

Index Insights | Sustainable Investment

How can SDG sovereign indices support impact investing?

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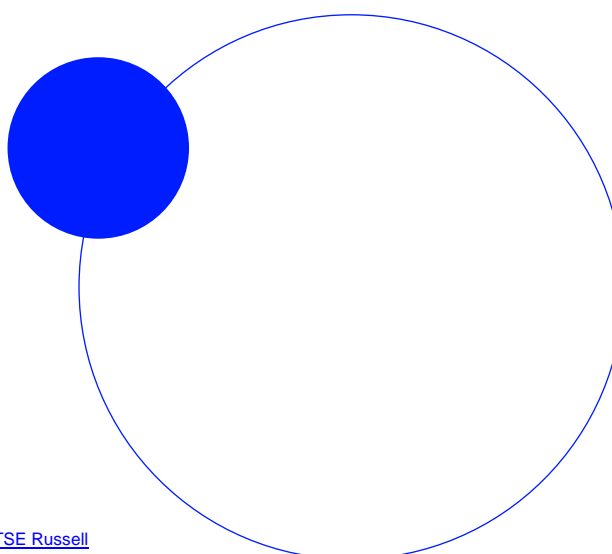
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Introduction

There is a growing interest in incorporating sustainable investment approaches into fixed income and particularly government bonds,¹ and a big increase in interest in incorporating social issues,¹ our recent client surveys show. The Sustainable Development Goals (SDGs) – a collection of 17 interlinked global goals that the United Nations designed to be a ‘blueprint to achieve a better and more sustainable future for all’ – answer both as they are a government-focused concept in which social issues are very present.

The Sovereign SDG assessment is a data product developed by LSEG. It covers about 190 countries and leverages more than 230 KPIs, the majority of which come from the United Nations official SDG database. The model uses a robust statistical approach to transform these inputs into a score for each SDG as well as an overall score. These scores aim to measure countries’ SDG progress, but in the context of sovereign bond portfolios can also provide a robust and versatile tool for impact-orientated portfolio reporting and portfolio construction, including the design of SDG-aligned government bond indices.



¹ FTSE Russell, [Asset owners widely adopting sustainable investment | FTSE Russell](#)

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Background

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations General Assembly in 2015 as a universal call to action to end poverty, protect the planet and ensure that by 2030 all people enjoy peace and prosperity.²



Source: UN (un.org)², November 2023

An SDG is typically composed of eight to twelve targets,³ each using one to four indicators to measure their progress. The targets are either 'outcome' targets (circumstances to be attained) or 'means of implementation' targets.⁴

² UN, [THE 17 GOALS | Sustainable Development \(un.org\)](https://www.un.org/sustainabledevelopment/)

³ Some targets are not used in this model as their underlying indicators are unavailable (low geographical coverage, redundancy, incomparability across countries etc.).

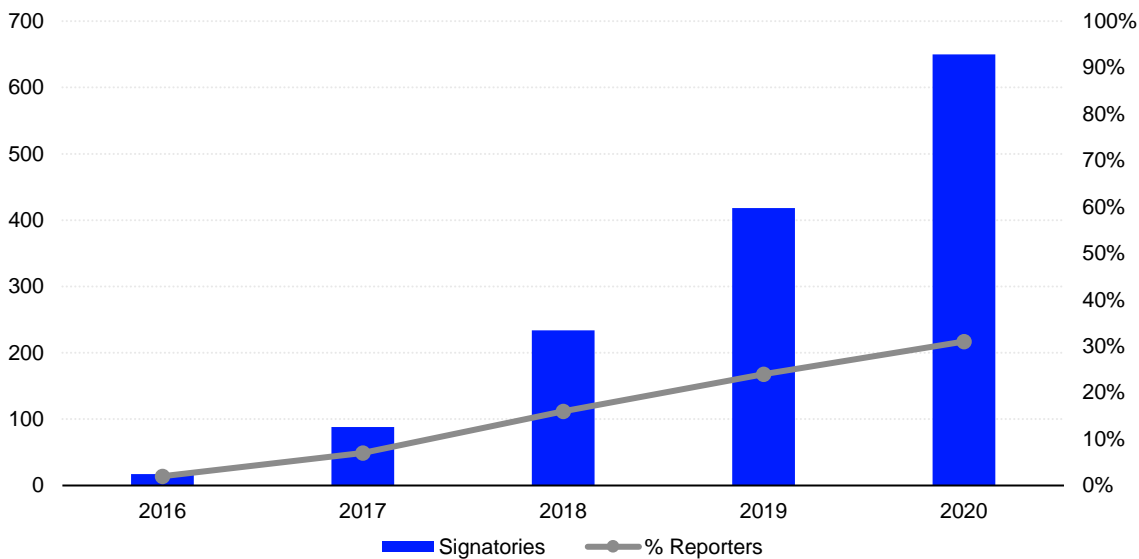
⁴ The official list of SDGs and underlying targets and indicators can be found at: [SDG Indicators — SDG Indicators](https://www.un.org/sustainabledevelopment/indicators/)

Significant growth in SDG investment

Since their launch, the SDGs have gained momentum in capital markets and have been used by several investors as a framework for portfolio reporting, impact assessment or asset allocation. A significant and increasing number of investors are now looking at how externalities can impact their portfolios and are aiming to increase positive outcomes of their portfolios – also known as the concept of ‘ESG as output’. In this context, SDG investment increased by 70% between 2020 and 2021.⁵ For many investors SDG investment comes in the form of specific commitments to one or more of the SDGs. Figure 1 shows the growing number of Principles for Responsible Investment (PRI) signatories⁶ that mention SDGs in their PRI reporting.⁷

However, according to the latest Sustainable Development Goals Report,⁸ the SDGs are at risk due to a confluence of crises dominated by Covid-19, climate change and conflicts. Consequently, the gap in SDG financing remains substantial. According to the OECD’s latest report on the Global Outlook on Financing for Sustainable Development,⁹ the gap to achieve the SDGs in developing countries increased by 56% after the Covid-19 pandemic, totalling US\$3.9 trillion in 2020. This situation can create new risks, as well as opportunities that investors and capital markets increasingly take into account in their investment strategies.

