Institute and Faculty of Actuaries

GIRO Conference 2022

21–23 November, ACC Liverpool

#GiroConf22

Institute and Faculty of Actuaries

How the UK can end reliance on Flood Re by 2039?

Laura Evans (Chair)
Richard Stock
Kemi Bello
Alex Hood
Marcus Schofield

#GiroConf22

Opening Poll

- What do you estimate the current full economic cost to be of a flood event equivalent to that experienced in 2007 in the UK (at 2022 prices)?
  a) £1bn - £2bn
  b) £2bn - £3bn
  c) £3bn - £4bn
  d) £4bn - £5bn
  e) > £5bn

Microsoft Word - SC070039 REPORT SCT.docx (publishing.service.gov.uk)

Institute and Faculty of Actuaries

Poll Results

Insert Web Page

This app allows you to insert secure web pages starting with https:// into the slide deck. Non-secure web pages are not supported for security reasons.

Please enter the URL below.

https:// poll.certaintouchpoint.com/results/cd14aa30-e037-4a3b-8e12-a593ac50935e

Note: Many popular websites allow secure access. Please click on the preview button to ensure the web page is accessible.

Web Viewer Terms | Privacy & Cookies Preview

Institute and Faculty of Actuaries

Purpose of Today's Talk*

- Provide background to Flood Re
  - Reasons behind its formation
  - Key successes so far
- Set out UK home flood insurance challenges
  - Need for affordable cover for all
  - Actions taken so far
  - Future risks & issues post-Flood Re exit in 2039
- Discuss sustainable solutions and potential opportunities for the market post-2039

* Following on from The Actuary magazine article: Post 2039 (September 2022- Digital Issue | The Actuary)

Institute and Faculty of Actuaries

Background to Flood Re

Factors leading to Flood Re's inception

- Significant flood events (e.g. 2007)
- Insurance pricing becoming more risk reflective … increasing sophistication of models

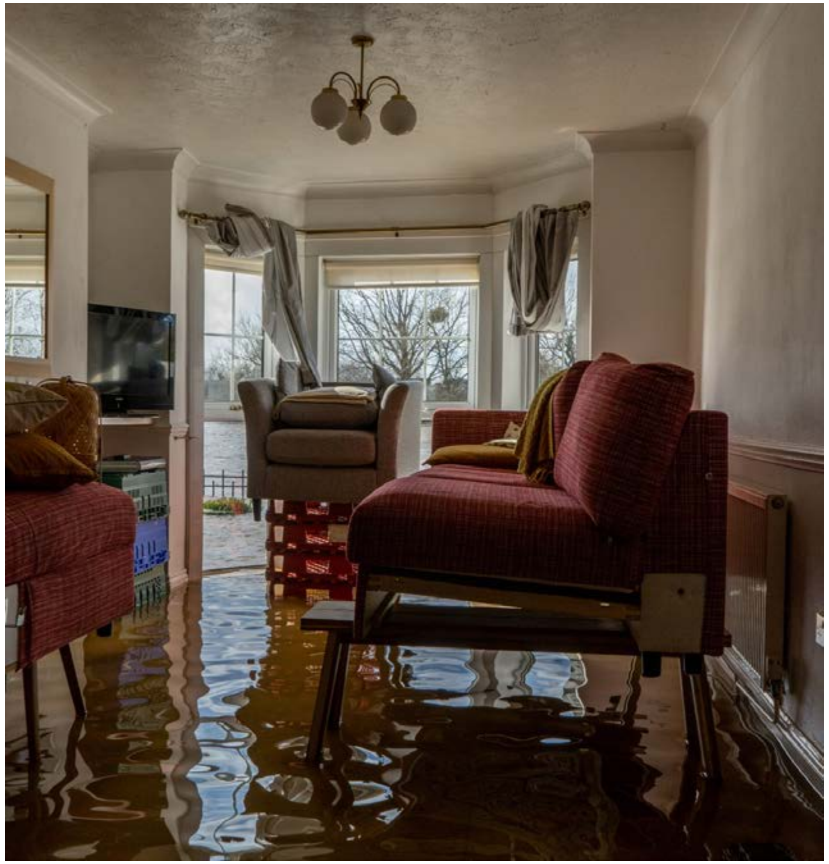
Formation and Coverage

- Developed by insurance industry, launched in 2016
- Not-for-profit, financed through annual levy on household insurers
- Flood Re premiums linked to council tax bands
  - Ensuring flood related premiums remain affordable for households in high-risk areas
- Some limitations

Institute and Faculty of Actuaries

Poll 2

- How many homes were covered by Flood Re in 2022?
  a) <100k
  b) 100k – 150k
  c) 150k – 200k
  d) 200k – 250k
  e) 250k+



Institute and Faculty of Actuaries

Successes to date

- 500,000 approx.* homeowners covered so far since Flood Re inception
  - >250,000 backed in 2022
- >50%* insurance premium reduction for 4 out of 5 homes with previous flood claims since inception
- Introduction of Build-back-better scheme

But … Flood Re only intended as temporary … legally obliged to end in 2039

** Source: https://www.floodre.co.uk/almost-half-a-million-households-have-now-benefited-from-flood-re/*

Institute and Faculty of Actuaries

Poll Results

Insert Web Page

This app allows you to insert secure web pages starting with https:// into the slide deck. Non-secure web pages are not supported for security reasons.

