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ESG integration principles for fixed income

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This document aims to provide further detail about our approach to ESG integration within fixed income. Our wider approach to the integration of environmental, social and governance (ESG) factors is outlined in abrdn's approach to sustainability risk integration

We have established five key principles that describe what sustainability risk integration means to us at abrdn. The integration process within fixed income is detailed below.

Risk and opportunity-based assessment
Identifying and assessing sustainability risks and integrating those considerations into investment decisions is part of our analysis. We aim to avoid and reduce risks to the financial performance of our investments. Similarly, we aim to identify sustainability opportunities through a forward-looking view, to ensure our funds are well-positioned to benefit from some of the megatrends we are seeing across society.

Financial materiality
Financial materiality is the key driver of our sustainability risk assessment. If a sustainability-related matter is deemed relevant, we will assess its impact or likely impact on the issuer's performance and, subsequently, the financial performance of our investments. This analysis is integrated into our investment decisions. Unless a fund or mandate has a specific sustainability-related objective or strategy, sustainability risks will not necessarily be the determining factor for portfolio construction. If a sustainability risk is not deemed financially material, it may not be considered in investment decisions.

Data supplemented by research
We use data to support our risk analysis. We use a number of external data providers and expert advisers. But we also recognise the backward-looking nature of data, and so we aim to interrogate and supplement this data where relevant. We do this via insights about investments obtained from direct interaction or engagement with the issuer.

Analytical tools
We use external analytical tools for our integration processes. We have also developed bespoke internal tools, in collaboration with external partners, which help us identify and understand the impact of sustainability risks. They also support our investment decisions. The use of these tools may not be binding for the investment process.

Active ownership
Engaging with issuers is an important part of our sustainability risk-integration approach. We will engage if we see a need and an opportunity to gain insights, and/or to influence an issuer's approach.

Research, tools and resources

Our portfolio managers and analysts are supported by a broader abrdn toolkit of ESG inputs to help assess ESG risks and opportunities in their decisions.

Research

Thematic research (all fixed income)

Forward-looking analysis on ESG topics that will affect government, company and sector practices, such as climate change and single-use plastics.

Research frameworks (credit)

Leveraging research from our sustainable, climate, and Sustainable Development Goals funds. These have bespoke research approaches for assessing investment alignment with ESG topics and approval processes for determining the credibility of company commitments.

Engagement (all fixed income)

Engagement provides a forward-looking view of the management of ESG risks, opportunities, and the ability to encourage value-enhancing best-practice standards. For further detail, please see the Engagement section below.

External data (all fixed income)

Our analysts have access to a number of third-party research providers that can support our detailed internal analysis. Different asset teams use tailored data sets.

Tools

For mandates with specific ESG targets, such as carbon intensity and ESG scores, these tools provide oversight functions. abrdn's independent risk and compliance teams also use these tools to monitor adherence with client guidelines where appropriate.

abrdn ESG house score (public credit)

Developed by our Sustainability Group to identify companies with potentially high or poorly managed ESG risks. It is calculated by combining a variety of data inputs from sources including MSCI, Trucost, and internal insights within a proprietary framework in which different ESG factors are assessed according to how relevant they are for each sector. This allows us to see how companies rank in a global context. The score is used by both equity and credit teams.

Climate change tools

Where appropriate, we use multiple tool kits to measure, analyse and engage with companies.

Carbon footprint (public credit and sovereign)

We have separate credit and sovereign models. Carbon footprint measurement provides a baseline for measuring the impact of climate within the portfolio. It helps us to understand carbon-related risks on four levels: portfolio, country, sector and company.

Climate scenario analysis (public credit)

Provides a forward-looking view of transition, physical risks and opportunities. It quantifies the financial implications of different climate scenarios by sector, region and security, which strengthens the integration of climate-change factors into investment decisions.

Climate screener (public credit)

Allows analysts to see how issuers perform on various qualitative and quantitative climate and environmental metrics, versus regional and global peers.

Resources

Asset-class collaboration (all fixed income)

Sharing issuer meetings and research with the wider investment teams, including equity, real estate, and the Sustainability Group. This allows us to gather deeper insights into ESG factors.

Sustainability Group

This team aims to maximise the quality and value of ESG engagement, research, and analysis across all asset classes. This team is responsible for setting sustainability standards across abrdn, driving active ownership and engagement, sustainability research, thought leadership across four pillars (climate change, nature, society and governance) and delivering cross-asset-class training.

