TE TAI ŌHANGA
THE TREASURY

Reference: 20220092

21 June 2022

Dear

Thank you for your Official Information Act request, received on 22 March 2022. You requested:

- *Briefing(s) received, or provided by, The Treasury related to the availability and affordability of flood insurance and/or any proposed flood scheme, in 2021 and 2022.*
- *Any analysis prepared on the availability and affordability of flood insurance and/or in connection with any proposed flood scheme, in 2021 and 2022.*
- *Any advice provided by The Treasury to Government on the availability and affordability of flood insurance and/or any proposed flood scheme, in 2021 and 2022.*

Approach to request

On 4 April 2022 we discussed the scope of the request with you and agreed that information regarding out-of-date timelines and emails between officials to develop the analysis were out of scope.

Your request was extended to the 27 June due to the large number of documents and significant industry consultation required before their release.

Information being released

The information in Table 1 is covered by the request and is proposed to be released.

Item	Date	Document Description	Decision
1.	28 May 2021	Update on Australian Cyclone Reinsurance Pool	Release in full
2.	4 August 2021	Treasury Report: Flood insurance risk pricing - T2021/1900	Release in part

1 The Terrace
PO Box 3724
Wellington 6140
New Zealand
tel. +64-4-472-2733

https://treasury.govt.nz

Item	Date	Document Description	Decision
3.	28 September 2021	Treasury Report: Options to support the continued access and affordability of flood insurance for New Zealand's residential property	Release in part
4.	29 September 2021	Short summary of the US National Flood Insurance Program	Release in full
5.	30 September 2021	A3 - Flood insurance affordability and availability	Release in part
6.	13 October 2021	Aide Memoire: Briefing for 15 October Meeting of the Climate Response Ministers Group	Release in part
7.	2 December 2021	Treasury Report: Flood insurance: Insurer feedback and next steps	Release in part
8.	15 December 2021	Aide Memoire: Update - Australian reinsurance pool for cyclones and related flood damage	Release in full
9.	9 February 2022	Aide Memoire T2021/3171: Meeting with IAG	Release in part
10.	15 February 2022	CRMG 16 Feb 2022 Talking Points	Release in part
11.	3 March 2022	Treasury Report T2022-321 Flood insurance next steps	Release in part
12.	14 March 2022	Treasury Report Draft Cabinet paper: Residential flood insurance issues	Release in part
13.	6 April 2022	Cabinet paper - Residential flood insurance issues	Release in part
14.	1 September 2021	A National Flood Risk Assessment of NZ (Aon Report)	Release in part

I have decided to release the relevant parts of the documents listed above, subject to information being withheld under one or more of the following sections of the Official Information Act, as applicable:

- names and contact details of officials, under section 9(2)(g)(ii) – to maintain the effective conduct of public affairs through protecting Ministers, members of government organisations, officers and employees from improper pressure or harassment,
- advice still under consideration, section 9(2)(f)(iv) – to maintain the current constitutional conventions protecting the confidentiality of advice tendered by Ministers and officials,
- certain sensitive advice, under section 9(2)(g)(i) – to maintain the effective conduct of public affairs through the free and frank expression of opinions,
- commercially sensitive information, under section 9(2)(b)(ii) – to protect the commercial position of the person who supplied the information, or who is the subject of the information,
- legally privileged information under 9(2)(h) – to maintain legal professional privilege,
- sensitive information, under section 9(2)(ba)(i) – to protect information which is subject to an obligation of confidence or which any person has been or could be compelled to provide under the authority of any enactment, where the making available of the information would be likely to prejudice the supply of similar information, or information from the same source, and it is in the public interest that such information should continue to be supplied, and
- direct dial phone numbers of officials, under section 9(2)(k) – to reduce the possibility of staff being exposed to phishing and other scams. This is because information released under the OIA may end up in the public domain, for example, on websites including Treasury's own website.

Information to be withheld

There are additional documents covered by your request that I have decided to withhold in full under the following section of the Official Information Act:

- advice still under consideration, section 9(2)(f)(iv) – to maintain the current constitutional conventions protecting the confidentiality of advice tendered by Ministers and officials.

Item	Date	Document Description	Decision
15.	19 October 2021	Email Funding sources for a flood insurance support	Withhold in full under s9(2)(f)(iv)

16.	4 March 2022	Flood scope – discussion	Withhold in full under s9(2)(f)(iv)
17.	21 January 2022	Treasury Report T2022-39 2022 Legislation Programme - Earthquake Commission Portfolio	Withhold in full under s9(2)(f)(iv)

Flood insurance project scope and timing

The current scope and timing of the flood insurance project can be found in the following two documents:

- Cabinet paper: Residential flood insurance issues (Document 13)
- Treasury report: Flood insurance next steps (Document 11).

We note that '*Cabinet Paper: Residential flood insurance issues'* (Document 13) was technically not in scope of this request because it was dated after the request was received. However, the Minister of Finance and the Minister Responsible for the Earthquake Commission have agreed to release the paper to support the Government's consultation on the issues.

Explanatory notes

We would like to provide some explanatory notes on T2021/2377 Treasury Report: Options to support the continued access and affordability of flood insurance for New Zealand's residential property (and corresponding sections in Aon Report):

- Paragraphs 18 & 21: the reference to a technical flood premium identifies the expected loss cost which is a component of insurance premium pricing (see also Table 5 on Page 19 of Aon Report).
- Figure 2, Components of an insurance premium: the ratios in this figure are for illustrative purposes only and do not represent the actual relativities between components of an insurance premium.
- The data for the EQC portfolio since 2021 renewal has also changed significantly with inflation and there have been more ICNZ flood losses which puts the numbers out of date.

In making my decisions on this request, I have considered the public interest considerations in section 9(1) of the Official Information Act.

Please note that this letter (with your personal details removed) and enclosed documents may be published on the Treasury website.

This reply addresses the information you requested. You have the right to ask the Ombudsman to investigate and review my decision.

Yours sincerely

Mary Llewellyn-Fowler
Acting Manager, Financial Markets

OIA 20220092
Information for Release

From: Sam Thornton [TSY]
Sent: Friday, 28 May 2021 12:35 pm
To: ^Parliament: Joanna Carr
Cc: Siobhan Duncan [TSY]; Dasha Leonova [TSY]; Mary Llewellyn-Fowler [TSY]; Helen McDonald [TSY]; Steve Cantwell [TSY]
Subject: Update on Australian Cyclone Reinsurance Pool

Hi Joanna

This week's Upcoming Issues Briefing to MoF and AMoFs includes an update on the Australian Cyclone Reinsurance Pool Taskforce (see below).

We thought the update may be of interest to Minister Clark in his capacity as Minister Responsible for the EQC. Let me know if you have any comments or questions.

Regards
Sam

Topic	Comment
Australian Cyclone Reinsurance Pool Taskforce	On 4 May 2021 the Australian Government announced its intention to establish a reinsurance pool for cyclone and related flood damage, backed by a $10 billion government guarantee. The purpose of the reinsurance pool is to improve the accessibility and affordability of insurance for residential, strata (unit title) and small business properties in cyclone-prone areas. Australia's concerns about the impact of cyclone risk on insurance affordability and availability are comparable to concerns in New Zealand regarding seismic risk and, in the future, climate change-exacerbated extreme weather events. An Australian Treasury-led Taskforce released a consultation document in Australia on 21 May 2021 seeking feedback on the design of the reinsurance pool. The pool is intended to allow insurers to reinsure at a lower cost than in the private reinsurance market, as the pool would forgo a commercial profit margin, and be backed by a government guarantee (meaning the reinsurance pool would not have to charge premiums to cover the solvency capital requirements). The reinsurance pool would be funded by reinsurance premiums paid by insurers and cover the expected long-term cost of insured risks and operating expenses for the pool. The reinsurance pool appears to be broadly similar to the UK's Flood Re scheme, but Flood Re does not have a government guarantee and is partially funded by a levy on all UK property insurers, in addition to the premium paid by insurers for each

Topic	Comment
	property they reinsure with Flood Re. The Taskforce is seeking feedback on the design of the pool, including pricing, whether it is mandatory or voluntary for insurers to participate, how to ensure pass-through of reinsurance cost reductions to private premiums, and how the scheme would encourage adaptation and avoid risk-taking (e.g. by only covering existing properties). We have engaged with the Australian Treasury to seek further information. The announcement follows a multi-year inquiry by the Australian Competition and Consumer Commission into insurance affordability in northern Australia. The inquiry recommended consideration of direct subsidies over other measures if governments want to provide immediate relief to consumers facing acute affordability pressures. The Australian Government also announced $600 million for disaster preparation and mitigation and $40 million for a three-year pilot program to subsidise the cost of cyclone risk mitigation works to improve insurance affordability and access for strata title properties in North Queensland.

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Sam Thornton | Senior Analyst, Financial Markets | Te Tai Ōhanga – The Treasury
Tel: s9(2)(k) | Mob: s 9(2)(g)(ii) | Email: sam.thornton@treasury.govt.nz
Visit us online at https://treasury.govt.nz/ and follow us on Twitter, LinkedIn and Instagram

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Treasury Report: Flood insurance risk pricing

Date:	4 August 2021	**Report No:**	T2021/1900
		File Number:	SH-11-4-3-14-2

Action sought

	Action sought	Deadline
Minister of Finance (Hon Grant Robertson)	**Indicate** whether you would like to meet with the Treasury to discuss flood insurance risk pricing. **Refer** this report to the Minister of Climate Change.	None
Minister Responsible for the Earthquake Commission (Hon Dr David Clark)		

Contact for telephone discussion (if required)

Name	Position	Telephone		1st Contact
Sam Thornton	Senior Analyst, Financial Markets	s9(2)(k)	N/A (mob)	✓
Dasha Leonova	Manager, Financial Markets		s 9(2)(g)(ii)	

Minister's Office actions (if required)

Return the signed report to Treasury.

Refer this report to the Minister of Climate Change.

Note any feedback on the quality of the report

Enclosure: No

Annex 3 withheld in full s9(2)(b)(ii)

Treasury Report: Flood insurance risk pricing

Executive Summary

This report seeks an indication as to whether you would like to discuss flood insurance risk pricing with the Treasury before we report to you in October 2021 on broader insurance issues related to climate change.

Ongoing sea-level rise and extreme weather events exacerbated by climate change are expected to challenge the insurability of assets exposed to those risks.

Work is underway across government to establish a clear position on the role of central government in providing support to individuals, businesses and communities affected by climate change. s9(2)(f)(iv)

Tower Insurance has told us it will begin phasing in more granular flood risk pricing for residential property insurance by the end of 2021. While around 90 percent of New Zealand homes have no exposure to river and pooling flooding, just under five percent have a level of river and pooling flood risk that, if fully risk-priced, equates to a potentially significant flood risk premium of greater than one percent of the sum insured (e.g. a flood risk premium over $5,000 for a home insured for $500,000).

New flood risk models, including the May 2021 flood model released by catastrophe modelling company RMS, have recently improved insurers' ability to granularly price flood risk for individual properties. The new flood models, combined with recent flooding events in New Zealand and internationally, could provide an impetus for insurers to increasingly risk-price flood insurance. Tower's pricing approach could also trigger other insurers to respond by shifting to greater use of flood risk pricing too.

The main way in which the Government directly supports property insurance affordability and availability in New Zealand is through the Earthquake Commission (EQC) scheme. EQC covers residential land damage caused by floods and storms. However, EQC does not cover flood or storm damage to buildings (which is generally covered by private insurers) or erosion damage to land or buildings (as erosion is a gradual rather than an "event" based loss).

Internationally, countries have established a range of intervention models in response to concerns about flood insurance affordability and availability. The UK's scheme, Flood Re, is generally regarded as effective at supporting insurance availability and affordability for flood-prone homes. s9(2)(f)(iv) .

Ideally, we recommend that you consider flood insurance affordability and availability options in the context of climate change adaptation. s9(2)(f)(iv)

As part of the development of the National Adaptation Plan for climate change risks, the Treasury will report to you in October with an update on risks to the insurability of assets due to more granular flood risk pricing, ongoing sea-level rise and extreme weather events, and to seek feedback on the direction of travel.

Recommended Action

We recommend that the Minister of Finance and the Minister Responsible for the Earthquake Commission:

a **note** that new flood models, combined with recent flooding events in New Zealand and internationally, could provide an impetus for insurers to more granularly risk-price flood insurance in the near-term.

b **note** that the Treasury will report to you in October with an update on risks to the insurability of assets due to more granular flood risk pricing and ongoing sea-level rise and extreme weather events, and to seek feedback on the direction of travel.

c **indicate** whether you would like to meet the Treasury prior to the October report noted in recommendation *b* to discuss flood insurance risk pricing, including:

- the impact of more granular flood risk pricing on residential property insurance affordability and availability,
- the UK's insurance intervention Flood Re, and
- the sequencing and ambition of policy work on the Government's response to risks to the insurability of assets due to ongoing sea-level rise and extreme weather events.

Yes/no.

d **refer** this report to the Minister for Climate Change.

Yes/no.

Dasha Leonova
Manager, Financial Markets

Hon Grant Robertson
Minister of Finance

Hon Dr David Clark
Minister Responsible for the Earthquake Commission

Treasury Report: Flood insurance risk pricing

Purpose of Report

1. This report provides information requested by the Minister Responsible for the Earthquake Commission on:

   - potential changes to the price and supply of residential property insurance if insurers adopt more granular risk pricing for river and pooling flood risk; and
   - the UK's insurance intervention Flood Re.

2. This report seeks an indication as to whether you would like to discuss flood insurance risk pricing with the Treasury before we report to you in October 2021 on broader insurance issues related to climate change.

Background

3. The Minister Responsible for the Earthquake Commission met Tower Insurance in May 2021 to discuss Tower's plans to increasingly differentiate residential property insurance premiums based on flood risk (i.e. more granularly risk-price flood insurance). Following that meeting, the Minister Responsible for the Earthquake Commission requested further information from the Treasury on:

   - how many properties could be affected by more granular flood risk pricing and how significantly those properties could be affected;
   - the effectiveness of the UK's flood insurance intervention Flood Re at supporting flood insurance uptake, and any challenges the scheme faces; and
   - whether New Zealand should consider regulations to require insurers to disclose risk factors for individual residential properties used to price insurance.

4. This report covers the first two points above. The Treasury will separately brief the Minister of Finance and the Minister Responsible for the Earthquake Commission on our work to improve consumer information and understanding of insurance and risk.

Flood insurance in New Zealand

Alongside earthquakes, floods are one of New Zealand's top natural hazard perils

5. Insurance Council of New Zealand (ICNZ) data shows that since 1968 flooding has accounted for around half of New Zealand's approximately 200 significant natural disasters. While earthquakes are the cause of New Zealand's top three costliest natural disasters since 1968 in terms of insured losses, damaging floods occur more frequently. Globally, severe weather events (including wind, hail and flooding) are by far the most significant driver of natural catastrophe losses.

6. The Reserve Bank's latest Financial Stability Report noted that the cost of weather-related catastrophes in New Zealand over recent years has been consistently higher than long-term averages. ICNZ reported that 2020 was New Zealand's costliest year

for insured losses from severe weather, which included flooding in Napier (November 2020), the upper North Island (July 2020) and Southland (February 2020).

7. Ongoing sea-level rise and extreme weather events exacerbated by climate change are expected to continue to increase the risk of such natural disasters in New Zealand.

Insurance plays a significant role in managing the impact of flood risk in New Zealand

8. Insurance plays a significant role in managing the financial impact of natural disasters by pooling and transferring the financial risk. Insurance contributes to New Zealand's resilience, reduces uncertainty for property owners and the Crown, and reduces the implicit liability to the Crown (e.g. of providing *ad hoc* financial assistance after an event). However, it is not economically efficient to insure all risks at any cost.

A feature of the New Zealand insurance market is that private flood insurance is readily available and offered as part of the standard "all risks" insurance offering

9. The main way in which government directly supports property insurance markets in New Zealand is through the Earthquake Commission (EQC) scheme. EQC covers residential land damage caused by a flood and storm.[1] However, EQC does not cover flood or storm damage to buildings (which is generally covered by private insurers) or erosion damage to land or buildings (as erosion is a gradual rather than "event" based loss).

10. The Treasury examined the availability of flood insurance in 2020 when advising the Minister Responsible for the Earthquake Commission on whether EQC cover should be extended to flood risk and other perils exacerbated by climate change [T2020/3782 refers].

11. Our advice noted that there was no issue with either the availability or affordability of private flood cover at that time that warranted extending EQC cover to residential buildings for storm and flood damage. The Treasury found that no areas were subject to blanket flood insurance exclusions. However, we are aware that insurers apply higher flood excesses or decline flood cover on an individual property basis. The Treasury recommended, and the Minister Responsible for the Earthquake Commission agreed, not to extend EQC cover to residential buildings for storm and flood damage.

The ubiquity and apparent affordability of flood insurance in New Zealand is unusual internationally and may not last

12. Globally, the costliest natural disasters are weather events, not earthquakes. In response to concerns about insurance unaffordability and limited availability, countries have established a range of intervention models.

The UK's flood insurance intervention Flood Re

13. Flood Re is a UK insurance scheme that ensures the availability of flood insurance for eligible homes, caps flood insurance premiums, and cross-subsidises flood insurance costs between homeowners. The purpose of the scheme is to:

    - promote the affordability and availability of flood insurance for homes with the highest risk of flood (expected to be 1-2 percent of UK homes); and
    - manage the transition of the household flood insurance market to risk-reflective pricing.

[1] Land cover has never been provided by insurers. EQC cover was extended to land following the 1979 Abbotsford landslip.

14. Flood Re is funded by a mix of compulsory levies on all residential property insurers (approximately £10 per insured home), combined with reinsurance premiums on flood-prone homes reinsured with the scheme.

15. Flood Re includes two key features to mitigate the perverse incentives Flood Re creates for development in flood-prone areas and other flood risk adaptation measures (e.g. under-investment in flood protection):

    - Flood Re is only available to homes built before 1 January 2009. New homes face full market pricing and the corresponding incentives to make decisions that manage flood risk appropriately.

    - Flood Re is planned to end by 2039. The end date creates an incentive for continued investment in flood risk reduction by governments and individuals for homes built before 2009. As part of the establishment of Flood Re, the UK government made commitments to increase spending on flood defences.

16. Flood Re is generally regarded as effective at supporting insurance availability and affordability for flood-prone homes. However, the long-term success of the scheme relies on the scheme providing enough time for flood defences to be completed. The scope and scale of public investment required may influence the success of Flood Re and its perceived credibility as a *temporary* intervention. s9(2)(f)(iv) [redacted]

17. Further information on Flood Re is outlined in Annex 1.

Australia's Cyclone Reinsurance Pool Taskforce

18. Over the past decade Australia has held several government inquiries over concerns about the affordability and availability of insurance in cyclone and flood-prone areas in northern Australia.

19. In May 2021, the Australian Federal Government announced the establishment of a reinsurance pool for cyclone and related flood damage to improve the availability and affordability of insurance for properties in cyclone and flood-prone areas. Public consultation on the design of the scheme is currently underway. Further information on the proposed cyclone reinsurance pool in Australia is outlined in Annex 2.

As flood risk information and modelling improves, flood insurance will increasingly be risk-priced more granularly to reflect the risk, putting upward pressure on flood insurance

20. The contrasting treatment of flood risk between New Zealand's and Australia's insurance markets is particularly striking given the two largest general insurers operating in New Zealand both have Australian parents (IAG and Suncorp). Insurers have previously told us that the difference is mainly due to Australia having better flood maps than New Zealand.

21. In May 2021, US-based company RMS released a river flood catastrophe risk model for New Zealand. Catastrophe models are built to assess losses to an insurer at a portfolio level. Catastrophe models are typically used to support regulatory capital requirements such as reinsurance purchasing decisions. Underwriting models draw on many of the same inputs but are built to risk rate at an individual property resolution. As well as a detailed understanding of the peril risk at a site, underwriting models include a more granular understanding of a location's construction and peril mitigation initiatives.

22. The RMS model enables insurers to better assess the flood risk for specific areas and properties, creating upward pressure on insurance premiums for properties subject to higher flood risk. RMS has stated that the model provides a 10-metre resolution grid in urban centres, enabling insurers to differentiate risk (and therefore premiums) between nearby locations with different flood risk. The model uses data obtained from local government and research institutions (e.g. NIWA)[2].

23. CoreLogic, an international property data and analytics company, also offers a New Zealand flood risk model. CoreLogic says its model provides a relative flood risk score for every address and location in New Zealand.

24. Both the RMS and CoreLogic models cover river flooding and pooling from rainfall (pluvial and fluvial flooding). Neither model currently includes coastal flooding.

25. Both models also include flood defences. This can make a major difference to the risk (refer to Box 1 below).

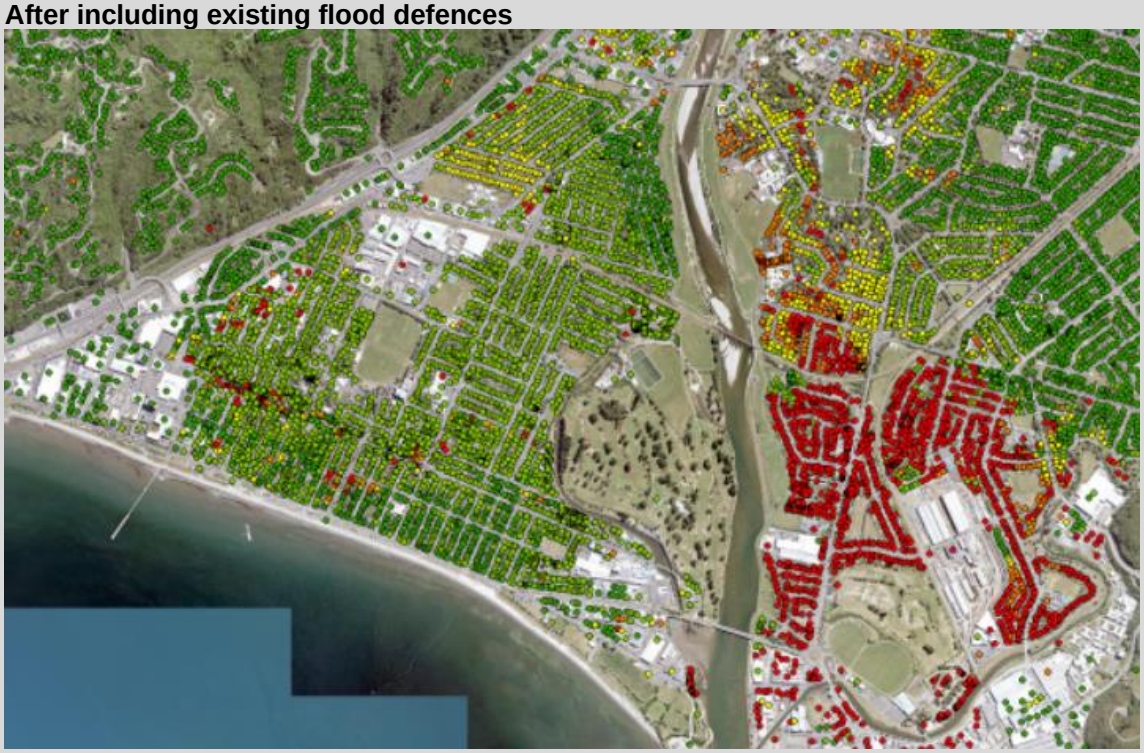
[2] In 2020 the MBIE-administered Endeavour Fund for scientific research awarded $15m over five years to NIWA to produce New Zealand's first consistent national flood map, showing where flooding is likely to occur and identify the vulnerability of assets.

