

Index Insights | Education

Sustainable Investment –
Fixed Income

Sustainable investment—not just an equity game

The challenges and opportunities of
sustainable fixed income investment

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Introduction

The pioneers of sustainable investment focused on one asset class above all—equities. Now, however, asset owners and asset managers are demanding greater coverage of sustainability issues across the whole portfolio, seeking alignment with specific values or commitments.

In this FTSE Russell paper, we explore the role of sustainable investment (SI) in the global securities market's largest asset class, fixed income. We note recent levels of investor demand for this type of strategy, investigate the challenges in implementing a sustainable approach in fixed income, look at the potential impact of sustainability on a portfolio's risk/return profile, and describe FTSE Russell's approach to implementing sustainability in fixed income indexes.

FTSE Russell offers market-leading capabilities and datasets across asset classes, helping investors address a variety of objectives. In 2022, FTSE Russell's parent company, London Stock Exchange Group (LSEG), employed 450 specialists in sustainability, enabling us to take a holistic approach in this fast-evolving but complex area.

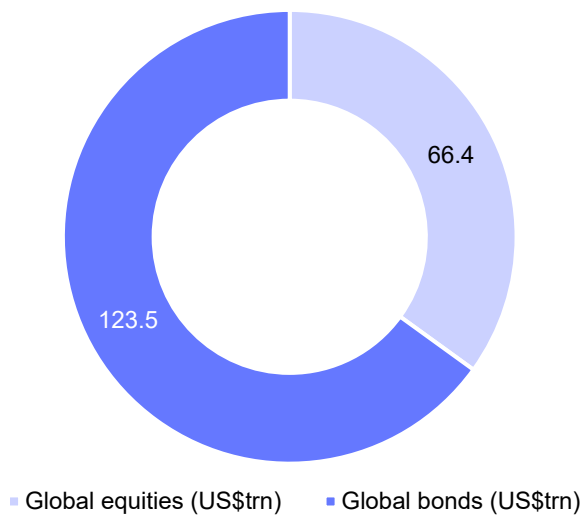
Contents

Rising interest in sustainable fixed income.....	4
Challenges of implementing SI in fixed income vs. equity.....	9
What are the practical considerations when constructing a SIFI index/portfolio?.....	13
Sustainable investment – no longer just an equity game	14
Appendix – Case Study: Investing sustainably with a custom credit index	14

Rising interest in sustainable fixed income

The fixed income (bond) markets are the largest tradeable securities markets in the world. As at the end of 2020, the market value of all global fixed income markets was nearly double that of global equity markets (see Exhibit 1).

Exhibit 1: Comparison of the global bond markets and the global equity markets by market value



Source: FTSE Russell, SIFMA, as at 31/12/2020, The global equity market capitalization is represented by the FTSE Global All Cap index.

While sustainable investing in the equity markets has a long history¹, recent years have seen a sharp rise in interest in applying similar methodologies to fixed income portfolios.

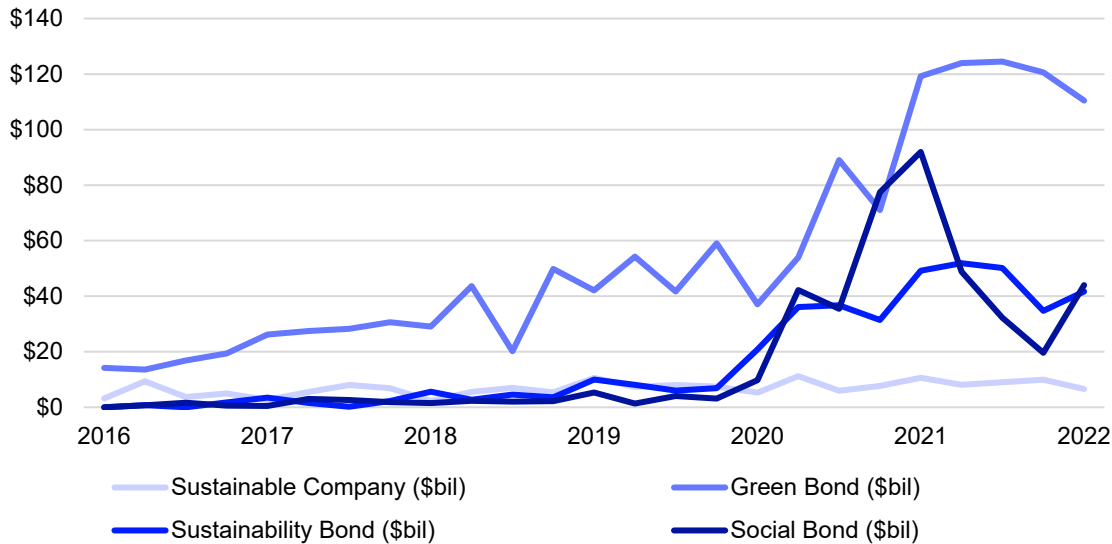
According to LSEG Data & Analytics², the issuance of sustainable bonds reached \$1 trillion in 2021, a 20-fold rise from 2015 and around 10 percent of the global debt capital markets (see Exhibit 2). By transaction type, green bonds showed continued growth, reaching \$489 billion in issuance during 2021, an all-time record and a 54 percent increase on the prior year. Other categories (sustainability and social bonds) also saw strong year-on-year gains and set all-time records during the year.

