



Society of Actuaries in Ireland

Insights from the UK Guide on Resource & Environment Issues for Pension Actuaries

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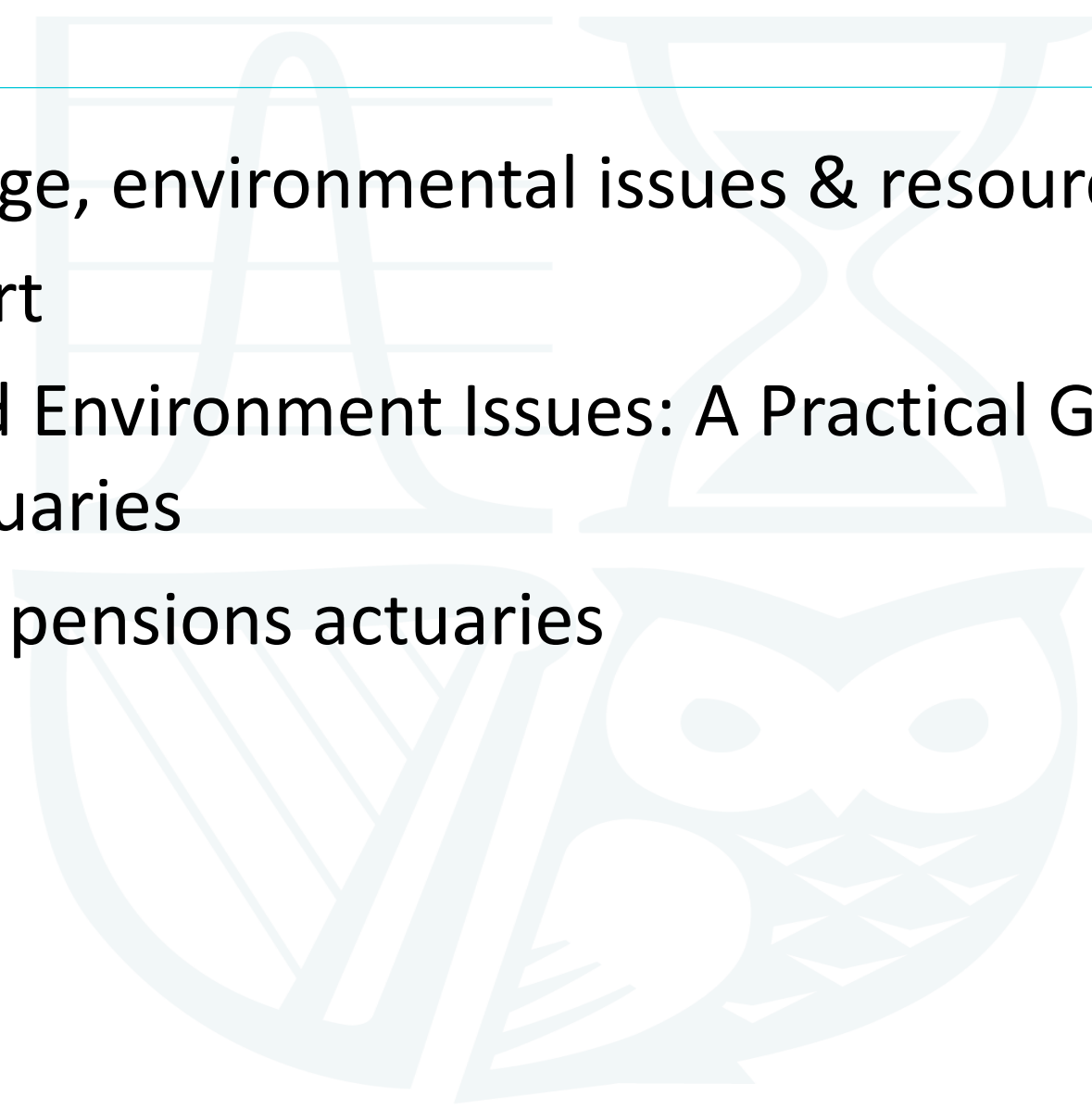
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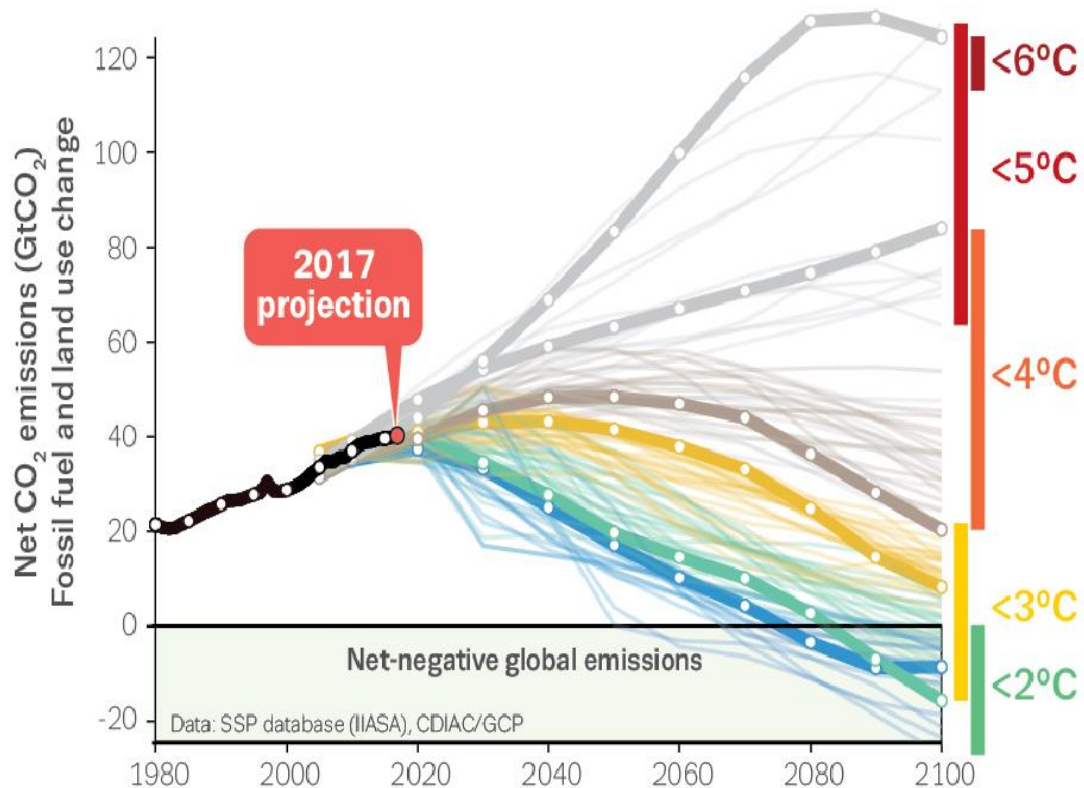
Agenda

