DEGROOF PETERCAM ASSET MANAGEMENT

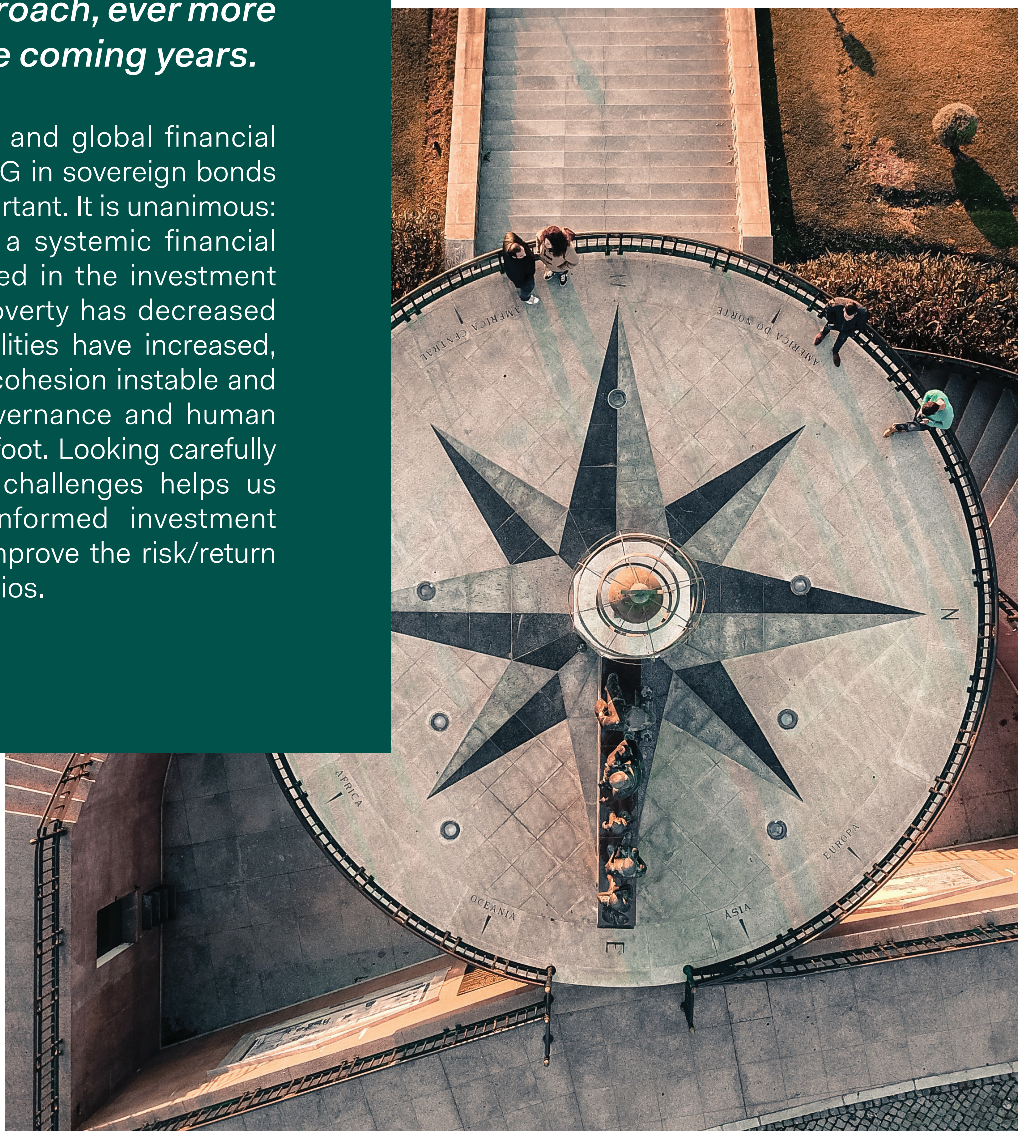
LUXFLAG Label ESG

October 2019

Sustainability Ranking Developed Countries

A valuable approach, ever more valuable for the coming years.

Looking at society and global financial market stability, ESG in sovereign bonds is increasingly important. It is unanimous: climate change is a systemic financial risk to be integrated in the investment process. Global poverty has decreased while social inequalities have increased, making the social cohesion instable and requiring good governance and human rights on the back foot. Looking carefully to these different challenges helps us to make better informed investment decisions and to improve the risk/return profile of our portfolios.



While sustainable and ESG research on corporates from independent third parties is generally readily available, reliable information on countries is harder to come by. The sovereign debt crises have questioned the status of 'risk-free' asset class of government bonds. This has led to the emergence of several analyses of country sustainability.

