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Flood

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GIRO Flood Working Party

Aim: To be a source of knowledge and expertise within the Actuarial Profession on matters relating to flood with a particular focus on the UK.

- To develop the Profession's position on UK flooding.
- To produce reference material for UK actuaries.
- To improve the understanding of flood risk amongst the industry, government and public.
- To gather data and opinions from the industry to inform the above.
- To work with industry bodies to report on market developments following the expected launch of Flood Re in 2015/6.

Flood insurance

The problem in the UK

- Insurers introduced flood cover as standard into household policies in 1961 at the request of the Government, following the significant flood events of the previous two decades. Prior to this, the Government had managed the financial impact of flooding - providing disaster relief aid.
- The move from public to private coverage was anticipated to allow the Government to channel those funds to flood defences rather than flood relief
- But we didn't all live happily after...

The more recent flood problem

Created by insurers:

- Insurance is about pooling the unknown
- Insurers try to price as accurately as possible to the known
- Risk models have differentiated most perils more and more over the last 25-30 years but flood, by its nature has a more extreme variation than others

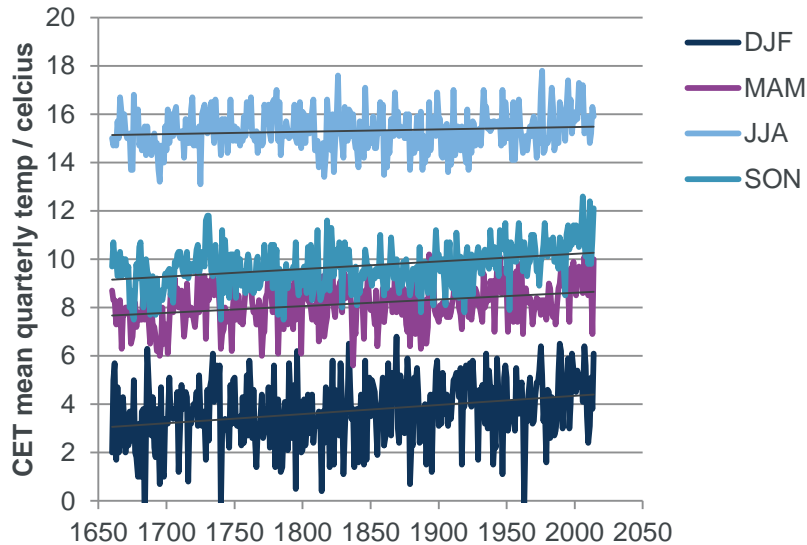
Exacerbated by external factors:

- Climate change
- Population growth – building on flood plains, increased run-off, pressure on infrastructure
- Diminishing resources – pressure on western economic growth challenging economic models and thus government spending

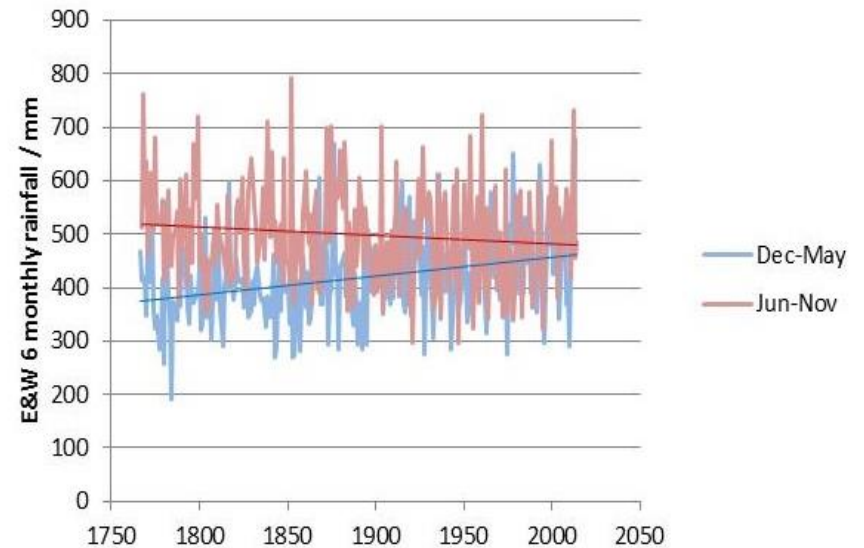
Problem - trends in weather patterns

- 2014 was the UK's warmest ever year and eight of the top ten warmest years have occurred since 2002.
- Five of the UK's top six wettest years have occurred since 2000.
- Many models are based on the average of past years. However, there is some evidence that expectations for 2016 should be greater than the average of past years.

