Risk Management – ERM Risk
21 September 2020

IAA AFIR ERM Section
presenting the IAA Risk Book Series
2020 – 2021 Risk Book Series – a chat with the authors and international leading actuarial experts:

REGISTRATION AND PARTICIPATION
• This webinar is free for all AFIR-ERM members, IAA section members and IAIS members.
Webinar speakers and moderator

Morgan Slebos – United Nations, Principles for Responsible Investment (UNPRI)
• Director of Sustainable Markets at the United Nations. Leading PRI’s sustainable financial system and driving meaningful data work areas.
• Morgan has extensive experience in policy development for the financial sector and insurance sector including the actuarial profession

Chris Howells, FIA – Head of Global Insurance Clients and Head of Insurance Solutions Asia Pacific at Schroders
• Leads the global insurance - asset solutions practice for Multi-Nationals and Asian insurers for Schroders, and the Insurance ALM function since 2007.
• Held actuarial, finance and management positions at Manulife, Credit Suisse, Sun Life Financial of Canada and Barclays.
• A Fellow of the Institute and Faculty of Actuaries (IFoA) and has a BSc Hons. in Mathematics and Astronomy from Cardiff University.
About the speakers and moderator

Sam Gutterman FSA, FCAS, MAAA, CERA, FCA, HonFIA – Advisory

- A retired consulting actuary whose interests span insurance, social insurance, valuation, accounting, demography and the environment. Prior to his retirement in 2014, he was an partner for actuarial consulting services firm for Life & Health, P&C, self insured and government agencies.

- He served as President of the Society of Actuaries (SOA) and chaired numerous committees of the SOA, International Actuarial Association (IAA), American Academy of Actuaries and Casualty Actuarial Society. He recently served as a vice-chair of the IAA’s Resource & Environment Working Group and has authored or co-authored numerous articles and papers on the environment.

Annie Tay FIA CERA - Moderator

- INEDs for Audit and Risk Committees including for the IAA and insurance practitioner in corporate development/strategy and risk management, and a practicing actuary.

- Specializes in Life insurance, finance, investments and risk management.
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ESG for the Insurance and Pension Industry

Significant ESG legislative developments 2020 -

Morgan Slebos
Director of Sustainable Markets, UNPRI

21 September 2020
ESG Global Developments
The PRI

**Investor-led, supported by the United Nations since 2006**

The PRI works with its international network of signatories to put the six Principles for Responsible Investment into practice.

Its goals are to understand the investment implications of environmental, social and governance issues and to support signatories in integrating these issues into investment and ownership decisions.

**2**

**3000+**

**100+**
PRI’s growing signatory base

*Total AUM include reported AUM and AUM of new signatories provided in sign-up sheet that signed up by end of March of that year.
What are ESG factors?

Some examples of ESG issues considered by investors

<table>
<thead>
<tr>
<th>Environment</th>
<th>Social</th>
<th>Governance</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Climate change</td>
<td>• Consumer rights</td>
<td>• Board structure</td>
</tr>
<tr>
<td>• Environmental policy</td>
<td>• Supply chain management</td>
<td>• Director independence</td>
</tr>
<tr>
<td>• Sustainability best practice</td>
<td>• Health and safety</td>
<td>• Chairman/CEO split</td>
</tr>
<tr>
<td>• Environmental management</td>
<td>• Product safety</td>
<td>• Executive pay</td>
</tr>
<tr>
<td>• Water supply</td>
<td>• Labour relations</td>
<td>• Shareholder rights</td>
</tr>
<tr>
<td>• Sustainable transport</td>
<td>• Community/stakeholder relations</td>
<td>• Accounting/audit</td>
</tr>
<tr>
<td>• Waste</td>
<td></td>
<td>• Business ethics</td>
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</tbody>
</table>

Companies

<table>
<thead>
<tr>
<th>Governance</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Fund governance</td>
</tr>
<tr>
<td>• Advisory Committee powers and composition</td>
</tr>
<tr>
<td>• Valuation issues</td>
</tr>
<tr>
<td>• Fee structures</td>
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Sustainable finance policy matters …

There have now been over 730 hard and soft-law policy revisions, across some 500 policy instruments, that support, encourage or require investors to consider long-term value drivers, including ESG factors.
...and the pace is increasing
There is a move away from sporadic adoption to comprehensive national sustainable finance strategies.