Box 1: CoreLogic New Zealand Flood Map – Impact of flood defence data

Key: Red = relatively higher flood risk. Green = relatively lower flood risk

Before including flood defences

After including existing flood defences



Source: CoreLogic

Just under five percent of New Zealand homes have a level of river and pooling flood risk that may lead to high insurance premiums

26. EQC, via its brokerage relationship with Aon, has provided general information on modelled river and pooling flood risk. Of the two million residential homes in New Zealand, around 90 percent have no exposure to river flooding. This is consistent with indications from Tower that around 90 percent of its customers would see no increase in their premiums from more granular flood risk pricing. The table below indicates the number of homes with different levels of flood risk, and the associated flood risk technical premium. The technical premium is the modelled expected claims cost of insuring the home for flood risk.

Flood risk (river and pooling) for New Zealand homes		
Stylistic relative risk rating	***Definition***	***Proportion total and estimated number of homes***
No flood risk	No flood risk.	89.8 percent (around 1,810,000 homes)
Low flood risk	Flood risk technical premium less than one percent of the sum insured.	5.4 percent (around 109,000 homes)
Medium flood risk	Flood risk technical premium between one percent and two percent of the sum insured. (e.g. a technical flood risk premium between $5,000 and $10,000 for a home insured for $500,000).	2.9 percent (around 58,000 homes)
High flood risk	Flood risk technical premium greater than two percent of the sum insured. (e.g. a flood risk premium over $10,000 for a home insured for $500,000).	1.9 percent (around 38,500 homes)
Source: Aon flood risk model.		

27. s9(2)(b)(ii) and s9(2)(ba)(i)

28. Tower has told us that full flood risk pricing could result in around s9(2)(b)(ii) and s9(2)(ba)(i) percent of their customers facing major affordability challenges (e.g. home insurance premiums over s9(2)(b)(ii) and s9(2)(ba)(i), but we do not have information on how this relates to sum insured).

Insurers may start phasing in greater flood risk pricing by the end of 2021, but the timing and extent is uncertain

29. When setting insurance premiums, insurers consider a wide range of factors alongside the technical risk-based premium, such as their risk tolerance and local risk concentrations, competition dynamics, and business strategy.

30. Tower has told us it will begin phasing in more granular risk-based pricing by the end of 2021. Tower's pricing approach could trigger other insurers to respond by shifting to

more granular flood risk pricing too. Tower was the industry first-mover to adopt greater risk pricing for earthquakes in 2019, which precipitated similar moves by other insurers. The new flood models, combined with recent flooding events in New Zealand and internationally, could create an impetus for insurers to increasing risk-price flood insurance.

31. Tower has indicated that more granular flood risk pricing redistributes the cost of flood risk, rather than increasing the aggregate flood risk across the market. This implies some properties could receive lower premiums if found to have no or low flood risk.

Links to climate change and next steps

Climate change is expected to exacerbate flood risk

32. Climate change is expected to increase the severity and frequency of extreme rainfall events as the water-carrying capacity of the atmosphere increases with temperature, increasing the risk of river and pooling floods. Research has found that a proportion of the costs major flooding events in recent years can be attributed to anthropomorphic climate change.[3]

33. Ongoing sea-level rise will also continue to increase flood risk in coastal areas. It is a near certainty that the sea will rise 20-30 centimetres by 2040. Relatively small increases in the sea-level can drive significant increases in the frequency of coastal flooding.

34. The 2020 National Climate Change Risk Assessment identified risks to the insurability of assets due to ongoing sea-level rise and extreme weather events. The Risk Assessment found that projected changes in the frequency and intensity of natural hazards, such as flood, fire, storm-surge, landslide, hailstorm and tsunami, are causing the insurance industry to reassess their product offerings. In addition to buildings, all types of insurance that currently cover losses from climate change exacerbated risks could be affected (e.g. contents, vehicle, business interruption, private and government-owned infrastructure, crop and forestry).

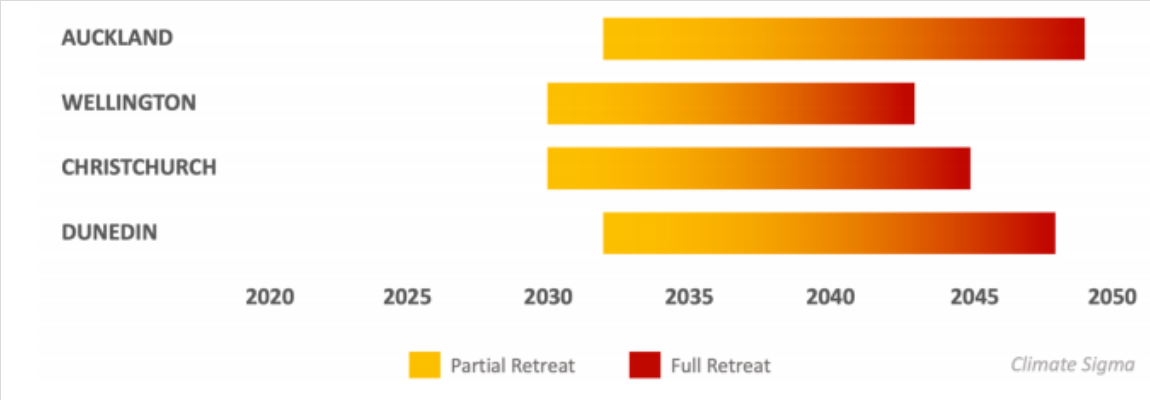
35. The extent of insurers' response to higher or more frequent losses from a climate change exacerbated risks is not known, but could include higher premiums, withdrawal of cover generally, exclusions for specific perils, higher excesses or more limited caps on coverage. While climate change will play out over decades, the timing of the insurers' responses could be sudden, triggered by both improved risk modelling and significant natural disasters. The actions of one insurer, particularly in New Zealand's relatively concentrated property insurance market, could drive others to follow suit to maintain the diversity of their portfolios and avoid insuring a disproportionately large share of high-risk properties.

36. Research[4] published in 2020 as part of the Deep South Science Challenge estimated that homes in Wellington and Christchurch that currently have a one percent probability of coastal inundation are expected to face partial insurance retreat from 2030. Across Auckland, Wellington, Christchurch and Dunedin, full insurance retreat was estimated to occur for at least 10,000 properties by 2050. The research estimates the timing and nature of insurers' responses to increased risk based on anecdotal evidence that:

[3] Frame, D.J., Rosier, S.M., Noy, I. et al. *Climate change attribution and the economic costs of extreme weather events: a study on damages from extreme rainfall and drought*. Climatic Change 162, 781–797 (2020).
[4] Storey, B., Owen, S., Noy, I. & Zammit, C. (2020). Insurance Retreat: Sea level rise and the withdrawal of residential insurance in Aotearoa New Zealand. Report for the Deep South National Science Challenge, December 2020.

- partial insurance retreat (e.g. increased excesses or exclusions) begins to occur when a risk reaches a two percent likelihood of occurring each year (i.e. a two percent annual exceedance probability or AEP), and
- full insurance retreat (e.g. insurers stop offering or renewing insurance cover) occurs by the time a risk reaches a five percent likelihood of occurring each year (i.e. a five percent annual exceedance probability or AEP).

Estimated timing of insurance retreat for homes that currently face a one percent probability of coastal inundation



Source: Insurance Retreat, Sea level rise and the withdrawal of residential insurance in Aotearoa New Zealand (refer footnote 4 for full source citation).

Work is underway to consider the role of central government in supporting climate change adaptation, including options for how the costs of adaptation could be shared

37. Climate change raises policy issues regarding the appropriate role of central government in providing support to affected individuals, businesses and communities (e.g. contributing funding for flood protection or floodplain retreat, supporting insurance affordability and availability).

38. Work is underway across government to establish a clear position and framework on climate change adaptation, including the Ministry for the Environment-led Climate Adaptation Act (CAA) and National Adaptation Plan (NAP).

Climate Adaptation Act

39. The CAA will set out the framework for managed retreat, including how the costs and risks of managed retreat are shared. The CAA is intended to be introduced to Parliament in 2023, with public consultation on the draft CAA alongside consultation on the NAP in early 2022. In the lead up to Cabinet's consideration of the draft CAA consultation material in early 2022:

Please note, this did not occur

- The Ministerial Oversight Group for the Resource Management Act reform is due to consider an overview of the decision making and processes for the proposed CAA at their meeting on 20 October 2021.
- The Ministry for the Environment intends to take a discussion on high-level issues and options for managed retreat (focusing on how the risks and costs of managed retreat should be shared) to the Prime Minister's Climate Response Ministerial Group in November 2021.

National Adaptation Plan

40. The National Adaptation Plan is an all-of-government plan that will set out the actions the Government will take over the next six years to address the risks identified in the

National Climate Change Risk Assessment published in August 2020. The NAP will also include indicators that the Climate Change Commission will use to measure the effectiveness of actions.

41. The NAP is considering a wide range of adaptation options, including funding mechanisms and how the costs of adaptation will be shared. We expect Climate Change Ministers will consider the draft National Adaptation Plan actions in December 2021 with direction on scope being sought in September 2021.

Resource Management Act Reforms

42. The MfE-led Resource Management reforms are developing a National Planning Framework (NPF) under the proposed Natural and Built Environment Act. The NPF would include principles and rules for local government decisions on land use, including how local government should consider conflicts between pressure for development and natural hazard risk.

43. The resource management reforms are the key lever for the management of natural hazard risk. Avoiding and controlling risk through land-use rules supports the long-term affordability and availability of insurance. Most countries spend far more on response and recovery from natural disasters than they do on mitigation of natural hazard risk. NZIER research commissioned by the Department of Internal Affairs (DIA) suggested shifting investment towards mitigating known hazards (particularly flood risk) for which measures can materially reduce expected future costs.

44. DIA has also developed initial principles and rules for flood risk management that could be given effect in the NPF [refer DIA report LG202100790]. For example, local land-use plans could be required to avoid development or intensification in areas with current or future significant flood risk to life or property or establish appropriate flood risk reduction mechanisms, including requiring homes to be rebuilt with higher minimum floor levels post-event (where rebuilding is appropriate).

Ideally, flood insurance affordability options are best considered in the context of climate change adaptation

45. The Government's response to more granular flood risk pricing in the near-term, and potential flood insurance affordability and availability issues, will be difficult to separate from its broader response to flood risk exacerbated by climate change.

46. s9(2)(f)(iv)

47. The different characteristics of flood risk compared to most EQC-covered perils (e.g. earthquakes, volcanic eruptions) mean a different treatment by government may be justified. Compared to earthquakes, there is arguably a stronger role for avoiding and controlling flood risk, and greater costs from relying on insurance, because:

- flood risk may be more amendable to targeted preventative adaptations with broader community benefits (earthquake adaption is less easily targeted because almost all properties in New Zealand face some risk); and
- flood risk affects a more distinct set of properties compared to earthquake risk, creating clearer winners and losers from government support (almost all properties in New Zealand face some seismic risk, but only around ten percent face some flood risk).

48. Close monitoring of the insurance market will allow the Government to keep an eye on the speed and extent of insurer responses to increasing risks due to climate change. The Treasury will shortly brief the Minister of Finance and the Minister Responsible for the Earthquake Commission on proposals for regular monitoring of residential property insurance premiums and penetration. While this work is for the purpose of monitoring the impact of the increase to the EQC cap, it could have the added benefit of enabling more regular and comprehensive monitoring of property insurance pricing and insurance penetration generally.

The Treasury will report to you in October with an update on risks to the insurability of assets due to ongoing sea-level rise and extreme weather events and to seek feedback on the direction

49. As a component of the NAP, the Treasury is working to better understand risks to the insurability of assets due to ongoing sea-level rise and extreme weather events, the nature of the problems created, and the scope of options available to the Government to respond to those problems. This is part of the broader cross-government work, the Treasury, MfE and other agencies are developing advice on the appropriate role of central government providing support to individuals, businesses and communities affected by climate change exacerbated perils. The Government has a range of possible options, such as regulatory actions to avoid or control development or intensification in high risk areas, funding support for adaptation and/or insurance affordability support.

50. The Treasury will report to you in October with an update on risks to the insurability of assets due to more granular flood risk pricing, ongoing sea-level rise and extreme weather events, and to seek feedback on the direction of travel.

51. At this stage we do not anticipate the October advice covering concrete options for new government interventions to support insurance affordability and availability. Instead, we anticipate focusing on areas of further research and policy work, including the nature, timing and impacts of changes to insurability from different perils, the Government's potential objectives for insurance markets, and the plan for developing options to meet those objectives over the six-year timeframe of the NAP.

52. s9(2)(f)(iv) [redacted].

Annex 1: The UK Flood Re insurance scheme

What is Flood Re?

53. Flood Re is a UK insurance scheme that ensures the availability of flood insurance for eligible homes, caps flood insurance premiums, and cross-subsidise flood insurance costs between homeowners. Flood Re is owned and operated by the insurance industry and is funded by a mix of compulsory levies on all residential property insurers, combined with reinsurance premiums on flood-prone homes reinsured with the scheme.

54. The scheme began operating in 2016 in response to a rapid increase in flood risk premiums. The purpose of the scheme is to:

    - promote the affordability and availability of flood insurance for homes with the highest risk of flood (expected to be 1-2 percent of UK homes), and
    - manage the transition of the household flood insurance market to risk-reflective pricing.

How did Flood Re come about?

55. Flood Re began offering reinsurance in 2016 following two years of design and implementation.

56. For decades prior to Flood Re, concerns about flood insurance availability underpinned arrangements between the UK Government and insurers that committed:

    - insurers to continue to offer cover to existing homes, and
    - the UK Government to invest in flood protections.

57. As the arrangements effectively only applied to existing insurers (not new entrants), they were considered unsustainable. In 2008, the UK Government and the Association of British Insurers renewed the arrangements, committing insurers to continue to make flood insurance available to high-risk homes, in return for the UK Government providing flood risk data and effectively managing flood risk. During that time, the UK Government and insurers continued to explore options to assess flood insurance availability and affordability in a more sustainable way.

58. Flood Re was established in legislation in 2014 to replace the arrangements to ensure all relevant insurers paid an equitable share of the cross-subsidy required to maintain affordability, levelling the playfield between the insurers.

How does Flood Re work?

59. Flood Re offers per-home flood reinsurance to insurers. An insurer can choose to reinsure a home's flood risk with Flood Re. The insurer continues to be responsible to the homeowner for claims. Flood Re reimburses insurers for flood claims costs arising from homes reinsured with Flood Re. Flood Re is a private company owned by its member insurers. It is not-for-profit but is commercially run.

How is Flood Re funded?

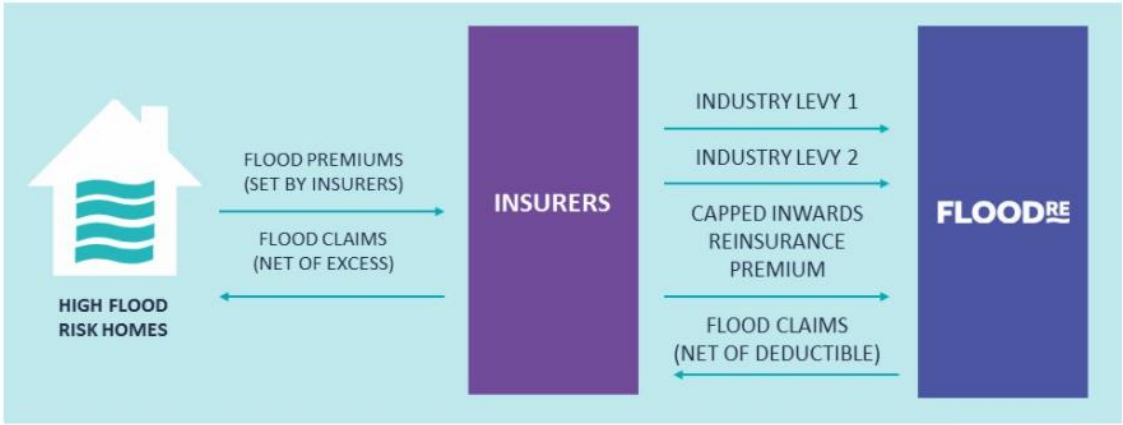
60. Flood Re is funded by:

- a capped reinsurance premium (based on council tax bands) on each home an insurer chooses to reinsure with Flood Re, and
- a levy on all homeowner insurance premiums.

61. The capped reinsurance premium is set below the technical risk-price. It effectively sets a maximum price on home flood insurance given the UK's competitive home insurance market, the capped reinsurance costs provided by Flood Re, allows the insurer to charge lower insurance premiums for flood prone homes.

62. The levy on all homeowner insurance premiums (industry levy 1 in figure 1 below) subsidises the scheme, enabling the capped reinsurance premiums to be set below cost. The levy is approximately £10 per home per year, generating around £180m in annual levy revenue. Overall, the revenue of the scheme (made up of the capped reinsurance premiums and the levy on all homes) is intended to cover its claims costs. Flood Re can apply an additional levy on insurers (industry levy 2) should claims exceed Flood Re's available funds.

Figure 1: Flood Re Funding



Source: World Forum of Catastrophe Programmes

Who is eligible for Flood Re reinsurance?

63. Flood Re is only available to homes built before 1 January 2009. New homes face full market risk-pricing and the corresponding incentives to make decisions that manage flood risk appropriately (e.g. incentives to build in high flood-risk locations).

64. Flood Re is planned to end by 2039. Flood Re's pricing is intended to manage the transition to market prices in 2039. The end date creates an incentive for flood risk reduction by government, and for individuals for homes built before 2009. By 2039, a greater proportion of UK homes are expected to be located in lower flood risk areas and subject to full market risk-pricing, further reducing the transition shock from ending Flood Re.

Has Flood Re supported affordability and availability of flood insurance in the UK?

65. The 2019 quinquennial review of Flood Re found that:

- 80 percent of homes with previous flood claims saw price reductions of more than 50 percent.
- 93 percent of homes with previous flood claims could receive quotes from five or more insurers. Prior to Flood Re, only nine percent could get two or more quotes and none could get five quotes.

66. A UK government survey in 2018 found that those in areas of high flood risk considered household insurance to be more affordable and readily available than it had been in 2015. One percent of owner-occupiers in flood prone areas had no household insurance, compared with three percent in areas not subject to flood risk.

What challenges or risks have been identified since the scheme started?

67. The key challenge for Flood Re relates to the credibility of Flood Re as a *temporary* intervention, and the associated impact of the scheme on flood risks management, including:

- **Risk of reduced incentives for investment in flood protection and adaptation.** Flood Re is intended to support the transition to risk-reflective premiums before the scheme ends in 2039. However, the scheme's success at improving the affordability of flood insurance has reduced the incentives to invest in flood protection and adaptation by homeowners and government. Flood Re itself has no direct role in flood protection and adaptation decisions. Changes to the scheme are currently being considered to improve adaptation incentives, including premium discounts for properties that have taken resilience measures and the ability for Flood Re to make additional payments to support claimants to rebuild more resiliently.
- **Risk of expansion of the scheme to homes built since 1 January 2009 and extension beyond the intended 2039 end-date.** The scope and lifespan of the scheme are intended to mitigate moral hazard risks from developments in flood prone areas. If perceptions of the credibility of the scheme's scope and lifespan erode, homeowners and developers may make decisions on the expectation of future expansion of Flood Re's benefits to flood prone areas. Increasing flood risk due to climate change-induced extreme weather events and sea-level rise are likely to present significant political challenges to the current scope and end-date of the scheme.

Annex 2: Australian cyclone reinsurance pool

68. On 4 May 2021, the Australian Government announced its intention to establish a reinsurance pool for cyclone and related flood damage, backed by a $10 billion government guarantee. The purpose of the reinsurance pool is to improve the accessibility and affordability of insurance for residential, strata (unit title) and small business properties in cyclone-prone areas.

69. The Australian Reinsurance Pool Corporation (ARPC) would administer the pool, which would operate from 1 July 2022. ARPC is a statutory authority which administers Australia's terrorism insurance scheme.

70. An Australian Treasury-led Taskforce released a consultation document in Australia on 21 May 2021 seeking feedback on the design of the reinsurance pool. The pool is intended to allow insurers to reinsure at a lower cost than in the private reinsurance market, as the pool would forgo a commercial profit margin, and be backed by a government guarantee (meaning the reinsurance pool would not have to charge premiums to cover the solvency capital requirements). The reinsurance pool would be funded by reinsurance premiums paid by insurers and cover the expected long-term cost of insured risks and operating expenses for the pool.

71. The reinsurance pool appears to share similarities to the UK's Flood Re scheme, but Flood Re does not have a government guarantee and is partially funded by a levy on all UK property insurers, in addition to the premium paid by insurers for each property they reinsure with Flood Re. Without a general levy or alternative broad-based funding, it is unclear how the scheme would offer significant insurance premium relief to homes with high flood and storm risk.

72. The Taskforce is seeking feedback on the design of the pool, including pricing, whether it is mandatory or voluntary for insurers to participate, how to ensure pass-through of reinsurance cost reductions to private premiums, and how the scheme would encourage adaptation and avoid risk-taking (e.g. by only covering existing properties).

73. The announcement follows a multi-year inquiry by the Australian Competition and Consumer Commission into insurance affordability in northern Australia. The inquiry recommended consideration of direct subsidies over other measures if governments want to provide immediate relief to consumers facing acute affordability pressures.

TE TAI ŌHANGA
THE TREASURY

Treasury Report: Options to support the continued access and affordability of flood insurance for New Zealand's residential property

Date:	28 September 2021	**Report No:**	T2021/2377
		File Number:	SH-11-4-3-14-3

Action sought

	Action sought	Deadline
Minister of Finance (Hon Grant Robertson) **Minister Responsible for the Earthquake Commission** (Hon Dr David Clark)	**Direct** the Treasury engage with insurers to seek further information and report to you by the end of December 2021. **Request** an invitation to the Climate Response Ministers Group meeting in October 2021 to discuss the Government's response to flood insurance issues, and interactions with wider climate policy.	None.

Contact for telephone discussion (if required)

Name	Position	Telephone		1st Contact
Sam Thornton	Senior Analyst, Financial Markets	s9(2)(k)	s 9(2)(g)(ii) (mob)	✓
Siobhan Duncan	Senior Analyst, Financial Markets		N/A	
Dasha Leonova	Manager, Financial Markets,		s 9(2)(g)(ii) (mob)	

Minister's Office actions (if required)

Return the signed report to the Treasury.