Figure 1. Number of PRI signatories (and percentage of reporters) mentioning SDGs in reporting to the PRI, 2016–2020



Source: PRI (unpri.org),⁶ November 2023

⁵ WEF, [The UN’s sustainable development goals require investment](https://www.weforum.org/publications/the-un-sustainable-development-goals-require-investment/) | World Economic Forum (weforum.org)

⁶ PRI: [PRI | Home](https://www.unpri.org/) (unpri.org)

⁷ PRI, [Investing with SDG outcomes: a five-part framework \(Introduction\)](https://www.unpri.org/investing-with-sdg-outcomes-a-five-part-framework-introduction) | Thought leadership | PRI (unpri.org)

⁸ UN, [The Sustainable Development Goals Report 2022](https://www.un.org/development/desa/pubs/2022/04/2022-report-sustainable-development-goals).pdf (un.org)

⁹ OECD, [Global Outlook on Financing for Sustainable Development 2023: No Sustainability Without Equity](https://www.oecd-ilibrary.org/publications/global-outlook-on-financing-for-sustainable-development-2023-no-sustainability-without-equity) | OECD iLibrary (oecd-ilibrary.org)

Sovereign SDG assessment methodology

Sovereign SDG assessment is a sustainable investing product developed by LSEG, covering about 190 countries¹⁰ and leveraging more than 230 KPIs with historical data since 2000. The model uses a robust statistical approach to transform these KPIs into a score for each SDG. The model also provides an *Overall SDG* score as the average of the 17 SDG scores. (The default solution uses an equally weighted average, but tailored versions could be developed to emphasise one or more specific SDGs.) A brief description of this process is provided below. Further details on the statistical analysis and data sources are available in the appendix.

These scores aim to measure the countries' progress toward the SDGs and can be used for portfolio reporting, portfolio allocation or exclusion, as well as index tilting to create ETFs or benchmarks. Furthermore, the model can provide *SDG Wealth Performance*, assessing how countries perform with respect to their level of wealth. (Further details provided in the next section).

Raw data

The model leverages about 230 KPIs (or indicators), 80% of which are sourced from the official UN SDG database¹¹ (i.e., around 185 KPIs). We selectively enhance these metrics through additional KPIs from other high-quality sources, including the World Bank, the International Roads Federation, Enerdata, EMDAT, LSEG KPIs. The covered period runs from 2000 to present.

Indicator score

Indicator values are normalised to a 1–100 scale (where 100=best and 1=worst) to get the indicator score.

Target score (sub-SDG)

As described earlier, each SDG is composed of specific targets, with each defined by one to four indicators. For each target, the target score is obtained by averaging the underlying indicator scores and normalising again to a 1–100 scale.

SDG score

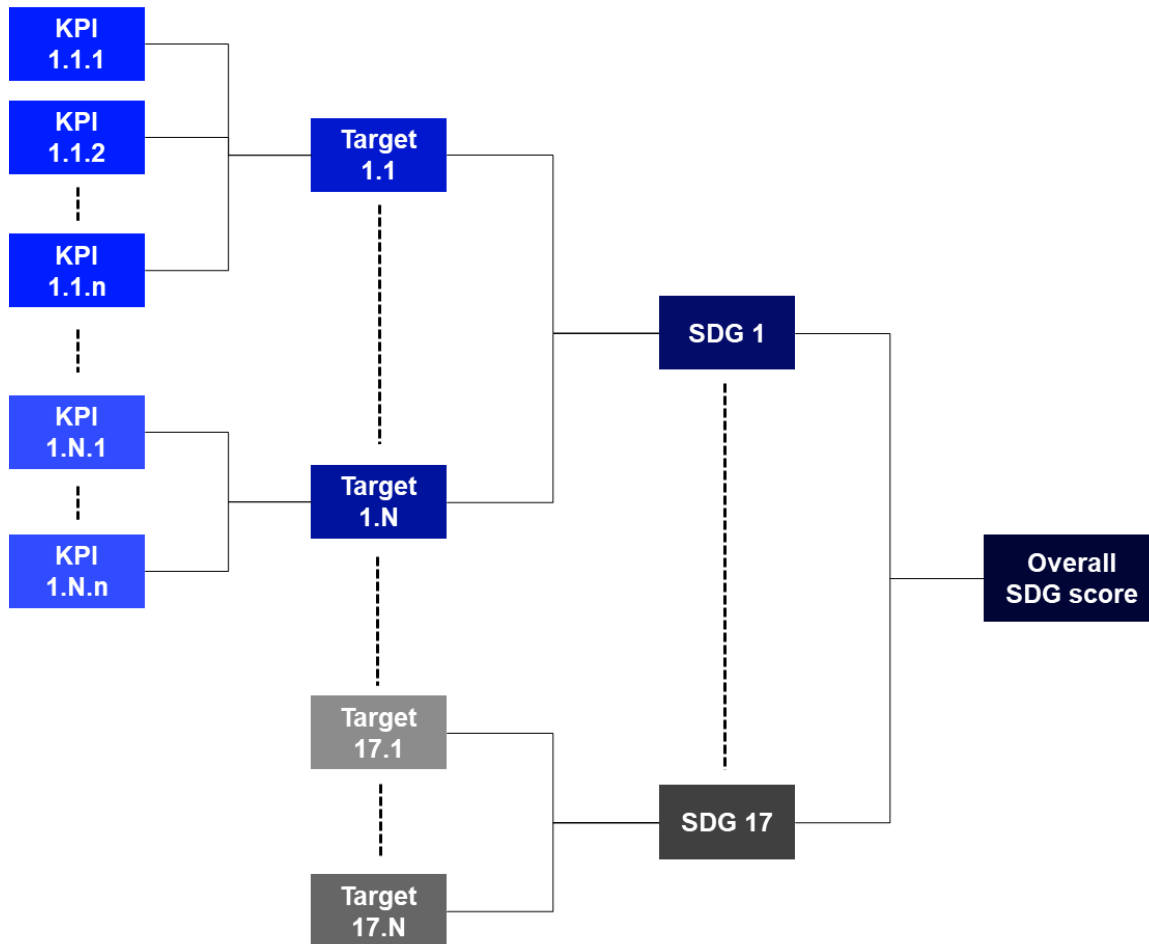
For each of the 17 SDGs, the same average and normalisation process is again applied to the underlying target scores to obtain the final SDG scores.

The Overall SDG score corresponds to the normalised equally weighted average of all 17 SDG scores.

¹⁰ For some countries, some SDG scores are missing due to lack of data.