Problem - trends in weather patterns



Trend for a warmer time than recorded in the past – this increase in energy is expected to lead to more storms and greater rainfall as warmer air can carry more moisture.



The impact on rainfall is less clear – winters have been wetter and summers drier over the last 250 years but more recently summers also appear to be wetter again.

Action on availability of flood insurance

Following the floods of October 2000 there was concern about rising prices and withdrawal of cover - discussion between the government and the ABI led to the ABI Moratorium to end 2002:

- Not binding
- Insurers will continue to provide flood cover to existing domestic and small business customers
- There will be no restrictions on pricing, i.e. cover will be available but it may be at a high cost or with a significant excess
- Cover may be declined where residents have refused to accept a flood alleviation project, the building is on a flood plain with no defences or the flood risk has worsened and no flood defence plans are likely to be in place in a reasonable period.

Action on availability of flood insurance

'Millions of homeowners whose properties are on flood plains are facing the alarming possibility that their properties may soon be uninsurable.

An announcement this week by internet insurer, Esure that it will no longer provide cover for homes on flood plains will have been seen as a possible taste of what lies ahead for the 10% of homeowners in the UK who are at serious risk from flooding.

A higher incidence of flooding caused by a combination of climate change and insufficient flood defences has led to increased premiums for many householders in the past 18 months, with some being denied cover altogether.

Around 5 million people in 2 million homes with an estimated value of £215bn live on flood plains.

The Association of British Insurers has warned that the number of people who are denied insurance could increase if the government does not spend more cash on shoring up flood defences. The organisation is calling for an annual government spend of £148m.

"We don't want the number of people who can't get insurance to increase," a spokeswoman for the ABI said. "But we need a cast iron guarantee from the government that they will take decisive action before the end of the industry moratorium in six months' time."

The Guardian 15/06/2002

Action on availability of flood insurance

The Moratorium was replaced by the Statement of Principles on the Provision of Flood Insurance:

- Continue to make flood insurance for domestic properties and small businesses available as a feature of standard household and small business policies if the flood risk is not significant (this is generally defined as no worse than a 1.3% or 1 in 75 annual probability of flooding).
- Continue to offer flood cover to existing domestic property and small business customers at significant flood risk providing the Environment Agency has announced plans and notified the ABI of its intention to reduce the risk for those customers below significant within five years. The commitment to offer cover will extend to the new owner of any applicable property subject to satisfactory information about the new owner.
- It is important to note that:
 - The premiums charged and policy terms will reflect the level of risk presented and are not affected by this commitment.
 - This commitment does not apply to any new property built after 1 January 2009: the ABI encourages developers and customers purchasing a property in a new development to ensure that it is insurable for flooding. The ABI intends to publish guidance on insurance for new developments in autumn 2008.
 - This commitment is subject to annual review that will consider progress in resolving the areas of continuing work and implementing the Government's commitments and to additional review in the event of any significant external shocks, such as a reduction in the availability of flood reinsurance or major changes in the UK insurance market.

Various versions and last renewed in 2008 to apply until 30 June 2013

The issue

- Many flood events in recent years
- Seem to be increasing in frequency and severity
- Insurers have more sophisticated modelling techniques so can price flood risk at an increasingly granular level
- Result is that there is an issue in the UK with the availability and affordability of flood insurance
- Owners of homes at flood risk have been implicitly subsidised by other elements of society for many years but insurance tries to remove cross-subsidy so now a decision is required on whether there should be a subsidy



