

# The Treasury

## Residential Flood Insurance Issues Information Release

December 2022

This document has been proactively released by the Treasury/Minister of Finance (Hon Grant Robertson)/ Minister Responsible for the Earthquake Commission (Hon Dr David Clark) on the Treasury website at <https://www.treasury.govt.nz/news-and-events/reviews-consultation/residential-flood-insurance-issues>

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- [33] 9(2)(f)(iv) - to maintain the current constitutional conventions protecting the confidentiality of advice tendered by Ministers and officials
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- [35] 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
- [36] 9(2)(h) - to maintain legal professional privilege
- [39] 9(2)(k) - to prevent the disclosure of official information for improper gain or improper advantage

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

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

**Action sought**

	Action sought	Deadline
<b>Minister of Finance</b> (Hon Grant Robertson)	<b>Direct</b> the Treasury engage with insurers to seek further information and report to you by the end of December 2021.	None.
<b>Minister Responsible for the Earthquake Commission</b> (Hon Dr David Clark)	<b>Request</b> 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.	

**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

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### Executive Summary

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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.

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

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

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:

## IN-CONFIDENCE

- 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)

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*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*

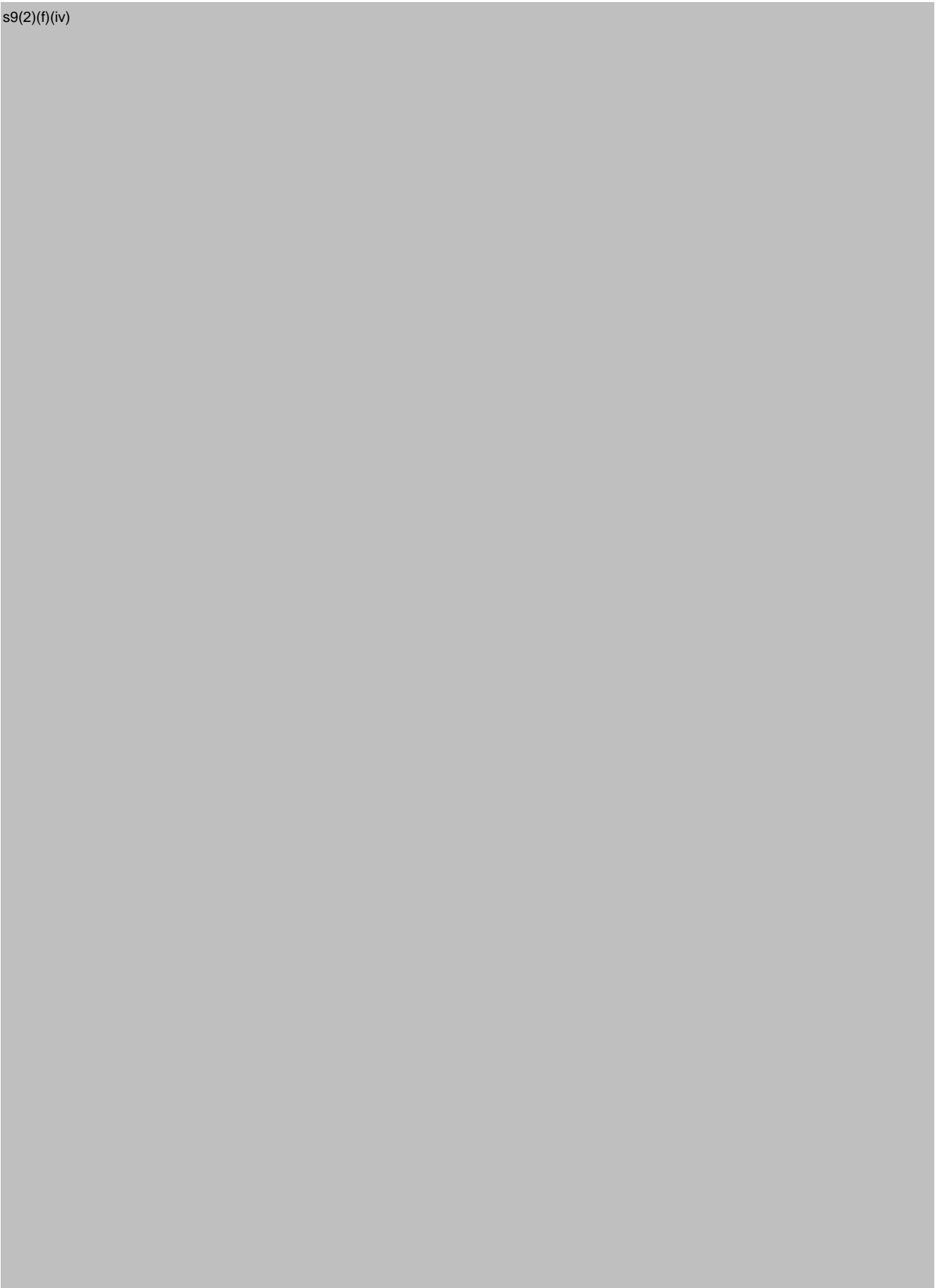
n **Note** you can also raise the immediate flood insurance issues at the Community Resilience Ministers meeting on 27 October 2021.

