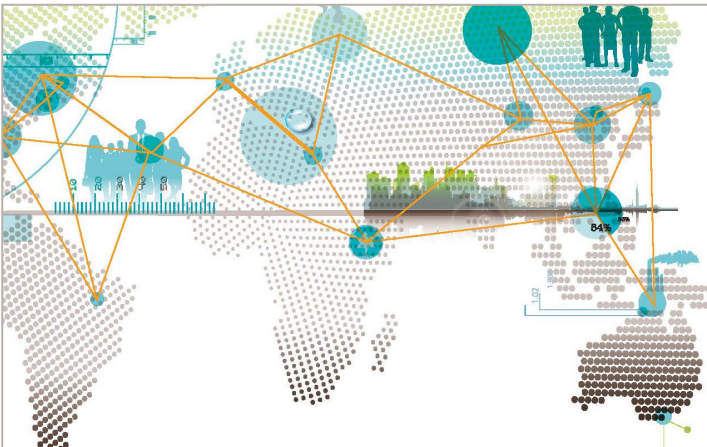


Country Sustainability Ranking Update – November 2018

## Sweden emerges as sole leader again

- Sweden leads a stable top trio
- Winds of change in Brazil
- Arab democracy deficit
- Growing climate risks



**This year's Autumn Update of the Country Sustainability Ranking renders no surprises. The Scandinavian countries and Switzerland have consolidated their leading positions, while the emerging giants India and China remained among the weakest ESG performers. They are also ranked at the bottom of our investment universe.**

**Populism is still very much alive, as recent election results have shown, and will likely impact various countries' ESG profiles going forward.**

**Whereas, public reaction to events involving Saudi Arabia has been one of shock and disbelief, the Kingdom's democratic deficits have been consistently reflected in our governance indicators and analysis in recent years.**

**More shocking perhaps is that the problem is not confined to Saudi Arabia.**

### About this report

This semi-annual report provides a succinct summary and analysis of the environmental, social and governance (ESG) profiles of 65 countries around the globe. It builds on the results of RobecoSAM's proprietary Country Sustainability Ranking (CSR) tool, which collects and analyzes ESG data from 22 developed economies and 43 emerging markets via a structured and comprehensive framework to calculate an overall country score.

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 making comparisons among countries and regions from a risk-return perspective. The summary outlined here complements findings gained from the more traditional country risk assessment and is particularly focused on integrating long-term perspectives.<sup>1)</sup>

Please note that with each update we also recalculate all previous scores. Due to revisions of input data, as well as changes in methodology and/or data sources, these recalculated scores can deviate from previously published ones but provide a more accurate picture of real progress or regress and thus facilitate historical comparisons.

For a more detailed outline of the methodology used, please refer to our brochure "Measuring Country Intangibles."<sup>2)</sup>

Please see the endnotes for further details on methodology.

## Sweden tops once again, ahead of Denmark and Switzerland

The Fall Country Sustainability Ranking Update from November 2018 shows Sweden as sole leader, followed by its neighbor Denmark and then Switzerland, which was again the only country that managed to crack the Scandinavian phalanx at the top by ranking third, as seen in **Figure 1**. This continued dominance reflects these countries' balanced and robust sustainability profile across all three ESG dimensions.

In Sweden, record-long government talks following the inconclusive election have not had a negative impact on the country's ESG score so far. There was no change in the composition of the top 10 countries. Denmark is the only country from that group that was able to make some noteworthy gains in its score (+0.15), mainly due to an increased share of renewable energy, better regulation and an improved score for aging, resulting from an increase in the retirement age and the IMF's lower net present value (NPV) estimate for pension spending.

**In Sweden, record-long government talks following the inconclusive election have not had a negative impact on the country's ESG score so far.**

### Europe's Refrain—Aging populations and political fragmentation

Belgium (+0.15) is the other developed country that emerged among the winners, benefiting largely from an improvement in almost all of the sub-indicators within the aging category (see **Figure 2**). Luxembourg (-0.20), Germany (-0.11) and Norway (-0.09), on the other hand, are among the developed economies that emerged as losers in the current update. In all three cases, the setback is entirely due to a poorer performance in some governance areas – especially with regard to most worldwide governance indicators – political risk (in Germany), as well as higher NPV estimates for pension and healthcare spending, with the latter undermining the sustainability of the respective social security systems.

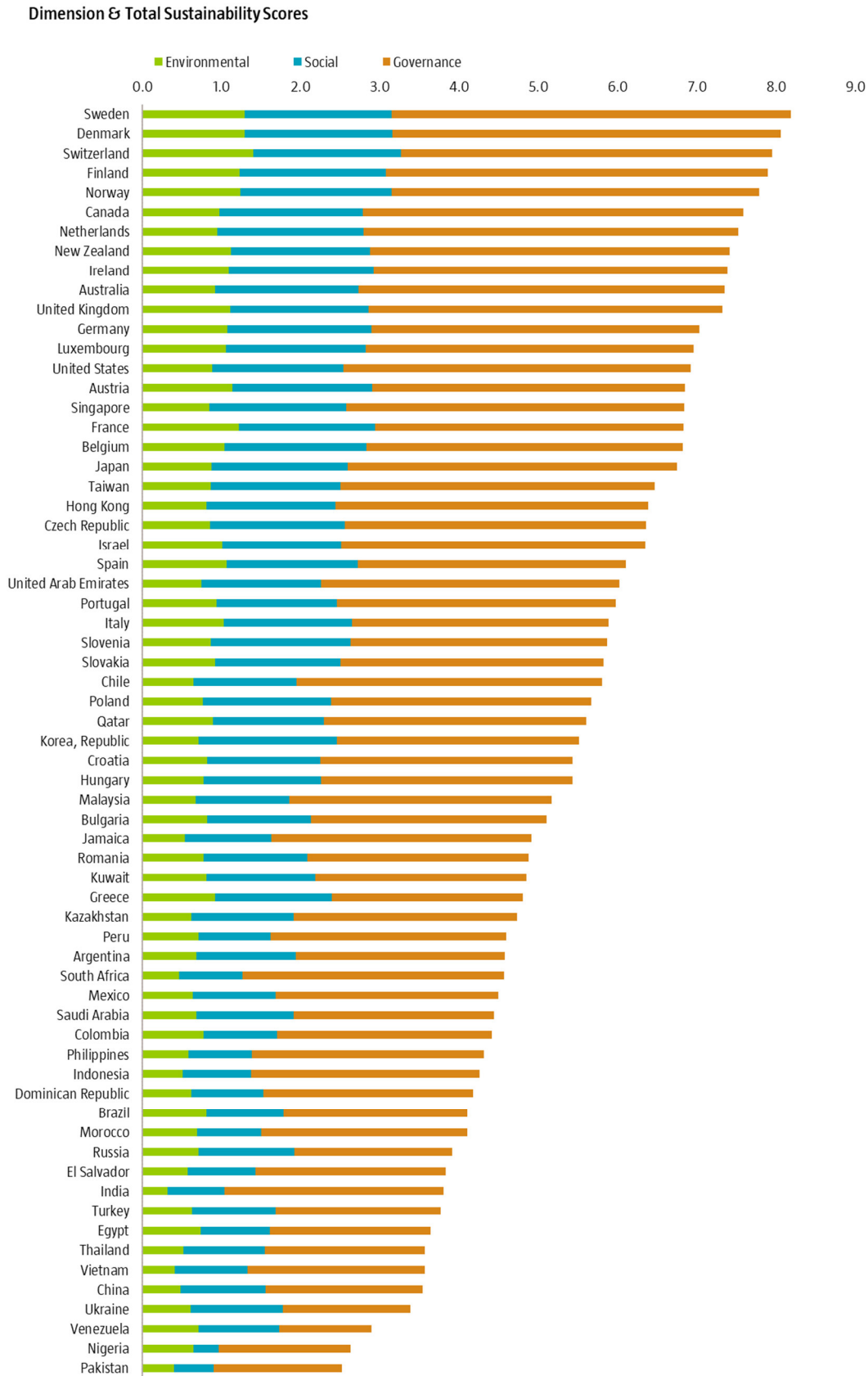
In Germany, long perceived as a haven of stability in Europe, the political landscape has been shaken up in recent months. Developments have been characterized by an increasing tendency toward political fragmentation and the grand coalition's rapidly eroding power base, as revealed once again by the most recent setbacks for the CDU, CSU and the SPD in the state elections in Bavaria and Hesse. As Luxembourg's decline has been greater than Germany's, the two countries swapped positions in the rankings, allowing Germany to move up one slot to #12 despite its lower absolute score.