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Interlude – flood pricing

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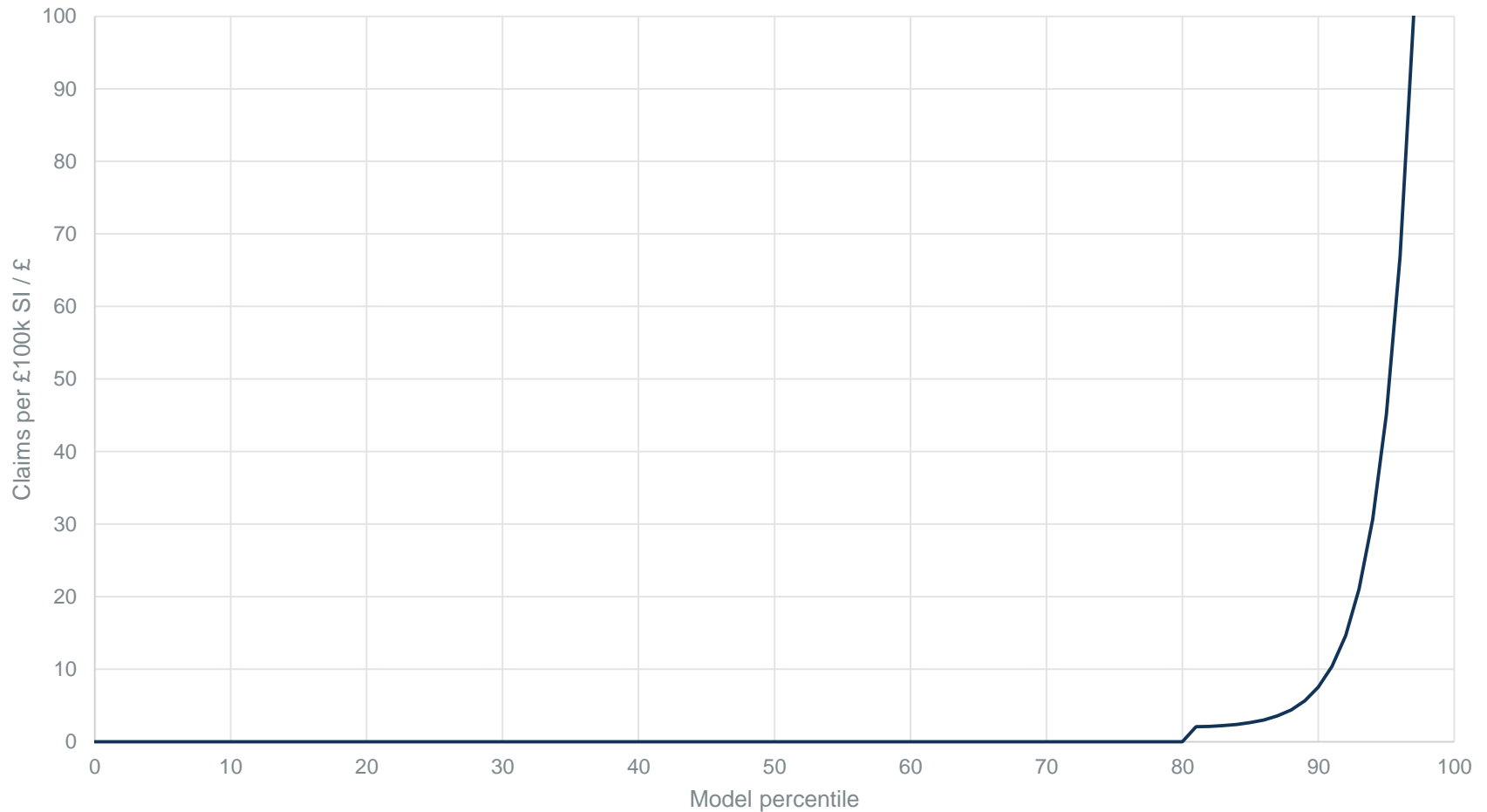
21 October 2015

Pricing approach

- Almost all use a third party model (generally JBA) that gives expected cost as a proportion of SI based on address and property characteristics
- Supplemented with own experience
- Decline some risks based on risk appetite - tighter for new business but potentially high excesses for renewal cases

- A few issues with models though...

Third party model - raw



A few issues

We like the shape but is the total level what we want, is it consistent with capital models?

- Probably scale to make the same but if we scale the back-book and it has a few really bad risks this can give a very low answer for more typical risks – is the capital model too low for insurers with some really bad risks on the books?