Further policy making is inevitable.
We are getting more technical and implementation focussed – at least in part because the regulators have got involved.

Example 1: Ontario Pension Benefits Act

| Canada, Ontario | Pension Benefits Act | 2016 | Under section 78(3), a plan’s statement of investment policies and procedures (SIPP) is required to include information as to whether environmental, social, and governance (ESG) factors are incorporated into the plan’s investment policies and procedures and, if so, how those factors are incorporated. |

#PRIForum
### Example 2: UK Investment Regulations

| UK | Occupational Pension Schemes (Investment) Regulations | 2018 | Funds must disclose their policies in relation to financially material considerations. This is defined as including environmental, social and governance issues and climate change. |
Example 3: EU Taxonomy - Disclosure Requirements

**Financial market participants** offering financial products in the EU, including occupational pension providers.

For each relevant product, state:
- How and to what extent the Taxonomy was used in determining the sustainability of the underlying investments;
- To what environmental objective(s) the investments contribute; and
- The proportion of underlying investments that are Taxonomy-aligned, as a percentage of the investment, fund or portfolio.

**Large companies** who are already required to provide a non-financial statement under the Non-Financial Reporting Directive.

- The proportion of turnover aligned with the Taxonomy; and
- CAPEX and, if relevant, OPEX aligned with the Taxonomy.

**The EU and Member States**, when setting public measures, are required to use the Taxonomy.

- Standards or labels for green financial products or green (corporate) bonds

Case studies: [https://www.unpri.org/policy/eu-sustainable-finance-taxonomy/eu-taxonomy-alignment-case-studies](https://www.unpri.org/policy/eu-sustainable-finance-taxonomy/eu-taxonomy-alignment-case-studies)
Example 3: EU Taxonomy - Financial Market Participants

- Financial products offered in the European Union will be required to make reference to the Taxonomy.
- The requirement differs depending on the type of fund, as defined in the regulation on sustainability-related disclosures in the financial sector.

<table>
<thead>
<tr>
<th>Type of funds</th>
<th>Obligation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Targeting sustainable investment as its objective (Article 9 of sustainability disclosures regulation)</td>
<td>Disclose against the taxonomy</td>
</tr>
<tr>
<td>Promoting environmental characteristics alone or in combination with other characteristics (Article 8)</td>
<td>Disclose against the taxonomy if environmental characteristics are promoted</td>
</tr>
<tr>
<td>All other funds (Article 7)</td>
<td>Optional to disclose against the taxonomy. Fund should carry a disclaimer that “the investment(s) underlying this financial product do not take into account the EU criteria for environmentally sustainable investments“.</td>
</tr>
</tbody>
</table>
Real economy outcomes are the new focus for investors and for policymakers.

The new generation of government strategies have articulated a clear vision for sustainable finance which encompasses not just risks to the financial system, but the role the financial system has to play in financing the real economy.

But fundamental legal questions remain:

- Are there legal impediments to investors adopting “impact targets”—for example—that an investor’s investment activity is consistent with no more than 1.5 degrees of warming?
- Are investors legally required to integrate the sustainability outcomes of their investment activity in their decision-making processes?
- On what positive legal grounds could or should investors integrate the realisation of the SDGs in their investment decision-making?
To conclude, the trends

- Sustainable finance policy matters. There have now been over 730 hard and soft-law policy revisions, across some 500 policy instruments, that support, encourage or require investors to consider long-term value drivers, including ESG factors.
- We are moving from sporadic adoption to comprehensive national sustainable finance strategies. Further policymaking is inevitable.
- We are getting more technical and implementation focussed – at least in part because the regulators have got involved.
- Real economy outcomes are the new focus for investors and for policymakers.
ESG – Actuaries in Action

Actuaries and their ESG mandates

Chris Howells FIA
Head of Global Insurance Clientsm Head of Insurance Solutions APAC, Schroders Asset Management
21 September 2020
Sustainable investing – key terms

**Corporate responsibility**
A company’s responsibility to operate its business in a way that does not harm the environment or society as a whole

**Active Ownership**
Actively exercising your shareholder rights and engaging with companies to encourage responsible corporate behaviour and improve long-term shareholder value

**Engagement**
A purposeful dialogue between a company and its shareholders that aims to enhance and protect the value of investments. This might involve seeking additional information about a company’s practices or to encouraging improvements in performance and processes

