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Climate Change Risk for Insurers

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21 November 2019

Flooding



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Heatwaves



Spread of disease



Migration



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Climate emergency (or “climate conspiracy”?)

“

I want you to act as you would in a crisis. I want you to act as if our house is on fire. Because it is ☹️

Greta Thunberg, January 2019

“

We don't need an army of actuaries to tell us that the catastrophic impacts of climate change will be felt beyond the traditional horizons of most actors – imposing a cost on future generations that the current generation has no direct incentive to fix ☹️

Mark Carney, September 2015

“

Trustees need to think very seriously about climate change risk and actually their true role of duty to the beneficiaries, by which I mean, there's no point having a nice pension if you haven't got a world to live in ☹️

Ed Davey, May 2019



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Agenda

1. What are climate-related financial risks?
2. How has insurance regulation reflected climate change risks to date?
 - What developments have occurred at European level?
3. What must UK insurers to do respond to SS3/19?
 - Who is responsible for climate change?
 - What does a climate change plan look like?
 - How does the time horizon for climate change risks differ from that current practice?
 - What challenges for life insurers in developing appropriate scenarios for stress testing?
 - What factors should a life actuary be aware of when considering climate change risk management?
 - How are insurers currently disclosing climate change risks in public reports?

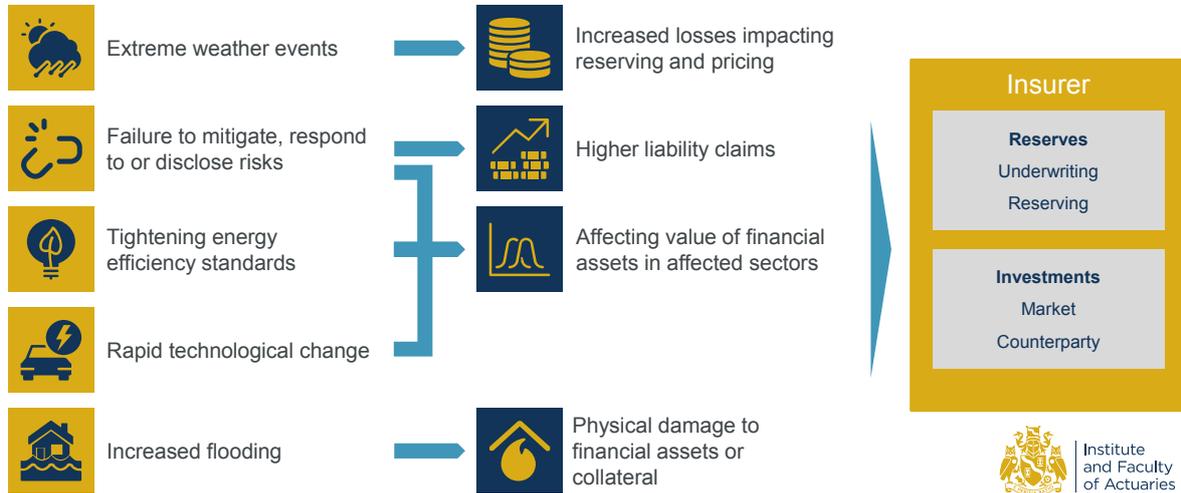


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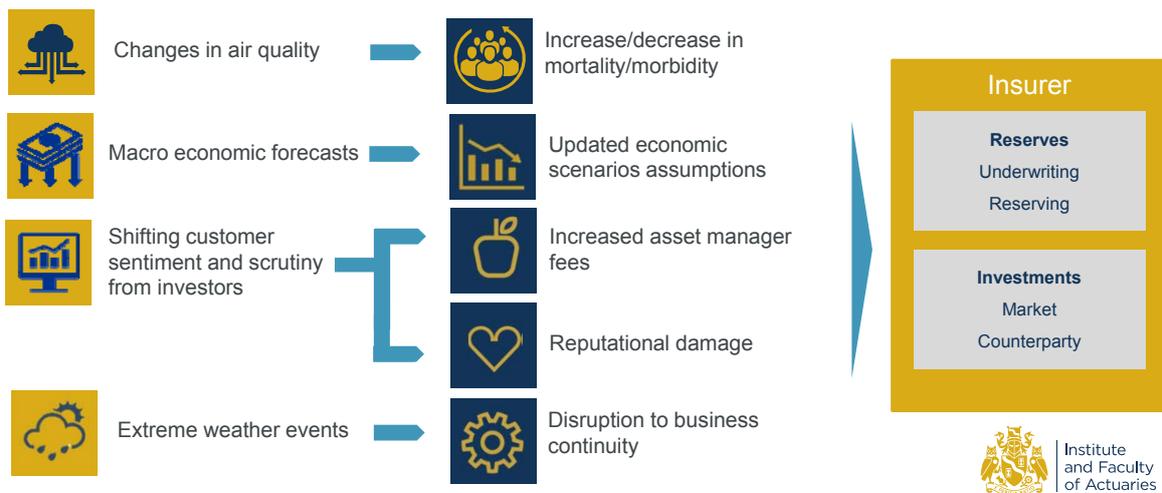
Climate-related risks



