

## SOLUTION OVERVIEW

# FTSE Nomura Climate Risk-Adjusted Carry and Roll Down World Government Bond Index Series

Combining climate considerations and carry factor into global sovereign bond indexes

### Overview

Enabling sovereign debt investors to consider climate risk exposures while optimising carry and roll down yields in their investment portfolios

As a well-known concept to practitioners and academics, the carry factor has been leveraged in the currency markets for decades. With the understanding of such FX carry trades becoming established, academic publications have explored this concept cross-markets and showcased evidence of the carry premium in the fixed income asset class.

The global sovereign debt market is one of the largest asset classes in the world, yet fixed income markets have typically lagged behind other asset classes in relation to ESG integration activities. Sovereign debt investors are exposed to a range of climate risks that are typically not well understood or incorporated in the investment process.

The FTSE Nomura Climate Risk-Adjusted Carry and Roll Down World Government Bond Index Series (FTSE Nomura Climate CaRD WGBI Series) offers a solution that seeks to reflect a targeted exposure to the sovereign bonds in the FTSE Climate Risk-Adjusted World Government Bond Index (FTSE Climate WGBI) by applying carry, and roll down optimisation.

The index measures the performance of fixed-rate, local currency, and investment-grade sovereign bonds based on the market capitalisation of its index eligible debt in the FTSE World Government Bond Index, and also incorporates a tilting methodology that adjusts index weights according to each country's relative climate risk performance.

### Features

#### Representative

- Based on the FTSE World Government Bond Index (WGBI), a widely used benchmark that currently includes sovereign debt from over 20 countries, denominated in a variety of currencies, and with more than 30 years of history available
- Aims to maximise the total carry and roll down, while controlling interest rate risk with both duration and weights anchored the individual country within the base universe
- Incorporates a forward-looking assessment of the climate risks sovereigns face at a country level
- Tilts country weights on a relative basis to the three pillars of climate risk

#### Best-in-class climate risk modelling

- Comprehensive sovereign climate risk assessments with history available from 2002
- Climate risk modelling provided by LSEG, and a highly regarded provider of ESG data solutions, and climate change research and modelling across asset classes



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**Quantitative climate risk assessments are made across three climate risk pillars, covering:**

<b>Transition risk</b>	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
<b>Physical risk</b>	The level of climate-related risk exposure to the country and its economy from the physical effects of climate change
<b>Resilience</b>	A country's preparedness and actions to cope with its level of climate-related risk exposure

**Benefits**

- Gaining climate exposure combined with CaRD strategy
- Combined strategy of CaRD and Climate can be applied on multiple sovereign markets or customised universes
- Allows flexibility on climate exposure with different tilting to each of the climate pillar scores
- Quantitative and transparent approach to climate risk modelling and assessment

**Developed in partnership with Nomura Securities**

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# NOMURA

**Index inclusion and methodology summary**

<b>Coupon</b>	Fixed-rate
<b>Currency</b>	JPY and hedged to JPY versions available
<b>Minimum maturity</b>	At least one year
<b>Minimum Credit Quality</b>	Entry: A- by S&P and A3 by Moody's, for all new markets Exit: Below BBB- by S&P and Baa3 by Moody's
<b>Weighting</b>	Alternatively weighted. The country weights of base universe are determined by Climate scores and pillars. The final weights of each Index in the Series are determined by performing an optimisation process, for details, see Optimisation Methodology section in the ground rule.
<b>Rebalance frequency</b>	Monthly on final business day of the month
<b>Climate risk pillars</b>	Each country is assessed by three core climate pillars (each with multiple sub-indicators) <ul style="list-style-type: none"> <li>- <b>Transition risk</b> represents the impact on the economy from the required efforts to mitigate climate risk as measured by modelled emissions needed to meet 2 degree alignment</li> <li>- <b>Physical risk</b> represents the climate-related risk to the country and its economy from the physical effects of climate change</li> <li>- <b>Resilience</b> represents a country's preparedness and actions to cope with climate risk</li> </ul>
<b>Climate pillars and tilt calibration</b>	Transition risk: 0.25 Physical risk: 1 Resilience: 1
<b>Country climate scores</b>	Updated annually and applied from the end of May rebalance
<b>Base date</b>	December 31, 2006

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