Fixed income ESG network

This network consists of the head of ESG fixed income, heads of research, ESG portfolio managers, analysts with sector coverage that is materially sensitive to ESG factors, and dedicated ESG analysts. The network is designed to drive ESG best practice throughout fixed income. The fixed income ESG network is a key forum for sharing ESG insights, communicating updates, and prioritising thematic research and engagement. All colleagues who are part of this forum have responsibility for integrating ESG best practices into their teams as 'ESG champions'. The network meets bi-monthly and has representatives from all regions.

Portfolio construction

We build high-conviction portfolios consisting of return-seeking ideas that are diversified across themes. Given the potential for ESG factors to be financially material, they are considered in both bottom-up security/country selection and the top-down tailoring of risk themes.

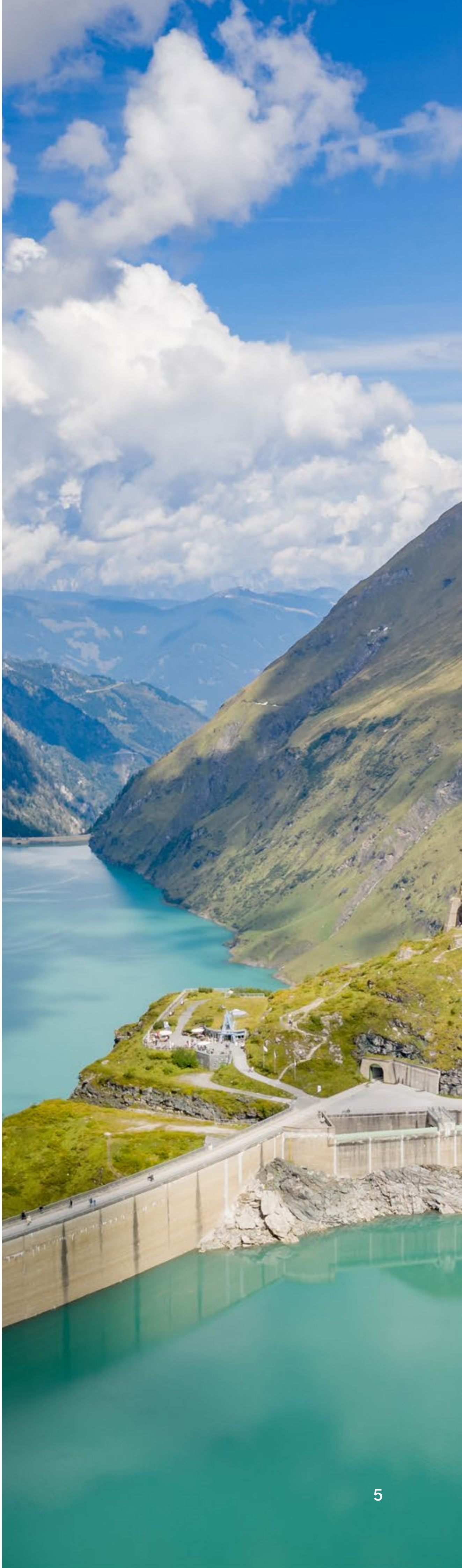
From a bottom-up perspective, ESG is a key component of our analysts' research. Depending on the financial materiality for an issuer, this can influence our view of valuations (both positively and negatively) in terms of deciding if enough compensation is being offered relative to risk. This can affect position weights in portfolios. Where an issuer is identified as having poorly managed material ESG risks, such as weak governance and political frameworks or poor environmental and labour practices, this could potentially result in zero/underweight exposures. Conversely, issuers identified as having strong ESG practices may be judged by analysts as having a competitive advantage, resulting in potentially overweight positions in portfolios. For example, automobile companies with leading electric vehicle technology, or sovereign issuers implementing robust policies to address climate change that may impact their long-term growth potential.

From a top-down perspective, ESG factors have the potential to affect sector valuations for credit portfolios. Our thematic research – including environmental management, climate change, human rights, and labour practices – contribute to our sector assessments and top-down views, both of which can influence portfolio risk themes. For example:

- The cost of borrowing for oil & gas and tobacco companies has risen over longer maturities, as a result of ESG factors and mounting exclusion within European portfolios;
- The transition risks/opportunities for some sectors and countries are more acute than others, such as utilities, building materials, transportation, and oil export-dependent economies;
- Sectors can be affected by economic and political drivers, such as the climate and social policies of various elected governments.