- Climate change, environmental issues & resource constraints
- IFoA Risk Alert
- Resource and Environment Issues: A Practical Guide for Pensions Actuaries
- Relevance to pensions actuaries





Climate change, environmental issues & resource constraints



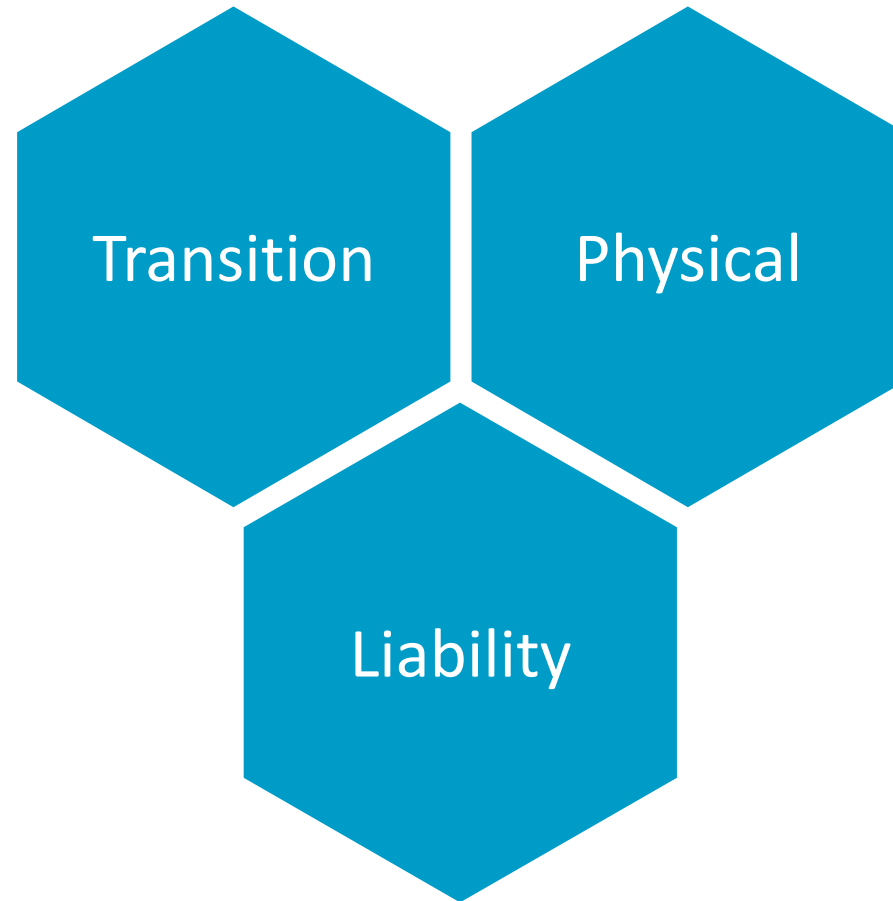
Source: Global Carbon Project, IPCC

- Warming of the climate is “unequivocal” (IPCC Fifth Assessment Report – 2014)
- Paris COP21:
 - Goal of keeping below 2°C average global temperature rise. Aspiration to keep to 1.5°C
 - “Non-binding commitments”
- “40m people live in UK areas with illegal air pollution” (Guardian, April 2017)
- We live in a finite world: constraints on key resources represent a significant risk to future growth.



Resource and Environment (R & E) issues

- Policy - carbon taxes
- Technology - capital investment
- Markets - changing customer behaviour
- Reputation - stigmatization



- Acute - more flooding (event driven)
- Chronic - heat waves (longer term shifts)
- Resource constraint
 - Energy - constrain fossil fuels
 - Land, soil & food – land degradation
 - Water – demand exceeds supply
 - Commodities – rare earth metal shortages



- Failure to mitigate
- Insufficiency of disclosure



IFoA Risk Alert: Climate-Related Risks, 12 May 2017



Risk Alert:

