Climate Risk in the Insurance Sector

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How does climate change impact investors?

Three main real-world risk factors threaten the economy and society:

- **Physical Risk**
- **Transition Risk**
- **Systemic Risk**

The Intergovernmental Panel on Climate Change’s 2021 and 2022 reports show temperatures rising more quickly than expected and document the long-term effects of increased CO2 in the air. Insurers are especially exposed due to the risks facing both the underwriting and the investment portfolios.
Climate Risk and Insurance

Insurance Companies

- Investment
- Underwriting

Transition Risks
- Policy liability
- Technology

Physical Risks
- Flooding
- Droughts
- Sea level rise
- Heat stress
- Wind

Potential financial impacts

- Production / operation disruptions (e.g. power, transportation, worker availability)
- Supply chain disruptions
- Physical damage to assets (and raising insurance costs)
- Changes in resource / input prices (e.g. water, energy, food)
- Changes in demand for products / services
Identification of Risks and Opportunities

- Policy and Legal
- Technology
- Market
- Reputation
- Acute
- Chronic
- Resource Efficiency
- Energy Source
- Products/Services
- Markets
- Resilience
- Revenues
- Expenditures
- Income Statement
- Balance Sheet
- Assets
- Liabilities
- Capital
Swiss Re notes level of insured losses due to natural disasters weather is rising 5-6% annually.
Climate Change as a Financial Risk

SwissRe’s Global Payouts from Disasters as a Share of Premium Income

Value of Losses/premiums

California's Camp Fire
First Street Foundation Wildfire Model finds:

- half of all continental US addresses face some wildfire risk
- 686,000 face a 1% risk this year; 30 years from now 2.5 million addresses will do so
- 381,000 current property owners have a fire risk of over 50% at some point in their 30-year mortgage
Health and Life Insurers are also Affected

A recent *Nature* article projects that climate change and land use changes may lead to 4,000 instances of new cross-species viral transmission by 2070, with potentially severe health consequences for humanity.

Researchers at *Duke* have estimated sharp increases in premature death in the US due to heat waves under unchecked global heating scenarios.

The *CDC* and many health professionals have noted that since higher temperatures concentrate air pollutants, climate change is projected to worsen pulmonary diseases and mortality.

*UC Davis* researchers have shown breathing wildfire smoke produced damage to the immune cells of healthy volunteers, with currently unknown effects.

The *NY Times* reports that the drought shrinking the Great Salt Lake is exposing arsenic-laden soil to the air; if current trends continue, toxic dust will sometimes poison air for millions of area residents.
Investors are using four main tools manage climate risk

Climate change as an investment risk

- Analysis and assessment
- Capital allocations
- Stewardship
- Public advocacy

Manage risks, position for the transition
Building Momentum Behind Climate Risk Disclosure

- **June 2017**: TFCD develops recommendations for voluntary climate-related financial disclosures.
- **February 2019**: PRI announces TCFD-based reporting will become mandatory for signatories in 2021.
- **September 2020**: New Zealand is first to implement mandate for TCFD-aligned reporting.
- **May 2020**: Canada ties pandemic funding to TCFD reporting.
- **November 2020**: UK announces its intention to require mandatory disclosures across key financial sectors by 2025.
- **May 2021**: President Biden signs an Executive Order on Climate-Related Financial Risk.
- **June 2021**: CDI and WA state formally call on insurers to submit TCFD reports in lieu of the NAIC Climate Risk Disclosure Survey.
- **July 2021**: States implementing the NAIC Survey grow from 6 to 15 states.
- **April 2022**: A group of state regulators adopts a new disclosure standard in alignment with the TCFD recommendations.