### *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)



*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

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### Background and Purpose

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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

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*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)(ha)(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

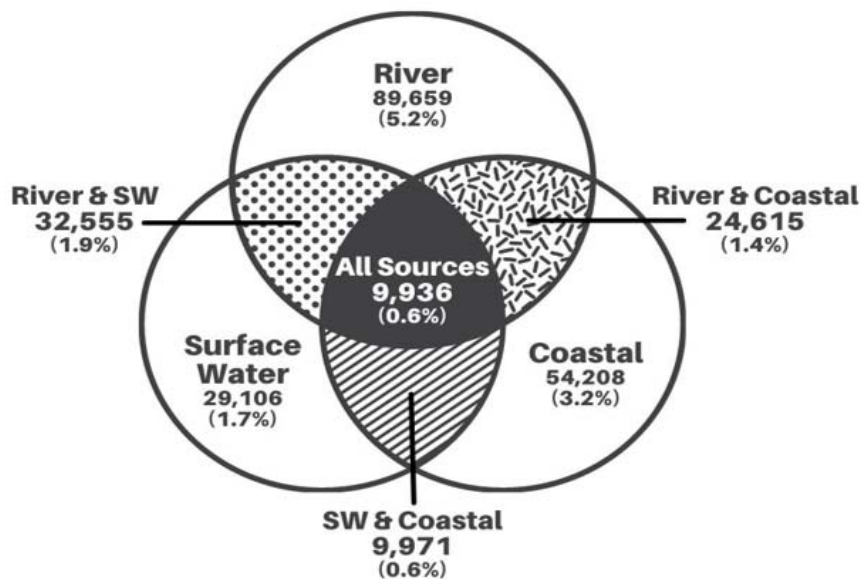
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**Total National**                      **1,719,774**                                      **\$751,450,300,974**                                      **\$436,947**

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

- 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



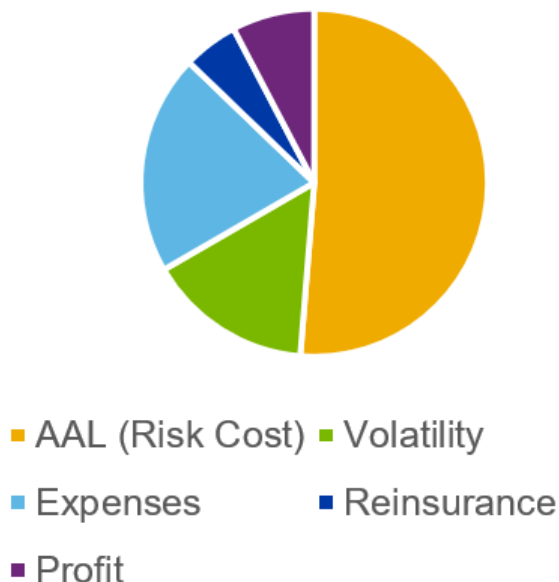
Source: Aon, A National Flood Risk Assessment of New Zealand, September 2021

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<sup>1</sup>. 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)



<sup>1</sup> 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

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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 managing 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)

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***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)
30. Natural hazard insurance is not an adaptation measure – it only spreads the financial cost of uncertain natural hazards over time<sup>2</sup>. Insurance price signals are likely a lever for promoting retreat away from higher risk areas.
31. s9(2)(f)(iv)
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)
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)

<sup>2</sup> 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)



s9(2)(f)(iv)




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




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<sup>3</sup> s9(2)(f)(iv)