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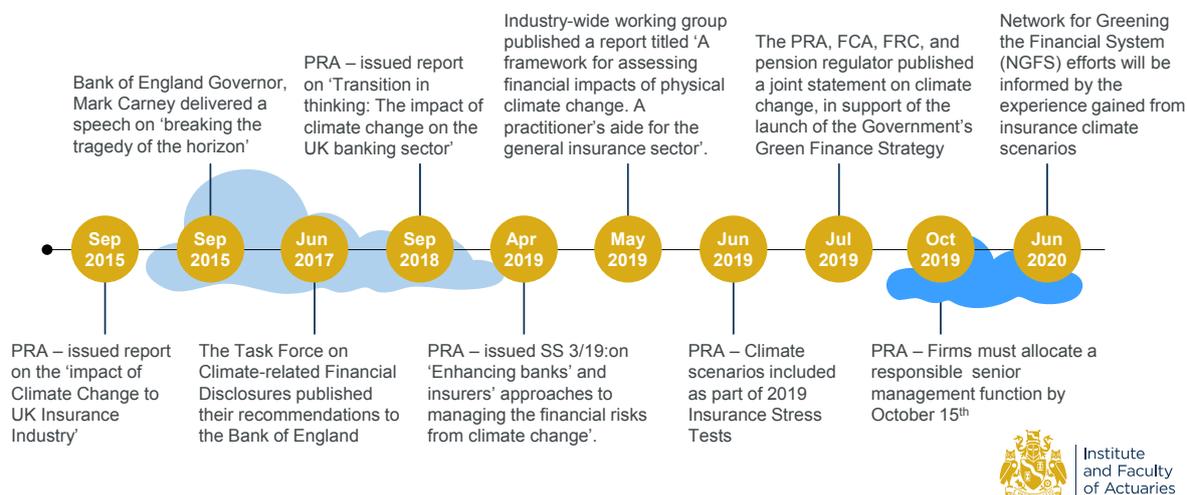
Climate-related risks (cont.)



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Emergence of climate change risk



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What developments have occurred at European level?

Non-Financial Reporting Directive requires companies to provide environmental, social and governance related disclosures in Management Report.

ECO labels for green financial products

EIOPA **Opinion** on **sustainability within Solvency II** to be incorporated within European Commission 2020 review (report due 1 January 2021).

EU Green Bond Standard

In June 2019 the European Commission (EC) has published **new guidelines on reporting climate-related information**, supplementing its non-binding guidelines on non-financial reporting published July 2017.

Benchmarks comprising **low-carbon and positive carbon impact investments** and ESG disclosures.

Development of an EU Sustainable Finance Taxonomy

EIOPA **technical advice** on potential **amendments to Solvency II and Insurance Distribution Directive (IDD)** on integration of sustainability risks and factors into organisational requirements; operating conditions; risk management and target market assessment.

Transparency of integration of **sustainability risks in the financial advice process** and transparency over financial products.



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An overview of SS3/19 regulatory expectations

-  Disclosures

Disclosures proposed to increase transparency of firms' approaches to managing climate related financial risks
-  Governance

Firms are expected to appoint a responsible senior management function(s) and embed climate change in their governance arrangements
-  Risk Management

Firms are expected to incorporate the financial risks from climate change into existing financial risk management practice
-  Scenario Analysis

Firms should use scenario analysis to inform strategy setting and risk assessment and identification.