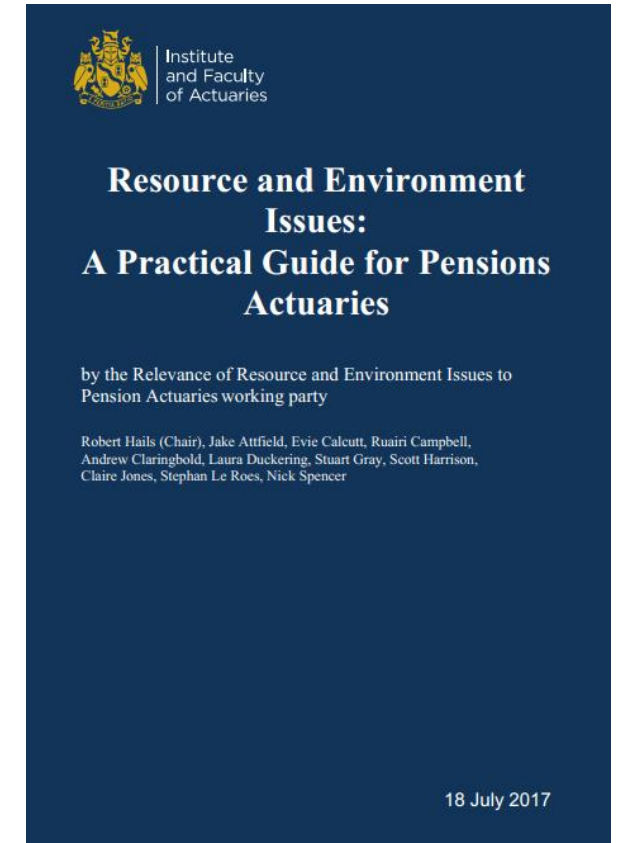
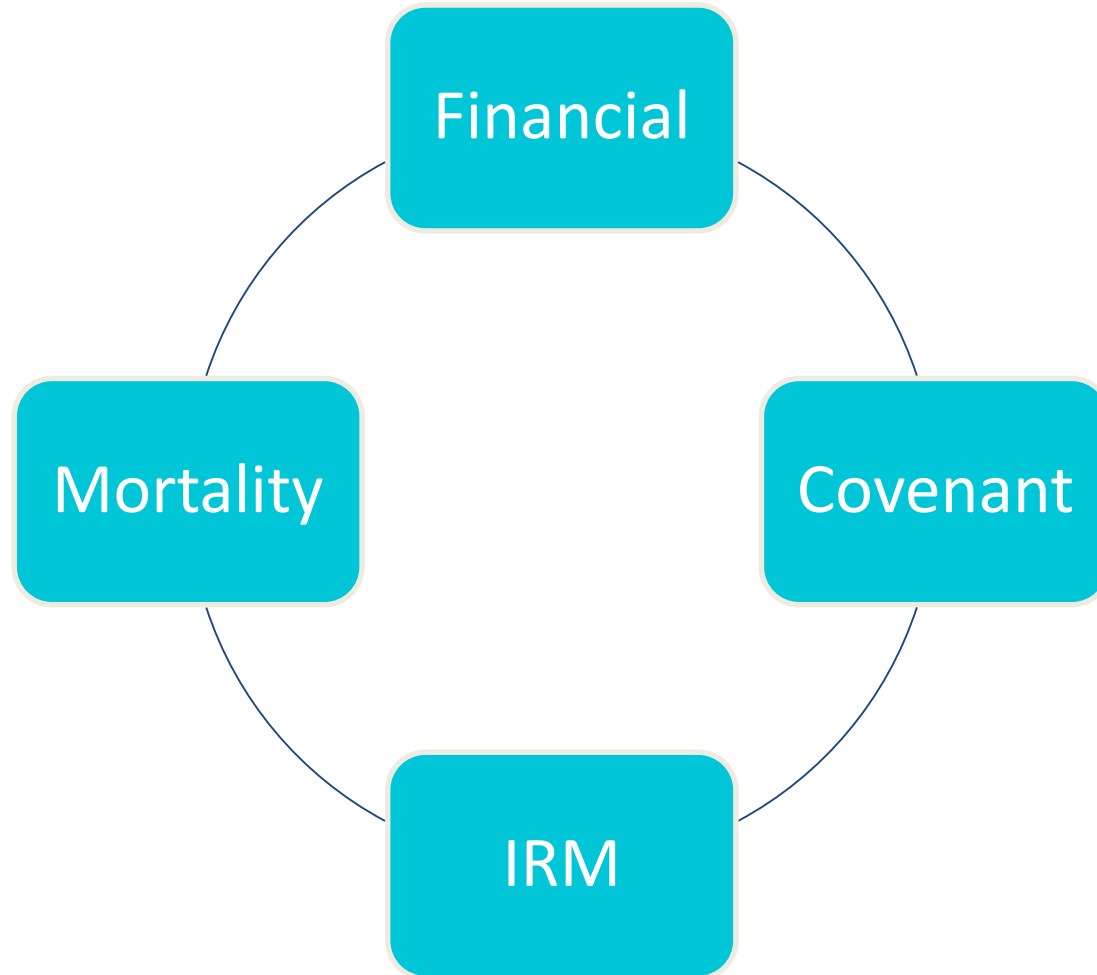
Climate-Related Risks