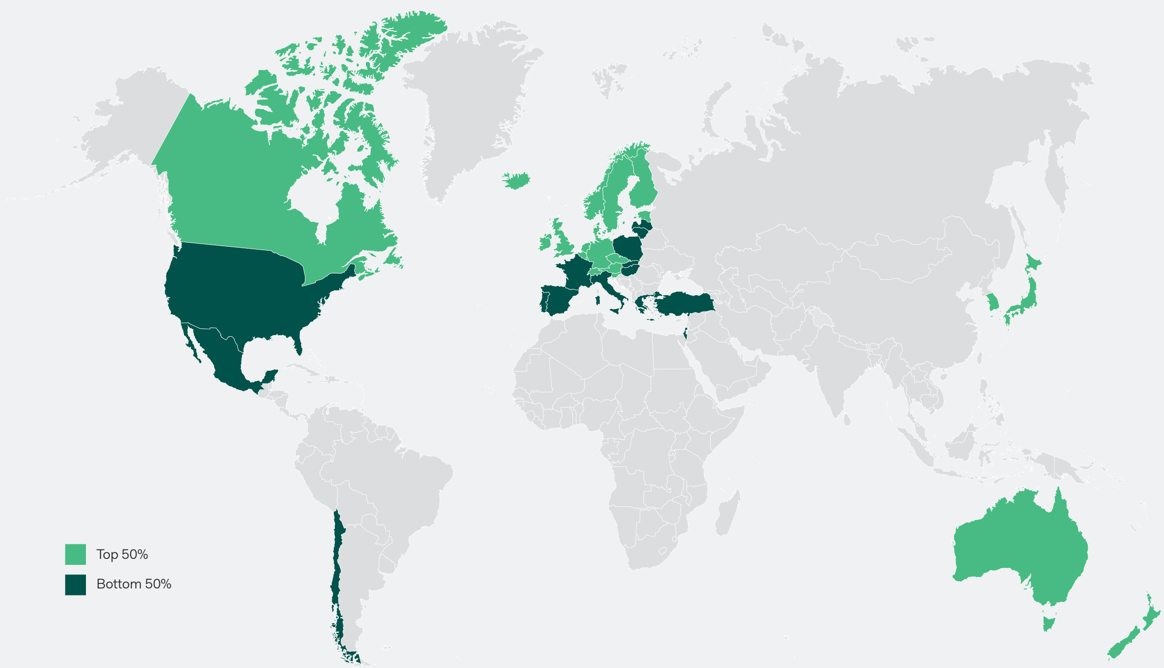
This in-house developed sustainability ranking is the basis of the eligible investment universe of government bonds issued by OECD Member States. The proprietary research model, which was developed by Degroof Petercam Asset Management (DPAM) in 2007, has the track record and credibility to assess trends and the added value of such analyses.

Sustainability ranking – October 2019

The starting universe is composed from the members of the OECD, therefore each new membership is included in the starting universe. The sustainability ranking allows the identification of countries which have fully integrated global challenges in their development of medium-term objectives.

This complements the information gathered from credit rating, which is traditionally used to assess the short term valuation of sovereign debt. Integrating long-term perspectives, which have no direct impact on the current valuation of an investment, but will influence medium and long-term performance, allows to highlight those countries that are expected to outperform and therefore to be solvent.

Developed Markets



Source: DPAM, October 2019

Sustainable country ranking of OECD member states

Eligible country for investment	H2 2019 #	H2 2019 score	H2 2018 #	H2 2018 score
Norway	1	71	1	76
Switzerland	2	71	3	75
Denmark	3	70	2	75
Sweden	4	69	5	71
Iceland	5	69	4	73
Germany	6	67	6	71
Finland	7	67	7	69
Netherlands	8	65	8	68
New Zealand	9	64	10	67
United Kingdom	10	62	13	64
Ireland	11	62	15	64
Austria	12	61	11	66
Slovenia	13	60	14	64
Luxembourg	14	60	9	67
Canada	15	59	16	63
Estonia	16	58	22	58
Australia	17	58	18	63
Czech Republic	18	58	19	63
South Korea	19	57	12	65
Japan	20	57	20	60
Belgium	21	57	18	61

Non-eligible country for investment	H2 2019 #	H2 2019 score	H2 2018 #	H2 2018 score
France	22	55	19	60
Portugal	23	54	26	55
Israel	24	54	23	58
Poland	25	53	25	56
Lithuania	26	53	-	-
Slovakia	27	53	27	55
Latvia	28	52	30	52
Spain	29	52	28	54
United States	30	50	24	57
Italy	31	49	29	52
Hungary	32	49	31	51
Chile	33	48	32	50
Greece	34	42	33	43
Turkey	35	38	35	39
Mexico	36	37	34	43

Source: DPAM, October 2019

Please keep in mind that for year-on-year comparisons, sustainability ranks could be influenced by various factors, such as changes in metrics and data availability.

What is sustainability?

Sustainable development meets the needs of the present generation without compromising the ability of future generations to meet their own needs.

