

# The Treasury

## Proactive release of Treasury advice related to the increase to the EQC Residential Building Cap

October 2021

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## Treasury Report: Property insurance: market trends and objectives

<b>Date:</b>	29 August 2019	<b>Report No:</b>	T2019/2234
		<b>File Number:</b>	SH-11-4-3-4-7

### Action sought

	Action sought	Deadline
Hon Grant Robertson <b>Minister of Finance</b>	<b>Agree</b> to the proposed objectives for catastrophe property insurance policy.	5 September 2019
<b>Minister Responsible for the Earthquake Commission</b>	<b>Agree</b> to discuss this report with the Treasury on 5 September 2019 (as arranged with your office).	
	<b>Refer</b> this report to the Community Resilience Ministers and other Ministers with related portfolios.	

### Contact for telephone discussion (if required)

Name	Position	Telephone	1st Contact
David Shewan	Senior Analyst, Financial Markets	[39]	-
Sam Thornton	Senior Analyst, Financial Markets		-
Robbie Taylor	Acting Manager, Financial Markets and International (Overseas Investment)	[35]	

### Minister's Office actions (if required)

**Return** the signed report to the Treasury.

**Refer** the report to the Community Resilience Ministers and other Ministers with related portfolios.

Note any feedback on the quality of the report

**Enclosure:** No

# **Treasury Report: Property insurance: market trends and objectives**

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## **Executive Summary**

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This report is the first in a series of briefings to you in advance of a November 2019 Cabinet paper that will seek agreement in-principle on recommended or prioritised options for addressing property insurance pricing and availability issues.

This report provides you with a summary of the information we have gathered on the scale and extent of insurance pricing and availability issues. It also analyses the causes of these issues and seeks confirmation of your objectives for this property insurance policy work. We recommend that the objectives of this property insurance policy work should be:

- to contribute to the overall natural hazard policy objective, alongside other policies, to maximise national wellbeing over time, and
- to help achieve socially acceptable distributional impacts on people and regions from the transition to new insurance pricing and availability.

Once you confirm your objectives, we will develop and assess options in line with those objectives. We will then brief you on options in late-September 2019.

## **Initial findings on property insurance market trends**

Our initial findings are set out below, but are based on limited data requiring further verification:

- Residential house insurance premiums are increasing moderately across regions with high seismic risk, while at least one insurer has implemented what appear to be roughly equivalent (on average) price decreases for some properties in low seismic risk areas. Some insurers have told us they are explaining the reasons for price increases to customers, but we have limited information about this.
- Significant premium increases appear to be limited to a small proportion of high perceived risk, often high value, houses, and to multi-unit residential buildings (**MUBs**) and commercial property in regions with high seismic risk.
- The availability (ie. the number of insurers offering insurance for a particular property) of insurance for all types of property in the greater Wellington region has declined – but we have not found examples of properties having no access to insurance.

## **Causes of trends in property insurance markets**

It appears that a key factor underlying property insurance price increases on average since 2010 is the change in understanding of risk and the damage that can be caused by seismic activity. However, the recent premium increases for high-risk properties appear to be largely a result of a change in how insurers allocate the cost of risk. Since 2018, New Zealand's largest insurers have been using updated catastrophe risk models and pricing risk more granularly, which has resulted in a reduction in cross-subsidisation of risk between policies.

Because insurers' level of Wellington exposure can drive the amount of catastrophe reinsurance they need to buy, large New Zealand insurers tend to have a maximum aggregate exposure to the Wellington region that they do not want to exceed. This may be a driver of Wellington insurance availability issues because it creates a high marginal cost to increasing exposure to Wellington. We are continuing to investigate the drivers of insurance availability issues.

The issues appear to be magnified for MUBs and commercial buildings because of the relatively complex nature of the risks they pose and lower availability of insurance in international markets.

## Recommended Action

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We recommend that you:

- a **agree** that your objectives for this catastrophe property insurance policy work are:
- to contribute to the overall natural hazard policy objective, alongside other policies, to maximise national wellbeing over time, and
  - to help achieve socially acceptable distributional impacts on people and regions from the transition to new insurance pricing and availability.

*Agree/disagree*

- b **agree** to discuss this report with the Treasury on 5 September 2019 (as arranged with your office).

*Agree/disagree*

- c **refer** this report to:

- the Community Resilience Ministers (the Minister of Local Government, the Minister of Civil Defence, and the Minister for Climate Change), and
- other Ministers with related portfolios (the Minister for Building and Construction, the Minister of Commerce and Consumer Affairs, and the Minister for Land Information).

*Refer/Not referred*

Robbie Taylor  
**Acting Manager, Financial Markets and International (Overseas Investment)**

Hon Grant Robertson  
**Minister of Finance**  
**Minister Responsible for the Earthquake Commission**

# Treasury Report: Property insurance: market trends and objectives

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## Purpose of Report

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1. This report:
  - a provides you with a summary of the information we have gathered on the scale and extent of insurance<sup>1</sup> pricing and availability issues, and an analysis of their causes, and
  - b seeks confirmation of your objectives for property insurance policy, and the criteria for assessing options for policy responses.

## Background

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2. On 7 August 2019 the Cabinet and Economic Development Committee (DEV) invited the Minister of Finance and the Minister Responsible for the Earthquake Commission to report to DEV in November 2019 on the extent and cause of changes in property insurance markets, and to seek in-principle agreement on recommended or prioritised options to improve or maintain property insurance uptake (refer DEV-19-MIN-0208).
3. As a result, you have directed the Treasury to: (i) obtain more comprehensive information on property insurance, pricing and availability; and (ii) to explore options for addressing any identified problems.

## Analysis

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### Trends in property insurance markets

#### *Information obtained and limitations*

4. Our initial findings on trends in New Zealand property insurance markets are based on limited information provided by insurers, reinsurers, brokers, real estate agents, commercial property owners, business associations, and residential property owners and their associations.
5. We are continuing to gather data on the insurance market for residential properties, including the commissioning of a report and data from a commercial insurance broking company for a more in-depth view of the insurance market for MUBs and commercial property. We are also commissioning surveys of residential property owners (both residential houses and MUBs) to understand property insurance uptake, price, quality, availability, and the information provided by insurers when they decline cover/increase price. We will provide you with updates to the extent this further data alters our initial findings.

