



Sustainable and Responsible Investment

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Key points

1. The **2008 euro crisis** demonstrated the importance of looking beyond traditional financial criteria, including for sovereign debt. It **seriously called into question the status of “risk-free” assets**.
2. It also **unveiled the flaws in certain economic and financial models**, which are **unidimensional**. **In a context of a globalising economy** facing major challenges such as climate change, the scarcity of natural resources, the growth of public debt and the demographic challenge, it seems obvious that **states**, as major actors in the economy, have a key role to play. They are pivotal to the **sustainability of the systems** that are put in place. Hence, it is essential to consider countries as economic actors and to analyse them according to a matrix taking into account financial and economic criteria as well as social, environmental and governance dimensions. This is comparable to what is increasingly being done for companies.
3. It may seem a **complex** issue, and there are **several possible approaches**. However, it seems that for an economy to thrive, it must operate within the appropriate democratic framework, which consists of high-quality governance institutions. When there is a lack of investment in the well-being and knowledge of current and future generations, an economy jeopardises its sustainability perspectives. Without an objective of sustainable management of its resources and environment, it has no chance of survival, given the major challenges our planet will be facing in a few years' time. Finally, failing to comply with international commitments (treaties, agreements, etc.) means that it is very likely that a state will renege on its commitments as regards its creditors.
4. A sustainability analysis of states may be looking at quantitative and/or qualitative data. It should be determined whether the objective is to carry out an evaluation at this point in time, with facts and figures related to the last couple of years, or whether the analysis includes a dynamic and forward-looking dimension in order to anticipate the future evolution of states. Indeed, particularly on the environmental domain, various policies and efforts generally yield results two or three years after they have been implemented. Hence, they are not included in the figures which are published by renowned international sources such as the World Bank or the World Economic Forum.
5. Finally, the carbon risk also exists in the sphere of investments in sovereign bonds. When states legislate their own economy and growth levers, the context for taking this risk into account is obviously quite different from that of the company and its carbon footprint. Public authorities have a major role to play here. Taking this element into account in a model valuing sovereign bonds is also an important piece of information in order to construct a sustainable long-term portfolio.

Why is sustainability important for countries? What's the added value?

On the one hand, the IMF reiterated its cautious stance with regard to the surge in global debt levels. Indeed, in 2016 this amounted to USD 164,000 billion, equivalent to 225% of global GDP.

The euro crisis showed the extent to which high debt renders a state's financing vulnerable to shocks on financial markets and substantially undermined the status of risk-free investments. Many states lost their coveted AAA rating granted by extra-financial rating agencies.

On the other hand, the COP 21 calls upon investors to assume responsibility for the financing that is required for the energy transition. In this respect, government bonds represent a major source of financing and provide considerable leverage as well.

From added value to investment decision-making

The sovereign bonds of more sustainable countries have proven to be more resilient during crisis periods. When looking at the 2008 euro crisis, Scandinavian countries or other countries that are generally well positioned in the rankings **have held up much better** than, for example, Southern European countries.

Many links have been proven between ESG factors and a country's long-term economic growth and development. Already in the sixteenth century, a link had been established between the environment/geography/climate and a country's agricultural system, in other words access to food for the people, possible diseases and economic growth.

Academic research has also demonstrated a correlation between the quality of a country's governance institutions and its debt default risk. Overall governance acts as the cornerstone for the implementation of policies that foster other sustainability dimensions (social and environmental). As a matter of fact, governance relates to the quality, stability and predictability of the policies that have been implemented. This will enable institutions to be resilient in the light of the endogenous and exogenous events that affect states. This stands in contrast to unsustainable factors such as corruption, lack of freedom, red tape, etc. which are detrimental to foreign investments in particular.

