COUNTRY ESG REPORT
SPRING 2024

Exploring ESG drivers to enhance and expand sovereign investment opportunities

SPRING UPDATE, MAY 2024

Marketing material for professional investors, not for onward distribution

Paul Ruijs
Impact Specialist

Peter van der Werf
Head of Engagement

ROBECO

About this report

This semi-annual report provides a summary of Robeco's latest Country Sustainability Ranking, a comprehensive assessment of the performance of 150 countries on environmental, social, and governance (ESG) criteria. It builds on the results of Robeco's proprietary Country ESG Framework which collects and analyses relevant ESG data to calculate country scores.

The resulting scores offer insights into the investment risks and opportunities associated with each country and provide investors with a better frame of reference for comparing countries and regions from a risk/return perspective.

ESG data contained in this report is as of April 2024, unless otherwise indicated. Commentaries, summaries, and analyses are as of May 2024. Please see the Appendix for further details regarding data indicators and methodology.

For complete rankings and scoring details, please visit Robeco's SI Open Access Country Portal.

Sovereign sustainability – the two lenses applied by Robeco

In addition to the Country ESG Framework, in 2023, Robeco launched the Country SDG Framework to inform investments into sovereign assets. Where the Country ESG Framework helps avoid ESG risks and seize investment opportunities, the SDG Framework aims to identify which countries should be prioritized among government bond portfolios in order to further support sustainable development.

In Appendix A we elaborate on the main similarities and differences between them.

ROBECO

Executive Summary - Country ESG scores

Nordics still dominate top

Similar to recent years, Nordic nations continue to dominate the upper ranks. Finland held on to the top spot while Norway narrowly surpassed Sweden to claim the second position, thanks to recent developments in GHG emissions. A straight ranking order, however, masks the fact that all three countries share virtually the same ESG score: Finland (9.04), Norway (9.03), and Sweden (9.03). Ocean Health Index scores deteriorated slightly for both Sweden and Finland, lowering environmental performance relative to Norway, whose score remained stable. On the social front, the trio saw income inequality widen in recent years while gender equality advanced.

Thirteen countries display superior ESG scores (8.0 and above) indicating they exhibit robust and well-balanced ESG profiles. Despite having retained the highest social score (8.91), Iceland slipped six places to rank 11. New Zealand (8.31), on the other hand, has found its way back into the top 10, the only non-European country with this distinction. Most of the top 10 countries have improved their scores compared to the last update, in part because of increased renewable energy uptake and lower GHG emission intensities.

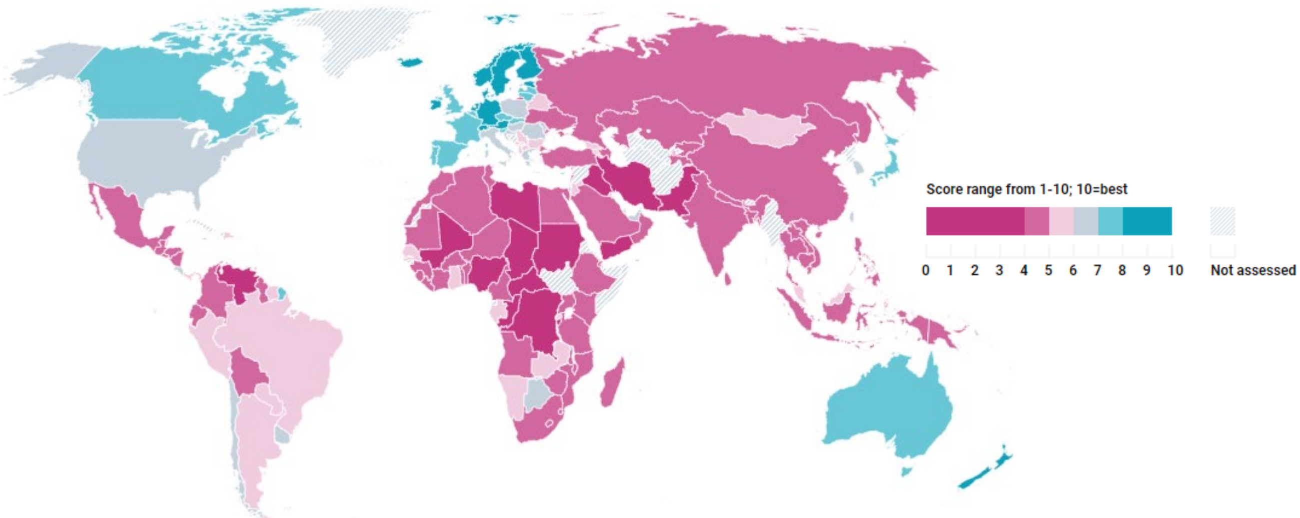
Scores around the globe

Meanwhile, scores of the world's largest sovereign debt issuers diverged somewhat. Japan (ranked 22nd) slightly improved its score (+0.02), while the US (ranked 41st) declined slightly (-0.09). Both countries have higher consumption-based emissions, indicating that the average carbon-intensity of imported goods has increased versus exports. In addition, economic inequality widened in recent years as reflected in their GINI-coefficients.

Some of the largest climbers in the ranking include Zambia (by 16 places) and Mongolia (by 15 places). Notably, Zambia exhibits improvements across all ESG criteria, from renewable energy uptake (E), economic equality (S) and political stability (G). A number of other Sub-Saharan African nations also improved their scores including Liberia (+0.24), Uganda (+0.13), Burkina Faso (+0.15), Eswatini (Swaziland) (+0.18), and Burundi (+0.11).

Conversely, Hong Kong (-0.36), Malaysia (-0.22), Mexico (-0.23) and China (-0.19), lost momentum and dropped several places in the ranking. Closing the rankings are Yemen (2.64), Libya (2.61) and Iraq (2.95) which continue to score poorly across all ESG measures.

Figure 1 | An overview of ESG scores by country



Source: Robeco Country ESG Scores as of April 2024. Complete scores available on Robeco's SI Open Access Country Portal.