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<sup>1</sup> For simplicity, references to “insurance”, “insurance premiums”, and “insurers” in this paper refer to primary insurers only and not reinsurers.

### *Insurance market for residential housing*

6. Our initial findings on trends in the residential housing insurance market are set out below:
  - a Residential house insurance premiums are increasing moderately across regions with high seismic risk.
  - b Significant price increases appear to be limited to a small proportion of high-perceived risk, high value houses in those regions.
  - c There have been premium decreases from at least one insurer for some properties in lower risk regions, roughly equivalent in aggregate to the increases for high risk properties.
  - d The availability (ie. the number of insurers offering insurance for a particular property) of insurance for residential houses in the greater Wellington region, including the Wairarapa and the Kapiti Coast (Wellington) particularly, appears to have declined, but we have not seen evidence of properties having no access to insurance.

### *Insurance market for MUBs and commercial buildings*

7. Our initial findings (based on a small amount of data) on trends in the insurance market for MUBs and commercial buildings are:
  - a There have been high insurance premium increases for MUBs and commercial buildings in Wellington.
  - b A small number of MUBs had premiums more than doubling in the past year. A common theme among such properties is the relative softness of the land they are built on.
  - c The availability of insurance for MUBs and commercial buildings in Wellington appears to have declined, but we have not seen evidence of properties having no access to insurance.
  - d We have not yet seen evidence of significant pricing or availability issues for MUBs and commercial buildings in areas outside the Wellington region.
8. More detail on data collected and our initial findings is set out in Annex 1.

## **Underlying drivers**

### *Increased understanding of risk*

9. It appears that a key factor underlying property insurance premium increases on average since 2010 is the increase in understanding of seismic risk and the damage that can be caused by seismic activity. This increased understanding resulted from insurer and reinsurer experience of claims, followed by the development of more sophisticated catastrophe risk models. These models combine data on the likelihood of seismic activity, severity of ground motion type with data on property characteristics, vulnerability and value to give a more advanced estimation of natural hazard losses.

10. Insurance premiums increased significantly on average from 2010 as insurers reassessed the risk of loss they were exposed to and passed on the post-Canterbury reinsurance premium increases.<sup>2</sup>
11. Further information on reinsurance markets in the context of New Zealand risk is set out in Annex 2.

#### *Insurer pricing strategy*

12. Recent significant insurance premium increases for high-risk properties appears to be due to insurers taking a more granular approach to pricing properties, therefore reducing cross-subsidisation between insureds. Insurers are able to do this using updated catastrophe risk models. This appears to be the result of insurer decisions on allocation of the cost of the risk they take on, rather than any new fundamental change in risk perception.
13. Further information in relation to the change in granularity in pricing risk is set out in Annex 3.

#### *Wellington earthquake risk appears to be driving capital and catastrophe reinsurance buying*

14. Insurers have applied their more granular approach to pricing their policies across the country. However, the Wellington risk environment (a high concentration of property in a relatively high risk area) has unique impacts on insurer decision-making.
15. For most New Zealand insurers, a large Wellington earthquake is the event with the highest maximum probable loss of any event they are exposed to. Therefore, the level of Wellington risk exposure has an impact on the amount of capital (or reinsurance, which can be used as an alternative) an insurer needs to hold to back its policies. Regions with lower risk levels do not have this impact. The result is that insurers with relatively high exposure to risk in the Wellington region tend to have a maximum aggregate exposure to the region that they do not want to exceed. This may be because the high marginal cost from buying more reinsurance is too high to pass on to new Wellington customers and customers would not buy the policies if it was.
16. Because large insurers seem to have a maximum aggregate exposure to Wellington, they are more selective about the properties they insure there. This has contributed to insurance availability issues for some high-risk properties in Wellington. This effect is described in detail in Annex 4.
17. The level of capital that insurers are required to hold under the Reserve Bank's solvency standard (the **Solvency Standard**) may be having some impact on certain insurers' reinsurance buying and desired maximum average exposure to the Wellington region at the margins. However, even with a less conservative Solvency Standard, insurers may continue to hold a level of capital and reinsurance well above regulatory minimums, as is currently the case for some insurers.
18. The Reserve Bank announced in May 2019 that it intends to review whether additional solvency buffer requirements for insurers are justified. Depending on what the changes (if any) are and how conservative each insurer's approach to regulatory buffers is (eg. how much of a voluntary buffer they want for business reasons above the regulatory minimum), there is potential for a change in the regulatory buffer requirements to have an impact on insurance pricing and availability in Wellington. Annex 5 contains further analysis of the Solvency Standard.

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<sup>2</sup> Based on listed insurer annual reports reinsurance pricing for New Zealand risks appears to have settled by around 2014 / 2015.

### *Additional factors affecting MUBs and commercial buildings*

19. Several factors have impacted pricing and availability of insurance for MUBs and commercial buildings in high risk seismic areas. The factors include:
  - a Some commercial property insurers have reduced their exposure to Wellington following the Kaikoura earthquakes <sup>[26]</sup> leaving a gap in the market.
  - b The issues described in this report in relation to the perception of risk generally are magnified for MUBs and commercial buildings due to their higher complexity and vulnerability to damage from earthquakes.
  - c The issues described in this report in relation to insurers having a defined maximum aggregate exposure to Wellington are magnified for MUBs and commercial buildings because they are high value buildings that use up insurers' reinsurance capacity more significantly.
  - d New Zealand insurers tend to consider their concentration of risk more granularly (eg. an insurer may decide not to insure a large building because it already insures another one on the same block).
  - e The availability of international cover for MUBs and commercial buildings appears to have reduced and pricing has increased (this is not specific to New Zealand risks – it is worldwide).
  - f For MUBs specifically, experience from the Canterbury earthquakes was that there are often additional administration costs involved in settling claims.
20. We have heard of bodies corporate undertaking strengthening work on MUBs to raise their building's percentage of the current New Building Standard (**NBS**), and this having little impact on insurance pricing. A common theme of feedback from insurance industry participants has been that NBS is designed to protect life, not buildings. Therefore increasing a building's NBS percentage will not necessarily decrease the likelihood of monetary loss caused by a major earthquake.