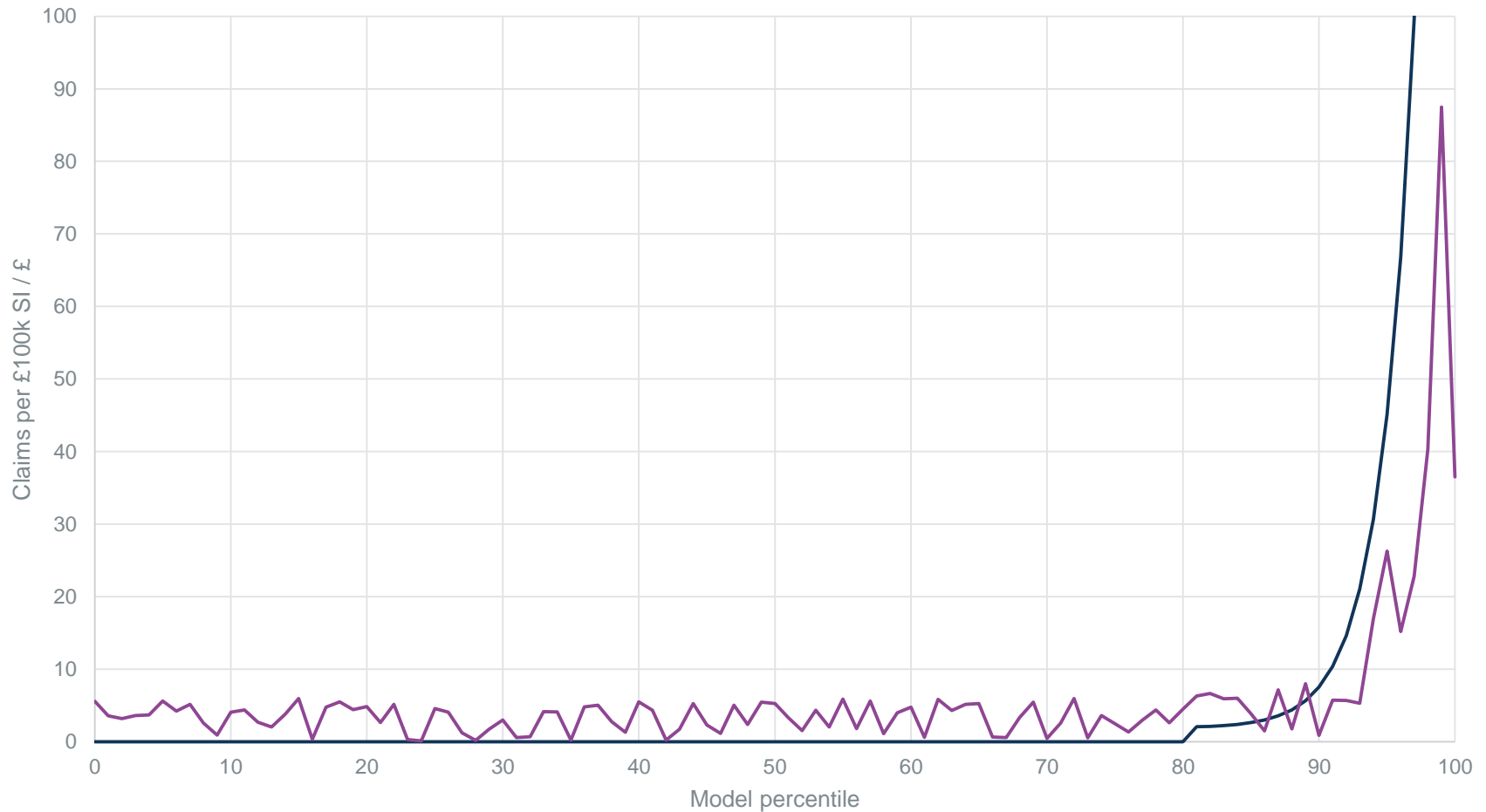
How do we manage the uncertainty / model risk?

- Do we give model full credibility?