Case studies - Mexico and Portugal

Mexico - seizing the nearshoring opportunity

With a population of almost 130 million, Mexico is among the world's 15 largest economies world and the second-largest economy in Latin America. It is abundant in natural resources such as petroleum, silver, and copper, and a thriving agricultural sector which adds to an economy which already commands solid revenues from ample on- and offshore oil fields and a growing manufacturing base.

Over the last three decades, Mexico has underperformed in terms of growth, inclusion, and poverty reduction compared to similar countries. Its economic growth averaged just above 2% a year between 1980 and 2022, although in more recent years this was north of 3% as a result of post-Covid recovery trends.

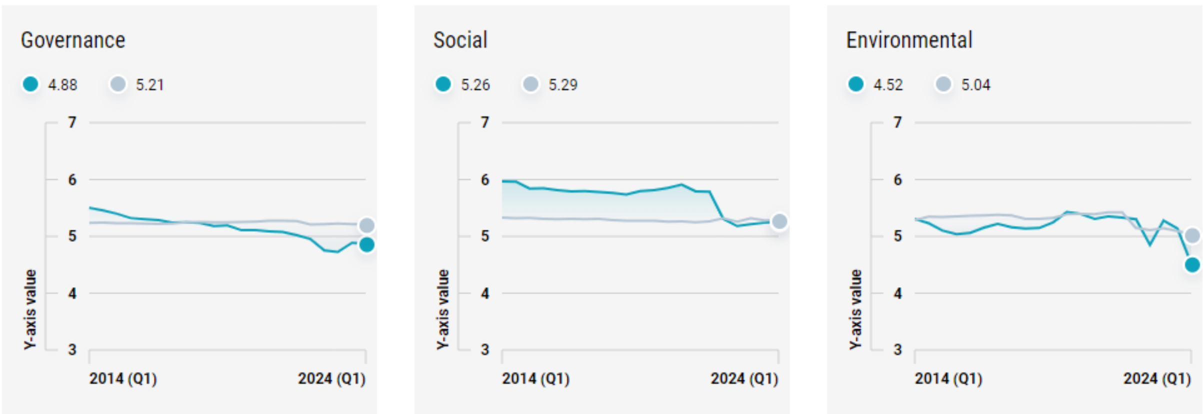
One of the recent buzzwords associated with Mexico's economy is 'nearshoring'. The Covid pandemic exposed vulnerabilities in global supply chains which was followed by an intensified trade dispute between the United States and China. To overcome the disruption, many companies – from heavy machinery to EV manufacturers – have sought to relocate production processes away from China and closer to their core markets.

Thanks to its proximity to the US, Mexico stands to significantly benefit from nearshoring trends and the increasing foreign direct investments (FDI) it should bring. Deloitte has estimated that the nearshoring opportunity could add more than a million jobs and close to 3% to Mexico's GDP.[1] Whether Mexico will be able to seize this extraordinary economic opportunity will largely depend on the confidence foreign companies have in their ability to smoothly and profitably conduct business within its borders.

ESG in Mexico

Mexico's ESG profile paints a somewhat bleaker picture. While the country historically outperformed peer countries in the upper-middle income segment (particularly on Social and Governance dimensions), this has changed in recent years.

Figure 2 | Environmental, Social and Governance scores Mexico vs. upper-middle income average (2014 – 2024)



Source: Robeco, April 2024.

Mexico's governance score has significantly declined from a high in 2005 (5.8) to its current 4.8. This is particularly driven by growing political risks, manifested by contested elections, protests, social unrest, and shifts in political power. These concerning developments can be explained by a variety of factors, including:

[1] https://www2.deloitte.com/us/en/insights/economy/issues-by-the-numbers/advantages-of-nearshoring-mexico.html

- **Corruption:** bribery, embezzlement and procurement corruption are all common in Mexican public service, at the federal, state, and municipal levels. Corruption undermines public trust, weakens the rule of law, and perpetuates social and economic inequalities. Mexico's sub-score on Corruption has deteriorated from 5 a decade ago to 4.23. On a positive note, several innovative reforms of the country's institutional and anti-corruption system have been implemented, which should help bend the corruption curve in the coming years.
- **Violence:** organized crime, drug trafficking, and violence contribute to a sense of insecurity, challenge the authority of the state, and erode confidence in the government's ability to maintain law and order. Recently, drug wars between gangs have intensified in the country, further fueling instability.
- **Rule of law**: weaknesses in the judicial system, including impunity for crimes, arbitrary enforcement of laws, and limited access to justice, contribute to a climate of lawlessness and undermine the protection of citizens' rights. Mexico's 'Institutions' performance has declined to 4.81 in recent years.
- **Environmental issues:** pollution, deforestation, and water scarcity, are exacerbating social tensions and political disputes, especially in regions where natural resources are being exploited.
- **Social inequality:** deep-rooted socioeconomic disparities in Mexico, including unequal access to education, healthcare, and economic opportunities, are fueling discontent leading to demonstrations and civil unrest.

These drivers interact in complex ways and can have far-reaching implications for Mexico's political stability, social cohesion, and broader economic development. Mexico faces a concrete risk that these factors will jeopardize foreign direct investments (FDI) from companies interested in nearshoring production. The Mexican government needs to address these challenges head-on, which will require comprehensive strategies related to governance reform, law enforcement, social inclusion, and sustainable development more broadly.