### *Levies and taxes*

21. Increased levies and taxes form a small portion of insurance price increases for residential properties. Most homeowners now pay approximately \$280 more in Fire and Emergency New Zealand (**FENZ**) and the Earthquake Commission (**EQC**) levies on their residential building insurance policy than they did before the Canterbury earthquakes. GST of 15 percent applies on top of the insurance premium and the levies.
22. The latest EQC levy increase on residential buildings (excluding contents) of \$100 (plus GST) took effect on 1 July 2019 and was part of a package that increased the residential building cap from \$100,000 (plus GST) to \$150,000 (plus GST). Overall this change had the effect of reducing the net cost of insurance policies for high-risk properties and increasing the net cost of insurance policies for low-risk properties.
23. For commercial property, the uncapped FENZ levy can be significant for some properties, at 10.6 cents (recently increased from 7.6 cents) per \$100 insured (plus GST). The Department of Internal Affairs is reviewing how FENZ is funded. The review is considering options other than an insurance-based funding model.

### *Application of findings at an individual property level*

24. The table below sets out a high level summary of factors that can lead (either alone or in combination) to an insurer either not offering to insure a particular property (causing availability issues) or offering to insure a property for a high price. The table is not an exhaustive list of factors.

Type	Factors that influence insurance pricing and availability
<i>Macro factors</i>	<ul style="list-style-type: none"> <li>• Insurer nearing desired maximum aggregate exposure in a particular area (causes insurers to be more selective about the properties and customers they insure).</li> <li>• Lower capacity internationally for per-risk insurance (affecting MUBs and commercial properties).</li> </ul>
<i>Micro factors (property specific)</i>	<ul style="list-style-type: none"> <li>• Property known to have pre-existing defects (eg. leaky building or prior earthquake damage).</li> <li>• Property on soft soil and foundations not anchored to harder ground underneath.</li> <li>• Property on ground at risk of liquefaction.</li> <li>• Property in tsunami zone.</li> <li>• Property in flood or coastal inundation zone.</li> <li>• Previous claim history of the property.</li> <li>• Number of floors (houses of two or more floors suffer higher loss in earthquakes and this is reflected in risk models).</li> <li>• Age (in general older properties are more vulnerable to seismic damage due to changes in approaches to building standards over the years).</li> </ul>
<i>Micro factors (customer specific)</i>	<ul style="list-style-type: none"> <li>• Customer is known to have made material non-disclosures in the past.</li> <li>• Intended use of the property (eg. rental).</li> </ul>

## Objectives and criteria

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### Objectives for the Government’s insurance market policy

25. To assist with the development of options, this report proposes, and seeks feedback on, possible objectives for this insurance market policy work.

*Objective 1: Insurance contributes to the overall natural hazard policy objective, alongside other policies, to maximise national wellbeing over time*

26. Recent New Zealand governments situate natural hazard policy within the national security framework. National security is described as the condition that permits the citizens of a state to go about their daily business confidently free from fear and able to make the most of opportunities to advance their way of life. It encompasses the preparedness, protection and preservation of people, and of property and information, both tangible and intangible.
27. New Zealand takes an “all hazards – all risks” approach to national security natural hazards, biosecurity events and pandemics. To achieve this, New Zealand takes a holistic and integrated approach to managing national security risk. Known as the 4Rs, this encompasses:
- a **Reduction:** Identifying and analysing long-term risks and taking steps to eliminate these risks if practicable, or if not, to reduce their likelihood and the magnitude of their impact.
  - b **Readiness:** Developing operational systems and capabilities before an emergency happens.

- c **Response:** Taking action immediately before, during, or directly after, a significant event.
  - d **Recovery:** Using coordinated efforts and processes to bring about immediate, medium-term, and long-term, regeneration.<sup>3</sup>
28. In this framework, the Government’s overall objective with regard to natural disasters is essentially to maximise national wellbeing over time, taking into account the full range of pre-disaster costs (eg. mitigation, insurance) and expected occasional large post-disaster costs (eg. disruption, loss, recovery).
29. Property insurance is one element that can be used to contribute to the 4Rs. Property catastrophe insurance contributes to the 4Rs by:
- a improving financial **readiness** and helping finance **recovery**, as insurance premiums effectively pre-fund disaster recovery, and
  - b improving incentives on insureds to fully consider efficient risk **reduction**, as insurance pricing and availability signals risk.
30. In this framework, the overall objective of current policy work would be to test if insurance markets are adequately contributing to national wellbeing via the 4Rs, and, if not, to identify and evaluate options to address the gaps.

*Objective 2: The distributional impacts of the transition to new insurance pricing and availability on people and regions are socially acceptable*

31. The 4Rs framework considers distributional impacts that affect individual and community security as expressed through the 4Rs. However, the Government’s interest in distributional outcomes likely run broader than this. For instance, property owners with significant and/or unanticipated insurance premium increases may experience financial hardship, and regions or communities with insurance issues may face community decline and dislocation. Objective 2 is intended to capture any distributional objectives that are not adequately addressed by Objective 1.

*Question: Do you agree that the objective for catastrophe property insurance market policy is:*

- 1. *to contribute to the overall natural hazard policy objective, alongside other policies, to maximise national wellbeing over time, and*
- 2. *to help achieve socially acceptable distributional impacts on people and regions from the transition to new insurance pricing and availability.*

## **Are current trends in insurance markets hindering these objectives?**

*Objective 1: Impact of insurance market trends on the overall natural hazard policy objective, alongside other policies, to maximise national wellbeing over time*

32. Current trends in property insurance pricing and availability may have different temporal impacts on the Government’s overall natural hazard policy objective to maximise national wellbeing:
- a In the **short-term**, they may reduce financial **readiness** and the ability to **recover** from a disaster if increased premiums and reduced availability lead to lower insurance uptake or underinsurance for higher-risk properties. Property owners without insurance (or underinsured) may be at higher risk of social distress from

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<sup>3</sup> DPMC, National Security System *Handbook*, August 2016, P.7.  
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financial loss in the event of a disaster. In turn, the Government faces an increased fiscal risk from ad hoc Government intervention post-disaster.