Key message:

Actuaries should ensure that they understand, and are clear in communicating, the extent to which they have taken account of climate-related risks in any relevant decisions, calculations or advice.

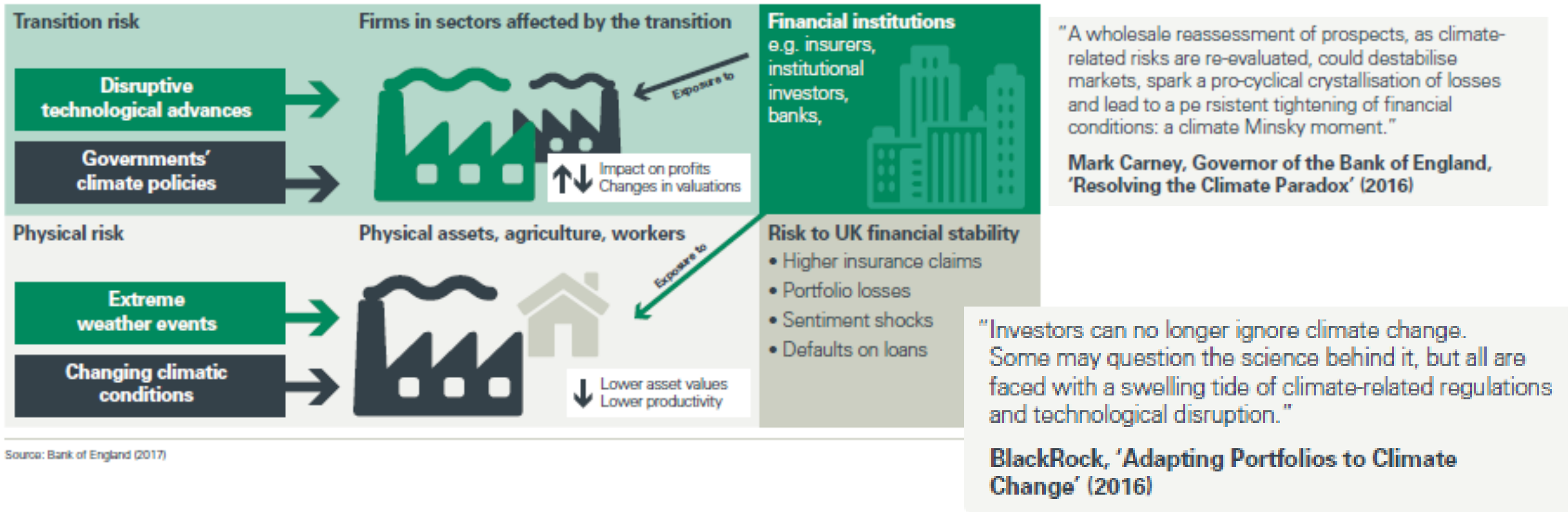


A practical guide for pensions actuaries (IFoA)





Are there financial implications for pension schemes?



"If progress continues at the same pace as the last 10 years then the transition risks for companies and investors could well crystallise within the next 10 years."

Professor Lord Stern, May 2017



But have UK actuaries done anything?

Rely on
market

“We derive our assumptions from what is priced into the market and the market should in theory have climate risk priced in. Even if it has not, it is not our job to second guess the market.”