### A broad mix of winners and losers overall

The list of winners and losers in **Figure 2** displays a fairly broad spectrum of countries in terms of development status, economic size, income category and regional affiliation. A pronounced deterioration in aging scores characterized losing countries this time around. Increased estimates for future pension spending, deteriorating pension assets-to-GDP ratio (S. Korea) and a lowered retirement age (Poland) were among the primary causes. Moreover, Poland suffered from increased political risk due to its populist policy stance and resulting divide within the country and the EU, while South Korea declined on account of curious relations with its erratic neighbor in the North and the uncertainties surrounding the U.S.'s commitment to retaining its role as a regional protective power in Asia.

**A pronounced deterioration in aging scores characterize losing countries...while increased corruption, weakened rule of law and declines in regulatory quality contributed to deterioration in worldwide governance indicators.**

**Figure 1: RobecoSAM's Country Sustainability Ranking – October 2018**

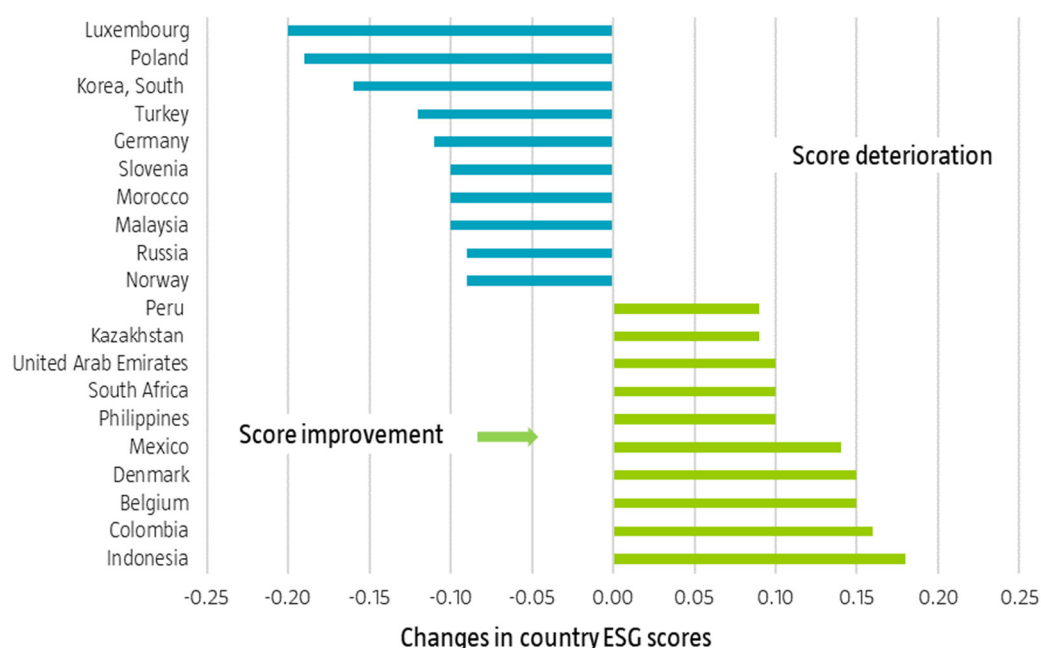


Source: RobecoSAM

Increased corruption (Malaysia and Russia), weakened rule of law (Malaysia and Poland) and declines in regulatory quality (Turkey) contributed to a deterioration in worldwide governance indicators. These shifts in indicator scores could not be offset by these countries' modest improvements in some of the social indicators.

Developing countries were among the biggest winners overall thanks to reduced poverty rates and inequality. Moreover, better scores related to aging indicators also improved developing country standings driven primarily by lower NPV estimates for age-related healthcare spending and, in the case of Indonesia, a pronounced increase in the retirement age from 55 to 65 years.

**Figure 2: Changes in country ESG scores October 2018 vs April 2018: the winners and losers**



Source: RobecoSAM

### South America—advancing slowly on a tight rope

Among the bigger emerging markets, Colombia, Indonesia and Mexico enjoyed an increase in their Fragile States Index scores, published by the Fund for Peace. In Mexico and Colombia, this improvement is accompanied by reduced political risk, as evaluated by the PRS Group. In Colombia's case, this seems obvious given the continuation of the peace accord with the former FARC under the new administration of President Ivan Duque. While this process still faces some hurdles, it is nevertheless advancing. A potential source of unrest is the large inflow of refugees from Venezuela, which puts additional stress on a country that is already struggling with the social integration of the many former FARC rebels.

The improvement in Mexico appears somewhat less plausible, as the country remains plagued by violence, security problems, a high crime rate and persistent social disparities. Still, the victory of the leftist and controversial president-elect, Andrés Manuel López Obrador (also known as "AMLO") – who will take office on December 1 – has not provoked the disruptive election dispute feared in the run-up to the polls. However, given his vague campaign promises, concerns that AMLO could pursue an extremist and excessively leftist policy agenda have not disappeared. In the case of Indonesia, the improvement regarding political rights and civil liberties contrasts with the decline in the PRS Group's political risk score. President Joko Widodo is faced with a strengthening group of political and religious conservatives within and outside the government and has yet to find the right strategy for successfully tackling the religious and ethnic tensions within the country.