- b In the **long-term**, insurance pricing and availability that accurately reflects risk can improve incentives for risk **reduction**. There is evidence that the market is responding to insurance pricing in higher risk areas by constructing new buildings to be more seismically resilient. However, the apparent lack of public understanding of the drivers of insurance pricing and availability may mean that the incentives to reduce risk may currently be muted.

*Objective 2: Transitional impact of insurance market trends on the distributional impacts of insurance pricing and availability on people and regions*

- 33. Current trends in property insurance pricing and availability are likely to have negative financial impacts on owners of higher risk properties, such as older properties in higher seismic areas. The Treasury does not have information about whether these property owners are more likely to be socially and financially vulnerable (eg, low income or low wealth), but proposed consumer surveys will help provide information.
- 34. More broadly, there is a risk that areas with widespread insurance issues could face long-term decline and dislocation of communities.

### **Criteria for assessing options for responding to insurance market issues**

- 35. The Treasury will advise you on options for responding to the problems created by the current insurance market trends in late September 2019. Once you confirm your objectives for property insurance policy, we will assess possible options based on the following criteria:
  - a Policy contributes to an efficient approach to the overall natural hazard policy objective, alongside other policies, to maximise national wellbeing over time by:
    - i encouraging financial **readiness** for disasters by pre-funding expected financial losses to provide financial resources for **recovery** (ie. the optimal level of insurance uptake and coverage to reduce national aggregate social distress from financial loss in the event of a disaster, and the likelihood of unfunded government intervention post-disaster).
    - ii supporting an efficient approach to risk **reduction** through appropriate incentives for the optimal management of risk (ie. discouraging moral hazard and encouraging the avoidance, mitigation or transfer of risk where such options are economically beneficial).
  - b Policy achieves socially acceptable distributional impacts arising from the transition to new insurance pricing and availability on:
    - i financially vulnerable people (including renters if the insurance market trends impact rents and the availability and quality of housing), and
    - ii the decline and dislocation of regions and communities.
  - c Policy creates manageable fiscal costs that are consistent with the fiscal strategy over time.

*Question: Do the criteria listed above reflect your objectives and the factors you want policy options to be assessed against?*

*Policies addressing current market pressures risk setting precedents for addressing the impact of hazards exacerbated by climate change*

36. There is a risk that any intervention to meet your objectives (which relate to the impacts of seismic risk) may set a precedent for future interventions to address the impact of increased risk exacerbated by climate change. However, seismic risk has different characteristics, which may suggest different approaches are appropriate for each. For example, compared to seismic risk, climate change-exacerbated risk increases gradually over time, affects a relatively more distinct set of properties, and may be more amendable to preventative adaptation action with broader community benefits. The Government (the Treasury, the Department of Internal Affairs, and the Ministry for the Environment) is developing a policy position on climate change exacerbated risk via work on adaptation funding and financing.

## Next Steps

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37. We would like to discuss this report with you on 5 September 2019.
38. In addition to this report, the Treasury is preparing a series of briefings to you in advance of the November 2019 Cabinet paper, including:

Paper	Description	Timing
Catastrophe insurance: policy interventions and international comparators	Outline of a high-level policy framework for government-sponsored catastrophe insurance or reinsurance schemes.	Provided concurrently with this report.
Intervention options	Advice on recommended options to be developed further for addressing any identified problems in property insurance markets.	Late September 2019
Cabinet paper and regulatory impact assessment	Cabinet paper for consideration by DEV in November 2019 to seek agreement in-principle on recommended or prioritised options to be developed further for addressing property insurance pricing and availability issues.	October 2019
Public Inquiry into EQC reports	Government response to the Public Inquiry into EQC may have some overlaps with insurance pricing and availability issues.	March-April 2019

## Consultation with agencies

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39. The Earthquake Commission, the Department of Internal Affairs, the Ministry for the Environment, the Reserve Bank of New Zealand, the Ministry for Business, Innovation and Employment, the Financial Markets Authority, and the Ministry for Housing and Urban Development were consulted on this report. The Department of Prime Minister and Cabinet was informed.

Annex 1: Trends in New Zealand property insurance markets

**Market changes**

1. New Zealand property insurance markets are undergoing a period of change. There are two main changes:
2. More granular risk-pricing: Insurers advise that they are reducing the extent of cross-subsidisation of seismic risk between high and low risk areas and are responding to competitors implementing such pricing strategies. As a result, properties in higher risk locations pay higher premiums, while properties in lower risk locations pay lower premiums, than they otherwise would.
3. Increased concentration risk constraints: Insurance works best for when it spreads similar, but non-correlated, risks across insureds. The high concentration of correlated seismic risk in Wellington appears to be contributing to insurers’ reluctance to increase their Wellington exposure.
4. The table below sets out a summary of the information we hold about changes to the price, availability, and uptake (and underinsurance) of property insurance for the residential house, MUBs and commercial building insurance markets. We do not yet have information to differentiate insurance pricing or availability trends between MUBs and commercial properties.

<b>Residential house insurance market</b>	
Premiums	<ul style="list-style-type: none"> <li>• Residential house insurance premiums are increasing moderately across regions with high seismic risk.</li> <li>• Significant price increases appear to be limited to a smaller proportion of properties.</li> <li>• There have been some premium reductions in lower risk locations like Auckland.</li> </ul>
Availability	<ul style="list-style-type: none"> <li>• The availability of insurance for residential houses in Wellington appears to be declining (when we refer to availability in this report, we mean the number of insurers offering insurance for a particular property) – but we have not seen evidence of properties having no access to insurance</li> <li>• Property sales appear to be holding up in Wellington, suggesting insurance is still being obtained by new property owners (on the basis that banks are unlikely to lend to a new property owner on an uninsured property).</li> </ul>
Uptake and underinsurance	<ul style="list-style-type: none"> <li>• We have limited information. Banks and real estate agents have not reported a decrease in insurance uptake.</li> </ul>
<b>MUBs and commercial buildings</b>	
Premiums	<ul style="list-style-type: none"> <li>• High premium increases for MUBs and commercial buildings in Wellington (100 percent increase on average since 2016).</li> <li>• A small number of MUBs and commercial buildings in Wellington had premiums more than doubling in the past year.</li> </ul>