Please enter the URL below.

https:// poll.certaintouchpoint.com/results/cd14aa30-e037-4a3b-8e12-a593ac50935e

Note: Many popular websites allow secure access. Please click on the preview button to ensure the web page is accessible.

Web Viewer Terms | Privacy & Cookies

Preview

Discussion: Why is Managing Flood Risk Vital?

- Costs involved with flood events
  - Not just affected homeowners
- Challenges with pricing flood risk
  - Flood model limitations
- Why is the affordability and availability of flood insurance important?
  - Various stakeholders

Institute and Faculty of Actuaries

Poll 3

- What do you think will be the main challenge / issue when Flood Re ends in 2039?

Institute and Faculty of Actuaries

Challenges post-2039

- Flood risk and associated costs are rising
  - Climate change & continued building on flood plains
- Models becoming more risk reflective
- Need to ensure continued affordability
  - especially for most vulnerable
- Affordability of flood defences and other mitigation measures
- Number & variety of stakeholders:
  - Insurers, homeowners, central government, Building Research Establishment, Environment Agency, planners, developers, mortgage lenders, etc.
- What else?

Institute and Faculty of Actuaries

Poll Results

Insert Web Page

This app allows you to insert secure web pages starting with https:// into the slide deck. Non-secure web pages are not supported for security reasons.

Please enter the URL below.

https:// poll.certaintouchpoint.com/results/cd14aa30-e037-4a3b-8e12-a593ac50935e

Note: Many popular websites allow secure access. Please click on the preview button to ensure the web page is accessible.

Web Viewer Terms | Privacy & Cookies Preview

Discussion: Market Opportunities post-2039?

- Learning from successes of other markets across the globe
- Opportunities for societal change, including homeowner engagement
- Development of innovative products/solutions
  - to improve UK property flood resilience / resistance
- Flood Flash
- Other opportunities?

Institute and Faculty of Actuaries

Sustainable Solutions post-2039

- Sustainable solutions need a **collaborative** response between stakeholders to:
  - **reduce the risk of flooding**
  - **reduce the damage and costs** of flood when they do occur
  - **increase overall efficiencies** in managing flood risk and responding to flood events

Insurers	Homeowners	Government
• Insurance policy innovation - beyond traditional indemnification	• More direct involvement in reducing flood risk • Improved awareness of flood risk and resilience/ resistance measures - Especially when buying a property	• Improve flood defense measures • Improve flood resilience & resistance standards and regulations • Improve regulation around homebuilding

Institute and Faculty of Actuaries

Reducing the Cost & Risk of Flooding

Build back better

- Up to £10k of funding provided for Flood Resilience following a flood claim
  - E.g. Raising sockets, resilient materials, flood doors/gates, automatically closing airbricks, fitting non-return valves, sumps & pumps
- To improve resilience going forward
- Possibly extend to flood resistance to reduce risk of clams, but …
  - How to fund?
  - How to implement fairly?

PFR (Property Flood Risk) scoring system

- Flood Risk Performance Certificates (similar to Energy Performance ratings)
  - including recommendations for performance improvement
  - to enable homeowners to demonstrate benefits of PFR measures they've invested in
- To incentivise policyholder proactivity in reducing risk
- And help insurers reduce flood premium

Reducing the Cost & Risk of Flooding

Improved Government regulation & support

- More restrictive planning on flood plains
- Require improved flood resistance and resilience in new build development
- Mandate greater investment in flood defences (through Environment Agency?)
- Central Government to have more “skin in the game” to incentivise appropriate focus
- Enable better flood forecasting and flood risk info

Institute and Faculty of Actuaries

Your thoughts?

- What do you consider the most promising solution for continued affordability?
  a) Build back better
  b) Flood performance certificates (akin to EPC)
  c) Parametric pricing (or other pricing approaches)
  d) Increased flood defences
  e) Ongoing cross-subsidisation
  f) Other ?

- What have I learned during the process of preparing this
  - Transition / tapering needed for current low premiums to fully risk reflective
    - Potential ongoing need for Flood Re, or new equivalent
  - Need for Government to have more “skin in the game”
    - to fully incentivise support and action
  - Importance of collaboration and early focus

Institute and Faculty of Actuaries

Poll Results

Insert Web Page

This app allows you to insert secure web pages starting with https:// into the slide deck. Non-secure web pages are not supported for security reasons.