Note any feedback on the quality of the report	

Enclosure: No

Treasury Report: Options to support the continued access and affordability of flood insurance for New Zealand's residential property

Executive Summary

You (the Minister Responsible for the Earthquake Commission) have asked Treasury to explore options to support the continued access and affordability of flood insurance for New Zealand's residential property owners.

Tower recently informed you it intends to implement greater risk-based pricing for flooding from mid-October 2021. The impact on affected homeowners and the wider market in the short-term from Tower's approach depends on the response by other insurers, which we do not yet know.

In the longer-term it is likely other insurers will follow Tower's approach as they all have similar information. EQC-commissioned modelling estimates nearly 90,000, or just over 5 percent of properties, have significant exposure to flood hazards. In terms of the number of homes – Auckland City, Christchurch City, Lower Hutt City, Napier City and Palmerston North City are the most exposed to flood hazards.

International evidence suggests there is no consistent insurance response as a result of increased climate change risks, but there is already a significant insurance coverage gap in many countries, which may widen as a result of climate change. Extrapolating from Tower's approximately [redacted] share of the home insurance market, a potential worst case scenario in the shorter-term could mean insurers stop offering cover to [redacted] of the 1.8 million homes in New Zealand and significantly increase premiums for [redacted] We propose to seek further information on the scale and timing of the issues from other insurers.

s9(2)(b)(ii) and s9(2)(ba)(i)

s9(2)(b)(ii) and s9(2)(ba)(i)

s9(2)(b)(ii) and s9(2)(ba)(i)

You have a broad range of options for supporting flood insurance, depending on your relative priority for affordability or availability, the allocation of costs, and how quickly you wish to implement an intervention for homes subject to higher flood risk. [redacted]

We recommend waiting for further information on the scale of the problem (which we will seek from insurers and Aon) before making any decisions on intervention options. [redacted]

In addition, we recommend you ask the Minister for the Environment to include an item on the agenda for the Climate Response Ministers Group meeting in October 2021 to discuss immediate flood insurance issues, interactions with wider climate policy, and potential options for sequencing and integrating any flood insurance response with the wider adaptation policy process. You could also use the Community Resilience Ministers meeting on 27 October 2021 (which you are attending) to raise flood insurance issues. We will work with the Ministry for the Environment (MfE) on a paper for this meeting.

The Government's approach to supporting flood insurance is integral to the Government approach to adaptation funding for climate-change exacerbated risks, particularly policies for pre-emptive managed retreat and investment in infrastructure that will mitigate flood risk. s9(2)(f)(iv)

Recommended Action

We recommend that you:

Context

a **Note** Tower recently informed you it intends to implement greater risk-based pricing for flooding from mid-October 2021, s9(2)(b)(ii) and s9(2)(ba)(i) .

b **Note** the impact on affected homeowners and the wider market in the short-term from Tower's approach depends on the extent of Tower's changes and the response by other insurers, which we do not yet know.

c **Note** Aon modelling suggests 90,000 properties (around five percent) are exposed to high river, surface or coastal flood hazard at the 1 in 20 year return period.

d **Note** the initial estimate of the average annual loss (AAL) from flood hazards is $85 million with evidence of rising costs of flood losses over the past 20 years.

e **Note** that whilst appropriate for an initial assessment of potential costs, the methodology for developing the AAL would need to be refined further for application in formally setting premiums (e.g. very simply, an AAL of $85 million equates to $46 per home, or $340 per flood exposed home).

f **Direct** Treasury, in addition to engaging with the Ministry for the Environment as outlined in recommendation x, to seek further information about the nature and scale of the issue, including (i) whether other insurers (representing the of the market not covered by Tower) may be willing to insure those s9(2)(b)(ii) and s9(2)(ba)(i) , and (ii) whether or when, they also plan to withdraw cover and increase premiums for flood-prone homes they currently insure. s9(2)(b)(ii) and s9(2)(ba)(i)

Yes/no

g **Note** the modelling developed by Aon can be extended for further analysis on the potential distributional impacts of flood hazards across different communities such as income distribution from Census data into the modelling outputs.

h **Note** that we recommend waiting for the information above before making any decisions on options, for example, we are hoping to be able to incorporate additional external data sources such as income distribution from Census data into the modelling outputs.

Government objectives

i **Note** the Government's objectives are to promote residential property insurance that is affordable and available to:

- support New Zealanders' wellbeing by improving financial resilience to recover and rebuild following natural disasters and other events, and
- manage the implicit fiscal risk on the Government to support homeowners post-disaster.

j **Note** that if there were to be widespread withdrawal of insurance cover for floods, or higher insurance premiums that materially reduce flood insurance penetration, this would challenge the objectives above.

k **Agree** that in any response to immediate changes to flood insurance coverage, the Government's approach should also:

- s9(2)(f)(iv)
-
-
-
-

Agree/disagree

Interactions with the Government's wider adaptation policies

l **Note** the Government's approach to supporting flood insurance is integral to the approach to adaptation funding for climate-change exacerbated risks, particularly policies for pre-emptive managed retreat and investment in infrastructure that will mitigate flood risk.

m **Request** an invitation from the Minister of Climate Change to the Climate Response Ministers Group meeting in October 2021 to discuss immediate flood insurance issues, interactions with wider climate policy, and potential options for sequencing and integrating any flood insurance response with the wider adaptation policy process.

Agree/disagree

n **Note** you can also raise the immediate flood insurance issues at the Community Resilience Ministers meeting on 27 October 2021.

Insurance-based interventions to support flood insurance access and affordability

o **Note** you have a range of options depending on your relative priority for affordability or availability, the allocation of costs, and how quickly you wish to implement an intervention.

p **Note** the table below sets out the main options for supporting flood insurance based on the key choices about s9(2)(f)(iv)

s9(2)(f)(iv)

[redacted]

Next steps

v **Note** that you are meeting with Treasury and EQC on 30 September 2021 to discuss the matters in this report and to confirm next steps.

w **Note** that you are announcing an increase to the EQC Cap by 30 September. When you meet with insurers to discuss this increase, you can also signal the Government's interest in flood insurance issues.

x **Direct** Treasury to work with the Ministry for the Environment and other relevant government agencies to prepare a paper for the Climate Response Ministers meeting on flood insurance issues and the interaction with the wider climate adaptation policies (including managed retreat).

Yes/no.

y **Refer** this report to the Minister for the Environment and the Minister of Climate Change.

Yes/no

Dasha Leonova
Manager, Financial Markets

Hon Grant Robertson
Minister of Finance

Hon Dr David Clark
Minister Responsible for the Earthquake Commission

Treasury Report: Options to support the continued access and affordability of flood insurance for New Zealand's residential property

Background and Purpose

1. On 27 August 2021, the Minister Responsible for the Earthquake Commission commissioned the Treasury, working closely with EQC, to explore options to support access and affordability of flood insurance for residential homes in response to greater risk-pricing of flood insurance. The Treasury previously briefed you on flood insurance risk pricing on 4 August 2021 (T2021/1900 refers).

2. We have used information from Aon and Tower and focused on international examples to build our understanding of the problem and potential options. There are limitations to the advice that can be provided at this stage given the timeframe and because we have not engaged with other insurers. We propose to address these gaps in future advice.

Background

Tower intends to significantly raise premiums and cease offering insurance to some higher-risk residential properties…

3. Tower recently informed you it intends to implement greater risk-based pricing for flooding from mid-October 2021, which will result in:

   - around s9(2)(b)(ii) and s9(2)(ba)(i) facing significant premium increases (we do not know how Tower defines significant), and
   - around s9(2)(b)(ii) and s9(2)(ba)(i) no longer being offered cover by Tower (we assume, but are not certain, that Tower is proposing to withdraw insurance cover for all perils). They plan to work with these customers to find cover through a broker with another insurer and may provide cover for a short period while they move insurers.

4. s9(2)(b)(ii) and s9(2)(ba)(i)

…but the implications for the wider market in the short-term are uncertain

5. The scale of the problem is uncertain. A key uncertainty is the response by other insurers, which will determine the scale of the immediate insurability problems for Tower's affected customers (e.g. other insurers may be willing to insure some or all of Towers affected customers). Each insurers' approach will be driven by various factors, including risk appetite, their distribution of exposures, and their business strategy (e.g. desire to build market share).

6. s9(2)(f)(iv)

7. The residential property insurance market is relatively concentrated and dominated by one large insurer, with the effective level of competition further varying by geographical location, which also makes the position more difficult to foresee. Treasury has previously noted a competition study would support a better understanding of the competitiveness of the insurance market (T2019/2933 refers).

8. In the longer-term it is likely that the insurance market will increasingly risk price insurance (including flood risk) as better information becomes available and the underlying risks increase (e.g. due to climate change). The information driving Tower's decisions is available to other insurers. But the path of change and its timing over the longer-term is still highly uncertain. For example, the international evidence demonstrates there is no consistent insurance response, in terms of the speed and triggers, as a result of increased climate change risks, but there is already a significant insurance coverage gap in many countries, which may widen as a result of climate change.

9. We propose to seek further information from insurers on the existence and scale of the problem across the market, including (i) whether other insurers may be willing to provide cover to the s9(2)(b)(ii) and s9(2)(ba)(i) from which Tower is withdrawing, and (ii) whether and when other insurers plan to withdraw cover and increase premiums for homes they currently insure.

Insurers could also reduce the 'quality' of flood insurance or cease to provide cover for other risks as well

10. In addition to ceasing to offer flood coverage at all, insurers could also reduce exposures to flood risk prone properties by reducing the 'quality' of any coverage offered, including increasing excesses, placing upper limits on sum insured, and / or adding exclusions (e.g. no cover for certain types of floods, but still cover others).

11. There is also the possibility that an insurer's decision to withdraw flood cover could also result in withdrawal of all residential insurance cover (i.e. for other risks as well).

Estimates of flood risk to New Zealand homes

Nearly 90,000 properties have significant exposure to flood hazards

12. EQC-commissioned flood modelling from Aon has estimated that around 250,000 residential properties (14.5 percent) are exposed to some form of river, surface water, or coastal flood hazard. This is for a 1 in 10,000 year event, i.e. the probable maximum flood risk.

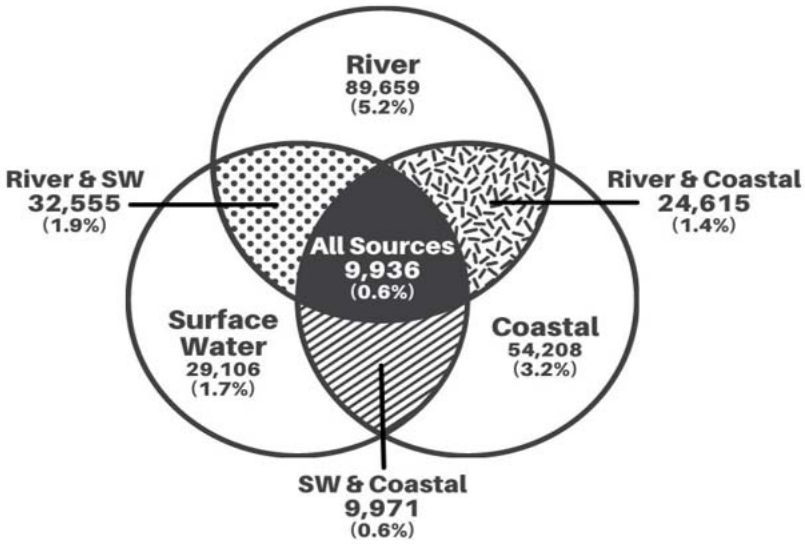
13. When focussing on homes with the highest risk of flooding (i.e. return periods for flooding such as the 1 in 20 year flood risk), Aon estimates nearly 90,000, or just over five percent of properties, are exposed to flood hazards.

Return Period (Years)	Home Exposure Count	Home Exposure (%)	Total Sum Insured	Total Sum Insured (Average)
<= 20	88,647	5.2%	$36,162,721,249	$407,941
<= 50	109,909	6.4%	$44,756,675,815	$407,216
<= 100	137,499	8.0%	$55,596,522,520	$404,341
<= 200	163,924	9.5%	$66,418,278,718	$405,177
<= 500	185,324	10.8%	$75,128,699,716	$405,391
<= 1,000	201,811	11.7%	$82,100,222,810	$406,817
<= 10,000	250,050	14.5%	$101,999,485,278	$407,916
Total National	***1,719,774***		***$751,450,300,974***	***$436,947***

Source: Aon, A National Flood Risk Assessment of New Zealand, September 2021

14. Aon has also provided some analysis on each type of flood risk (river, coastal and surface water). The number of homes exposed to each type of flood risk at different return periods is set out in Annex 1. River flooding is the most common flood hazard with just over 156,000 properties exposed. As the figure below indicates, around 107,000 properties are exposed to two or more risks with just under 10,000 exposed to all three flooding hazards.

Figure 1: Flood Risk Count by Peril



Source: Aon, A National Flood Risk Assessment of New Zealand, September 2021

15. In terms of regions within New Zealand most exposed to flooding hazards, this can be assessed in terms of absolute numbers or normalised per 100,000 of population with the following results:

    - In absolute terms – Auckland City, Christchurch City, Lower Hutt City, Napier City and Palmerston North City territorial authorities;
    - Per 100,000 people – Buller District, Thames-Coromandel District, Wairoa District, Central Otago District and Gore District territorial authorities.

16. Aon indicated, when accounting for population, the flood risk in New Zealand is most severe in rural areas.

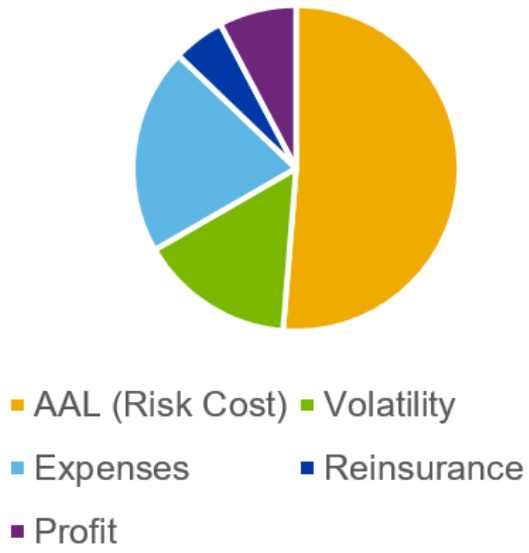
Estimating technical flood risk premiums

17. Initial estimates of the average annual loss (AAL) arising from flood hazards is $85 million per year, based on the last 20 years of ICNZ published figures for river flood and Aon estimates for riverine, surface water, and coastal inundation. For comparison, if EQC cover was uncapped, EQC's annual expected cost of earthquake claims is estimated at around $180 million per year (based on 2019 modelling).

18. The AAL is a core component in the pricing of insurance (refer to Figure 2 below) and as such, we will need to undertake further sensitivity analysis of this[1]. In addition, there is evidence from the ICNZ published figures that the annual cost of flood hazards has risen significantly over the past 20 years, including in the last five years.

19. The AAL is a long-run average. Losses in any one year can be higher than the average annual loss. For example, ICNZ's provisional weather-related domestic insurance losses (e.g. home and contents) were around $100 million for the 16-19 July 2021 severe weather and flooding that impacted the West Coast, Upper South Island, Wellington and North Island.

Figure 2: Components of an insurance premium (Source: Aon)



[1] Reinsurance costs may be greater or lesser, depending on an insurer's decisions to reinsure (e.g. whether they carry some risk on their balance sheet).

20. Using the estimated AAL of $85 million and allocating it across homes based on flood risk, Aon can estimate the per-home technical flood risk premium, as set out in Figure 3 below. The chart does not include the estimated 150,000 homes exposed to flooding with a technical flood premium below $100.

21. Aon found 67 percent of flood exposed risks are expected to have a technical flood premium below $250 per year. Homes with high technical flood premiums above $5,000 per year appear to include a high proportion of high-value homes.

22. We recommend caution in interpreting these results as it is based on average flood heights above ground-level. An individual home's flood risk will be significantly affected by floor height (i.e. the land on which a home is located may be exposed to flood risk, but a high floor level may prevent significant flood damage).

s9(2)(b)(ii) and s9(2)(ba)(i)

23. The modelling developed by Aon can be extended for further analysis on the potential distributional impacts of flood hazards across different communities. For example, should you wish to proceed with further advice on specific options, we are hoping to be able to incorporate additional external data sources such as Census data into the modelling outputs.

Government objectives for flood insurance

24. Drawing on the objectives set when considering the EQC cap, the Government's general objective is to promote home insurance affordability and availability to:

- support New Zealanders' wellbeing by improving financial resilience to recover and rebuild following natural disasters and other events, and
- manage the implicit fiscal risk on the Government to support homeowners post-disaster.

25. A change in approach by insurers could lead to a widespread reduction in flood risks covered by insurance, which in the **short-term** may result in:

    - a reduction in society's resilience and ability to recover from floods (which is a particular issue in the shorter-term before changes can be made to the wider approach to manging the risk).
    - increased implicit fiscal risk of ad hoc interventions by the Government to protect uninsured or underinsured property owners after flooding events.

26. In the **long-term**, however, insurance pricing and availability that reflects risk can improve incentives for risk reduction, thereby supporting society's resilience, minimising implicit fiscal risks and improving overall wellbeing.

27. In the context of the immediate changes to flood insurance coverage, we recommend the Government's approach to natural disaster insurance should also seek to:

    - s9(2)(f)(iv)
    -
    -
    -
    -

The Government's wider climate adaptation response is integral to any government support for flood insurance

28. The Government's approach to supporting flood insurance is integral to the approach to adaptation funding for climate-change exacerbated risks, particularly policies for pre-emptive managed retreat and investment in infrastructure that will mitigate flood risk.

29. The Ministry for the Environment is developing a Climate Adaptation Act (CAA) that will better enable pre-emptive managed retreat. Changes to insurance policy settings would have major implications for how the Government's CAA is designed. While this work is in the relatively early stages of policy development, s9(2)(f)(iv) [redacted]

30. Natural hazard insurance is not an adaptation measure – it only spreads the financial cost of uncertain natural hazards over time[2]. Insurance price signals are likely a lever for promoting retreat away from higher risk areas.

31. s9(2)(f)(iv) [redacted]

32. Before taking decisions on flood insurance interventions, we recommend you engage in the Climate Change Ministers Group to discuss how the Government's response to any emerging flood insurance issues will be sequenced with and integrated into the wider climate adaptation policies. We recommend you seek to include an item on the agenda for the Climate Response Ministers Group meeting in October 2021 which could outline the immediate flood insurance issues, interactions with wider climate policy, and potential options for sequencing and integrating any flood insurance response with the wider adaptation policy process. You could also use the Community Resilience Ministers meeting on 27 October 2021 (which you are attending) to raise flood insurance issues.

33. The current issues for deciding the future approach to flood risk management in Westport is a live example of the future climate change exacerbated risks communities and governments will need to grapple with. s9(2)(b)(ii) and s9(2)(ba)(i) [redacted]

34. Significant flooding events show communities face difficult questions after events about how and whether to rebuild their homes. The availability and affordability of insurance will affect how people make these decisions.

Broad options to support the availability and affordability of flood insurance

Key options

35. The table below sets out the main options for supporting flood insurance based on the key choices about s9(2)(f)(iv) [redacted]

[2] The more flood risk is avoided and controlled, the lower the residual risk to be insured, supporting lower premiums and availability.

s9(2)(f)(iv)

[redacted]

s9(2)(f)(iv)

44. s9(2)(h) and s9(2)(f)(iv)

[3] s9(2)(f)(iv)

[4] s9(2)(h) and s9(2)(f)(iv)

s9(2)(f)(iv)

[redacted]

s9(2)(f)(iv)

[redacted]

61. s9(2)(f)(iv)

Next Steps

62. We understand you are likely to meet with insurers following your announcement of the increase to the EQC Cap. At these meetings you can also ask insurers about their recent experience with flood claims, whether they are considering any changes to their treatment of flood risk and their views on any policy options. We can provide talking points and suggested questions prior to these meetings.

63. Following that meeting, we propose to engage with insurers to seek specific information on:

Questions	***Why it matters***
The scale of the problem, including:	
• whether Tower is completely withdrawing cover s9(2)(b)(ii) and s9(2)(ba)(i) or only excluding flood cover.	If Tower is completely withdrawing cover, s9(2)(f)(iv)
• whether other insurers (representing the s9(2)(b)(ii) and s9(2)(ba)(i) of the market not covered by Tower) will insure the s9(2)(b)(ii) and s9(2)(ba)(i) that have their insurance withdrawn.	If other insurers cover the homes, the Government will have more time to consider solutions to any future flood insurance availability problems. s9(2)(b)(ii) and s9(2)(ba)(i)
• whether and when other insurers plan to withdraw flood cover or increase premiums for homes they insure.	As above, if other insurers are not planning to change their approach to pricing and cover for flood insurance in the short-term, the Government will have more time to consider its response.

s9(2)(f)(iv)

	s9(2)(f)(iv)

64. We will report to you by the end of December on our findings.

65. If you agree to include flood insurance matters on the agenda for the October 2021 Climate Response Ministers meeting, we will work with the Ministry for the Environment on a paper that outlines the immediate flood insurance issues, interactions with wider climate policy, and potential options for sequencing and integrating any flood insurance response with the wider adaptation policy process.

Annex 1 withheld in full s9(2)(b)(ii) and s9(2)(ba)(i)

Annex 2 withheld in full s9(2)(f)(iv)

Short summary of the US National Flood Insurance Program

The US National Flood Insurance Program (NFIP) enables homeowners, business owners and renters in participating communities to purchase US government backed flood insurance. The NFIP has two main policy goals: (1) to provide access to primary flood insurance, thereby allowing for the transfer of some of the financial risk from property owners to the federal government, and (2) to mitigate and reduce the US's comprehensive flood risk through the development and implementation of floodplain management standards. A longer-term objective of the NFIP is to reduce federal expenditure on disaster assistance after floods.

Insurance is made available for residents and business owners in both high-risk and moderate-to-low risk areas and there are more than five million policyholders in the NFIP. The NFIP is voluntary for communities and there are currently more than 20,000 participating communities across the US. Participating communities agree to adopt and enforce floodplain management rules to reduce future flood damage. Policies can cover the building and/or contents. Policies are sold via private insurance companies and agents.

Premiums charged vary according to the level of risk. From October 2021, changes to the way premiums are priced will begin to be implemented to better reflect each property's unique flood risk – including relating to flood frequency, types of flood, and property characteristics such as elevation and the cost to rebuild. Premium discounts are offered if certain actions are taken to mitigate flood risk for a property, including elevating the property, filling in basements, elevating heating or cooling systems, etc. Discounts can also be available based on the applicable community's efforts to reduce its risk of flooding.

The NFIP has faced criticism about how it assesses/prices the risk of some properties, and the incentives that muted price signals can create to remain/build in risky areas and/or not undertake mitigation efforts (the recent changes to pricing are an attempt to deal with this). The NFIP has run up significant deficits over its lifetime, which can be funded by borrowing from the US Federal Government. In 2020 this debt was US$20.5 billion.