## **South Africa's diminishing optimism...Singapore undiminished leadership position**

As for South Africa, last but not least, the initial optimism after the transfer of power to Cyril Ramaphosa has given way to a more cautious assessment of political change and reforms. The lower political risk score, compared with the Spring update, reflects the prevailing political uncertainty, the lack of reform progress, disappointment regarding Ramaphosa's cabinet, and the threat of a controversial land reform policy that allows seizures without compensation. Singapore's modest gains prevented its inclusion among the biggest winners, but with a moderately improved overall sustainability performance (an increase of 0.05 in the ESG score) it overtook Taiwan (a small decline of 0.07) and regained the position as the sustainability leader in emerging markets.

## **UK and US: No decline in their ESG scores...so far**

Despite concerns relating to Brexit and Trump's contentious policy agenda, both the UK and the U.S. were able to maintain their ESG score (UK) or even improve it slightly (+0.05 in case of the U.S.) since the Spring. However, their overall ESG scores mask some noticeable shifts within their ESG profiles on an individual indicator basis.

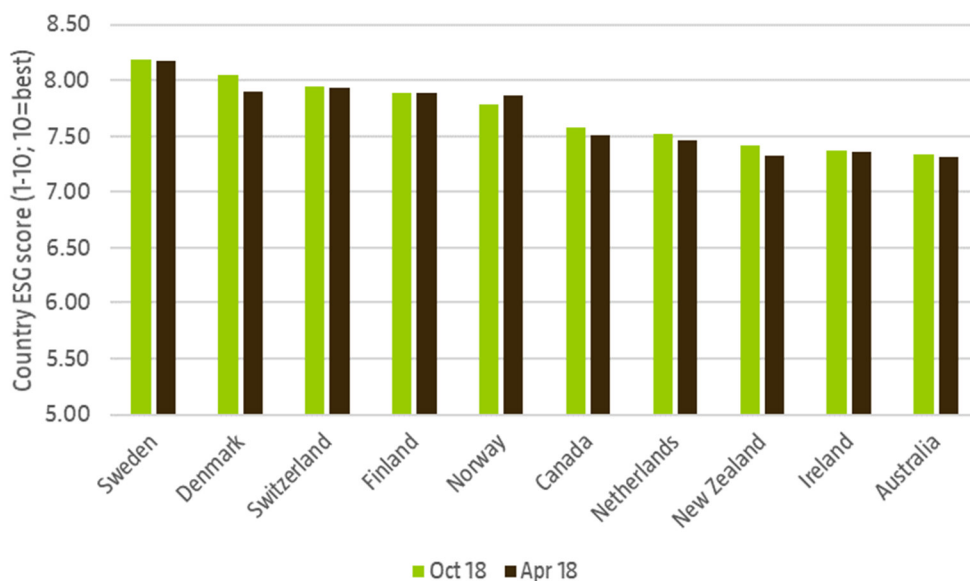
Both countries show a deterioration in social unrest, political risk and political stability indicators, reflecting greater uncertainty, more pronounced risks, increased polarization and a widening social divide. As for the UK, the deadline for its formal withdrawal from the European Union, scheduled for March 29 next year, is approaching rapidly. However, the UK and the EU have yet to agree on an exit deal, leaving little time to overcome the current deadlock. In the U.S., some weakening of its ESG performance could have been expected in view of Trump's introduction of various controversial policies. These include the dismantling of environmental protection, a harsh stance on immigration, some erratic and shady foreign-policy initiatives, the start of a trade war, and – more generally – his "America first" policy.

## **Both [the UK and US] show a deterioration in social unrest, political risk and political stability indicators, reflecting greater uncertainty, more pronounced risks, increased polarization and a widening social divide.**

So far, the adverse impacts of such moves – and the Brexit debate in the UK – have largely been confined to the areas indicated above. And, both in the UK and in the US, the resulting downward pressure on ESG scores have been offset by improvements in other areas, especially in aging, where both countries have benefited from lower NPV estimates for future pension spending and higher pension assets in relation to GDP. In some areas, the adverse implications have also been mitigated by action on the sub-sovereign level. In the environmental area in the U.S., for example, 17 states and several hundred cities and private businesses have formed groups such as the "We are still in" coalition, announcing their own climate goals and thus undermining Trump's move to exit the Paris Agreement. To a large extent, this also explains why environmental indicators for the U.S., including Yale University's Environmental Performance Index, have held up quite well so far.

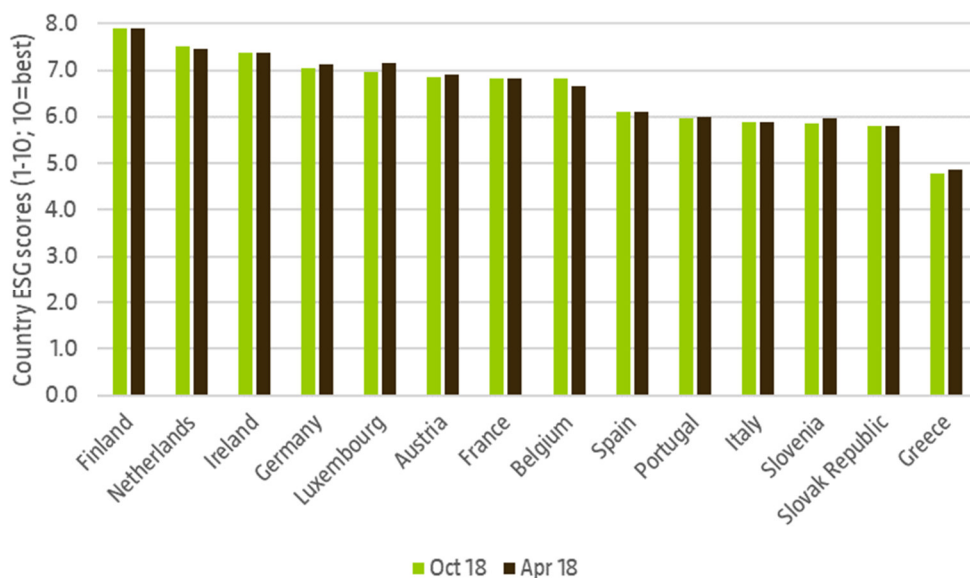
In the medium to longer term, the country's ESG performance, in general, will certainly be impacted by the outcome of the recent mid-term elections. Having regained control of the House of Representatives on November 6, the Democrats will make life harder for President Trump as they will be able to block Trump's legislative agenda on issues such as healthcare, tax plans, or immigration reform, but could also initiate a multitude of damaging investigations into his administration and his business dealings.

Figure 3: Top 10 country ESG scores



Source: RobecoSAM

Figure 4: Country ESG scores for EMU members



Source: RobecoSAM

### EMU: Finland remains in front, the Netherlands runs second, while Ireland holds steady

Finland, the Netherlands and Ireland have easily managed to defend their leading positions among EMU countries, while their nearest pursuers, Germany and Luxembourg, have suffered a setback in their ESG scores (see **Figure 4**). In the case of Ireland, the ongoing uncertainty surrounding Brexit has apparently not affected the country’s ESG profile so far. However, this may change as one of the key outstanding issues with Brexit is the future status of the Irish border – there are concerns that the possible reintroduction of a hard border between Northern Ireland and Ireland could destabilize the peace process.