Please enter the URL below.

https:// poll.certaintouchpoint.com/results/cd14aa30-e037-4a3b-8e12-a593ac50935e

Note: Many popular websites allow secure access. Please click on the preview button to ensure the web page is accessible.

Web Viewer Terms | Privacy & Cookies Preview

Summary & Next Steps

Summary

- No easy solutions
- Multi-pronged approach and broad collaboration essential
- Importance of starting to develop a new approach now

Next Steps?

- Who? What? When? Where? How?

Institute and Faculty of Actuaries

Thank you

#GiroConf22

Appendix

Supporting detail

Institute and Faculty of Actuaries

Introduction

Flood Risk is <u>not</u> a new phenomenon … but:

- Population growth has led to more housing development on flood plains
- Awareness, knowledge of, and exposure to climate change impact has grown significantly

Homebuilding

- The location and type of homes built is generally determined by builders and Local Government planners
- Building Regulations to not include any material requirements or consideration relating to flood risk or resilience
- Home warranty providers are private organisations with no legal or regulatory responsibilities relating to flood risk

Other Stakeholders

- Homeowners: generally naïve about flood risk
- Mortgage lenders appear to have limited focus on the potential impact of flood risk
- Insurers and ABI: commercial organisations who will price flood risk as needed for profit

Before Flood Re

Insurance

- Insurance pricing was relatively unsophisticated
- Flood (and Catastrophe) models were much more limited in their granularity (and accuracy)
- Greater cross-subsidy between low and high risk homes

Flood insurance “agreements” between UK Govts and Insurance Industry since the 1960s

- “Formalised” after 2000 Floods: government and ABI drew up Statement of Principles
- ABI members agreed to continue offering insurance at existing rates to properties at high risk of flooding
- Only intended as temporary + new market entrants not covered under agreement (significant commercial advantage)

… and then the 2007 Floods hit, affecting many parts of the UK

Institute and Faculty of Actuaries

Background to Flood Re

Factors leading to Flood Re’s inception

- Insurers’ focus on re-pricing flood risk + Significant update and “improvement” to flood models and predictive pricing
- Many policyholders in or near flood affected areas see premiums rise to unaffordable levels: red-lining
- Rise in associated complaints and pressure from government on the insurance industry to find a solution
- In 2008 Government and ABI agreed to revise and extend Statement of Principles for one last five-year period

Formation and Coverage … only intended as temporary

- Insurance industry developed 'Flood Re' model with economic consultants Oxera
- Not-for-profit scheme, launched 4 April 2016, financed by household insurers
  - Supersedes Statement of Principles which was extended until Flood Re’s launch
- Premiums linked to council tax bands: caps domestic flood insurance prices
  - Ensuring premiums remain affordable for households in high-risk areas
- Homes built since 2009 not covered, to avoid incentivising homebuilding on high flood risk land
  - No evidence this has been successful

What’s changed since Flood Re’s Inception

Insurance Pricing & Flood Models

- Vastly improved computing power and available data
- Flood models more granular and more predictive
- Pricing techniques more advanced, sophisticated and risk reflective

Government approach to managing flood risk

- Hasn’t kept pace with rising flood risk ... many other higher priority issues to consider …
  - Perhaps “crowded out” or disincentivised by Flood Re?
- Continues to allow homebuilding on flood plains … conflicting incentives, as more homes needed (300k p.a. often quoted)

Wider environment

- Climate change: evidence suggests greater frequency / severity of flooding
  - JBA presentation 11 July 2022 for Lloyd’s of London
  - Much greater recognition as a key worldwide issue

Institute and Faculty of Actuaries

Longer term vision

Reduce risk (and cost) of flood events

- Requires investment, incentives, and coordination of action centrally
  - Every £1 spent on flood defence maintenance estimated equivalent to £7 on new defences (recent JBA report)

Ensure insurance remains affordable for all

- Dependent on:
  a) reducing risk and cost of flood
  b) natural insurance cross-subsidy
  c) Appropriate overarching backstop

Ensure homeowner (and tenant) awareness of affordable flood cover

- 2020 review suggests many homeowners / tenants are unaware affordable cover available
  - Independent Review of Flood Insurance (publishing.service.gov.uk)

Institute and Faculty of Actuaries

Challenge and issues faced

Flood Re cessation in 2039

- Written into Flood Re’s articles
  - No obvious alternative / successor arrangement, which will take many years to devise and implement

Even more homes now at risk on flood plains

- Existence of Flood Re undermines incentive/imperative to address flood risk: >250k homes backed by Flood Re in 2022
- Number of homes increases year on year
- Government unlikely to be able to fund adequate flood defences
  - No central database of PFR assets and their state of repair

