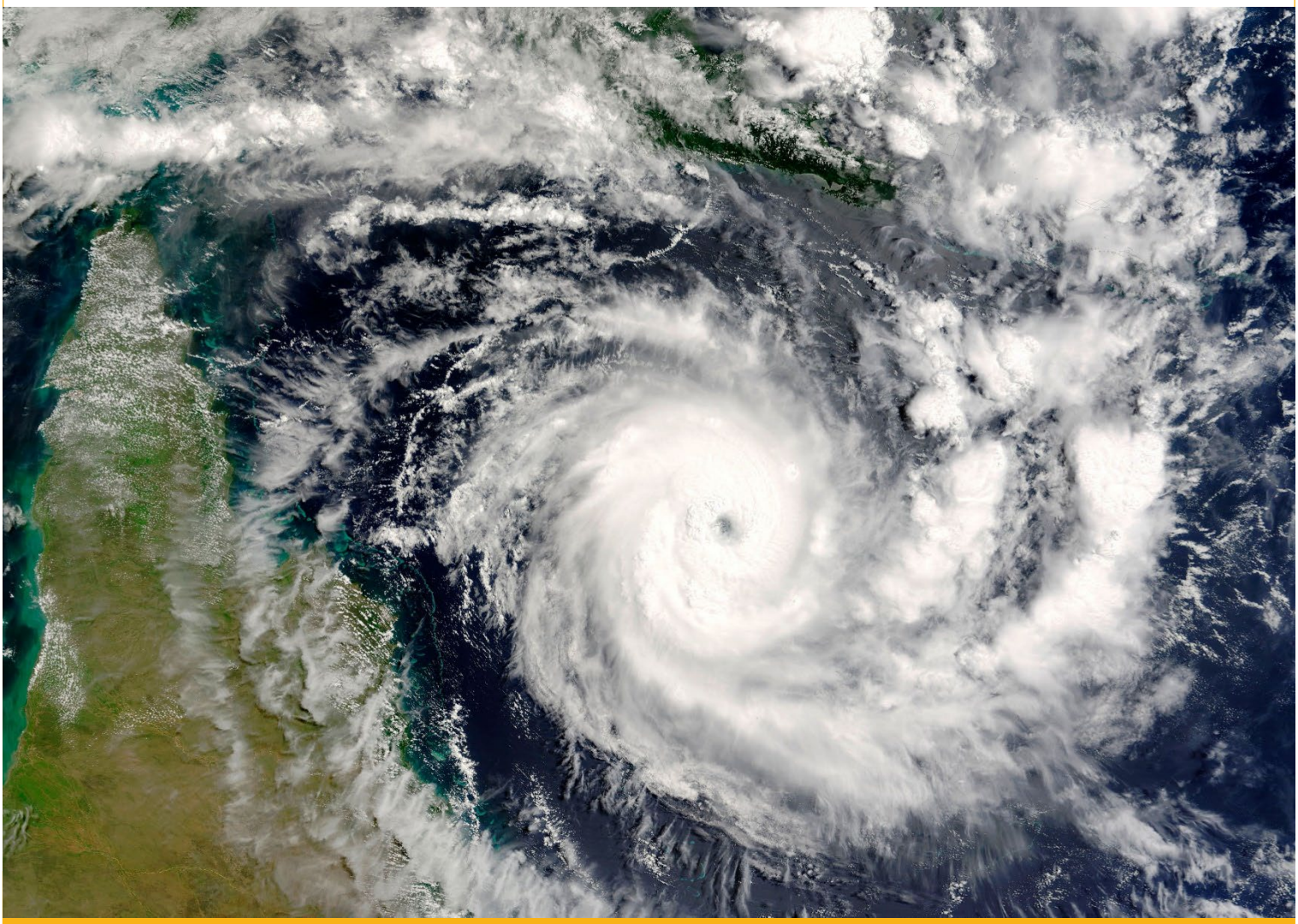
Cyclone Reinsurance Pool – Premium determination applying from 1 October 2022

Australian Reinsurance Pool Corporation



September 2022

finity

28 September 2022

Dr Christopher Wallace
Chief Executive Officer
Australian Reinsurance Pool Corporation
PO Box Q1432
QUEEN VICTORIA BUILDING NSW 1230

Dear Chris

Cyclone Pool – Premium determination applying from 1 October 2022

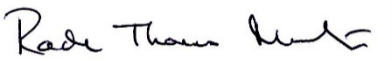
We are pleased to present our Summary Report covering the actuarial analysis undertaken to revise the premium rates for the Cyclone Pool.

This Report summarises our consideration of the insurer consultation conducted in July and August 2022 and our recommended changes to the premium rates to the Australian Reinsurance Pool Corporation for the operation of the Cyclone Pool. The recommended rates were developed jointly between Finity and ARPC.

Yours sincerely

Stephen Lee
Fellow of the Institute of Actuaries of Australia

Geoff Atkins
Fellow of the Institute of Actuaries of Australia



Rade Musulin
Associate of the Casualty Actuarial Society
Member of the American Academy of Actuaries
Certified Catastrophe Risk Management Professional

Notice of amendment

This Report was reissued on 7 October 2022 with a revised Appendix E.11 to correct a misprint.

