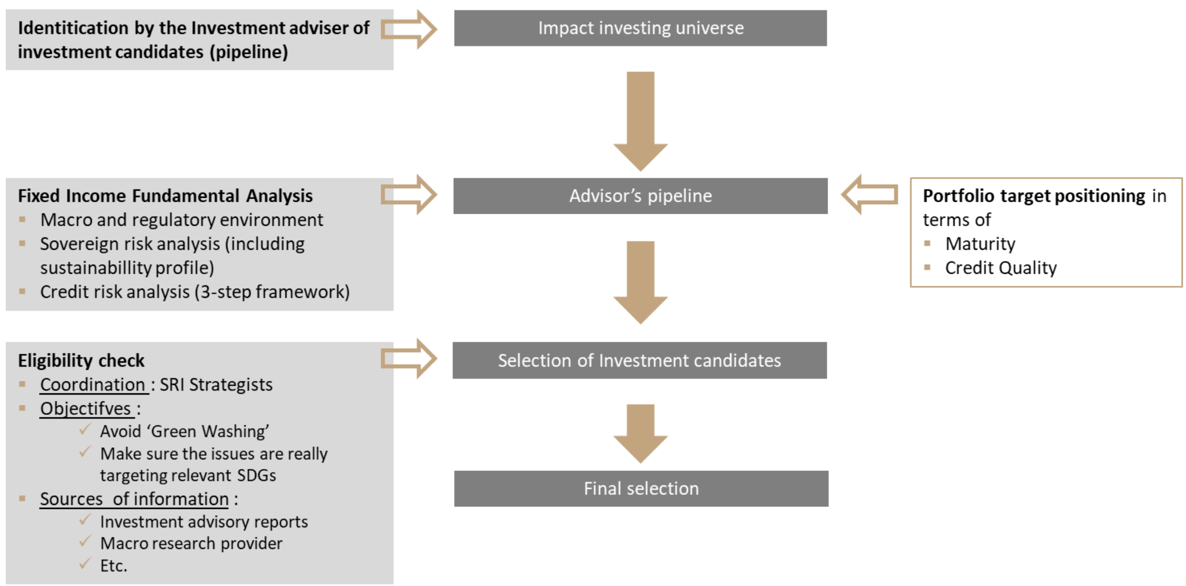
Final portfolio construction thus follows a rigorous investment process that prioritises bond issues of high quality, whether in terms of the quality of the projects being financed or the credit quality of the issuers selected.

Key criteria

- Countries with a robust legal and regulatory framework
- Stable economies
- Eligible instruments: promissory notes, loan contracts, bonds
- Priority enterprises:
  - micro, small and medium-sized enterprises
  - microfinance institutions, preferably forming part of a robust network

The selection process begins with the investment advisor identifying a pipeline of bond issues of potential interest according to the criteria established beforehand by BLI and the advisor, the impact targets set for the fund in question, and the risk/reward profile targeted by the investment team.

Once the advisor has selected the pipeline, BLI's bond management team will then analyse the bond issues to assess their quality in credit risk terms and to gauge whether they are well-suited to the current macroeconomic and regulatory environment.
For instance, issuers should preferably be audited independently and publish their financial statements in accordance with international accounting standards (GAAP/IFRS).
Last of all, the targeted impact must be taken into consideration when assessing each investment candidate.



3.5.4 Establishing and analysing impact indicators

These instruments (liquid and alternative impact) uphold the United Nations Sustainable Development Goals (SDGs) and are thus geared towards supporting the energy transition, limiting climate change and/or promoting other SDGs; they are therefore not subject to any other environmental or social optimisation measures applied to our portfolios.

We assess a portfolio's impact by associating each green bond or alternative impact instrument with the SDG(s) they support according to a second party opinion; this is necessary if the portfolio is to meet its impact investing criteria/expectations. We are thus able to measure the amount of funds allocated to efforts to achieve one or several SDGs.

If a bond issue seeks to promote more than one SDG, then total exposure will be measured in relation to each targeted SDG (so the sum of all exposures to SDGs may exceed total exposure to the impact investment segment).
This approach is taken because it is impossible to quantify the amount of funds allocated from an impact investment and distributed between different SDGs, since USD1 collected from a positive impact bond may in fact support several SDGs.

4 Appendices

4.1 Environmental and/or Social objectives

The table below lists the different indicators along with their target, their timeline, and the portfolio with which they are associated. The objectives apply only to the corporate bond pocket of the funds concerned.

Portfolio	*Indicator*	*Starting value*	*Start date*	*Target objective*	*Target value*	*Target date*	*Next value*	*Next date*
BL - Global Bond Opportunities	Carbon Emissions - Scope 1+2 Intensity (t/USD million sales)	160	30/06/2021	-20%	128.00	30/06/2025	156.00	31/12/2021
BL - Corporate Bond Opportunities	Carbon Emissions - Scope 1+2 Intensity (t/USD million sales)	85	30/06/2021	-15%	72.25	30/06/2025	83.39	31/12/2021
BL - Bond Emerging Markets Euro	Carbon Emissions - Scope 1+2 Intensity (t/USD million sales)	463	30/06/2021	-20%	370.40	30/06/2025	451.34	31/12/2021