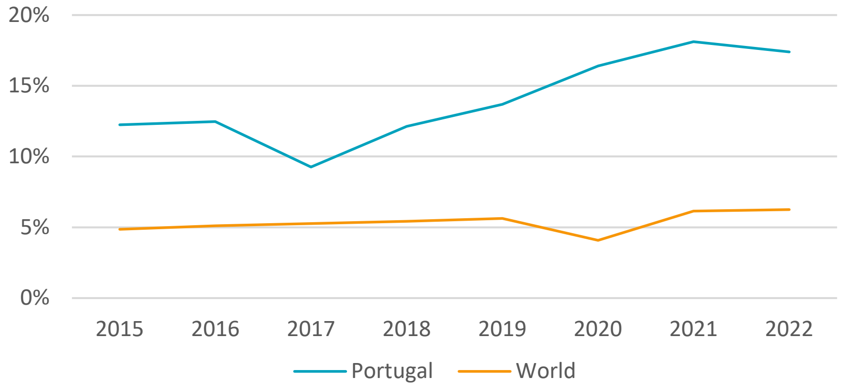
Portugal - renewable energy is powering the economy

Over the past decade, under the leadership of PM António Costa, Portugal has reduced public spending, improved fiscal discipline, and enhanced the competitiveness of the economy. Helped by this strong economic and fiscal management, the nation recovered from the economic downturn it experienced during the Euro- and global financial crises.

Despite economic challenges, Portugal prioritized renewable energy as a strategic sector for investment and growth. The country has abundant natural resources for renewable energy generation, including wind, solar, hydroelectric, and biomass. One notable initiative was its National Renewable Energy Action Plan (NREAP) of 2015, which set ambitious targets for the expansion of renewable energy capacity by 2020. The plan also included specific targets for electricity generation, heating, and transportation. More recently, Portugal announced its commitment to reach 85% renewable electricity by 2030.

To achieve its targets, Portugal implemented various policies and incentives to attract investment in renewable energy projects. These included feed-in tariffs, tax incentives, and regulatory frameworks that facilitated project development and integration into the national grid.

Figure 3 | Portugal vs. World – share of renewables in primary energy usage (2015-2022)



Source: U.S. Energy Information Administration (EIA), analysis as of 2023.

Portugal's investment in renewable energy has not only contributed to the energy transition and emissions savings but has also significantly stimulated economic activity and job creation. The renewables industry has generated employment opportunities in construction, manufacturing, installation, and infrastructure maintenance.

Furthermore, the boost in renewable power allows Portugal to expedite the phase-out of coal and natural gas-fired power plants which are currently fueled by energy imports. As a result, Portugal is increasing its energy independence and security over time – a strategically relevant development. In 2010, Portugal had one of the highest dependencies on foreign energy imports (80%) in the EU. Finally, with more energy from renewable sources, Portugal has more control over domestic energy prices for its citizens and critical industries.

In summary, favorable conditions in combination with effective policies and investments have made Portugal a leader in renewable energy generation. The expansion of renewable energy has positively charged Portugal's economy, driving job creation, stabilizing energy prices, and increasing energy independence.

Positive ESG performance and attractive valuations mean Portugal's government bonds score well on our multi-factor ranking models, resulting in an overweight position in Robeco's Global Multi-Factor Bond strategy.

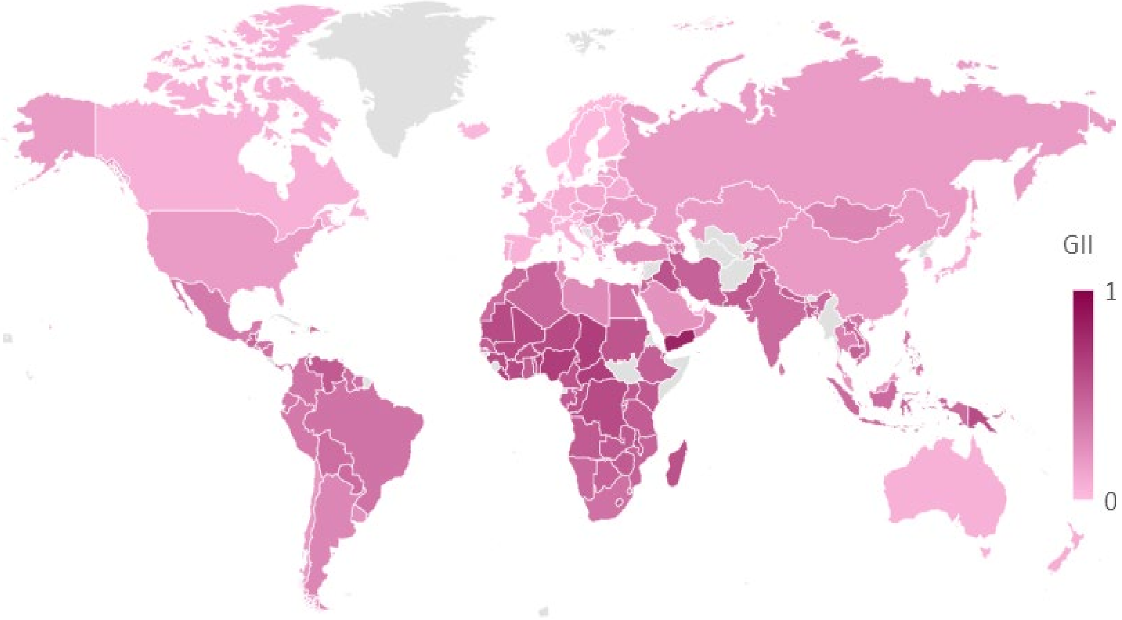
Government bonds within the portfolio must have a better ESG ranking and lower carbon emissions compared to other government bonds in the index, so ESG scores contribute to fulfilling the strategy's sustainability mandate.

Thematic spotlight - gender inequality

Treating women and girls fairly is a moral imperative, but extensive research clearly demonstrates that including women in all aspects of society also fosters economic growth and stability. Our Country ESG Framework integrates the Gender Inequality Index (GII) from the UNDP as part of a broader assessment of human equality within the social dimension.

The GII is a composite metric of gender inequality based on three dimensions: reproductive health, empowerment, and participation in the labor market. It incorporates several indicators, including maternal mortality ratios, adolescent birth rates, the share of seats in parliament held by women, and differences in women's educational attainment levels vs men. Higher GII values are desirable and reflect less gender disparities. A low GII value indicates the country has more gender inequality.