1 Executive Summary

1.1 Background

The Treasury Laws Amendment (Cyclone and Flood Damage Reinsurance Pool) Act 2022 was assented on 31 March 2022, amending the (renamed) Terrorism and Cyclone Insurance Act 2003. The legislation guiding the Cyclone Pool is referred to as 'the Act' in this report. This Act establishes a Cyclone and Cyclone Related Flooding Reinsurance Pool (referred to as the Cyclone Pool in this document) to be administered by the ARPC. The Cyclone Pool commenced on 1 July 2022, with transitional timeframes for insurers to participate in the scheme. All eligible insurers are required to fully participate in the Cyclone Pool by 31 December 2024.

ARPC engaged Finity Consulting Pty Ltd (Finity) to recommend parameters for the initial premium rating formula to apply from the Cyclone Pool's commencement on 1 July 2022. The analysis undertaken and the initial premium formula are documented in our report titled "Cyclone Reinsurance Pool – Summary of the Actuarial Premium Rate Assessment", dated 28 June 2022 (the 'Previous Report').

Note that references in this Report to cyclone related losses will include cyclone related flooding losses, unless otherwise specified.

1.2 Purpose of this Report

The Responsible Minister requested that ARPC undergo a second stage consultation with industry from July 2022 to September 2022. The Responsible Minister requested insurers to provide more detailed data to assist ARPC in this second stage consultation, noting the very limited nature of the sample set available for setting the initial premium rating formula.

ARPC engaged Finity to recommend revisions to the premium rating formula having considered the following:

- Analysis of additional data provided by insurers.
- Consideration of feedback provided by insurers in second stage consultation.
- Review of the assumptions made in respect of the original analysis.

The premium rating formula changes documented in this Report have been adopted by ARPC.

This Report summarises the findings and revisions to ARPC's premium rating formula applying from 1 October 2022. It concentrates on the considerations and changes made to the premium rating formula, and should be read in conjunction with the Previous Report.

This report is intended to be provided to insurers and to be publicly available. Care has been taken not to include information that is commercially confidential. A great deal of sensitive data is provided by insurers to ARPC and there are extensive confidentiality obligations on ARPC and its advisers in respect of that information. No individual insurer is named in the report and no information included that might identify an insurer or enable insurer data to be derived or deduced.

1.3 Application dates for Cyclone Pool premium rates

The Cyclone Pool went live on 1 July 2022; the 1 July 2022 premium rates applied for policies written from 1 July 2022 to 30 September 2022.

This Report documents the premium rates applying for policies written from 1 October 2022. The corresponding version of the supporting premium rating spreadsheets for this release is v2.0.

1.4 Analysis of new data, feedback, and assumption review

1.4.1 Analysis of insurer data

Finity analysis of the policy data provided by 4 insurers, when applying the 1 July 2022 premium rates, suggests that the Cyclone Pool will, overall, reduce the cyclone premium component of policyholder premiums, in a manner consistent with the objectives of the scheme.

1.4.2 Insurer feedback

Insurers provided feedback to ARPC for this phase of industry consultation. The feedback also generally confirmed the following outcomes consistent with the intention of the Cyclone Pool and with our analysis of insurer data:

- There were material reductions in policyholder premiums in cyclone affected areas.
- The premium reduction are more substantial in Northern Queensland.
  - > One insurer indicated that for a large number of its policyholders, predominantly in Northern Queensland[1], the *cyclone component of premium* reduced by more than half.
  - > One insurer's feedback suggested *total policyholder premium* reductions in Northern Queensland in the order of 20%.
- Some insurers observed some savings in South East Queensland, in the order of 5-10% of the premium.

Insurers indicated that Cyclone Pool premiums in Perth and surrounding areas appeared high.

1.4.3 Assumption review

Finity undertook an internal review of the premium-setting assumptions for the Cyclone Pool, which included discussions with Aon in respect of catastrophe modelling assumptions. The review generally concluded that the original analysis was reasonable. The areas highlighted for additional review for the 1 October 2022 premium rates were the following:

- The modelled losses for Pilbara are the most likely to be anomalous, which was strongly confirmed from the insurer feedback.
- The non-insurance assumption applied to estimate the premium pool requirement can lead to overstatement of the AAL.

1.5 Areas of review

The insurer feedback and Finity's review of assumptions identified the following areas warranting further investigation and where changes have been made as a result:

1 Cyclone Pool premium rates for Geraldton and Perth were identified as higher than current premiums. More generally, it was identified that catastrophe modelling outcomes estimated larger losses than have been observed for recent cyclone events in WA (though noting that there have only been a limited number of recent events).

2 There are a number of indications that the cyclone risk for Strata buildings, particularly for higher sum insured buildings (i.e. >$20m sum insured), benefits from better engineering and build strength.

[1] This insurer also noted a small number of policies where the opposite was true, which was a known potential consequence of comparing a standard premium rate to market premiums.

3 The non-insurance assumption applied to estimate the premium pool requirement can lead to overstatement of the Average Annual Loss (AAL) that the pool is required to collect.

In some instances the feedback received was not consistent (e.g. between insurers). Adjustments to the premium rating formula were considered where the feedback could be verified through additional information from other sources or using the data provided by insurers.