Who is responsible for Climate Change?



- CEO / CFO / 1st Line of Defence
- CRO / 2nd Line of Defence
- Both 1st and 2nd Lines of Defence
- CSR team
- Don't Know

How does the time horizon for climate change risks differ from that current practice in life insurers?

Life insurers manage capital and liquidity in the short term...



Planning for the medium term...

But only in rare examples look at long term risks...



What challenges for life insurers in developing appropriate scenarios for stress testing?

Case study: 2019 PRA stress tests

Climate scenarios

Scenario A: sudden, but disorderly transition

Scenario B: long term orderly transition

Scenario C: failed future improvements

Deadline: 31 October 2019

The PRA's stress testing approach

Stress tests most relevant to life insurers:

A. 'Minsky moment' – climate shock

B. Long-term transition (2050)

Stresses specified by sector – e.g. by 2022:

- Coal linked shares (40%);
- Real Estate linked (30%);
- Renewables +20%

Key takeaways from life insurers



For a number of insurers this was their first quantitative effort



Classifying investments was challenging



Dataset developed which can be used for future scenarios



Completed at a group and legal entity level encouraging life company involvement



What are the challenges for life insurers in developing appropriate scenario analysis?



	Climate scenarios	Parameters	Exposure	Firm Impacts
Considerations	2C – transitional 4C - physical IPCC, IEA, Greenpeace	GDP/Pop Growth Policy Energy Transition	PACTA tools Transition scoring Total cost approach	Investments Dependencies Liabilities
Life insurer considerations	How do you own the narrative? How do you measure the uncertainty within the scenarios?		More meaningful approach than an instantaneous stress	What climate management actions are you assuming?



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What are the challenges for life insurers in developing appropriate scenario analysis?

How do you aggregate the picture?

Single metric vs range of results
Weighting of scenarios

Single metric vs range of results
Weighting of scenarios

PRA stress test output for sample portfolio (change to portfolio value)

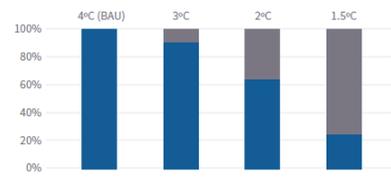


Aviva's approach

Figure 13: Initial Climate VaR output by scenario for Aviva's shareholder funds as at 31/12/2018. Source: Aviva.



Figure 14: Physical versus transition risks by scenario for Aviva's shareholder funds as at 31/12/2018. Source: Aviva.



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What factors should a life actuary be aware of when considering climate change risk management?



Your analysis will be wrong but it is about explaining the thought process



Scenario analysis can be about more than just financial impacts



Capturing the dynamic nature between physical and transitional risks is key



Indicating the uncertainty in the results helps communicate to users.

This is a fast developing field and best practice is still emerging



How are companies disclosing climate change risks in public reports?

Recommendation	Recommended disclosure	Banking	Insurance	Energy	Materials & Buildings	Transport	Agri, Food & Forest	Tech & Media	Consumer Goods
Governance	a. Board Oversight	48%	29%	38%	37%	25%	22%	19%	29%
	b. Management's Role	54%	35%	32%	35%	18%	26%	17%	40%
Strategy	a. Risks and Opportunities	51%	38%	57%	50%	38%	40%	38%	50%
	b. Impact on Organisation	55%	20%	64%	65%	34%	45%	25%	52%
	c. Resilience of Strategy	20%	12%	13%	12%	5%	4%	2%	6%
Risk Management	a. Risk ID and Assessment Processes	52%	30%	38%	41%	23%	24%	24%	22%
	b. Risk Management Processes	46%	33%	42%	39%	17%	26%	19%	23%
	c. Integration into overall Risk Management	32%	16%	21%	18%	11%	9%	17%	21%
Metrics and Targets	a. Climate-Related Metrics	51%	27%	49%	63%	36%	45%	37%	55%
	b. Scope 1,2,3 GHG Emissions	42%	22%	39%	41%	28%	26%	29%	38%
	c. Climate-Related Targets	50%	24%	45%	53%	32%	30%	24%	51%

Source: Mark Carney Speech on TCFD: strengthening the foundations of sustainable finance
The Task Force on Climate-related Financial Disclosures Status Report, June 2019



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Questions

Comments

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