Among the southern European peripheral countries, ESG scores remained more or less stable. In Spain, political developments have stabilized somewhat since the new prime minister, Pedro Sánchez of the Socialist Workers’ Party, came to power in June.

Sánchez has promised to stick to a rather conservative economic program and to start repairing the institutional, political and social damage caused by the People's Party government of former Prime Minister Mariano Rajoy. All this has resulted in a small improvement in the PRS Group's political risk score – by 1 point to 74.5 compared with March – even though the new government lacks a majority in parliament. Sánchez has also announced that he will address the “pressing social needs” of Spaniards after years of austerity and he still needs to find a solution to the Catalan separatism crisis. Both of these issues have contributed to a moderate deterioration in the Fund for Peace's Fragile States Index – from 37.5 to 41.4 (a rise in the index implies a deterioration) – since the Spring update, offsetting the improved score in the political risk indicator.

**[In Italy] important institutional and structural reforms are being put on hold, leaving little hope for a noticeable improvement in the country's sustainability performance.**

The most notable and relevant developments in southern Europe over recent months took place in Italy, although the country's ESG score has not been affected so far. Since taking office in June, the populist coalition formed by the anti-establishment 5-Star Movement and the far-right League party has struggled to deliver on the unrealistic election promises that helped them to gain power. An expression of this is found in the budget for 2019, which was approved by the Italian parliament in late September and provides for a deficit equal to 2.4% of GDP. This violates EU rules on fiscal responsibility and has frightened financial markets. The two parties campaigned on reforming the tax system with a flat tax, overhauling the pension system, enacting mass deportations of illegal migrants, reaching out to Russia, and establishing a guaranteed basic income for those living below the poverty line. This agenda is at odds with the country's debt situation, risks destabilizing the EU and prompted Moody's to downgrade Italy's credit rating by one notch to “Baa3” on October 19. At the same time, important institutional and structural reforms are being put on hold, leaving little hope for a noticeable improvement in the country's sustainability performance.

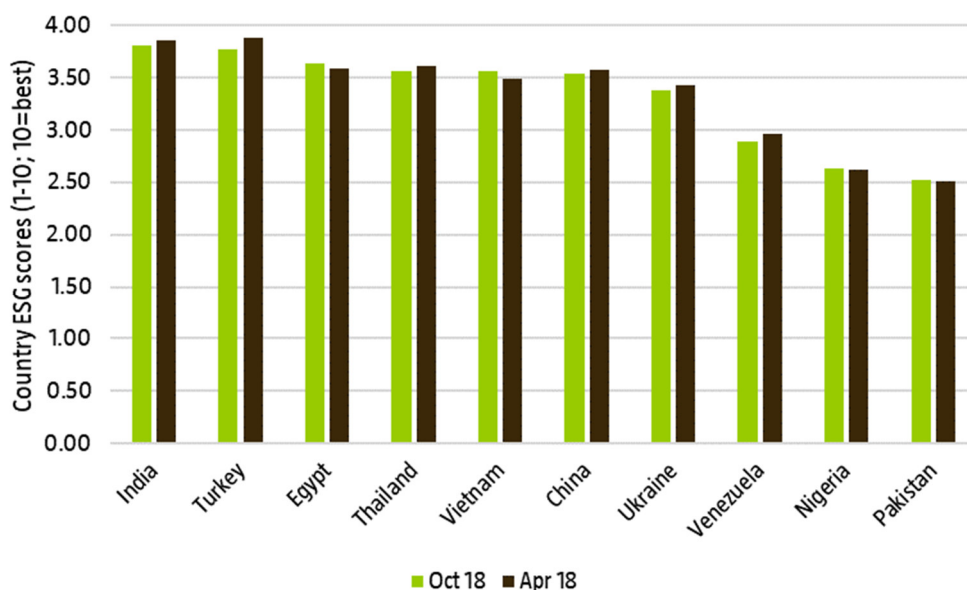
### Stagnant ESG performance within the bottom 10

No change has occurred in the composition of the bottom 10 since the Spring country sustainability review (see **Figure 5**). Turkey has again lost some ground within this group of the poorest performing countries, including the two emerging giants India and China, which did not manage to further improve their sustainability performance. Turkey is enduring its most severe economic crisis since the Justice and Development Party (AKP) gained power in 2002. President Erdogan has consolidated his leadership by gradually taking control of constitutional powers, reducing the influence of parliament, and interfering in economic policymaking, thus complicating the restoration of economic stability. As a consequence, Turkey has suffered small declines in its score for political risk, rule of law, and the quality of regulations.

In Venezuela, the economy has collapsed, characterized by free-falling GDP, plunging oil production, a currency crisis, debt-servicing problems, hyperinflation, a life-threatening shortage of basic goods, and rapidly spreading poverty. This situation has caused massive migration into neighboring countries. According to estimates, more than 2 million people have left Venezuela since 2016, and 87% of families were living below the poverty line last year, thus explaining Venezuela's poor scores in governance and social indicators.

The prospects for an improvement in the situation in Turkey and Venezuela, as well as both countries' sustainability performance, look rather dim at present.

Figure 5: Bottom 10 country ESG scores



Source: RobecoSAM

### Populism still in vogue

The key risks to global growth include increased geopolitical strains, escalating trade tensions, protectionist pressures, diminishing trust in mainstream politics and institutions, as well as deepening political divisions within several countries. The accentuation of these risks went hand in hand with a rise of populism around the globe manifested in the election of Donald Trump in the U.S., Rodrigo Duterte in the Philippines, the 5-Star Movement and League in Italy, Andrés Manuel López Obrador in Mexico and – most recently – far-right populist Jair Bolsonaro in Brazil.

### Even Denmark, Finland and Sweden have not been saved from the widespread populist backlash.

Authoritarian governments have already been in power for a number of years in Hungary, Poland, Turkey and Venezuela. Populists are also well established in Austria, France, Germany and the Netherlands. Even Denmark, Finland and Sweden have not been saved from the widespread populist backlash, with far-right parties gaining significant support. This has raised some questions about the so-called Nordic Model, which often serves as an example of well-functioning economies with robust institutions and a strong social security system. Even though the adverse impacts on the sustainability performance have remained limited in most cases, the potential damage caused by the gradual undermining of institutions should not be neglected and could well impair ESG profiles more markedly in the medium to longer term.

### A far-right shift in Brazil

Jair Bolsonaro, the extreme right-wing candidate from the Social Liberal Party (PSL), won the presidential runoff against left-winger Fernando Haddad in Brazil on October 28 with 55% of the valid votes. This is a radical turnaround after four successive victories by the Workers' Party (PT) since 2002. After years of corruption scandals, discredited institutions, deepening political polarization, prevalent crime, economic malaise and surging poverty – also reflected in a decline in the ESG score from 4.37 in early 2015 to 4.11 currently – Brazilian voters appear to have become deeply disillusioned and lost faith in the traditional parties in government as well as the political elite. Bolsonaro, a controversial former army captain, an admirer of Brazil's past military dictatorships and also described as a "Tropical Trump", has promised to crack down on crime and to fight endemic corruption. In economics, the appointment of University of Chicago trained Paulo Guedes as finance minister points to a free-market policy course, which has triggered positive initial reactions in local financial markets.