¹¹ The UN SDG database can be found at: [UNSDG](https://unstats.un.org/sdgs/)

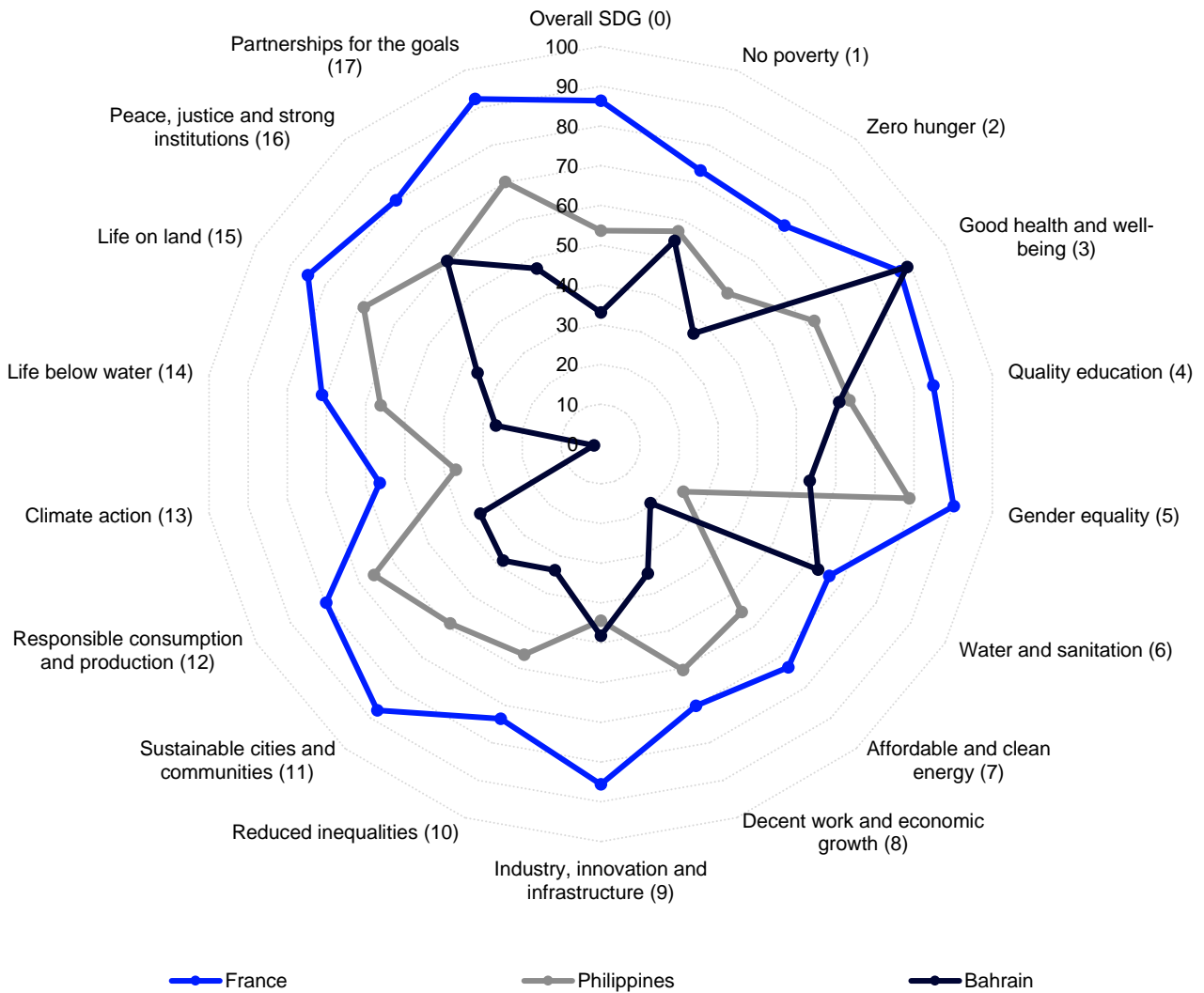
Figure 2. Summary of the data processing for SDG assessment



Source: LSEG sovereign SDG data, November 2023

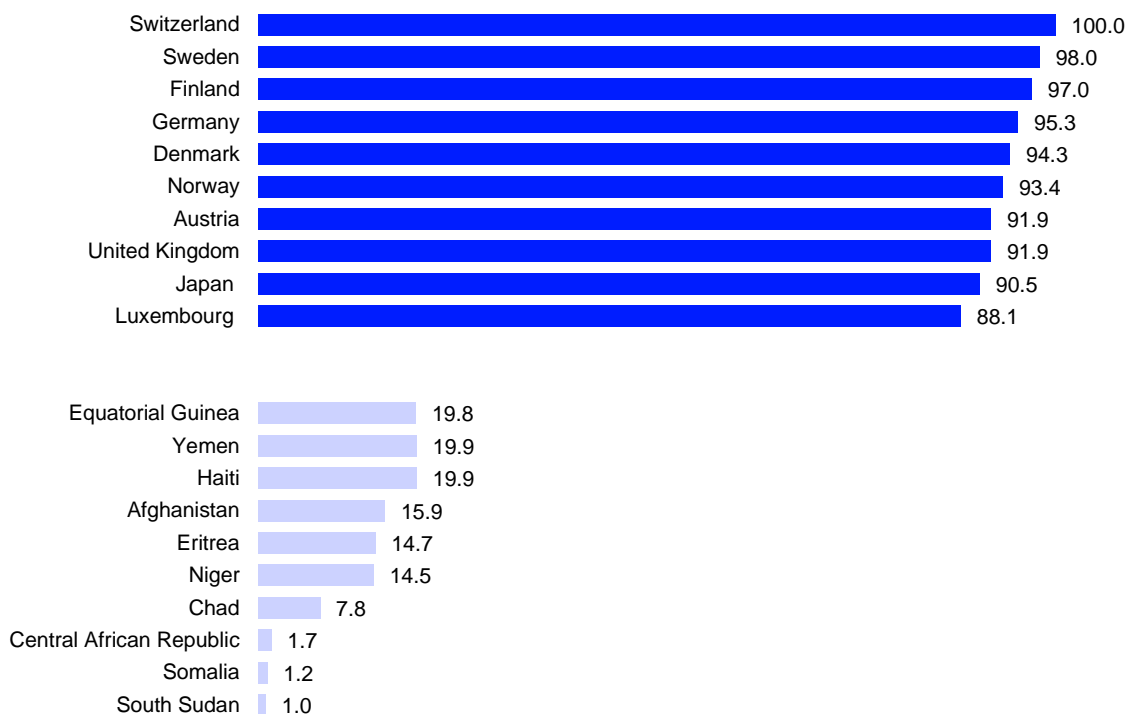
Figure 3 compares the SDG scores for a few countries. Figure 4 shows the top-10 and bottom-10 scores for the Overall SDG.