¹ In 2021, the FTSE4Good index celebrated its twentieth anniversary. See <https://www.ftserussell.com/research/ftse4good-20th-anniversary-special-report>.

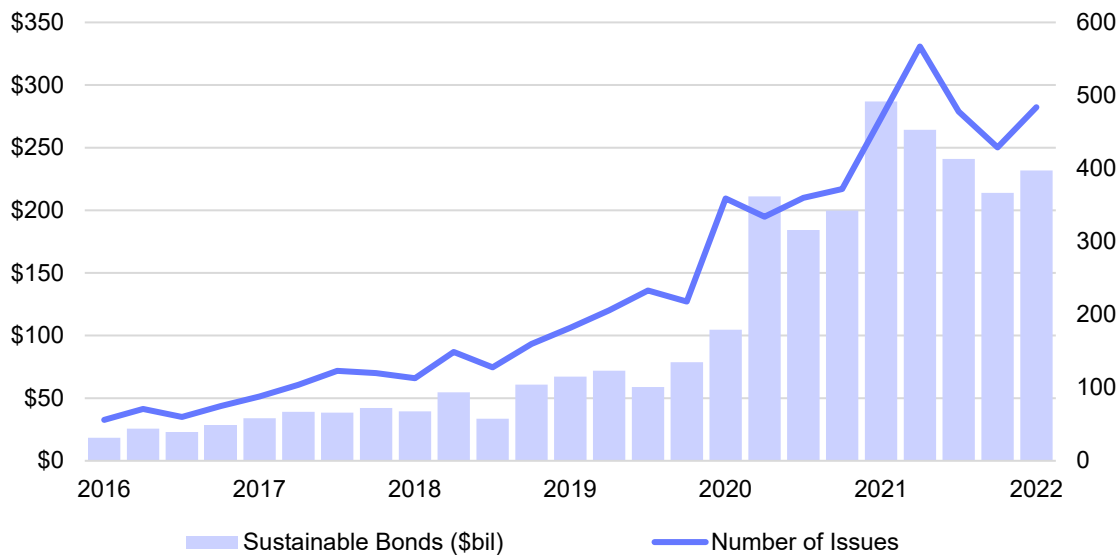
² <https://thesource.refinitiv.com/thesource/getfile/index/af374ef2-95e5-45f7-a33f-2f796dd0ed46>.

Exhibit 2: Sharp rise in sustainable bond issuance

2a. Sustainable bonds by transaction type



2b. Sustainable bond quarterly volumes

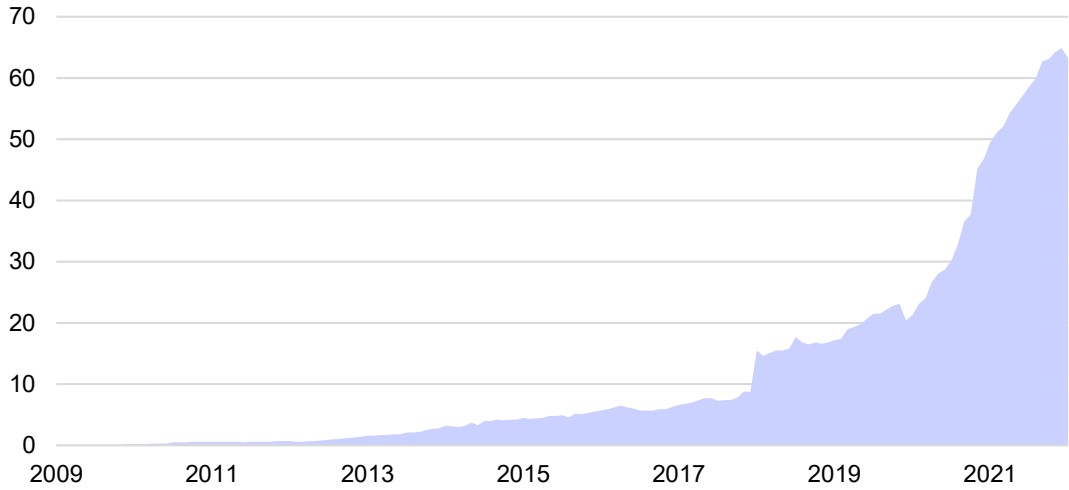


Source: LSEG Data & Analytics Sustainable Finance Review, Q1 2022.

At the same time, more and more fixed income investors are shifting their focus towards a passive (index-based) approach. According to a recent survey from State Street Global Advisors³, while active management still accounts for more than 75 percent of fixed income investment, more than two-thirds of investors are preparing for a shift to indexing. Within the exchange-traded fund (ETF) market, which is almost exclusively index-based, assets in funds with a sustainability focus have recently risen sharply (see Exhibit 3). In aggregate, rising investor demand is driving the rapid development of datasets and methodologies in the Sustainable Investment Fixed Income (SIFI) space.