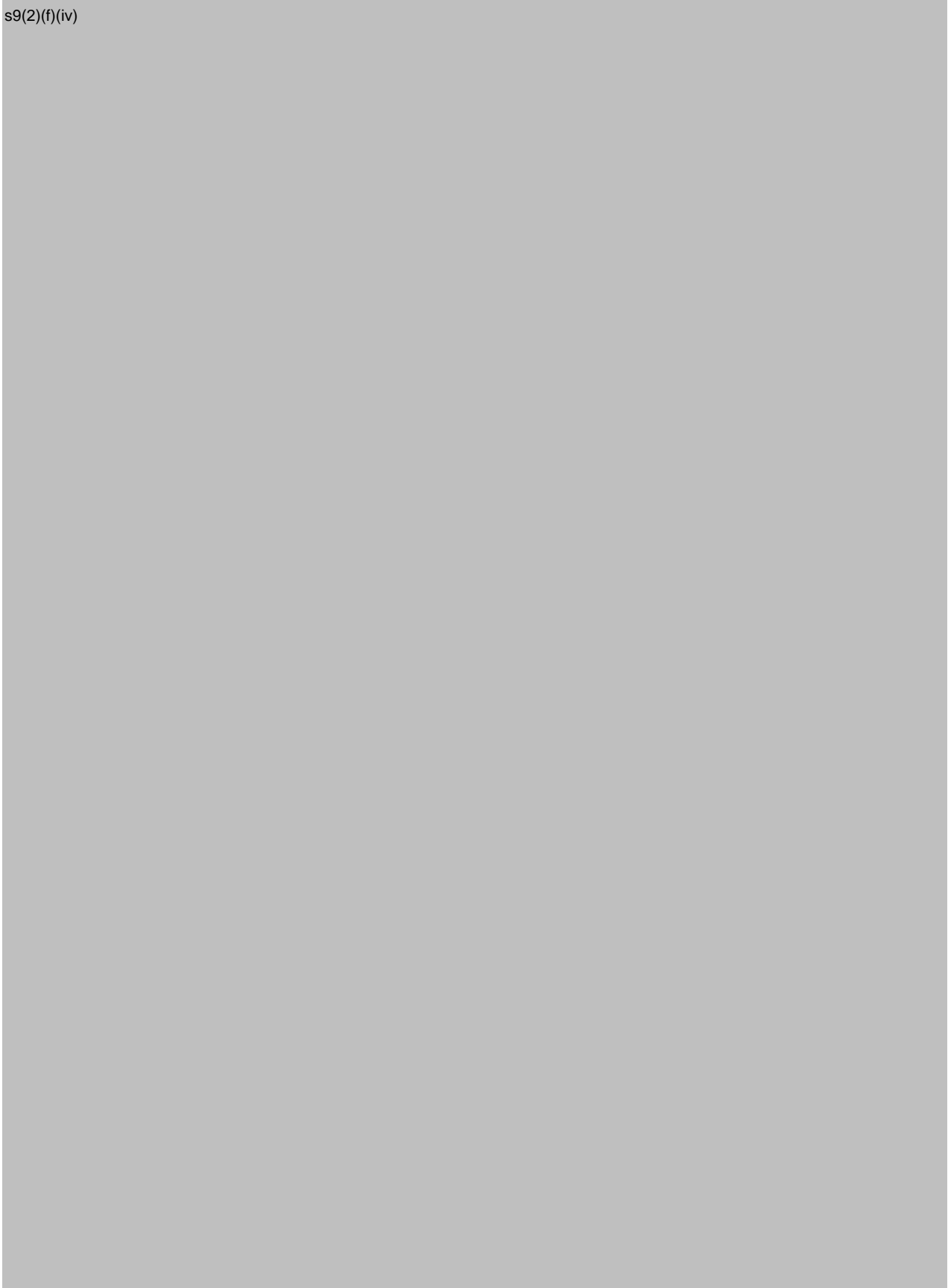


<sup>4</sup> s9(2)(h) and s9(2)(f)(iv)






s9(2)(f)(iv)



s9(2)(f)(iv)



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
<b>The scale of the problem, including:</b>	
<ul style="list-style-type: none"> <li>whether Tower is completely withdrawing cover s9(2)(b)(ii) and s9(2)(ba)(i) or only excluding flood cover.</li> </ul>	If Tower is completely withdrawing cover, s9(2)(f)(iv)
<ul style="list-style-type: none"> <li>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.</li> </ul>	If other insurers cover the s9(2)(b)(ii) and s9(2)(ba)(i) homes, the Government will have more time to consider solutions to any future flood insurance availability problems.
<ul style="list-style-type: none"> <li>whether and when other insurers plan to withdraw flood cover or increase premiums for homes they insure.</li> </ul>	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)