Ever increasing model sophistication

- Ever-improving computer power, available data and model granularity results in more risk reflective premiums
  - Only thing between affordable current premiums and unaffordable risk-reflective premiums is Flood Re
- Many different (competing) flood models and maps available

Institute and Faculty of Actuaries

Homeowners Challenges and Issues Post-Flood Re

Challenge/ issue	Details
Affordability challenges and society's most vulnerable	Affordability concerns are likely to arise due to: • **Reduced risk mitigation measures available** to the market as a result of the removal of the reinsurance pool. • A move to more risk-reflective pricing, for instance removal of the Council Tax band subsidy (which is a proxy to insurance affordability levels as opposed to actual flood risk levels). This may **materially affect lower income homeowners**. • As insurers build their data sources over time and computing power increases, a move to more risk-reflective pricing may mean that homeowners with properties with particularly material flood risk may face **unaffordable increases in premiums** (or increases in excesses, as a mechanism to keep costs down). There is the potential risk that **some homeowners may pay premiums that are higher post-Flood Re** compared to before the pool's creation.
Limits of affordability and political risk	• For properties with significant flood risk, the **financial investment required to reduce flood risk levels and costs to a (readily) insurable level may be uneconomic**. This would therefore result in political risk, as policymakers would need to decide on the level of support (if any) provided to those who cannot gain access to insurance cover.

Institute and Faculty of Actuaries

Insurance Challenges and Issues Post-Flood Re

Challenge/ issue	Details
Commercial Factors	• With the absence of Flood Re, there may be **commercial constraints** on insurers' ability to reduce the level of flood risk associated with their portfolios. • With a move to more risk-reflective pricing, some **insurers may struggle to compete efficiently in** the market. For example, following through on theoretically correct increases in premiums may not be commercially viable. With insurers exiting the market, homeowners would have reduced policy choice and remaining insurers would have less incentive to keep rates as low as possible (due to reduced supply) – thus directly **impacting the insurance cycle**.
Changing Risk	• **Climate change** is likely to increase both the frequency and severity of future flood events, **reducing the reliability insurers can place on historic data**. This would have direct consequences in pricing and reserving where several traditional methods used rely on historic data, as well as vendor catastrophe models. More bespoke methods may need to be derived, costing Actuarial departments time and there may be accuracy and auditing concerns. • Without strong new build regulations and standards, **flood risk may actually increase in areas**, which could result in insurers needing to modify their strategy (e.g. in terms of the geography of their portfolios).

Institute and Faculty of Actuaries

Who cares in practice?

Probably very few … until there’s fallout!!

- Not insurers … they’re commercial entities needing to make a profit
- Not ABI, unless government makes it insurers’ problem
- Not FCA or PRA, as their remit is capital and smooth functioning market
- Not government … at least not until it becomes a major source of adverse press

Homeowners care

- But generally only once they’ve been affected

Floor Re cares

- See next slide for actions in progress

PFR (Property Flood Resilience) actions in progress

Build back better

- Up to £10k of funding provided for Flood Resilience following a flood claim
  - E.g. Raising sockets, resilient materials, flood doors/gates, automatically closing airbricks, fitting non-return valves, sumps & pumps
- To improve resilience going forward
- Possibly extend to flood resistance to reduce risk of clams, but …
  - Challenge of how to target funding fairly
  - And how should it be funded … perhaps a loading on flood premiums charged by Flood Re?

PFR (Property Flood Risk) scoring system

- Flood Risk Performance Certificates (similar to Energy Performance ratings)
  - including recommendations for performance improvement
  - to enable homeowners to demonstrate benefits of PFR measures they've invested in
- Aiming to incentivise policyholders to be proactive in reducing risk

Institute and Faculty of Actuaries

Potential solutions

Not many alternatives

- Otherwise they would have been proposed when Flood Re was being considered
  - Consider what’s changed since Flood Re’s inception that might make an alternative approach more viable now
- Requires positive engagement with Government

Regulation

- Update planning regulations to disallow any future home-building on flood plains and other areas of high flood risk
  - Unlikely to receive support
- Update Building Regs to require adequate individual protection and resilience for homes built in high flood risk areas
  - Views on flood risk vary by organisation and through time
  - Likely to make sites economically unviable

Perhaps Flood Re remains the best solution?

Flood Re success so far

- >250k homes under cover … and flood cover affordable for all (nearly … some exclusions exist)

Flood Re improvements in progress

- Build Back Better, PFR scores, etc.

What else?

- Load premiums to fund further improvements
- Partner with government to support flood defence maintenance

Solution must overcome downside of removing incentive to reduce flood risk

- Active levers needed to drive vested Government interest in outcome
- Transition to risk reflective premiums

Institute and Faculty of Actuaries