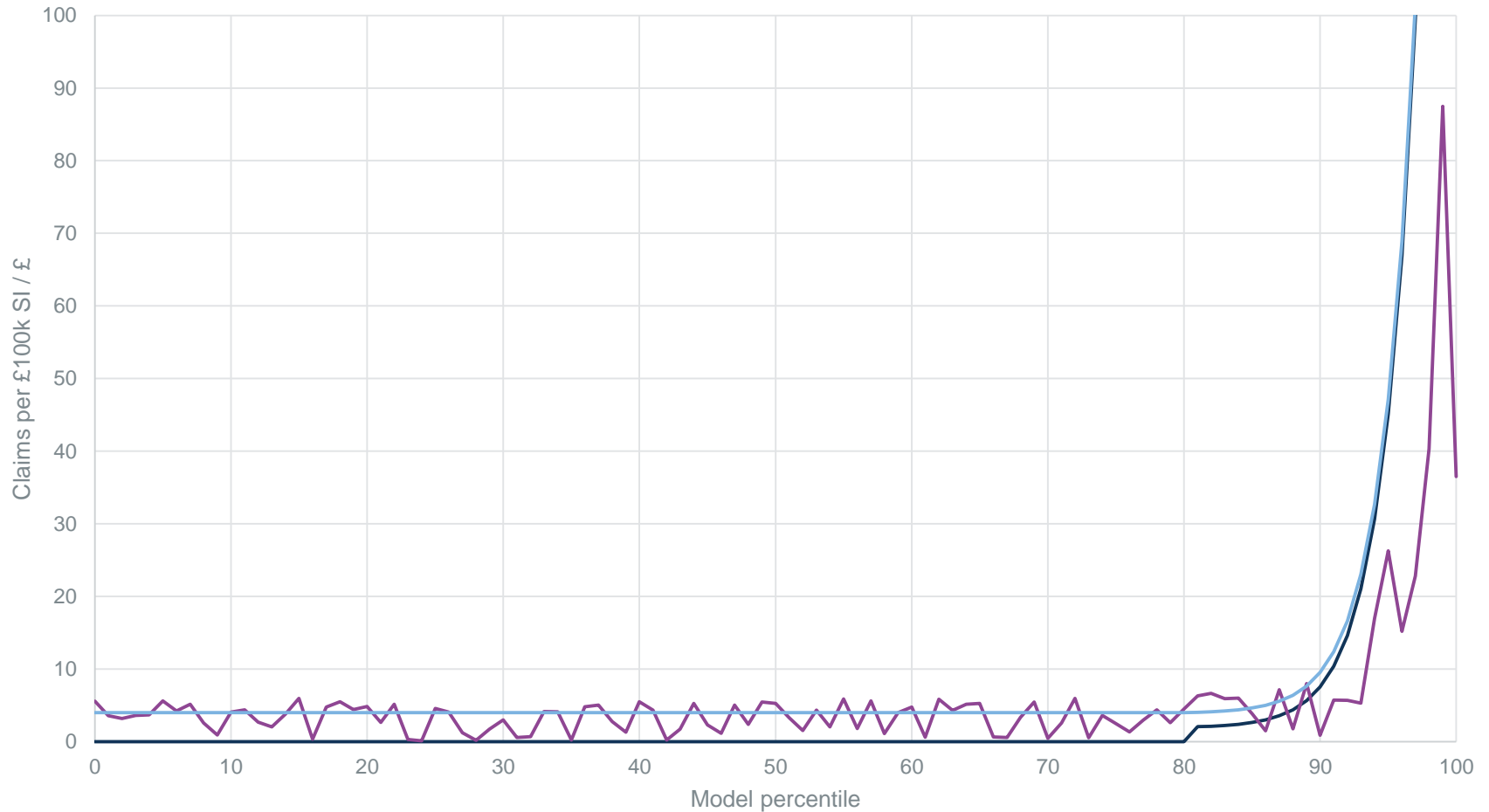
The model may well have a zero answer for much of the country

