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# 2039: The Future of Flood Insurance

David Johnson and Philippa King  
IFoA Flood Working Party





hit by flooding

© 16 October 2018

News Wales weather

Live up  
with hom



FACEBOOK/RIVERSIDE CAFE

rm Callum is bringing torrential  
Office warns



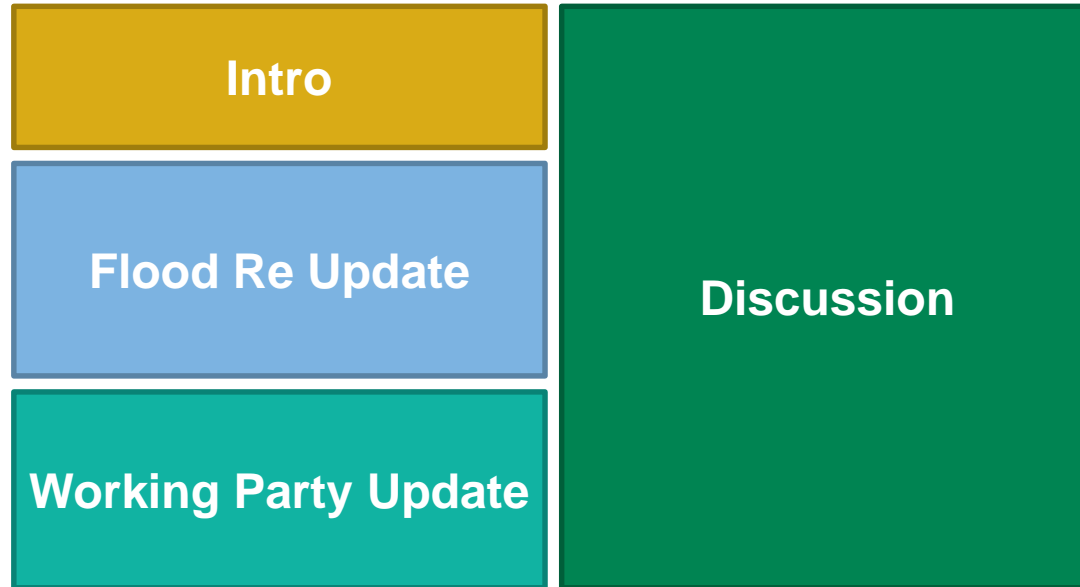
MICHAEL BOLTON

flooded and travel delays  
leaves Wales battered,



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# Agenda



# Two Thousand and Thirty Nine

## 2039

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From Wikipedia, the free encyclopedia

*This article is about the year 2039.*

**2039** (**MMXXXIX**) will be a [common year starting on Saturday](#) of the [Gregorian calendar](#), the 2039th year of the [Common Era](#) (CE) and *[Anno Domini](#)* (AD) designations, the 39th year of the [3rd millennium](#), the 39th year of the [21st century](#), and the 10th and last year of the [2030s](#) decade.

### Predicted and scheduled events [\[ edit \]](#)

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- [June 21](#) – [Annular solar eclipse](#) over the Northern hemisphere.
- [September 2](#) – The [Destroyers for Bases Agreement](#)'s ninety-nine-year rent-free leases granted to the [United States](#) by the [United Kingdom](#) will expire.
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# Two Thousand and Thirty Nine

STURBON, Wednesday, September 4, 1939

**Daily Mirror** SEPT 4  
No. 11,688 **ONE PENNY**  
Registered at the G.P.O. as a Newspaper.

## BRITAIN GETS 50 DESTROYERS: U.S. 8 BASES

### SAILOR DIED AT HIS GUN

BRITAIN is to get fifty American destroyers immediately to reinforce the Royal Navy. In exchange the United States will get ninety-nine-year leases of eight naval and air bases on British possessions in the North and South Atlantic.

This historic defence agreement between the two greatest democracies was announced last night—on the anniversary of the outbreak of Britain's war against Nazi Germany.

The first eight of the destroyers, which are all fully armed and equipped for action, will be ready for delivery to Britain next Friday. They are now at Boston, and will be sent to Canada. British crews who have already been sent over will man the vessels and bring them to Britain.

Two or three further groups of eight will be released at fortnightly intervals, and the remainder will be ready when asked for.