³ <https://hub.ipe.com/asset-manager/state-street-global-advisors/fixed-income-preparing-for-the-big-shift/10054200.supplierarticle>.

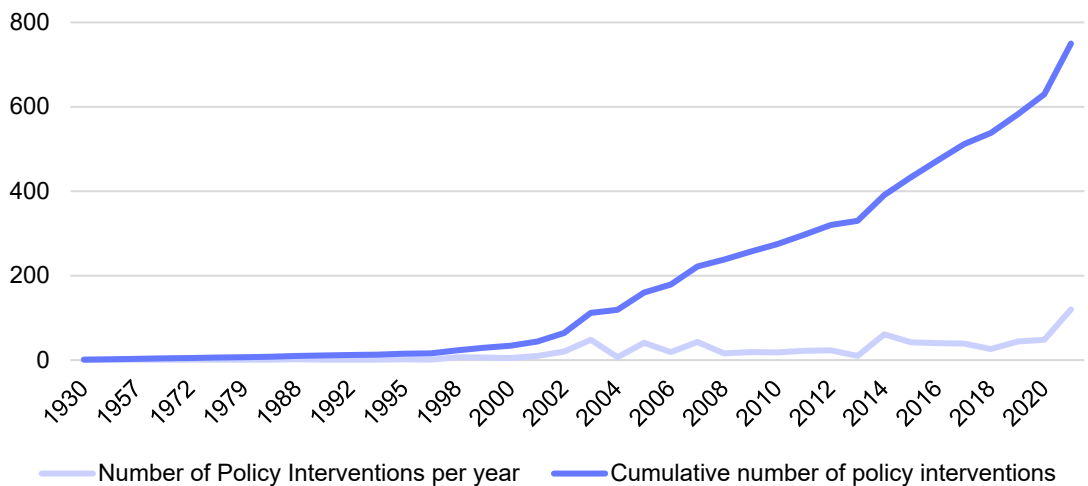
Exhibit 3: Sustainable fixed income ETF assets under management (AUM) globally (\$bn)



Source: LSEG D&A Lipper, as of 29 April 2022.

In parallel, government and policymaker interest in sustainable finance and investment has grown dramatically since the start of the century. The United Nations Principles for Responsible Investment (UN PRI) identified 159 new or revised policy instruments in the first eight months of 2021, more than in the whole of 2020 (see Exhibit 4). This takes the cumulative sustainable investment policy interventions since the 1960s to over 750.

Exhibit 4: Sustainable investment policy interventions



Source: UNPRI regulation database, as of September 2021

What’s driving this trend?

There are three key contributors to the rising rate of adoption of sustainable investment approaches in the fixed income market.

First, **clients are demanding the same standards** in fixed income as they now routinely apply when constructing an equity portfolio. This means that they expect greater transparency of sustainability issues across the whole portfolio and are seeking alignment with specific values or commitments.

Second, **investors increasingly recognize the impact of environmental, social, and governance (ESG) and climate risks** across the sovereign and corporate bond markets. These risks are material, given the prevalence of fixed income in long-term institutional savings portfolios (pension funds and insurance companies in OECD countries have an average of 53 percent and 64 percent, respectively, of their portfolios in bonds⁴). ESG risks, such as the climate change transition risks that confront many bond issuers, could generate significant financial losses for bondholders over the long term. As a result, incorporating ESG considerations in fixed income portfolios is now a prerequisite for investors looking to manage risk and return and ensure stable long-term growth.

Third, **regulations are driving the adoption** of sustainable investment approaches in fixed income.

In 2020, the European Commission adopted new rules⁵ setting out minimum technical requirements for the methodology of EU climate benchmarks. Alongside the disclosure requirements, the regulations set out the specific carbon reduction targets, exclusions, and methodology that investors and index providers need to follow in order for a benchmark to qualify as an EU Climate Transition or Paris-aligned Benchmark.

In 2021, the European Union's Sustainable Finance Disclosure Regulation (SFDR)⁶ set out a number of actions aimed at standardizing financial disclosures and deterring 'greenwashing' (using misleading advertising and branding to cover up negative environmental and social impacts). The SFDR aims to make investment funds' sustainability profile clearer for the average investor, using pre-defined metrics for the ESG characteristics used in the investment process.

Early in 2022, the European Central Bank (ECB) launched a supervisory climate risk stress test⁷ to assess how prepared banks—which are some of the major issuers of bonds—are in dealing with the financial and economic shocks stemming from climate risk.

Furthermore, there are regulatory developments within the green bond market. The proposed European Green Bond Standard (EUGBS)⁸ requires that European green bonds should align with the EU Taxonomy, be subject to external review, and register with the European Securities and Markets Authority (ESMA). This will likely encourage market participants to issue and invest in EU-based green bonds. Together, these requirements are likely to improve the effectiveness, transparency, comparability, and credibility of the region's green bond market.