## The structure of [Brazil's] political system and institutions should be sufficiently robust to prevent extreme radicalization.

On the other hand, there are fears that Bolsonaro may follow other countries down the path of an illiberal and authoritarian presidency, which could not only threaten Brazil's liberal democracy but could also imply that the country is headed for prolonged social and political turmoil. However, the structure of the political system and Brazil's institutions should be sufficiently robust to prevent extreme radicalization. The effects of the Bolsonaro presidency could spread beyond the borders of Brazil and impact other countries in South America. Until recently, Brazil was seen as a successful model that embraced market-friendly economic policies, bold anti-poverty programs and democracy. But with the disillusionment that has arisen and at a time when leftist governments, above all the regime in Venezuela, have lost some of their appeal, other countries in the region could follow in the footsteps of their larger neighbor.

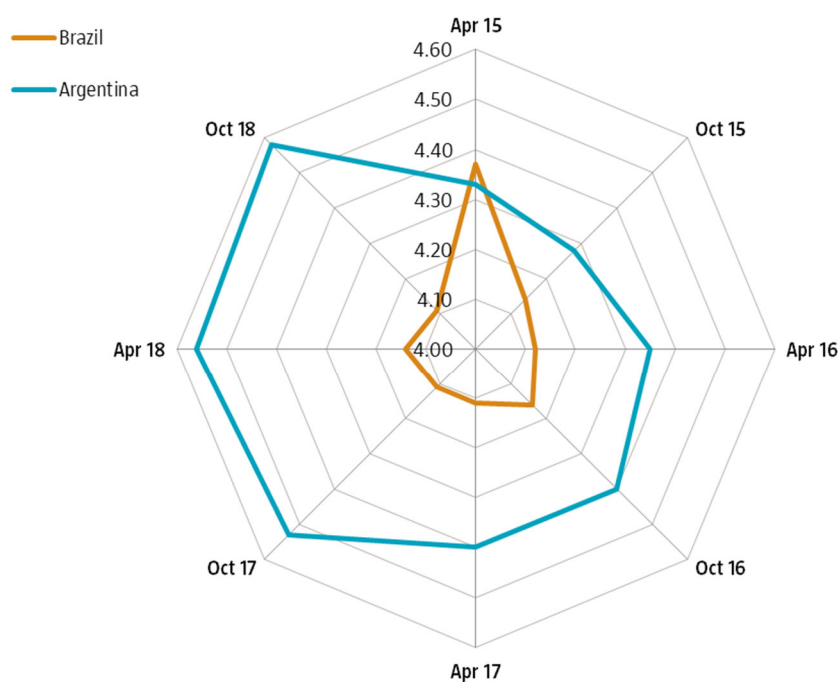
## [In South America] disillusionment has arisen at a time when leftist governments...have lost some of their appeal.

### Argentina—Straddling the middle of political extremes

Argentina will be an interesting case to watch in this regard. After Mauricio Macri's election victory in November 2015, Argentina has been seen as a potential alternative to the left- and right-wing populist models that have appeared elsewhere. Macri promised that his vision of liberal economic reforms, though painful at first, would reignite growth after years of stagnation and eliminate the chronic problem of inflation. He has successfully implemented parts of his reform agenda, including trade liberalization, the elimination of foreign-exchange controls, the introduction of tax reforms, and steps against corruption.

Macri also won a big endorsement in the mid-term elections in October 2017. All this has contributed to a gradual improvement in the country's ESG score from 4.28 at the end of 2015 to 4.58 at present, setting it apart from Brazil, its big rival (see **Figure 6**). Meanwhile, the currency crisis and the sharp economic contraction have forced Argentina's government to seek a USD 57 billion IMF bailout package, which is expected to shield the country from any credit distress for the time being. However, aside from the required austerity measures, such a rescue comes with a high political cost and could not only severely harm Macri's election prospects in 2019 but also jeopardize the continuation of his reform program.

**Figure 6: Brazil and Argentina with a divergent sustainability performance**



Country ESG score from 1 - 10 (best)

Source: RobecoSAM

## The Arab democracy deficit

The disappearance and murder of prominent Saudi journalist Jamal Khashoggi in the Saudi consulate in Istanbul last month has led to widespread public outrage and provoked tensions in the relationship between the West – in particular the U.S. – and Saudi Arabia. The incident has shed new light on Saudi Arabia, a country that has been well-known for its autocratic regime, human rights violations, shady foreign military campaigns and its promotion of fundamentalist Wahhabism. The affair has tarnished the image of Crown Prince Mohammed bin Salman even more than his harsh domestic crackdown on wealthy Saudi rivals, his jailing of women’s rights activists, the kidnapping and killing of dissidents abroad, or his reckless military campaign in Yemen.

The Khashoggi case also casts doubts on the Crown Prince’s true resolve to reform the country as well as on the viability of proposed reforms. This includes plans which require foreign investment and know-how to help diversify the economy away from its current dependence on oil and energy. This ambition would come under increasing threat if painful sanctions were to be imposed on the country, even though this doesn’t look very likely at present.

**The Khashoggi case also casts doubts on the Crown Prince’s true resolve to reform the country as well as on the viability of proposed reforms.**

### An abundance of physical assets—scarce on democracy

The shortcomings regarding the institutional framework, the political system and the quality of democracy in general are not a new phenomenon and are also not confined to Saudi Arabia. **Figure 7** shows the ESG profile as a whole and the breakdown of the three dimensions for four Gulf Cooperation Council (GCC) countries in relation to the average of their relevant emerging market peers in the high-income category, as well as three selected emerging market economies in the upper-middle income category – Brazil, China and South Africa. Thanks to their immense oil and gas wealth, the GCC countries have considerable financial resources that allow them to improve conditions in the environmental and social areas. This is also reflected in relatively better scores for these dimensions, helping to offset the deficiencies in the governance sphere to some extent.

It becomes clear that Saudi Arabia has the worst sustainability profile of the four Arab countries, while Qatar and the UAE have ESG scores above the relevant peer group average. It is also evident that the deficiencies in the governance sphere are the main stumbling blocks for a better overall score – similar to the situation in Brazil and in China, whereas governance is a relative strength in South Africa.