Sustainability at country level differs from that of a corporation. A sustainable **country** is committed to fully ensuring the freedom of its citizens and invests in their personal development and welfare. It is respectful towards the environment and is reliable in terms of international responsibilities and commitments. It ensures its future and invests in next generation (education & innovation).

How to measure sustainability of a country?

There are three main approaches to measure the sustainability of a country, namely

01 The **legal approach**, with the emphasis on treaties and offenses related to government actions. It should be noted however that agreement on treaties is not always fully binding and there is often no penalty where violations occur.

02 The extreme **stakeholder approach**. The inconvenience of this approach is the importance of the number of stakeholders and parameters to be considered, giving rise to the possibility of dilution and irrelevancy of the indicators.

03 The **exclusion approach**, which consists of exclusions on the basis of controversial activities, examples being whale hunting and deforestation.

These approaches raise the issue of the moral threshold level, and subjectivity is likely to make it questionable.

The lack of information and an associated model encouraged DPAM to develop an in-house research model in 2007. Given the subjective character of the issue, key principles were defined from the beginning:

01

Existence of an **advisory board**, consisting of external specialists providing input to the model.

02

Assessment of the commitment of the country to its **sustainable development**: variables on which the country can have influence through decisions.

03

Comparability and objectivity: criteria are numeric data, available from reliable sources and comparable for all countries.

The Fixed Income Sustainability Advisory Board (FISAB) ensures the objectivity of the model

The role of the FISAB is:

1. To select the sustainable criteria which fulfil the preliminary requirements, and are the most relevant in the framework of sustainability assessment of the OECD universe.
2. To determine the weights attributed to each indicator.
3. To critically and accurately review the model and the ranking to ensure continuous improvement.
4. To validate the list of eligible countries.

The FISAB consists of six voting members with a majority of external experts. The complementary background of the members guarantees a high level of expertise and knowledge of the issue in constructing the most relevant model. The objective of the board is to raise awareness on ESG issues among the portfolio management teams.

EXTERNAL MEMBERS

Bart Haeck
Journalist at Mediafin

François Gemenne
Professor at Sciences Po (Paris) & ULB (Brussels)

Jan Schaerlaekens
Deputy at Brussels Parliament

Thomas Bauler
Assistant Professor at ULB-IGEAT (Brussels)

INTERNAL MEMBERS

Ophélie Mortier
RI Strategist DPAM

Ives Hup
Country Head France DPAM

Selective and objective criteria to assess the sustainability of countries

The sustainable overlay is characterised by the criteria which governments can utilise to influence their policies (government, authorities, law). Thus, it avoids data linked to the geography or population density of the country. The model is quantitative and tracks the current performance of a country, with comparable data. Only a limited number of treaties are considered as they do not guarantee genuine commitment.

Norms-screening: violation of International Treaties

The Belgian department of foreign affairs reminds investors in Israel that the EU and its member states consider the establishment of Israeli settlements in the Israeli-occupied territories illegal under international law, an obstacle for peace and a possible threat for a two state solution to the Israeli-Palestinian conflict.

The Belgian department of foreign affairs also warns EU citizens and companies to be aware of the fact that economic or financial activities related to the settlements can cause reputation damage. The FISAB is aware of the fact that Israel claims that there is no violation of international law because the Fourth Geneva convention does not apply to the territories occupied in the 1967 six-day war. However, the United Nations Security Council, the United Nations General Assembly, the International Court of Justice, the International Committee of the Red Cross and the High Contracting Parties to the Convention have all affirmed that the convention does apply. The sustainable strategies the FISAB oversees operate under European law. It therefore follows the official Belgian and EU view that there is a violation of international law. Israel is therefore excluded from the eligible universe.

Best-in-class combined with best-effort approach

The sustainability analysis focuses on five main key drivers: Transparency & Democratic Values, Environment, Education & Innovation, Healthcare & Wealth Distribution and Economics. Each criterion gets an assigned weight and each country receives a score ranging from 0 (worst) to 100 (best) based on its relative position compared to other countries (comparison to the difference between the maximum and the minimum). For binary criterion (death penalty, signing Ottawa Convention, for instance) a score of either 0 or 100 will apply. The final and overall score of a country is equal to the weighted average of the scores on each criterion, using the weights which are decided by the Fixed Income Sustainability Advisory Board. The selection process results in a ranking of the 36 countries. The final scoring is rounded up to avoid an excessively unstable universe as decimals are statistically irrelevant.

Progress and improvement are taken into consideration through a **trend indicator**, which provides insights into the robustness of a country's commitment to sustainability. The trend is calculated over the previous three years and a 25% weight of the scoring is allocated to it.
In total, the model has around 60 indicators.