Figure 3. Comparison of SDG scores for France, Philippines and Bahrain (2020)



Source: LSEG sovereign SDG data, November 2023

Figure 4. Overall SDG top-10 and bottom-10 scores (2020)¹²



Source: LSEG sovereign SDG data, November 2023

¹² Switzerland has a score of 100 on Overall SDG, but this does not mean it is a perfect country. This score should rather be interpreted as Switzerland being the most advanced country in the progress toward achieving all the 17 SDGs.

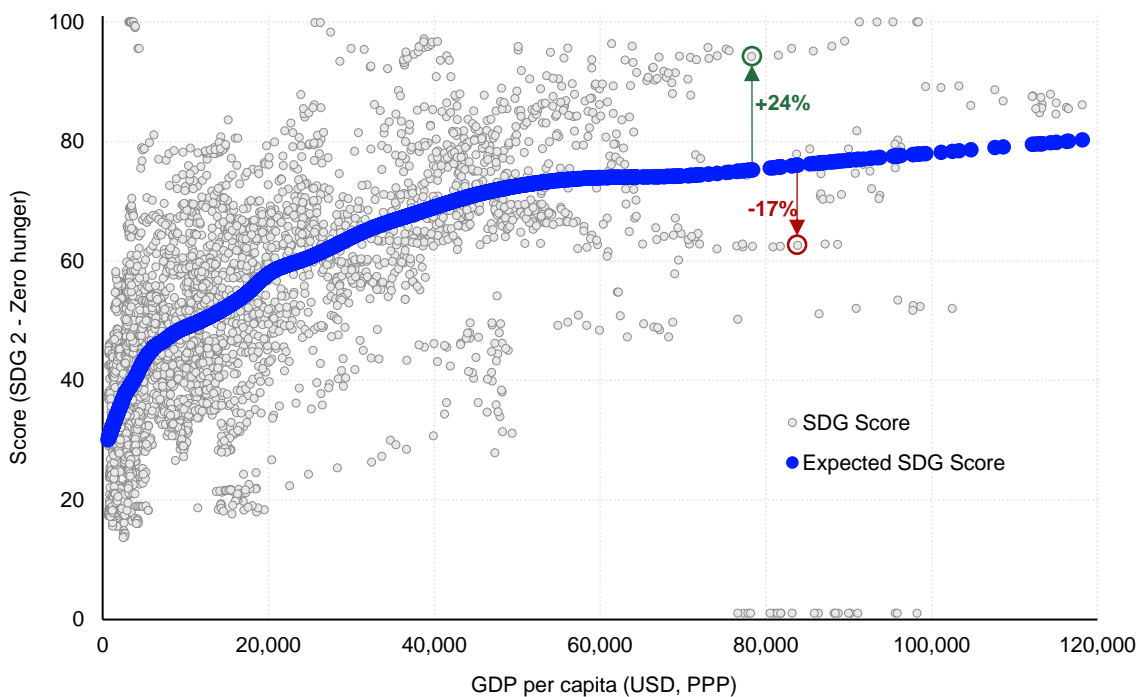
SDG wealth performance

A recent analysis by the World Bank¹³ highlighted a high correlation between sovereign ESG scores and national income. This *ingrained income bias* can lead to unintended outcomes in the use of ESG scores. For instance, ESG investing would drive capital away from low-income countries. Since many of the indicators used in the SDG methodology are similar to those found in ESG assessments, this income bias can be expected to be present in our SDG scores. Unsurprisingly, in Figure 4, the top 10 are high-income countries and the bottom 10 are low-income countries.

To circumvent this problem, we have been implementing income bias correction tools in our methodologies. (For example, see our sovereign ESG case study¹⁴ for an *ex-post* approach to adjusting the income bias). In our SDG assessment model, we calculate the SDG Wealth Performance – the gap between the expected SDG score of a country given its level of wealth and its actual score. The expected score is obtained by smoothing all national SDG scores using the locally weighted scatterplot smoothing (LOWESS) algorithm, as seen in figure 5 (SDG 2 ‘Zero hunger’, blue line). This expected score can also be viewed as a peer average (i.e., the average value of countries with similar wealth).

A country SDG score (expressed as grey dots in Figure 5) is compared with the country’s expected score for its level of wealth. Here, it’s GDP per capita at purchasing power parity (PPP). The SDG Wealth Performance is the gap (in %) between the actual SDG score and the expected one. The green and the red arrows in Figure 5 are examples of Wealth Performance. A score of +24% means that the country in that year performs 24% better than countries with similar wealth (and -17% means 17% worse).

Figure 5. SDG wealth performance (gap) for SDG 2 ‘Zero hunger’



Source: LSEG sovereign SDG data, November 2023

¹³ World Bank, [Demystifying Sovereign ESG \(worldbank.org\)](https://www.worldbank.org/).

¹⁴ FTSE Russell, [Dealing with income bias in sovereign ESG scores - Sovereign ESG revisited | FTSE Russell](https://www.ftserussell.com/).

Use cases

Focusing on the use cases of our Sovereign SDG assessment product, in this section we discuss and illustrate the options.

Reporting and disclosure

Financial professionals can use this product as a dataset for portfolio-reporting purposes. Being able to aggregate SDG scores for sovereign portfolios enables asset managers or asset owners to report on how their portfolio performs in comparison with a standard benchmark, and to highlight the best-in-class and worst-in-class constituents.

