PENSIONSAge

A changing climate – *Why climate change also matters for government bond investing* **p64**

A non-passive attitude to ESG – *Andrew Williams explores how ESG factors can still be taken into account with passive investment* **p66**

Index investing focus:

Factoring in ESG

A changing climate

Why climate change also matters for government bond investing

Sovereign debt investors are exposed to a range of climate change risks that are generally not well understood or incorporated into the investment process. Part of the challenge has been the lack of sustainable investment products and viable climate data.

Climate change risk has long been a consideration for publicly traded stocks. Today, investors can choose from a broad selection of equity products designed to avoid companies with high exposure to climate change risk. However, when it comes to government bonds, market participants have largely overlooked the potential impacts of climate risk.

If asset owner demand is any indication, government bond climate risk won't be disregarded for much longer. FTSE Russell has found that many of these clients are looking to extend environmental, social and governance (ESG) considerations beyond equity. Fixed income allocations are frequently a large component of asset owner portfolios and focusing solely on equity climate risk falls short of a holistic, multi-asset ESG approach.

Defining climate risks

More asset owners are also beginning to recognize the impact climate change can have on government spending, which can in turn affect government bond values. Governments are exposed to both transition risk and physical risk related to climate change, and by all metrics these risks are material and growing. Transition risk relates to the costs associated with countries transitioning to a greener economy. For example, growing concern over climate change – and the resultant increased regulation – has many countries developing plans to reduce carbon emissions. The UN estimates that such an undertaking would require investing about $1 trillion per year over 30 years, with this expenditure largely financed by governments.

Transition risk	The level of climate related risk exposure of the country's economy, as measured by the distance to reach the modeled emissions needed to meet a 2 degree alignment
Physical risk	The level of climate related risk exposure to the country and its economy from the physical effects of climate change
Resilience	A country's preparedness and actions to cope with its level of climate related risk exposure

Governments are also exposed to risks related to the physical effects of climate change. Recent data demonstrates that both the frequency and cost of extreme weather events around the globe are on the rise. In fact, in 2017 three major storms in the US cost the government at least $265 billion.

Climate risk-adjusted index characteristics	• Meaningful climate risk reduction compared to the conventional market value weighted indexes • Closely matches the index characteristics of the conventional market value weighted index, whilst achieving minimal tracking error and turnover • Quantitative and transparent approach to climate risk modeling and assessment • Highly configurable methodology supports custom versions that further reduce the index's climate risk profile

Adjusting government bond indexes for climate risk

Both transition and physical risks have the potential to materially impact government debt, which is why it's important to consider climate risk alongside traditional risk measures when investing in sovereign bonds. To this end, FTSE Russell has developed a solution to serve as a sustainable alternative for passive government bond investors: the FTSE Climate Risk-Adjusted World Government Bond Index (Climate WGBI) and the FTSE Climate Risk-Adjusted EMU Government Bond Index (Climate EGBI).

The indexes' methodology conducts quantitative climate risk assessments across transition risk, physical risk and a country's resilience. This climate risk modelling data is sourced from Beyond Ratings, which is a highly regarded provider of ESG data solutions, climate change research and modelling across asset classes. The London Stock Exchange Group acquired Beyond Ratings in June 2019, as it is highly complementary to FTSE Russell's existing ESG index and data offerings. By providing these comprehensive sovereign climate risk assessments with history available from 2002, Beyond Ratings data has enhanced the Climate WGBI and Climate EGBI considerably.

Once the risk assessments are complete, the index scores countries across each of the three pillars and a single combined score is derived for each country. Country scores are then used to reweight the country's exposure in the index to provide higher exposures to countries that are better prepared for climate change risks and lower exposures to countries that are more threatened by climate change risks.

The result of this methodology are indexes that can mirror the characteristics of a global or European sovereign bond portfolio while reducing exposure to climate change risk. As an example, the Climate WGBI effectively meets asset owner demand for a climate risk-adjusted global government bond index with low tracking error relative to the broad index. And for asset owners looking for even more climate risk reduction, FTSE Russell can use Beyond Ratings data to develop custom solutions.

Today's situation is characterized by a growing perception of climate risks. On the one hand evolutions in physical patterns are suggested by growing temperatures or striking extreme events such as the notable recent fires in California, British Columbia, Brazil or Australia. On the other, transition risks are also becoming more visible as the scope of carbon taxes and ETS increases (including growing support for carbon border adjustments), our heavy dependence on fossil fuels is increasingly challenged, and social pressure for deeper transition develops. To take just one example, in last December the Supreme Court of the Netherlands upheld a previous judgment requiring its government to do more to reduce its carbon emissions.

The risks at stake for investors are non-linear and, thus, difficult to assess. However, indexes such as, the Climate WGBI can provide a solution to better take them into account, including in conditions replicating similar financial characteristics compared with the original conventional index. For example, the non-linear dimension calls for forward-looking approaches, and this is allowed by assessments of target budgets by country, consistent with a 2°C trajectory in the future.

Whether through Climate WGBI or custom-designed indexes, FTSE Russell offers solutions for the growing number of investors who are recognizing that climate risk considerations aren't just for equities—they also matter when investing in government bonds.

In association with FTSE Russell