Fiduciary duty

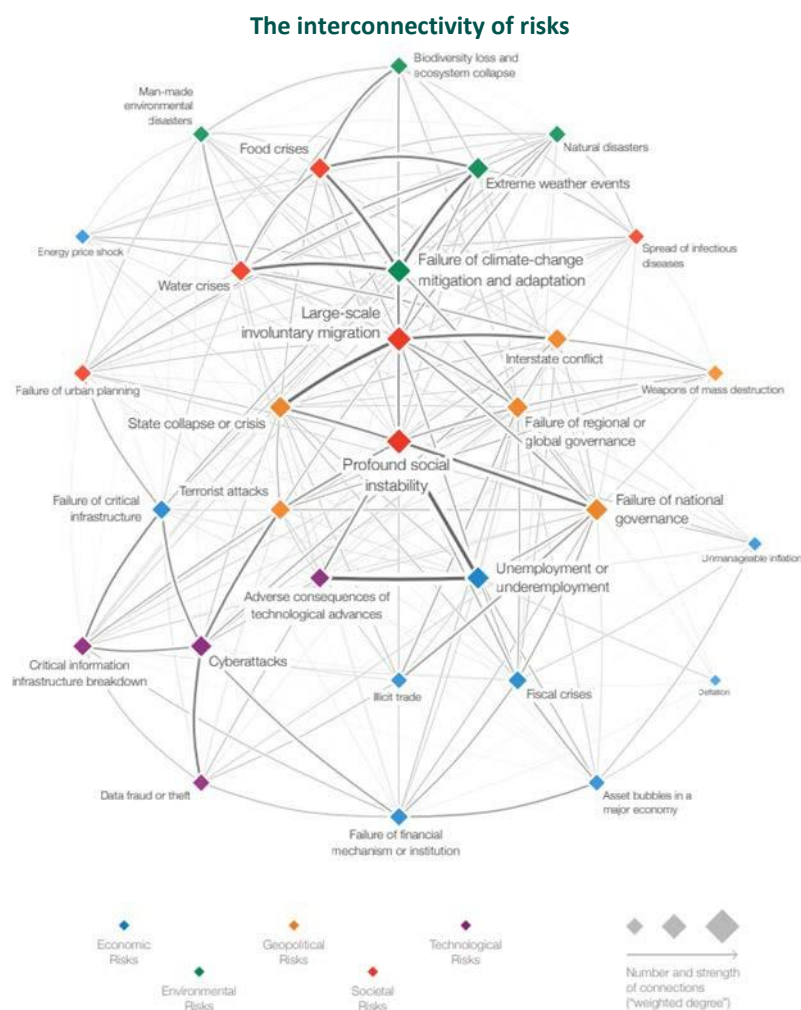
As explained in the second tutorial (regulation), it is now a fiduciary duty for investors to integrate ESG factors into their investment processes and risk management. Government bonds, which are thus issued by countries, are not an exception to this rule.

Indeed, 30% of the portfolios of occupational retirement provision institutions (referred to as IORPs or pension funds) are exposed to sovereign bonds. The ESG risks associated with this investment must therefore be included in the Statement of Investment Principles ("SIP"), risk management and portfolio construction.

How can a country's sustainability profile be assessed and defined?

It makes sense to refer to the three sustainability dimensions which are studied for companies, i.e. **E, S and G**.

Climate, social, technological and other risks are inextricably linked to one another. This interconnectivity between various risks is particularly well illustrated by the risk experts of the World Economic Forum (WEF). They demonstrate that it is important to adopt a **holistic approach to these three dimensions** - environment, social and governance - which are part and parcel of the fundamental analysis of countries and the sovereign debt they issue.



Source: World Economic Forum, the Global Risk Report

Environment

Climate change is at the heart of all debates and the role of states is unmistakable. Testament of this is the conviction of the Dutch state, followed by the French state, for their lack of ambition and their irresponsibility in terms of emission reduction objectives. Indeed, in response to the limited progress made at the COP 24 summit in Katowice in Poland, several French NGOs have joined forces to sue their respective states. Thus, Greenpeace, la Fondation pour la nature et l'homme, Notre Affaire à Tous and Oxfam France are blaming public authorities for their lack of action and decisions to combat climate change effectively. In terms of investments, standards, taxes and controls, the measures taken by France, which nevertheless wants to position itself as a leader within Europe on this subject, are considered insufficient. Given the impact of climate change on health, biodiversity and agriculture, NGOs regard their governments' inertia as a criminal offence, and a failure to assume their responsibilities.