The approach is dynamic as the selected criteria are reviewed twice per year, with the intention of selecting the most appropriate and relevant criteria for each domain. An indicator may be replaced and adapted, or omitted. New indicators can enter the model and the allocation of the weightings may also vary.

18.5%

EDUCATION / INNOVATION

PISA survey, Tertiary school participation, Expenditure per student, etc.

18.5%

POPULATION HEALTH & WEALTH DISTRIBUTION

GINI-index, Healthcare spending, Poverty, Wealth, etc.

26%

TRANSPARENCY AND DEMOCRATIC VALUES

Corruption, Press freedom, Civil liberties, Governance sub indexes, Women rights, etc.

18.5%

ENVIRONMENT

Ecological footprint, GHG, etc.

18.5%

ECONOMICS

Private debt, Competiveness, etc.

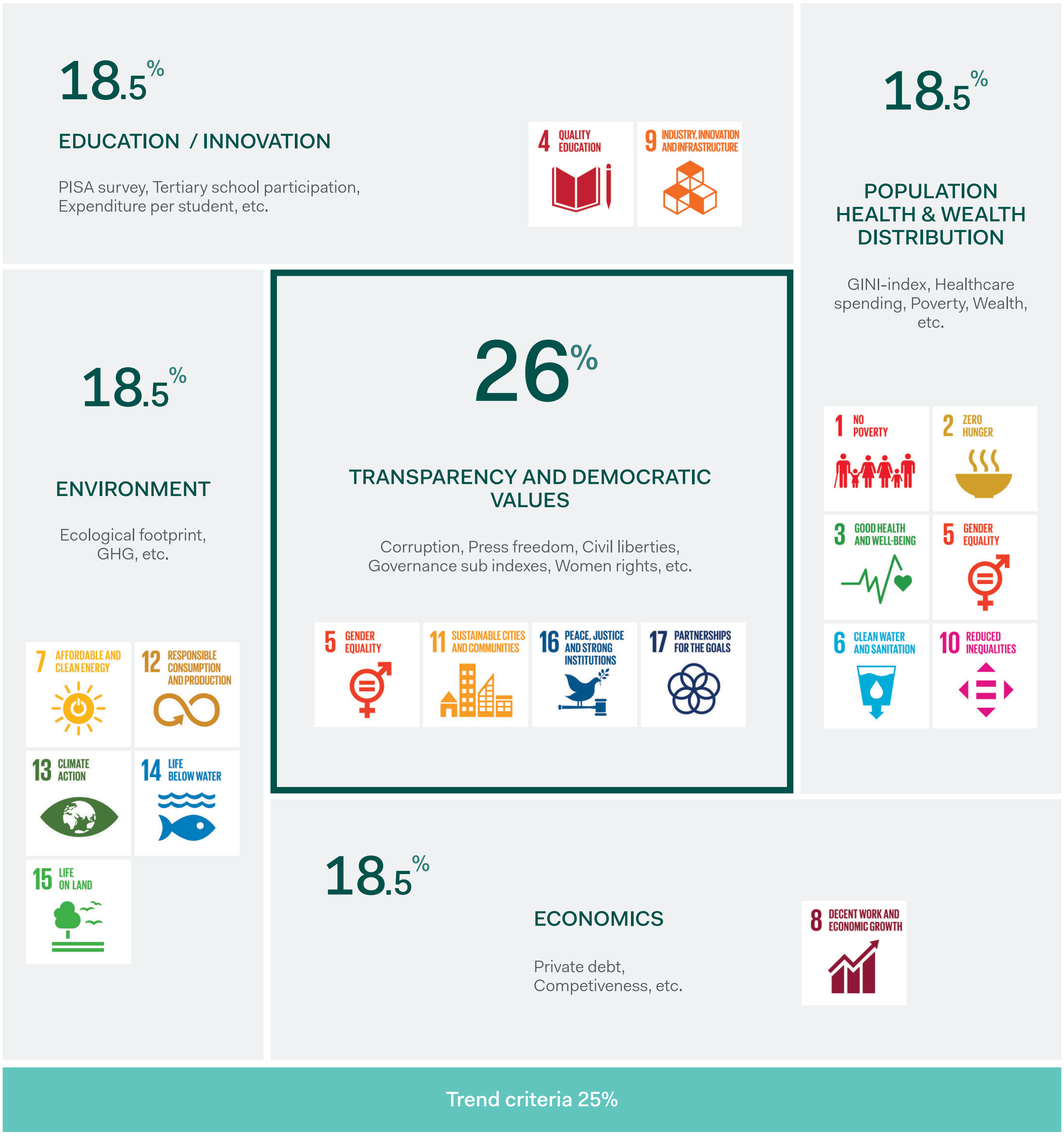
Trend criteria 25%

The model predates the Sustainable Development Goals

The 17 Sustainable Development Goals (SDG's), in the wake of the Millennium Development Goals, which were launched by the United Nations between 2000 and 2015, aim to advocate sustainable development on the economic, social and environmental domain. They reaffirm the human rights and the willingness to eradicate poverty, hunger and inequality by the end 2030.