#### Do 30 Knots—Ready for Action

The fifty destroyers are of the 1,200-ton class, can do thirty knots, and carry six guns, A.A. guns, and 21in. torpedo tubes—the also used by the British Navy. They have been recently reconditioned and are in good condition and ready for action.

An expert stated that they are particularly easy to manœuvre, which means that with their depth-charges they will take heavy toll of the U-boats.



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# Two Thousand and Thirty Nine

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# What is Flood Re?

# FLOODRE

Homes built  
after 2009

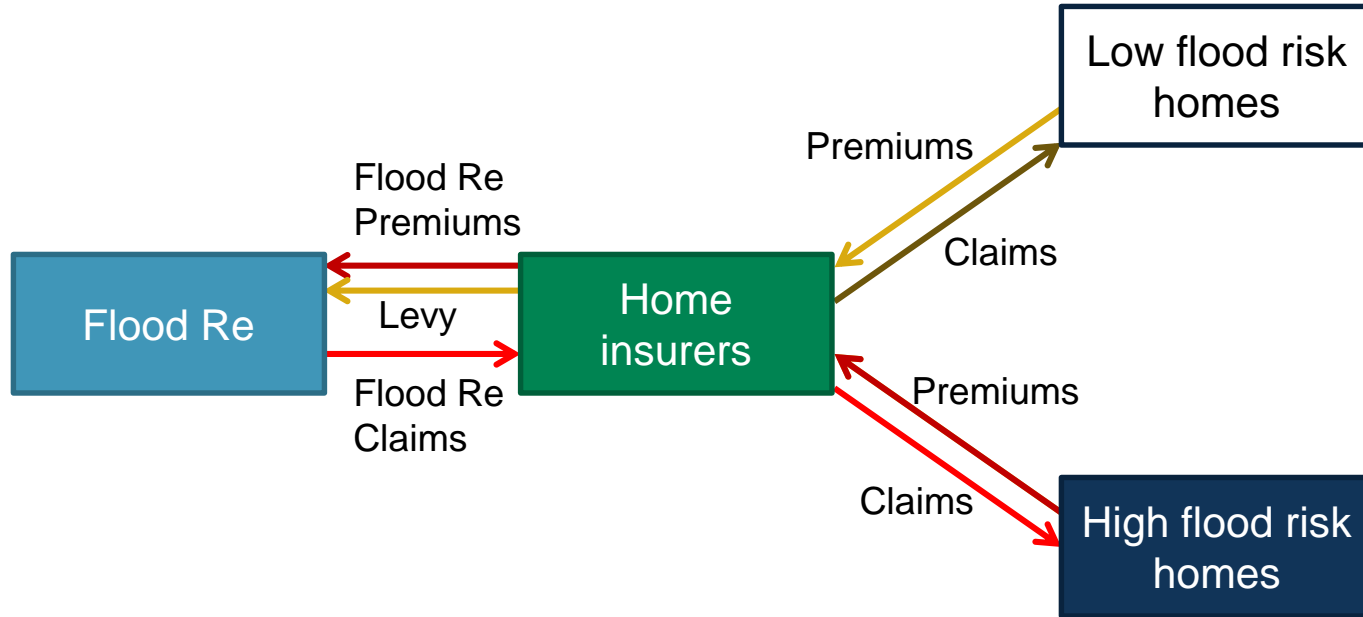
Commercial  
properties

Buy to lets



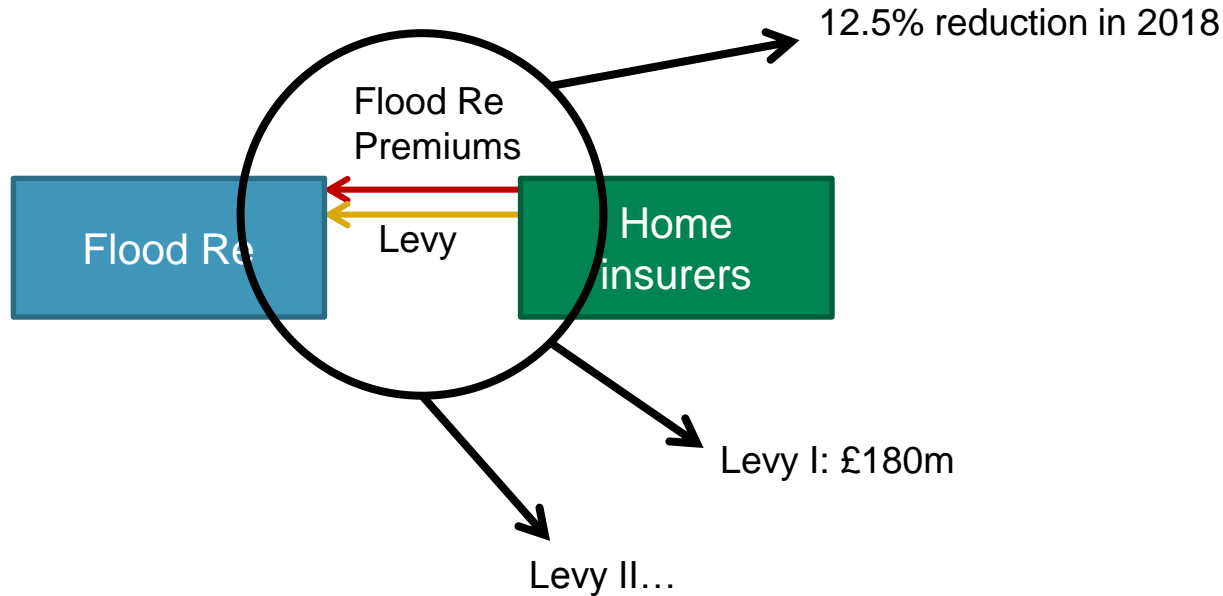
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# How does Flood Re work?