Please note: the proposed next steps were superseded

SUPPORTING THE CONTINUED ACCESS AND AFFORDABILITY OF FLOOD INSURANCE FOR NEW ZEALAND'S RESIDENTIAL PROPERTY

GOVERNMENT OBJECTIVES - Promote residential property insurance that is affordable and available to:

Support wellbeing by improving financial resilience to recover and rebuild following natural disasters.

Manage the implicit fiscal risk on the Government to support home-owners post-disaster.

s9(2)(f)(iv)

PROBLEMS

Immediate / short-term – Tower is planning to introduce greater risk-based pricing for flood from mid-October resulting in:

s9(2)(b)(ii) and s9(2)(ba)(i)

Uncertainty – We propose to find out if, in the short term, other insurers:
- will offer cover to these customers
- will also apply more granular pricing to flood risk for their customers

Longer-term – We expect the insurance market will to move towards more granular risk based pricing for flood, which, coupled with increasing risks from climate change, will put pressure on insurance affordability and availability.

s9(2)(f)(iv)

NEXT STEPS TO TAKE THIS WORK FORWARD

Consult insurers
Treasury engages with insurers to better understand the scale of the immediate problem and effectiveness of potential solutions.

Coordinate and sequence flood work with managed retreat policy
Treasury works with the Ministry for the Environment and other agencies to ensure options are consistent with wider adaptation work.

Proposed timetable

Early Oct	**Climate Response Ministers meeting –** Tsy/MfE report to Ministers on (i) emerging insurance issues, (ii) plan for sequencing managed retreat and insurance advice.
From mid-Oct to early Nov	**Engagement with insurers –** Tsy will prepare consultation document with clear and pointed questions. Time included to give insurers time to prepare response/information and for Tsy to follow up with addition requests for information.
27 Oct	**Community Resilience Ministers meeting –** Opportunity to update on engagement with insurance industry and coordinate approach to Westport recovery.
Nov	Developing and assessing options for integrated approach to managed retreat, climate adaptation **and insurance issues**, including possible **further engagement with insurers** and other agencies (e.g. DIA).
Mid-Dec	**MfE/Tsy advise to Ministers** on options for integrated approach to insurance and climate adaptation, which will feed into advice to Ministers on the draft National Adaptation Plan in late 2021 (the NAP is due for Cabinet consideration in March 2021).

TE TAI ŌHANGA
THE TREASURY

EXTRACT

Reference: T2021/2600 SH-10-8

Date: 13 October 2021

To: Minister of Finance (Hon Grant Robertson)

Deadline: 15 October 2021
(if any)

Briefing for 15 October Meeting of the Climate Response Ministers Group

The Climate Response Ministers Group (CRMG) is meeting on Friday 15 October. The agenda will cover three substantive items:

2) Flood insurance

This note provides Treasury's advice on each issue. We also suggest you provide a brief update on the invitation process for the Climate Emergency Response Fund (CERF).

Item 2: Flood insurance and Managed Retreat (Minister Clark)

- Minister Clark (as Minister Responsible for the Earthquake Commission) is concerned about the affordability and availability of flood insurance if there was a widespread shift towards greater risk-based pricing of flood risk.
- New flood risk models make this possible, and an insurer has already indicated they're moving in this direction. It plans to withdraw cover for [redacted] with the highest flood risk from February 2022. s9(2)(b)(ii) and s9(2)(ba)(i)
- s9(2)(f)(iv) [redacted]
- Minister Clark is concerned that the potential immediacy of this issue means action is required now. Treasury is therefore working up potential options for consideration in December s9(2)(g)(i) [redacted]
- s9(2)(g)(i) [redacted]

s9(2)(f)(iv)

- Treasury supports taking a strategic approach to these issues. Although Treasury leads engagement with the insurance industry it is working closely with the Ministry for the Environment.

TE TAI ŌHANGA
THE TREASURY

Treasury Report: Flood insurance: Insurer feedback and next steps

Date:	2 December 2021	Report No:	T2021/2921
		File Number:	SH-11-4-3-14-3

Action sought

	Action sought	Deadline
Minister of Finance (Hon Grant Robertson) **Minister Responsible for the Earthquake Commission** (Hon Dr David Clark)	**agree** to Treasury continuing to work at pace to progress the Government's response to flood insurance issues through either (i) a 12-month work programme linked with development of National Adaptation Plan (Option 1, Treasury recommended); or (ii) on a faster timeframe that bypasses that process (including public consultation therein) (Option 2). *If you agree to Option 2,* **indicate** your preference for further advice on short-listed interim potential solutions. **agree** to refer this report to the Climate Response Ministers Group for discussion at their meeting in December.	9 December 2021

Contact for telephone discussion (if required)

Name	Position	Telephone		1st Contact
Sam Thornton	Senior Analyst, Financial Markets	s9(2)(k)	N/A (mob)	✓
Daniel Jury	Senior Analyst, Financial Markets		N/A (mob)	
Dasha Leonova	Manager, Financial Markets		s 9(2)(g)(ii) (mob)	

Minister's Office actions (if required)

Return the signed report to the Treasury.

Refer this report to the Climate Response Ministers Group.

Note any feedback on the quality of the report	

Enclosure: No

Treasury Report: Flood insurance: Insurer feedback and next steps

Executive Summary

We previously provided you with advice on issues related to access and affordability of flood insurance for residential homes (T2021/1900 and T2021/2377 refer). This report: (i) provides feedback from consultation with insurers on how flood risk currently affects residential home insurance access and pricing, and how this could change in the future, and (ii) outlines options for how to proceed with the Government's response to flood insurability issues due to increased risk-pricing in the near-term.

What we learned from insurers

When asked about how flood risk currently affects residential home insurance, insurers told us that flood risk is currently largely community-rated for home insurance (with some house specific adjustments where flood risk is known to be particularly high), and there are a small number of residential homes each insurer is unwilling to insure due to high flood risk (but we have not yet been able to quantify the number of homes or identify any specific examples of particular homes being unable to obtain insurance from any insurer due to high flood risk).

s9(2)(f)(iv)

Options for next steps

We **recommend** that we continue to work at pace on the Government's response to flood insurance issues.

We have considered two options.

- Option 1 – Progress work through public consultation and coordination with wider government adaptation policy aligned with development of the National Adaptation Plan, with a view to providing you with a series of advice over that period culminating in decisions in the third quarter of 2022 an option.
- Option 2 – Develop a flood insurance intervention as quickly as practicable, without being subject to, or informed by, the wider National Adaptation Plan process or public consultation, and provide you with further advice *in early 2022* on options (including more detail on the design of potential solutions) for starting to *implement* a flood insurance support scheme within the next 12 months.

The key difference between them is Option 1 is integrated and coordinated with the wider National Adaptation Process. This brings policy, process, coordination and risk management benefits. However, it results in a project that is currently envisaged to take about 12 months longer to implement than Option 2, with implementation in early 2024 rather than 2022 (exact timing significantly depends on the option).

Option 2 trades earlier implementation for significantly higher risks of some incoherence between the initial insurance and subsequent National Adaptation Plan policy decisions and settings. Moreover, under Option 2 the initial decisions on flood insurance interventions may cause a deterioration in the policy context in which future decisions on the National Adaptation Plan are made. Therefore, we recommend option 1.

Resourcing this work

s9(2)(f)(iv)

Recommended Action

We recommend that you:

Background

a **note** Tower recently announced it intends to implement greater and more granular risk-based pricing for pluvial and fluvial (river and surface) flooding from late 2021, withdrawing cover from s9(2)(b)(ii) and s9(2)(ba)(i) and significantly increasing premiums for around s9(2)(b)(ii) and s9(2)(ba)(i) as policies are renewed over the course of the next 12 months;

b **note** the impact of Tower's new approach on the wider residential home insurance market (and timing thereof) largely depends on:

- how other insurers respond to Tower's change in approach; and
- whether those customers impacted by Tower's change in approach find alternative cover from other insurers (which could mean that those customers may not ultimately face significant premium increases or loss of cover);

c **note** any widespread and significant shift in the insurance market to greater and more granular risk-pricing for flood risk could:

- increase the implicit fiscal risk from uninsured homes (if some homeowners cannot obtain insurance or choose not to insure due to the cost), and
- have significant wellbeing impacts for affected homeowners, both before and after a flooding event (from increased premiums or loss of access to insurance);

d **note** we previously provided you with advice on issues related to access and affordability of flood insurance for residential homes (T2021/1900 and T2021/2377 refer);

e **note** you asked us to: (i) consult with insurers on how flood risk currently affects residential home insurance access and pricing, and how this could change in the future, and (ii) provide you with options for how to proceed with the Government's response to flood insurability issues due to increased risk-pricing in the near-term;

Feedback from consultation with insurers on the current situation, and the potential scale / significance / distributional impacts of a shift to greater and more granular risk-based pricing

f **note** we recently consulted eight general insurers about how flood risk currently affects residential home insurance access and pricing and how this could change in the future;

g **note** insurers told us:

- flood risk is currently largely community-rated for home insurance (with some house specific adjustments where flood risk is known to be particularly high), and
- there are a small number of residential homes each insurer is unwilling to insure due to high flood risk (but we have not yet been able to quantify the number of homes or identify any specific examples of particular homes being unable to obtain insurance from any insurer due to high flood risk);

h **note** to help quantify the significance of a shift to greater risk-based pricing for flood risk, s9(2)(b)(ii) and s9(2)(ba)(i)

i s9(2)(b)(ii) and s9(2)(ba)(i)

j s9(2)(b)(ii) and s9(2)(ba)(i)

k **note** EQC, in consultation with the Treasury, has commissioned Aon to assess the potential **distributional** impacts of flood hazards across different communities, such as income distribution and ethnicity, which will help with judgements about the potential increased implicit fiscal risk from uninsured homes and wellbeing impacts on affected homeowners, which we expect to receive in January 2021;

Timing of any widespread and significant shift to greater and more granular risk-based pricing

l s9(2)(f)(iv)

m

s9(2)(f)(iv)

Wider considerations for any government response

n **note** any decision for the Government to intervene to improve access and affordability of insurance involves a key trade-off between:

- the potential increased implicit fiscal risk from uninsured homes and wellbeing impacts on homeowners, and
- the unquantified impact of a softening of insurance price signals on long-term resilience and wellbeing from delayed or deferred risk reduction measures;

o **note** while there would be benefits in considering the full range of options available across the risk management spectrum to manage flood risk (including measures to reduce flood risk such as strengthening community flood protection through information, funding, and regulation) when considering options to support flood insurance affordability and availability, **this wider app**roach could take several years to deliver benefits and therefore we have considered two main options for progressing this work now on a faster timeframe ahead of any such wider work being completed;

Options for progressing the flood insurance work

p **agree** to Treasury continuing to work at pace to progress the Government's response to flood insurance issues;

Agree/disagree

q **direct** the Treasury to progress the Government's response to flood insurance issues through:

EITHER:

- **Option 1 (recommended):** progress work now to form a view on how best to respond to flood insurance issues through public consultation and coordination with wider government adaptation policy in parallel with the development of the National Adaptation Plan, with a view to providing you with a series of advice over that period culminating in decisions in the third quarter of 2022 an option;

  Agree / disagree

OR

- **Option 2 (not recommended):** if you wanted to move faster, we could develop a flood insurance intervention as quickly as practicable, without being subject to, or informed by, the wider National Adaptation Plan process or public consultation, and provide you with further advice *in early 2022* (including more detail on the design of potential solutions) for starting to *implement* a flood insurance support scheme within the next 12 months;

  Agree / disagree

r **note** Option 1 will allow us to:

- consult the wider public and industry (including affected communities) alongside or as part of consultation on the National Adaptation Plan to expose and prompt wider public discussion about the different trade-offs and issues; and
- be better able to coordinate with wider government adaptation policy, including designing any insurance intervention consistent with the Government's longer-term policy approach to climate change adaptation (including any formal managed retreat policy and position on risk-and cost-sharing of adaptation) and

s9(2)(f)(iv)

s **note** Option 2 will have significant downsides, including: (i) limiting our ability to engage with the insurance industry on options; (ii) limiting our ability to consult with the wider public; and (iii) increasing the likelihood of any intervention being inconsistent with, and setting unhelpful precedents for, the Government's to-be-determined climate adaptation policies.

t *if you agree to Option 2,* **indicate** your preference for that further advice to cover (or not) the following currently identified short-listed interim potential solutions:

- s9(2)(f)(iv)
-
-

NA / Yes / No

u **note** a key advantage of Option 1 is that it aims to minimise the risk a flood insurance intervention pre-emptively determines or restricts the Government's future options for climate adaptation policy, including how the costs of climate change fall, and who decides and who pays for adaptation measures, by giving time for the National Adaptation Plan to be further developed and have better engagement / understanding of different approaches;

v **note** the benefits of aligning the flood insurance work with climate adaptation policy work rely on the National Adaptation Plan consultation publicly exploring issues relating to the risk and cost-sharing of climate adaptation;

w **note** the choice between Option 1 (aligning the flood insurance work with climate adaptation policy work) and Option 2 (a quicker solution) will in large part be driven by balancing the following competing risks:

- s9(2)(f)(iv)
-

x **agree** to meet with the Treasury to discuss this report;

Agree/disagree

y **agree** to refer this report to the Climate Response Ministers Group for discussion at their **meeting** in December with a covering note, which the Treasury will prepare for you, outlining your position on these matters.

Agree/disagree

Dasha Leonova
Manager, Financial Markets

Hon Grant Robertson
Minister of Finance

Hon Dr David Clark
Minister Responsible for the Earthquake Commission

Treasury Report: Flood insurance: Insurer feedback and next steps

Purpose of Report

1. This report:

   - provides feedback from consultation with insurers on how flood risk currently affects residential home insurance access and pricing, and how this could change in the future, and
   - outlines options for how to proceed with the Government's response to flood insurability issues due to increased risk-pricing in the near-term.

Context

2. The Treasury previously provided you with advice on issues related to access and affordability of flood insurance for residential homes (T2021/1900 and T2021/2377 refer). In particular, the advice in T2021/2377:

   a. advised on high-level options for supporting flood insurance access and affordability,

   b. noted the Government has a broad range of options for supporting flood insurance, depending on the relative priority for affordability or availability, the allocation of costs, and how quickly you wish to implement an intervention; and

   c. s9(2)(f)(iv)

3. On 27 August 2021, you commissioned the Treasury, working with EQC, to explore options to support access and affordability of flood insurance for residential homes in response to indications insurers are moving toward greater and more granular risk-pricing of flood insurance.

4. You asked the Treasury to seek further information from insurers on the scale and timing of any flood insurance access and affordability problem before making decisions on next steps.

5. The Climate Response Ministers Group (CRMG) discussed flood insurance matters in October and invited you to report back to the group in December on the findings from consultation with insurers and reinsurers. The next CRMG meeting is tentatively scheduled for the week of 6 December 2021.

Feedback from insurers on flood insurance pricing and availability

6. In October and November, officials met with IAG, Suncorp, Tower, AA, QBE, Ando, MAS, Chubb and the Insurance Council of New Zealand (ICNZ) to obtain information about how flood risk currently affects residential home insurance access and pricing, and how this could change in the future. The Treasury also joined your meetings with Flood Re, Swiss Re, and Munich Re.

7. The key themes from the meetings are outlined below.

The current approach by insurers to flood insurance pricing and availability

8. Overall, insurers said insurance for homes with flood risk is currently widely available and well-priced (relative to homes with no flood risk), except for a small number of homes subject to significant flood risk where insurance may not be available. In particular:

- **Flood risk is currently largely community-rated for home insurance** (that is, the cost of flooding losses is widely spread across many homes), but the degree of risk-pricing vs community-rating varies by insurer. Some insurers told us flood risk is largely community-rated because flood risk information has been patchy and unreliable, often based on local government hazard information of varying quality and coverage. The insurance industry's focus has been on earthquake risk. Accordingly, pricing for flood risk tends to be relatively blunt (generally 'postcode- level' pricing), although most insurers make some adjustments for a subset of homes that they see as particularly risky.

- **Flood insurance is currently unavailable for only a small number of homes with high flood risk**, which are spread across New Zealand, generally in areas with well-known flood hazard. Some insurers said they embargo specific areas where flood risk is known to be high, while some take a more case-by-case approach to offering cover (e.g. online quotes may be unavailable and prospective customers would be referred to a call centre to provide more information about the property). s9(2)(b)(ii) and s9(2)(ba)(i) [redacted]. We are awaiting further information from ICNZ on the number of homes that insurers are currently unwilling to insure due to flood risk.

- s9(2)(b)(ii) and s9(2)(ba)(i) [redacted] Insurers said single peril exclusions can create reputational and moral hazard risks and any exclusion would need a clear definition of 'flood' and would require clear messaging to customers. For example, whether pluvial flood damage caused by a cyclone would be counted as a flood loss or severe-weather loss. However, we have heard flood exclusions are common in other countries.

- **Reinsurance is not a major factor in flood insurance pricing or availability currently**. s9(2)(b)(ii) and s9(2)(ba)(i) [redacted] Unlike earthquakes which tend to be rare and cause catastrophic losses that trigger reinsurance, flood losses tend to be driven by higher frequency events with smaller losses per event. Reinsurers s9(2)(b)(ii) and s9(2)(ba)(i) [redacted] also confirmed that flood risk was not a major concern for their pricing and willingness to provide reinsurance for New Zealand risks. However, significant recent flooding events in Europe have caused large reinsurance losses, heightening reinsurer awareness of flood risk globally with potential for future impacts on reinsurance prices for New Zealand.

How flood insurance pricing and availability is expected to change <u>within the next year or two</u>

9. There remains uncertainty about the timing of other insurers' (other than Tower) moves towards greater and more granular flood risk pricing. s9(2)(b)(ii) and s9(2)(ba)(i) However, almost all insurers said they are planning to investigate new models for fluvial and pluvial flood risk (river and surface flooding) and consider pricing changes in the next year or two. As the new models do not cover coastal flood risk, this may be considered later and, we are told by insurers, could present much more significant insurability challenges.

10. Insurers did not commit to any pricing approach or timing as they had not yet closely investigated the new flood models. One insurer indicated they are likely to consider the new flood risk models as they move to more granular risk-pricing, and that the timing for this may align with the implementation of the EQC cap changes from October 2022 so their system changes can be done at the same time. Most insurers also indicated they were cautious about the value of national flood models, which could be less accurate than local government flood information (as flooding is highly localised). s9(2)(b)(ii) and s9(2)(ba)(i)

11. Counterintuitively, Tower suggested the improved modelling and greater risk-based pricing could in fact lead to *improved / better* access to insurance for some currently uninsurable homes in high risk areas. Some properties that are currently not offered insurance due to being in high flood risk areas may now be offered insurance if they are found to be (because of the improved more granular information) lower risk than previously thought. Tower did not provide us with the net expected change.

How flood insurance pricing and availability is expected to change <u>in the longer-term</u>

12. All insurers indicated a clear direction of travel towards greater risk-pricing for climate change-exacerbated perils, including flooding, as information about risk improves and risks increase. Future engagement with insurers could explore how risk pricing may possibly apply, over time, to other climate related hazards in New Zealand including wildfire, coastal flooding or inundation, or wind damage.

13. Insurers said risk needs to be sufficiently rare to be insurable, meaning that, as the frequency of damaging natural hazard events becomes more certain, insurance will become unavailable for at-risk homes.

14. Insurers indicated they do *not* price future risk (e.g. risk exacerbated by future climate change) into current premiums. Insurance contracts are typically for one year and are priced to reflect the risk taken on by the insurer for that period.

15. A common view expressed by insurers was that flood risk reduction can have major beneficial impacts on insurability, and, compared to earthquakes, flood risk is more amenable to mitigation. Insurers were open to helping the Government to understand flood risk and the benefits of mitigation (and are already doing so to some extent) but did not see a role for insurers to share in the costs of climate change.

16. Insurers also raised concerns that existing adaptation policies/incentives are not enough to prevent new developments in high risk areas, and greater central and local Government efforts to manage risk was needed.

What this means for the timing of insurance issues due to flood risk

17. In the near term, while there remains uncertainty about the timing of other insurers' moves towards greater flood risk pricing and the impact on insurance access and prices, based on what insurers told us, s9(2)(f)(iv) [redacted]

s9(2)(b)(ii) and s9(2)(ba)(i) [redacted]

s9(2)(f)(iv) [redacted]

18. s9(2)(f)(iv) [redacted] However, those changes played out over a couple of years and, to our knowledge, no stand-alone residential homes have been unable to obtain insurance as a result of greater risk-pricing for seismic risk. s9(2)(b)(ii) and s9(2)(ba)(i) [redacted]

19. s9(2)(f)(iv) [redacted]

The public policy problem if insurers moved to fully risk-price flood risk for individual residential homes' insurance policies

20. If there were to be a widespread and significant shift in the insurance market to greater and more granular risk-pricing for flood risk, this could both materially increase premiums for some homes and / or materially increase the number of homes that do not have home insurance (either because they no longer have access to cover or choose not to buy given higher costs). These could result in the following key public policy problems:

    - An increase in the implicit fiscal risk given the possible increased likelihood that the Government may be called on to step in and protect uninsured homes following a major flooding event; and

    - Negative impacts on the wellbeing of, and / or increased hardship for, some affected homeowners arising from both increased premiums and loss of access to insurance prior to an event. Some groups may also be impacted more than others in ways the Government deems unacceptably inequitable. s9(2)(b)(ii) and s9(2)(ba)(i) The wellbeing and hardship impacts may also differ depending on whether the homes are primary residences, investment properties, holiday homes, etc.

s9(2)(b)(ii) and s9(2)(ba)(i)

21. Assessing the potential impacts on homeowners is uncertain and indefinite. It is therefore a difficult judgement for the Government about whether the impacts above warrant a significant government response.

22. In the Treasury's judgement, Tower's proposed changes at this stage are not significant enough in and of themselves to create the public policy problems above because:

    - a small number of homes s9(2)(b)(ii) and s9(2)(ba)(i) will not have their cover renewed by Tower, but other insurers may pick them up (as occurred following Tower's initial moves to increasingly risk-price for earthquake risk). Some other homes potentially will gain insurance that they are currently not getting.

    - the loss of insurance for those s9(2)(b)(ii) and s9(2)(ba)(i) homes will occur over the next year as the one-year insurance contracts are renewed,

- the homes are spread across New Zealand (i.e. not concentrated in few areas), lowering the implicit fiscal risk, and there are already flood and other peril insurability issues which homeowners / communities appear to live with), and s9(2)(b)(ii) and s9(2)(ba)(i)
- for the homes facing significant premium increases, s9(2)(b)(ii) and s9(2)(ba)(i) and it is possible that those customers may be able to find alternative cover from other insurers (which could mean that they may not ultimately face significant premium increases).

23. s9(2)(b)(ii) and s9(2)(ba)(i)

24. s9(2)(b)(ii) and s9(2)(ba)(i)

25. The Treasury has not formed a view about the impact of such changes on implicit fiscal risk and wellbeing impacts on affected homeowners. EQC, with Treasury support, have commissioned Aon to assess the potential distributional impacts of flood hazards across different groups, such as by income distribution and ethnicity, which will help with judgements about the potential increased implicit fiscal risk and wellbeing impacts on affected homeowners. We expect to receive this analysis before Christmas 2021.