Figure 4 | A map of global Gender Inequality Index (GII) scores



Source: UNDP, 2022.

High and low performers

Some of the best scoring countries in this index include Denmark, Norway, Switzerland, and Sweden. These countries exhibit very strong performance across most indicators including maternal mortality (less than 10 deaths per 100,000 births) and adolescent birth rates (less than 5 per 1,000 women aged 15-19). In addition, the share of females aged 15 years and older that completed secondary education in these countries is almost on par with their male counterparts. Non-European countries that do well in the index include the United Arab Emirates and Singapore which have the 7th and 8th best scores, respectively. In 2019, the United Arab Emirates became the only Arab country, and one of only five countries in the world, to attain gender parity in a national legislative body.

Conversely, Yemen, Central African Republic, Liberia, and Chad are among the poorest scoring countries on these indicators, driven by high maternal mortality ratios and adolescent birth rates. Relatedly, countries that have shown the least improvement in recent years include Azerbaijan, Haiti, Venezuela, Jamaica, Afghanistan, Sri Lanka, and Nigeria.

Gender equality and human capital development

In this context, it is worth noting that the GII is highly negatively correlated (-0.92) with the Human Development Index (HDI) which measures dimensions such as life expectancy at birth, expected years of schooling and Gross National Income (GNI) per capita. Countries with higher income levels and more advanced human development typically perform better on gender equality, and vice versa. This can explain why the above examples (but also many other Sub-Saharan African nations) score poorly in this index.

Figure 5 | Gender inequality indicates poor human capital development

Source: World Bank, UNDP, 2023.
Gender Equality Index (GII) vs. Human Development Index (HDI) shows a -0.92 correlation coefficient

This negative correlation highlights that advancing economic and human development has the potential to uplift women's position in society, and vice versa. For instance, according to the UNDP, newly available technological advances make household chores less time-intensive, freeing women – who typically bear the responsibility for these chores - to participate in the labor market.[2] Moreover, economic development increases access to family planning services, which is associated with lower fertility rates. With a smaller family size and more control over when they have children, women can pursue careers that require several years of upfront training and spend more time in the labor force.

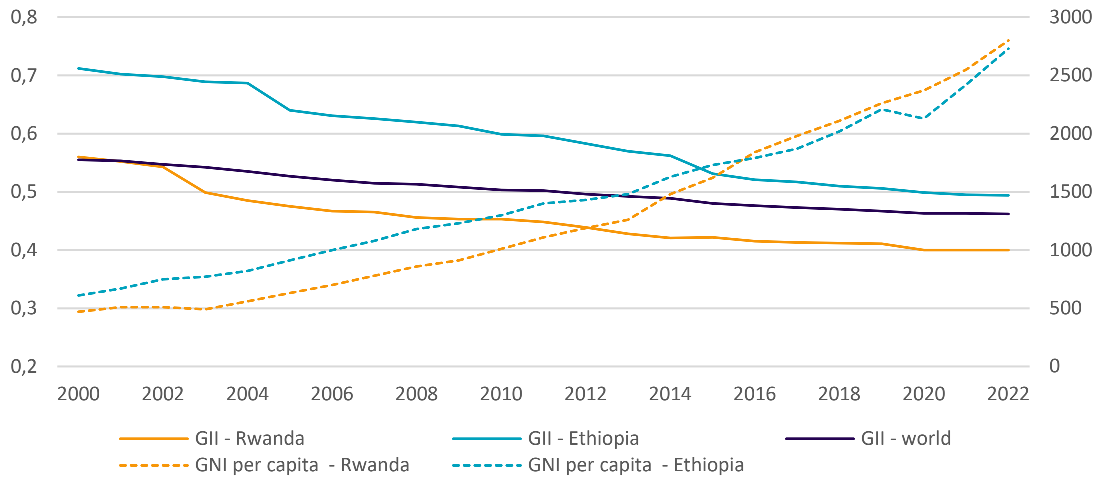
Ethiopia and Rwanda – the payoffs of gender parity policies

Ample research suggests that countries with higher gender equality tend to have stronger economies. When gender gaps persist, productive human resources are under-developed and under-employed, with adverse effects on productivity and growth. Reducing gender gaps in education, health, and financial inclusion can therefore advance economic development and resilience. Ethiopia and Rwanda present illustrative examples.

In these countries, GNI per capita has increased substantially since the start of the millennium, which has gone hand-in-hand with significant advancements in gender equality (see figure 6). In 2000, Ethiopia was still one of the poorest performers in the GII but is now almost on par with the world average. Meanwhile, Rwanda has made substantial progress in closing the gender gaps in education and employment. As a result, the country has one of the highest rates of female labor force participation in Africa which has contributed to its rapid economic growth over the last two decades.

[2] https://www.undp.org/eurasia/blog/power-limits-economic-development-pathway-gender-equality

Figure 6 | More gender empowerment (left axis) and national income gains (right axis) in Ethiopia and Rwanda (2000-2022)



Source: World Bank, UNDP, data from 2000-2022.
Gender Equality Index (GII) scores (left axis) and purchasing-power-parity-adjusted Gross National Income (GNI) per capita (right axis) - Ethiopia and Rwanda (2000-2022)

Overall, the world has made positive progress on the GII in recent years. While encouraging, it is far too slow. As highlighted above, advancing the position of women in society can unlock tremendous economic benefits, making it a material and fertile topic for our sovereign ESG investment research.

Sovereign engagement on nature and climate policy

Recognizing that effectively addressing systemic issues such as climate change and biodiversity loss requires robust regulatory frameworks, Robeco's engagement experts, meet representatives of sovereign governments to advocate for better policies and positive change in these areas that are crucial for regional economic development.

Engagement efforts are taking place with multiple governments, but more recently, Robeco and other institutional investors are taking advantage of changes in legislation and ruling parties and stepping up engagement with Brazil and Australian officials on climate and nature-based policies.