Researching and benchmarking country performance against SDGs

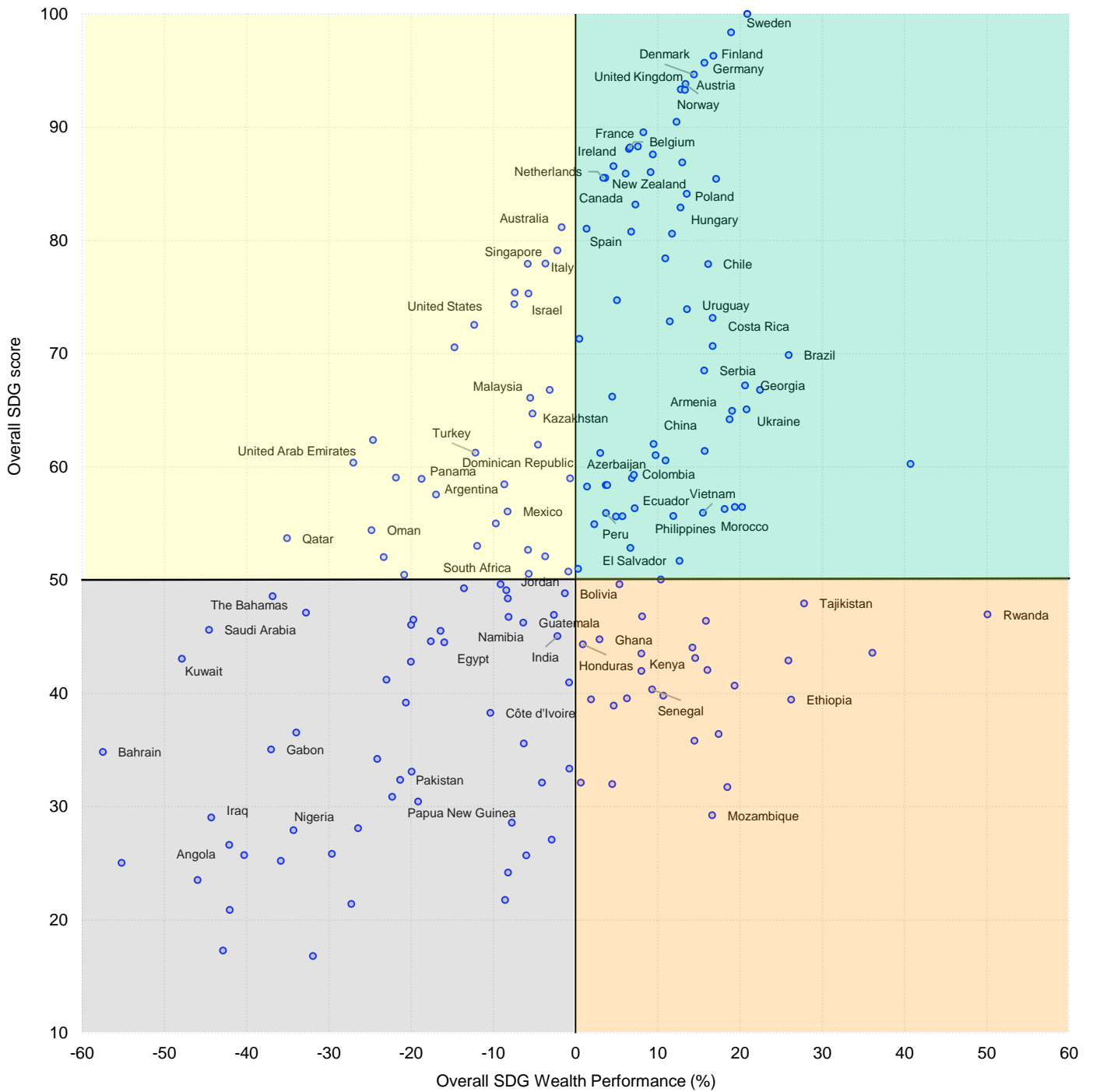
This model can also be used to benchmark a country's score and Wealth Performance for individual SDGs, an aggregate of SDGs or the Overall SDG (compare Figure 6). The score measures the country's SDG progress while the Wealth Performance evaluates how the country performs compared to its peers.

Country-specific SDG data shown in Figure 6:

- United Arab Emirates and Morocco both have a good SDG score of around 60 on the Overall SDG but Morocco has a much higher Wealth Performance.
- Kuwait and Kenya both have a medium SDG score of around 45 but Kenya has a better Wealth Performance.

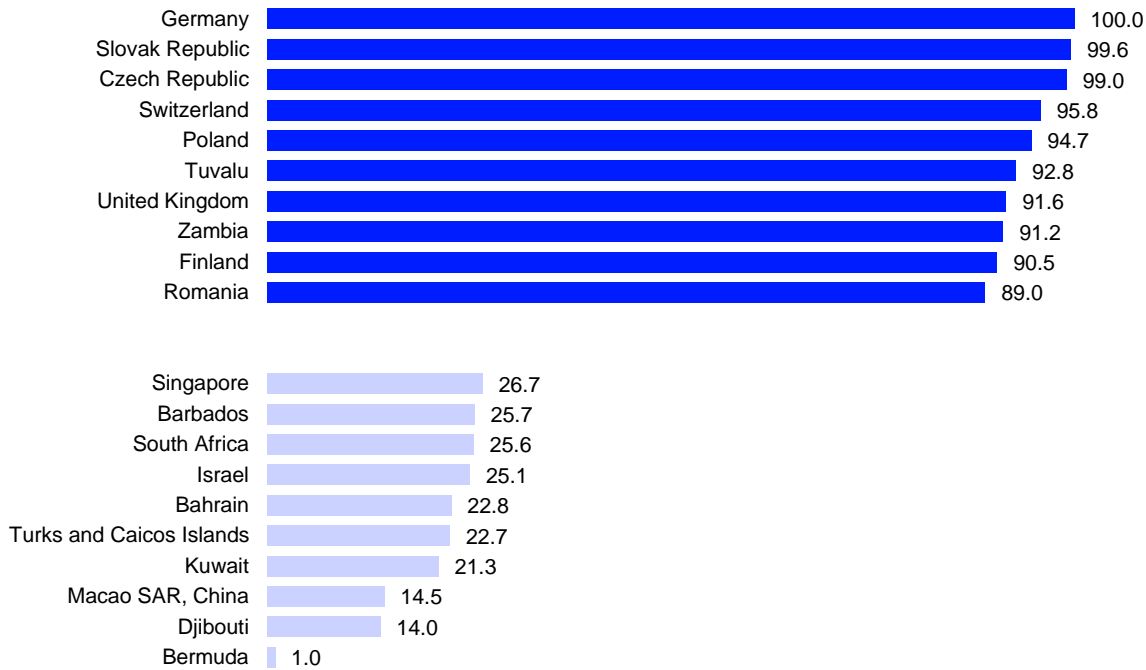
Moreover, our Sovereign SDG assessment enables users to flexibility focus on a customised combination of SDGs, showing how countries score on specific themes (e.g., biodiversity, inequalities, climate change, etc.). Figure 7 shows the top and bottom scores when the biodiversity SDGs are aggregated (SDGs 14 = Life below water; and 15 = Life on land). Figure 8 focuses on a subset of social SDGs (SDGs 1 = No poverty, 2 = Zero hunger, 3 = Good health and well-being, 4 = Quality education, and 5 = Gender equality). This analysis can be enhanced by considering the aggregated SDG Wealth Performance for biodiversity or social SDGs in addition to the aggregated SDG score.