26. s9(2)(f)(iv) We recommend the development of the Government response to flood insurance issues as part of a 12-month work programme (further discussed below). However, if you wish to proceed with an interim support for flood insurance on a faster timeline, we have outlined some initial parameters below.

Options for next steps to progress the Government's response

27. In light of insurer feedback on the timing and scale of a shift to greater and more granular risk-based pricing for flood risk, you have choices about the pace of further work on an insurance intervention to support access and affordability for residential flood insurance.

28. There would be benefits in considering the full range of options available across the risk management spectrum to manage flood risk when considering options to support flood insurance affordability and availability (including measures to reduce flood risk such as strengthening community flood protection through information, funding, and regulation). However, this wider approach could take several years to deliver benefits, meaning the Government will not be well-positioned to respond to changes in insurance markets arising from greater flood insurance risk pricing. Therefore, we have considered two main options for progressing this work now on a faster timeframe ahead of any such wider work being completed.

29. We recommend that we continue to work at pace on the Government's response to flood insurance issues. We have considered two options.

    - Option 1 (**recommended**) – Progress work through public consultation and coordination with wider government adaptation policy aligned with development of the National Adaptation Plan, with a view to providing you with a series of advice over that period culminating in decisions in the third quarter of 2022 an option.

    - Option 2 – Develop a flood insurance intervention as quickly as practicable, without being subject to, or informed by, the wider National Adaptation Plan process or public consultation, and provide you with further advice *in early 2022* on options (including more detail on the design of potential solutions) for starting to *implement* a flood insurance support scheme within the next 12 months.

30. The key difference between them is Option 1 is integrated and coordinated with the wider National Adaptation Process. This brings policy, process, coordination and risk management benefits. However, it results in a project that is currently envisaged to take about 12 months longer to implement than Option 2, with implementation in early 2024 rather than early 2022 (exact timing significantly depends on the option).

31. Option 2 trades earlier implementation for significantly higher risks of some incoherence between the initial insurance and subsequent National Adaptation Plan policy decisions and settings. Moreover, under Option 2 the initial decisions on flood insurance interventions may cause a deterioration in the policy context in which future decisions on the National Adaptation Plan are made. Therefore, we recommend Option 1.

Option 1 – Progress work through public consultation and coordination with wider government adaptation policy aligned with development of the NAP

32. The Government's response to greater and more granular risk-based pricing could be aligned with the climate adaptation policy work, and seek to address outstanding questions, as outlined below.

33. This approach has key benefits by allowing us to:

    - consult the wider public and industry (including affected communities) alongside or as part of consultation on the National Adaptation Plan to expose and prompt wider public discussion about the different trade-offs and issues; and

    - be better able to coordinate with wider government adaptation policy. Coordination would help to design any insurance intervention consistent with the Government's longer-term policy approach to climate change adaptation (including any formal managed retreat policy and position on risk-and cost-sharing of adaptation). It could also mitigate some of the adverse adaptation incentives an insurance intervention could create (e.g. local government deferring or delaying necessary flood protection measures, or developers not having due regard to flood risk).

Question	***Issue***	***Next step***
How risk reduction can support insurance availability and affordability?	Risk reduction to support insurability may be more cost-effective and provide other longer-term benefits (including to the wellbeing of homeowners) that cannot insurance support.	The Government's response to recent flooding in Westport provides a possible case study for risk reduction supporting insurability.

What are the implications of the Government's climate adaptation policy for any insurance intervention?	There are risks from any flood insurance intervention pre-emptively determining or restricting the Government's future options for policy on climate adaptation, including how the costs of climate change fall, and who decides and who pays for adaptation measures.	Sequencing any flood insurance intervention decisions after the Government makes initial decisions on these matters, perhaps around mid-2022, would help manage the risk of inconsistency.
What are the community, local government and Māori views about the choices and trade-offs between supporting insurance and other risk management interventions, and the design of an insurance intervention?	Public consultation on these matters could help inform the Government's response.	The Government could consult publicly on these matters alongside consultation on the National Adaptation Plan in April 2022.

34. Further information on these questions and how they relate to any flood insurance intervention is set out in Annex 1.

35. The key next steps would be reporting to you in early 2022 on a draft consultation, document and process, consultation in April 2022, followed by further advice (and decisions) in the third quarter of 2022 on an option. A high-level indicative timeline is set out below:

Date	***Action***
Dec-Feb	Preparing consultation document.
Feb	Advice to Ministers seeking feedback and agreement to consultation document.
Mar	Cabinet paper seeking agreement to release consultation document.
Apr	Public consultation begins alongside or as part of National Adaptation Plan consultation.
May	Public consultation closes.
Jun-Aug	Reviewing submissions and policy development.
Sep	Advice to Ministers on response to flood insurance issues.

s9(2)(f)(iv)

s9(2)(f)(iv)

Option 2 – Move faster and instead bypass the public consultation and coordination with wider government adaptation policy

36. If you wanted to move faster, we can instead bypass the public consultation and coordination with wider government adaptation policy and provide further advice in early 2022 on options (including more detail on the design of potential solutions) for starting to *implement* a flood insurance support scheme within the next 12 months (option 2).

37. Moving this quickly will have significant downsides, including:

- limiting our ability to consult with the wider public; and
- increasing the likelihood of any intervention being inconsistent with, and setting unhelpful precedents for, the Government's yet-to-be-determined climate adaptation policies.

s9(2)(f)(iv)

s9(2)(f)(iv)

40.

41.

Treasury recommends Option 1

42. The choice between the options is a balance between competing risks that:

- the insurance market moves faster and more significantly than expected, and the Government is not well-positioned to respond, and
- there are adverse impacts from a quick interim insurance solution that conflicts with an optimal flood risk management approach and climate adaptation policy.

43. On the balance of risks, the Treasury recommends Option 1 based on our judgement about:

- s9(2)(f)(iv)
- the benefits of being able to undertake [better] public consultation with affected communities;
- being better able to design any insurance intervention consistent with the Government's longer-term policy approach to climate change adaptation (including any formal managed retreat policy and position on risk-and cost-sharing of adaptation)
- the potentially significant long-term implications from a quick interim insurance solution that conflicts with the Government's longer-term policy approach to climate change adaptation (including any formal managed retreat policy and position on risk-and cost-sharing of adaptation), which may be difficult to change or unwind later.

44. However, we envisage Option 1 taking about 12 months longer than Option 2 to implement. If a key concern for you is the insurance market moving faster than expected and the individual wellbeing issues that would create, you may prefer Option 2).

Resourcing

45. s9(2)(f)(iv)

Next Steps

46. The Treasury would like to meet with you to discuss how you would like to take this work forward.

47. The Climate Response Ministers Group (CRMG) are expected to meet in December 2021 to discuss the next steps for the Government's response to flood insurability issues and the sequencing with the wider climate adaption policy work. Once you make decisions on the proposed next steps for this work, we will prepare a cover note for you to circulate to the CMRG with this briefing.

Annex 1: Key outstanding policy issues for the Government's response to flood insurability issues due to increased risk-pricing

How can risk reduction support insurance availability and affordability?

48. If the Government wants to support access and affordability of flood insurance, it has a range of options across the risk management spectrum (including supporting measures to reduce flood risk such as strengthening community flood protection through information, funding, and regulation, which indirectly supports insurance access and affordability).

49. Natural hazard insurance spreads the financial cost of uncertain natural hazards over time. Insurance is one risk management approach alongside:

    - avoiding risk through land use planning
    - controlling risk through structural design and mitigation, and
    - accepting risk through emergency management and community education/engagement tools.

50. A key question is where central government invests across the risk management spectrum to optimally reduce the social and economic impact of natural hazards, including the loss of insurance or increasing the cost of insurance. Most countries spend far more on response and recovery from natural disasters than they do on mitigation of natural hazard risk. NZIER research commissioned by the Department of Internal Affairs (DIA) suggested shifting investment towards mitigating known hazards (particularly flood risk) for which measures can materially reduce expected future costs. The report found a return on investment of around $5 for every $1 spent on flood mitigation measures. The report also found that hazards with the most scope for cost-beneficial mitigation to 2050 are flooding, storm surge and monitored landslips.

51. The different characteristics of flood risk compared to most EQC-covered perils (e.g. earthquakes, volcanic eruptions) mean a different treatment by the Government may be justified. Compared to earthquakes, there is arguably a stronger role for avoiding and controlling flood risk, and greater costs from relying on insurance, because:

    - flood risk may be more amendable to targeted preventative adaptations with broader community benefits (earthquake adaption is less easily targeted because almost all properties in New Zealand face some risk); and
    - flood risk affects a more distinct set of properties compared to earthquake risk, creating clearer winners and losers from government support (almost all properties in New Zealand face some seismic risk, but only around ten percent face some flood risk).

52. Optimising the Government's approach to these different risk management options is challenging and are currently being considered through the DIA-led Community Resilience Programme. The Community Resilience Programme is undertaking adaptation work to support Buller District Council in relation to Westport flooding and will pilot-test a Crown / local government co-investment model for flood risk management. At a meeting on 27 October 2021 Community Resilience Ministers instructed DIA to undertake further work to scope/cost the optimum mix of measures to reduce flood risk at Westport, including co-investment in flood protection.

What are the implications of the Government's climate adaptation policy for any insurance intervention?

53. The Government's approach to supporting flood insurance for homes in the short term has links with, and implications for, the Government's longer-term approach to adapting to increased risks from climate change (which will cover other risks and asset types).

54. In particular, there are common key policy questions where there are clear benefits in alignment / risks of non-alignment. For example (non exhaustive):

Who should be responsible for making decisions (what, when, how, etc) on community adaptation measures, such as stop-banks and managed retreat?

55. Some potential options to support flood insurance affordability / availability for homes could involve the Crown taking on the underlying risk (e.g. if EQC were to provide flood cover). If this were the case, the Crown would need the ability to appropriately manage that risk, which could potentially involve a more active role in reducing the underlying risk of flooding via flood defences or a stronger managed retreat framework.

56. It is possible that the outcome of the wider work on climate change adaption could find a compelling case (e.g. for subsidiarity type reasons) for the Crown to have a more limited role vis a vis local councils for deciding on community defences and / or have a smaller role for the Crown in managed retreat.

How should losses / costs faced by asset owners arising from flood risks (including flood risks exacerbated by climate change) be shared across society?

57. Any option to support flood insurance *affordability* for homes will involve some element of subsidisation of, and reallocation of, costs away from some homeowners that have homes subject to high flood risk, to reduce the premiums that would otherwise be payable. There will be choices for where this subsidy is funded from, including other homeowners (e.g. community rated premiums), the Crown, or some combination thereof. There will also be choices about the extent of any subsidy.

58. It is possible that the outcome of the wider work on climate change adaption could result in losses / costs of increased risks being shared in a different way than as outlined above – e.g. in some cases there might be a compelling case for the losses / costs to remain with some asset owners themselves, or be shared differently across society.

59. s9(2)(f)(iv)

What is the appropriate balance between relying on market mechanisms vs government direction to respond to flood risks?

60. Any option to support flood insurance affordability for homes will involve some element of subsidisation, which will blunt the market price signal and associated incentives on homeowners (and local councils via the political process) to respond to this signal.

61. s9(2)(f)(iv)

To what extent are any key policy decisions transitional / temporary?

62. s9(2)(f)(iv)

63.

64. The forthcoming National Adaptation Plan (NAP) and Climate Response Act will provide further clarity about the Government's position on these matters (as will the wider resource management reforms).

65. There are benefits in developing the Government's response to this flood insurance issue in parallel with the development of the Government's longer-term policy approach to climate change adaptation, as it will:

- lower the risk of any flood insurance support pre-emptively determining or restricting the Government's future options for policy on climate adaptation,
- lower the risk of needing to subsequently unwind elements of any flood insurance support to align with the longer-term approach to climate change adaptation (which may be challenging / not practicable, particularly given political economy considerations),
- lower the risk of any flood insurance support undermining the longer-term approach to climate change adaptation,
- allow any flood insurance support to be designed to actively support the longer-term approach to climate change adaptation.

What are the community, local government and Māori views about the choice and trade-offs between supporting insurance and other risk management interventions?

66. Public consultation could help inform the Government's response regarding the trade-offs between insurance and different flood risk management approaches. Public consultation would also provide an opportunity for Māori consultation on flood insurance issues as initial information from MfE suggests Māori are likely to be disproportionately affected by flood risk.

67. Consultation could be at a high-level on some key questions for the design of an insurance support, including:

- whether a flood insurance scheme would support insurance access only or affordability and access,
- how any insurance scheme may be targeted, including in terms of characteristics of homes / ownership of the homes (e.g. owner occupied, rental/investment properties, holiday homes, primary home vs secondary home, etc.),
- the degree of any affordability support (e.g. insurance price caps or partial subsidy),
- how any flood insurance scheme should be funded (Crown or all homeowners),

- what incentives for adaptation should be included in a flood insurance scheme (build back better, limitations on multiple claims), and
- whether a flood insurance scheme should be transitional or permanent (for the life of the occupant, fixed timeframe).

Annex 2: Flood Re in the New Zealand context

68. A scheme like Flood Re is a potential option for supporting access and affordability of flood insurance in New Zealand.

69. Flood Re is a private UK company owned and operated by its member insurers. It is not-for-profit but is commercially run. The scheme is funded by:

- fixed-price reinsurance premiums on flood-prone homes that an insurer chooses to reinsure with Flood Re
- a compulsory levy (Industry Levy 1 below) on all homeowner insurance premiums (approximately £10 per insured home)
- a potential further levy on the insurance industry if flood claims are in excess of available reserves (Industry Levy 2 below).

70. Flood Re's fixed-price reinsurance premium is set below the technical risk-price. It effectively sets a maximum price on home flood insurance (with adjustments based on the property's local council tax code). The capped reinsurance costs provided by Flood Re allows the insurer to charge lower insurance premiums for flood prone homes.

71. s9(2)(f)(iv)

s9(2)(f)(iv)

[redacted]

TE TAI ŌHANGA
THE TREASURY

Reference: T2021/3082 SH-11-4-3-14-2

Date: 15 December 2021

To: Minister Responsible for the Earthquake Commission (Hon Dr David Clark)

Deadline: (if any) None

Update – Australian reinsurance pool for cyclones and related flood damage

Purpose

This aide memoire updates you on the proposed reinsurance pool in Australia for cyclone and related flood damage. New details about the reinsurance pool have recently been published by the Australian Government with the release of draft legislation for consultation earlier this month.

The reinsurance pool is a useful example to inform options for supporting the availability and affordability of flood insurance in New Zealand. We briefed you on options for progressing the work on flood insurance on 2 December 2021 [T2021/2921].

Key points about the reinsurance pool

The Australian Government has proposed a Government-operated and guaranteed reinsurer to cover all insured cyclone risk for residential home and contents policies and some small business property policies. The reinsurance pool would be funded by premiums charged to insurers.

The purpose of the reinsurance pool is to improve the accessibility and affordability of insurance for eligible properties with high cyclone-risk.

The pool is intended to lower cyclone reinsurance costs overall because it would not charge a profit margin that private reinsurers charge. The benefit of lower cyclone reinsurance costs are intended to be applied primarily to properties with medium-to-high cyclone-risk. Reinsurance premiums on lower cyclone-risk properties are intended to be comparable to private reinsurance premiums. The reinsurance pool is also intended to encourage more insurers to offer insurance in cyclone-prone areas (e.g. Northern Australian), increasing competition and placing downward pressure on insurance premiums.

The Insurance Council of Australia supports the proposed reinsurance pool.

Further detail on the reinsurance pool is set out in Annex 1. We intend to discuss the details of the pool with the Australian Treasury early in the New Year, including clarifying the size of potential premium reductions for higher cyclone-risk properties, whether the policy intent is to cross-subsidise reinsurance premiums between higher and lower cyclone-risk properties, and any advice on developing insurance interventions to support access and availability of private insurance.

Jessica Burns, Senior Analyst, Financial Markets, s9(2)(k)
Dasha Leonova, Manager, Financial Markets, s9(2)(k)

Annex 1: Key design features of the cyclone reinsurance pool

Perils covered by the pool	• Damage caused by a cyclone event (as declared by the Bureau of Meteorology) including damage caused by flooding, storm surge, wind and rain caused by the cyclone weather system.
Eligible property covered by the pool	• Residential home and contents. • Residential strata title buildings (i.e. multi-unit buildings) (where 80 percent of the floor space is mainly residential). • Commercial property (including contents and business interruption) less than $5 million sum insured.
Insurers	• Once fully implemented, insurers will generally be required to reinsure all eligible cyclone losses with the pool.
Funding and premiums	• The pool will be funded by charging reinsurance premiums to insurers. • Premiums will be set to meet the expected claims and operating expenses for the overall pool over the longer-term. • Premiums to medium-to-high cyclone-risk properties are intended to be lower than the private market rate because the pool will not have a profit margin. • Premiums to lower cyclone-risk properties are expected to be comparable to the private market.
Fiscal support	• $10 billion Government guarantee (annually reinstated). • Any shortfall in reserves will be paid for through the Government guarantee. • The overall pool is intended to be cost-neutral to the Government over the longer term.
Administration	• The Australian Reinsurance Pool Corporation (ARPC) will administer the pool. Currently the ARPC provides reinsurance for commercial property and associated business interruption losses arising from a declared terrorist incident. • The Australian Competition and Consumer Commission will receive $18.4 million over five years to monitor and collect data to ensure that savings are passed through to policyholders.
The transition to greater risk-sharing with private insurers	• From 2025, the pool will begin to operate risk-sharing arrangements with insurers whereby some cyclone risk would be returned to private insurers to manage (as opposed to being fully covered by the reinsurance pool).

	The details of the risk-sharing arrangements will be developed later.
Role in incentivising risk reduction	• Over time the pool will offer discounts for policies that cover properties that have undertaken cyclone and flood risk mitigation. • The reinsurance pool will sit alongside other government interventions to mitigate the risks of natural hazards including $600 million to be invested in a new programme of disaster preparation and mitigation which will support projects such as bushfire and cyclone proofing houses.
Implementation timelines	• Insurers will be able to reinsure with the pool from 1 July 2022. • Larger insurers will be required to have obtained reinsurance for all their eligible cyclone risks by 31 December 2023 with smaller insurers having until 31 December 2024.
Key differences with the UK's Flood Re	• Flood Re is owned and operated by private insurers, while the cyclone reinsurance pool is Government run. • Flood Re insures only the highest risk homes, while the cyclone reinsurance pool covers all cyclone risk for all residential buildings and contents insured for cyclone risk (plus some commercial property policies). • Flood Re was intended to be in place for 25 years, while the cyclone reinsurance pool is intended to begin transitioning to risk-sharing with private insurers after three years. • Flood Re supports insurance affordability for higher risk homes through levy-funded cross-subsidies. The cyclone reinsurance pool appears to be more constrained because it supports affordability by passing on savings to higher risk properties from not applying a profit margin.

TE TAI ŌHANGA
THE TREASURY

Reference: T2021/3171 SH-11-4-3

Date: 8 February 2022

To: Minister Responsible for the Earthquake Commission (Hon Dr David Clark)

Deadline: 9 February 2022 (date of meeting)

Meeting with Amanda Whiting (CEO of IAG New Zealand)

You are meeting with the Chief Executive Officer of IAG New Zealand (IAG), Amanda Whiting, on Wednesday 9 February 2022.

The objectives of this meeting are to:

- establish a relationship with Amanda Whiting (this is your first meeting with her since she was appointed in July 2021); and
- discuss flood risk (at IAG's request), which provides an opportunity for you to inform IAG of the flood insurance work and forthcoming consultations (with the intention of getting their buy in to the process if you have not contacted them already).

It is possible that IAG may raise other insurance-related matters.

This briefing provides you with talking points and background information on: (1) flood risk; and (2) other matters IAG may raise, as well as a biography of Amanda Whiting.

1. Flood risk

Flood insurance project

This is an opportunity for you to update IAG and get their buy in on the status of the work currently being carried out for you to address affordability and accessibility concerns related to flood risk for homes.

Officials engaged with insurers in November 2021 (including IAG) on their likely responses to Tower's move towards greater and more granular risk-based pricing of flood risk [T2021/2921 refers].

In November 2021, s 9(2)(b)(ii) s9(2)(b)(ii) and s9(2)(ba)(i) . s 9(2)(b)(ii)

Talking points

- I intend to develop options for a flood reinsurance scheme to support the affordability and availability of home insurance over the next few months.
- I am concerned about the potential for widespread and significant shift to more granular risk-pricing for flood insurance.
- I'm very keen to work with the insurance industry on a solution. We need a solution that's workable and supports a well-functioning private insurance market in New Zealand.
- Some insurers have previously offered to work with the Government on targeted and time-bound availability and affordability solutions for high-risk locations. I agree with this sentiment and am keen for ideas on what this might look like. s9(2)(f)(iv)
- The Treasury has organised a meeting next week to discuss how we can work together. Your involvement and expertise will be critical to the success of this work.
- I know New Zealand ultimately needs to fix the underlying problem of flood risk, as it will only get worse with climate change.
- The Government is working on a range of measures to support adaptation, including managed retreat, the National Adaptation Plan, and resource management reforms.
- s9(2)(f)(iv)
- In the meantime, I want to soften the impact and transition so insurance remains broadly available and affordable for higher flood risk homes.
- It is my intention to move as fast as possible to have measures in place before any insurance withdrawal occurs.
- s9(2)(f)(iv)
- *(If asked government's role to incentivise risk reduction)* The Government is currently deciding on its policy for adaptation, which may include incentives for individual and community risk reduction. The funding and financing of risk reduction measures is being considered across government.
- *(If asked* about *betterment after the Buller floods)* What barriers does IAG see to incorporating betterment into disaster recovery?

Westport flooding

Officials are working with the Buller community to ensure the recovery from last year's floods considers options for building greater resilience to future flooding.

IAG were involved in early discussions about this work in Buller, including options to raise property heights during the rebuild. However, this was not progressed because the cost was not covered by insurance (which covers the financial cost of damage) and residents were generally unwilling to pay for this themselves. However, insurers often settle claims by making cash payments, and claimants can use the settlement funds for rebuilding and as a contribution towards betterment as they see fit.

IAG may suggest central and local government could better support post-disaster recovery by rebuilding infrastructure to a 'better than a pre-disaster standard' (known as betterment) rather than 'like-for-like' as is the most common response.

[Not public] At their meeting on 27 October 2021, Community Resilience Ministers received an update on the Buller flood recovery and discussed some of the system level issues which have emerged. Ministers directed officials to develop options for central government co-investment proposals to increase the resilience of the community to future flooding (the 'resilience co-investment proposals'). Community Resilience Ministers also agreed that work undertaken to increase the resilience of Westport should be used as a case study to inform relevant policy development in areas such as the National Adaptation Plan and Resource Management system reform.

Talking points

- What does IAG see as the barriers to incorporating betterment into disaster recovery? What is the role of insurance in supporting betterment?
- The Government also has work underway to increase the resilience of Buller to future flooding.