Tackling deforestation through enhanced traceability in Brazil

Brazil, home to 60% of the Amazon basin, boasts the world's largest rainforest and holds a pivotal role in biodiversity conservation. However, preserving this priceless ecosystem has historically been at odds with economic drivers such as the expansion of its agricultural sector, which accounts for nearly 29% of Brazil's GDP. Regrettably, during the final year of Jair Bolsonaro's administration (2022), Brazil witnessed the highest rate of tropical tree cover loss globally.

Amidst this concerning backdrop, Robeco has been in dialogue with governmental bodies to address biodiversity loss. While the new Brazilian government has shown dedication to curbing deforestation and protecting indigenous rights, more coordination amongst governmental entities is needed to transform commitments into tangible outcomes.

In April 2023, Robeco, alongside other members of the Investor Policy Dialogue on Deforestation (IPDD), convened in Brazil for discussions on deforestation, engaging with a diverse array of stakeholders. Central to these discussions was the pursuit of systematic and socially beneficial solutions to the deforestation challenge. Notably, enhancing the transparency and traceability of the cattle supply chain emerged as a key focus area. This approach empowers companies to combat deforestation within their supply chains while aligning with the legislative mandates of the EU Deforestation Directive, which mandates farm-level traceability for soy and cattle imports into the European Union. Additionally, a centralized traceability system holds potential to mitigate broader criminal activities and tax evasion which are often associated with illegal deforestation.

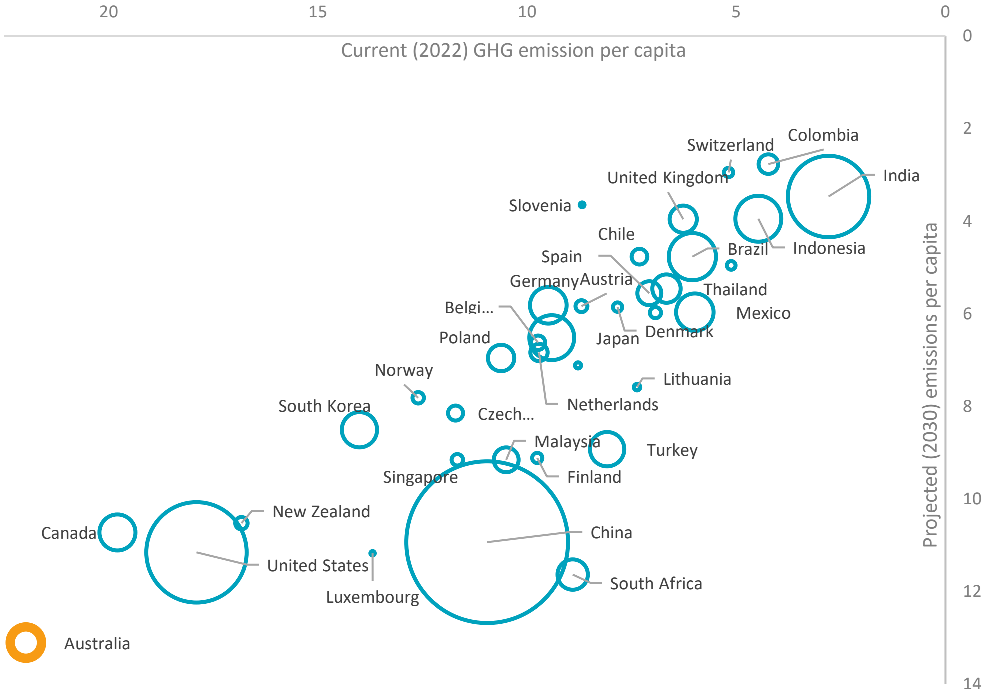
Thus far, the engagement dialogue has catalyzed progress towards establishing a national traceability system in Brazil, marking a significant step in the collective efforts to combat deforestation and safeguard biodiversity.

Accelerating climate policy action in Australia

Australia is a poor performer on the "Climate & Energy" component of Robeco's Country ESG Framework. It has one of the highest GHG intensities in the world (denominated per capita). Moreover, despite some progress in recent years, a significant gap still persists between its climate action policies and what is needed for its emissions to be Paris-aligned. Figure 7 shows the performance of the most relevant sovereign debt issuers on two indicators: current (2022) and projected (2030) GHG emissions per capita.

Australia has the highest values on both metrics, highlighting its poor performance relative to peers.

Figure 7 | Current (2022) vs. projected (2030) emissions per capita by country.



Source: EDGAR, Climate Resource, Robeco. Bubble size represents the magnitude of total GHG emissions per country. Source data as of 2023, the most recent available. Robeco analysis as of 2024.

Following the introduction of the Climate Change Act and other reforms, a Robeco-advised and PRI-coordinated investor initiative has identified Australia as a key prospect for sovereign engagement in order to accelerate climate change mitigation through policy action.

Through collective engagement, this group of global investors seeks to contribute to mitigating climate change and reducing exposure to risks associated with the global transition to a net-zero economy. The engagement is centered on the following objectives:

- Closing the gap between current action and a Paris-aligned emissions reduction trajectory
- Establishing a detailed, economy-wide, net-zero transition plan made credible with supporting policy mechanisms, budget expenditures and investment structures
- Building greater climate adaptation and resilience across the economy and in local communities to avoid worsening disruption and damage from physical risks
- Improving disclosure of climate risks and opportunities consistent with international standards

During a trip in March 2023, the collective engagement group spoke with the federal treasury, debt management office and department of climate change, environment, energy and water in Australia's capital and political center, Canberra. In its financial hub, Sydney, the group met with state government officials for New South Wales, the Reserve Bank of Australia, and the Climate Change Authority. And in Melbourne, Australia's second-largest city, the group secured time with the deputy treasurer of the state of Victoria, its second-largest economy.

Building on stakeholder relationships from first-round talks, the scope expanded in the second half of the year to include three distinct working groups focused on climate policymaking with federal authorities, state governments and relevant regulators. Over the full year, the collective engagement effort logged a total of 36 meetings across all groups, paving the way for a trip in the latter half of 2024 to discuss how policies can help move Australia's National Defined Contributions (NDC) closer to Paris-defined climate goals.