This is not the first time that a state's lack of ambition has resulted in lawsuits. As a matter of fact, the Urgenda Foundation had already taken to the Dutch Court of Justice in 2015, as it believed the carbon emission reduction targets of the Netherlands were insufficient. Urgenda won the case, which was later confirmed by the Court of Appeal in October 2015, ordering the Dutch State to reduce its CO₂ emissions by 20% by 2020 compared to 1990 levels.

The last two years have **marked a turning point, as the financial industry has become increasingly aware of its role in financing a greener economy**. The success of the COP 21 in Paris in late 2015 was followed by the outcry with the United States dropping out of the agreement, while the newly elected French President appointed an environmentalist as head of the Ministry of Energy Transition. China has adopted its 5-year plan (2016-2020) and is positioning itself in the vanguard of environmental innovation to counter the burden of pollution, which its emerging middle class refuses. Limiting global warming to 2°C is now a fully-fledged scenario adopted by the renowned International Energy Agency going forward. Finally, the emerging regulation taking into account carbon risk in portfolios confirms that this is an economic risk in its own right, rather than an environmental objective for some "green" investors.

The Pentagon, under the Obama administration, declared climate change "a national security risk." Indeed, it is notable that many Americans live near the coasts, and a massive exodus to the centre of the country would have major ramifications for social cohesion and the US economy.

The same is true on a larger scale. According to the International Organization for Migration, an estimated 20 million people were displaced and became refugees in 2016 as a result of climate change. By 2050 this figure is expected to rise to 250 million, posing a major challenge to the countries accommodating immigrants. Hence, these factors are key to analysing a country's sustainability and thus the strength of its economy in the medium and long term.

Permanently rising costs

Given the surging number of climate refugees, the fight against climate change is especially vital for countries which are faced with this issue. In this respect, a recent study has demonstrated that there is a link between environmental vulnerability, the sovereign credit ratings attributed by rating agencies and the cost of capital. According to the report of the Centre for Climate Finance and Investment and the Imperial College Business School, the 20 countries which are most vulnerable to climate change have already spent an additional 40 to 62 billion dollars on extra interest payments resulting from climate change (droughts, floods and extreme weather conditions). This additional cost of 62 billion dollars is equivalent to the cost of building dykes to protect over 9,500km of coastline, namely that of Bangladesh, Barbados, Cambodia, Fiji, Haiti, Sri Lanka and Vietnam combined.

In other words, it is all the more urgent to address the Paris Agreement and to invest in climate adaptation solutions, not only to mitigate social tensions and economic and environmental risks, but also to provide better protection against fiscal deficiencies.

But this investment must be made right now. **The longer we postpone it, the higher the costs of the debts related to climate vulnerability will be.**

The Paris Agreement may be key in assessing a country's environmental sustainability. A country's commitment to reducing its future emissions may provide an initial estimate.

This is the tenet of the approach which has been chosen to assess a country's sustainability, namely:

- A **"legislative" approach**, which primarily focuses on the treaties signed by and commitments made by a government, bearing in mind that certain agreements or treaties are not always binding and that countries may discard them at any time without penalties or fines;
- An **approach with stakeholders**, NGOs, etc. with the difficulty of a large number of stakeholders and parameters to take into account. This results in a rather unclear message and signals which may get missed in the crowd (1), and poses the additional problem of subjectivity from the point of view of each NGO (2);
- An **exclusion-based approach**, for example excluding practices which are considered to be unsustainable, such as the death penalty, deforestation, the violation of international rights, etc.
- A **holistic approach** analysing various sustainability dimensions is based on the progress that has been made, as opposed to the simple and outright exclusion that may lack nuances.

This approach that has been chosen is also relevant for the other two dimensions, namely social and governance.

Social

The Arab Spring of late 2010 is a good illustration of the **importance of social stability for a country's sustainable development**, and of its correlation with social equality and equity among its population.

On the one hand, social equality is related to equitable wealth distribution.