Figure 6. Matrix of overall SDG score versus SDG Wealth Performance (2019)



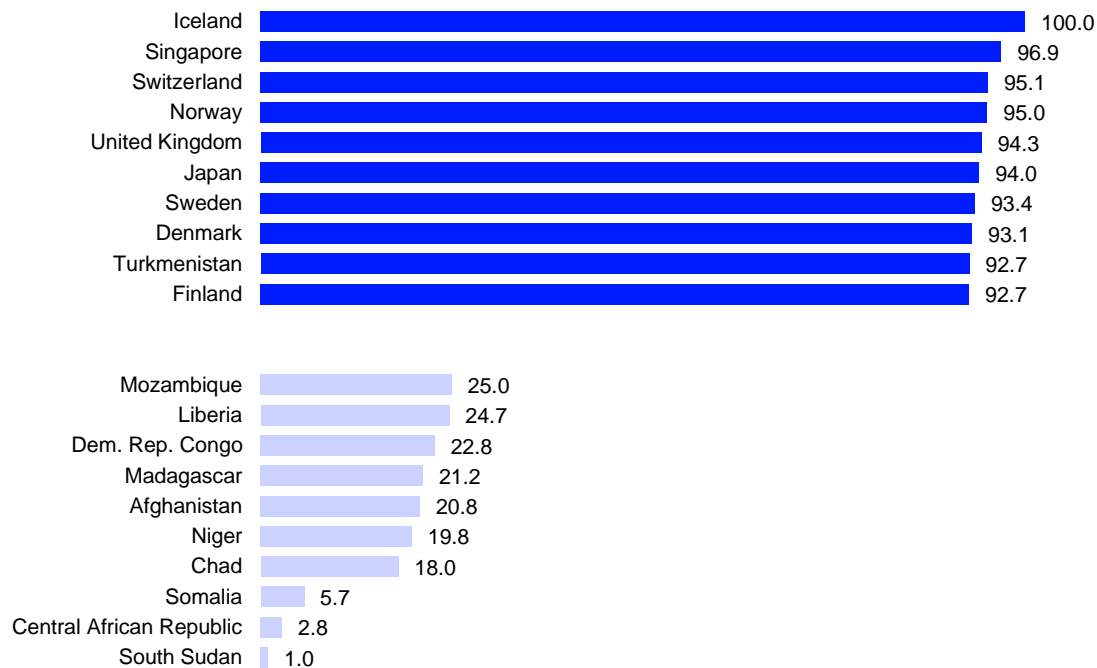
Source: LSEG sovereign SDG data, November 2023

Figure 7. Biodiversity SDGs aggregated score for the top 10 and the bottom 10 (2020)¹⁵



Source: LSEG sovereign SDG data, November 2023

Figure 8. A subset of social SDGs aggregated score for the top 10 and the bottom 10 (2020)



Source: LSEG sovereign SDG data, November 2023

¹⁵ Only the SDG 15 score (Life on land) was used for the biodiversity aggregated score for countries that do not border a sea or an ocean, including Slovakia, Czech Republic, Switzerland and Zambia because their SDG 14 score (Life below water) is not available.

Portfolio construction

The Sovereign SDG assessment product can help users define or better understand an investable universe according to SDG Wealth Performance.

In Figure 6 we provide the matrix SDG score vs. SDG Wealth Performance for the Overall SDG. The matrix can be split into four zones depending on SDG score level and SDG Wealth Performance level:

- GREY ZONE (bottom-left): low score and low performance
- ORANGE ZONE (bottom-right): low score and high performance
- YELLOW ZONE (top-left): high score and low performance
- GREEN ZONE (top-right): high score and high performance

1. **Best-in-class investment strategy** for developed markets.

In the FTSE World Government Bond Index¹⁶ (WGBI) more than 20 developed markets represent some of the largest outstanding debts on the planet. Using the SDG scores, we can build an investment strategy where we overweight the WGBI's constituents with an Overall SDG score above 50 and a positive Wealth Performance (i.e., in the green zone). In this top-right quadrant, each country has an Overall SDG score higher than the expected score for a similar level of GDP per capita (wealth). For example, within the WGBI, this strategy would lead to overweighting bond debts held by Nordic countries, the United Kingdom, Germany and France; and lead to de-facto underweighting those held by the United States, Italy and Israel.

Another version of this strategy would be targeting developed markets in a narrower area in the green zone (e.g., with an Overall SDG score above 70).

2. **Diversified portfolio** for emerging markets.

In the FTSE Emerging Markets US Dollar Government Bond Index¹⁷ (EMUSDGBI) over 60 investment-grade or high-yield emerging market governments issued US-dollar denominated debt. Our SDG assessment framework can help to build an investment strategy where we overweight top performers about the Overall SDG Wealth Performance in the EMUSDGBI (i.e., in the green and orange zones). This strategy would lead to underweighting constituents such as the Gulf countries, Turkey, South Africa and Pakistan; and overweighting some Latin American countries, Poland, Hungary and Morocco, among others.

Addressing a narrower area in the green and orange zones could be another example of this strategy (e.g., with an Overall SDG Wealth Performance above +15%).

¹⁶ [FTSE World Government Bond Index \(WGBI\) Series | LSEG](#).

¹⁷ [FTSE Russell | FTSE Emerging Markets Fixed Income Indices | Overview \(lseg.com\)](#).

Index tilting

Index construction with SDG scores

Targeting specific SDGs – the granular SDG scoring of sovereigns (or corporates) – enables dedicated SDG scores to be improved. It is clear that ESG requirements are becoming more selective and more aligned with corporate policies. Overall, having the flexibility to choose specific goals means tailoring solutions with specific objectives in mind.

SDG index case study: emerging markets

With a continued emphasis on ESG solutions in index constructs, FTSE Russell has pioneered climate and ESG solutions for government bond indices and has now added SDG solutions to the emerging market government bond index space. There has been a shift into climate related benchmarks in recent years, primarily following the growing prominence of Paris-aligned benchmarks; but SDG solutions are now also gaining momentum with The Netherlands being a good example. Indeed, in 2016 pension funds signed SDG-aligned investment strategies into agreement in a 'Responsible Business Conduct Agreement'¹⁸ for 'Highways for SDG investing'.

In index parlance, *tilting* provides the most improved upside to any factor exposure, whether traditional factor exposure (value, momentum), ESG factor exposure or, in this case, SDG factor tilting.

Applying SDG tilts with emission tilts to a diversified emerging markets local currency portfolio

For the focus of this case study, we look at the FTSE Emerging Markets SDG-Aligned Bond Index. The index is constructed by taking the average SDG scores for SDGs 8 (Decent work and economic growth), 12 (Responsible production and consumption), 13 (Climate action) and 16 (Peace, justice and strong institutions), and tilting the countries based on relative ranking in the index composition. The index also tilts on emission intensity, measured as total territorial greenhouse gas (GHG) emissions per capita. These territorial GHG emissions correspond to production emissions¹⁹ and include land use, land-use change, and forestry (LULUCF).