Country SDG scores

In 2015, in an unprecedented display of unity and resolve, members of the United Nations articulated 17 global goals for sustainable development to be achieved by 2030. According to the UN, achieving this ambitious agenda requires investments of up to USD 5 trillion a year from both public and private sources. That means investors have a crucial role to play in financing future sustainable development.

For sovereign bond investors interested in contributing to sustainable development, this will mean prioritizing their portfolios based on country contributions to the UN SDGs. This requires a complementary set of considerations beyond those offered by sovereign ESG ratings (including Robeco's own Country ESG Framework). For this reason, we developed a Country SDG Framework that can help investors integrate the SDGs into their sovereign bond portfolios (see Appendix A for a framework comparison).

Our Country SDG Framework follows a systematic approach that consists of three steps:

- Step 1 - Policies: Investors can support the SDGs by financing countries that have stable, credible, and transparent policies for advancing these goals. Identifying these policies is the starting point of our Country SDG Framework. Ideally, we would generate such insights by analyzing governmental policy documents, but such data is not available, at least not in standardized and comparable formats.

  To overcome this issue, we gauge countries' policies for the SDGs by tracking their progress on 84 relevant indicators over time. For example, one indicator for SDG 3 (Good health and well-being) is a country's maternal mortality ratio. A reduction in maternal mortality would lead to a positive score on this SDG, while increases would lead to negative scores.

- Step 2 - Potential: Here we identify which nations investors can support in gaining better access to capital. This directs capital flows to where they are most needed, helping close the SDG financing gap. To do this, we look at countries' income classifications according to the World Bank, and then screen them for corruption. Countries that are rated as low, lower-middle, or upper-middle income and which do not have high levels of corruption receive a higher score, indicating their need for additional capital to aid development efforts. The corruption check should control the risk of funds being misallocated to poor but untrustworthy governments.

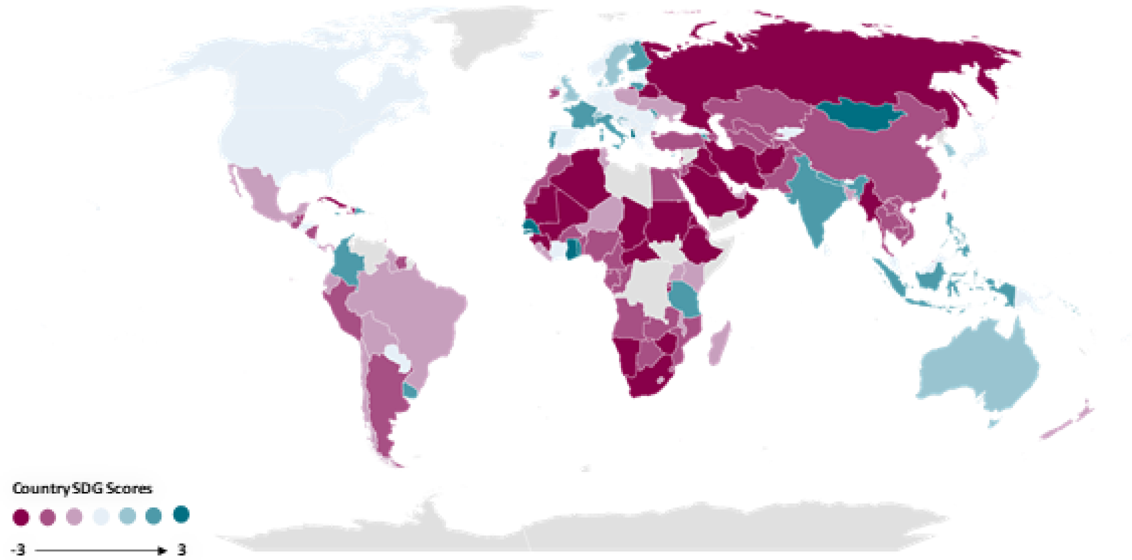
- Step 3 - Controversies: In order to qualify as an SDG investment, a country must follow the principles of good governance that lie at the heart of sustainability itself. Using governance-related data from the Country ESG Framework, we analyze if countries can be considered hardline autocracies or whether they are in violation of rights and civil liberties. In any of these cases, a negative score is assigned on the relevant SDG.

In step 1 companies are assigned a score on each SDG ranging from -3 (high negative) to +3 (high positive), which are consolidated into an overall score.

In step 2, qualifying countries can receive a further upgrade to their scores (e.g. +1). This facilitates their inclusion into the viable sovereign bond investment pool considered by many of Robeco's global-macro investment teams.

Should a country have a negative score in any of the three steps, the lowest score becomes the country's total score by automatic default. This recognize that countries with poor policies for the SDGs (step 1) or those displaying behavior that strongly conflicts with the SDGs (step 3) should not receive a neutral or positive total score.

Figure 8 | SDG scores by country



Source: Robeco, April 2024.

The results suggest that:

- one in five countries (19%) have policies that support additional progress on the SDG Agenda
- 28% have policies that we label as neutral – they do not lead to substantial positive or negative progress
- More than half (54%) of countries have policies that appear to detract from overall SDG achievement

Figure 8 shows the global distribution of policy scores for the SDGs. Each continent hosts countries with positive and negative policy scores. Europe has the lowest number of countries with negative scores, making it the continent with the most supportive policy agenda for attainment of the SDGs. Furthermore, we see countries at all income levels with positive scores (e.g., France and Ghana both have a "medium positive" score) and negative ones (e.g., Myanmar and Qatar both have "high negative" scores).

Creating an SDG-aligned government bond portfolio

Robeco has used its corporate SDG scores to construct SDG-aligned portfolios since 2018. With the development of the Country SDG Framework and ratings system, we expanded this successful corporate approach to government bonds.