- We can see this is wrong

Third party model vs experience



Third party model - adjusted



Pricing approach

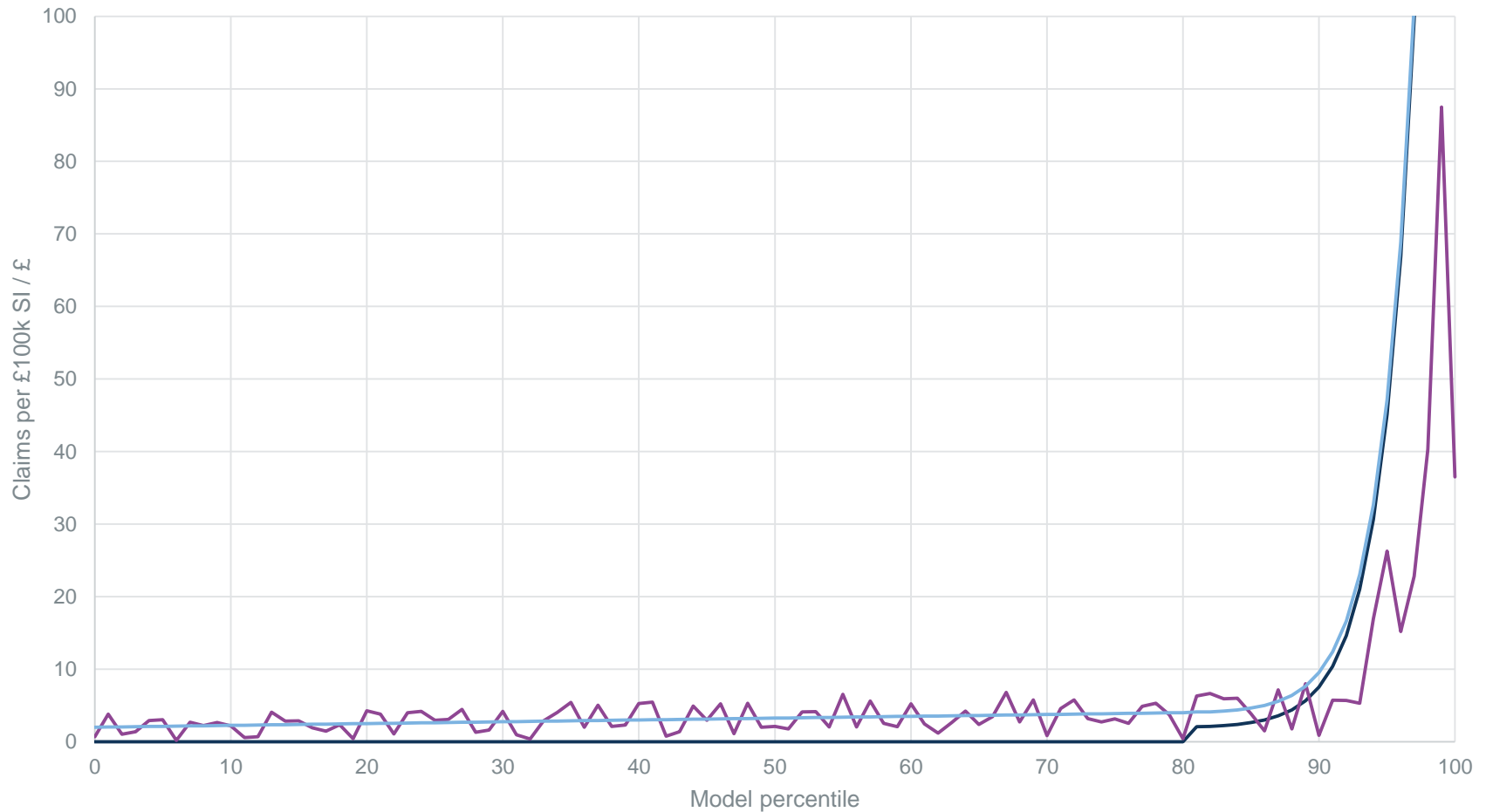
So this is better but we are still failing to discriminate the smaller risks at all

- the difference could be 2% of premium which can be quite significant where margins are tight / elasticity high

A possible approach model providers could take:

- Vary more assumptions such as rate of rainfall, draining, size of zone around each address
- Run a number of scenarios – optimistic to pessimistic
- Assign a probability to each
- Average the results
- Possibly only for the previous zero answers as little lost

Third party model – improved?





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The latest solution

Flood Re

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Flood Re

As the SoP drew to an end there was a lot of discussion between the government and the industry (ABI) on a successor solution

- To address affordability as well as strengthened availability
- A LOT of discussion led to a Moratorium of Understanding and then Flood Re
- General feeling is that
 - Flood Re will work
 - Better than the alternatives (e.g. FIO)
 - Some good features – pre-2009, reviewable, 25 years
 - Some concern at the government winning on not having liability in extreme cases now lessened as the Flood Re limit is well above the 1 in 200 event
 - Disappointed there are not firm commitments on defences / resilience etc.

What is Flood Re?

- A reinsurance arrangement agreed between insurers and the government
- Run by the insurance industry but has a public function
- In legislation through the Water Bill
- Expected to launch in April 2016
- Insurers currently going through an 'on-boarding' process

Aims of Flood Re

- Enable flood cover to be affordable for those households at highest risk of flooding both directly by offering cheap reinsurance and indirectly by increasing competition
- Increase availability and choice of insurers for customers
- Create a transitional measure to allow flood insurance to move towards risk-reflective pricing within 25 years – i.e. a fairly explicit cross-subsidy for a limited time
- Create a level playing field for new entrants and existing insurers in the UK home insurance market

How does Flood Re work?