¹⁸ [Pension Funds Agreement | IRBC Agreements \(imvoconvenanten.nl\)](#)

¹⁹ Please see [PCAF \(2022\), The Global GHG Accounting and Reporting Standard Part A: Financed Emissions](#).

Table 1. 2020 Emerging markets local currency SDG scores and emission intensity

Country	SDG scores				Avg.	tCO2eq./Cap	SDG tilt (a)	Emission tilt (b)	Country tilt (a x b)
	8	12	13	16					
Hungary	96.2	85.6	76.6	87.2	86.4	6.16	0.97	0.50	0.48
Poland	96.5	93.4	69.9	74.2	83.5	9.79	0.94	0.18	0.17
Romania	85.7	82.5	79.3	60.8	77.1	4.31	0.84	0.67	0.56
Chile	70.1	79.3	78.6	69.5	74.3	2.56	0.77	0.81	0.62
Mexico	67.6	84.5	74.7	54.6	70.3	4.24	0.63	0.68	0.43
Turkey	51.5	93.3	82.2	50.1	69.3	5.15	0.60	0.59	0.35
Colombia	69.7	87.4	78.5	35.1	67.7	4.79	0.54	0.63	0.34
China	84.8	92.0	35.5	56.3	67.1	8.54	0.52	0.28	0.14
Malaysia	84.1	77.0	66.1	40.0	66.8	3.68	0.50	0.73	0.37
Brazil	57.7	93.7	74.2	40.5	66.5	6.90	0.49	0.42	0.21
Philippines	83.4	66.9	40.2	55.1	61.4	1.75	0.31	0.86	0.27
South Africa	70.7	67.9	60.6	41.6	60.2	9.06	0.27	0.24	0.06
Thailand	79.7	76.0	36.2	46.5	59.6	4.80	0.25	0.63	0.16
Peru	58.5	60.5	70.9	35.7	56.4	5.41	0.17	0.57	0.09
Indonesia	67.8	68.0	55.8	29.2	55.2	2.15	0.14	0.83	0.12
Saudi Arabia	42.1	20.2	54.9	62.9	45.0	18.58	0.02	0.00	0.00

Source: FTSE Russell, LSEG sovereign SDG data, November 2023

Table 2. Before and after country weight changes, December 2022

Country	Country weight (before)	Country tilt	SDG-aligned weight (after)
Hungary	2.64%	0.48	5.6%
Poland	6.65%	0.17	5.1%
Romania	2.87%	0.56	7.1%
Chile	2.39%	0.62	6.6%
Mexico	10.00%	0.43	19.0%
Turkey	2.33%	0.35	3.7%
Colombia	3.54%	0.34	5.3%
China	10.00%	0.14	6.3%
Malaysia	8.45%	0.37	13.7%
Brazil	4.85%	0.21	4.5%
Philippines	6.04%	0.27	7.1%
South Africa	10.00%	0.06	2.8%
Thailand	10.00%	0.16	7.0%
Peru	2.52%	0.09	1.1%
Indonesia	10.00%	0.12	5.1%
Saudi Arabia	7.73%	0.00	0.0%

Source: FTSE Russell, LSEG sovereign SDG data, November 2023

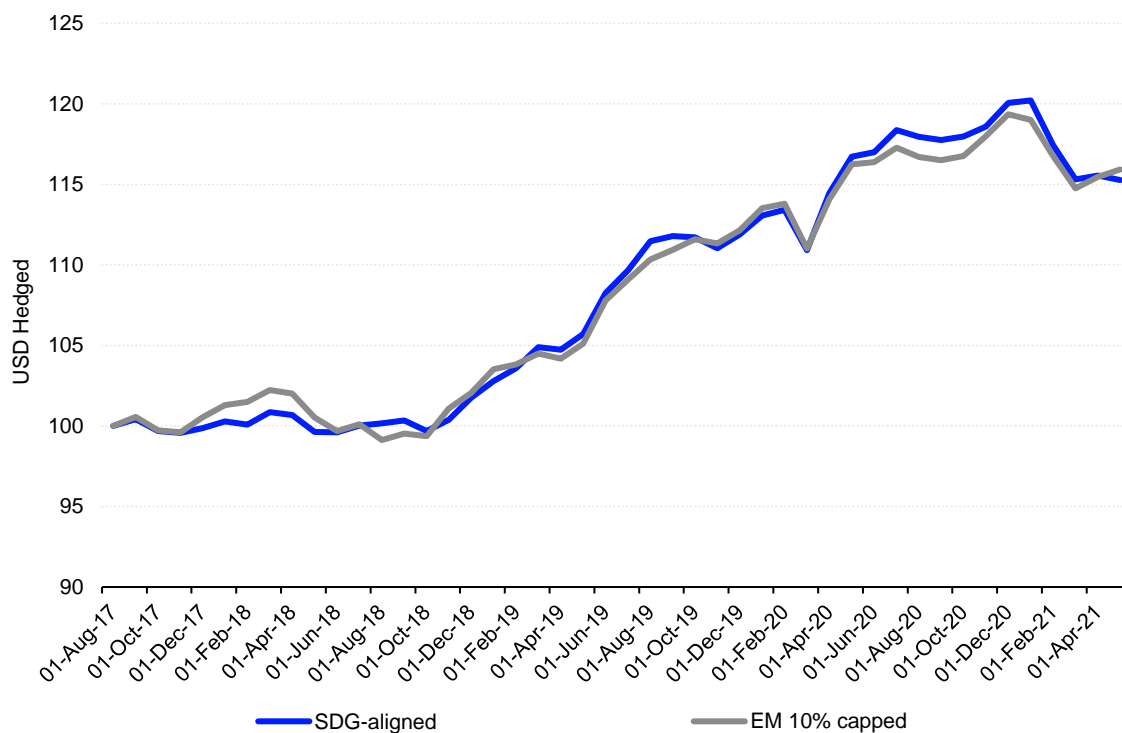
The result of the tilting achieves an aggregate improvement in SDG scores and emission reduction but taking on more concentration in best performing countries in SDG terms.