**Figure 7: Comparison of total & dimension ESG scores**

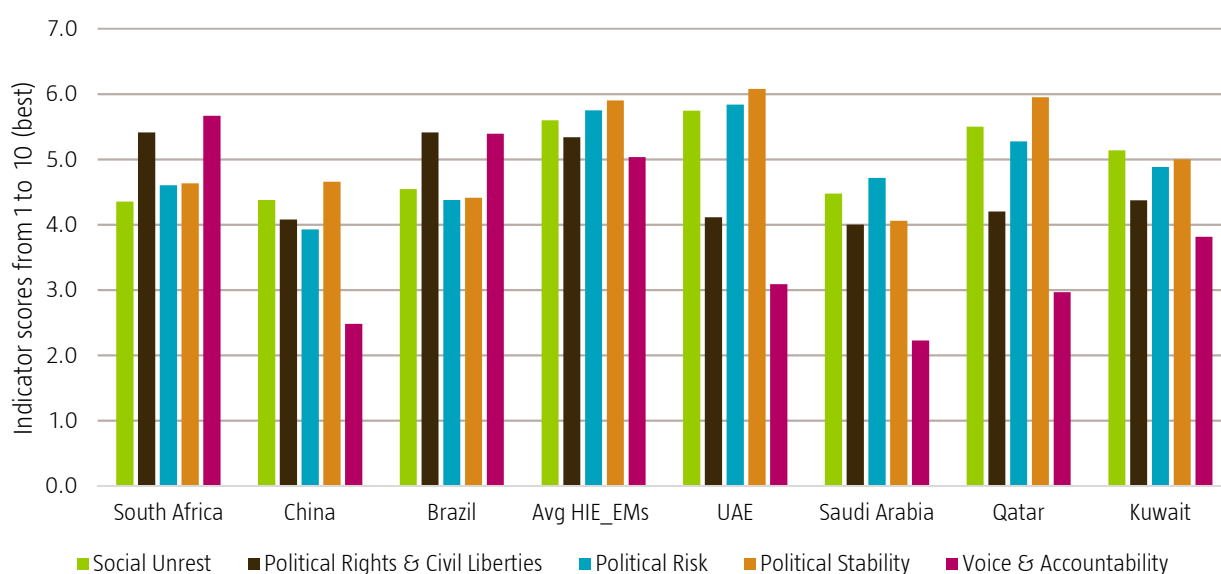


Source: RobecoSAM

Gulf Cooperation Countries continue to suffer from weak political systems and limited democracy, however, financial resources have helped improve conditions across environmental and social areas.

Deficits in various governance features as well as in the social unrest indicator are revealed in **Figure 8**. These indicators are all part of our country sustainability ranking. Based on this specific extract, Saudi Arabia displays a very similar profile to China, another country that often encounters criticism with regard to its political structure and human rights record. Traditionally, most Arab regimes traded public services (government jobs, free or heavily subsidized services such as education, health, energy and food) in exchange for citizens' loyalty and quiescence. This has, of course, been easier for the oil-rich countries. The maintenance of this social contract has become more challenging in recent years, however, given the increasing dissatisfaction of a growing population with shifting preferences.

**Figure 8: Selected social and governance indicators in comparison**



Source: RobecoSAM

## ESG country ranking closely interlinked with the 2018 SDG index...

RobecoSAM’s latest country ESG ranking (see **Figure 1**) is again closely correlated to the 2018 Sustainable Development Goals (SDG) index (see **Figure 9**). The SDG index was created by the Bertelsmann Stiftung and the United Nations Sustainable Development Solutions Network in response to the 17 SDGs announced by the UN in 2015. The index serves as a tool to help countries identify national priorities and track SDG achievements.<sup>1</sup> The 2018 SDG index ranking includes 156 countries and is also led by Sweden and Denmark, while Nigeria and Pakistan came in last.

As explained earlier, the outcomes of the SDG index and country ESG scores in **Figure 9** suggest there are no inherent conflicts or trade-offs between a country’s commitment to the SDGs and the need to strengthen its ESG profile in the pursuit of sustainability. Moreover, it is clear that lower-income countries tend to have lower SDG index scores as well as weaker country ESG scores as they usually lack adequate institutions, mechanisms and the financial means to tackle severe environmental threats and improve their often precarious social conditions.

**Figure 9: RobecoSAM country ESG score and SDG index in comparison**



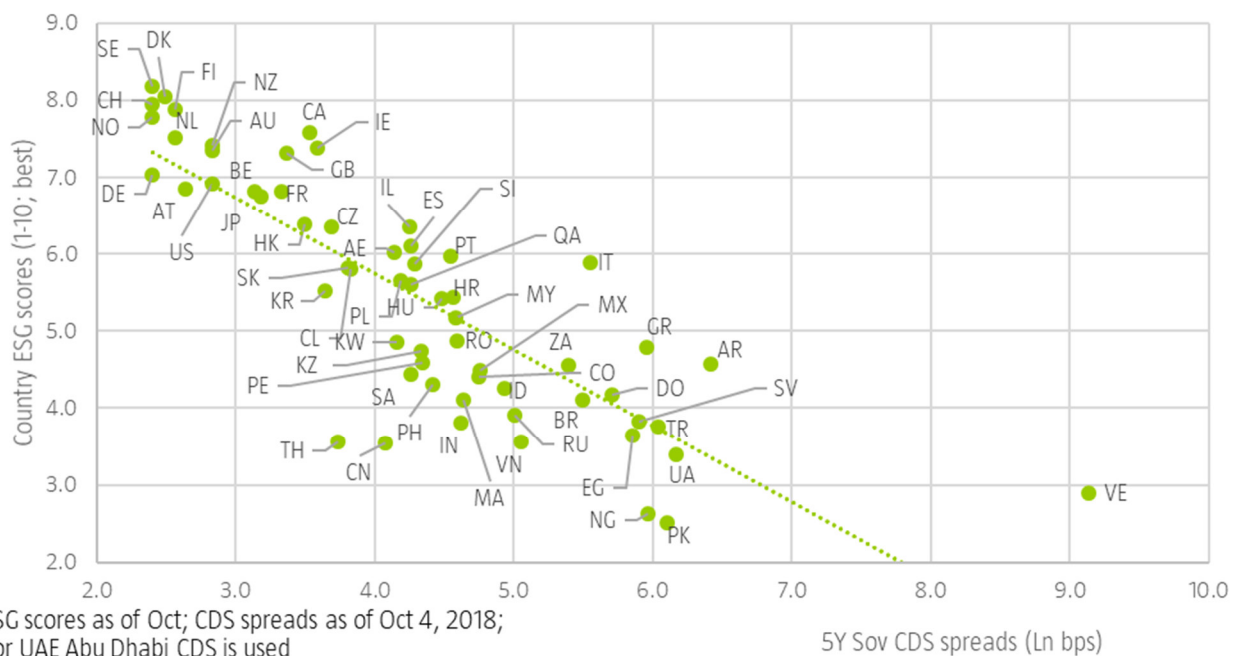
**Source:** Bertelsmann Stiftung & UN Sustainable Development Solutions Network (SDSN), RobecoSAM

<sup>1</sup> Bertelsmann Stiftung / UN Sustainable Development Solutions Network: “SDG Index and Dashboards Report 2018 – Global Responsibilities”, July 2018

### ... as well as with sovereign spreads

The pursuit of SDG targets impacts not only a country's overall sustainability profile, but also its macroeconomic performance and its long-term creditworthiness, as seen in **Figure 10**. A regression between our country ESG scores and the respective credit-default-swap (CDS) spreads for 60 countries displays a strong relationship, with an R-squared of 74%. CDS spreads can be considered a good measure of the probability of default, which, of course, is also influenced by economic and financial data, apart from ESG factors. In general, the countries above the regression line are the ones with a CDS spread that is too high relative to their ESG score and vice versa. In the case of China, one would expect a higher CDS spread in view of the rather poor ESG score, whereas in the case of Italy the CDS spread appears too high compared with the country's ESG score. However, drawing such a conclusion is not always appropriate at any point in time: ESG scores are less frequently available than the daily CDS data, which may reflect the ups and downs in a country's condition in a more timely manner. On the other hand, CDS spreads are more volatile and susceptible to speculation as well as market exaggerations, resulting in a distorted view of a country.