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**CA Dept. of Insurance**
NAIC Survey Aligns with Task Force on Climate Related Financial Disclosures

### Recommendations and Supporting Recommended Disclosures

**Governance**
- Disclose the organization's governance around climate-related risks and opportunities.

**Strategy**
- Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.

**Risk Management**
- Disclose how the organization identifies, assesses, and manages climate-related risks.

**Metrics and Targets**
- Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

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#### Recommended Disclosures

**Governance**
- **a)** Describe the board's oversight of climate-related risks and opportunities.
- **b)** Describe management's role in assessing and managing climate-related risks and opportunities.
- **c)** Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.

**Strategy**
- **a)** Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.
- **b)** Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.
- **c)** Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.

**Risk Management**
- **a)** Describe the organization's processes for identifying and assessing climate-related risks.
- **b)** Describe the organization's processes for managing climate-related risks.
- **c)** Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

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**PRI Principles for Responsible Investment**

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Governance and Strategy

Governance:

- Creation of board committees/changes to committee charters
- Creation of new managerial roles/changes to job descriptions
- Adjustment of processes, procedures, and key documents
- **Key for insurers**: where is climate governance handled within the insurer’s structure, e.g., at a group level, entity level, or a combination?

Strategy

- Analysis of impact on investee firms & industries
- Possible changes to product development & business practices
- Integration into financial planning
- **Key for insurers**: how are customers and other key constituencies being engaged on climate risk and resiliency? Are products and services being provided to aid the transition to a low-carbon economy or adapt to climate change?
A Key Strategy Tool: Scenario Analysis

• Can be done in-house by investment staff OR with consultants
• Can involve company-by-company assessment OR macro-level holistic view of industries, sectors, and the economy
• Can include scenarios from IEA, IPCC, and Inevitable Policy Response (IPR)
• Essential to disclose:
  ➢ methodology
  ➢ how investor sees base case/market/"business as usual"
  ➢ how portfolio relates to base case
**Risk Management**

- Incorporation of climate into risk identification, analysis and management
- Climate related due-diligence:
  - of asset managers by asset owners
  - of investee companies by asset managers
- Engagement with investee companies
- Engagement with policymakers
- Participation in investor networks

**Key Issues for Insurers:**

Are policyholders being helped to manage risk?

Are underwriting and investment risks both being considered, along with potential interactions between them?

**Paris Aligned Investment Initiative**
Metrics and Targets

Metrics:
✓ can provide assessment of current state of portfolio (e.g., alignment with temperature scenario; carbon intensity scaled by various factors; percentage investment in fossil fuels or green energy; levels of engagement with investee companies)
✓ should be presented relative to benchmark for comprehensibility

Targets:
✓ arise from strategic planning discussions
✓ relate to items tracked by metrics
✓ should include both medium and longer-term targets

Key for insurers:
✓ Disclosure of underwritten emissions
✓ Disclosure on catastrophe modeling
✓ Business lines, sectors, geographies exposed to physical risk
GHG protocol developed by World Resources Institute and World Business Council for Sustainable Development

- Provides a standard method for organizations to identify, calculate and report direct and indirect emissions and set targets for reduction
- Additional calculation tools also provided, as well as guidance for cities & product life cycles

www.ghgprotocol.org
The Standard, developed by the PCAF Global Core Team, provides detailed methodological guidance to measure and disclose GHG emissions associated with six asset classes:

- Listed equity and corporate bonds
- Business loans and unlisted equity
- Project finance
- Commercial real estate
- Mortgages
- Motor vehicle loans

As the Standard and PCAF evolve, additional asset classes and case studies will be added to the Standard.
Examples of Actions Taken by Insurers & Other Financial Firms

**Governance:**
- Board training
- Committee charters
- Management job description changes

**Risk Management**
- Catastrophe Modeling
- Investee Engagement
- Policy Engagement

**Strategy:**
- Discount coverage on “green” assets
- Client risk control services
- Portfolio scenario analysis

**Metrics and Targets:**
- Absolute Emissions
- Weighted Average Carbon Intensity (WACI)
- Implied Temperature Rise
- Net Zero by 2050
For more information


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