The only constant is change – climate change presents us actuaries with new challenges and opportunities

Frank Schiller, Chair AAE Sustainability & Climate related Risks WG
26 August 2022, SAV Mitgliederversammlung – ASTIN
What’s next?!

“And I thought they meant something else when they warned us about the next wave...!”

Migration of Peoples

Climate Change

Inflation

COVID-19

The only Constant is Change
Climate Change and Sustainability

The three pillars of sustainability

Sustainability means meeting our own needs without compromising the ability of future generations to meet their own needs.

In addition to natural resources, we also need social and economic resources.

Sustainability is not just environmentalism.

University of Alberta: What is sustainability?
Main Action Points for European Actuaries

We must assure that the pensions and insurance industry maintain their role for the economy despite the climate change by answering the three questions:

**Financial Sustainability**
- How can we effectively manage the risks posed to insurance and pension systems from the short and long-term policy effects?

**Climate and Social Sustainability**
- How can insurance and pensions contribute to the transition through investments and transition project insurance
- as well as pay-out on climate related physical risks which are insurable?

**Climate Protection Gap**
- For climate risk borne by society which are not currently insurable, or may become non-insurable under current market conditions, how do public policies work with the insurance and pension industries to assure society is covered in these areas?

Financial Sustainability

With respect to climate change the basic principle “same risk - same capital” is underlined:

• If so-called ‘green supporting’ or ‘brown penalising’ factors are introduced in Solvency II capital requirements, they should be science-based and reflect the quality of investments and the inherent risks
• If such factors are also introduced on the underwriting side, similar risk-based requirements apply
• It is acknowledged that the integration of emerging risks cannot rely solely on historical statistics but needs to factor in forward-looking considerations

AAE Position on Sustainability and Climate Change: https://actuary.eu/memos/aae-position-sustainability-and-climate-change/
A forward-looking approach is needed!

<table>
<thead>
<tr>
<th>Actuaries are looking to the ...</th>
<th>... past ...</th>
<th>... present ...</th>
<th>... future ...</th>
</tr>
</thead>
<tbody>
<tr>
<td>... , e.g., for ...</td>
<td>... traditional reserving and pricing</td>
<td>... market consistent valuation</td>
<td>... assessment of climate scenarios</td>
</tr>
<tr>
<td>The philosophy behind this approach</td>
<td>“The historical development is a valid prediction of the future”</td>
<td>“Today’s financial market already includes all relevant information”</td>
<td>“The future needs to be explored comprehensively from all perspectives”</td>
</tr>
<tr>
<td>Required expertise for its application</td>
<td>historical observations and classical statistics</td>
<td>mark-to-market or market consistent modelling</td>
<td>future looking scenario analysis reflecting various external aspects</td>
</tr>
</tbody>
</table>
Non-linear effects of Tipping Points dominate

Domino-effects connecting tipping points further increase non-linearity.

Need to base our scenario analyses on long-term scientific assessments and modelling.

No prediction but what-if-analysis to support management.

Nature, Climate Tipping Points: [https://www.nature.com/articles/d41586-019-03595-0](https://www.nature.com/articles/d41586-019-03595-0)
Reverse pillar journey will add complexity

**Solvency II framework:**
Based on a 1-year risk valuation that translates into risk management practice and disclosures

<table>
<thead>
<tr>
<th>Pillar 1</th>
<th>Pillar 2</th>
<th>Pillar 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantitative Requirements</td>
<td>Risk Management and Governance</td>
<td>Reporting and Disclosure</td>
</tr>
</tbody>
</table>

**ESG and sustainability frameworks:**
Currently often originating from disclosure requirements and multi-year approaches that need to be translated back to risk management and quantitative assessments
Climate and Social Sustainability

Non-life insurance can play a major role during the transition in protecting companies against physical losses and providing supporting services.

- We believe that underwriting approaches that include ESG criteria in the assessment of risk exposures are important for developing sustainable solutions that price climate change risks appropriately.
- Companies should use such approaches to judge and implement effectively their risk appetite when pricing or agreeing to insure such risks, as well as the economic capital they need to face these risks.

Position insurance as long-term partner

UN Environment Finance Initiative formulated Principles of Sustainable Insurance (PSI):

“Sustainable insurance is a strategic approach where all activities in the insurance value chain, including interactions with stakeholders, are done in a responsible and forward-looking way by identifying, assessing, managing and monitoring risks and opportunities associated with environmental, social and governance issues. Sustainable insurance aims to reduce risk, develop innovative solutions, improve business performance, and contribute to environmental, social and economic sustainability.”