On the other hand, social equity is related to fair and equitable access to the various social services that a country is expected to provide to its population: education, healthcare, basic facilities, etc.

These objectives of social equality and equity must be pursued, even though we are at a genuine demographic turning point.

First, the population is ageing - and not just on the Old Continent - with low fertility rates and strongly evolving working age.

Furthermore, by 2050 there will be 9.1 billion people to feed. This means that food security will be more important than ever.

Finally, generations Y (born after 1980) and Z (born after 2000) have already outnumbered the baby boomers in the United States. They have significantly altered the attitude and consumption patterns of previous generations.

The ageing population: a major issue for governments

The **inverted age pyramid** has an impact on the available workforce as well as on employment and retirement policies. This is reflected in low productivity gains - less than 1% per year - and may foster the emergence of robotisation and artificial intelligence. According to a study carried out by the consultant PwC, artificial intelligence will add an estimated USD 15,700 billion to global GDP by 2030, not only because of increased productivity, but also because of higher demand.

The up-and-coming new generations

Finally, **millennials** account for almost a third of the global population, 86% of whom live in emerging markets. By 2020 they will account for 59% of the global workforce. They are also capturing our attention due to their consumption patterns. Above all, the **challenges of education, employment and innovation** will be key to ensuring the integration and prosperity of this generation, which is looking for meaning in life. Millennials also attach great importance to recycling, health, wellness, etc.

The millennial generation runs a greater risk of poverty than their parents and grandparents. In the long term, this impacts economic growth, housing, pensions, health, education, the labour market and public finances.

The challenge consists of anticipating not only the opportunities, but also the risks that this major social revolution entails for the public sector as well as for the private sector.

Education and innovation: key sustainability factors

A country's sustainability obviously depends on **future generations** and in particular on the growth that they represent. Hence, it is important to invest in skills today to ensure that individuals can take part in the economy. It is also a guarantee for the financing of future public spending.

An important dimension which is closely linked to the social domain is the future generations. In the general definition of sustainability as set out in the Bruntland report¹, future generations are explicitly mentioned. Hence, when drilling this down to the country level, it is first and foremost a matter of education, so that future generations effectively contribute to the future economic activity of the countries through their work.

In industrialised and ageing economies such as ours, **lifelong learning** is a major challenge to ensure that people remain employable and available to the labour market.

In emerging economies, where an upcoming middle class is very appealing to investors, it will be key to analyse the extent to which the skill levels of the populations ensure the economic development of these countries. In Africa, where the demographic challenge is completely the opposite of the other continents, which have declining populations, the education of the young generation, which will account for more than half of the population of African countries by 2020-2030, is a key challenge to ensure that these young people are able to enter into active life.

The **emergence of disruptive technologies may have a profound impact on the labour market** in many countries, and at the same time it will lead to many jobs disappearing while creating others we do not even know of at the present time. A key issue for the education and training systems is to ensure that the working population "follows the trend" and is able to meet the needs of the economies of tomorrow.

Overall, governments have several reasons to invest in the training of their population, as better skills contribute to:

- Higher wages and better individual employment prospects;
- Greater productivity and higher profits for companies;
- Higher tax revenues for public authorities.

For a state, improving the skills of its population also means reducing unemployment levels, or enhancing health in the workplace. A recent OECD study has found that public education costs are largely offset by higher tax revenues. Thus, for every euro governments invest in education, more than one euro flows back to the government in the form of higher personal income tax.

A lack of investment in education is a short-termist view that jeopardises a state's future because it affects employment and participation rates, productivity growth, future tax revenues and thus hampers the full potential for future economic growth.

Governance

The tenure of a government mandate is relatively short. By contrast, the effects of policies are felt in the medium and long term. So how can we assess the quality of a country's governance?

We need to look beyond the government or political party(ies) which are in charge at a given time, and instead focus on the effectiveness of the institutions in the medium and long term. Governance is multifaceted and relates to

¹ Sustainable development aims to meet the needs of present generations without compromising the ability of future generations to meet their own needs. - Bruntland Report 1987

several topics, such as the respect for certain freedoms and fundamental rights, equal opportunities, the quality of governance institutions or a country's security.

