



Society of Actuaries in Ireland

Emerging Risks
Stuart Redmond

11th February 2025



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Stuart is a qualified actuary with over 20 years of experience in the insurance industry in Ireland. He co-leads Deloitte's Insurance Risk & Regulation offering and currently acts as Chief Risk Officer (PCF-14) on an outsourced basis for a non-life entity.

Stuart Chair's the SAI Risk Committee and is the Deputy Chair of the ERM Committee.



What are Emerging Risks?



*“there are known knowns; there are things we know we know. We also know there are known unknowns; that is to say we know there are some things we do not know. But there are also **unknown unknowns**—the ones we don't know we don't know. And if one looks throughout the history of our country and other free countries, it is the latter category that tends to be the difficult ones”*

- Donald Rumsfeld



What are Emerging Risks?

Thoughts for the 2001 Quadrennial Defense Review

LIN WELLS
CF: Amdm

- If you had been a security policy-maker in the world's greatest power in 1900, you would have been a Brit, looking warily at your age-old enemy, France.
- By 1910, you would be allied with France and your enemy would be Germany.
- By 1920, World War I would have been fought and won, and you'd be engaged in a naval arms race with your erstwhile allies, the U.S. and Japan.
- By 1930, naval arms limitation treaties were in effect, the Great Depression was underway, and the defense planning standard said "no war for ten years."
- Nine years later World War II had begun.
- By 1950, Britain no longer was the world's greatest power, the Atomic Age had dawned, and a "police action" was underway in Korea.
- Ten years later the political focus was on the "missile gap," the strategic paradigm was shifting from massive retaliation to flexible response, and few people had heard of Vietnam.

- By 1970, the peak of our involvement in Vietnam had come and gone, we were beginning détente with the Soviets, and we were anointing the Shah as our protégé in the Gulf region.
- By 1980, the Soviets were in Afghanistan, Iran was in the throes of revolution, there was talk of our "hollow forces" and a "window of vulnerability," and the U.S. was the greatest creditor nation the world had ever seen.
- By 1990, the Soviet Union was within a year of dissolution, American forces in the Desert were on the verge of showing they were anything but hollow, the U.S. had become the greatest debtor nation the world had ever known, and almost no one had heard of the internet.
- Ten years later, Warsaw was the capital of a NATO nation, asymmetric threats transcended geography, and the parallel revolutions of information, biotechnology, robotics, nanotechnology, and high density energy sources foreshadowed changes almost beyond forecasting.
- All of which is to say that I'm not sure what 2010 will look like, but I'm sure that it will be very little like we expect, so we should plan accordingly.



Red As Unclassified
9/2009
12958, as amended

Chief, RDD, ESD, WHS

Lin Wells



Characteristics of Emerging Risks

Novel / Evolving Risks

New risks which develop or risks which currently exist but are continually evolving.

Uncertainty / Ambiguity

High degree of uncertainty on impact / likelihood.

Diverse Origins

Risks from diverse sources, typically outside traditional domain specialism.

Temporal Dynamics

Can manifest rapidly or develop slowly over time.

Contextual Dynamics

Result from changes in regulatory, social, technological or natural context.

Interconnectedness

Non-linear impacts due to interconnected nature of the risk and highly stressed systems.





Emerging Risk Framework

Emerging Risk Identification: Horizon Scanning

- Identify external forces that affect your environment and could create new risks.
- Continuous monitoring of data sources (e.g. reinsurer, government and international body publications).
- Output: **Emerging Risk Inventory** (List of risks grouped into themes, e.g. using the PESTLE approach.)

Emerging Risk Analysis: Stakeholder Engagement / Scenario Analysis

- Engage with internal stakeholders to analyze individual risks and how they could impact your business.
- Structure to deliver best results, use scenarios / narratives to make the risks more tangible.
- Output: **Emerging Risk Register** (Assessment of likelihood and impact of various risks on your business).

Emerging Risk Mitigation

- For Emerging Risks deemed material, develop strategies to mitigate those risks.
- No regrets actions that can be taken now, contingency plans.
- Output: **Emerging Risk Mitigation Plan**

Emerging Risk Monitoring / Reporting

- Regularly refresh horizon scanning / Emerging Risk Register.
- Establish and monitor KPIs for emerging risks.
- Output: **Emerging Risk Dashboard**

Emerging Risk Governance

- Emerging Risks require a robust governance framework within the overall ERM Framework.
- Emerging Risks Committee / Working Group that reports regularly to the Risk Committee
- Clear definition of processes and roles / responsibilities around Emerging Risks.



SAI Emerging Risk Survey: Approach

- Joint initiative of the SAI ERM and Risk Committees.

ERM Committee Sub-Group

- Stuart Redmond
- John McCrossan
- Eoin Stack
- Emmet McCabe

- Goal: Identify emerging risks to our industries and to the SAI / wider profession to:
 - Inform ERM Committee CPD events / research;
 - Input into the SAI's Risk Register.
- Approach:
 - Emerging Risk Template issued to all SAI Committees;
 - Feedback consolidated into an Emerging Risk Log;
 - Emerging risks were then grouped into several risk 'themes'.