UN Environment Finance Initiative (UNEP FI), Principles for Sustainable Insurance (PSI): https://www.unepfi.org/insurance/psi/
Principles to apply for sustainable products

Embed in decision-making ESG issues relevant to insurance business.

- Company strategy
- Risk management & underwriting
- Product & service development
- Claims management
- Sales & marketing
- Investment management

Work together with clients and business partners to raise awareness of ESG issues, manage risk and develop solutions.

- Clients & suppliers: - firm dialogue - transparency - empowerment - common goals

Work together with governments, regulators and other stakeholders to promote action across society on ESG issues.

- Governments & regulators: - support policies - open dialogue
- Other key stakeholders: - open dialogue - transparency

Demonstrate accountability and transparency in regularly disclosing publicly the progress in implementing the Principles.

- Assess, measure and monitor progress and disclose publicly
- Participate in disclosure or reporting frameworks
- Dialogue with clients, regulators, rating agencies to gain mutual understanding

UN Environment Finance Initiative (UNEP FI), Principles for Sustainable Insurance (PSI): https://www.unepfi.org/insurance/psi/
Principles to apply for sustainable products

Embed in decision-making ESG issues relevant to insurance business.

- Company strategy
- Risk management & underwriting
- Product & service development
- Claims management
- Sales & marketing
- Investment management

Work together with clients and business partners to raise awareness of ESG issues, manage risk and develop solutions.

- Clients & suppliers:
  - firm dialogue
  - transparency
  - empowerment
  - common goals

- (Re)insurers & intermediaries:
  - promote ideas
  - support implementation

Work together with governments, regulators and other stakeholders to promote action across society on ESG issues.

- Governments & regulators:
  - support policies
  - open dialogue

- Other key stakeholders:
  - open dialogue
  - transparency

Demonstrate accountability and transparency in regularly disclosing publicly the progress in implementing the Principles.

- Assess, measure and monitor progress and disclose publicly
- Participate in disclosure or reporting frameworks
- Dialogue with clients, regulators, rating agencies to gain mutual understanding

UN Environment Finance Initiative (UNEP FI), Principles for Sustainable Insurance (PSI): https://www.unepfi.org/insurance/psi/

The only Constant is Change
Benchmark product benefits against UN SDGs

Consider Double Materiality for SDG effects

Identify goals that are affected by product
- Identify material effects of product on 17 goals
  - Assess if impact is negative (harmful) or positive (beneficial)

Describe the effects in detail
- Describe the ways in which that goal is harmed or benefits
- Assign a measurement to the extent of harm or benefit
- Describe risks & opportunities for better or worse effects
- Translate the risks and opportunities into actions

Aggregate product’s measurements
- Define OKRs of product’s effects on SDGs
- Setup monitoring and reporting process for internal measurement and public disclosure

UN, Sustainable Development Goals (SDGs): [https://sdgs.un.org/goals](https://sdgs.un.org/goals)

The only Constant is Change
Climate Protection Gap

With **limited capacities and increasing physical risks** due to the climate change, insurers adopting well-informed underwriting processes may need to **decline coverages**.

- **Protection gaps** are areas in which societal risks are not covered by the insurance industry.
- Risks that are uninsurable in profit-oriented markets can only be covered by **public policy encouragement**.
- The **early identification** of protection gaps and the **development of shared resilience solutions** between the insurance industry and public protection facilities are key.
EIOPA works on early identification of gaps

1. Understand drivers for existing protection gaps
2. Analyse **measures for mitigating** gaps:
   - reduce vulnerabilities
   - identify proactive prevention measures
   - improve cross-border cooperation
3. Understand possibilities to establish **public-private partnerships** vs. public schemes and private protection

Only a world-wide approach will be successful

Climate change is not just a European issue. Solving the climate crisis will need a global view.

• There should be no worldwide inconsistencies or local regulatory loopholes that can be exploited
• Actuaries can support the development of accounting and valuation approaches to make such loopholes more transparent

More details to be found at AAE webinar on “Role of the Actuary” (June 2022).

AAE Position on Sustainability and Climate Change: https://actuary.eu/memos/aae-position-sustainability-and-climate-change/
Any questions or comments?