Using country SDG scores, we are able to construct a universe of eligible sovereign bonds for our investment teams that not only has an enhanced risk-reward profile but also contributes to the goals of the UN's 2030 sustainable development agenda.

Appendix A - Two sovereign sustainability lenses

ESG and SDG - complementary approaches

Robeco has been actively incorporating sustainability analysis in its investment decisions for sovereign bonds since 2010. Over this period, the Robeco Country ESG Framework has been our main sustainability analysis tool for avoiding sustainability risks and seizing opportunities related to sovereign bond investments.

Optimizing the risk-return tradeoff is one approach to investing in sovereigns, however, it may prevent low-income countries with poor sustainability performance from accessing desperately needed financing.

While as investors, we want the lower risks and positive returns associated with top ESG performers, we also want to help low-ranking countries forge a path towards sustainable economic growth and development. In 2023, our in-house SDG strategist and global macro and fixed income teams developed the Robeco Country SDG Framework. The framework integrates material UN SDG criteria into country analysis in order to identify which countries should be prioritized in government bond portfolios.

Each framework has a distinct purpose which is reflected in differences in measurement criteria, how final scores are calculated, as well as how country performance is ranked or rated. Moreover, there are also differences in the sustainability outcomes that can be expected as well as how they are applied to sovereign portfolios. To avoid confusion, we have summarized the main similarities and differences of the two approaches in the table below.

Table 1 | An overview of the tools used in Robeco's sovereign sustainability analysis

	Country Sustainability Ranking	Country SDG Framework
Purpose	Identifying sustainability risks and opportunities for sovereign bonds, in order to make better informed investment decisions	Identifying which countries should be in/excluded in government bond portfolios, in order to support sustainable development
Lens	Uses sustainability criteria as input	Uses sustainability criteria as output
Model	The model consists of three pillars, Environment (30%), Social (30%) and Governance (40%), that comprise 51 indicators related to 15 criteria	The framework consists of three steps that gauge if: (1) countries have good policies for the SDGs; (2) the country shows clear investment potential that could be realized with access to capital; and (3) a country is involved in controversies that diminish SDG progress.
Output	ESG Score on a 1-10 scale (two decimals)	SDG Score on a -3 to + 3 scale (integers)
Similarities	Countries that have high levels of corruption and are involved in environmental, social, or governance controversies will receive poor scores in both assessments.	

Source: Robeco

Please refer to the white paper, "Sovereign Sustainability – the two lenses applied by Robeco", which is available on Robeco's website and further elaborates on the development and application of these two investment approaches.

Appendix B - Country Sustainability Framework

Ongoing monitoring of the underlying data, data providers and methodology used to construct a model is an integral part of ensuring its accuracy, completeness, and ongoing predictive power. Here, we provide our data sources as well as how sustainability scores are weighted and calculated.

As shown in the Table, the current methodological framework comprises 51 indicators, which are combined into 15 criteria covering the three main ESG dimensions (environmental, social and governance).

The framework captures a broad set of relevant ESG factors with the ultimate aim of providing an assessment of whether a country's development in the E, S and G areas helps preserve the long-term solvency of its bonds. The country sustainability assessment framework presently covers a universe of 150 countries, 23 of which are considered industrialized countries or advanced economies, and 127 emerging market and developing countries.

Table 2 | Underlying indicators and weightings in Robeco's Country ESG Framework

Indicators		Criteria	Weight	Dimensions	Weight	Country
For each country, numerous data series on a variety of ESG features are collected and summarized in 50 indicators. Each indicator gets a predefined weight and a relative score ranging from 1 to 10.		The indicators are aggregated to 15 criteria, whereby each criterion is also assigned a predefined weight.		Each dimension weight is the sum of the criteria weights within the respective dimension.		The country score is the weighted sum of all standardized indicator scores.
> Forest Cover Net Change > Natural Resources Rent > Red List Index > Ecological Deficit/Reserve	> Marine Protected Area > Ocean Health Index > Terrestrial Protected Area > Biodiversity Intactness Index 2030	Biodiversity	7.5%	Environmental	30%	Country Sustainability Score
> Consumption CO2 per Capita > GHG Emissions per GDP > Consumption CO2 5-Yr p/C Change > GHG Emissions 5-Yr p/GDP Change > GHG p/C Reduction 2015-30	> GHG Emissions per Capita > Share of Renewables > GHG Emissions 5-Yr p/C Change > Share of Renewables 5-Yr Change > GHG Emissions p/C Target 2030	Climate & Energy	10%			
> Integrated Water Management > Water Stress Level > Water Use Efficiency	> Wastewater Treatment > Water Stress 2030 Projection > Waste Management	Water & Waste	7.5%			
> ND-GAIN Index	> Natural Hazard Index	Environmental Risk	5%			
> Labor Force Participation Rate 55-64	> Old-Age Dependency Ratio 25Y Projection	Aging	7.5%	Social	30%	
> Education > Human Development Index	> Health	Human Development	5%			
> Global Rights Index	> Human Rights	Human & Labor Rights	7.5%			
> Gender Inequality Index	> GINI Coefficient	Inequality	5%			
> Fragile States Index	> Socio-Economic Vulnerability	Social Unrest	5%			
> Control of Corruption	> Corruption Perception Index	Corruption	7.5%	Governance	40%	
> Globalization Index	> Global Innovation Index	Globalization & Innovation	5%			
> Government Effectiveness > Rule of Law	> Regulatory Quality	Institutions	10%			
> Freedom in the World	> Voice & Accountability	Personal Freedom	5%			
> Political Risk Rating EIU	> Political Risk Rating PRS	Political Risk	7.5%			
> Human Hazard	> Political Stability/No Violence	Political Stability	5%			