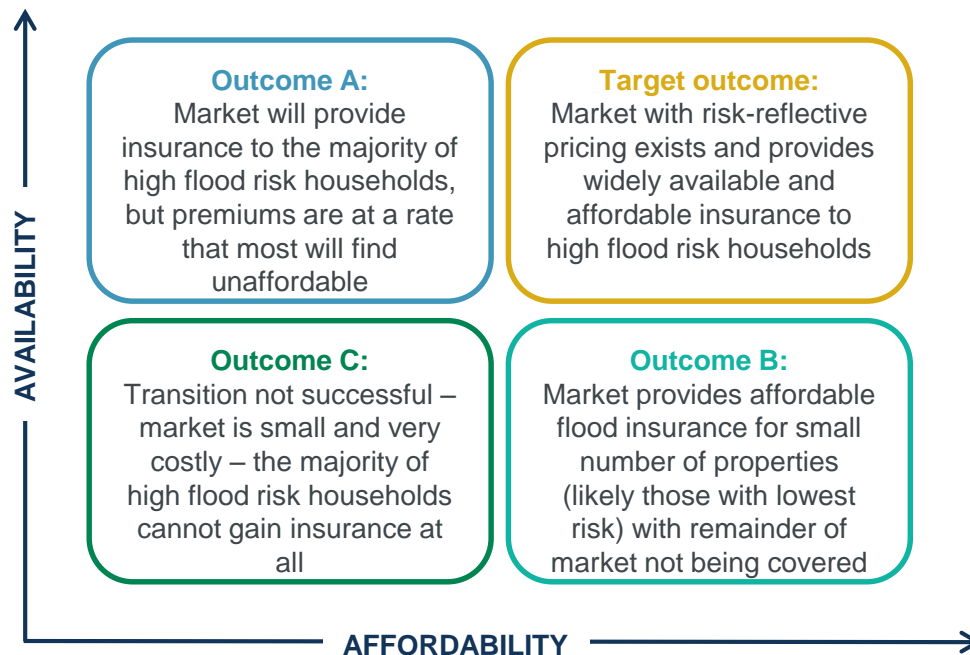




# How does Flood Re work?



# “Risk-reflective” pricing

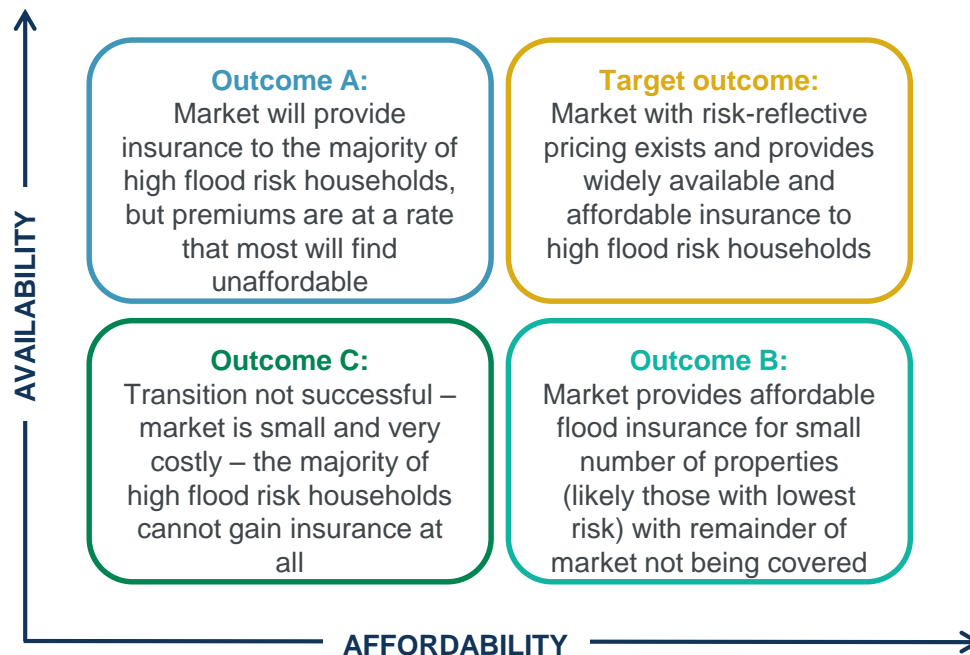


# What does the headline Flood risk profile look like?

- Inherent Flood Risk – increasing
- Flood Risk Appetite - mixed
  - Market: Appetite for lower risk (evidenced by Flood Re 2039 transition)
  - Firms: Happy with the status quo? Buy-in to the 2039 picture? Somewhere in-between?
- Residual Flood Risk – mixed
  - Market: increasing, unless flood risk management keeps pace with inherent risk?
  - Firms: stable, due to availability of Flood re?
- Risk Controls
  - Flood risk management key to reducing market levels of residual risk