1.6 Proposed changes to the premium pool and premium collections

The Cyclone Pool premium firstly considers the ***target premium pool***. The target premium pool is determined by estimating the AAL of claims, claims handling expenses payable by the Pool and the Pool's operating expenses. The target premium pool is the amount that the Cyclone Pool should aim to collect once all insurers join the scheme. In circumstances where the modelled risk level has changed, the target premium pool will change accordingly. If, however, a rate change does not relate to a modelled risk level change (e.g. distribution of subsidies), there will be no change to the target premium pool.

The target premium pool was revised as shown in Table 1.1.

Table 1.1 – Summary of target premium pool changes

Description of change	Target premium pool ($m)
Previous estimate of premium pool	867
Revised risk assessment for WA / Pilbara	(45)
Revised cyclone risk for strata buildings	(17)
Non-insurance assumption	(29)
Overall changes	**(91)**
Revised estimate of premium pool	776

Having considered each of the issues discussed in Section 1.5, the target premium pool reduced by $91m, arising from the following:

- WA/Pilbara wind risk: A review undertaken by Aon and insurer information indicated that the vulnerability curve in at least one of the models overstates the level of risk. The catastrophe model output for WA events was changed to reflect reduced vulnerability curves, resulting in a lower estimate of the wind damage losses (see Section 4.1).
- Strata: Insurers provided feedback that pricing for strata, in some instances, was lower than the Cyclone Pool premiums. The target premium pool estimates for strata were revised to reflect risk modelling results from additional modelling samples (further to those initially relied upon) and assessed cyclone risk for higher sum insured properties informed by market pricing (see Section 4.2).
- Non-insurance: Allowing for a modest level of non-insurance, particularly in high risk regions, results in a reduction in the target premium pool of $29m (see Section 4.3).

This reduction in the target premium pool means that the Cyclone Pool rates for some policies can be reduced from the 1 July levels. This will involve changes to the premium rating formula, which sets out the calculation of

reinsurance premiums payable by insurers to the Cyclone Pool. The list of changes can be found in Appendix D. The key changes applied to the premium rating formula were the following:

- The wind premium rates for wind bands V and W were reduced to $0.25 and $0.35 per $100 sum insured (down from $0.35 and $0.50 respectively for the initial 1 July 2022 premium rates). This predominantly affects the Pilbara region, where the Cyclone Pool premium rates will reduce.
- Reallocation of suburbs in southern WA to lower wind risk bands. This is in response to the change in the modelled assessment of AAL for Perth and Geraldton areas.
- Changes to sum insured, construction type and number of storeys risk factor relativities for strata buildings.
- Other changes to relativity factors arising from feedback from insurers, notably removing the excess relativity for combined home policies and revised relativity for 'Timber/Weatherboard/Hardiplank' construction.

We estimate that applying the recommended 1 October 2022 premium formula will mean that premiums in the order of $776m are collected (once all eligible risks are in the Cyclone Pool). To preserve the fiscal neutrality requirement of the Cyclone Pool, the premium formula has been determined such that the amount collected is essentially equal to the target premium pool.

1.7 Estimated policyholder savings

This section summarises the estimated savings by insurance class applying the recommended 1 October 2022 premium rates to the policyholder sample data received. The analysis is biased to the insurers that provided data and not representative of all insured properties. There are limitations in the data received and in estimating policyholder saving in this section, which are discussed in Section 2.4.

1.7.1 Summary of savings

The estimated reduction in ***policyholder premiums*** when applying the 1 October 2022 premium formula is summarised in Table 1.2.

Table 1.2 – Summary of average premium savings by class (1 October 2022 rates)

	Average savings (sample size)			
Product class	All record samples (QLD, NT, WA, Northern NSW)	Northern Australia (CRESTA 5-20)	High ***total*** premium band in Northern Australia[2]	Total sample size
Home	-6% (720,934)	-13% (143,500)	-32% (2,416)	720,934
SME[1]	-6% (34,700)	-10% (11,857)	-13% (274)	34,700
Strata	-14% (24,508)	-37% (1,905)	N/A[4]	24,508

[1]Policies with BLD cover

[2]Highest premium band defined as $1.50+ per $100SI for Home and SME

[3]Cannot be reliably estimated due to data limitations

For comparability, we have shown savings for the ***highest total premium*** band consistent with this table found in our Previous Report[2]. The premium reductions presented, however, should not be directly compared to the Previous Report because the underlying dataset which this analysis is based on is different. A better comparison

[2] It should be noted that the total premium can be high for reasons not just related to cyclone risk, such as if a home has exposures to other natural perils or the SME business involves dealing with hazardous materials.

is with savings outlined in Section 3.1, where savings are estimated using the 1 July rates applied to the insurer data provided for this review. The 1 October premium formula changes set out in this Report are almost exclusively downwards compared to the 1 July rates, leading to further savings to the specific areas addressed.

The premium charged by insurers in respect of the cyclone is a more direct measure of cyclone risk, and is also more directly related to the component of premium that the Cyclone Pool aims to reduce. We are able to better observe this with the more comprehensive data provided by insurers for this review. Table 1.3 below shows the estimated savings for the ***highest cyclone premium*** policies (and the highest total premium for comparison). The two versions of the summaries represent alternate groupings of policies; the underlying distribution of outcomes is not different.