The 17 social, environmental and economic objectives have been adopted by nearly 200 countries. It is a unique opportunity to channel more investments towards major environmental and social challenges.

DPAM is proud of its pioneer sustainability model that predates the SDG's. SDG's are much more than another way to communicate on our ESG and sustainable investment philosophy. We review the country model taking into account the SDG's to increase its relevancy and to better integrate these objectives in our investment decisions.



PRI Principles for Responsible Investment

Sources are internationally recognized

The model aims for highest possible level of objectivity. Accordingly, statistical data to support the analysis of the country's sustainability are mainly collected from government databases and international government agencies such as the International Energy Agency, World Bank, International Monetary Fund, United Nations Development Programme and US Central Intelligence Agency. Data are complemented by information drawn from leading non-governmental organisations such as Freedom House, Transparency International and World Economic Forum.

Keeping an holistic view

Our sustainability country model relies on five dimensions namely transparency and democratic values (1), environment (2), population, health and wealth distribution (3), education and innovation (4) and economics (5). This does not hide the high interconnectivity between these five closely correlated dimensions.

Over the last years, we witnessed several disruptions and even contradictions regarding governance, social concern or environmental issues. This is why sustainability analysis at country level has been essential in an integrated model.

In terms of governance, the strength of the governing institutions is a key indicator to ensure the reliability and stability of the adopted policies and programs. These enable countries in facing internal and/or external challenges and obstacles.

The lack of credible and meaningful policies could impact the social stability of a country. Sound corporate governance is indisputable. At the same time, social instability weighs on long-term growth potential and economic development of a country.

The recent examples of citizens, through NGO's, suing the States for lack of responsibility in their environmental ambition and emissions targets – is testament to the strong relationship between governance and environment.

The ambitious environmental policy adopted by China reveals also the link between environment and social stability. Facing a growing middle class, which refuses the constant smog and its dramatic health consequences, Chinese leadership has not other choice than taking the required measures to ensure social stability in a respirable environment.

ILLUSTRATION THE UNITED KINGDOM

Over the past 12 years, the United Kingdom has consistently ranked among the highest-scoring 50% of OECD member states in terms of sustainability. Ever since the model's inception, the United Kingdom's overall sustainability score has hovered around 60. The slight variance in its score can mainly be explained by the continued evolution of OECD memberships (i.e. additional countries were included in both 2010 and 2018).

Interestingly, the evolution of the United Kingdom's score deviates from the average OECD profile. Indeed, though one notices a general downtrend in OECD sustainability drivers, the United Kingdom's drivers have remained relatively stable in terms of transparency, population and democratic values. In addition, its innovation and education scores have even improved. As a result, the United Kingdom's score has been more resilient in comparison to the other so-called dollar-bloc countries (namely Australia, Canada, New Zealand and the United States).