Similar regulations and guidelines outside the EU, such as the national green bond guidelines in China and Japan and the sustainable bond regulations in several Association of Southeast Asian Nations (ASEAN) countries, have all played a critical role in helping local green bond markets gain the trust of investors and in reducing the risk of adverse financial consequences to investors due to green and social washing.

How far have investors already gone in implementing sustainability in fixed income?

According to the FTSE Russell 2021 survey of 179 global asset owners⁹, over a third of all respondents have already implemented sustainability considerations within their fixed income portfolios.

The proportion of those doing so (50 percent) is highest in Europe, the Middle East, and Africa (EMEA), an unsurprising result given that European institutions have traditionally taken a lead on sustainable investing (see Exhibit 5). According to the survey results, 38 percent of asset owners in the Asia Pacific region and 20 percent of those in North America are now investing sustainably within the fixed income allocation of their portfolios.

⁴ <https://www.oecd.org/environment/cc/Green%20bonds%20PP%20%5Bf3%5D%20%5Blr%5D.pdf>.

⁵ https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-climate-benchmarks-and-benchmarks-esg-disclosures_en.

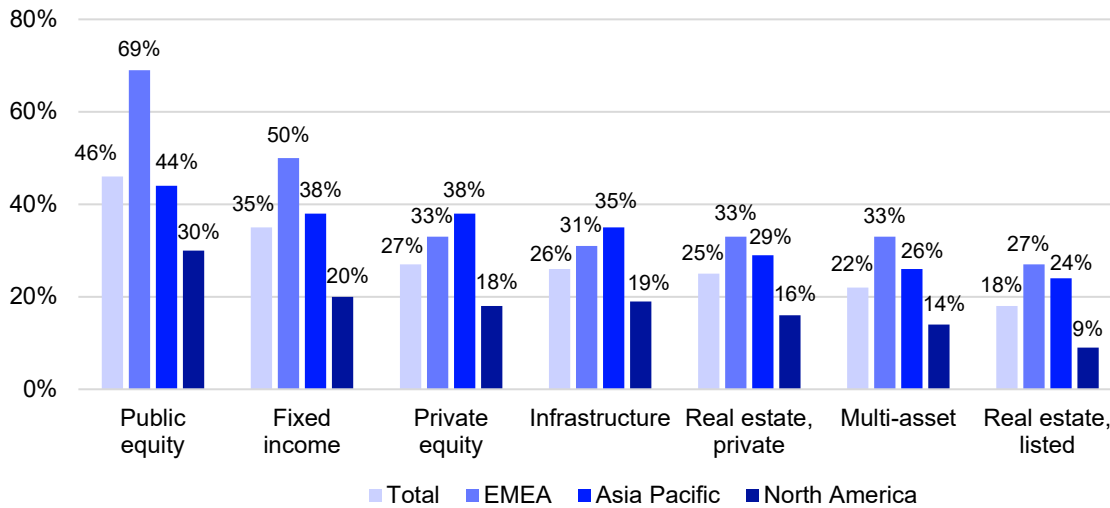
⁶ https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/sustainability-related-disclosure-financial-services-sector_en.

⁷ <https://www.bankingsupervision.europa.eu/press/pr/date/2022/html/ssm.pr220127%7Ebd20df4d3a.en.html>.

⁸ https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/european-green-bond-standard_en.

⁹ <https://www.ftserussell.com/research/sustainable-investment-2021-global-survey-findings-asset-owners>.

Exhibit 5: Asset classes for which sustainability considerations have been implemented

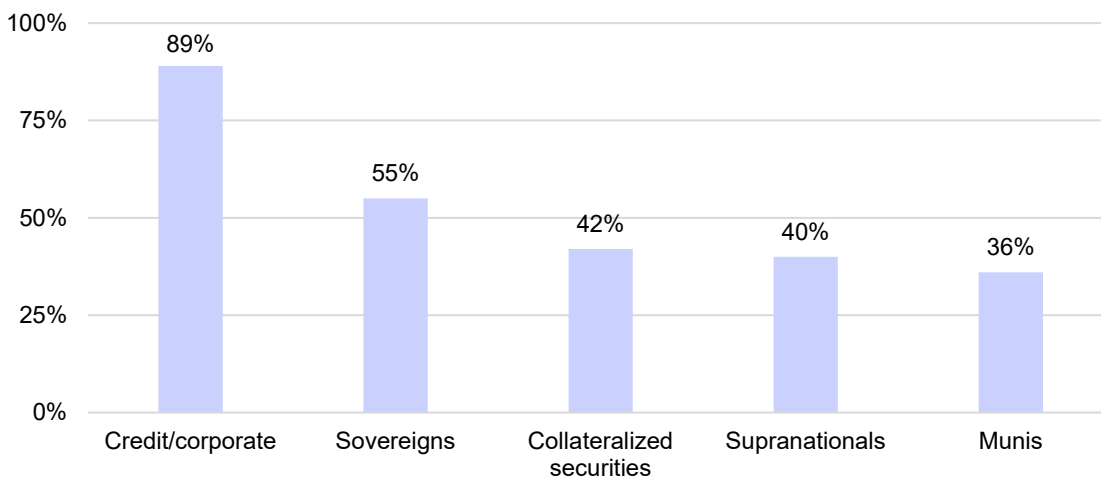


Source: FTSE Russell Sustainable Investment: 2021 global survey findings from asset owners. Survey respondents were asked for which asset classes they had implemented or considered implementing sustainability considerations.