To support ESG insights in portfolio construction, the fixed-income team uses the previously described ESG toolkit, including climate change tools, bespoke research, and engagement (detailed below).

Portfolio managers and analysts discuss ESG aspects as required but also through formalised meetings. Within credit, for example, ESG will be discussed at our stock selection meetings, within sovereign and policy reviews, and within portfolio manager meetings. Ultimately, we take a holistic assessment of debt issuers. Therefore, ESG decisions will be driven by their financial materiality in combination with more traditional financial metrics.



Engagement

Public credit

We actively engage with companies in which we are, or may become, an asset owner. Engagement provides a forward-looking view of the management of ESG risks, opportunities, and the ability to encourage value-enhancing best practice standards. In our research and analysis of ESG issues, we identify any concerns we may wish to discuss. We then set engagement objectives according to the circumstances of each debt issuer. These objectives may include enhancing our knowledge, setting milestones to encourage best practice or to identify leaders, and laggards on any given ESG topic. Engagement is carried out by our analysts, on-desk fixed income ESG analysts, and the centralised Sustainability Group. Engagement may be conducted across asset classes, such as collaborating with our equity team. The way we record engagement activities is common across fixed income and equities – supporting better communication and insight. We also engage collaboratively with our industry peers, supported though memberships and associations, such as Climate Action 100+, Asian Investor Group on Climate Change (AIGCC), FAIRR and Emerging Market Investors Alliance.

Engagement enhances our investment process at multiple stages:

- **Research:** Meeting with key stakeholders enhances our insights into the management of ESG factors and their future plans. Importantly, it provides us the opportunity to raise any concerns and to set milestones to track delivery. Insights can impact an analyst's assessment and ultimately their recommendation.
- **ESG data:** ESG data can often be backward-looking and for some asset classes, such as high yield and emerging markets, have lower coverage. Engagement is a useful tool to enhance data transparency. For example, we aim to obtain information on revenue contributions to activities, how historical/current controversies are being managed, capital expenditure commitments, and decarbonisation targets.
- **Proprietary models:** Engagement provides a feedback loop to enhance our proprietary models. It allows us to change model weights, add or remove environmental and social factors, or directly adjust an individual company's ESG score based on our robust bottom-up assessment. For emerging market sovereigns, this is a useful tool to enhance our forward-looking 'direction of travel' assessment (as detailed below).

Within public credit, we group our engagements into two categories.

- **Review engagements** – Our credit analysts attempt to meet with their companies on a regular basis and ESG themes are often a common topic of discussion. These topics are recorded and, where relevant, specific ESG comments are logged by analysts. These engagements can also lead to follow-up priority engagements if concerns are raised.
- **Priority engagements** – Engagement includes a combination of attendees from the Sustainability Group, fixed income ESG analysts, subject-matter experts from the fixed income ESG network, and collaboration with broader asset class resources (including equity ESG specialists). Priority engagements consist of three interlinked vectors.
  - Respond – reacting to an event or news that may affect a single investment or a selection of similar investments.
  - Enhance – designed to seek changes that, in our view, would minimise risk and enhance company value.
  - Thematic – focus on a particular ESG theme, such as climate change, diversity and inclusion, or modern slavery.

There is a robust governance framework in place to decide on engagement priorities. Fixed income heads of research, portfolio managers, and fixed income ESG analysts have a quarterly engagement meeting with members of the Sustainability Group. Topical themes and client drivers are discussed at these meetings, to agree on engagement priorities for fixed income. We also react to relevant company news. We will meet with debt issuers outside of this standard framework, if there has been a significant event. Engagements are saved in our engagement tracking tool. This enables insights into the engagement lifecycle of individual companies and reporting outputs, which can be tailored for each fund. For example, details such as the number of engagements and the ESG topics discussed (climate, environment, labour etc.)

Sovereign engagement

We aim to engage with sovereigns where appropriate. We see engagement with sovereigns as a useful way to support governments in formulating sustainable policies and adopting best practices. This helps sovereigns to achieve just and sustainable development, while being cognisant of political sensitivities. Engagement also allows us to gain a better understanding of the investment risks posed by ESG factors affecting a country. Sovereign engagements may be held with a variety of different sovereign stakeholders, including a nation's Debt Management Office, Central Bank, or Ministry of Finance.