Availability	<ul style="list-style-type: none"> <li>Declining availability for MUBs and commercial buildings in Wellington – but we have not seen evidence of properties having no access to insurance. Some insurers have already reduced their exposure to Wellington <sup>[26]</sup> while other insurers appear to have limited capacity or appetite to increase their Wellington exposure.</li> <li>The risk on a given building is being shared between more insurers, so it is taking brokers longer to piece together cover on each building.</li> <li>Insurers are keen to avoid insuring a single unit within a MUB (insurers look to insure the whole building only).</li> </ul>
Uptake and underinsurance	<ul style="list-style-type: none"> <li>Most Wellington MUBs appear to be insured for replacement value (ie. the cost of replacing), but indemnity value (an amount that may not actually cover replacement) is becoming more common.</li> <li>Based on limited information, most MUBs appear to be continuing to insure, at least to indemnity value (Note that Section 135(1) of the Unit Titles Act (UTA) requires a body corporate to insure buildings and other improvements to their “full insurable value”).</li> </ul>

*Risk of reduction in availability and coverage*

5. There is a risk that property insurance uptake could decline if higher risk properties are unable to obtain insurance at a price they consider affordable. The table below sets out our assessment of the risk of a reduction in insurance uptake or increase in underinsurance.

<b>Risk of a reduction in insurance uptake</b>	
Residential house	<p>Low-medium:</p> <ul style="list-style-type: none"> <li>For residential housing, the main risk is a reduction in insurance uptake (or increased underinsurance) for the small proportion of properties with significant premium increases.</li> <li>Insurance appears to be generally available for now.</li> <li>Residential insurance uptake has proven resistant to significant premium increases in the past (after Christchurch 2011 and Kaikoura 2016). However, there may be a point at which insurance becomes more problematic for property owners (particularly in the context of forecasts of low house price inflation).</li> <li>Property owners are generally required to hold property insurance under the terms of their mortgage.</li> </ul>
MUBs	<p>Medium:</p> <ul style="list-style-type: none"> <li>There is a medium risk that the concentration of correlated risk in Wellington will create further availability issues and higher premiums for MUBs, leading to reduced insurance uptake and underinsurance.</li> <li>Property owners are generally required to hold property insurance under the terms of their mortgage. In addition, the Unit</li> </ul>

	Titles Act requires body corporates to insure to the full insurable value.
Commercial	<p>Medium:</p> <ul style="list-style-type: none"> <li>The commercial building market appears to be experiencing the same issues (around price increases and availability decline) as body corporates. However, commercial rents in Wellington are reported to have more than offset insurance premium increases (but this may not continue - if rents become unaffordable buildings may lose tenants and remain unleased). Property owners appear to be continuing to insure.</li> </ul>

*Further information*

6. Our assessment of the changes to property insurance markets is based on limited information provided by insurers, brokers, real estate agents, commercial property owners, and business associations, and residential property owners and their associations. We are continuing to seek further information as set out below.

Further information we intend to obtain	
Residential house	<ul style="list-style-type: none"> <li><b>Information direct from insurers:</b> <sup>[26]</sup></li> <li><b>Consumer surveys:</b> We are looking to engage an external contractor to conduct phone or online surveys of residential property owners, including owner-occupied houses and unit title holders. The purpose of the surveys is to understand property insurance uptake, price, quality, availability, and the information provided by insurers when they decline cover or increase premiums. We are seeking to collate and analyse the data by mid-October.</li> <li><b>Research project with the Insurance Council of New Zealand (ICNZ):</b> We are engaging with ICNZ on a research proposal to provide a more comprehensive view of the current state of the insurance market. This will involve working with ICNZ to collect information from insurers. We anticipate that the research is likely to take more than six months to complete, which means it will not be available to inform the November 2019 Cabinet decisions.</li> </ul>
Body corporates and commercial	<ul style="list-style-type: none"> <li><b>Broker data on premiums:</b> We are commissioning a commercial property insurance broker to provide data on premium trends for commercial properties and body corporates in Auckland and Wellington.</li> </ul>

## Annex 2: Reinsurance of New Zealand risks

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### Overview

1. The purchasing of reinsurance is a key expense for property insurers. It is therefore an important factor for insurance pricing and availability.

### *Benefits to holding reinsurance*

2. Reinsurance transfers risk assumed by insurers to reinsurers. Reinsuring risk is essentially an alternative to holding capital – so it allows insurers to increase their underwriting capacity and offer more insurance coverage. It can be cheaper and more accessible than the capital insurers would otherwise need to hold. Reinsurance also enables property insurers to reduce volatility in underwriting results from year to year and diversify risk internationally to reduce the impact of catastrophes on the domestic financial system.

### *Main forms of reinsurance*

3. Reinsurance takes two basic forms:
  - a **Treaty reinsurance** – whereby a reinsurer (or multiple reinsurers) covers an entire portfolio (or a portion of a portfolio) of insurance policies in return for a premium paid by the insurer. The vast majority of New Zealand residential property risks are reinsured via treaty reinsurance.
  - b **Facultative reinsurance** – whereby individual insurance policies (usually for large or complex risks) – for example MUBs and commercial buildings worth over NZ\$100 million – are covered on a stand-alone basis in return for a premium paid by the insurer.

### *Use of catastrophe reinsurance for New Zealand risks*

4. EQC insures the first \$150,000 of loss to residential properties from earthquakes in New Zealand. It retains \$1.75 billion of the risk and reinsures risk on top of this with international reinsurers. This means that the proportion of claims costs covered by EQC's reinsurance varies considerably by size of event (from nil up to a maximum of about 77% of losses).
5. On average, New Zealand insurers transfer (or “cede”) over 90 percent of property catastrophe risk that they assume from policyholders to reinsurers.<sup>4</sup> Each insurer's reinsurance programme differs depending on that insurer's group structure. According to the Reserve Bank, New Zealand insurers typically place reinsurance with roughly 30 to 50 reinsurers at any one time. This enables insurers to spread the risk of their insurance portfolio widely, get the best price for given sections of risk, and reduce their risk of suffering loss due to the failure of a reinsurer.
6. In general, insurers retain some risk before their catastrophe reinsurance cover kicks in.