Of those with an existing sustainable fixed income allocation, nearly nine in ten are focusing on credit and corporate bonds, while just over half of the same group are allocating to sovereigns using a sustainability approach (see Exhibit 6).

We believe the trend will likely accelerate in the upcoming years and sustainable investment will become mainstream, making it more challenging to hold portfolios without at least a basic sustainability element. There is a steady increase in investor sophistication, where we see rising demand for a more nuanced approach to everything from the mapping of data points to index construction approaches. While EMEA is ahead in terms of its SI adoption, we see a significant interest from other regions. We anticipate the development of new index methodologies in the coming years to address different sub-asset classes, including securitized and sub-sovereign bonds, as well as an increase in coverage of different regions and industries.

Exhibit 6: Fixed income sub-sectors in which a sustainability approach has been implemented



Source: FTSE Russell Sustainable Investment: 2021 global survey findings from asset owners. Those currently implementing sustainable investment considerations for fixed income were asked for which fixed income asset classes this was the case.

Challenges of implementing SI in fixed income vs. equity

In general terms, approaches to incorporating sustainable investment in fixed income are similar to those in equities.

However, when it comes to the details of the sustainable investment implementation, fixed income as an asset class presents a number of specific challenges.

These include:

1. Heterogeneity of sub-asset classes

The global fixed income markets are diverse in many ways. They consist of fixed-rate, floating-rate, inflation-linked, and hybrid debt instruments. They include bonds issued by governments, government agencies, municipalities, and corporations, as well as mortgage-backed and other asset-backed securities, in both developed and emerging markets. They span a range of maturities, from undated (perpetual) debt to short-term, money market securities, and they are issued in a variety of currencies. Each sub-asset class requires a different approach and an appropriate dataset and methodology.

Over the years, LSEG has acquired and developed market-leading capabilities in this area: **Beyond Ratings** enables FTSE Russell to integrate sovereign climate and ESG datasets into its indexes; **Yield Book** is a highly respected fixed income analytics platform with deep expertise in ESG and securitized products; and **LSEG Data & Analytics** is the global provider of financial market data and infrastructure.

2. Complex corporate structures

While a corporation often has one or two lines of listed equity, it may have multiple subsidiaries and related entities, each capable of issuing its own bonds. Identifying the relationship between these subsidiaries can be difficult, but is critically important for fixed income investors. For example, when applying sector exclusions, one can take a simple approach and exclude a full corporate issuer tree based on a parent company's equity ticker symbol. This approach, however, tends to lead to exclusions that are too extensive and inaccurate. In our sustainable fixed income indexes, we take a more nuanced approach, enabled by granular LSEG D&A datasets that allow us to identify issuers' business involvement and trace their corporate structure. One of the datasets we use is LSEG D&A Business Classification (TRBC), a flagship sector classification that covers more than 250,000 securities and is the most detailed and comprehensive data classification currently available.

To illustrate how challenging this question can be, in Exhibit 7 we depict the corporate tree of HSBC Holdings plc, a banking and financial services company based in the UK with ~1,000 subsidiaries and affiliates. We can see that vast majority of the entities are private (circle shape) and many of them are known to issue bonds, depicted in grey color. TRBC provides business classification data for all active issuers, including private, enabling investors to have full transparency over their portfolio.

Exhibit 7: HSBC corporate issuer tree



Source: LSEG Data & Analytics.