Engaging with sovereigns on ESG issues presents unique challenges for investors, as these entities are primarily accountable to their electorates and not investors. However, engagement provides investors with an opportunity to establish a constructive dialogue and emphasises the long-term benefits of sustainable policies for both the electorate and the broader economy. Additionally, by focusing on collaborative efforts and fostering partnerships with multilateral organisations, investors can demonstrate their commitment to supporting sovereigns in achieving their sustainable development goals, while respecting their autonomy and decision-making authority.

It can be difficult to set milestones for sovereigns on sustainability issues, given a lack of access to the relevant policy decision makers, inherent politics, and time horizon mismatches with relevant policy actions that take years to have a measurable impact – often beyond the current administration's mandate. However, sovereigns regularly seek feedback on their labelled bond frameworks and we can play a much more active role in shaping outcomes in this area.

We may also observe differences in our level of influence when engaging with developed-market sovereign issuers or larger emerging market issuers, compared with smaller emerging market sovereign issuers. Owing to the larger size, well-established market and benchmark presence, and higher creditworthiness of developed market sovereign issuers, we are less likely to unilaterally drive changes in policy or decisions. While influence may remain limited, emerging market sovereign issuers may offer more opportunities for investor engagement to affect policies and decisions.

Private credit engagement

Engagement activities in private credit can be split into two stages of the process:

- Initial due diligence and underwriting prior to investment,
- Ongoing monitoring of the investment.

During the initial due diligence phase, we engage to understand the risk and opportunities to which the underlying assets or companies are exposed. We may do this via direct conversations with management or technical advisers where applicable. For commercial real estate debt, for example, we will have access to specialist environmental reports. Our greatest ability to set milestones for our borrowers occurs prior to investment, where we may be able to negotiate certain ESG key performance indicators, ESG reporting, or other ESG-related structuring requirements into the legal documentation governing the investment.

Following initial investment, there are regular opportunities to engage with management. Where material, ESG will be discussed as part of this ongoing dialogue.

ESG rating frameworks

As detailed above, there are a common set of principles the fixed income team uses when integrating ESG within investment decisions. However, given the vast diversity of different sub-asset classes, different investment teams also incorporate tailored approaches. These have been detailed below.

Public credit

Credit analysts[1] conduct an ESG assessment of a company's credit profile and assign an ESG risk rating to each issuer, ranging from low, medium, high (low is better – low risk to credit profile). This is credit profile-specific and represents the impact that we believe ESG risks are likely to have on the credit quality of the issuer now and in the future. The key areas of focus are the materiality of the inherent environmental and social risks of the sector of operation (such as greenhouse emissions, water usage, and cyber security), and a judgement on the timeframe over which these risks may have an impact. This is combined with an assessment of the sustainability of a company's corporate governance.

A high rating indicates that there are potentially significant ESG risks, where the impact and timing could negatively affect the credit profile of a company.

Our analysts use an ESG risk-rating framework to support making these assessments. This is a proprietary tool designed to help focus the knowledge and expertise of credit analysts in a systematic way to substantiate the overall ESG risk rating assigned to debt issuers.

The framework is based on sectoral analysis, covering all corporate and financial sub-sectors. It identifies those environmental and social risks that a generic company, operating in a particular sector, is likely to face and manage. Identifying these risks is based on a combination of internal and external materiality assessments. The ESG analysis is performed in the context of the impact to a credit profile.

Within each environmental and social risk category, more granular risk factors are listed (such as greenhouse gas emissions). Using the experience of the credit team and the Sustainability Group, an initial indication of the impact (low/medium/high) and the timing (short term/medium term/long term) of these granular risks is devised. This means that when any company is assessed under the framework, there is a pre-defined sector starting point – that is, a suggested set of likely ESG risks broken down by impact and timeframe. As an example, the starting risk indications for the greenhouse gas emissions for a car manufacturer are 'high impact' and 'short term' (to reflect the importance of carbon emission regulatory targets and the negative financial impact of the fines for missing these). For a real estate company, this risk is 'low' and 'medium term'.

It is the responsibility of credit analysts to work through the framework, risk by risk, to determine whether the sector starting assessment is appropriate given the idiosyncratic aspects of the company in question. For example, it may be that the company is quite 'generic' for its sector, and hence requires little adaptation. However, in the modern world, it is our experience that this is becoming less typical. Corporate structures and business models have had to adapt (and will continue to adapt). This means that while a sector 'label' might still be an appropriate categorisation, the underlying operations of the company may mean it faces quite different or additional risks to its peers.