Too long-
term

“The impact of climate change is very long-term and trustees have more pressing short-term issues.”

Legally
wrong

“We do not take into account factors that may adversely impact on the financial performance of the fund and restricting investments by taking account of climate change issues could have that effect.”



What is the UK legal/regulatory position?

“Most investments in pension schemes are exposed to long-term financial risks, which may include risks around long-term sustainability. These can relate to factors such as **climate change**, responsible business practices and corporate governance. **We expect you to assess the financial materiality of these factors ...**”

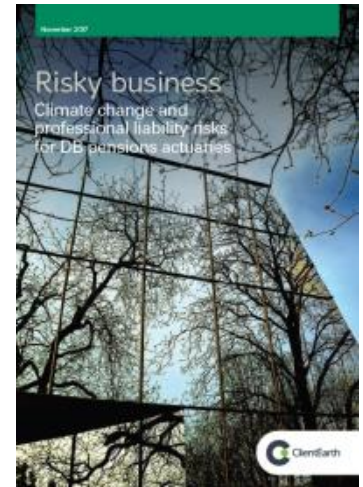
[The Pensions Regulator \(2017\)](#)

If the risks associated with climate change are financially material to a particular investment decision then it is clear, we think, beyond reasonable argument that the law permits and requires the trustees to take those risks into account when making that investment decision.”

[Keith Bryant QC and James Rickards \(2016\)](#)

“IORPs should...produce a risk assessment ... [that] should, where relevant, include, inter alia, **risks related to climate change, use of resources, the environment, social risks, and** risks related to the depreciation of assets due to regulatory change (**‘stranded assets’**)”

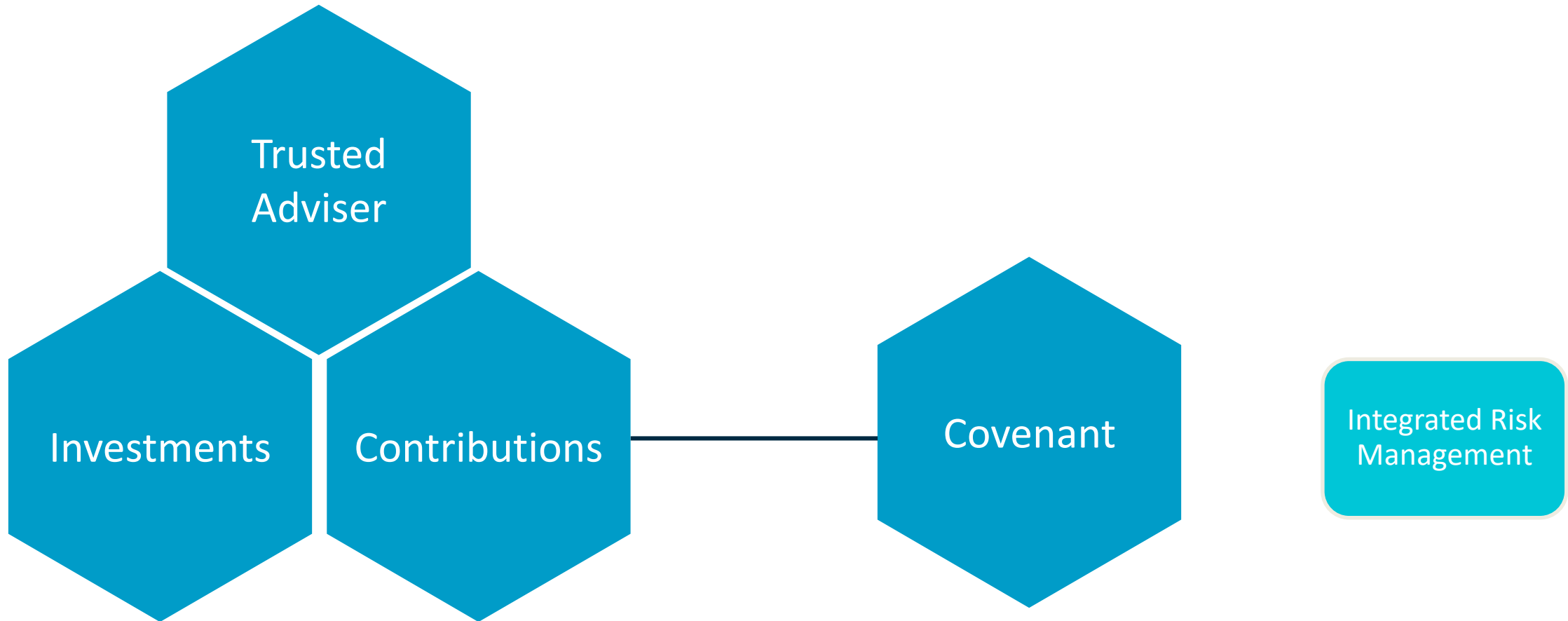
[Directive \(EU\) 2016/2341 \(“IORP II”\) \(14.12.2016\)](#)





