Climate X Data

Climate data – what’s the target?

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About AXA & me

Head of Climate = ACTUARY
- What is an actuary?
- Why an actuary?
- What is the link to data?
Problem Statement

What about insurance?
- claims data, modelling data, finance data

Although the volume of data is sizeable – when it comes to climate data, the quality and availability of data is poor
What is climate data in the context of insurance?

PHYSICAL RISK

TRANSITION RISK

ZERO EMISSION

CO₂ 2050
# Physical Risk – What about the future?

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Numerical Weather Prediction</th>
<th>Global Climate Model</th>
<th>Catastrophe Models</th>
<th>Pricing Models</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Predicted weather</td>
<td>Predicted climate</td>
<td>Model risk for catastrophes</td>
<td>Price risk</td>
</tr>
<tr>
<td>Timescale</td>
<td>Days to weeks in advance</td>
<td>Years to decades in future</td>
<td>Based on policy length, but typically annual</td>
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</tr>
<tr>
<td>Resolution</td>
<td>High-resolution (5-10KM)</td>
<td>Low resolution (25-100KM)</td>
<td>High-resolution (geocoding)</td>
<td>High-resolution (geocoding)</td>
</tr>
</tbody>
</table>
Physical Risk – so what’s the problem?

Modelling Resolution
Climate Change

Data Coverage & Sampling Bias

Uncertainty

Natural variability vs climate change
System Response
Tools
Exposure
Societal response
Vulnerability
Societal response

Courtesy of James Done
So, what is the target for climate data?

…to improve our understanding of the physical environment and the impacts on the climate

**PHYSICAL RISK**

- Improved coverage and availability (historical & geographic)
- Better resolution for forward looking projections
- Consider all parts of the risk equation
- Consideration of systems modelling
- Improve consensus on the science
- Improve our understanding of uncertainty around responses

**TRANSITION RISK**

- More consistency around disclosure requirements globally
- Improved coverage of information across all clients across all countries
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