Unlike environmental and social risks, the more granular governance risks in the framework are not pre-populated, except for country of domicile. All other governance risks are populated by the credit analyst, owing to the idiosyncratic nature of how companies are managed and their respective oversight arrangements. These risks include the level of financial transparency and the complexity of the structure or ownership of the company. They also include the quality of management, their track record, strategy, and capital allocation intentions. As for environmental and social risks, each governance risk is expressed in terms of potential impact and timeframe, and these are assessed on a forward-looking basis.

[1] ESG risk-rating framework for municipal debt, currently being implemented on a rolling basis across our holdings.

The qualitative inputs completed by analysts for impact and timeframe affect a quantitative scoring system, which maps scores to an overall rating of low, medium or high. The scoring contribution weights for ESG factors are tailored, based on the sector of operation. For example, oil & gas has a greater weighting towards environmental factors, owing to significant transition risks. In comparison, the information technology consulting sector has a higher weighting towards social factors, such as data privacy.

Governance for all sectors has the largest contribution weight (around 40%) since, historically, governance risks have been more likely to drive credit spreads. Furthermore, governance practices often indicate the company's oversight of environmental and social practices. As a result, if a company's governance score reaches a set threshold (that is, very poorly governed), the ESG risk rating will automatically be rated as 'high' (irrespective of environmental and social risks)

Example – factors driving a low, medium, high score

abrdn ESG risk rating	Definition
Low risk	ESG risks have been satisfactorily mitigated and aren't expected to have a material negative impact on the credit assessment identified.
Medium risk	One or more ESG risks identified as having a potentially materially negative impact on the credit assessment of the issuer. Management has not fully mitigated these risks but there is progress being made. Examples: high carbon footprint, but realistic timeline for carbon transition in place; weak community relations, but signs of progress; moderate governance issues.
High risk	One or more ESG risk factors identified as having a significant negative impact on the credit assessment of the issuer, which management has not addressed or is unable to sufficiently mitigate. Examples: significant governance concerns; very weak environmental track record; significant labour health and safety concerns; unresolved controversies; activities that may become illegal.

The ESG risk rating provides a qualitative approach for assessing how ESG factors can affect the credit profile of a company and therefore influence our view of a company's valuation. Our ESG risk-rating framework drives a consistent approach for analysts to substantiate their qualitative assessments and add conviction though materiality (impact) consideration and timeliness drivers. It also supports peer challenge and discussion, given the overall ESG risk rating can be broken down into individual risk factors via the framework. This is important as analysts use expert judgement when conducting their assessments, especially when estimating timeframes.

The ESG risk rating feeds into the fundamental credit assessment (FCA) assigned by the credit analyst. This is a forward-looking view of how we think the credit profile will be now and in the future. If the ESG risk rating indicates that a deterioration in the credit profile is more likely, then the analyst's FCA may also be affected. This then feeds into the analyst's investment recommendation, which also includes a relative value assessment – that is, whether sufficient compensation is being offered for all the risks.

Emerging Market Sovereigns

Our ESG integration process for emerging market sovereigns is supported by our proprietary sovereign environmental, social, governance and political (ESGP) framework. This assesses the performance of over 80 emerging market sovereign issuers across a number of factors, which fall within one of four pillars – environmental, social, governance and political. This highlights the importance of the political environment in sovereign ESG analysis. Through this framework, ESG is fully embedded into the investment process and every country analyst is responsible for conducting ESG analysis for the countries they cover. The key components of this frameworks are ESG data and sources, calculation methodology and a 'direction of travel' assessment.

ESG data and sources:

We use a range of data sources, mostly publicly available, which meet the following criteria:

- Indicators able to quantify ESG factors necessary for sustainable economic development;
- Timely and consistent data updates;
- Data comparable over time;
- Reliable data sources, with publicly available methodologies.

We have aligned our indicators 9 out of the 17 UN Sustainable Development Goals, with the aim to cover more SDGs as new ESG data becomes available.