Homeowners

- Buy insurance as usual and insurer pays out in the event of a claim

Insurers

- Pay premiums to Flood Re for ceded risks – their choice whether to cede
- Pay annual levy regardless
- Flood Re reimburses insurers for any claims made up to a limit in excess of the 1 in 200 year event

Flood Re

- Flood Re itself has outwards reinsurance arrangements

Flood Re – cost to insurers

- Premiums are based on council tax bands of properties

Cover Type	Property Council Tax Band								
		A	B	C	D	E	F	G	H
Wales:	A/B/C		D	E	F	G	H	I	
Buildings only	£132	£132	£148	£168	£199	£260	£334	£800	
Contents only	£78	£78	£98	£108	£131	£148	£206	£400	
Buildings and Contents combined	£210	£210	£246	£276	£330	£408	£540	£1,200	

- Levies are payable by all home insurers
- Levy I is set at £180 million for the first five years
 - It will be shared by insurers proportionally based on GWP
- Levy II may be required if Flood Re needs more funding to meet Solvency II requirements

Flood Re - Strengths

- Provides coverage for consumers – a market for new business
- Very likely to improve price/terms for majority of customers who are subject to high flood risk
- Properties built since 2009 cannot be ceded to Flood Re – this introduces a pressure on planning to fully consider flood risk
- Intention to return to risk reflective premiums within 25 years encourages investment in defences and improvement of housing stock (by owners)
- Some scope for resilient repairs

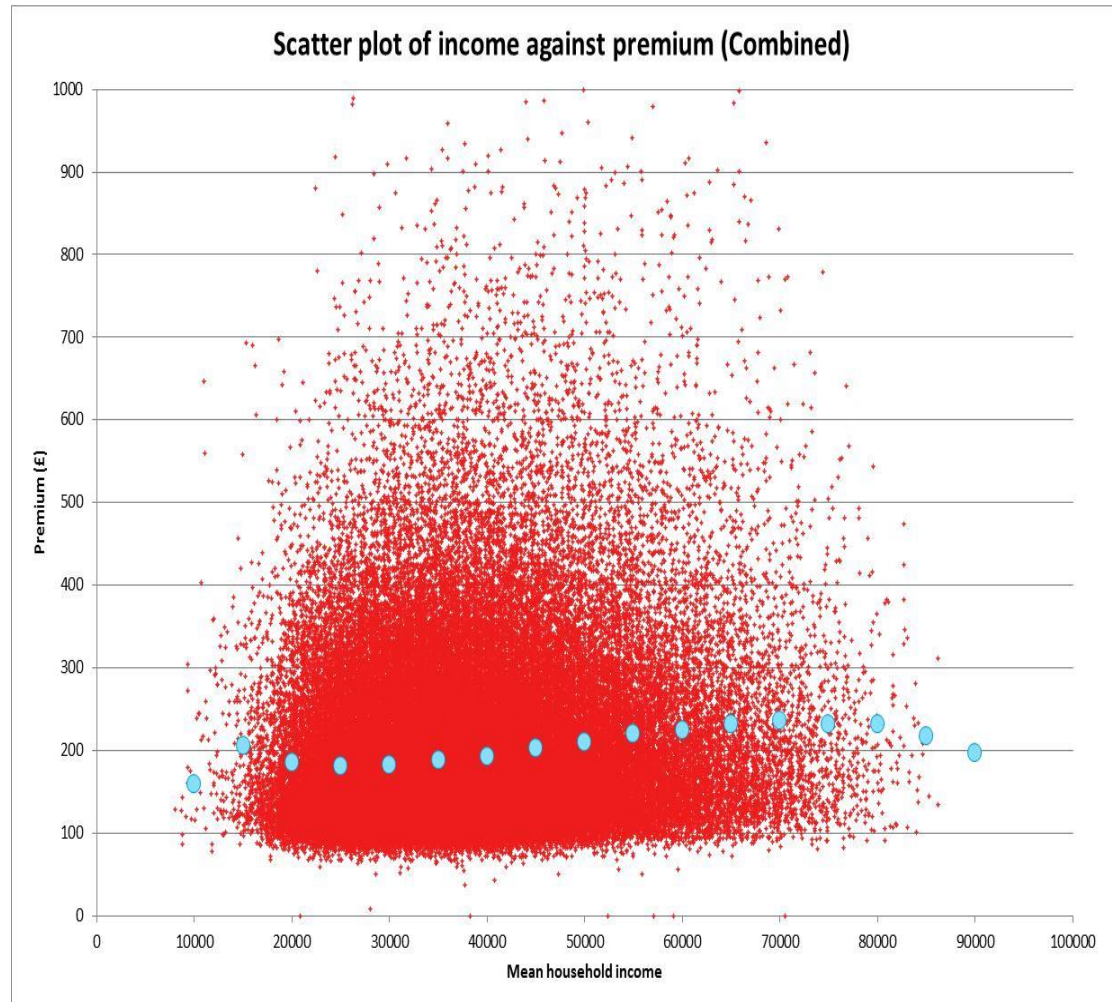
Flood Re – Controversies

- Coverage – Band H/I added
- Windfall benefit for insurers with historically weaker underwriting
- 25 years – and associated political uncertainty
- Levy I timing doesn't match coverage
- Cost, difficulty and delay in inception
- 1 in 200 - a disincentive to underwrite along with the political uncertainty and surge risk
- Who pays and who benefits