Table 1.3 – Summary of average premium savings for high risk policies (1 October 2022 rates)

	Average savings (sample size)	
Product class	High ***cyclone*** premium band[2]	High ***total*** premium band in Northern Australia[3]
Home	-48% (2,349)	-32% (2,416)
SME[1]	-38% (64)	-13% (274)
Strata	N/A[4]	N/A[4]

[1]Policies with BLD cover

[2]High cyclone premium defined as $1.00+ per $100SI for Home and SME

[3]Highest premium band defined as $1.50+ per $100SI for Home and SME

[4]Cannot be reliably estimated due to data limitations

Savings are expected across insurance segments from the data we analysed. Savings in Northern Australia are higher than across the whole dataset, consistent with the intention of the Cyclone Pool. Further, the policyholders currently paying the highest premiums will get the greatest savings.

In the context of a hardening insurance market responding to high claims inflation and recent (non-cyclone related) natural perils costs, premium reductions arising from the Cyclone Pool may be difficult to observe in practice or dampened as these reductions may be offset by premium increases elsewhere. Premium increases resulting from issues outside of the Cyclone Pool may mean that estimated premium reductions for nil/minimal and low risk properties may not be observed by the policyholder.

1.7.2 Saving by cyclone risk

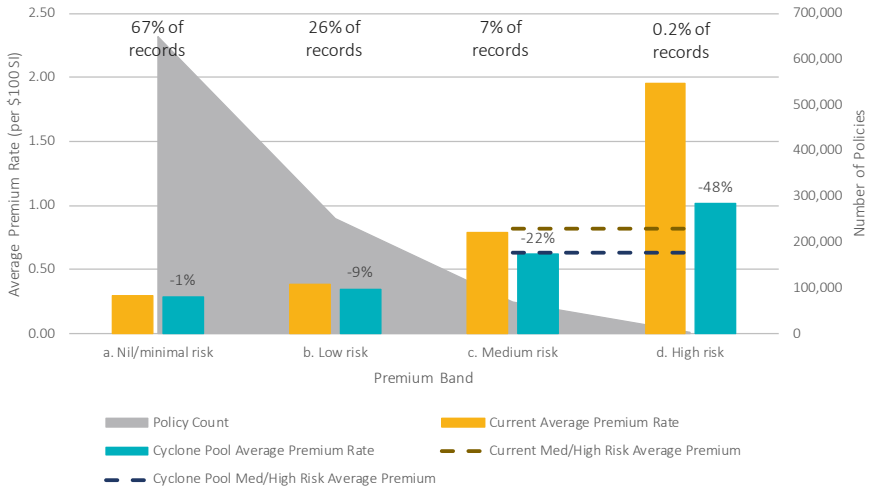
The intention is for the Cyclone Pool to direct savings to medium to high cyclone risk properties.

The following exhibits show estimated premium savings by premium risk bands based on the cyclone risk inferred from current insurer pricing (i.e. where the insurer charges a high cyclone premium, we assume this is because the insurer assesses the policy is a high risk of cyclones). See Section 2.4.3 for how low to high cyclone risk properties have been classified, and how this has changed from the classification used in the Previous Report.

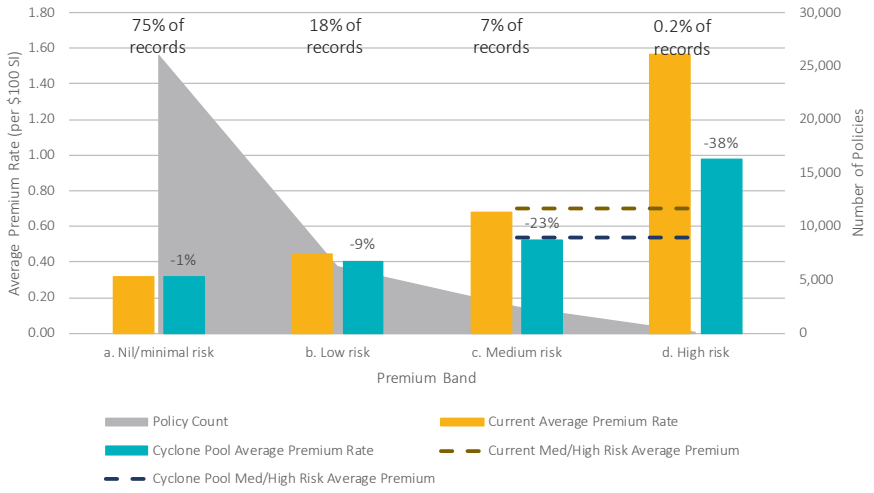
This is shown in Figure 1.1 for home, SME and strata respectively for policies in the insurer dataset.