Source: Robeco, April 2024

Appendix C - Data sources

Criterion	Indicator	Source*	URL
Biodiversity	Biodiversity Intactness Index 2030 Projection	Natural History Museum, London	The Biodiversity Intactness Index
	Ecological Deficit or Reserve	Global Footprint Network	Global Footprint Network
	Forest cover Net Change	Global Forest Watch	Global Forest Watch (GFW)
	Marine Protected Area	WDPA - World Database of Protected Areas	WDPA (World Database of Protected Areas)
	Natural Resource Rent	World Bank	World Bank
	Ocean Health Index	Ocean Health Index Team	Ocean Health Index team
	Red List Index	ICUN/UN Statistics Division	UN Statistics Division
	Terrestrial Protected Area	WDPA - World Database of Protected Areas	WDPA (World Database of Protected Areas)
Climate & Energy	Consumption CO2 Emissions per Capita	Our World in Data/Global Carbon Project	Per capita consumption-based CO_2 emissions, 2019 (ourworldindata.org)
	GHG Emissions per Capita	EDGAR	EDGAR - The Emissions Database for Global Atmospheric Research (europa.eu)
	GHG Emissions per GDP	EDGAR	EDGAR - The Emissions Database for Global Atmospheric Research (europa.eu)
	Share of Renewables to Energy Consumption	U.S. Energy Information Administration (EIA)	International - U.S. Energy Information Administration (EIA)
	Consumption CO2 Emissions p/C 5-Yr Change	Our World in Data/Global Carbon Project	Per capita consumption-based CO_2 emissions, 2019 (ourworldindata.org)
	GHG Emissions per Capita 5-Yr Change	EDGAR	EDGAR - The Emissions Database for Global Atmospheric Research (europa.eu)
	GHG Emissions per GDP 5-Yr Change	EDGAR	EDGAR - The Emissions Database for Global Atmospheric Research (europa.eu)
	Share of Ren/Energy Cons. 5-Yr Change	U.S. Energy Information Administration (EIA)	International - U.S. Energy Information Administration (EIA)
	GHG Emissions p/C Reduction 2015-30	Climate Resource	NDCs - Climate Resource (climate-resource.com)
	GHG Emissions p/C Target 2030	Climate Resource	NDCs - Climate Resource (climate-resource.com)
Water & Waste	Integrated Water Management	UN Water - UNEP	Home | SDG 6 Data
	Wastewater Treatment	SEDAC - Socioeconomic Data & Applications Center	Environmental Performance Index (EPI) | SEDAC (columbia.edu)
	Water Stress Level	UN Water - FAO Aquastat	Home | SDG 6 Data
	Water Stress Projection 2030	World Resources Institute - Aqueduct	Data: Aqueduct Projected Water Stress Country Rankings | World Resources Institute (wri.org)
	Water Use Efficiency	UN Water - FAO Aquastat	Home | SDG 6 Data
	Waste Management	SEDAC - Socioeconomic Data & Applications Center	Environmental Performance Index (EPI) | SEDAC (columbia.edu)
Environmental Risk	Climate Risk Index	Germanwatch	Globaler Klima-Risiko-Index 2021 | Germanwatch e.V.
	Natural Hazard Index	DRMKC - INFORM - European Commission	INFORM - Global, open-source risk assessment for humanitarian crises and disasters (europa.eu)
	ND_GAIN Index	University of Notre Dame	Download Data // Notre Dame Global Adaptation Initiative // University of Notre Dame (nd.edu)
Aging	Labor Force Participation Rate 55-64	ILOSTAT - International Labour Organization	https://ilostat.ilo.org/data/
	Old-Age Dependency Ratio 25-Year Projection	UN – Population Division	Population Division | (un.org)
Human Development	Education	Legatum Institute	Rankings :: Legatum Prosperity Index 2023
	Health	Legatum Institute	Rankings :: Legatum Prosperity Index 2023
	Human Development Index	UNDP	Human Development Data Center | Human Development Reports (undp.org)
Human & Labour Rights	Global Rights Index	ITUC - International Trade Union Confederation	ITUC GRI - Home (globalrightsindex.org)
	Human Rights	Fund for Peace	Fragile States Index | The Fund for Peace
Inequality	Gender Inequality Index	UNDP	Human Development Data Center | Human Development Reports (undp.org)
	GINI Coefficient	Our World in Data	Income inequality – Gini Index, 1981 to 2019 (ourworldindata.org)
Social Unrest	Fragile States Index	Fund for Peace	Fragile States Index | The Fund for Peace
	Socio-Economic Vulnerability	DRMKC - INFORM - European Commission	INFORM - Global, open-source risk assessment for humanitarian crises and disasters (europa.eu)
Corruption	Control of Corruption	World Bank	WGI 2022 Interactive > Home (worldbank.org)
	Corruption Perception Index	Transparency International	https://www.transparency.org/en/cpi/2022
Globalization & Innovation	Globalization Index	KOF/ETHZ	KOF Globalisation Index – KOF Swiss Economic Institute | ETH Zurich
	Global Innovation Index	WIPO	Indicator Rankings & Analysis | Global Innovation Index
Institutions	Government Effectiveness	World Bank - Worldwide Governance Indicators	WGI 2022 Interactive > Home (worldbank.org)
	Regulatory Quality	World Bank - Worldwide Governance Indicators	WGI 2022 Interactive > Home (worldbank.org)
	Rule of Law	World Bank - Worldwide Governance Indicators	WGI 2022 Interactive > Home (worldbank.org)
Personal Freedom	Freedom in the World	Freedom House	Freedom in the World | Freedom House
	Voice & Accountability	World Bank - Worldwide Governance Indicators	WGI 2022 Interactive > Home (worldbank.org)
Political Risk	Political Risk Rating	Euromoney Country Risk	Euromoney subscription
	Political Risk Rating PRS	PRS Group	PRS Group subscription
Political Stability	Human Hazard	DRMKC - INFORM - European Commission	INFORM - Global, open-source risk assessment for humanitarian crises and disasters (europa.eu)
	Political Stability/No Violence	World Bank - Worldwide Governance Indicators	WGI 2022 Interactive > Home (worldbank.org)

* The bulk of the data is being obtained from CEIC Data

Source: Robeco, as of April 2024.

ROBECO