[25]

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<sup>4</sup> Reserve Bank of New Zealand

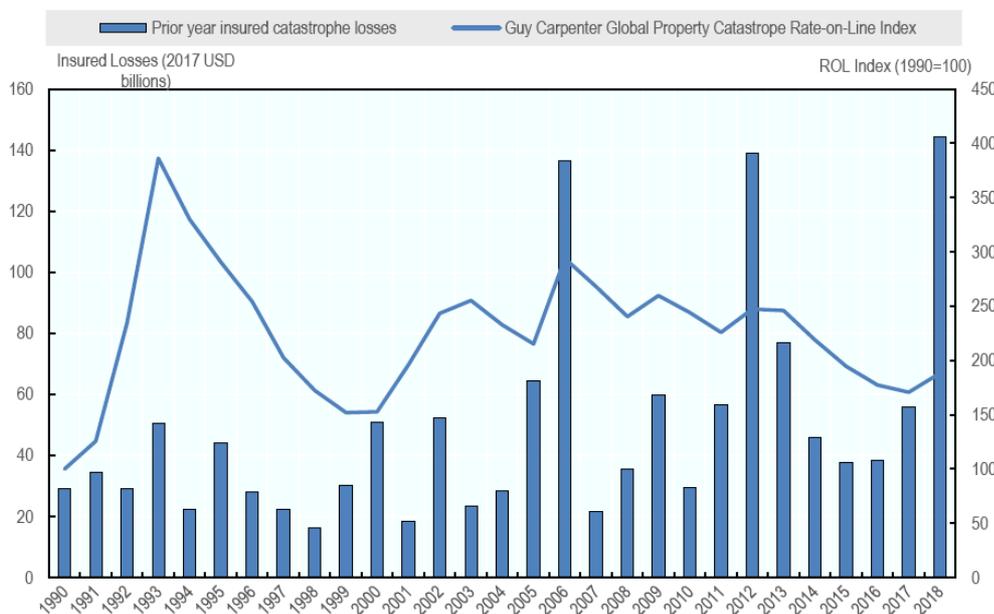
<sup>5</sup> [25]

## Reinsurance pricing

7. The OECD has noted that<sup>6</sup>:

- a The global reinsurance market for property catastrophe risks has historically gone through cycles of high prices and limited capacity (a “hard market”), and low prices and significant capacity (a “soft market”). See Figure 1 below.
- b The cycles have normally been driven by the occurrence of major catastrophes.
- c A catastrophe typically causes pricing to rise in the short term as reinsurers’ capital base is reduced and/or reinsurers re-evaluate their exposures based on the impacts of the event.

Figure 1: The impact of insured capacity losses on reinsurance pricing



Source: OECD calculations based on (Swiss Re, 2018<sup>[20]</sup>) and data for the Guy Carpenter Global Rate-on-Line index (provided by Guy Carpenter for traditional reinsurance coverage).

8. New Zealand insurers’ experience with reinsurance markets since the Canterbury earthquakes follows the trends shown in Figure 1.<sup>7</sup> However, because the Canterbury earthquakes occurred in New Zealand, the impact on reinsurance prices for New Zealand risks was magnified and more sustained than that shown for global reinsurance markets, as the major losses suffered by reinsurers caused them to rethink their true level of exposure to loss from New Zealand earthquake risk.
9. It appears that reinsurance pricing for New Zealand risks had settled by around 2014-2015 (but is still much higher on average than it was prior to the Canterbury earthquakes).<sup>[25]</sup>

. Pricing is, and has always been, impacted by global markets – New Zealand insurers benefit from the positive impacts of soft global reinsurance markets, and are affected by the negative impacts of hard global reinsurance markets.

<sup>6</sup> OECD, The Contribution of Reinsurance Markets to Managing Global Catastrophe Risk, 2018, p.21.

<sup>7</sup> Based on conversations with insurers, brokers, and the annual reports of listed insurers since 2010 T2019/2234 Treasury Report: Property insurance: market trends and objectives

### *Reinsurance capacity*

10. We have not seen any evidence of New Zealand insurers having difficulty in obtaining treaty reinsurance. Several insurers have noted to us that there is not a reinsurance capacity problem and in fact there is excess reinsurance capacity for treaty reinsurance. Representatives from Munich Re noted to us that they were not (and to their knowledge other reinsurers were not) pulling back on reinsurance of New Zealand risk. They did not see any issue of access for New Zealand to reinsurance in the immediate future.
11. We understand from commercial property insurance brokers that there are capacity issues in the global facultative reinsurance market, and prices for facultative reinsurance for risks around the world are currently relatively high. This is likely to be contributor to the constraints experienced in relation to insuring large MUBs and commercial buildings.

## Annex 3: Changes in granularity of pricing

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### *Insurers using catastrophe risk models to price risk more granularly*

1. Although insurers have always priced risk, since 2018 the large insurers in New Zealand have moved toward a more granular approach to pricing earthquake and flood risk. Catastrophe risk models has helped to enable this approach.

### *Catastrophe risk modelling*

2. Catastrophe risk models are designed to estimate the potential monetary loss that could be caused by damage to property exposed to natural hazard events.
3. In relation to earthquake risk, catastrophe risk models combine knowledge of:
  - a the earthquakes that are likely to affect a property (ie. where they are located, how often they are likely to occur, and how large they are likely to be)
  - b the likely severity of ground motion that will occur in the earthquakes and to which the asset will be subjected
  - c the type and characteristics of the property, and its vulnerability to shaking of any given intensity (ie. the likely cost of repairing the damage, as a proportion of its value), and
  - d the value of the exposed property.
4. The above four items can then be combined to produce a risk estimate for material damage to the property under consideration and calculate a “technical premium”.
5. The following information about the type and characteristics of property is relevant:
  - a For the building:
    - structure type
    - material of construction
    - number of floors in height
    - year of construction as age
    - percentage of New Building Standards(NBS) (commercial and MUBs only), and
    - quality of design – ‘sound’ or ‘deficient’
  - b For the land:
    - its topography (slope or flat)
    - susceptibility to land damage (liquefaction and landslide), and
    - soil properties.
6. Seismic vulnerability of a building and its risk can be assessed provided the above characteristics are available. However, in reality specific information on each characteristic

is not available, so generally conservative approaches are adopted by making specific assumptions and engineering judgements based on available publicly information.<sup>8</sup>

### *Portfolio proportions*

7. Generally, insurers do not want to be disproportionately exposed in high-risk areas. Since 2018, it appears that large New Zealand insurers have sought to ensure the exposure of their portfolios to the Wellington region is kept to a given proportion of their overall portfolios. This is because insurance works best when it spreads similar, but non-correlated, risks across insureds so insurers avoid concentration risk. When one insurer increases pricing for higher risk properties, other insurers can be left exposed to a higher concentration of high risk properties than desired if they do not take action by changing their pricing and/or declining to cover certain properties. As explained in Annex 4, the need to maintain solvency capital and reinsurance buying also impact the level of exposure insurers are willing to accept in high risk locations.