Table 3. Index level improvements

Index name	Avg. SDG	tCO2eq./Cap
EM Local Currency 10% Capped	64.5	6.491
EM Local Currency SDG-aligned	69.0	4.806
SI Improvement	6.91%	-25.96%

Source: FTSE Russell, LSEG sovereign SDG data, November 2023

Figure 9. Index performance: EM local currency 10% Capped vs. SDG-aligned (in US\$ hedged)



Source: FTSE Russell, LSEG sovereign SDG data, November 2023

Conclusion

The Sovereign SDG assessment is a sustainable investing data product developed by LSEG that leverages more than 230 KPIs, covers about 190 countries and aims to measure countries' SDG progress.

Throughout this paper, we presented some of the benefits of this model as:

- The possibility to align with an official framework as the majority of the leveraged KPIs come from the UN SDG database
- A robust statistical approach to transform the inputs into a score by SDG for each of the covered countries
- The flexibility to select only specific SDGs to create tailored solutions

Moreover, this paper illustrates some of the use cases of the product as it can be – for a sovereign bond portfolio – used as a dataset for portfolio reporting and/or portfolio construction as well as being used to create SDG-aligned government bond indices.

This product can help investors that seek to finance the SDGs and promote sustainability.

Appendix

Appendix A: More on raw data sources

The UN SDG Database¹¹ was launched in 2018 and is updated quarterly. It provides over 650 metrics, but not all of them are relevant to this model. For example, some metrics cannot be used as is (metrics in local currencies, metrics to be converted to % of population or % of GDP, etc.). Other metrics are redundant, have poor geographical coverage or are incomparable across countries. Ultimately, around 185 KPIs from the UN SDG Database passed our selection process. We then enriched them with some 45 other KPIs from well-established, respected sources including:

- World Bank (+30 KPIs in areas like agriculture, industry, education, social inequalities, governance, etc.)
- International Roads Federation (two KPIs, roads quality)
- Enerdata (three KPIs, energy and electricity consumption, electric grid quality)
- EMDAT (two KPIs, human casualties due to natural disasters)
- LSEG KPIs (six KPIs, GHG and climate)

In total, this model leverages more than 230 KPIs, covers 191 countries and spans from 2000–present.

If we consider relatively recent data (2017–present) and a universe of 191 countries, the KPIs in this model have the following coverage:

- All countries: 70% of KPIs cover at least 63% of countries
- High-income OECD countries: 70% of KPIs cover at least 85% of countries
- Emerging markets:²⁰ 70% of KPIs cover at least 70% of countries

As many of the KPIs in the UN SDG Database are recent and are enriched at each update, the coverage is therefore expected to improve in the future.

Also, this model covers 104 targets out of 169 defined by the official framework. However, more targets will be covered in the future when relevant KPIs are available in the UN SDG Database or other sources.

²⁰ Emerging markets: Saudi Arabia, Türkiye, Mexico, Indonesia, Qatar, Brazil, Russia, Argentina, Philippines, Colombia, Egypt, Dominican Republic, Peru, Oman, South Africa, Uruguay, China, Chile, Ukraine, Nigeria, Bahrain, Ghana, Hungary, Ecuador, Angola, Kazakhstan, Kenya, Sri Lanka, Pakistan, Poland, Paraguay, Jamaica, Costa Rica, El Salvador, Jordan, Kuwait, Guatemala, Croatia, Iraq, Belarus, Mongolia, Côte d'Ivoire, Gabon, Azerbaijan, Uzbekistan, Senegal, Trinidad and Tobago, Bolivia, Honduras, Armenia, The Bahamas, Serbia, Vietnam, Namibia, Mozambique, Rwanda, Barbados, Papua New Guinea, Georgia, Tajikistan, Belize, Thailand, Malaysia.

Appendix B: Step-by-step example

In this section, a step-by-step fictitious example is provided to illustrate the process of obtaining SDG scores from the raw data.

One SDG, two targets, six KPIs and three countries.

Raw data

						Raw data (imputed and winsorised)		
SDG	Target	KPI	Unit	Polarity*	Country A	Country B	Country C	
SDG	Target 1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters	Number of affected persons attributed to disasters 30 years average	per 100k cap	-1	37.62	965.91	200.68	
		Number of deaths attributed to disasters 30 years average	per 100k cap	-1	0.08	0.06	0.11	
	Target 2 Integrate climate change measures into national policies, strategies and planning	GDP per unit of energy use	\$15P/KOE	1	17.37	10.34	7.37	
		Emitted GHG per capita including LULUCF	tCO2e/Cap	-1	6.86	6.75	19.55	
		Share of oil, gas and coal in total primary consumption	%	-1	77.39	51.91	99.97	
		Installed renewable electricity-generating capacity (watts per capita)	Per cap watts	1	12.00	400.00	4.00	

Source: LSEG sovereign SDG data, November 2023

*Polarity: whether the KPI is positive (the higher, the better) or negative (the higher, the worse)

Steps

Raw data imputed and winsorised (cutting extreme values)

KPI score

SDG	Target	KPI	KPI score (1–100)		
			Country A	Country B	Country C
	Target 1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters	Number of affected persons attributed to disasters 30 years average	100.00	1.00	82.61
		Number of deaths attributed to disasters 30 years average	60.40	100.00	1.00
SDG	Target 2 Integrate climate change measures into national policies, strategies and planning	GDP per unit of energy use	100.00	30.40	1.00
		Emitted GHG per capita including LULUCF	99.15	100.00	1.00
		Share of oil, gas and coal in total primary Consumption	47.51	100.00	1.00
		Installed renewable electricity-generating capacity (watts per capita)	3.00	100.00	1.00

Source: LSEG sovereign SDG data, November 2023

Steps

- Apply polarity
- Zscore, then min-max normalisation to get the KPI score

Target score

SDG	Target	Target average			Target score (1–100)		
		Country A	Country B	Country C	Country A	Country B	Country C
SDG	Target 1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters	80.20	50.50	41.81	100.00	23.42	1.00
	Target 2 Integrate climate change measures into national policies, strategies and planning	62.42	82.60	1.00	75.51	100.00	1.00

Source: LSEG sovereign SDG data, November 2023

Steps

- Aggregate by target (average)
- Target average for a given country is dropped if too many KPI scores are missing (for robustness)
- Zscore, then min-max normalisation to get the target score

SDG score

	SDG average			SDG score (1–100)		
SDG	Country A	Country B	Country C	Country A	Country B	Country C
SDG	87.76	61.71	1.00	100.00	70.28	1.00

Source: LSEG sovereign SDG data, November 2023

Steps

- Aggregate by SDG (average)
- SDG average for a country is dropped if too many target scores are missing (for robustness)
- Z-score, then min-max normalisation to get the SDG score

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