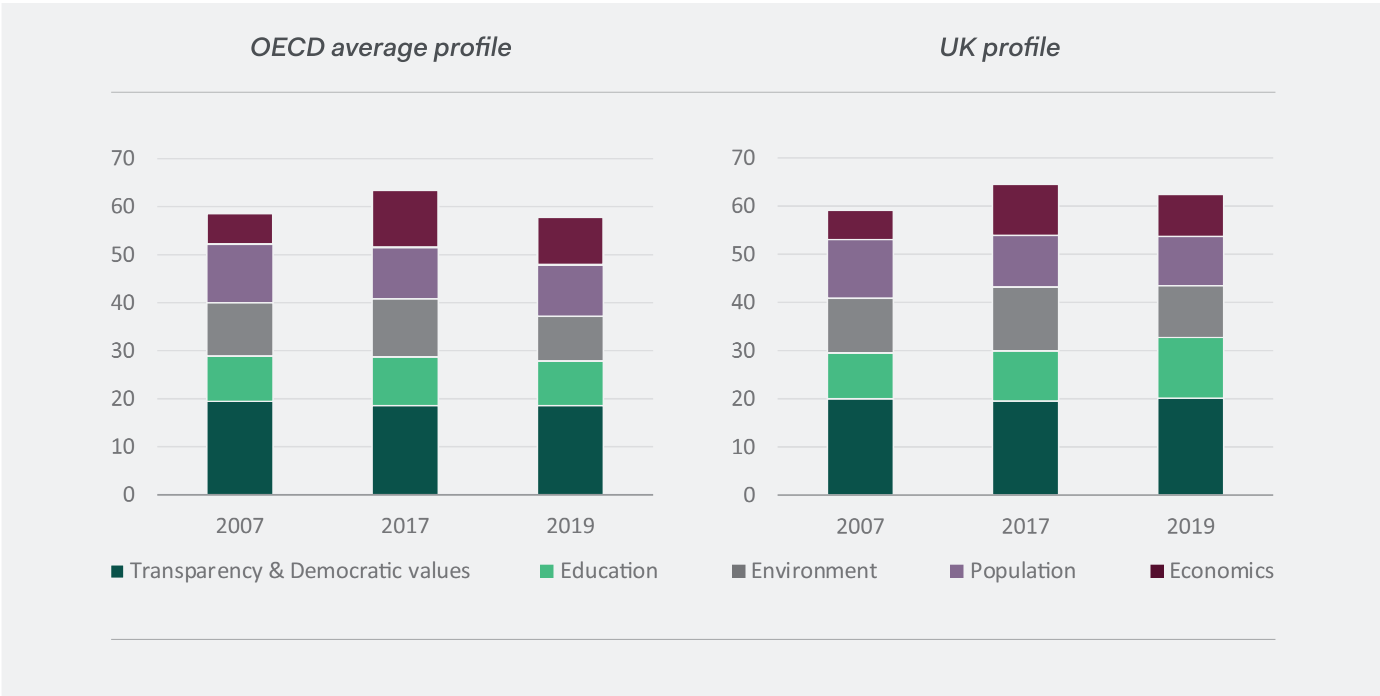
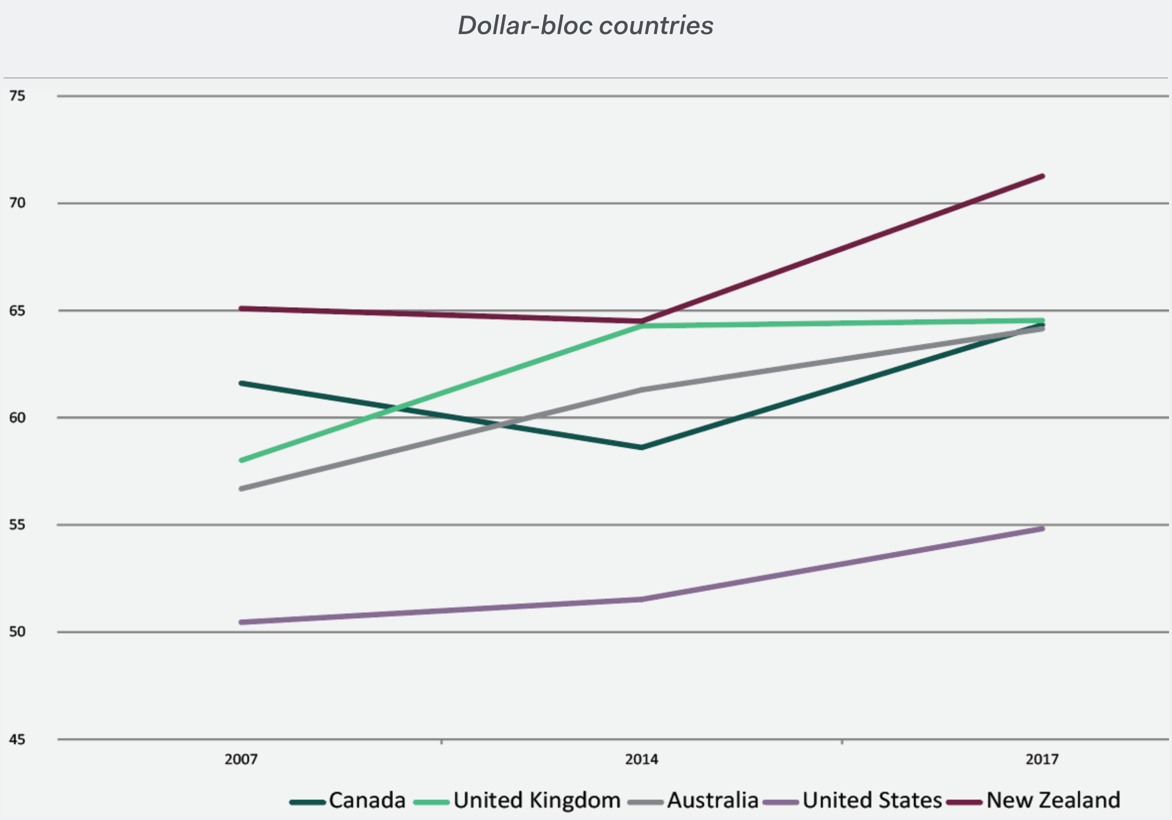


ILLUSTRATION THE UNITED KINGDOM



A quick look at the country's key indicators demonstrates its comparative weakness in terms of population, healthcare and wealth distribution and its strength in environment and education.