Figure 1.1 – Estimated savings by premium risk band for home, SME and strata insurance

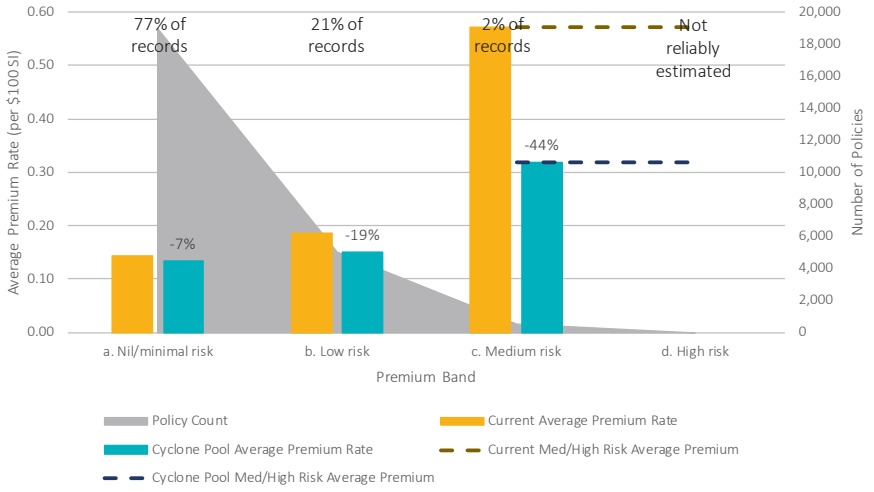
Home insurance polices



SME business insurance polices



Strata buildings insurance policies



1.8 Reliances and limitations

This report and the analysis contained herein summarises work completed solely for ARPC for the purposes of determining the Cyclone Pool premium. This summary report has been provided to insurers to assist with their own implementation of the Cyclone Pool.

We have relied upon a range of catastrophe models, each producing an estimate of claims costs. There is significant uncertainty in modelled estimates of cyclone claims. Catastrophe models are simplifications of complex natural weather processes, the interaction with building damage and finally the estimated insurance losses.

We have also relied on exposure data furnished to Treasury by insurers. A number of assumptions were required to standardise that exposure and render it useful for this analysis.

Some insurers provided data to ARPC for the purposes of determining the Cyclone Pool premium rates. This data was provided on a best endeavours basis. Finity undertook reasonableness checks on the insurer data provided. We were unable to verify this data for completeness and accuracy. Some insurers informed ARPC that the data provided had known discrepancies, such as the cyclone book premium not being reflective of the actual premium paid by the policyholder. Furthermore, the data was not consistent between insurers; Finity adjusted the raw data for comparability purposes by making assumptions on the insurer expense and commission rates.

Estimating the Cyclone Pool premium inevitably requires many assumptions. Further details of the reliances and limitations of this work are important to understand and are documented in Section 6.

2 Background and context for this Report

2.1 About the Cyclone Pool

Currently, insurers determine the price for cyclone risk for each property. This price will be made up of an expected cost for cyclone damage, loading for expenses, reinsurance cost (especially the cost of Cat XOL) and margins (such as for capital costs). In a competitive market, an insurer is not able to materially cross subsidise the premium required for a high-risk property by charging lower risk properties more. Doing so will lead to an insurer being selected against.

The premium for cyclone risk is, however, embedded as one component of overall premiums. Insurers may or may not build up 'technical' premiums by peril in this way, and usually apply a range of commercial overlays on technical to determine actuarial premium charged.

The Cyclone Pool established by the Act will replace insurers' current approach to financing cyclone losses. The Cyclone Pool can achieve savings to policyholders as follows:

- The Cyclone Pool will not need to charge a margin for the risk it takes on, and therefore this leads to a saving in the total cost of cyclone insurance costs.
- The Cyclone Pool can direct the margin savings to the highest risk properties through its reinsurance premium setting.
- In the longer run, a centralised Cyclone Pool can provide incentives for mitigation initiatives to lower overall cost of cyclone to Australia.

ARPC is the Cyclone Pool operator under the Act.

The Act sets out the following four objectives of the Cyclone Pool relevant to the premium setting:

1. Premiums paid to the Cyclone Pool are sufficient (over the longer term) to meet the Cyclone Pool's costs (Section 8D (a)).
2. Premiums for medium to high cyclone risk policyholders as low as possible (Section 8D (b)).
3. Maintain incentives to reduce and mitigate cyclone risk (Section 8D (b)).
4. Premiums for low cyclone risk policyholders kept to comparable levels of what would be charged by other reinsurers (Section 8D (c)).

In meeting the first objective, the Cyclone Pool premium rating formula is designed to collect a total premium pool needed to pay the expected costs of claims and the expenses related to operating of the pool.

2.2 Coverage for the Cyclone Pool

Key details of the Cyclone Pool, as set out in the legislation and supporting regulations, are summarised in Table 2.1.