**Screening**
An investment approach used to filter companies based on pre-defined criteria before investment. You can use a negative screen (in which you deliberately exclude certain companies because of their involvement in undesirable activities or sectors) or a positive screen (in which you select companies based on their sustainability practices)

**Impact investing**
Investments that are made with the primary goal of achieving specific, positive social benefits while also delivering a financial return. They create a direct link between portfolio investment and socially beneficial activities, historically most of the activity has occurred in unlisted assets

**Thematic investing**
Investing in companies that can be classified under a particular investment theme such as renewable energy, waste and water management, education or healthcare innovation

**ESG integration**
An investment approach that takes into consideration a range of sustainability and ESG-related risks and opportunities in addition to traditional financial analysis

**Responsible investing**
An investment approach that considers ESG-related risks and opportunities as part of its investment process and includes engagement and voting in order to generate sustainable, long-term financial returns with consideration for society and the environment

**Sustainable investing**
An investment approach in which a company’s sustainability practices are paramount to the investment decision and in which ESG analysis forms a cornerstone of the investment process
ESG impacts key insurance functions
Enhanced management and disclosure requirements

Senior management
- Awareness of reputational risk and making sure that risk mitigating factors are in place
- defining the ESG strategy and corporate governance
- Minimizing externalities of the investment

Finance
- Delivering reports, including ESG/Climate Risks Disclosure, e.g. as defined in Q2 2020 EIOPA consultation
- Analysing ESG impact on accounting
- Ensuring shareholder value

Risk Management
- Including sustainability and ESG risks in the risk framework (Solvency II, economic model etc.)
- Challenging CIO, Actuaries, ALM vs. ESG risk

Investment
- Defining ESG criteria for the investment portfolio
- Portfolio screening
- Proposing scenario to optimize yield and ESG
- Implementation of the strategy

Sales and Marketing
- Which products to be sold to policy holders?
- How to position the company?
- IDD requires insurers to question their clients on the ESG preferences from 2022 and to define an IDD ESG target market

Liabilities
- Defining ESG criteria for liabilities
- Portfolio screening
- Proposing business strategies

PPP EIOPA regulated. ESG = Bonus KPI
Insurers’ focus on ESG
ESG to be further embedded in management activity

<table>
<thead>
<tr>
<th>Category</th>
<th>12–24 months</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security-level ESG scores</td>
<td>78%</td>
<td>55%</td>
</tr>
<tr>
<td>Thematic metrics</td>
<td>78%</td>
<td>38%</td>
</tr>
<tr>
<td>Scenario-testing metrics for climate change</td>
<td>77%</td>
<td>34%</td>
</tr>
<tr>
<td>Portfolio-level exposure to other material ESG risks</td>
<td>74%</td>
<td>35%</td>
</tr>
<tr>
<td>Voting decisions and outcomes for ESG issues across portfolio</td>
<td>73%</td>
<td>31%</td>
</tr>
<tr>
<td>Engagement activity across relevant ESG issues</td>
<td>66%</td>
<td>35%</td>
</tr>
<tr>
<td>Greenhouse gas emissions and carbon intensity</td>
<td>66%</td>
<td>50%</td>
</tr>
<tr>
<td>Portfolio-level exposure to climate transition risks</td>
<td>62%</td>
<td>30%</td>
</tr>
</tbody>
</table>

- Source: Cerulli Associates, May 2020
- Notes: Thematic metrics (e.g., board diversity, gender equality, UN Sustainable Development Goal factors).
ESG strategy within an insurance framework

Steps to successful integration

1. Identify and screen your current ALM portfolio and surplus assets
   1. Identify ESG raw risk criteria, especially climate and sustainability risks
      - Environmental – electricity consumption, GHG emissions...
      - Social – diversity, inclusion ...
      - Governance – disclosures, executive remuneration...
   2. Apply screening tools (impact, thematic, positive, negative ...)
   3. Analyse and aggregate information with relevant indicators, e.g.
      - E – temperature or carbon footprint of the investment portfolio
      - S – employee satisfaction/well being
      - G – transparency rating

2. Define objectives for your portfolio and products within current ALM, risk budget and return constraints
   1. E – Reduce the portfolio’s temperature from current 4 degrees down to 2 degrees within 20 year
   2. S – Engage companies to improve the employees well being (from score A to score B within 15 years)
   3. G – Eliminate opaque corporate investments

3. Implementation
   1. Risk assessment: measure sensitivity of the portfolio to the objectives and to the ESG risk criteria
   2. Investment process: choose and apply one or several levels of ESG integration e.g.
      - Impact investment, Exclusion, Thematic, Full ESG integration across the balance sheet, Active ownership (voting and engagement)
   3. Communication/Marketing/ESG disclosure
      - In accordance with all of the above!
Thank you!