ILLUSTRATION THE UNITED KINGDOM

United Kingdom sustainability scorecard (October 2019)

	Score	Rank	Strength/ Weakness
	62,4	**10**	

	Score	Rank	Strength/ Weakness
TRANSPARENCY & DEMOCRATIC VALUES	**20,11**	**12**	
Equality	**1,93**	22	
Institutions	**4,44**	8	
International relationships	**3,84**	12	
Rights & liberties	**3,75**	17	
Security	**3,63**	25	
Tolerance for & Inclusion of immigrants	**2,51**	9	

	Score	Rank	Strength/ Weakness
ENVIRONMENT	**10,75**	**3**	
Air quality & emissions	**2,18**	6	
Biodiversity	**2,95**	12	
Climate change	**2,97**	7	
Energy efficiency	**2,65**	32	

	Score	Rank	Strength/ Weakness
ECONOMIC INDICATORS	**8,68**	**29**	
Economic	**8,68**	29	

	Score	Rank	Strength/ Weakness
POPULATION, HEALTHCARE AND WEALTH DISTRIBUTION	**10,22**	**21**	
Demography	**3,27**	22	
Health & wellness	**2,65**	19	
Inequality	**1,91**	30	
Wealth	**1,92**	17	
Life satisfaction	**0,47**	18	

	Score	Rank	Strength/ Weakness
EDUCATION	**12,64**	**3**	
Equality	**3,58**	3	
Innovation	**3,46**	12	
Quality	**2,34**	17	
Access to advanced education and ICT	**2,37**	5	
Investments	**0,89**	5	

Source: DPAM proprietary sustainability model

ILLUSTRATION THE UNITED KINGDOM

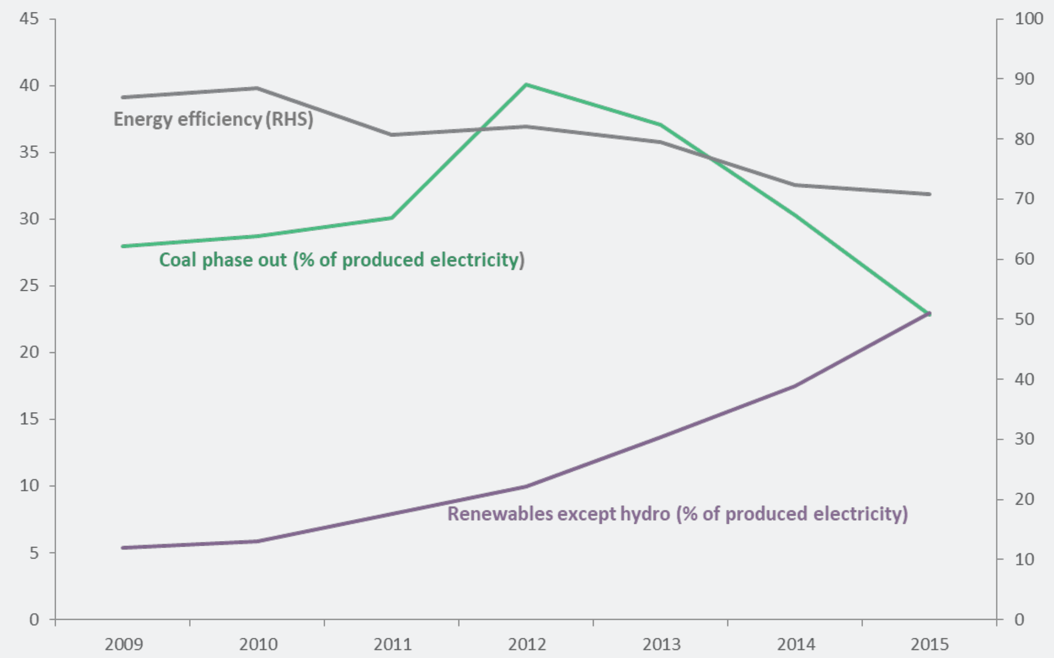
Like several OECD member states, the United Kingdom's population is ageing. Social inequalities are on the rise and create an increasing demographic gap in terms of revenue. This bodes ill for the country's ageing population which struggles to keep up with the increasing healthcare costs.

In terms of education and innovation, the United Kingdom continues to share the top 2 positions with the United States thanks to the quality of its universities. It is one of the most innovative countries worldwide and the quality of its innovation consistently ranks in the top 5 among the high-income economies. Similarly, the excellence of its publications also enjoys worldwide recognition.

The United Kingdom has adopted an important environmental policy in 2008, the Climate Change Act, which aims to reduce greenhouse gas emissions by 80% in 2050. The result of this policy has had a visible and tangible impact on the country's environmental drivers. The United Kingdom has successfully managed to decouple economic growth from carbon emissions over the last 20 years. Indeed, from 1990 to2014, the country's energy consumption has decreased by 10% whilst its GDP has increased by 65%. For comparison purposes, the EU-28's average merely reached a 4% decrease in energy consumption vis-à-vis a 49% increase in GDP.