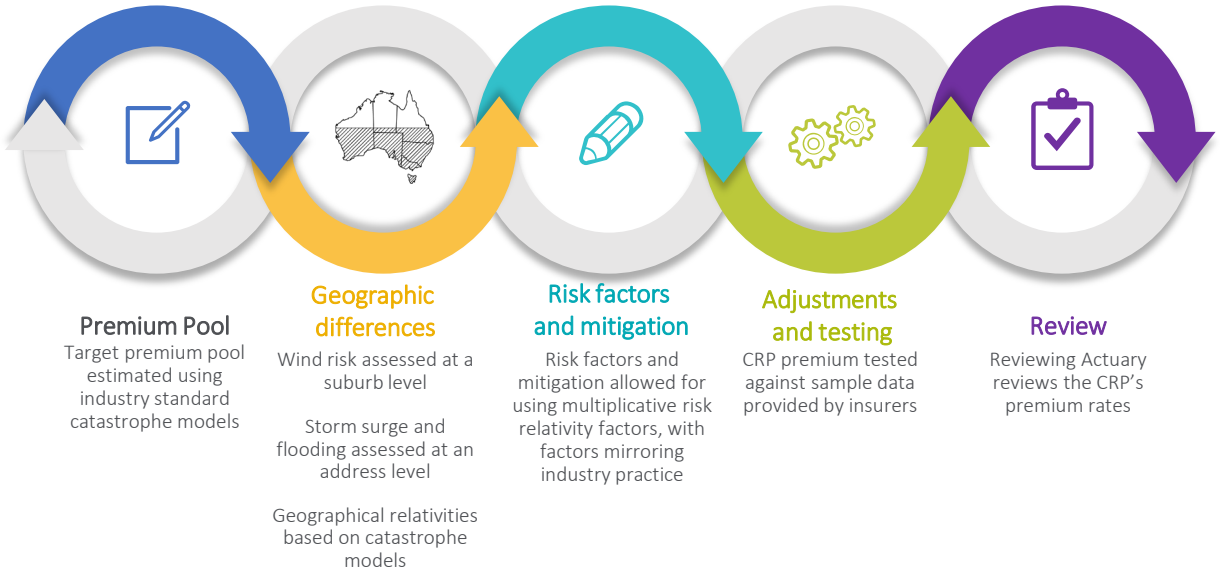
Table 2.1 – Summary of Cyclone Pool operation

Cyclone Pool Coverage	Summary
Eligible properties covered	Homes (buildings and contents) Buildings used for business purposes, including the contents and business interruption losses of the businesses within these buildings, up to a combined per policy limit of $5m (in this Report we refer to this sector as SME) Strata buildings and common property contents with either less than 50% commercial usage or less than $5m sum insured.
Insurers required to be part of the Cyclone Pool	Australian authorised insurers writing more than $10m GWP of properties that are covered by the Cyclone Pool are required to be in the Cyclone Pool. Insurers with more than $300m of home insurance GWP are required to be fully in the Cyclone Pool by 31 December 2023. Other insurers are required to be fully in by 31 December 2024. Cyclone Pool membership is optional for other Australian authorised insurers and Lloyds syndicates. Once an insurer is fully part of the Cyclone Pool, all of its Cyclone Pool covered properties must be in the Cyclone Pool.
Cyclone event	The start and end of a cyclone event is notified by the Bureau of Meteorology (BOM) to ARPC, and subsequently announced by the ARPC.
Insured losses covered	The Cyclone Pool will reinsure the cyclone related losses incurred by the insurer for eligible properties under the insurer's policy. That is, where coverage is excluded in the original policy, the Cyclone Pool will not respond. The Cyclone Pool will reinsure claims where cyclone damage occurred during the period of the cyclone and for a period of 48 hours after the cyclone has been declared to have ended. The Cyclone Pool will pay for damage caused by wind and rain, storm surge and flood from a cyclone event.
Funding losses	The Cyclone Pool will be backed by an annually reinstated $10b Commonwealth guarantee. If the ARPC considers it likely that the guarantee will be insufficient, the Responsible Minister must determine additional funds to be paid to ARPC.

2.3 Recap of process for parameterising initial Cyclone Pool premium rates

Figure 2.1 summarises the process followed to determine the Cyclone Pool's initial premium rates.

Figure 2.1 – Overview of process followed to determine Cyclone Pool premium rates



ARPC procured the following catastrophe models to be used in parameterising the Cyclone Pool premium rating formula:

- Wind risk: RMS, Risk Frontiers, COMBUS.
- Fluvial flooding: Aon CHIP, COMBUS, Finperils/JBA.
- Storm surge: Aon CHIP, COMBUS, Finperils.

Additionally, ARPC engaged Aon, Risk Frontiers and COMBUS to provide expert advice in respect of the catastrophe models. Aon ran the RMS and Risk Frontiers catastrophe models. Finity relied upon the catastrophe models to estimate the target premium pool and to inform geographical differences in risk.

Risk mitigation factors were based on risk factors typically allowed for in the underwriting of cyclone risks, and parameterised by reference to catastrophe models and market practice.

The Cyclone Pool premium rates were tested against policyholder premium data provided by insurers to the ARPC. The testing process measured the Cyclone Pool premium rates against the intended outcomes of the Act.

2.4 Important note on the estimated savings shown in this Report

2.4.1 Data provided by insurers

Following the request from the Minister ARPC asked insurers to provide detailed policyholder data for the purpose of refining its premium rating formula for this second stage consultation. The data provided by insurers for the second stage consultation was significantly more comprehensive than what was available for determining the initial 1 July 2022 premium rates

The data for the second stage consultation made available to ARPC included:

- 1.0m home buildings, home contents, and combined policies.
- 71,000 SME business insurance policies.
- 27,000 strata buildings policies.