Emerging Market Sovereign: ESGP Indicators and Data Sources

Pillar	Environmental	Social	Governance	Politics
Sustainable Development Goals	**SDG 13** Climate action **SDG 7** Affordable and clean energy	**SDG 3** Good health and wellbeing **SDG 4** Quality education **SDG 5** Gender equality **SDG 9** Industry, innovation and infrastructure **SDG 10** Reduced inequalities	**SDG 16** Peace, justice and strong institutions **SDG 8** Decent work and economic growth	**SDG 16** Peace, justice and strong institutions
Indicator 1	**Air Pollution** Source: World Bank	**Life Expectancy** Source: World Bank	**Voice and Accountability** Source: World Bank	**Corruption Perception** Source: Transparency International
Indicator 2	**Carbon Intensity** Source: Trucost, IMF	**Infant Mortality** Source: World Bank	**Government Effectiveness** Source: World Bank	**Political Stability** Source: World Bank
Indicator 3	**Renewable Energy** Source: Trucost	**Mean Years of Schooling** Source: Human Development Report (UN Development Program)	**Regulatory Quality** Source: World Bank	**State Fragility** Source: Fund for Peace
Indicator 4		**GINI Coefficient** Source: World Bank	**Rule of Law** Source: World Bank	**Press Freedom** Source: Reporters without Borders
Indicator 5		**Gender Inequality Index** Source: Human Development Report (UN Development Program)	**Open Budget Index** Source: International Budget Partnership	
Indicator 6		**Quality of Infrastructure** Source: Global Competitiveness Index (World Economic Forum)		
Indicator 7		**Access to Electricity** Source: World Bank		

Calculation methodology

There are two parts to the framework: a quantitative part, where we calculate a relative score for each issuer in the model, and a qualitative forward-looking assessment, where we assign a positive, negative or neutral 'Direction of Travel' to each country. In arriving at the overall ESGP score, we apply the following data transformations:

- We standardise the data points using z-scores, which signal where each country lies relative to the average of all countries on each particular indicator.
- Z-scores are then averaged within each of the four dimensions, resulting in a score for each pillar.
- We remove the income bias by adjusting the social scores for GDP per capita, using the residuals from a regression of each indicator's z-score on the logarithm of GDP per capita. As social indicators are highly correlated to GDP, we believe through this adjustment we can better compare the ESG performance of countries with different levels of income.
- Our overall ESGP score is calculated as an equally-weighted average of each pillar's score.

The resulting ESGP scores provide useful information in identifying long-term factors and tendencies that might not be fully factored into sovereign bond spreads. The additional use of the Direction of Travel assessments ensures we are looking at these factors in greater depth from a bottom-up, qualitative perspective, including an assessment of materiality, which is essential in investment decisions.

Direction of Travel assessments

The 'direction-of-travel' is our internal emerging market debt (EMD) team's forward-looking assessment of whether a country is on an improving or deteriorating ESGP trend. This is determined by our internal research that is focused on material ESGP factors. By materiality we mean any environmental, social, governance or political factor that can have a significant impact on the valuation of an asset in our investment portfolio over the investment horizon, or which may have a major reputational or legal impact on abrdn. Many ESG indicators are only available with a lag of one or two years. Therefore, they might not reflect recent changes in the political landscape, their influence over institutional quality, or policies the governments are putting in place to address climate change, which may impact their long-term economic growth. Therefore, supplementing the indicators with our internal analysis adds significant value to our investment process.

Developed Market Sovereigns

Assessing relative macroeconomic prospects across countries is essential for a wide range of policy and investment purposes. Yet existing approaches are often narrow in their scope, focusing too much on the short term and what is happening in a small number of developed economies. They fail to take into account a broader range of environmental, social and political factors that make for successful societies. We fill this gap by building a proprietary ESG screen for developed countries. We measure the extent to which countries progress on meeting UN Sustainable Development aligned ESG goals.

The developed market ESG model is based on 20-factors: four environmental, eight social, and eight governance factors to rank countries relative to their peers. We use a range of publicly available data sources which must meet the following criteria:

- Indicators are able to quantify ESG factors necessary for sustainable economic development;
- Timely and consistent data updates;
- Data comparable over time;
- Reliable data sources, with publicly available methodologies.

The Developed Sovereign ESG model offer key insights into the ESG risks and opportunities of an issuer. This is combined with on-desk bottom-up research from the covering analyst to assess the materiality of ESG drivers and how impactful they are to the investment case. In many cases while ESG concerns can be significant, exogenous forces (like Central Bank Policy) can completely dominate other potential bond market drivers, so it is incumbent to weigh up all potential drivers of bond market performance both in the short and long term.