# “Risk-reflective” pricing



# “Risk-reflective” pricing



# Flood Re Action

## Action to Date

- Raise awareness
- Increase understanding
- Engage widely
  - Additionality
  - Expertise
  - Impact
  - Sustainability
  - Partnership

## Next Steps

- Continue with current work
- Develop the role of Flood Re
- Increasing resilience through resilient repair
- Building social capital and strengthening communities
- Incentivising action from households



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# What did the working party want to achieve this year...?

- 2017 GIRO

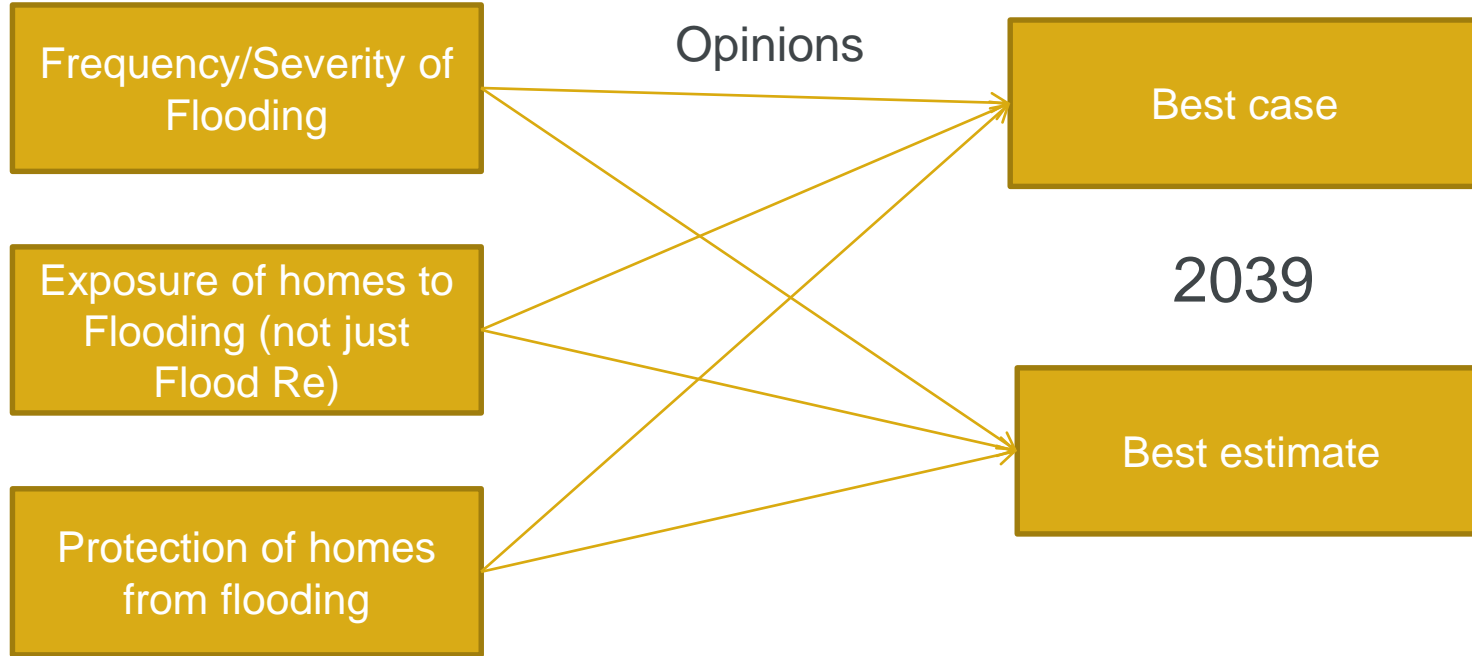
## Potential impacts of autonomous vehicles on the UK insurance sector – Bank of England Quarterly Bulletin 2017 Q1