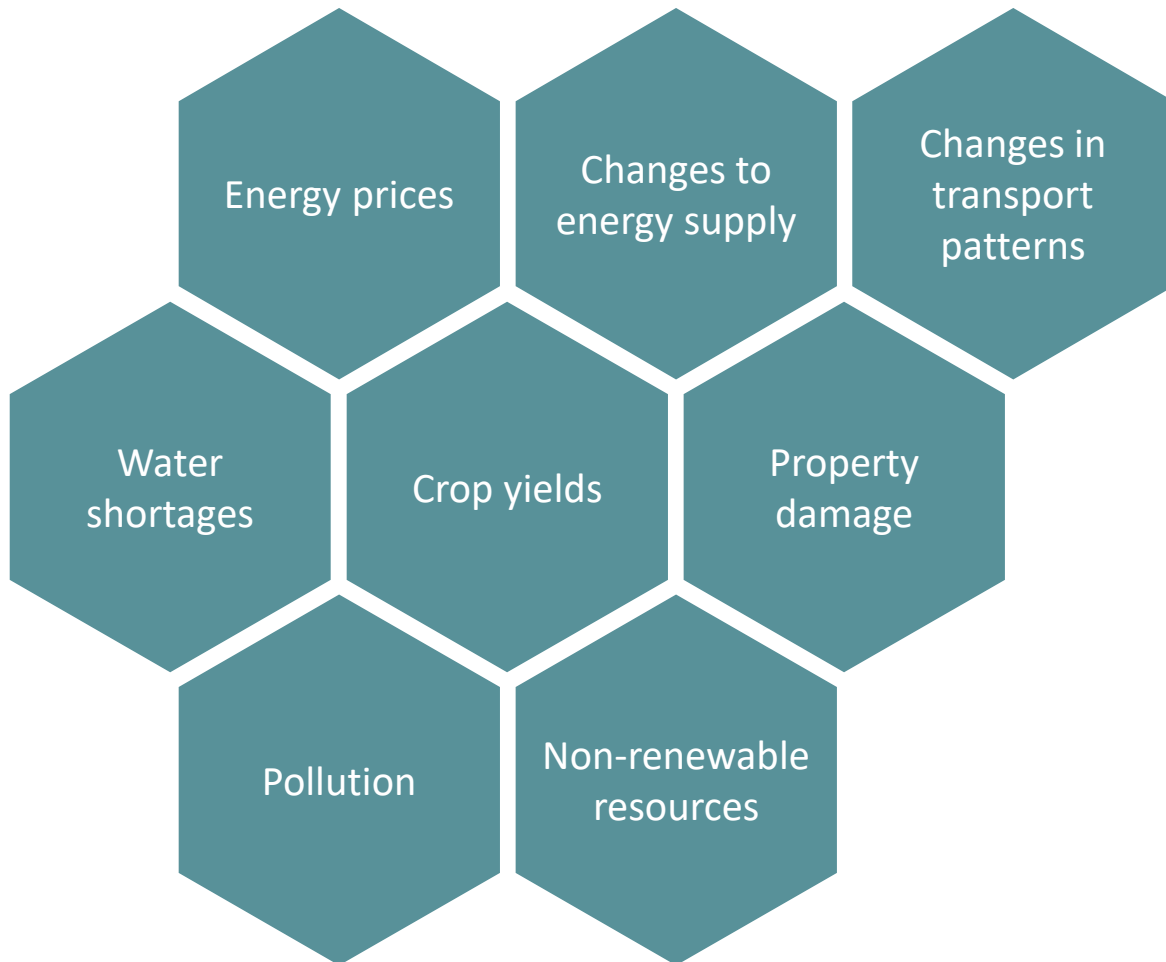
What can Scheme Actuaries do about it?