### *International examples*

8. The increases observed in property insurance premiums in parts of New Zealand are comparable to changes that have taken place in other countries over the past 30 years. For example, events like the Northridge earthquake in California in 1994, the Kobe earthquake in 1995, the Tohoku earthquake and tsunami in 2011, and the major US hurricanes in the 2000s, caused major loss. These events demonstrated to insurers and reinsurers that they had not been accurately pricing the risk they were insuring, and led to more granular pricing of risk based on more detailed data and considerable increases in premiums for affected areas.
9. We have provided more detail on responses to insurance issues arising from major international events in our report to you titled Catastrophe Insurance: Policy Interventions and International Comparators [T2019/2590].

## Annex 4: Solvency capital and reinsurance

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### *Why insurers hold capital and reinsurance*

1. Insurers hold capital to back the policy obligations they underwrite. Buying reinsurance is an alternative to holding capital. It is a business necessity for insurers to hold capital and reinsurance because, among other things:
  - a if businesses and consumers are not confident that an insurer has sufficient capital or reinsurance to pay claims in the event of a catastrophe, the insurer is unlikely to attract customers, and
  - b insurers want to survive catastrophic events so that they can avoid the loss and legal ramifications associated with failure and continue to operate and make profits in the future.
2. In addition to the above reasons for holding capital and reinsurance, insurers are compelled to hold a minimum level of capital (or reinsurance) pursuant to the solvency standard (Solvency Standard) set by the Reserve Bank under the Insurance Prudential Supervision Act 2010 (IPSA). In short, under the Solvency Standard insurers must hold enough capital and/or reinsurance to cover an insurer's maximum probable loss for a 1:1000 year event for earthquakes. The 1:1000 year calibration is the highest in the world meaning that New Zealand insurers are required to maintain more capital or reinsurance to back policy obligations than insurers in other countries. A description of the Solvency Standard and our view of its impact on the market are set out in Annex 4.

### *Increasing capital*

3. Insurers can increase capital by retaining earnings or issuing other capital instruments (eg. shares). There is an opportunity cost to holding a lot of capital, because insurers could be using the capital to fund operations and grow their business to increase profits rather than holding onto it in the form of relatively safe and liquid (but lower yielding) instruments.

### *How maintenance of insurer capital impacts Wellington insurance market capacity*

4. Insurers purchase treaty reinsurance annually. The amount of reinsurance purchased is determined taking into account a number of factors, including the insurer's risk appetite, regulatory solvency requirements, and the amount of new business the insurer expects to write in the coming year.
5. The total amount of catastrophe reinsurance cover purchased for a given portfolio is driven by the insurer's maximum probable loss from a given event. For most New Zealand insurers (including the large trans-Tasman insurers) a 1:1000 year Wellington earthquake is either the event in their portfolio that could cause the highest maximum probable loss, or very close to it. This is the case even though their Wellington risk count is low compared to other centres like Auckland or Sydney.
6. Insurers with relatively high exposure to risk in the Wellington region have a maximum aggregate exposure to the region that they do not wish to exceed because:
  - a in a given year, an insurer can only take on a certain amount of risk within the confines of the amount of treaty reinsurance they have purchased for that year. Taking on new Wellington risks will take up more of the reinsurance head-room for that year than taking on, say, the equivalent number of Auckland risks, and
  - b when planning for reinsurance buying for the next year, a conscious decision to write more risks in Wellington (and increase the portfolio's exposure to Wellington) is likely to come with a higher marginal cost than for lower risk locations. This is because

that decision would increase the maximum probable loss for the portfolio and so would require increased reinsurance buying if the insurer wanted to maintain the same solvency capital ratio (whereas that is not the case for less risky regions).

7. The above factors help to explain how the concentration of high risk in the Wellington region has led to insurance availability issues for certain properties in Wellington.
8. There is evidence that new entrants with a low proportion of Wellington risk in their portfolio <sup>[34]</sup> have been able to underwrite Wellington risks more freely than established market participants.<sup>9</sup> This is possible, in part, because they have not yet reached a proportion of Wellington risk in their portfolio that impacts the amount of reinsurance they have to buy for their portfolio if they want to maintain the same solvency capital ratio.

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<sup>9</sup> [34]  
T2019/2234 Treasury Report: Property insurance: market trends and objectives  
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Annex 5: Regulatory solvency standards

*Introduction to insurer solvency standards*

1. Sufficient capital is often the most important mitigant that may avert the failure of an insurer in financial distress. The Reserve Bank issues a solvency standard for insurers licensed under IPSA (the Solvency Standard). The purpose of the Solvency Standard is to maintain the possibility of insurer failure at low levels and thereby safeguard the interests of policyholders and, to some extent, other stakeholders.
2. The Solvency Standard applies to every insurer licensed in New Zealand, unless they are an overseas insurer (ie. incorporated outside of New Zealand) with an exemption. Exemptions may be granted to overseas insurers that are subject to acceptable overseas solvency standards.

*Summary of Solvency Standard in the context of catastrophe risk*

3. The Solvency Standard sets out the calculation of the minimum solvency capital (**MSC**) that must be held by each licensed insurer. The MSC is the sum of six “charges” that reflect the risk to the insurer of suffering losses. For property insurers, the most significant component is the *catastrophe risk capital charge*, which reflects the insurer’s risk of exposure to losses from extreme events such as earthquakes. Some key features of the catastrophe risk capital charge are set out in the table below.