Withheld out of scope of request

Withheld out of scope of request

Withheld out of scope of request

Max Lin, Analyst, Financial Markets, s9(2)(k)

Dasha Leonova, Manager, Financial Markets, s9(2)(k)

Annex: Biography

Amanda Whiting, CEO, IAG New Zealand

Amanda became CEO of IAG New Zealand on 1 July 2021. She has previously held a range of senior positions in IAG, which she joined in 2008.

Amanda has more than 20 years' experience in the insurance industry in both general and health insurance. She has also worked in telecommunications.

Bryce Davies, Executive Manager, Corporate Relations, IAG New Zealand

Bryce is the executive manager of corporate relations at IAG. He is responsible for advancing IAG's purpose, strategy, and reputation through shaping public policy and addressing environmental, social, and governance (ESG) issues and opportunities.

Bryce is also the Lead of Resilient New Zealand. Resilient New Zealand is a collaboration between a range of corporate and civil society organisations focusing on improving New Zealand's resilience to natural disasters.

Climate Response Ministers' Group Meeting 16 February
Talking points on flood insurance

Relevant agenda items

1. **Note** Minister Clark has commissioned Treasury to develop a flood reinsurance scheme to support the affordability and availability of insurance for homes at-risk from flooding
   a. **Note** that consultation with insurers will take place over February and March. Options for consulting local government and Māori are being investigated. Cabinet decisions are expected in June, and any necessary legislation passed by May 2023.
   b. **Note** that the flood reinsurance scheme is included in the draft NAP.

Talking points

Problem

- Last year I updated this group on the step-change that is emerging in the pricing and coverage of flood insurance for residential property.

- Insurers are increasingly implementing more granular risk-based pricing for river, surface and coastal flooding, triggered by significant losses from recent flood events and improved flood risk models.

- I am concerned about the risk of significant and widespread increases in premiums and loss of insurance for homes subject to high flood risk in the next few years.

- s 9(2)(b)(ii)
  [and s9(2)(b)(ii) and s9(2)(ba)(i)
  .

- Longer-term, climate change is expected to increase flood risk, driving further increases in flood insurance premiums and withdrawal of coverage.

Proposed response

- I have asked the Treasury to explore options to support the continued access and affordability of flood insurance for New Zealand's residential property owners.

- While I see a strong rationale to move at pace on this work, I also acknowledge the need to align it with the broader climate adaptation policy work, including the National Adaptation Plan, and finding time for greater consultation and stakeholder engagement.

- I intend to ask officials to re-assess the timeframes and work programme to better align it with the broader adaptation work. It is important that the Government continues to develop its position and response to emerging insurance issues.

Questions and Answers

What is the size of the problem?

- s9(2)(b)(ii) and s9(2)(ba)(i) , s 9(2)(b)(ii)
- These estimates are consistent with confidential information s 9(2)(b)(ii)
- Longer-term, climate change is expected to increase flood risk, driving further increases in flood insurance premiums and withdrawal of coverage.

How urgent is the problem?

- Tower Insurance has already announced plans to implement more granular risk-based pricing. s9(2)(f)(iv)
- The Government is preparing now, to minimise the need for a reactive and ad hoc policy response.

How are you going to manage the risks given the links between adaptation and the scheme?

- I intend to ask officials to re-assess the timeframes and work programme to better align it with the broader adaptation work. It is important that the Government continues to develop its position and response to emerging insurance issues.
- Any insurance support intervention could align with the government's broader policies by,
    - s9(2)(f)(iv)
    -

TE TAI ŌHANGA
THE TREASURY

Treasury Report: Flood insurance: next steps

Date:	3 March 2022	**Report No:**	T2022/321
		File Number:	SH-11-4-3-4-14-1

Action sought

	Action sought	Deadline
Minister of Finance (Hon Grant Robertson) **Minister Responsible for the Earthquake Commission** (Hon Dr David Clark)	**Agree** to the timing of next steps to progress further work on flood insurance alongside broader climate change policy.	7 March 2022

Contact for telephone discussion (if required)

Name	Position	Telephone		1st Contact
Jessica Burns	Senior Analyst, Financial Markets	s9(2)(k)	N/A (mob)	✓
Dasha Leonova	Manager, Financial Markets		s 9(2)(g)(ii) (mob)	

Minister's Office actions (if required)

Return the signed report to the Treasury.

Refer a copy of this report to the Minister of Local Government and the Minister of Climate Change.

If required, **arrange** a meeting between the Minister of Finance and the Minister Responsible for the Earthquake Commission.

Note any feedback on the quality of the report	

Enclosure: No

Treasury Report: Flood insurance: next steps

Executive Summary

During the second half of 2021 the Treasury advised the Minister of Finance and the Minister Responsible for the EQC on emerging issues related to access and affordability of flood insurance for residential homes [T2021/1900, T2021/2377 and T2021/2921 refer].

On 15 February 2022 the Minister of Finance wrote to the Minister Responsible for the EQC and noted:

- his preference to progress policy work on flood insurance issues in closer alignment with the wider work on climate adaptation policy, including the National Adaptation Plan (NAP), noting that this may take some time, and
- s9(2)(f)(iv)

On 16 February 2022 the Climate Response Group of Ministers (CRMG) requested:

- the flood insurance work should be coordinated with the development of wider climate change adaptation policy (including by consulting on high level policy questions as part of the public consultation process for the draft National Adaptation Plan (NAP) due to take place in April/May), and
- to report to Cabinet with substantive advice on wider options before selecting a preferred option.

Based on the feedback from Ministers and the resource constraints, we understand the next step is to *examine a full set of options* (including a Flood Re model at a high-level) before Ministers decide whether to proceed with an insurance intervention and the type of intervention. The advice would also provide options on next steps, including seeking decisions on a preferred option(s) and agreement to targeted consultation on the preferred option(s).

We expect to provide substantive advice in August/September 2022. This would allow consultation to be aligned with public consultation on climate change adaptation policies. This consultation is planned to occur from 12 April to 25 May and reflects the direction from the CRMG that work on flood insurance issues should be coordinated with the development of wider climate change adaptation policy (including the National Adaptation Plan). Examples are provided in Annexes 1, 2 and 3.

The Treasury anticipates working up more detailed / developed material for targeted consultation (e.g. descriptions of the potential issues, further examples of the potential options we've identified). For example, we anticipate discussing with insurers more detailed questions regarding a Flood Re model or any other insurance solution that insurers may suggest. We will test this material with your offices once it is developed.

We consider that any expedited approach in the near term s9(2)(f)(iv) may not be faster overall. s9(2)(f)(iv)

s9(2)(f)(iv) [redacted] , s9(2)(f)(iv) [redacted] . s9(2)(b)(ii) and s9(2)(ba)(i) [redacted]

Following decisions on this report officials will prepare a Cabinet paper that reflects Ministers' decisions. We recommend that this paper be considered at the same Cabinet meeting as the draft NAP on 6 April (Cabinet Economic Development Committee) and 11 April (Cabinet). Aligning the timing will allow Ministers to see the wider climate adaptation policies alongside the flood insurance work programme.

Recommended Actions

We recommend that the Minister of Finance and the Minister Responsible for the Earthquake Commission (EQC):

Background

a **note** the Treasury previously advised the Minister of Finance and the Minister Responsible for the EQC on issues related to access and affordability of flood insurance for residential homes [T2021/1900, T2021/2377 and T2021/2921 refer].

Feedback from Ministers

b **note** flood insurance issues were discussed at the Climate Response Ministers Group (CRMG) meeting on 16 February 2022, and the CRMG requested that:

- the flood insurance work should be coordinated with the development of wider climate change adaptation policy (including by consulting on high level policy questions as part of the public consultation process for the draft National Adaptation Plan (NAP) due to take place in April/May), and
- to report to Cabinet with substantive advice on wider options before selecting a preferred option.

c **note** the Minister of Finance wrote to the Minister Responsible for the EQC on 15 February 2022 and noted:

- his preference to progress policy work on flood insurance issues in closer alignment with the wider work on climate adaptation policy, including the National Adaptation Plan (NAP), noting that this may take some time, and
- s9(2)(f)(iv) [redacted]

d **note** the Minister Responsible for the EQC has asked the Treasury to:

- prepare a paper to update the Cabinet Economic Development Committee (DEV) on the flood insurance work programme in advance of Cabinet considering the draft NAP for consultation (currently scheduled for 6 April 2022), and

- focus on progressing the development of a Flood Re model as soon as possible.

Next steps to progress the flood insurance work

e **note** this paper seeks to clarify and confirm Ministers' expectations for further work on flood insurance issues.

f **note** there are currently 2.5-3 policy fulltime equivalent staff working on the project that will continue to support it during the engagement and policy development stages throughout 2022 and early 2023 (but there is limited contingency for absences which are likely during the Omicron outbreak, meaning the work could face delays).

g **agree**, based on feedback from the CRMG and the Minister of Finance, to direct Treasury to *examine a full set of options* (including a Flood Re model at a high-level) before deciding whether to proceed with an insurance intervention and the type of intervention, and to report to the Minister of Finance and the Minister of Responsible for the EQC in August/September 2022.

Agree/disagree	*Agree/disagree*
Minister of Finance	**Minister Responsible for the Earthquake Commission**

h **agree** to the indicative timetable set out in paragraph 10 of this report.

Agree/disagree	*Agree/disagree*
Minister of Finance	**Minister Responsible for the Earthquake Commission**

i s9(2)(f)(iv)

j

k

Alignment with broader climate change policy

Insurance issues in the draft National Adaptation Plan consultation

l **note** that public consultation on the National Adaptation Plan is expected to occur from 12 April to 25 May.

m **agree** to public consultation on policy questions for flood insurance issues being carried out through consultation on the draft NAP in April and May 2022 by including material and questions related to:

- the role of insurance in dealing with climate change flood risk (see draft material and questions in *Annex 1*), and
- a case study on the UK's Flood Re scheme as an example of a potential insurance response to climate change insurability issues (see draft material and questions in *Annex 2*).

Agree/disagree	*Agree/disagree*
Minister of Finance	**Minister Responsible for the Earthquake Commission**

n **indicate** if you have any comments on *Annex 1* or *Annex 2*, including whether the draft NAP consultation should include any other matters.

Comments: Yes/no	*Comments: Yes/no*
Minister of Finance	**Minister Responsible for the Earthquake Commission**

o **note** we will continue to work with the Ministry for the Environment (MfE) and EQC to refine the material in *Annex 1* and *Annex 2* for the draft NAP prior to Ministerial consultation on 10 March 2022, and submission to Cabinet for approval in early April.

Insurance issues in the managed retreat policy consultation

p **note** the MfE is preparing public consultation on a framework for managed retreat as part of, or alongside, the draft NAP consultation in April and May 2022.

q **agree** that questions about the interaction between insurance and managed retreat should be included in the consultation material (see draft material in questions in *Annex 3*).

Agree/disagree	*Agree/disagree*
Minister of Finance	**Minister Responsible for the Earthquake Commission**

r **indicate** if you have any comments on *Annex 3*.

Comments: Yes/no	*Comments: Yes/no*
Minister of Finance	**Minister Responsible for the Earthquake Commission**

Next steps

s **note** the Treasury will prepare a draft Cabinet paper in line with the decisions in this report to update Cabinet and seek agreement to the next steps on flood insurance issues for consideration at the same Cabinet meeting as the draft NAP, currently scheduled for 6 and 11 April 2022 (DEV and Cabinet respectively).

t **forward** a copy of this report to the Minister of Local Government and the Minister of Climate Change.

Yes/no.

Dasha Leonova
Manager, Financial Markets

Hon Grant Robertson
Minister of Finance

Hon Dr David Clark
Minister Responsible for the Earthquake Commission

Treasury Report: Flood insurance: next steps

Purpose of Report

1. This report seeks to clarify and confirm expectations for further work on flood insurance issues from the Minister of Finance and the Minister Responsible for the Earthquake Commission (EQC).

Background and feedback from Ministers

2. During the second half of 2021, the Treasury advised the Minister of Finance and the Minister Responsible for the EQC on emerging issues related to access and affordability of flood insurance for residential homes [T2021/1900, T2021/2377 and T2021/2921 refer][1].

3. On 23 December 2021, the Minister Responsible for the EQC wrote to the Treasury seeking the development of a reinsurance scheme for flood risk modelled on the UK's Flood Re scheme. On 1 February 2022, the Minister discussed his views on the objectives and design features of the scheme with officials.

4. On 15 February 2022, the Minister of Finance wrote to the Minister Responsible for the EQC noting that he understood the Minister Responsible for the EQC wanted to progress this work at pace with ambitious timelines. The Minister of Finance expressed his preference to progress policy work on flood insurance issues in closer alignment with the wider work on climate adaptation policy, including the National Adaptation Plan (NAP)[2], noting that the benefits this would afford outweighed the benefits of moving at speed. s9(2)(f)(iv)

5. On 16 February 2022, the Climate Response Ministers Group (CRMG) discussed the next steps for the policy work on flood insurance issues. The CRMG requested that flood insurance work should be coordinated with the development of wider climate change adaptation policy (including by consulting on high level policy questions as part of the consultation process for the draft National Adaptation Plan (NAP) due to take place in April and May). The CRMG also requested to report to Cabinet with substantive advice on wider options before selecting a preferred option.

6. Following the CRMG meeting, the Minister Responsible for the EQC asked officials to prepare a Cabinet paper informing his colleagues of the flood insurance work programme (including exploring an option based on Flood Re further), to be considered by Cabinet before consultation on the draft NAP starts.

[1] The Minister of Finance and the Minister Responsible for the EQC are jointly overseeing flood insurance policy work given their responsibilities for insurance markets generally (Minister of Finance) and EQC as a potential intervention tool (EQC Minister).

[2] The NAP is a report that sets out the Government's objectives, strategies, policies and timeframes to adapt to the effects of climate change. Under the Climate Change Response (Zero Carbon) Amendment Act 2019, the Government is required to publish the first NAP by August 2022.

Next steps to develop policy on flood insurance issues

7. Based on the feedback from Ministers, including s9(2)(f)(iv) [redacted], we understand the scope of the Treasury's next substantive advice on insurance issues is to **examine a full set of options** (including a Flood Re model at a high-level) before Ministers decide whether to proceed with an insurance intervention and the type of intervention.

8. The advice would also provide options on next steps, including seeking decisions on a preferred option(s) and agreement to targeted consultation on the preferred option(s).

9. We expect to provide substantive advice in August/September 2022. This would allow consultation to be aligned with public consultation on climate change adaptation policies. This consultation is planned to occur from 12 April to 25 May and reflects the direction from the CRMG that work on flood insurance issues should be coordinated with the development of wider climate change adaptation policy (including the National Adaptation Plan).

10. An indicative timetable is in the table below.

Timing	***Milestone***
April	Cabinet paper: context explaining the work done to date on flood insurance, what we have heard from the industry, and agreement to high-level insurance questions in the draft NAP consultation.
April – May: alignment with consultation on broader climate change policy	Annex 1 and 2 illustrate the information and questions that could be included in the NAP. In addition, it may be desirable to include questions in the context of work on managed retreat.
Early June	Briefing to update Ministers on consultation.
August / September	Advice to Ministers on: • full set of options for insurance-based interventions to address issues associated with climate change exacerbated flood risk, • options on next steps, including seeking decisions on preferred option(s) and agreement to consultation on the preferred option(s).

s9(2)(f)(iv)

[redacted]

Resourcing

11. We have several senior analysts and analysts, as well as management resource, contributing to the project in addition to their other Financial Markets Policy and EQC Policy work. In total there are around 2.5-3 full-time equivalent staff working on flood insurance issues, depending on the pressure of other areas they are covering.

12. s9(2)(f)(iv) s9(2)(f)(iv)

13. s9(2)(f)(iv)

Expedited approach in the near term not preferred

14. s9(2)(f)(iv)

15. We also do not recommend an expedited approach in the near term because:

- we do not think it is consistent with feedback from the CRMG and the Minister of Finance;
- our recommended approach allows for consultation on broad options (and the potential benefits therein) to improve policy effectiveness and limit unintended consequences; and
- s9(2)(b)(ii) and s9(2)(ba)(i) s9(2)(b)(ii) and s9(2)(ba)(i)

Consultation and timing to align with the draft NAP

16. Consultation through the NAP is intended to build buy-in to the issue and proposals from stakeholders and the public. It will also ensure questions about the appropriate management of flood risk are considered alongside insurance issues. This will help to address feedback we have been receiving from insurers and other agencies that insurance cannot address the challenges of climate change without other strategies to manage the underlying risk.

17. To date the Treasury's consideration of insurance issues has focussed on floods (rather than other climate change exacerbated perils such as drought and storms) and on addressing the short-term risk of possible significant and widespread affordability and availability changes to flood insurance for high-risk homes, which could be triggered by the recent release of new flood models and one small insurer moving to a more granular risk-based pricing approach). Repositioning access and affordability of insurance within a broader climate change adaptation context suggests less of a focus on the short-term, and greater emphasis on medium to longer-term implications and options.

18. The insurance-related content and questions that would be consulted on in the draft NAP are provided in the *Annexes*. We would recommend including material similar to that in *Annex 1* (role of insurance in responding to flood risk), *Annex 2* (Flood Re case study), and *Annex 3* (managed retreat framework) in the package of material being consulted on in April and May.

19. Another advantage of aligning with consultation on climate change adaptation policy is that it allows officials to leverage the NAP consultation process to discuss insurance issues where appropriate by participating in MfE-led targeted engagements with key stakeholders (e.g. with local government, Māori). In addition, we would target other key stakeholders as necessary (e.g. insurers). *Annex 4* outlines our proposals for consultation.

20. The Treasury anticipates working up more detailed / developed material for targeted consultation (e.g. descriptions of the potential issues, further examples of the potential options we've identified). For example, we anticipate discussing with insurers more detailed questions regarding a Flood Re model or any other insurance solution that insurers may suggest. We will test this material with your offices once it is developed.

Immediate next steps

21. Following decisions on this report officials will prepare a Cabinet paper that reflects Ministers' decisions. We recommend that this paper be considered at the same Cabinet meeting as the draft NAP on 6 April (Cabinet Economic Development Committee) and 11 April (Cabinet). Aligning the timing will allow Ministers to see the wider climate adaptation policies alongside the flood insurance work programme.

22. The immediate next steps are set out below.

14 March	Officials provide draft DEV paper on flood insurance to the Minister of Finance and the Minister Responsible for the Earthquake Commission to seek approval to Ministerial consultation.
15- 24 March	Ministerial consultation on flood insurance Cabinet paper.
10-24 March	Ministerial consultation on: • Draft NAP, and • Managed retreat Cabinet paper (timing to be confirmed).
31 March	Cabinet papers lodged.
6 April	Cabinet Economic Development Committee (DEV) considers paper.
11 April	Cabinet considers paper.
12 April	Consultation on draft NAP begins.
25 May	Consultation on draft NAP ends.

Annex 1 – Draft insurance key messages and questions for the draft National Adaptation Plan consultation

Role of insurance in responding to flood risk

Climate change could lead to 'insurance retreat' for flood risks for many assets, including homes. The Government has a choice about how it wants to respond, including potentially supporting flood insurance.

Climate change will increasingly exacerbate the severity and frequency of floods and the losses those events create. The nature of the changes and their impact will differ depending on the type of flood (e.g. river, surface, and coastal) and is particularly location specific. The timing and path of these changes is relatively uncertain.

Risks like flooding can be managed in a number of ways, including: (i) avoiding the risk through land-use planning, (ii) controlling the risk (e.g. public flood defences, asset-specific flood mitigations, 'retreat' from high-risk areas, and minimising new builds in high risk areas); (iii) insuring the risk to help communities recover from its consequences if and when those are realised; and / or (iv) accepting the risk with a view to dealing with the consequences after the event.

The increase in underlying flood risk is likely to challenge the insurability[3] of flood risks for some assets, such as homes, as some of the key characteristics needed for risks to be privately insurable are no longer met. For example, it becomes increasingly uneconomic for either an insurer or an asset owner (at a proper price) to enter into an insurance arrangement if an asset is subject to frequent and significant losses.

This may lead to 'insurance retreat' in some cases, which can be a process including higher premiums, reduced 'quality' (e.g. higher excesses or limits on cover), and ultimately loss of access to insurance. Any significant and widespread insurance retreat would likely result in: (i) negative wellbeing impacts on affected asset owners, both pre- (e.g. income, stress, and reduced market value of existing assets, implications for mortgage finance) and post- (e.g. losses) flooding events; and (ii) potential fiscal implications for the Government to support uninsured/underinsured asset owners after a flooding event. Insurance retreat will also result in insurance playing a smaller role than at present to respond to damage caused by flood risk. Also, loss of insurance or higher premiums is likely to provide incentives for asset owners to manage their risk in other ways, including potentially taking measures to adapt to the risks (such as encouraging the development of public flood defences or moving assets).

The Government has a choice about how it wants to be involved in terms of how flood risks are managed in the short-term and as those risks are exacerbated by climate change, including whether it wants to support insurance markets in the continued provision of flood insurance (and if so in what ways). The Government's position will be driven by weighing up various factors, including: (i) who should bear these climate change exacerbated risks / how should they be shared across society, including considering to what extent these risks are different than other risks; (ii) costs and benefits of various options to manage risks; (iii) who is best placed to manage and make decisions about managing these risks (e.g. asset owners, local government, central government); (iv) to what extent is any government involvement transitionary (i.e. temporary); and (v) the risk of unintended consequences. The short term, medium term, and long term impacts will all need to be considered. Many of these factors are common across other risks being considered in this National Adaptation Plan.

[3] For a risk to be insurable privately the risk should generally feature the following elements / characteristics: (1) Large number of similar exposure units; (2) Definite Loss; (3) Accidental Loss; (4) Large Loss; (5) Affordable Premium; (6) Calculable Loss; (7) Limited risk of catastrophically large losses; (8) Generally does not cover certain or highly likely risks.

Questions:

What role should insurance have in responding to flood risks exacerbated by climate change in the context of other options to manage flood risk (e.g. public flood defences, asset-specific flood mitigations, 'managed retreat' from high risks areas)? Who is best placed to make decisions about responding to flood risk? To what extent is the best approach owner, asset, time, and place specific?

Does the Government have a role to support flood insurance, noting that climate change is likely to exacerbate risks that may cause insurance retreat? If so, how is this best achieved (e.g. by directly supporting flood insurance and/or some other way(s) of reducing underlying flood risk or a combination)?

If the Government were to directly support flood insurance:

- *what is the best way to do this?*
- *should the focus be on supporting availability and/or affordability of insurance?*
- *how should the costs of that support be funded, including by whom?*
- *what are the benefits and downsides of this approach compared with other options?*
- *to what extent should this support be temporary?*
- *what else (protection, mitigation, etc) would be needed in order to make an insurance scheme effective if it were a temporary measure? For example, to ensure that risks have been managed by the time the scheme is phased out?*

How effective do you think the insurance 'price signal' (e.g. higher premiums or loss of insurance) is for providing incentives to reduce underlying flood risk?