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ESG Risk:
The IAA Risk Book chapter on climate change risks

Sam Gutterman
Consulting actuary

21 September 2020
My agenda today

- A climate change risk taxonomy
- Climate change risk management process
- Challenges for insurers
- The U.S. scene

Based on the upcoming IAA Risk Book chapter on Climate Change Risks
A climate change risk taxonomy

- Categorized by the Task Force on Climate-related Financial Disclosures (TCFD)
  - Physical risk
    - Property and other assets
    - Illhealth
    - Economic risks
  - Transition risk
    - Decarbonization process
      - Carbon footprints
    - Cost of adaptation
    - Financial, e.g., as a result of stranded assets
  - Liability risk
    - Litigation over inaction
- Involves both invested assets and obligations
• An insurer needs to consider actions/risks from several vantage points, such as
  – Insurer
  – Investor
  – Public citizen
• Analytical tools for an actuary
  – Stochastic analysis
  – Sensitivity analysis
  ▪ Stress testing
  – But model risk always exist
  – Qualitative regarding brand and sustainability risks
Climate risk management process

• All aspects of this comprehensive process are important
  – *Identifying* risks that threaten health, life, property, infrastructure, food security, income and other resources
  – *Assessing* stakeholders and current approaches
  – *Controlling* through mitigation and adaptation to reduce the probability and severity of losses or damages
  – *Measuring* (estimating) the resulting risk probabilities associated with the scenario(s) assessed, including frequency, timing and their expected financial impact
  – *Financing* and/or transferring the expected or actual cost of a risk, which can be done in advance through, for example, an insurance mechanism or after-the-fact in a disaster recovery and charitable efforts
  – *Monitoring* to identify new risks, monitor risk appetite and recognize/report on the effectiveness of measures in place and actual costs

• Feedback loops inevitably occur
The climate risk management process

- Large scenario analysis, including what if’s to enhance understanding
- Governance
  - Important to embed this process into everyday management
  - Sustainability management
- ESG disclosures are just one aspect, often the final element
- The TCFD emphasized measurement and monitoring
  - Focused on external stakeholders, such as shareholders and regulators
  - Includes the use of consistent scenarios for comparability
  - But aggregation of exposures of each insurer is unique
The climate risk management process - actions

• For insurers
  – Operational approaches
    ▪ Underwriting guidelines / pricing of characteristics susceptible to damage
      ○ For example, location and resiliency of structures to flood, storm and wildfire risks
  – Product design
    ▪ Policy exclusions, benefit caps and terms that restrict coverage until steps are taken to address inadequate loss control actions
  – Spread of risks
    ▪ Avoiding concentration risks especially susceptible to climate losses and adequate reinsurance protection
  – Can be viewed as being similar to and incorporated in the ORSA process

• Roles for and constraints imposed by insurance supervisors
  – Internationally, the IAIS and SIF have become more active
Challenges for insurers

- Many ‘supporters’, but so far fewer applying effective ESG disclosures
- Operating issues involving affordability and availability
  - How to best address the insurance protection gap for the most vulnerable
- Overcoming uninsurable risks
- Providing behavioral incentives to insureds for loss avoidance and prevention
  - Limitations of private-sector insurance
- Sustainability governance
  - Capital
  - Reinsurance
  - Government support/backup
The U.S. scene

• Not as well advanced as in European countries
  – Only recently has external forces been emerging

• Key areas of potential actuarial involvement
  – Insurers
  – Pension plans
  – If actuaries demonstrate their value here, may expand

• So far, insurers and their regulators have emphasized invested asset risk
  – Several state insurance regulators have focused on these risks, such as California, which has required invested asset sensitivities, mostly of larger insurers

• Generally slow in implementation, although implementing the process can take significant effort and time
Thank you!

Sam Gutterman, FSA, FCAS, CERA, MAAA, CFA, Hon FIA
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Q&A
Thank You

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