The data provides good coverage across the major cyclone affected areas. Some insurers also provided their total flood premium, where the policy included coverage for flood.

2.4.2 Caution in interpreting the estimated savings

We will refer to policyholder outcomes and effects on the presumption that insurers will directly reflect Cyclone Pool reinsurance premiums in their pricing (see Section 5.1). The design of the Cyclone Pool means that actual policyholder outcomes will result from the totality of pricing decisions made by insurers and it may take some time before Cyclone Pool and consumer pricing come into alignment.

We note the following when interpreting estimated savings shown in this Report and in comparing to the Previous Report:

- Care is needed to not over-interpret changes in the estimated savings because they are dependent on the sample dataset, particularly since the dataset used in the Previous Report had (in some instances) very few records. This leads to differences in estimated outcomes because the underlying policies have changed, and directly comparing the estimated outcomes is not indicative of the changes to the premium rates documented in this Report.
- The summaries of savings shown throughout this report represent alternate groupings of policies (by geography, risk level, etc.).
- Saving estimates are based on what insurers have indicated are the current premiums charged for cyclone risk in data provided to ARPC. In some instances, insurers noted (particularly for strata) that an estimate of cyclone premium was provided which may differ from the actual amount charged which increases uncertainty in our estimated savings; because of this we have not shown the savings for high cyclone risks for strata throughout this Report.
- The estimated policyholder outcomes assume no change to the non-cyclone related premium charged by insurers. Insurer determined premiums for risks not covered by the Cyclone Pool will affect the policyholder outcomes. We note that premiums for non-cyclone risk are increasing in the current market, but this is outside of the control of the Cyclone Pool.

2.4.3 Defining cyclone risk levels

The Act sets out objectives for the Cyclone Pool to keep premiums to medium and high cyclone exposures as low as possible. We have used insurer premium pricing to infer medium/high cyclone risk property[3], because this directly addresses the affordability issues that the Cyclone Pool aims to address. The design of the premium formula inherently directs savings to these properties as the Cyclone Pool premium essentially caps the cost of cyclone insurance.

We have estimated the savings for high cyclone risk policies, inferred where the insurer charges a higher premium. We have shown this analysis in two ways – using the total insurer premium and based on only the cyclone component of the premium; the thresholds for the bands are shown in Table 2.2. The former has been shown for consistency with the Previous Report, and the latter, a more direct and improved measure enabled by the comprehensive data provided by insurers for this Report.

[3] There is not a universal view of what constitutes a medium/high cyclone risk (e.g. there are different risk models, etc.).

Table 2.2 – Cyclone risk banding in exhibit

	Premium rate thresholds (per $100 SI)[1]	
	Previous approach	Revised approach
Basis for risk segments	Total premium per $100 Sum Insured	Cyclone premium per $100 Sum Insured
Nil/minimal risk	<$0.40	<$0.05
Low Risk	$0.40 - $0.60	$0.05 - $0.20
Medium Risk	$0.60 - $1.50	$0.20 - $1.00
High Risk	>$1.50	>$1.00

[1] Inclusive of taxes and levies paid by the policyholder.

Unless explicitly stated otherwise, the cyclone risk segment shown throughout this Report is based on the cyclone premium advised by insurers in the data provided.

The cyclone risk varies by address, with insurers commonly assessing risks specific to each address and setting premiums to reflect the risk. A suburb, depending on its size and shape, may have a wide mix of cyclone risk – those nearer to the coast will typically have higher risk, while those further away will have lower risk. Further, location specific factors such as topography and shielding can affect cyclone risks. Classifying a suburb or region as a specific level of cyclone risk does not reflect the diversity of risk within the suburb.

"High cyclone risk" policies only represent a small proportion of the total policyholders (under either of the above definitions), representing those that are currently paying very high premiums in respect of their cyclone risk. The estimated level of savings for these high cyclone risk policies will not be observed by the broader population.

The table below shows the mix of nil/minimal risk, low risk and medium/high risk properties within each wind risk band (as defined by the Cyclone Pool for premium rating purposes) based on the insurer data provided. The table shows a good correlation between the wind risk bands defined by the Cyclone Pool and the cyclone premium charged by insurers. However, it also shows some of the diversity within suburbs where, for example, a small number of properties in low risk banded suburbs such as C to E are charged cyclone premiums that would indicate a medium or even high risk. Similarly, in the high risk bands (Q and above) there are many properties currently being charged premiums consistent with a low risk level rather than medium/high.