Immigration is also becoming an increasingly important topic these days. As populations age, immigration may provide a boost to the working population of the host countries.

Sound governance, for countries as well as companies, is **the cornerstone of any sustainable social and environmental policy**, as it ensures stability and results in lower investment volatility.

It is mainly based on a country's institutions and the robustness of the policies which have been implemented. It must enable all citizens to have their rights and freedoms respected. Beyond the local population, the relations also extend to neighbouring countries and international connections.

Most definitely a relevant analysis!

Firstly, by looking into the aspect of transparency and democratic values, the analysis allows an initial assessment to be made of the political context of a country and its stability. The quality of its public institutions is evaluated, as well as its transparency or the lack thereof, in terms of corruption and press freedom, for instance. It also involves looking into the fundamental rights of civil society, including political rights and civil liberties. Furthermore, the analysis of the population and its well-being also enables flaws and discontent to be detected within civil society which may give rise to instability, and which are detrimental to a sound investment climate.

Did you know?

DPAM is a pioneer in terms of country sustainability analysis, which is implemented in its sovereign bond management expertise for developed and emerging countries. The added value in terms of financial performance and risk control is measured on a quarterly basis.

In the framework of an investment in sovereign bonds, the contribution of the sustainability filter becomes even more important as market volatility increases and markets' performance goes down. This demonstrates the strength of the tool in better understanding risks.

The information sources and criteria

Qualitative versus quantitative data

We may also look into the type of data used.

Quantitative data have the advantage that they are **objective and can be compared between different states**. They can be integrated into a quantitative model, which avoids any risk of subjectivity.

Conversely, **qualitative data** allow for more nuances and perspectives but may be prone to a certain degree of interpretation and hence subjectivity. However, **not all analytical factors are always quantifiable or modellable**. In order to interpret them in a relevant way, we should take some distance from the other factors. Moreover, it may be appropriate to assess the context impacting countries, which sometimes gives a specific meaning to the data. For the sake of higher quality analysis, it is therefore necessary to use both quantitative and qualitative data.

Credit rating agencies and extra-financial rating agencies

Over the past ten years, and in particular since the 2008 euro crisis, the well-known credit rating agencies S&P, Moody's and Fitch have also looked into the ESG qualities of states. However, these ESG studies and research criteria still have a low weighting in credit ratings, even for countries, and contain additional and supplementing information for interested parties. Governance criteria are already better integrated than the other environmental or social criteria.

The **extra-financial rating agencies** very quickly realised that their ESG research for companies also had to cover sovereign debt issuers and thus countries. Many of them offer country ratings based on the three ESG dimensions. However, a country's sustainability approach differs significantly from the approach that is pursued for companies. It is therefore important to pay close attention - just like for companies - to the **relevance of the information**. The remarks on the issue of a company's extra-financial rating (see Tutorial 3) are very much valid for countries as well.

Other potential sources

Regarding criteria such as social equality and equity, energy consumption, education and healthcare, **the databases of international institutions are brimming with statistics**. Sources such as the World Bank, the World Health Organization, the International Labour Organization, the OECD, etc. are well-known and recognised for the quality of their research and statistical departments. In addition, several NGOs also have indicators or indices on different dimensions that may be a source of relevant information. **Particular attention must be paid to the objectivity and comparability of data as well as the correct interpretation of these various measures**.

The “forward looking” issue

Most statistics coming from international sources are **historical data** that are regularly updated (on a monthly or annual basis). Their drawback is that they **measure the past**, and do not take into account the progress that has been made following the policies that have been implemented. In the context of an objective and comparable approach, it is preferable to focus on tangible facts and data instead of on projections or commitments made by the governing authorities.

However, if the objective is to anticipate the future, it will be necessary to think about **future statistics** or the development scenarios that are also available. There is a risk that an important gap between projections and reality could give a false message about the sustainability of some countries compared to others.