Features of the catastrophe risk capital charge	
Calibration	<ul style="list-style-type: none"> <li>• The catastrophe risk capital charge must cover an insurer’s probable maximum loss for a 1:1000 year event for earthquakes, and a 1:250 year event for other hazards. The calibration was increased from 1:500 to 1:1000 over 2015 and 2016.</li> </ul>
Impacts on calculation of catastrophe risk capital charge	<ul style="list-style-type: none"> <li>• When catastrophe risk models are updated to show that there is greater seismic risk than previously thought (as has happened following the Christchurch earthquakes), the amount of the risk capital charge increases and insurers are required to hold more capital.</li> </ul>
Implications for Wellington	<ul style="list-style-type: none"> <li>• Wellington has a higher risk of an extreme event than other parts of New Zealand. The more exposure to Wellington an insurer has within an insurance portfolio of a given size, the higher its maximum probable loss from a 1:1000 year event, and the more capital (or reinsurance) it must hold.</li> </ul>
Reinsurance is a mitigant	<ul style="list-style-type: none"> <li>• When calculating the MSC, reinsurance is recognised as a mitigant. This means that the insurance risk charge and the catastrophe risk charge are reduced to the extent that reinsurance is applied (subject to a minimum insurance risk charge set by the Reserve Bank).</li> </ul>

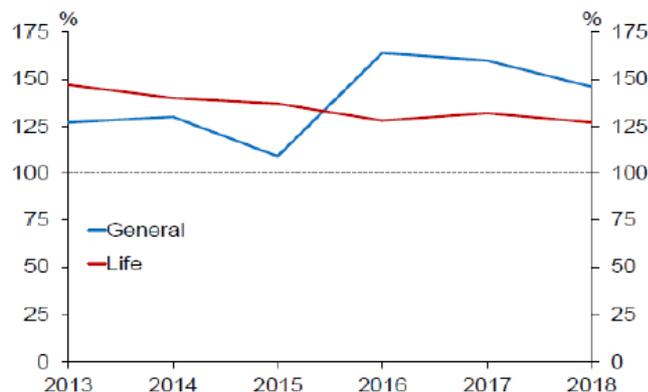
4.

5. New Zealand's earthquake calibration is the highest catastrophe calibration in the world.<sup>10</sup> This implies that the Reserve Bank has a lower risk tolerance for insurer failure than its overseas counterparts. There are reasons for the Reserve Bank to have a lower risk tolerance than regulators in other countries. New Zealand is a small country with a small insurance market, so the impact of insurer failure may be felt by a greater proportion of the population, have a larger structural impact on New Zealand's economy, and be more likely to require government intervention than an insurer failure in a larger market.

*Impact of prudential capital requirements on insurance pricing and availability*

6. New Zealand's high catastrophe risk capital charge could potentially impact on insurance affordability and pricing. ICNZ noted in 2011 that the implementation of the 1:1000 year calibration would force insurers to increase the amount of reinsurance they purchase, despite the fact that most insurers' reinsurance programmes responded more than adequately to the Canterbury earthquakes.<sup>11</sup>
7. However, the Reserve Bank has noted that most insurers claimed that they were already at the 1:1000 year calibration. The Reserve Bank has noted that increases in reinsurance purchased since 2011 reflects a higher view of the underlying risk, better data, and increases in insured asset values generally – in other words, notwithstanding the Solvency Standard, insurers would make a business decision to hold this level of capital and reinsurance to survive an extreme event.
8. Insurers are holding significant voluntary buffers of capital (or reinsurance) on top of what they are required to hold pursuant to its MSC (see Figure 1 below).

Figure 1<sup>12</sup>:



Note: Averages are weighted by insurer's minimum solvency capital requirements (adjusted for licence conditions).  
Source: RBNZ, Macquarie Research, Jun '19

9. The Society of Actuaries has noted to us that it is a business necessity for insurers to hold a buffer above the MSC required under the Solvency Standards, as if they operated at levels close to their MSC, they would risk dropping below their MSC if a major event occurred (which would have regulatory and reputational consequences).

<sup>10</sup> Australia and the European Union, for example, use a 1:200 year calibration

<sup>11</sup> Insurance Council of New Zealand, submission on Reserve Bank Solvency Standard for Non-life Insurance Consultation Draft, July 2011

<sup>12</sup> Macquarie Research, New Zealand General Insurance: We've seen this movie before, 4 June 2019, p. 2

### *Impact of Reserve Bank Solvency Standard*

10. On balance, we consider that insurers' business decisions based on their understanding of earthquake risk cause them to hold a relatively high level of capital (or reinsurance). Therefore, a lower catastrophe risk charge would be unlikely to result in a significant change to insurance pricing and availability, however:
  - a it is likely that at the margins, some insurers hold more capital (or reinsurance) than they would if there was a lower catastrophe risk charge in the Solvency Standard,
  - b the catastrophe risk charge is likely to be a factor for some insurers in determining the maximum aggregate exposure that they are willing to assume in respect of Wellington risks, because in order to maintain a desired buffer above their MSC, they need to increase their reinsurance buying for their portfolio, and
  - c the Solvency Standard prevents current participants in the New Zealand property insurance market from deciding to pursue a higher risk strategy (while still carrying on business in a "prudent manner" in accordance with IPSA) whereby they are able to offer lower priced products by buying less reinsurance.

### *Upcoming review of insurer prudential capital requirements*

11. The Reserve Bank announced in May that it intends to review whether additional solvency buffer requirements for insurers are justified. The Reserve Bank has not made any decisions on solvency buffer requirements at this point.
12. The Society of Actuaries noted to us that it is likely that any changes to the Solvency Standard to require insurers to hold a buffer above current solvency requirements will have the practical impact of some large insurers to reconsider whether they are holding sufficient capital and/or reinsurance. This is because those insurers are likely to want to have sufficient capital above any new buffer requirement to avoid the regulatory and publicity implications of falling below it.
13. Whether insurers increase their reinsurance or capital levels in response to any changes that result from the Reserve Bank review will depend on what those changes (if any) are and how conservative the insurer's approach to regulatory buffers is. If any insurers do decide that they need to increase their reinsurance or capital levels there is a risk that they will:
  - a adjust their premiums to reflect the added cost to them, and/or
  - b reduce their desired maximum aggregate exposure to the Wellington region.