When formalising an investment view, the portfolio manager or analyst incorporates all relevant information which they believe could realistically impact bond prices over the short/medium term. This is detailed in an "Enhanced Country Note", where we combine our Sustainability Group's appraisal of the ESG score across factors, along with the portfolio manager/analyst's investment recommendation regarding a country's sovereign bonds.

Developed Market Sovereign: ESGP Indicators and Data Sources

Theme	Indicator 1	Indicator 2	Indicator 3	Source	Sustainable Development Goal
			Social Indicators		
Health	Life expectancy at birth	Mortality rate under 5		United Nations Human Development Report	Good health and wellbeing
Education	Mean years of schooling	Expected years of schooling		United Nations Human Development Report	Quality education
Gender	Gender inequality index			United Nations Human Development Report	Gender equality
Happiness	Wellbeing ladder index			World Happiness Report	Good health and wellbeing
Economic Opportunity	Employment to population ratio	Income Inequality (GINI)		World Bank, World Inequality Database	Decent work and economic growth
			Political & Governance Indicators		
Individual Engagement	Civil Society Participation	Social group equality		IDEA, V-Dem Institute	Reduced inequalities
Individual Freedom	Freedom of Expression	Civil liberties	Clean elections	IDEA, V-Dem Institute, International Country Risk Guide	Peace, justice and strong institutions
Rule of Law	Transparent laws with predictable enforcement	Access to justice	Absence of corruption	IDEA, V-Dem Institute, Civil Liberties Dataset	Peace, justice and strong institutions
			Environmental Indicators		
Environmental Health	Air Quality	Drinking water		Yale University Environmental Performance Index	Life below water, life on land, climate action
Ecosystem Vitality	CO_2 Emissions Intensity	Species Protection		World Bank	Climate action

Example ESG country indicators

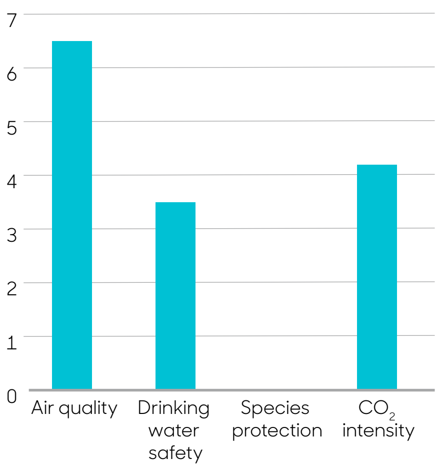
Country			France
	Overall	Median	Rank
ESG Score	75.2	72.1	13
Environmental	84.8	75.6	6
Social	62.8	69.6	19
Governance	78.0	77.6	14

Environmental	Score	Median	Rank
Air quality	78.3	68.4	8
Drinking water safety	87.7	87.3	15
Species protection	99.9	97.4	10
CO_2 intensity	73.2	57.4	6

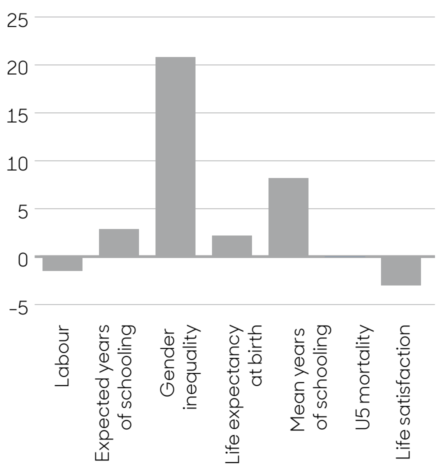
Social	Score	Median	Rank
Labour	40.7	67.7	26
Expected years of schooling	25.7	33.8	25
Gender inequality	78.4	64.1	9
Life expectancy at birth	93.4	90.9	9
Mean years of schooling	55.7	73.0	23
U5 mortality	79.3	81.4	17
Life satisfaction	66.6	67.6	16

Governance	Score	Median	Rank
Absence of corruption	73.0	75.9	17
Access to justice	65.6	74.8	21
Civil Society Organisation participation	80.7	79.5	15
Free and fair elections	91.4	89.7	11
Freedom of expression	86.3	78.3	11
Social group equality	80.5	78.3	14
Transparent laws	68.5	74.8	18