**Figure 10: Country ESG scores vs sovereign CDS spreads**



Source: Bloomberg, CNBC, Markit, RobecoSAM

## Climate risk-related losses on the rise

Environmental risks have grown in prominence over the 13-year history of the World Economic Forum's Global Risks Report, which ranks "extreme weather events" and "natural disasters" among the top three risks in terms of likelihood and impact in the 2018 report.<sup>2</sup> And, as if to confirm this assessment, recent months have indeed been characterized by heat waves, floods, hurricanes, typhoons, earthquakes and a tsunami. The growing significance of these risks is also reflected in the evolution of disaster-related economic losses and fatalities. From 1998 to 2017, natural disasters and extreme weather events killed 1.3 million people and caused direct economic losses of USD 2.9 trillion. About 77% of this was due to climate-related incidents (such as floods, storms, heat waves and draughts), according to a recent report by the UN Office for Disaster Risk Reduction (UNISDR).<sup>3</sup> Overall, reported losses rose by 151% compared with the 20-year period from 1978 to 1997.

**Climate-related incidents were responsible for more than a million lives lost and over 2.2 trillion in direct economic losses over the past two decades.**

The Global Climate Risk Index by Germanwatch – part of our Environmental Risk Indicator – analyzes the extent to which countries have been affected by the impacts of weather-related loss events. This data shows that poor countries are hit the most: nine out of the 10 most affected countries in the 1997-2016 period were developing nations in the low-income or lower-middle income category, with only one – Thailand – in the upper-middle income group. Thailand also leads the ranking within our country ESG universe with regard to the economic damage suffered during the observation period, as seen in **Figure 11** below. But Indonesia, Japan and the Philippines have again been badly hit by natural disasters and extreme weather events this year. It is therefore no surprise that these countries are poorly positioned in the world risk indicator and climate-risk indicator rankings, reflected in their weak score in our environmental risk indicator. The rather large number of fatalities shown for some European countries such as France, Italy or Spain may appear somewhat surprising, but can largely be explained by the extreme heat wave in 2003 that resulted in a death toll of 14'800 in France alone, according to the French National Institute of Public Health Surveillance.

**The financial burden on disaster-hit countries is likely to increase in the future with adverse implications for their sovereign credit profiles and capital costs...drawing attention to the close link between the environment and the economy.**

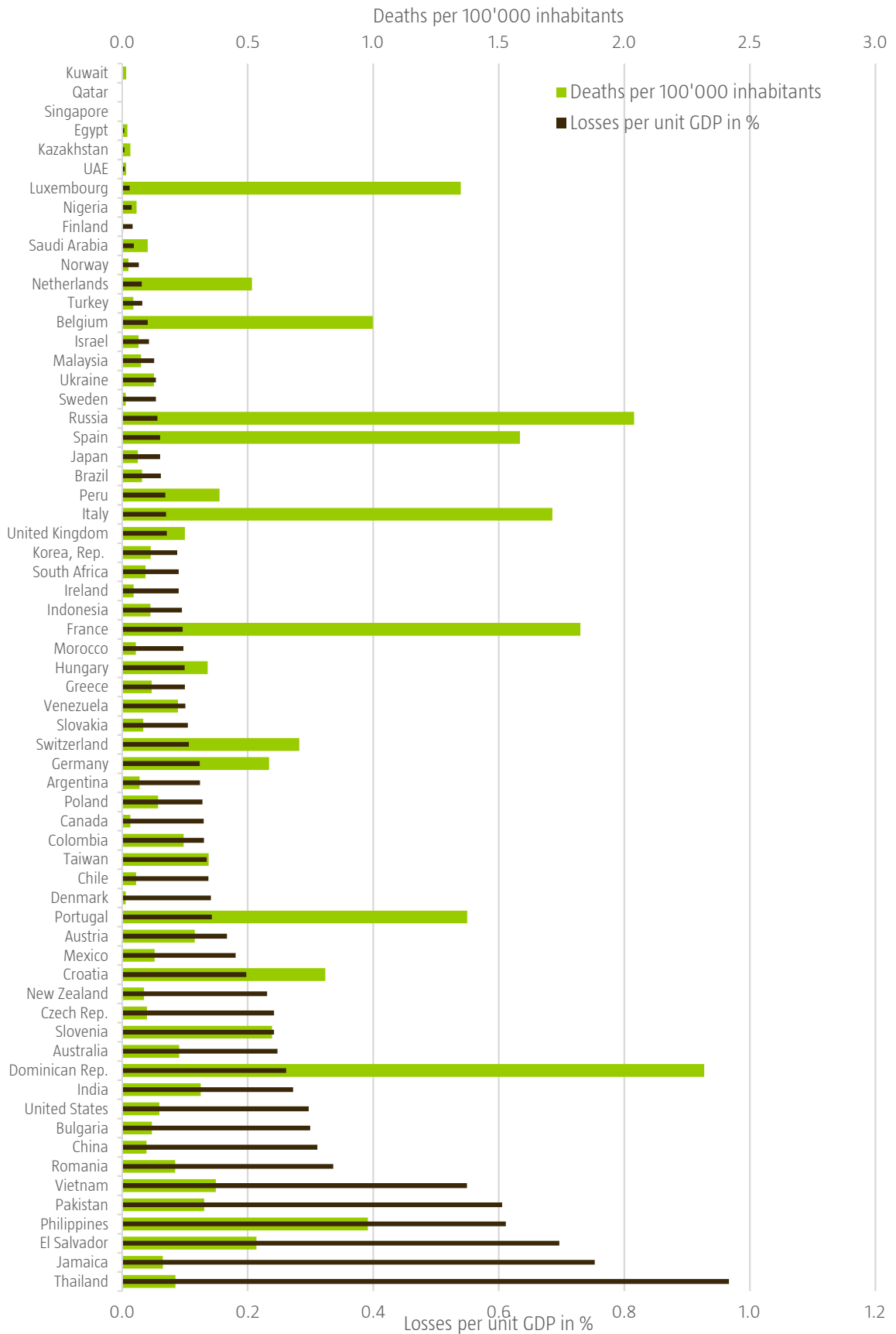
With the apparent intensification of these risks, the financial burden on disaster-hit countries is likely to increase in the future with adverse implications for their sovereign credit profiles and capital costs, drawing attention to the close link between the environment and the economy. This is particularly important because the economic and humanitarian costs of such environmental incidents can have significant ramifications far beyond a directly affected country's border, for example by triggering sudden and disruptive migration flows into other countries. There is also ever-growing demand for water as the impact of climate change is now leading to higher rates of water scarcity, thus intensifying poverty, fueling social instability and harboring the potential for conflict.