Emerging Risk Template

Risk Name	<i>Name of the emerging risk</i>
Identified By	<i>For example, the name of the Committee or SAI staff member who has identified the risk.</i>
Nature of Risk	<input type="checkbox"/> Risk to the Society <input type="checkbox"/> Risk to industry participants
Risk Type	<input type="checkbox"/> Reputational <input type="checkbox"/> Financial (including investment, insurance / underwriting risk) <input type="checkbox"/> Operational <input type="checkbox"/> Strategic
Risk Description	<i>A brief outline of what the emerging risk is and how it could impact the Society / industry participants (as appropriate).</i>
Risk Rating	<i>Indicative rating of the potential impact of the risk on the Society / industry participants (as appropriate).</i> <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High
Timeframe	<i>Indicative timeline of when the emerging risk may manifest.</i> <input type="checkbox"/> Less than 2 years <input type="checkbox"/> Within 2 to 5 years <input type="checkbox"/> Longer than 5 years
Comment	<i>Any additional information you wish to include (e.g. potential risk mitigants).</i>

Note on Risk Rating

The template uses a qualitative High / Medium / Low risk rating scale to assess emerging risks:

- Low – an event that could cause limited reputational damage and / or small financial loss to the SAI / industry participants;
- Medium – an event that could cause reputational damage and / or financial loss to the SAI / industry participants;
- High – an event that could cause significant reputational damage and / or financial loss to the SAI / industry participants.



SAI Emerging Risk Survey: Outputs

Regulation / Government Intervention	Climate & Biodiversity	Economic	Health & Demographic	Technology, AI & Digitalisation	Political & Social
Auto Enrolment Related Risks / Pension Regulatory Risk	Biodiversity & Nature Related Risk - Physical Risks	Inflation Impact on Insurers	Pandemic	Artificial Intelligence	Brexit
Regulatory Environment / Compliance Burden	Biodiversity & Nature Related Risk - Transition Risks	Inflation Impacts on Customers	Population Trends	Cyber Risks	Geopolitical Tension / Conflict
Customer Understanding of Investment Risk / Inadequate Disclosures	Climate Change - Existential Threat	Interest Rates Paradigm Shift	Right To Be Forgotten	Data Privacy & Ethics	Ireland's Attractiveness as an Insurance Hub
Data Protection / Use of Data Risks	Climate Change - Legal Risk	Protectionism / De-globalisation	Medical Advances	Disruptive Technologies / FinTech	Mis-information / Dis-information
Increased Operational Resilience Focus	Climate Change - Physical Risk		Mental Health		Shifting Political Landscape
Public Healthcare Challenges / Sláintecare Implementation	Climate Change - Transition Risk		Antimicrobial Resistance		Role of Private Equity in Insurance
SEAR / Individual Accountability	Impact on GI Pricing / Insurability & Reinsurance Availability				
Sustainability of Pension Provision					



SAI Emerging Risk Survey: An Irish Specific Lens

Regulation / Government Intervention	Climate & Biodiversity	Economic	Health & Demographic Trend	Technology, AI & Digitalisation	Political & Social
Auto Enrolment Related Risks / Pension Regulatory Risk	Biodiversity & Nature Related Risk - Physical Risks	Inflation Impact on Insurers	Pandemic	Artificial Intelligence	Brexit
Regulatory Environment / Compliance Burden	Biodiversity & Nature Related Risk - Transition Risks	Inflation Impacts on Customers	Population Trends	Cyber Risks	Geopolitical Tension / Conflict
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SEAR / Individual Accountability	Impact on GI Pricing / Insurability & Reinsurance Availability				
Sustainability of Pension Provision					



SAI Emerging Risk Survey: 2025 Horizon Scanning Update

Regulation / Government Intervention	Climate & Biodiversity	Economic	Health & Demographic Trend	Technology, AI & Digitalisation	Political & Social
Auto Enrolment Related Risks / Pension Regulatory Risk	Biodiversity & Nature Related Risk - Physical Risks	Inflation Impact on Insurers	Pandemic	Artificial Intelligence	Brexit
Regulatory Environment / Compliance Burden	Biodiversity & Nature Related Risk - Transition Risks	Inflation Impacts on Customers	Population Trends	Cyber Risks	Geopolitical Tension / Conflict
Customer Understanding of Investment Risk / Inadequate Disclosures	Climate Change - Existential Threat	Interest Rates Paradigm Shift	Right To Be Forgotten	Data Privacy & Ethics	Ireland's Attractiveness as an Insurance Hub
Data Protection / Use of Data Risks	Climate Change - Legal Risk	Protectionism / De-globalisation	Medical Advances	Disruptive Technologies / FinTech	Mis-information / Dis-information
Increased Operational Resilience Focus	Climate Change - Physical Risk	Supply Chain Risks	Mental Health	Information Reliability	Shifting Political Landscape
Public Healthcare Challenges / Sláintecare Implementation	Climate Change - Transition Risk	Global Debt Crisis	Antimicrobial Resistance	Space Risk	Role of Private Equity in Insurance
SEAR / Individual Accountability	Impact on GI Pricing / Insurability & Reinsurance Availability	Critical Infrastructure Failures	Metabolic Syndrome / Obesity	Nanotechnology	Political Violence / Terrorism
Sustainability of Pension Provision	Hazardous Chemicals & Small Particles	Rising Inequality	Medical Implants	Dependency on 'Big Tech'	Social Fragmentation / Tension
Insurance Fairness	Pollution	Digital Currencies	Endocrine Disruptors	Autonomous Machines	Social Media
Conduct Risk	Resource Scarcity	Sanctions	Social Isolation	Genetically Modified Organisms (GMOs)	Involuntary Migration



Breakout Discussion Questions

- 1. What are the top emerging risks facing the insurance industry?**
- 2. What are the top emerging risks specifically impacting the Irish industry?**
- 3. Do you feel equipped to identify and manage the universe of emerging risks? What additional support would be helpful?**



Q&A