- Scheme Actuary in good position to explain issues





Covenant: Sources of Risk



Example: Supermarket

- Increasing transport costs may encourage localisation of supply chains and distribution networks
- Changing transport patterns could make out-of-town stores less popular
- May face economic and legislative pressure to reduce energy use in stores and depots
- Consumers may demand greater efforts to reduce packaging and food waste throughout the supply chain
- Changing temperature and rainfall patterns may affect food availability and prices
- Ability to deliver food with lower inputs and less environmental impact may become a key factor in competitive success



Scenarios

Base Case	Green	Climate calamity
<p>Actions taken in line with current pledges</p> <p>Climate change is not as bad as climate change experts predict and global warming limited to 2.5°C</p> <p>Asset returns broadly in line with what is currently expected by market</p>	<p>Coordinated global action is taken to aggressively tackle climate change.</p> <p>Climate change limited to 2°C</p> <p>Lower economic growth in first 5 years and real yields rise as concern over borrowing</p> <p>Higher growth in long-term and real yields remain higher</p>	<p>Focus on short-term concerns with insufficient consideration to sustainable long-term policies</p> <p>Climate change increase of 4°C. Mitigation late and less effective, leading to economic damage.</p> <p>Economic growth and real yields in line with expectations for first 5 years</p> <p>Lower economic growth and real yields in longer-term</p>



Next Steps for UK (all?) Actuaries

- Results of scenario analysis
- What can you do?
 - Learn more about R&E risks so can discuss with clients
 - Encourage trustees to raise R&E issues with covenant adviser
 - Find out how clients are addressing R&E risks in investment processes
 - Review whether your models and documentation incorporate R&E risks adequately
 - Use scenario analysis to explore uncertainty
 - Help trustees include R&E risks in their IRM approach



Summary

What do we mean?

- Climate change and resource scarcity are high-profile
- But other long-term issues include urbanisation, shifts in economic power, demographic and social change, technological breakthroughs

What is potential impact?



Has market priced in changes?
Impact of transitional measures?
CISL scenario of 50% fall

Discount Rates
Inflation
Mortality

Energy changes
Water scarcity
Physical impact
Non-renewable resources

Why consider?

- Legal backdrop is changing
 - Law commission
 - The Pensions Regulator
 - ClientEarth
 - IORP II
- Financial risks and returns
- Reputational damage
- Do members want it?
- Don't forget impact on covenant

What can you do?

- Integrate Responsible Investment into investments
- Consider exposure of covenant to long-term risks
- Consider scenarios
- Could allow for in funding strategy (but unlikely if satisfactory answers to above)
- Join/see updates from new SoA ESG Working Party



Questions



Comments

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IFoA pension guide and risk alert – resource links

<https://www.actuaries.org.uk/practice-areas/resource-and-environment/research-working-parties/relevance-resource-and-environment-issues-pension-actuaries>

<https://www.actuaries.org.uk/news-and-insights/media-centre/media-releases-and-statements/ifo-warns-climate-change-financial-risks>