Against this background, it is worrisome to notice that the International Energy Agency is expecting global carbon emissions to rise to a new record level in 2018, dimming hopes for meeting the Paris Agreement goals of keeping global temperature increases to 1.5 to 2.0 degrees Celsius. It is therefore a more-than-welcome sign of the growing public awareness that this year's Nobel Prize in Economics was awarded to Paul Romer and William Nordhaus for their work on sustainable growth and climate change. Specifically, Nordhaus – who is seen as a pioneer of environmental economics – was honored for integrating climate change into long-run macroeconomic analysis and for his proposal to address the problems caused by greenhouse gas emissions through a global scheme of carbon taxes uniformly imposed on all countries.

<sup>2</sup> Global Risk Report 2018: World Economic Forum, Switzerland; [http://www3.weforum.org/docs/WEF\\_GRR18\\_Report.pdf](http://www3.weforum.org/docs/WEF_GRR18_Report.pdf)

<sup>3</sup> Economic Losses, Poverty & Disasters 1998-2017; UNISDR, 2018

**Figure 11: Weather-related loss events 1997-2016 (annual averages)**



Source: Germanwatch



**Max Schieler**  
**Senior SI Country Analyst**

**“A proper country sustainability assessment provides additional information and valuable insights into a country’s underlying risk drivers that we believe are critical to making balanced investment decisions”.**



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## Endnotes

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### About this report

1) There has been no change in the set of indicators, data sources or ranking approach in this update, except for a change in the methodology for the Environmental Performance Index (EPI), which involved replacing all previous original EPI input scores with the newly calculated EPI benchmark score. This was necessary as the methodology change did not permit a direct comparison of the newly calculated EPI 2018 scores with previous EPI scores. Comparisons with past scores are always based on re-calculated previous scores. The latter can differ from the originally published scores as they take into account potential changes in data sources, methodologies and/or data revisions.

2 "Measuring Country Intangibles," June 2015, is available on the RobecoSAM website: <http://www.robecosam.com/en/sustainability-insights/about-sustainability/country-sustainability-ranking.jsp>

## Appendix

<b>Environmental Status</b>	Yale; Environmental Performance Index <a href="http://epi.yale.edu/">http://epi.yale.edu/</a>
<b>Energy</b>	World Energy Council/Oliver Wyman; Energy Trilemma Index <a href="https://trilemma.worldenergy.org/">https://trilemma.worldenergy.org/</a> International Energy Agency; World Energy Balances 2018 <a href="http://www.iea.org/bookshop/753-World_Energy_Balances_2018">http://www.iea.org/bookshop/753-World_Energy_Balances_2018</a>
<b>Environmental Risk</b>	Bündnis Entwicklung Hilft; World Risk Report <a href="http://www.entwicklung-hilft.de/home.html">http://www.entwicklung-hilft.de/home.html</a> Germanwatch; Global Climate Risk Index <a href="https://germanwatch.org/en/cri">https://germanwatch.org/en/cri</a>
<b>Social Indicators</b>	Social Progress Imperative; Social Progress Index <a href="https://www.socialprogressindex.com/">https://www.socialprogressindex.com/</a> UNDP; Gender Inequality Index <a href="http://hdr.undp.org/en/data">http://hdr.undp.org/en/data</a> UNICEF; Child Labor <a href="https://data.unicef.org/">https://data.unicef.org/</a> World Bank; World Development Indicators – GINI Index <a href="http://databank.worldbank.org/data/">http://databank.worldbank.org/data/</a> OECD; Income Distribution Database <a href="http://www.oecd.org/social/income-distribution-database.htm">http://www.oecd.org/social/income-distribution-database.htm</a>
<b>Human Development</b>	UNDP; Human Development Report <a href="http://hdr.undp.org/en">http://hdr.undp.org/en</a>
<b>Social Unrest</b>	Fund for Peace; Fragile States Index <a href="http://fsi.fundforpeace.org/">http://fsi.fundforpeace.org/</a>
<b>Liberty &amp; Inequality</b>	Freedom House; Political Rights & Civil Liberties <a href="https://freedomhouse.org/reports">https://freedomhouse.org/reports</a>
<b>Competitiveness</b>	World Economic Forum; The Global Competitiveness Report 2018-2019, WEF, Switzerland, 2018 <a href="https://www.weforum.org/reports/the-global-competitiveness-report-2018-2019">https://www.weforum.org/reports/the-global-competitiveness-report-2018-2019</a>
<b>Political Risk</b>	PRS Group; Political Risk Services (PRS) <a href="http://www.prsgroup.com/">http://www.prsgroup.com/</a>
<b>Accountability</b>	World Bank; Worldwide Governance Indicators <a href="http://info.worldbank.org/governance/wgi/index.aspx#home">http://info.worldbank.org/governance/wgi/index.aspx#home</a>
<b>Stability</b>	World Bank; Worldwide Governance Indicators <a href="http://info.worldbank.org/governance/wgi/index.aspx#home">http://info.worldbank.org/governance/wgi/index.aspx#home</a>
<b>Effectiveness</b>	World Bank; Worldwide Governance Indicators <a href="http://info.worldbank.org/governance/wgi/index.aspx#home">http://info.worldbank.org/governance/wgi/index.aspx#home</a>
<b>Regulatory Quality</b>	World Bank; Worldwide Governance Indicators <a href="http://info.worldbank.org/governance/wgi/index.aspx#home">http://info.worldbank.org/governance/wgi/index.aspx#home</a>
<b>Rule of Law</b>	World Bank; Worldwide Governance Indicators <a href="http://info.worldbank.org/governance/wgi/index.aspx#home">http://info.worldbank.org/governance/wgi/index.aspx#home</a>
<b>Corruption</b>	World Bank; Worldwide Governance Indicators <a href="http://info.worldbank.org/governance/wgi/index.aspx#home">http://info.worldbank.org/governance/wgi/index.aspx#home</a>
<b>Aging</b>	IMF - Fiscal Monitor; NPV of Pension & Health Care Spending Change 2015-50 <a href="http://www.imf.org/external/">http://www.imf.org/external/</a> UN – Population Division; Old Dependency Ratio & Old Dependency Ratio 2050 <a href="https://esa.un.org/unpd/wpp/">https://esa.un.org/unpd/wpp/</a> World Bank – Women, Business and the Law; Retirement Age <a href="http://wbl.worldbank.org/">http://wbl.worldbank.org/</a>
<b>Institutions</b>	World Economic Forum; The Global Competitiveness Report 2018-2019, WEF, Switzerland, 2018 <a href="https://www.weforum.org/reports/the-global-competitiveness-report-2018-2019">https://www.weforum.org/reports/the-global-competitiveness-report-2018-2019</a>

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