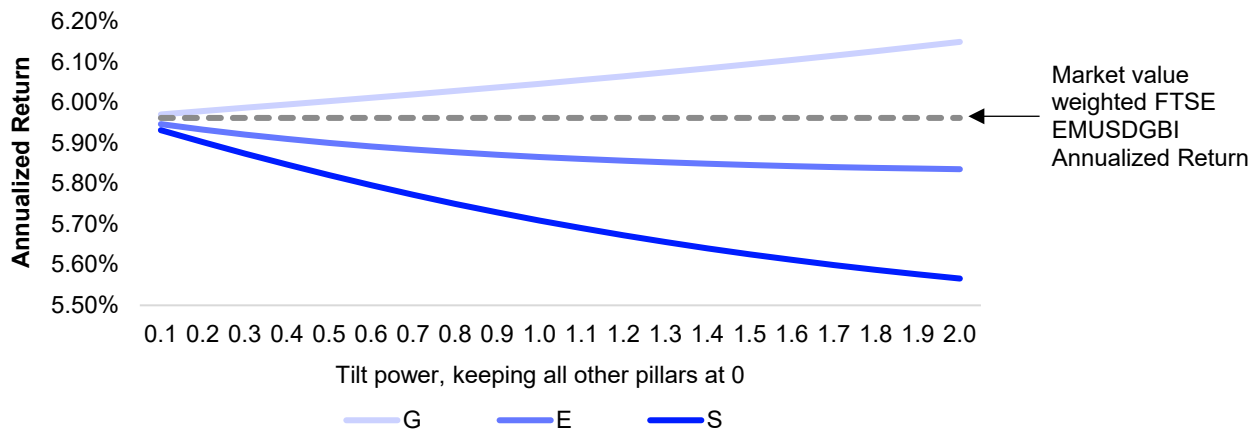
3. Specifics of individual bonds

Individual bonds have distinct liquidity and risk/return characteristics. In turn, these depend on the bond's issuance size, maturity, interest coupon, credit rating, covenants (in the case of a corporate bond), and any inbuilt optionality (such as in callable bonds or securitized bonds). There are some academic papers exploring the relationship between bonds' duration or credit ratings and their ESG characteristics. One example is a Fidelity study¹⁰ which concluded that companies with higher ESG scores tend to have lower leverage, higher dividend yields, and higher sales (in other words, there is a large company bias in the data).

When constructing the FTSE ESG EMUSDGBI (US dollar bonds issued by emerging markets sovereigns) that applies a three-pillar tilt approach to market value weights, we ran an analysis to look at the relationship between individual ESG pillars. Exhibit 9 shows that increasing the weight of countries with a higher governance (G) score improves the historical return of the portfolio, unlike with the environmental (E) and social (S) pillars. You can read more about why ESG emerging market fixed income portfolios have outperformed in our [blog](#).

¹⁰ <https://page.ws.fidelityinternational.com/rs/829-LMV-001/images/ESG%20White%20Paper%20FINAL.pdf>. Fidelity International: The impact of ESG investing in corporate bonds. July 2018.

Exhibit 8: Impact of E, S, and G pillars in isolation on historical annualized return over 10 years



Source: FTSE Russell and Beyond Ratings, as of December 2021. Past performance is no guarantee of future results. Returns shown prior to index launch reflect hypothetical historical performance. Returns and volatility calculated between December 2011 and December 2021. Please see the end for important legal disclosures.

Another important characteristic to consider is the relationship between a bond’s duration and the different ESG pillars, since different ESG issues may not be equally relevant at all points in the future. For example, the governance pillar could be more relevant in the near term, implying that bonds with a shorter duration could have stronger tilts towards this pillar. A similar argument could be made for the environmental pillar and bonds with a longer duration. However, constructing a SIFI portfolio means taking several ESG dimensions into consideration. Changing the underlying risk profile of the portfolio is something that needs to be considered carefully as it may generate a higher tracking error and lead to a deviation in the risk profile from that of the underlying benchmark.

Last but not least, for thematic impact bonds such as green, social, and sustainability bonds in particular, the bond-level screening of the use of issuance proceeds is crucial. These types of bonds are expected to have funds earmarked and dedicated to relevant green and social projects. Therefore, the issuer-level ESG performance may not be sufficient to justify the credibility of the bond. We have seen conventional utility companies praised by the market for their issuance of green bonds to finance renewable energy projects (as part of their transition strategy), but it is not uncommon to see such so-called ‘green’ bonds accused of greenwashing. Investors may introduce additional ESG criteria for issuer-level exclusions in their impact bond portfolio, but the validation of the use of proceeds has been recognized as the most credible method.

4. Risk-return profile of sustainable investment in fixed income

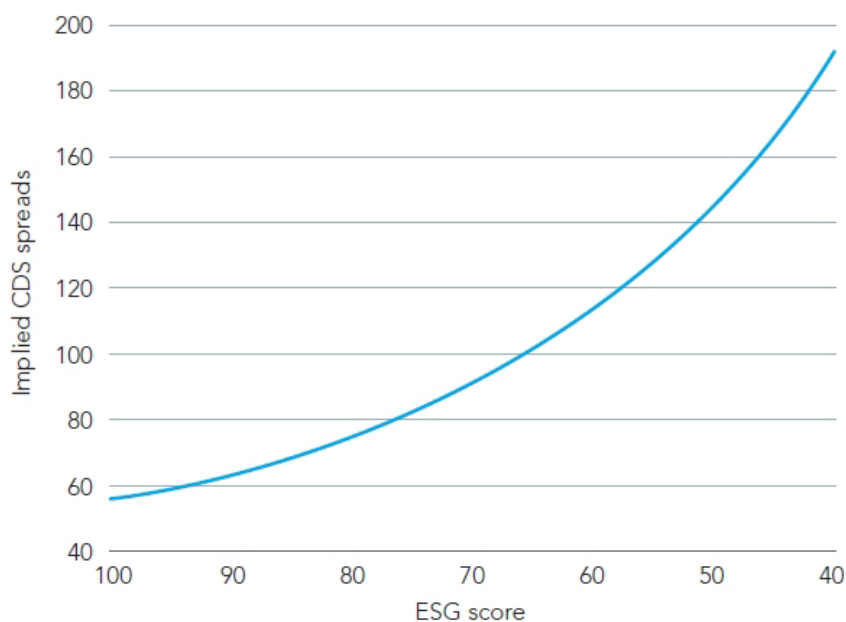
The risk-return expectations of a fixed income investor are fundamentally different to those of an equity investor, a principle that should extend to a sustainable investment portfolio.