It is also possible to anticipate countries’ trends in terms of sustainable development by adding a qualitative layer looking at the decisions and measures taken by the governments. This qualitative information may be supplemented by quantitative analyses of **trends** highlighting a country’s positive or negative development with regard to a particular sustainable development issue. Anyhow, it is important to study the trends and development of countries over time, in order to give the country analysis a **dynamic and forward-looking dimension**.

Sustainable Development Goals (SDGs) to assess the relevance

As successors of the Millennium Development Goals (MDGs) which were launched by the United Nations between 2000 and 2015, the 17 Sustainable Development Goals (SDGs) aim to foster sustainable development on the economic, social and environmental front. They reassert human rights and the willingness to eradicate poverty, famine and inequality by the end of 2030.

The eight MDGs had obtained excellent results on all fronts. However, that success varied across the board, and the poorest and most vulnerable populations continue to be left behind.

Their successors, the SDGs, have primarily targeted governments as well as the public sector. It is very encouraging to see that these ambitious principles have been extended to the whole of the private sector as well as to investors. The Paris Agreement has greatly increased awareness. Therefore, the timing was just right. Indeed, substantial investments will be required to achieve all these objectives.

Nearly 200 countries have adopted the 17 social, environmental and economic objectives. They represent a unique opportunity to step up investments in the light of major environmental and social challenges.

Now, the question is why government bonds do not pay more attention to these major challenges, which are also economic challenges. Government bonds remain an important asset class for long-term investors after all. And yet, the universes and reference indices still do not fully take into account these dimensions.

A country's carbon footprint - quite a challenge

Carbon risk is key to investors, as it represents an **economic threat**. Meanwhile, **legislation** relating to this issue is becoming increasingly strict and pressure is mounting on financial markets in order to finance the energy transition.

On the one hand, we need to look into a country's carbon intensity and energy efficiency, and on the other hand into the **physical risk that climate change poses**, as well as the policies which have been adopted to deal with this risk.

Looking at some recent examples, we can also mention the legal risks for states whose climate policies lack ambition. As mentioned earlier in this document, some civil organisations will not hesitate to take states to court because they fail to assume their responsibilities in this matter (cf. France and the Netherlands).

The carbon footprint of the portfolio is meant to assess the portfolio's carbon risk in the framework of the transition to a low-carbon economy. Hence, measuring risk remains a challenge in and of itself.

The carbon intensity approach, which measures a country's emissions relative to its GDP, is an initial calculation which enables comparable data to be obtained. However, several challenges should still be accounted for, including:

- the **economic dependence of certain countries** on highly carbon-intensive sectors. The concept of stranded assets illustrates this rather well. Although it is mostly associated with companies active in the oil and energy sector, it remains relevant for the economies of countries for which the growth model is primarily based on the consumption of fossil energy reserves, such as Venezuela, Russia or other countries strongly dependent on fossil energy sources.
- The interaction between countries and **exported and imported emissions**.
- The **accessibility** of recent data.
- The **energy transition risk**; the 2°C scenario recommended by the Paris Summit requires net emissions to be reduced to zero by 2050, which poses a real challenge to all countries.

Conclusions

As is often the case, it has taken an important crisis to unveil the flaws of certain economic and financial models that are unidimensional. In a context of a globalising economy facing major challenges such as the demographic challenge, the scarcity of natural resources and climate change, it seems obvious that states, as major actors in the economy, have a key role to play. They are pivotal to the sustainability of the systems that are put in place. Therefore, for an economy to operate efficiently, it must have an appropriate democratic framework, composed of effective and stable governance institutions. When there is a lack of investment in the well-being and knowledge of current and future generations, an economy jeopardises its sustainability perspectives. Without an objective of sustainable management of its resources and environment, it will incur significant costs to adapt to the major challenges our planet will be facing in a few years' time. Finally, failing to comply with international commitments (treaties, agreements, etc.) means that it is very likely that a state will renege on its commitments vis-à-vis its creditors. Hence, while this is an **extremely complex matter**, it is **essential to take a holistic view of countries as economic actors and actors of sustainable development**, and to analyse them according to a matrix taking into account financial and economic criteria as well as social, environmental and governance dimensions. This is comparable to what is increasingly being done for companies.

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