Chris Wiltshire, Nicholas Silk and Stefan Claus



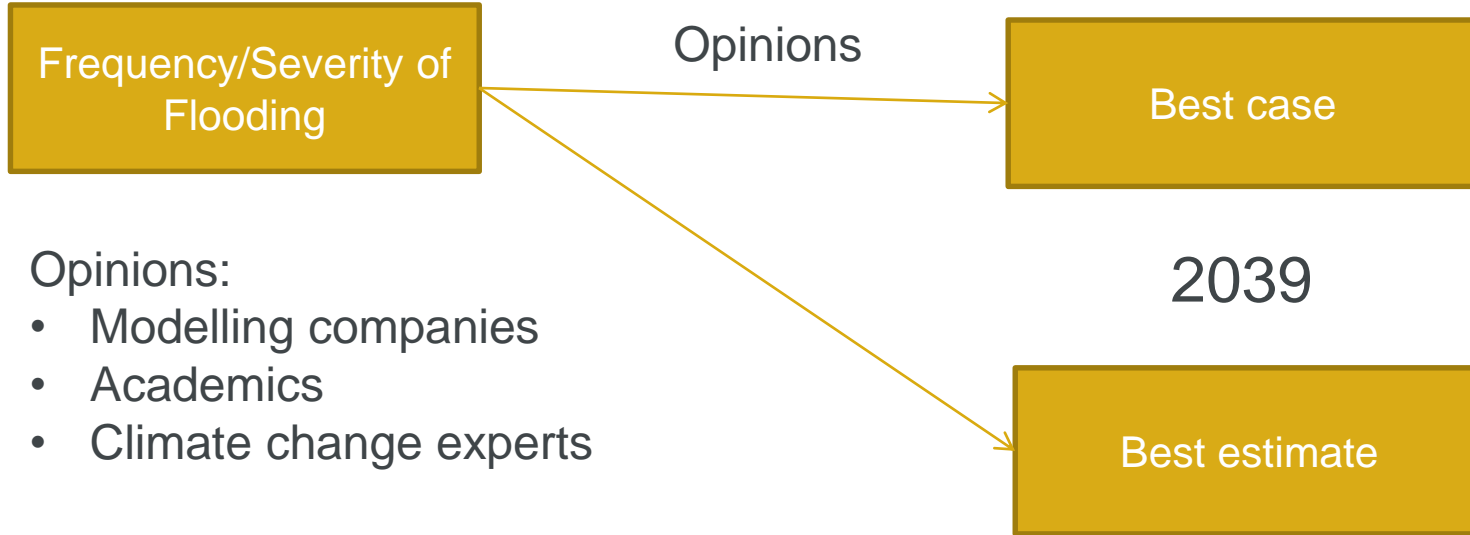
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# The Opinion Model Idea