Flood Re

Affordability:

- Flood Re is effectively funded by a percentage load on most home insurance premiums
- Household premiums are greater for those with higher incomes but not that much





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What should we do / say?

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Profession's view?

The topics which our engagement has consistently found support for are:

- Build awareness of opportunity to improve housing in 'breather' provided by Flood Re
 - Flood Re lasts 25 years and premiums should rise to risk reflective levels over that time
 - So relatively short window for people to benefit from to ensure they can cope with the implications of risk reflective pricing for them
 - Publicity to date hasn't really addressed this though the launch of Flood Re in April may well improve this – can we help achieve that?

Profession's view

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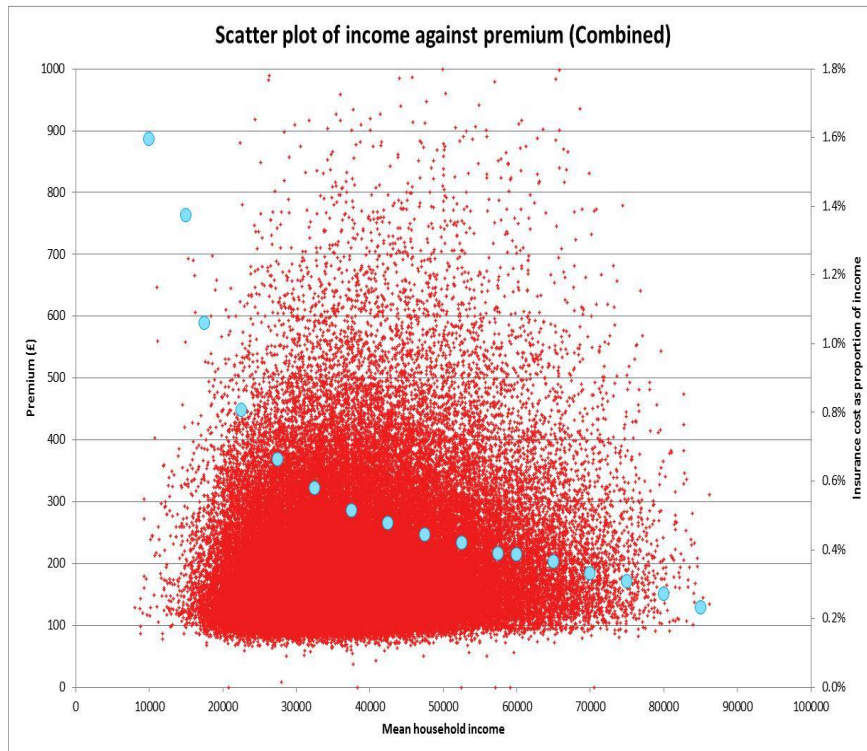
- Greater investment in flood defences and resilience of housing stock
 - Flood Re is likely to do what it was envisaged including some improvements in resilience but there are still many areas of public policy relating to flood that need continued focus and championing
 - we should help Flood Re be a success both by supporting it but also by not taking our focus off the wider issues such as flood defence maintenance and construction, drainage capacity, sustainable housing and population growth

Profession's view

The topics which our engagement has consistently found support for are:

- A wider issue than flood - concern at relatively low level of penetration of flood insurance amongst low income groups – 24% of households already uninsured
 - IPT (rise)
 - Flood Re levy
 - Further regressive costs that tend to discourage the benefits of insurance
- Feels like a real public interest issue but how can this be addressed?

Affordability of insurance more generally



- HH premium is a much greater proportion of income at lower income levels
- Though only a relatively small part of overall expenditure and one of many examples

Next steps

- Actuarial Profession to speak up when it should
- Monitor the impact of Flood Re.
- Flood working party would love to hear from anyone who would like to be involved in the next stage of our work in any way



Questions



Comments

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