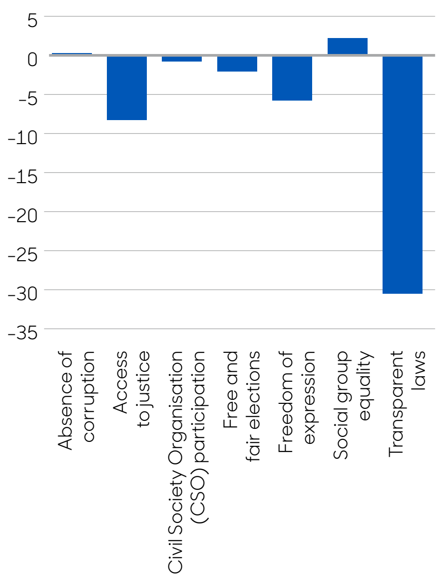
Change 2011 – present



Change 2011 – present



Change 2011 – present



Private credit

Our assessment of private credit largely follows our approach to public credit, allowing for comparability and consistency across portfolios that invest in both private and public debt. The differences are as follows.

For private placements, infrastructure debt and commercial real estate debt, we assign an ESG risk rating to each issuer, ranging from low, medium, to high (low is better – low risk to credit profile). For more detail on this please refer to the ESG rating framework – public credit section above.

In addition to using the ESG risk rating for commercial real estate debt, the underlying property is also assessed using the 'Real Estate Impact Dial'. This is abrdn's proprietary tool for measuring and scoring sustainability factors for real estate. Combining the power and insight of the Impact Dial, together with our robust and in depth ESG analysis, allows the team to identify key areas for improvement at the property level. Where appropriate, a bespoke sustainability framework will then be developed to set challenging and meaningful targets, which aim to improve the sustainability and quality of the underlying property. The improvements will be measurable and verifiable.

For fund finance, each investment is assessed for ESG risks using a dedicated questionnaire during the due diligence stage. The questionnaire is designed to highlight any ESG red flags and allows the team to determine whether they are comfortable with the ESG profile of the borrower.

The majority of general partners (GPs) assessed are anticipated to be low risk. GPs focused on perceived high-risk industries merit particular attention.

In addition, for our private credit assets, we often have an opportunity to influence terms and conditions and to interrogate the contents of loan and security documents. Negotiations often arise at the bidding stage where we seek to best protect the value of our clients' investments. We view this as part of our primary responsibilities in delivering sustainable value to our clients. Our private credit investments cover a broad range of sectors, including economy-wide corporates, real estate and infrastructure. It is commonplace for relevant documents to include provisions in relation to governance and environmental considerations. For example, where we can, we oblige borrowers/issuers to represent and covenant that their activities are, and will remain, in line with environmental laws, sanctions, anti-bribery laws, and specified business activities. We can also request the provision of information reporting on environmental issues.

Documentation and governance

Analysts ultimately own the ESG view of the company or sovereign and document their ESG analysis within their company and country research notes. This will include a qualitative write-up that draws on their own research, engagement activities, and the insights gained from proprietary models and tools. We also include ESG data points within research notes (where data is available). Within credit notes, for example, we include our abrdn ESG house score details, any governance health warnings issued by the Sustainability Group or equity teams, and our proprietary ESG score. We also include any relevant third-party data, including company scores and carbon metrics. This helps stimulate a compare and/or contrast discussion on the ESG assessment presented.

Research notes are stored centrally via our Bloomberg research portal. This is accessible to the whole abrdn investment team, with cross-asset-class research also stored here. We also store engagement notes and ESG thematic research that is completed by our Sustainability Group.

For further details about abrdn's approach to sustainability risk management and our sustainable investing governance structures, please refer to abrdn's approach to sustainability risk integration.

Important Information

The value of investments, and the income from them, can go down as well as up and an investor may get back less than the amount invested. Past performance is not a guide to future results.

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Applying ESG and sustainability criteria in the investment process may result in the exclusion of securities within the universe of potential investments. The interpretation of ESG and sustainability criteria is subjective meaning that products may invest in companies which similar products do not (and thus perform differently) and which do not align with the personal views of any individual investor. Furthermore, the lack of common or harmonized definitions and labels regarding ESG and sustainability criteria may result in different approaches by managers when integrating ESG and sustainability criteria into investment decisions. This means that it may be difficult to compare strategies within ostensibly similar objectives and that these strategies will employ different security selection and exclusion criteria. Consequently, the performance profile of otherwise similar vehicles may deviate more substantially than might otherwise be expected. Additionally, in the absence of common or harmonized definitions and labels, a degree of subjectivity is required and this will mean that a product may invest in a security that another manager or an investor would not.

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