In equities, the prospect of substantial upside from good stock selection means that the focus within SI datasets is often on identifying investment opportunities. Conversely, the upside in fixed income is limited, while the potential downside (in the case of a default) is large. A sustainability focus may therefore go hand-in-hand with a screen to help avoid such left-tail risks.

While there is no straightforward relationship between ESG risks and the risk-return characteristics of a sustainable fixed income investment portfolio, there have been some interesting studies in this regard.

For example, in 2020 Federated Hermes and Beyond Ratings published a paper¹¹ showing a relationship between credit default swap (CDS) spreads and ESG scores for developed market sovereigns (see Exhibit 10).

¹¹ [Pricing ESG risk in sovereign credit](#), Federated Hermes and Beyond Ratings, Q1 2020.

Exhibit 9: CDS spreads and ESG scores

Source: Federated Hermes and Beyond Ratings, as of December 2019

The researchers found that, on average, the countries with lower ESG scores have the widest CDS spreads, while those countries with the highest ESG scores have the tightest CDS spreads. The link between ESG scores and CDS spreads remained even after controlling for the risk that should be reflected in credit ratings. The analysis also found that, of the three ESG ‘pillars’, governance had the strongest, most consistent correlation with sovereign CDS spreads, while spreads do not seem to fully reflect environmental risks.

A recent study by FTSE Russell mentioned earlier in the paper extended this approach to emerging market sovereign debt (read more in our [blog](#)). By varying the strength of each ESG pillar in isolation, we analyzed the effect that reweighting based on E, S, and G has on an emerging market sovereign bond index’s risk-return profile. Mirroring the results of the Beyond Ratings study of 2020, we found that the governance pillar had a positive relationship with the simulated historical returns of the index (however, the environmental and social pillars had a negative relationship with return).

5. Stability of universe

As bonds reach maturity, they are usually refinanced, and the fixed income universe is updated to include the new issue. This type of turnover in fixed income datasets is inevitable, but the index designer can seek stability as a goal, helping mitigate the replication costs for an investor tracking the index. When using SI datasets in fixed income, we typically look to keep stability and introduce specific measures to minimize turnover, such as threshold buffers, adjustments to scores, and so on.

6. The role of stewardship

As equity investors are the owners of businesses, they can influence a company’s direction by observing long-term fiduciary standards. In the words of the 2012 Kay report¹², “all participants in the equity investment chain should act according to the principles of stewardship.”

Stewardship can occur by means of regular engagement between investors and companies’ management, and ultimately through shareholders’ ability to vote at company meetings.

¹² The Kay review of UK equity markets and long-term decision making, final report, July 2012.

As bond investors do not own equity, the measures they can take to ensure effective stewardship are different. But their influence is real, nevertheless. For example, fixed income investors can require covenants in bond issues or insist on other conditions when offering to finance companies or projects. Broadly speaking, we see equity holders control ownership, while bondholders control the flow of funding. Therefore, both investor types exert powerful levers in the SI world.

Another challenge is to identify the right fixed income issuer with whom to engage within a large universe of companies. Here, bond investors following a passive mandate may need to consider the size of the holding and apply ESG screening to identify the priority levels of contact. Many large investment houses have a single stewardship team, covering equities and fixed income, making company engagement more pertinent.

Ultimately, since investors collectively have a direct impact on issuers' cost of funding, their views carry weight. And as more and more fixed income assets are managed according to a sustainability mandate, this weight is becoming increasingly influential.

What are the practical considerations when constructing a SIFI index/portfolio?

As already outlined, incorporating sustainability in fixed income can be complex and lead to unintended consequences if not implemented holistically. Potential portfolio design flaws could include:

- Large concentrations in certain sectors
- Exclusions that are too extensive due to a lack of issuer mapping or no data
- Inclusion of special purpose vehicles or SPVs and other financial vehicles that are typically classified as financials, even though they belong to a fossil fuel company and are designed to raise finance for oil and gas exploration
- Undesirable change in portfolio risk profile or high tracking error.

We lay out some practical considerations when implementing sustainable solutions in fixed income indexes. These rely on both design principles and building blocks.

The design principles include the following:

- Taking into account the **different risk-return characteristics** of bonds (when compared to those of equities)
- Developing **clear methodologies** for achieving sustainability goals (for example, the use of exclusions, thresholds, multifactor tilts, and target exposures)

Creating a framework to **measure the improvements** in sustainability in order to meet pre- defined goals and/or regulatory thresholds.

The required building blocks include:

- A comprehensive family of conventional fixed income indexes
- A mapping between bonds, issuers and datasets
- Broad sustainability datasets (for example, climate risk-related, ESG, UN Sustainable Development Goals) across asset classes
- A sophisticated range of index implementation techniques
- Smart overlays to tailor custom solutions and adjust sustainability or financial characteristics
- Analytics to measure the sustainability characteristics of the indexes
- Rigorous quality control process across data sources.