Annex 2 – Flood Re case study for the draft National Adaptation Plan

Flood Re – A flood reinsurance scheme in the United Kingdom

Flood Re is a UK reinsurance scheme that supports the affordability and availability of flood insurance for homes with the highest risk of flood (around 1-2 percent of UK homes). It caps flood insurance premiums, and cross-subsidises flood insurance costs between homeowners.

Flood Re is owned and operated by the insurance industry and is funded by a mix of compulsory levies on all residential property insurers, combined with reinsurance premiums on flood-prone homes reinsured with the scheme.

To manage the adverse incentives of Flood Re on risk management, Flood Re is only available to homes built before 1 January 2009. New homes face full market risk-pricing to create incentives not to build in high flood-risk locations. In addition, Flood Re is planned to end by 2039, because the scheme is intended to manage the transition to market prices. The end date preserves the incentive for risk reduction, so that a greater proportion of homes would be in lower flood risk areas by 2039 which reduces the shock when transitioning to market prices.

Alongside Flood Re, the UK Government committed to major investment in flood risk reduction. It is intended that flood risk will be largely addressed by the time Flood Re ends in 2039, allowing for a smooth transition back to risk-reflective market-based insurance premiums.

Changes to the scheme are currently being considered to improve adaptation incentives, including premium discounts for properties that have taken resilience measures and the ability for Flood Re to make additional payments to support claimants to rebuild more resiliently.

Questions:

What are your views on a Flood Re type scheme in New Zealand to address current and future access and affordability issues for flood insurance?

How do you think a Flood Re type scheme in New Zealand could support climate change adaptation in New Zealand?

Annex 3 – Insurance content for the managed retreat consultation

Managed retreat and the interaction with insurance

The Economy and Finance chapter of the National Adaptation Plan outlines the opportunities and challenges with respect to insurance in the context of climate change. This section outlines some initial questions about how a managed retreat framework could interact with insurance.

Climate change will increasingly exacerbate the severity and frequency of floods and the losses those events create. The increase in underlying flood risk is likely to challenge the insurability of flood risks for some assets, such as homes. How retreat interacts with insurance may depend on whether a retreat is pre-emptive or in response to a natural disaster.

Pre-emptive managed retreat and the interaction with insurance

Insurers analyse information to form a view about risk and set the price and offering of their products. Insurers' view of risk may be a useful input for managed retreat decision makers, although much of the information available to insurers is also available to local and central government.

Question: Are insurers able to signal the risks better than local or central government despite operating off the same information set (e.g. insurers do not face the same political constraints around disclosure of information)?

Where insurance is increasingly expensive or unavailable, it may provide an important signal about the need to consider alternative options to manage risk, such as managed retreat. However, as insurance contracts are typically for only one year, the premium and availability may not provide a useful signal about increasing risks in the future.

Question: Should insurability be a factor in considering whether to retreat from an area?

Additionally, both in New Zealand and internationally, governments often support access to affordable insurance in higher risk areas – generally through cross-subsidies – softening the signal and incentive for managed retreat. The Government is considering the role of insurance in managing flood risk and the implications from climate change, with a view to supporting the continued availability of affordable insurance.

Question: How could government balance the trade-off between supporting affordable and available insurance in higher risk areas (for a range of equity or fiscal risk reasons) with the signal / incentives for retreat provided by increasing insurance premiums or withdrawal? For example, should government seek to maintain insurance affordability and availability in higher risk areas only while managed retreat decisions are being developed?

Post-disaster retreat and the interaction with insurance

Insurance claim payments (post-event pay-outs) compensate insured parties for loss or damage after a covered event. Post-event there is an opportunity for those payments to support a retreat, rather than rebuilding.

Insurance payments are unlikely to be sufficient to fund retreat, meaning further consideration of funding sources is required. Insurance payments typically only cover loss or damage, meaning insurance may not cover the full amount required to compensate for the value of a building in a retreat scenario or to fund significant betterment/resilience improvements. Additionally, land is generally not insurable in private insurance markets, and even where land may be insured (e.g. EQC covers land in certain circumstances) the land must suffer damage or loss to qualify for an insurance payment.

Climate-change exacerbated risks such as flooding do not generally damage land itself (other than the cost of clearing flood debris) or are gradual (e.g. erosion) and therefore do not qualify for insurance payments (insurance tends to cover only sudden, accidental and/or unforeseen events like a landslip).

Insurers generally do not put restrictions on how insurance payments are used by claimants, enabling insurance payments to be used to fund post-event retreat. However, insurers may limit their liability (e.g. refuse future cover) if a property is highly likely to suffer similar damage again.

Questions:

How can post-event insurance payments best support a retreat? Are there any barriers to the use of insurance payments to support retreat? To what extent and when should the retreat be mandated post insurance pay-out?

Are there sufficient processes/mechanisms for quick post-event decision making on retreat to take advantage of insurance payments to part-fund retreat? Would there be net benefits in the government seeking to maintain insurance coverage for higher risk areas so insurance payments would be available to part-fund post-event retreat?

Annex 4 – Initial plans for targeted stakeholder consultation alongside the draft NAP

The Treasury intends to leverage the NAP consultation process to discuss insurance issues with key stakeholders by participating in MfE-led targeted engagements (e.g. with local government, Māori). This approach will help minimise duplication and consultation fatigue from stakeholder.

In addition, Treasury will seek to consult stakeholders with a particular interest in insurance issues, including:

- **Insurers** – The Insurance Council of New Zealand (ICNZ) has established a reference group of insurer representatives to engage with us on flood and wider climate change insurance issues. We will seek bilateral engagements with IAG, Suncorp, Tower, FMG, MAS, Ando and AA (who are the largest residential property insurers), with an open invitation to any other insurers to engage. We will also work with EQC to make enquiries with reinsurers to test their interest in engaging. We have been working with ICNZ to organise an initial workshop with the reference group in early March, based on a 'strawman' of a New Zealand Flood Re scheme. Given the subsequent decision to align the flood insurance project with the draft NAP consultation, we are now planning to engage with the reference group once the draft NAP is released in April. This will ensure that consultation can take place with the questions raised in the NAP as a starting point, rather than focusing on a strawman model in the first instance. We will continue to work with the Office of the Minister Responsible for the EQC on our messaging to insurers about the project and timelines as they evolve.

- **Banks** – We intend to discuss insurability issues with the New Zealand Bankers' Association and any banks that are willing to engage. We will integrate these engagements with consultation on the draft NAP.

- **Māori** – We intend to engage with Māori most affected by high flood risk, and any other groups to also capture broader Māori views on this issue, for example the Iwi Chairs Forum.

TE TAI ŌHANGA
THE TREASURY

Treasury Report: Draft Cabinet paper: Residential flood insurance issues

Date:	14 March 2022	Report No:	T2022/439
		File Number:	SH-11-4-3-4-14-1

Action Sought

	Action Sought	Deadline
Minister of Finance (Hon Grant Robertson)	**Approve** the attached draft Cabinet paper for Ministerial consultation.	15 March 2022
Minister Responsible for the Earthquake Commission (Hon Dr David Clark)		

Contact for Telephone Discussion (if required)

Name	Position	Telephone		1st Contact
Max Lin	Analyst	s9(2)(k)	N/A	
Danijela Tavich	Senior Analyst		s 9(2)(g)(ii)	✓
Dasha Leonova	Manager, Financial Markets			

Actions for the Minister's Office Staff (if required)

Return the signed report to Treasury.
Circulate (by Office of the Minister Responsible for the Earthquake Commission) a copy of this paper and consult the offices of other Cabinet Ministers prior to lodgement.
Lodge the Cabinet paper by 31 March.

Note any feedback on the quality of the report	

Enclosure: Yes (attached)

Treasury Report: Draft Cabinet paper: Residential flood insurance issues

Executive Summary

On 3 March 2022, Treasury sought feedback from the Minister of Finance and Minister Responsible for the Earthquake Commission ("Joint Ministers") on next steps to progress the flood insurance issues work [T2022/321 refers]. This report seeks your agreement to circulate a draft Cabinet paper with your Ministerial colleagues for feedback. The draft Cabinet paper:

- Updates Cabinet on work done to date on flood insurance issues, including initial consultation with insurers.
- Notes that policy questions for flood insurance, including the interaction with managed retreat, will be included in the consultation material of the draft National Adaptation Plan (NAP) in April and May 2022. We proposed that the Cabinet paper be considered at the same Cabinet meeting as the draft NAP [T2022/321 refers].
- Notes that Joint Ministers intend to undertake further work focused on ensuring insurance for flooding continues to play an appropriate role in supporting community resilience in the context of increasing risk-based pricing and underlying risks being exacerbated by climate change.
- Invites Joint Ministers to report back to Cabinet in the second half of 2022 to seek decisions on responding to flood insurance issues, including whether to proceed with the development of an insurance intervention, key aspects of any intervention, and agreement to targeted consultation.
- Directs the Treasury to lead a work programme to develop recommendations to inform the Cabinet report back.

The Cabinet paper also informs your Cabinet colleagues that final policy decisions on any intervention would likely be sought in the second half of 2023, s9(2)(f)(iv)

We recommend that you forward the draft Cabinet paper for consultation with your colleagues between 15 March to 24 March. This coincides with the consultation period on the draft NAP.

We recommend that, subject to any changes in response to Ministerial feedback, the attached paper should be lodged following consultation with your colleagues by 10:00am on 31 March 2022, for consideration by the Cabinet Economic Development Committee (DEV) on 6 April 2022 and Cabinet on 11 April 2022. This means the paper will most likely be considered alongside the Cabinet paper on the draft NAP.

Recommended Action

We recommend that you:

a **Agree** that the Office of the Minister Responsible for the Earthquake Commission begins consultation with your colleagues based on this paper

Agree/disagree	*Agree/disagree*
Minister of Finance	**Minister Responsible for the Earthquake Commission**

b **Agree** that the attached Cabinet paper, subject to any changes made by yourselves or arising from consultation with your colleagues, be lodged by 10:00am 31 March for consideration by DEV on 6 April 2022.

Agree/disagree	*Agree/disagree*
Minister of Finance	**Minister Responsible for the Earthquake Commission**

Dasha Leonova
Manager, Financial Markets

Hon Grant Robertson
Minister of Finance

Hon Dr David Clark
Minister Responsible for the Earthquake Commission

Office of the Minister of Finance

Office of the Minister Responsible for the Earthquake Commission

Chair, Cabinet Economic Development Committee

RESIDENTIAL FLOOD INSURANCE ISSUES

Proposal

1. This paper updates Cabinet on policy work on flood insurance issues and invites the Minister of Finance and Minister Responsible for the Earthquake Commission to report back to Cabinet in the second half of 2022 to seek decisions on whether to proceed with the development of a flood insurance intervention, key aspects of any intervention, and agreement to further targeted consultation.

Relation to government priorities

2. The Government has declared a climate emergency. Climate change will exacerbate the severity and frequency of flood events. Changes in underlying flood risk and insurers' increased access to more granular flood risk data are likely to challenge the insurability of flooding for some assets which may have implications for access to insurance. Any reduction in the role of insurance in managing flood risk has implications for the resilience of New Zealanders to those risks.

Executive Summary

3. Insurance is one response to natural hazard risks, alongside other options such as risk avoidance through land-use planning (e.g. 'retreat' from high-risk areas, and preventing new builds in high risk areas) and reducing the risk via flood management and protection measures.

4. There are two issues playing out in insurance markets. Insurers have access to better data and are increasingly able to more granularly price flood risk (also known as 'risk-based pricing'). Underlying flood risk is also increasing due to climate change. These both challenge the insurability of some assets. The Government has a choice about how it wants to respond to these insurance issues. In some cases, the Government might choose not to act at all, because insurance may change but not to the extent that any intervention is required.

5. The availability and pricing of insurance is a function of the underlying risk and the operation of the insurance market. A broad programme of work under the banner of the National Adaptation Plan (NAP) is outlining the Government's approach to improving New Zealand's resilience to the effects of climate change. This includes considering the management of underlying risks exacerbated by climate change, including flood risk. This paper and proposed further work focusses on the role of residential insurance against flooding. The National Climate Change Risk Assessment noted the insurance market is likely to be the most significantly affected by ongoing sea level risk and climate change. Flooding is a priority

because it is already the most significant cause of insured losses (other than earthquakes) and recent moves by insurers toward more granular risk-based pricing for flooding has highlighted the need for government policy in this area.

6. While the Government's primary focus is on flood insurance for residential buildings, the risk of insurance retreat for non-residential buildings and facilities (e.g., commercial property) in high-risk areas remains.

7. We are seeking Cabinet approval to further work focused on ensuring insurance for flooding continues to play an appropriate role in supporting community resilience in the context of increasing risk-based pricing and underlying risks being exacerbated by climate change. This will include consideration of a 'do nothing' scenario. We intend to report back to Cabinet in the second half of 2022 to seek decisions on whether to proceed with the development of an insurance intervention, key aspects of any intervention, and agreement to further targeted consultation.

8. s9(2)(b)(ii) and s9(2)(ba)(i) However, we want to be ready if and when the availability and affordability of flood insurance were to deteriorate significantly. Maintaining insurance is important across several wellbeing domains and for the general subjective wellbeing of property owners. The most effective approach will be to have measures in place before any large-scale insurance withdrawal occurs. If too many people become uninsured it may be difficult to support them in regaining insurance as needed.

9. Government will need to carefully consider the importance of insurance price signals about risk, which encourage actions to reduce, avoid, and/or control the underlying flood risk, including retreat. Any intervention would need to minimise the potential adverse effects of dampening those price signals, as well as the possible precedent risks for wider adaptation policy which may be caused by creating an expectation that government would directly support individuals affected by climate change. Questions on the interaction between insurance, flood risk, and managed retreat have been added to the package of adaption consultation materials which is being considered in a companion paper by the Cabinet Economic Development Committee (DEV).

10. s9(2)(f)(iv) However, if the availability and affordability of flood insurance were to quickly and significantly deteriorate, the Treasury could pivot at that stage s9(2)(f)(iv)

Background

11. With thousands of New Zealand homes exposed to flood risk, insurance cover against these losses has long been viewed as an essential way of supporting our resilience to natural hazards.

12. Historically, New Zealanders have had very high insurance coverage compared to other countries subject to similar risks. Flood insurance and insurance for other natural hazards is

widely available as part of all-risk insurance policies. This has been supported by Government interventions such as the EQC Scheme. EQC automatically attaches to private insurance policies for fire. It provides natural hazard insurance for residential buildings and some areas of residential land after earthquakes, landslips, volcanoes, tsunami and hydrothermal activity.[1] It also provides cover for storm or flood damage for residential land. Residential buildings are not covered for flood risk by EQC as insurance against flood risk has historically been widely available at affordable prices.

13. There are two issues playing out regarding flood insurance. One is improved information about risks supporting more granular risk-based pricing by insurers. In the past, different risks across the country have not been fully reflected in insurance pricing. Improved data has enabled risk-based pricing which can mean that riskier parts of the country can face rising premiums, while premiums may decrease in less risky areas. For example, Tower Insurance, which has around [redacted] of the residential insurance market share, began phasing in more granular flood risk pricing in late 2021. s9(2)(g)(i) [redacted] The second issue is underlying risk increasing as the frequency and severity of flooding events is exacerbated by climate change – we expect to see the effects of this in the longer-term. The effects of these two issues are distinct but overlapping and, when combined, mean that households may begin to face rising premiums or struggle to access insurance, though timing of any large-scale impacts is uncertain.

s9(2)(b)(ii) and s9(2)(ba)(i)

14. Loss of access to insurance means communities are less resilient and able to recover from flooding events. This has negative wellbeing implications across key wellbeing domains including: housing; income, consumption and wealth, and; health and subjective wellbeing. Further, the effects of risk-based pricing and increased flood risk will not be distributed evenly. Some (but not all) flood-prone properties are cheaper, and therefore home to those in lower-socioeconomic situations. Those on low incomes are most likely to be impacted by affordability issues caused by an increase in insurance prices. However, all homeowners of high-risk properties (i.e. across all incomes) would be affected by changes to insurance availability.

15. Additionally, Te Ao Māori recognises the interconnectedness of people and the natural world, including a strong connection between people and wai (water). Iwi and hapū located by awa (rivers) and moana (ocean) will also be affected, and these connections will result in unique wellbeing impacts. The Treasury and EQC have been working together to commission detailed modelling from Aon on the distributional impacts of flood risk to help understand these better.

International schemes

16. Other countries are also grappling with flood insurance issues. Examples include:

    16.1 The Australian Government recently released draft legislation on a cyclone and related flood damage reinsurance pool. It is proposed to be backed by a $10 billion Government guarantee and commence on July 1st, 2022 for residential, strata, and small business property insurance policies, in order to lower premiums.

[1] Note EQC cover has some exclusions such as fences, driveways, and mailboxes (where these are not integral to the building) and outdoor swimming pools, which means it is not always as comprehensive as private insurer cover.

16.2 In the United Kingdom, Flood Re is a joint initiative between the Government and insurers. It makes the flood cover part of residential insurance policies more affordable. Every insurer that offers residential insurance in the UK must pay into the Flood Re Scheme (with some restrictions on eligibility for homeowners, as outlined at paragraph 28.1). This Levy raises £180 million every year that is used to cover flood risks in residential insurance policies.

16.3 The US National Flood Insurance Programme (NFIP) is a federally managed scheme used to subsidise the cost of flood insurance, delivered to the public directly and through a network of insurance companies. It is funded by premiums paid by policyholders and borrowing from the US Treasury when the balance is insufficient to pay NFIP's obligations. NFIP works with communities who are required to adopt initiatives to mitigate flooding effects.

Work done to date and initial feedback from industry

17. The Treasury began providing advice on the emerging issues surrounding flood insurance in the second half of 2021, in the context of a potential shorter-term issue of insurers such as Tower adopting more granular risk-based pricing for flood due to better information. In response to this, the Treasury engaged with all major residential insurers to determine whether they were likely to follow suit. The Minister Responsible for the EQC has also begun engaging with industry chief executives.

18. s9(2)(b)(ii) and s9(2)(ba)(i) [redacted]. Further, insurers have said that Tower's move is unlikely to trigger a significant shift in the market in the short-term. Despite this assurance, the move is indicative of the increasing challenges around insurability of flood risk to come, and insurers could move more quickly than expected (for example, in response to a large-scale event).

19. Insurers have indicated they agree affordability and availability may become an issue as risk-based pricing becomes more widely used in the medium to longer-term. s9(2)(b)(ii) and s9(2)(ba)(i) [redacted] However, we expect for some assets the risk will materialise before then.

20. Thinking about the appropriate role of insurance in the context of increasing insurability issues due to climate change needs to be one part of a wider work programme including measures to avoid and control risk (e.g., through land-use planning, public and asset-specific flood management and protection measures, and 'retreat' from high risk areas). These kinds of actions will remain essential regardless of decisions around insurance. This is because insurance only shares the costs of impacts, and does not alter the physical risks or changes in these. Alignment with the NAP process will help to ensure insurance issues are considered within this context, as outlined further from paragraph 21.

21. The Minister Responsible for the EQC has also previously heard feedback from some insurers that Government should explore targeted and time-bound availability and affordability solutions for high-risk locations. We agree with this sentiment and are keen to investigate what this might look like.

22. Our officials will continue to work collaboratively with the insurance industry to ensure a solution that is workable and supports a well-functioning private insurance market. Officials

will continue to monitor market developments. Officials will also investigate whether the increased emphasis on climate risks for large insurers via the new Climate Related Reporting Disclosures regime has any implications for insurance pricing. If the availability and affordability of flood insurance were to deteriorate quickly and significantly, s9(2)(f)(iv)

Consultation through the National Adaptation Plan

23. We are proposing to consult on insurance issues alongside the draft NAP, within the package of materials that the Ministry for the Environment (MfE) is intending to release. This means these insurance issues will be considered in context and the consultation process is intended to build buy-in to further work on flood insurance and generate proposals from stakeholders and the public. It will also ensure questions about the appropriate management of flood risk are considered alongside insurance issues. This will help to address feedback from insurers that insurance cannot address the challenges of climate change without other strategies to manage the underlying risk. Positioning access and affordability of insurance within a broader climate change adaptation context suggests less of a focus on the short-term, and greater emphasis on medium to longer-term implications and options.

24. The high-level insurance-related content and questions to be consulted on is attached at Appendices 1-3 and provided in a companion paper also being considered by the Cabinet Economic Development Committee (DEV) on 6 April 2022. That paper also covers the draft NAP and the consultation questions around managed retreat. The flood insurance-related material seeks feedback on the role of insurance in responding to flood risk, the UK Flood Re model as a case study, and the interaction between insurance and managed retreat more specifically.

Targeted stakeholder consultation

25. The Treasury intends to leverage the NAP consultation process to discuss insurance issues with key stakeholders. This includes by participating in relevant targeted engagements led by MfE. This approach will help minimise duplication and consultation fatigue from stakeholders. Key stakeholders include insurers, local government, banks, and iwi/Māori. As abovementioned, there will be a particular emphasis on working collaboratively with the insurance industry to ensure any intervention is effective and feasible. The Treasury will engage stakeholders on the NAP generally and on targeted questions around insurance. The Treasury will continue to work with MfE to finalise the details and timing of the flood insurance engagement plan.

Considering options for the role of insurance

26. As noted above, a broad programme of work under the banner of the NAP is considering the underlying management of risks exacerbated by climate change, including flood risk. Improved management of underlying flood risk will help to promote the affordability and availability of insurance.

27. Clear risk signals from insurance pricing can have positive impacts on encouraging homeowners and communities to take flood risk mitigations. While loss of access to insurance has negative wellbeing impacts as described above, rebuilding in high-risk areas following a disaster might also reduce resilience. The Government has a choice about whether and how it wants to respond, considering how any response may interact with its other objectives for climate change adaptation. Ideally, the objectives of any intervention would be informed by the

broader objectives of the NAP. s9(2)(f)(iv)

28.

29. s9(2)(f)(iv) [redacted]

30. [redacted]

Next steps for a flood insurance work programme

31. We have asked Treasury officials to lead a work programme to analyse options and develop recommendations with a focus on ensuring insurance for flooding continues to play an appropriate role in supporting community resilience.

32. We intend to report back to Cabinet in the second half of 2022 to seek decisions on responding to these insurance issues, including whether to proceed with the development of an insurance intervention, key aspects of any intervention, and agreement to further targeted consultation.

33. It is likely that legislation would be required to implement an insurance intervention. If Cabinet agrees to an insurance intervention following the next report back, s9(2)(f)(iv) [redacted] s9(2)(f)(iv) [redacted] We would likely seek final policy decisions from Cabinet on any intervention in the second half of 2023.

Financial implications

34. This paper has no financial implications. s9(2)(f)(iv) [redacted]

Legislative Implications

35. Legislation will likely be required to establish a flood insurance intervention, though significant analytical work and consultation is required before proposals for legislation are developed. [redacted] s9(2)(f)(iv) [redacted].

Impact Analysis

Regulatory Impact Statement

36. The proposals in this paper do not have immediate legislative or regulatory implications. The Treasury will engage with the Regulatory Impact Analysis Team to confirm the scope of Regulatory Impact Statements to support substantive policy decisions (i.e. with regulatory impacts) that will be sought through the next Cabinet report back in the second half of 2022.

