Assessing Climate Risks in Insurance

NAIC’s Climate Disclosure Survey and Regulatory Lens - Physical Risk

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https://content.naic.org/
Extreme Weather Remains One of the Top Risks
(Next 10 Years)  Source: Global Risk Report 2024

Extreme weather

Critical changes to earth systems

Natural resource shortages (food, water)

Biodiversity loss and ecosystem collapse
Every Region Faces More Severe and/or Frequent Compound and Cascading Climate Risks

Source: IPCC 6th assessment report
Every Region Faces More Severe and/or Frequent Compound and Cascading Climate Risks

Coastal flooding events that occurred once in a century expected to be 20-30 times more frequent by 2050

Source: IPCC 6th assessment report
Highly Complex, Uncertain, Systematic

**Physical Risk**

- Acute: Event driven
- Chronic: Longer-term shifts in climate patterns

**Transition Risk**

- Policy and Legal
- Technology
- Market
- Reputation

Climate-related risks

Source: TCFD
Task Force on Climate-Related Financial Disclosure

a) Board Oversight
   b) Management’s Role

a) Risks and Opportunities (short, medium, and long term)
   b) Impact on Organization
   c) Resilience of the Strategy

a) Risk Identification & Assessment
   b) Risk Management Process
   c) Integration into ERM

a) Climate-related Metrics
   b) Scope 1, 2, 3 GHG
   c) Climate-related Targets

Source: TCFD
NAIC’s Climate Disclosure Survey - Voluntary Risk Management Tool for US Regulators

2010: Originally adopted

2022: Survey aligned to TCFD framework

Administered by the California DOI

All insurers (P&C, Life, Health and Others) with DWP >100M Nationwide

(licensed to write in participating states/territories)

More than 25 participating states/territories

Public disclosure

About 1,700 companies submitted disclosures for 2022 reporting year

Climate Disclosure Survey Reports
Climate Disclosure Survey (P&C Segment)

926 total filings,
62% in TCFD format and remaining in survey format

310 unique filings as multiple companies under an insurance group submitted the disclosure report

36 filings with net assets of >10B contributed to 82% of the net assets

<table>
<thead>
<tr>
<th>Net Assets Category</th>
<th>No. of Unique Filings</th>
<th>Net Assets (in billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Billion or less</td>
<td>248</td>
<td>$270 B</td>
</tr>
<tr>
<td>5-10 Billion</td>
<td>26</td>
<td>$179 B</td>
</tr>
<tr>
<td>More than 10 Billion</td>
<td>36</td>
<td>$2,073 B</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>310</strong></td>
<td><strong>$2,522 B</strong></td>
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</tbody>
</table>

As reported on YE2022 annual statements to NAIC
Sample Selection for Survey Analysis (P&C Segment)

35 (or 11%) filings selected representing 41% of the total net assets for 310 filings

<table>
<thead>
<tr>
<th>Asset Size</th>
<th>No. of Filings</th>
<th>Filings (%)</th>
<th>Net Assets(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Billion or less</td>
<td>20</td>
<td>8.1%</td>
<td>10.5%</td>
</tr>
<tr>
<td>5-10 Billion</td>
<td>5</td>
<td>19.2%</td>
<td>20.5%</td>
</tr>
<tr>
<td>More than 10 Billion</td>
<td>10</td>
<td>27.8%</td>
<td>46.2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>35</strong></td>
<td><strong>11.3%</strong></td>
<td><strong>40.6%</strong></td>
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</tbody>
</table>

Focus of the analysis

What are the insights on disclosure of climate-related impact of ‘Physical Risk’ on the Natural Catastrophe Property Portfolio and how specific the disclosure is in terms of use of Climate Scenario (e.g., 2°C) Modeling and Time Horizons (e.g., 2040) for quantification?

Note: Sample selection using stratified random sample approach.
All 35 disclosures in the sample recognized climate-related impact of ‘Physical Risk’ for the Natural Catastrophe Property Portfolio and most of the companies disclosed this risk being part of the existing ERM governance framework.

33 disclosures referred to managing such a risk (today and in future) with the use of
- Catastrophe Models for portfolio management
- Annual pricing/underwriting cycle
- Transfer of risk through reinsurance
About 50% of the Disclosures in the Sample Mentioned Use or Non-use of Climate Scenarios

- 8 disclosures with specific scenarios being used
- 3 disclosures mentioned using scenario analysis, but no other specifics
- 7 disclosures specifically mentioned not using scenario analysis
- Rest (17) provided no disclosure on use or non-use of scenario analysis
Disclosures Mentioned Using a Combination of Scenarios and Time Horizons (based on GHG emission projections)

<table>
<thead>
<tr>
<th>Scenario(1)</th>
<th>Scenario Type</th>
<th>No. of times used</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCP2.6/SSP1</td>
<td>Low Emission</td>
<td>2</td>
</tr>
<tr>
<td>RCP4.5/RCP6.0/SSP2</td>
<td>Moderate Emission</td>
<td>6</td>
</tr>
<tr>
<td>RCP7.0/SSP3</td>
<td>High Emission</td>
<td>2</td>
</tr>
<tr>
<td>RCP8.5/PRA CBES</td>
<td>Worst-Case</td>
<td>5</td>
</tr>
</tbody>
</table>

Most Common Perils Considered

Time Horizon Range

- 6 2030
- 8 2050
- 4 2100

(1) Scenario Information
Notable Themes for the Scenario Analysis Disclosed

1. Majority of the disclosures expressed high uncertainty in the estimates due to
   - Challenges with decoupling natural variability with the climate signal
   - Use of simplified business assumptions
   - Not accounting for potential societal changes

2. Some uses of the scenario analysis
   - Informing the future strategy
   - Stress testing (internal or external assessment)
   - Research and evaluation of the future risk impact
   - Fulfilling regulatory disclosures
Closing Thoughts

1. Insights from the analysis - ‘Physical Risk’ (P&C NatCat Exposures)
   - P&C Segment: Recognition, awareness and integration into ERM
   - Scenario analysis: Evolving, higher uncertainty, long-way for wider adoption

2. Other reports for NAIC’s Climate disclosure analysis (Physical and Transition risks)
   - Analysis of U.S. Insurance Industry Climate Risk Financial Disclosures for Reporting Year 2021
   - Climate Risk Management in the U.S. Insurance Sector

3. Increasing regulatory disclosures and use of scenario analysis
   - NAIC: Climate Scenario Analysis Proposal (exposed for public comment till Feb 28th)
   - IAIS: Draft Paper on climate scenario analysis (Nov 2023)
   - BMA: Guidance Note (March 2023)
Thank you!