In the Appendix, we show how FTSE Russell implemented a customized SI approach into a fixed income index for an asset owner, Pensioenfond Detailhandel – one of the Netherlands' largest pension funds.

Sustainable investment – no longer just an equity game

Although the origins of sustainable investment are in the equity markets, recent years have seen a sharp rise in interest in applying similar methodologies to fixed income portfolios. This trend is likely to accelerate in the years ahead.

Implementing a sustainable investment approach in fixed income requires a detailed and sophisticated understanding of the nuances of this asset class, the ability to map exposures between bonds, issuers, and datasets, a sophisticated range of index implementation techniques, the ability to customize index solutions, and a range of analytics to measure the sustainability characteristics of the resulting indexes.

With over 450 specialists in sustainability, London Stock Exchange Group (LSEG) and its index arm, FTSE Russell, is well-equipped to meet client needs in this fast-evolving but complex area.

Appendix – Case Study: Investing sustainably with a custom credit index

Extending sustainable investment to credit: an innovative approach to fixed income indexes

Pensioenfonds Detailhandel is one of the Netherlands' largest pension funds and a signatory to the Principles for Responsible Investment (PRI). In 2019, Detailhandel chose an innovative equity benchmark, the FTSE Custom Developed ex Korea SDG Aligned index, to help align its developed equity portfolio with four of the United Nations' (UN) Sustainable Development Goals (SDGs). In 2020, Detailhandel extended this approach by investing in a new fund tracking a new FTSE Russell emerging market equity SDG index.

In 2021, Detailhandel went a step further by deciding to align its fixed income assets, starting with the credit portfolio, with the same four SDGs. Detailhandel engaged FTSE Russell (as its benchmark provider) to develop a way to implement the policy within the pension fund's overall investment strategy.

With the three launches, Detailhandel has now aligned almost 50% of its €32bn investment portfolio to the three SDG funds tracking FTSE Russell indexes (correct as of Dec 2021).

Embedding SDGs in a credit index

In 2015, the UN's General Assembly set 17 global goals, designed to be a "blueprint to achieve a better and more sustainable future for all," that are intended to be achieved by 2030. Detailhandel identified the following four SDGs as particularly relevant to its sustainable investment policy:

- SDG 8 – Decent work and economic growth
- SDG 12 – Responsible consumption and production
- SDG 13 – Climate action
- SDG 16 – Peace, justice, and strong institutions

Embedding the SDGs in a credit index required a new design approach from FTSE Russell, when compared to the SDG-aligned FTSE equity benchmark used by Detailhandel in 2019.

This is because the underlying credit benchmark – the FTSE EuroBIG ex-Sovereigns index – consisted of corporate, sub-sovereign, and collateralized bonds, not all of which could be categorized using the existing SDG alignment framework (used for equities).

Rewarding sustainable bond issuance

The FTSE EuroBIG excluding Sovereigns SDG benchmark is a custom index of corporate, sub-sovereign, and collateralized bonds designed to integrate the desired SDGs.

The design of the index enabled Detailhandel to translate its responsible investment priorities into a passive (index-tracking) bond portfolio. The index design also incentivizes the ownership of bonds issued by entities whose activities are aligned with the SDGs.

Index design overview

The key elements of the index design are as follows:

- **Listed corporate bond issuers (c. 50% of benchmark)** – the index follows the existing SDG-aligned equity approach (using FTSE Russell's sustainable investment data inputs, covering ESG scores, green revenues, and carbon), tilting constituent weights towards desired issuers and excluding certain categories of bond (e.g., those issued by arms suppliers)
- **Sub-sovereign bond issuers (c. 28% of benchmark)** – the index uses a customized country-level scoring system based on the alignment of a group of indicators with each of the desired SDGs (for agency and supranational bonds, GDP-weighted scores are used), then tilts towards the desired constituents
- **Collateralized bond issuers (c.17% of benchmark)** – these were determined to be out of scope for the index design
- Private corporate bonds and securitized debt (c.5% of benchmark) – these are also out of scope for the index design
- **Green impact bond overlay** – an additional SDG-aligned overlay rewards the issuers of green bonds by means of an additional tilt factor (with the option to add further social/sustainability-linked tilts)

The new SDG credit index achieves a substantial improvement in sustainability: a November 2020 simulation of the index's methodology showed a 62% reduction in CO2 emissions, a 69% reduction in carbon intensity, and a 64% reduction in carbon reserves for the index's corporate bonds, compared with the reference benchmark (the FTSE EuroBIG ex-Sovereigns index). It also doubled the starting index's green bond exposure.

Broadening sustainable investment goals

In 2021, Pensioenfonds Detailhandel decided to extend its sustainable investment policy to the fund's credit portfolio, building on its past success in embedding UN SDGs into a passively managed equity portfolio. Through a custom index solution, the fund was able to target several objectives simultaneously:

- Align credit investment policy with four selected SDGs
- Help advance the SDGs through its efforts
- Create longer-term value for fund beneficiaries

[Read the full case study](#)

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