# The Opinion Model Idea



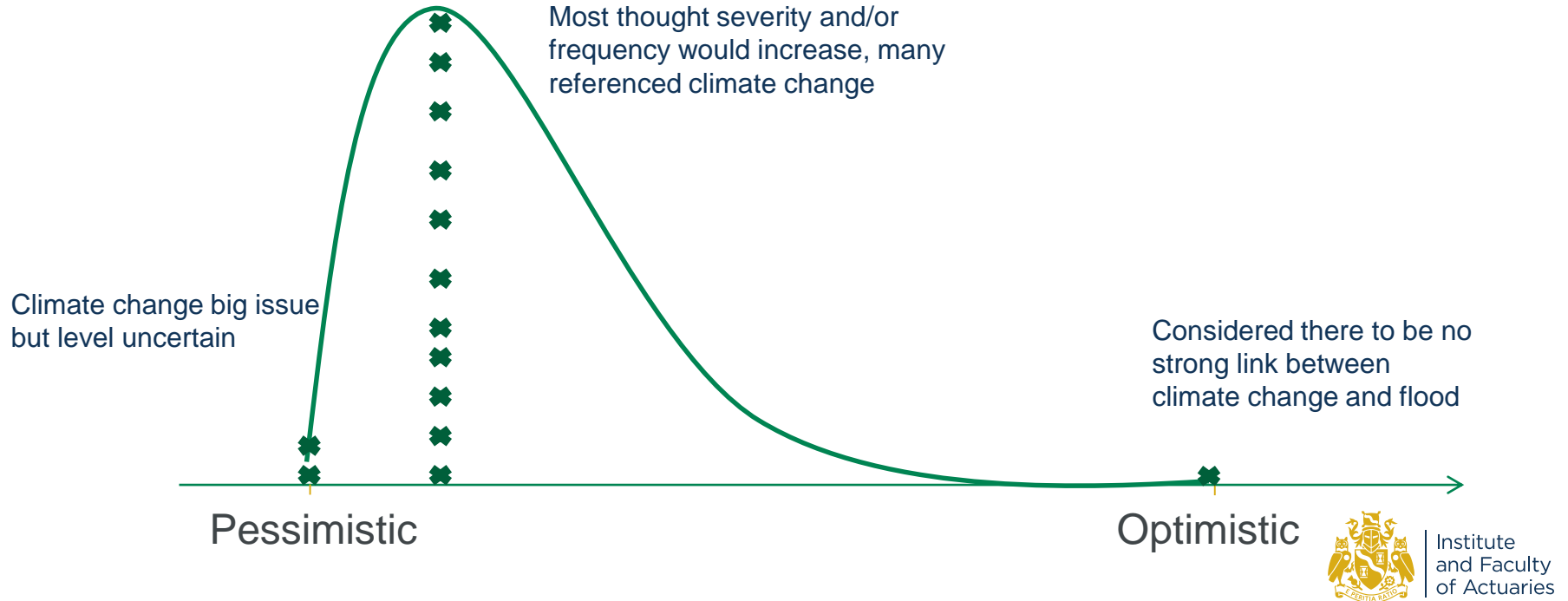
Opinions:

- Modelling companies
- Academics
- Climate change experts



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# Will the flood picture look worse in 2039?