The reduction of emissions is mainly thanks to the country's lowered reliance on coal and, to a lesser extent, the increase in renewables. However, the latter only occupies a small part of the country's energy portfolio. Consequently, there is mounting criticism that the United Kingdom's environmental efforts have only focused on lowering coal usage. As such, they are still lacking in other sectors, notably the higher carbon intensity of new cars and the low carbon transport approach.

UK energy portfolio



DPAM and its commitment towards sustainability

Degroof Petercam Asset Management (DPAM) considers today's global challenges as major opportunities for tomorrow. By looking at the world from a disciplined and broader perspective, our partners and investors stand to benefit from our approach and expertise. For us, being a responsible investor is not solely about offering responsible products, it is a global commitment at the company level defined by a consistent approach to sustainability.

Our commitment

Defend the basic and fundamental rights
- Human Rights, Labour Rights, Fight against Corruption and Protection of Environment

Express an opinion on controversial activities
- No financing of usual suspects
- Clear controversial activity policy & Engagement on controversial issues
- Avoid controversies that may affect reputation, long term growth and investments

Be a responsible stakeholder and promote transparency
- Bring sustainable solutions to ESG challenges
- Engage with companies, promote best practices and improvements

The mission statement of responsible investing is the cornerstone of DPAM's commitment to sustainable finance and aims at fostering a sustainable economy by unlocking long-term economic and social value. DPAM is an independent financial institution with the fiduciary duty to act in the best long-term interests of its clients.
Individuals, organisations, companies and countries, all face a growing number of long-term challenges and new paradigms. That is why investors are increasingly paying attention to sustainability factors and their impact on the long term. This has all resulted in new insights in the field of financial analysis. Sustainable development is part and parcel of profitability and the ability to create long-term shareholder value.

We aim at aligning our investment activities with the broader interests of society. This predominantly involves incorporating in our decision making process key questions about the impact of our investment. DPAM turns to various independent experts specialized in environmental, social and governance matters. As a member of our scientific boards or as an invitee to our "responsible investment corners", they make an important contribution to enhancing our processes and methodologies. Sharing information and engaging with a positive yet critical mind-set endow DPAM's professionals with a sense of responsibility and prompts them to act as knowledgeable and well-informed investors.

Integrating ESG challenges with knowledge about risks and opportunities

DPAM's core business is managing assets for its clients in their sole interest, based on a financial objective that is consistent with the client's objectives and guidelines. We are convinced that ESG-issues can impact the performance of investment solutions. By identifying risks related to ESG challenges we can get a better understanding of the broader risks involved in an investment and this makes our management more proactive.

At DPAM, ESG issues are not isolated processes but are fully integrated throughout the entire investment process. This is done through engaging with companies by the investment and research teams as well as different stakeholders such as extra financial rating agencies. We refrain from "dictating" to our clients what is responsible or not, nor what is sustainable or not. However, we map all the risks and opportunities associated with a specific investment and understand how ESG factors affect our investment decisions.

Responsible ownership: making its voice heard

As a shareholder and economic actor, DPAM bears a personal social responsibility:

- Ensuring that the rights of shareholders and other stakeholders are respected. DPAM has adopted a voting policy and participates in general and extraordinary shareholders' meetings. We speak up so that the companies we invest in are managed according to best practices in terms of corporate responsibility. Our voting policy provides detail on our approach to promoting best practices in terms of corporate governance.
- Engaging in a dialogue with the companies we invest in. This means, raising key questions with investee companies and engaging with them to ensure that the rights of shareholders as well as those of other stakeholders are respected to create long term shareholder value. Our engagement program details our commitment and procedures to uphold this vision.

DPAM became a signatory to the UN Principles for Responsible Investment (PRI) in 2011. This has been an important milestone in our sustainable journey by adopting a clear and formalized responsible investment policy and by prompting us to integrate ESG in our financial analysis.

OVER A 17 YEAR TRACK RECORD
in sustainable investing

SIGNATORY OF UN-PRI SINCE 2011
Highest rating A+ for our expertise

PIONEER IN SUSTAINABLE SOVEREIGN DEBT
over EUR 2.3 bn invested

OVER EUR 6 bn IN SUSTAINABLE STRATEGIES,
across various asset classes

EXERCISE OUR VOTING RIGHTS IN 465 COMPANIES
in Europe and North America

All sustainable funds accredited with the **INDEPENDENT LUXFLAG ESG LABEL**

ACTIVELY ENGAGED IN DIALOGUE WITH + 75 COMPANIES
regarding corporate governance practices

Supporter of **TCFD RECOMMENDATIONS** and **SIGNATORY OF THE CLIMATE ACTION 100+**

PRI Principles for Responsible Investment

DPAM is signatory of the UN-PRI

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