Climate Implications of Policy Assessment

37. The proposals in this paper do not have immediate legislative or regulatory implications. The Treasury will engage with the Climate Implications of Policy Assessment (CIPA) team in the Ministry for the Environment to confirm requirements to support substantive policy decisions (i.e. with regulatory impacts) that will be sought through the next Cabinet report back in the second half of 2022.

Population Implications

38. As mentioned above, the effects of increased flood risk will not be distributed evenly, and those on low incomes are most likely to be impacted by the increase in insurance prices. We also expect that iwi and hapū located by wai will be affected. The Treasury and EQC have been working together to commission detailed modelling from Aon on the distributional impacts of flood risk to help better understand these.

Human Rights

39. There are no human rights implications of the proposals in this paper.

Consultation

40. The Ministry for the Environment, the Department of Internal Affairs, the Financial Markets Authority, the Ministry of Business, Innovation and Employment, the Reserve Bank of New Zealand, the EQC, the National Emergency Management Agency, the Ministry of Housing and Urban Development, Te Puni Kōkiri, the Ministry of Social Development, and the Commerce Commission have been consulted on this paper. The Department of Prime Minister and Cabinet (Policy Advisory Group) has been informed.

41. This paper has also been informed by initial discussions that the Minister Responsible for the EQC and the Treasury have had with the insurance industry, including: the Insurance Council New Zealand (ICNZ), IAG, FMG, Tower, AA Insurance, AIG New Zealand, Suncorp, MAS, and Ando/Hollard.

Communications

42. We do not intend to make any announcements following Cabinet approval of this paper. The fact that work is underway on flood insurance is in the public domain due to initial engagement with industry. It will also be publicly known once the draft NAP and associated consultation materials are released due to the inclusion of flood insurance content.

Proactive Release

43. A version of this paper will be published on the Treasury's website following Cabinet agreement to the proposals set out in this paper. The paper will be published subject to withholdings that are consistent with the Official Information Act 1982.

Recommendations

The Minister of Finance and the Minister Responsible for the Earthquake Commission recommend that the Committee:

1. **note** that high uptake of residential property insurance can support New Zealand's resilience against natural hazards;

2. **note** that hazards that are exacerbated by climate change and more sophisticated risk modelling mean that some households could face significant increases to their insurance premiums or lose access to cover, though the timing of any large-scale impacts of these is uncertain;

3. **invite** the Minister of Finance and Minister Responsible for the Earthquake Commission to report back to Cabinet in the second half of 2022 to seek decisions on responding to these insurance issues, including whether to proceed with the development of an insurance intervention, key aspects of any intervention, and agreement to targeted consultation;

4. **note** further work by the Treasury will be focused on ensuring insurance for flooding continues to play an appropriate role in supporting community resilience in the context of increasing risk-based pricing and underlying risks being exacerbated by climate change;

5. **note** a careful balance needs to be struck between supporting insurance access and affordability for homes with high flood risk (supporting resilience and recovery from flooding, equity, and minimisation of implicit fiscal risk benefits) with the potential adverse effects from dampening market signals about risk and possible precedent-setting effects from intervening in the insurance market;

6. **note** high-level insurance-related content and questions have been included in the package of materials being consulted on as part of the draft National Adaptation Plan (NAP) process;

7. **note** the draft NAP and associated materials are being approved for consultation in a companion paper being considered by the Cabinet Economic Development Committee (DEV) on 6 April 2022;

8. **note** if Cabinet agrees to proceed with an insurance intervention following the report back in **recommendation 3**:

   8.1 s9(2)(f)(iv) ;

   8.2 final policy decisions from Cabinet on any intervention would likely be sought in the second half of 2023.

Authorised for lodgement

Hon Grant Robertson	Hon Dr David Clark
Minister of Finance	Minister Responsible for the Earthquake Commission

Appendix 1 withheld in full s9(2)(g)(i)

Appendix 2 – Flood Re case study for the draft National Adaptation Plan

Case Study: Flood Re – A flood reinsurance scheme in the United Kingdom

Flood Re is a United Kingdom reinsurance scheme that supports the affordability and availability of flood insurance for those homes that have the highest risk of flood (around 1 to 2 per cent of United Kingdom homes). The scheme caps flood-insurance premiums and cross-subsidises flood-insurance costs between homeowners.

Flood Re is owned and operated by the insurance industry. It is funded by a mix of compulsory levies on all residential-property insurers and reinsurance premiums on flood-prone homes that are reinsured with the scheme.

To manage any adverse incentives Flood Re might create, it is only available to homes built before 1 January 2009; new homes face full-market risk pricing, which discourages building in high flood-risk locations. In addition, Flood Re has an end date of 2039. This is because the scheme is intended to manage the transition to market prices and the end date preserves the incentive for risk reduction. By 2039, a greater proportion of homes will be in lower flood-risk areas, which will reduce the shock when transitioning back to market prices.

Alongside Flood Re, the United Kingdom government has committed to major investment in flood-risk reduction. It is intended that flood risk will be largely addressed by the time Flood Re ends in 2039, which will also assist with a smooth transition back to risk-reflective market-based insurance premiums.

Changes to the scheme are being considered to improve the incentives for adaptation, including premium discounts for properties that have taken resilience measures and additional payments that would support claimants to rebuild more resiliently.

A five-year review of Flood Re found that 80 per cent of homes with previous flood claims saw insurance price reductions of more than 50 per cent. A 2018 United Kingdom government survey found that those in areas of high flood risk considered household insurance to be more affordable and readily available than it had been in 2015.

Questions:

- In your view, should a Flood Re type scheme in New Zealand be used to address current and future access and affordability issues for flood insurance? Why or why not?
- How do you think a Flood Re type scheme in New Zealand could support or hinder climate change adaptation initiatives in New Zealand?

Appendix 3 – Insurance content for the managed retreat consultation

Managed retreat and the interaction with insurance

Insurance currently plays an important role in supporting New Zealand's resilience and recovery from natural hazards. However, sea level rise and increasing extreme weather due to climate change are likely to affect the ability to insure assets (particularly residential buildings). This may lead to 'insurance retreat' in some cases, which can include higher premiums, reduced 'quality' (eg, higher excesses or lower cover limits), and ultimately loss of access to insurance.

As described earlier, managed retreat is a process to strategically relocate assets, activities, and sites of cultural significance away from at-risk areas within a planned period of time.

We seek feedback on how insurance could interact with a managed retreat policy. The interaction between insurance and managed retreat may differ depending on whether a retreat is pre-emptive or in response to a natural disaster.

Post-disaster managed retreat and the interaction with insurance

Insurance payments compensate parties for loss or damage resulting from an event covered by their insurance policy. While there may also be an opportunity for these payments to support a managed retreat, insurance payments typically only cover the value of the loss or damage to the building. This means that insurance may not cover the full cost of a managed retreat. Insurance retreat may also be exacerbated by climate change, in turn reducing the opportunity for insurance to support managed retreat post-event.

Insurers generally do not put restrictions on how claimants use insurance payments. This may enable insurance payments to be used to fund post-event managed retreat. However, insurers may limit their liability (eg, refuse future cover) if a property is highly likely to suffer similar damage again. Options for managed retreat may be limited if an insurer decides to manage repairs for a property.

Question:

- Do you think insurance payments after a flood could help support managed retreat? Yes, no, unsure. Please explain your answer.

Pre-emptive managed retreat and the interaction with insurance

As insurance becomes increasingly expensive or unavailable in at-risk locations, it may provide an important signal to better manage the underlying risk. Accordingly, insurance premiums and availability could influence decisions about managed retreat and may also encourage relocation decisions by individuals and communities outside the managed retreat process. However, as insurance contracts are typically for only one year, insurance premiums and availability may not provide a useful signal about increasing risks in the future.

Questions:

- Do you think insurability challenges should be a factor in considering whether to initiate managed retreat from an area? Yes, no, unsure. Please explain your answer.

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A National Flood Risk Assessment of NZ

September 2021

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Introduction

Aon has been engaged to assist EQC and Treasury in understanding the cost of the flood peril in New Zealand and undertake preliminary analytics around the implications of this risk for establishing insurance premiums. This work has been undertaken to help inform discussions about the affordability or otherwise of flood insurance in New Zealand.

As an extension of this work, we have offered some qualitative and quantitative analyses of potential implications of the Crown assuming this risk, including a preliminary analysis of the impacts of including this risk in the current EQC scheme.

Assessing Flood Risk in New Zealand

Accurately quantifying flood risk consistently across New Zealand has only been recently made possible thanks to significant advancements in national-scale hydrological modelling and computing power. These recent technical advancements allow the development of detailed national flood hazard data and catastrophe loss models which are both beginning to emerge. Examples include the RMS NZ Flood model (which combines river and surface water flooding) and the Ambiental NZ FloodCat model (which relates to river flooding only). s9(2)(b)(ii) and s9(2)(ba)(i)

To examine the overall financial implications of flooding across the New Zealand population, we can either utilise the available catastrophe loss models or use the detailed flood hazard maps that cover all sources of flood hazard (river, coastal and surface water flooding). Catastrophe models are useful tools for examining risk at a portfolio level, but for this assessment we've utilised the national hazard maps covering all sources of flooding rather than use catastrophe loss models. The main reasons for using the detailed hazard maps over catastrophe loss models are:

1. We can calculate flood risk at each unique building outline as opposed to an address point location (used by available catastrophe loss models). Flood risk varies considerably over very small geographic distances, it is therefore vital to quantify flood risk at the individual building (i.e. asset) outline over address points which are associated with a land parcel for greater confidence in our risk assessment.

2. Using the detailed hazard maps means we are able to consider all the main sources of flood hazard impacting the New Zealand population whether this be from river, coastal or surface water sources.

3. We can use the most detailed national view of the flood hazard across NZ (5m in urban areas and 8m in rural areas), rather than the coarser resolution used in most catastrophe models.

4. The approach taken allows a consistent assessment of risk on a national basis. This consistency is crucial to ensure regional / study specific nuances do not introduce bias into the comparative risk assessment.

s9(2)(b)(ii) and s9(2)(ba)(i)

s9(2)(b)(ii) and s9(2)(ba)(i)

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Risk Calculation Methodology

s9(2)(b)(ii) and s9(2)(ba)(i)

Matching Buildings to Address Data

To assign flood insights at each building outline to all residential addresses across New Zealand, we have been supplied a national address database by EQC that includes 100% of all residential homes across the country (including Kainga Ora). This national database is based on the same raw address dataset that is processed for modelling in EQC's 2021 / 22 reinsurance renewal and totals 1,719,774

homes across New Zealand. Each individual home in this database is represented by a single point location, not a building outline. We therefore spatially match the national address database provided by EQC to the LINZ national 'Building Outline' database that contains building footprints and modelled flood inundation data.

There are limitations to the address matching exercise. The quality of the national address point location for each individual address is vital as we need to select the representative building building footprints.

- For 80% of national address points across New Zealand, the address point is geographically located inside a specific building outline and we therefore have a high associated confidence with the flood risk information at these addresses.
- For 14% of national address points, the address point is geographically located outside of the building outline but within 25m and so we have a moderate confidence in the flood risk assessment at these addresses.
- For 6% of national address points, the point locations are geographically located beyond 25m from the building outline and so we have low confidence in the flood risk assessment at these addresses. These low confidence records are geographically dispersed across the country and not concentrated in any particular territory, with less than 200 homes within each territorial authority. Overall, it is not expected that these low confidence locations will skew the findings in any material fashion.

s9(2)(b)(ii) and s9(2)(ba)(i)

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s9(2)(b)(ii) and s9(2)(ba)(i)

s9(2)(b)(ii) and s9(2)(ba)(i)

Estimating National Average Annual Loss (AAL)

The damage values calculated above do however represent loss to an individual asset, insensitive to the correlation effects of rainfall and flooding occurring across a catchment and / or multiple catchments. As a result, the sum of these risk level values would likely overstate the risk. As such, we have calculated a national Average Annual Loss (AAL) to estimate the technical premium pool required to support the flood risk in New Zealand.

The ICNZ national 'Cost of Natural Disasters' database (ICNZ, 2021) provides reported industry loss data running from 1968 to present and reports major event loss statistics by simplistic natural hazard category definitions (Flood, Storm, Earthquake). These data provide a useful observational record to inform an annualised insurance loss values in recent decades for the insurance market as a whole and offer useful insight to the frequency of major events back to 1968.

We inflate the insured loss values in the ICNZ database into 2021 values and use a time-weighted approach to estimate the annualised cost using the past 20 years of record. We assign the highest weighting to the most recent 5 years of record, the second highest weight to losses occurring between

5-10 years ago, third highest weight to losses occurring 10-15 years ago and finally lowest weight to losses occurring 15-20 years ago. This time-weighted approach is common practice in weather underwriting and takes account of any changing climate patterns over the last 20 years. We ignore loss experience pre-2000 that does include several significant loss events. While use of these event statistics are useful to understand overall event frequency, the normalised loss outputs grow in uncertainty over time with inflationary effects a multiple of actual loss. An example of this methodology is provided in Table 1.

Table 1: Example ICNZ 'Riverine Flood' Loss Calculation

Record Period	Annual Average Loss
Last 5 Years	$99,329,757
6 - 10 years	$78,202,392
11 - 15 Years	$58,594,623
16 - 20 years	$48,723,724
Annual Average	*$71,212,624*

The ICNZ database specifically defines a 'Flood' category that we use to define river flood events. Recognising that the ICNZ loss list considers all classes of business, not simply householders, these values have been discounted. It is estimated that approximately 85% of flood losses are associated with residential policies, resulting in an AAL of approximately $60M for riverine flood losses to residential property.

From a surface water flooding perspective, there is no explicit categorisation and rather these are inherently captured within the overall reported 'Storm' event classification. The majority of property damage in storm events is due to either wind or water ingress damage (typically 70-80% of the total storm event loss). Isolated surface water flooding is typically responsible for 20-30% of the overall storm loss in any given event. We therefore calculate the annualised cost of 'Storm' events from the ICNZ database (similar to 'Flood' events) and assume a 25% proportion of this 'Storm' loss is driven by surface water flooding. The result of this analysis is an AAL of $15m for surface water flooding.

There are no observed coastal flooding events in the ICNZ database, accordingly a subjective AAL of $10m has been applied to account for this risk.

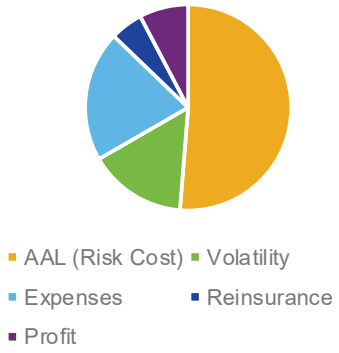
As a result of this analysis, a national AAL is derived to be approximately $85M. Whilst appropriate for a first order assessment of potential costs, the above methodology for developing the AAL should be refined further for application in formally setting premiums.

This AAL can now be disaggregated across the portfolio by normalising the individual risk results generated above, with the logic being that the relative risk presented by a building will be relatively consistent as these have been calculated from a ground up peril basis. The result allows the address-level calculation of mean annual damage at each unique home across New Zealand from river, surface water and coastal sources.

Please note, the ratios in this figure are for illustrative purposes only and do not represent the relativities between

It is important to note here that the technical AAL calculated above is one base component that feeds into creating an insurance premium, rather than the final premium charged to a policy holder. The premium itself will include additional loadings, some of which are illustrated across, with their relative contribution to the overall cost.

Figure 4 : Constituents of an Insurance Premium



When creating premiums for distribution to policy holders, insurers often mitigate the impacts of extremes in the technical flood rate, employing strategies such as 'capping and cupping'. Capping sets a maximum amount that premiums can increase at renewal for a given policy. For example, an insurer may set a cap of 20% for home and contents product premium increases overall, even if a change in the technical premium, or a premium adjustment would otherwise generate a far greater increase. Capping is often used as a way of reducing price shock to customers from year to year and smooths premium increases over time. Cupping (or collaring) on the other hand is a limit on the amount of premium reduction. These strategies have not been employed in the current analysis, however, may skew the results shown herein when compared to open market pricing.

s9(2)(b)(ii) and s9(2)(ba)(i)

How Many Homes are Exposed to Flooding?

Using the risk-level flood hazard, we calculate national aggregate values of exposure for New Zealand. We can calculate these national aggregate totals individually for each separate source (river, coastal and surface water) and collectively as a whole. This combined view is provided below in Table 2 and covers the aggregate risk-level exposure to modelled floodplains at multiple return periods (expressed in years). The aggregate risk counts for each individual peril is provided in Appendix 1.

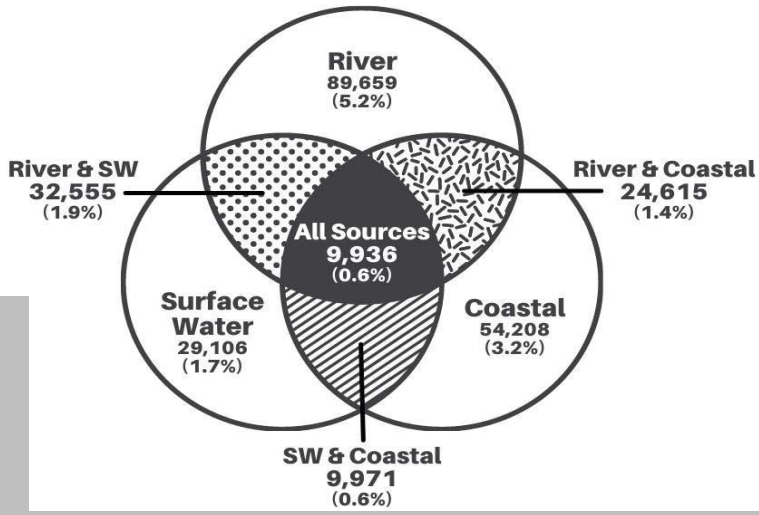
Table 2 finds there are 250,050 homes exposed to flooding (14.5% of all homes). We find that 8% of homes (137,499) are particularly exposed to flooding (within the modelled 1% floodplain, or 100-year return period). We find 5% of homes (88,647) are extremely exposed to flooding (and within the 5% floodplain, or 20-year return period). The sum insured listed below is taken from the data provided by EQC.

Table 2: Flood Exposure Counts: All Residential Property (including NZHC)

Return Period (Years)	Home Exposure Count	Home Exposure (%)	Total Sum Insured	Total Sum Insured (Average)
<= 20	88,647	5.2%	$36,162,721,249	$407,941
<= 50	109,909	6.4%	$44,756,675,815	$407,216
<= 100	137,499	8.0%	$55,596,522,520	$404,341
<= 200	163,924	9.5%	$66,418,278,718	$405,177
<= 500	185,324	10.8%	$75,128,699,716	$405,391
<= 1,000	201,811	11.7%	$82,100,222,810	$406,817
<= 10,000	250,050	14.5%	$101,999,485,278	$407,916
Total National	***1,719,774***		***$751,450,300,974***	***$436,947***

The diagram across illustrates the contribution to flood exposed properties from each form of flooding. This illustration clearly shows the dominance of riverine flooding risk. Interestingly, almost 10k locations are exposed to all three flood mechanisms.

Figure 5 : Risk Count by Flood Peril



s9(2)(b)(ii) and s9(2)(ba)(i)

s9(2)(b)(ii) and s9(2)(ba)(i)

s9(2)(b)(ii) and s9(2)(ba)(i)

Is there a change in flood prone risks through time?

The data provided include information related to the year a property was constructed, with data grouped into 5-year bands. Using these data, we have extracted a flood prone risk count, by each 5-year period, which is shown in Table 3.

Table 3 : Flood exposed risk count by age band

Year	Home Risk Count
2020	8,991
2015	190,606
2005	223,119
1995	191,979
1985	174,754
1975	238,115
1970	39,242
1965	200,093

Recognising that the 2020 band is incomplete, there does not appear to be a strong migration to or away from flood risk through time.

s9(2)(b)(ii) and s9(2)(ba)(i)

s9(2)(b)(ii) and s9(2)(ba)(i)

What are the National Costs Associated with Flood Risk?

At a national aggregate level, we calculate the market residential AAL from flooding to be NZD 85m. This national aggregate total is driven mostly by the river flood peril (NZD 60m) with surface water flooding (NZD 15m) and coastal flooding (NZD 10m) making up the remainder.

s9(2)(b)(ii) and s9(2)(ba)(i)

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s9(2)(b)(ii) and s9(2)(ba)(i)

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s9(2)(b)(ii) and s9(2)(ba)(i)

Financial Impacts on the Crown

We have assessed the financial impacts of the Crown providing insurance coverage for the flood peril across all NZ homes. The section below outlines the implications of some of these for decision making, as well as introduces some other considerations regarding any Crown involvement in helping alleviate affordability concerns regarding flood insurance.

The implications of Crown protecting Flood risk

The work undertaken in the previous section creates a solid foundation upon which to assess the implications of incorporating flood risk into EQC or an alternative Crown own mechanism.

Very simply, the AAL, or risk cost associated with flood is approximately $85m, or $46 per household, or $340 per flood exposed household. This value may be distributed between EQC, the Private Market and reinsurers, however any distribution does not lessen the total risk cost. In fact, any method for distributing this risk beyond the Crown will incur increased cost as all external risk carriers apply margins on the risk. The question then becomes what qualitative considerations need to be made in order to manage such a change in the distribution of the risk.

s9(2)(f)(iv)

Proprietary and Confidential

s9(2)(f)(iv)

s9(2)(f)(iv)

Proprietary and Confidential

s9(2)(f)(iv)

s9(2)(f)(iv), s9(2)(b)(ii) and s9(2)(ba)(i)

s9(2)(f)(iv)

s9(2)(b)(ii) and s9(2)(ba)(i)

Proprietary and Confidential

s9(2)(b)(ii) and s9(2)(ba)(i)

Concluding Thoughts

We have undertaken an analysis of flood risk in New Zealand using per risk flood height data, coupled with industry loss information. The result is that for every house in New Zealand an estimated cost of risk can be developed.

Following this analysis, various high-level observations can be made, most notably:

- The Average Annual cost of flooding to New Zeeland is estimated to be approximately $85m, coming from riverine, surface water and coastal inundation.
- 250k risks (14% of national housing stock) are exposed to some type of flooding in New Zealand, with 88k risks (5% of national housing stock) exposed to extreme flood risk (i.e. < 20-year return period).
- When accounting for population, the flood risk in New Zealand is most severe in rural areas.
- 67% of flood exposed risks are expected to have a technical flood premium below $250.
- s9(2)(b)(ii) and s9(2)(ba)(i)

Proprietary and Confidential

s9(2)(b)(ii) and s9(2)(ba)(i)

s9(2)(b)(ii) and s9(2)(ba)(i)

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s9(2)(b)(ii) and s9(2)(ba)(i)

Proprietary and Confidential

s9(2)(b)(ii) and s9(2)(ba)(i)

Contact Information

Auckland, New Zealand

s9(2)(a)

s 9(2)(g)(ii)

London, United Kingdom

s9(2)(a)

Sydney, Australia

s9(2)(a)

About Aon

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