# Key Drivers of Increased Flooding

## Emissions



## Population

## Continued development near water



## Insufficient defences

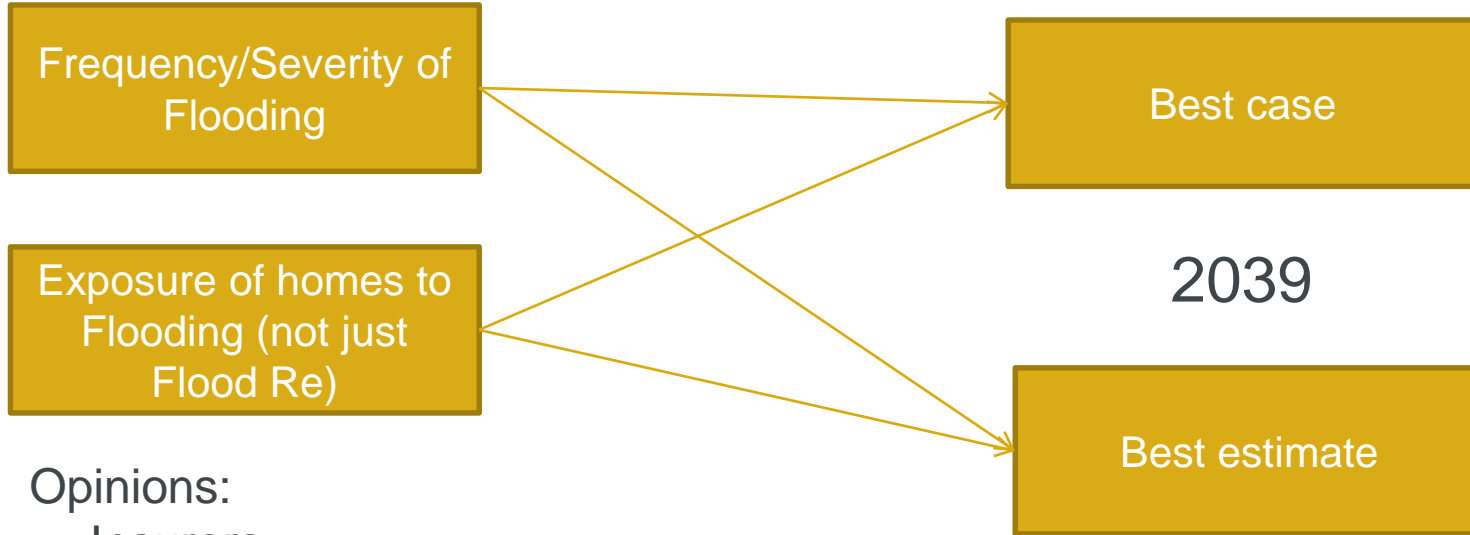


## Removal of Natural Drainage



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# The Opinion Model Idea



Opinions:

- Insurers
- You!

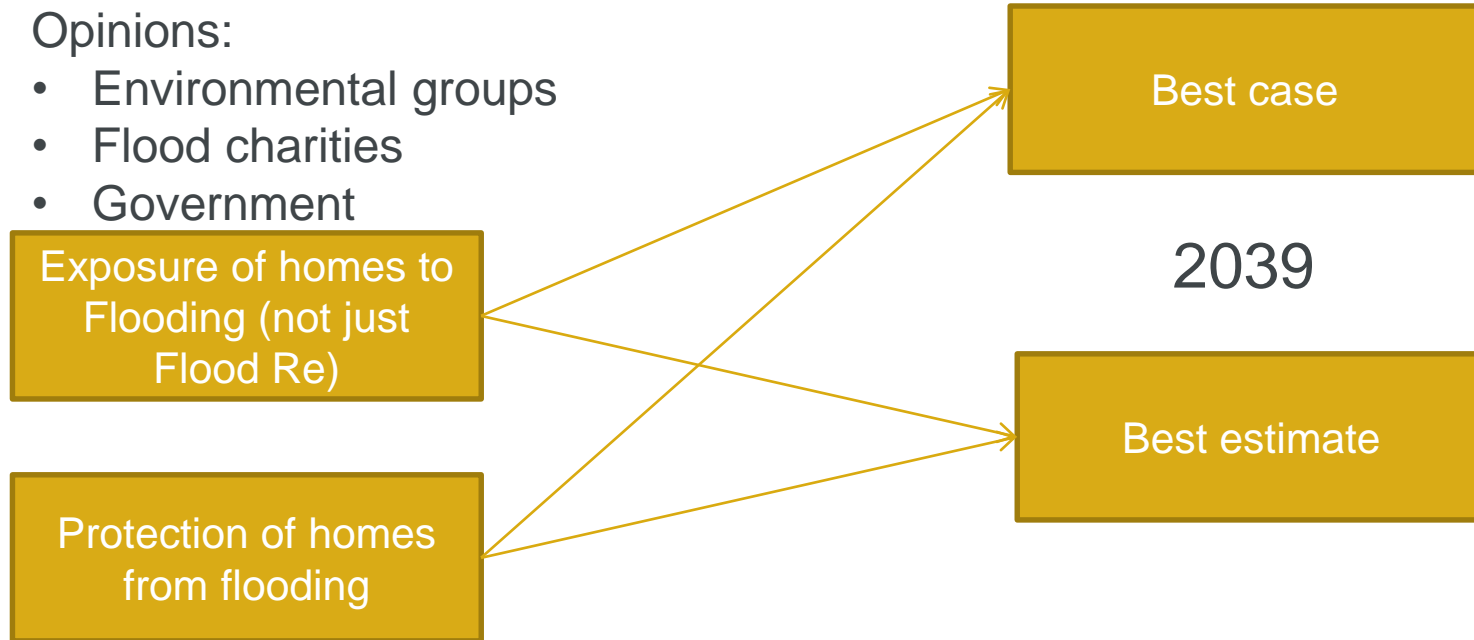


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# The Opinion Model Idea

Opinions:

- Environmental groups
- Flood charities
- Government



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# Flood Defences – Summary of Survey Responses

	~Facts	~Opinions



# Discussion Topics

Affordable risk-reflective pricing by 2039:

- A. Realism of the transition plan
- B. Risks associated with the transition plan
- C. Unknown factors not yet considered



# Flood Re, Insurance Pricing and OFGEM

**FLOODRE**

Securing a future of affordable  
flood insurance

The 2039 return to  
affordable risk  
based flood pricing

Specific focus on  
dual insurance  
pricing

Consumer &  
Regulatory Focus  
on pricing



Treatment of existing  
customers

Understanding firms'  
pricing practices in retail  
general insurance



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# Discussion Topics

Affordable risk-reflective pricing by 2039:

- A. Realism of the transition plan
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# Questions

# Comments

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# Appendix: Questions in survey

The following slides detail the questions in the opinion model survey, as submitted to participants.



# Frequency/Severity Opinions

Aimed at modelling companies, academics, climate change experts

1. How might the frequency and/or severity of severe flooding in the UK change by 2039?
2. Are you able to quantify any likely changes? If so, how large might they be?
3. What are the likely drivers of this change (i.e. what would we have to do to alter the situation)?



# Exposure Opinions

Aimed at insurers (Q4 for developers for comparison)

## 1. Flood Re

- a. What proportion of your residential property portfolio would you want to cede to Flood Re but can't? eg due to construction year, being unable to match council tax data, other.
- b. For a high flood risk household, how much more do you estimate they would be paying on their annual premium if there was no Flood Re?

## 2. Claims fulfilment

- a. What % of flood claims do you estimate are being fulfilled with resilient repairs (defined as a repair which materially reduced future risk of flood damage to the property)?
- b. How do you expect this to change by 2039?



# Exposure Opinions

## 3. Claim values

- a. How do you think resilient repairs are going to affect the cost of flood claims?
- b. What do you expect the rate of inflation on flood claims to be, and how does this compare to the rate of general inflation?

## 4. New homes

- a. Compared to today, what is your view on the number of new houses that will be built in the following time periods: 0-5 years, 5-10 years, 10 years+
- b. Compared to today, what proportion of new homes built will be in areas of high flood risk eg on flood plains?



# Defences Opinions

Aimed at environmental groups, flood charities, government (Q3 to loss adjusters/resistance resilience companies)

## 1. Government spend

- a. By 2039, how much will the government have spent on flood defences (excluding property level grants)?
- b. How much investment in flood defences would you say is needed in the UK by 2039?

## 2. Property Flood Resistance

- a. Assuming nothing changes from the current position, by 2039 what proportion of high risk households will have taken preventative measures to protect their homes from flooding?
- b. What would need to happen to get over 90% of high risk households to do so?



# Defences Opinions

## 3. Property Flood Resilience

- a. By 2039, what proportion of insurers will be offering resistant and resilient repairs as standard?
- b. What would need to happen to increase the current levels to 100%?
- c. What would be the benefits of insurers offering resistance and resilience repairs as standard?





# Contributors

- Many individuals responded to the questionnaire that the working party circulated. The responses have been reviewed and collated but have not yet been fully explored. There is more to do! Some respondents opted for anonymity. Other contributors were happy to be named. We're grateful for all responses. Those happy to be named are listed below:
  - Dr Aliastair Clarke (AIR)
  - Prof David Schultz (University of Manchester)
  - Dr Gregor C Leckebusch (University of Birmingham)
  - Dr Natalie Schaller (CICERO, Oslo)
  - Paul Cobbing (National Flood Forum)
  - Julie Dobson (DEFRA)
  - Jon McGurk (Auto Flood Guard)
  - Chris Short (University of Gloucestershire)
  - Laura Hughes (ABI)
  - Dr Crystal Moore (EA/Met Office)
  - Liz Mitchell (Flood Assist)
  - Sue Morris (Sedgeberrow Flood Group)