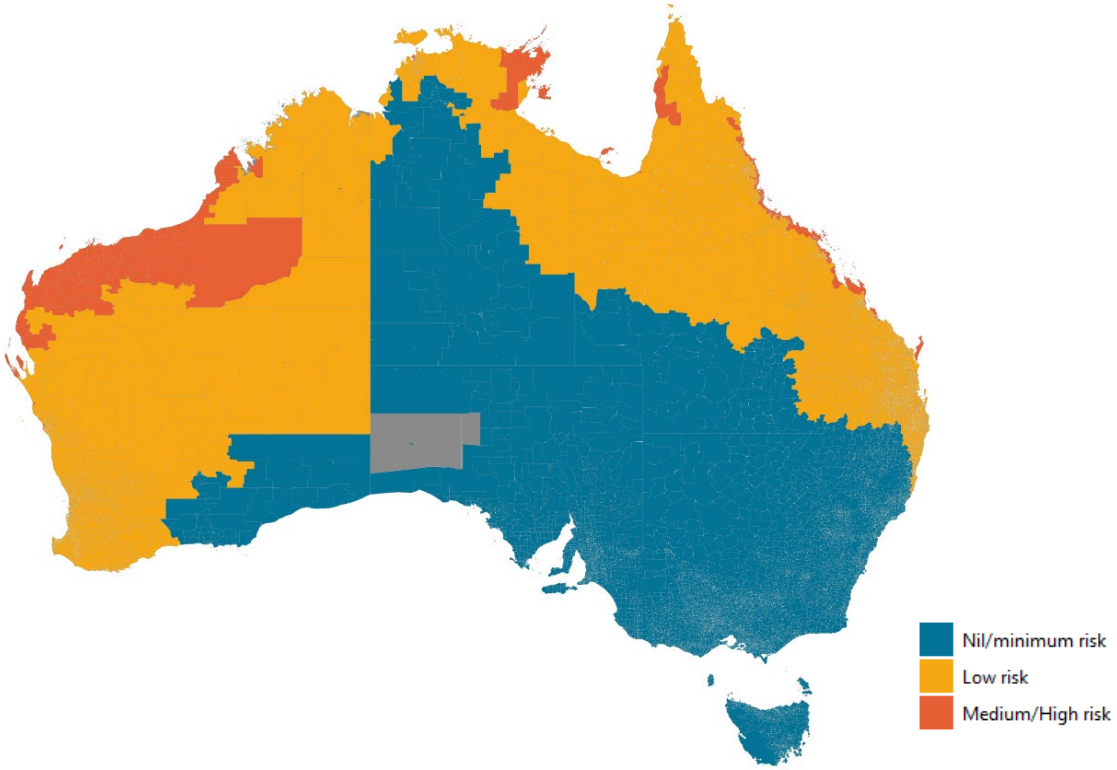
Table 2.3 – Cyclone risk by wind risk band

	Insurer Data Distribution		
Wind Risk Band	Nil/minimal risk	Low risk	Medium/ High risk
A	99%	1%	0%
B	98%	2%	0%
C	93%	6%	1%
D	90%	9%	1%
E	85%	15%	0%
F	78%	22%	0%
G	63%	36%	1%
H	44%	54%	2%
I	23%	73%	4%
J	20%	73%	6%
K	12%	78%	11%
L	7%	79%	15%
M	5%	78%	16%
N	1%	53%	45%
O	1%	38%	61%
P	0%	32%	68%
Q	0%	17%	83%
R	0%	17%	83%
S	0%	6%	94%
T	0%	8%	91%
U	0%	8%	92%
V			
W	0%	3%	97%

The Cyclone Pool premium formula is designed such that savings are directed to medium/high risk properties. The Cyclone Pool premium for the highest wind risk band is $0.35 per $100 sum insured, or around $0.42 including GST and stamp duty, for wind risk. This means that any property currently paying more will effectively be capped at $0.42 per $100 sum insured for its cyclone wind risk. The greater the cyclone risk, the higher the premium reduction provided by the Cyclone Pool; consistent with the objectives.

The figure below shows the location of suburbs classified as wind zones N or above, where there is a high proportion of addresses that are considered medium/high risk based on the cyclone premium provided by insurers.

Table 2.4 – Location of medium/high cyclone risk properties (wind zones N or above)



Just because a property is in a suburb shown above as having a higher proportion of medium/high risk properties, this does not mean that all properties in that suburb will receive the saving estimated for medium/high risk properties.

2.4.4 Limitations of the policyholder data

The premium data supplied was not consistent across the insurers. The data limitations include:

- Most insurers provided an estimate of the premium for cyclone risk. This data was not consistent across insurers (e.g. some included margins, others did not) and in some instances this did not reflect the actual premium charged to the policyholder (e.g. the figure may be based on a model run after the premiums were set or there may be subsequent adjustments applied).
- Where insurers provided the premium for flood risk, this was generally for all flood risk and not limited to cyclone-related flooding only. We have applied the assumed allocation for cyclone flood risk as set out in our 'Cyclone Reinsurance Pool – Determination of Cyclone Related Flood Proportions' report, dated 13 May 2022 and available on ARPC's website.

The lack of consistency and other limitations of the policyholder premium data provided to ARPC meant that we needed to make assumptions to adjust the data provided to be comparable between insurers, and to estimate the current policyholder premium (i.e. the component of premium to cover cyclone and cyclone related flooding, inclusive of margins) that would be replaced by the Cyclone Pool. Even where there is a large volume of premium data for comparison, care is needed not to over-interpret the observed outcomes as these may be different when applied to another insurer.

Our approach to testing Cyclone Pool premium rates against policyholder premium data is discussed in detail in Appendix H.

3 Observations from further industry consultation and review

3.1 Review of insurer data applying the 1 July 2022 premium rates

The reader should refer to Section 2.4 for a discussion on the interpretation of the analysis shown in this section and limitations of the underlying data.

The estimated reduction in *policyholder premiums* when applying the initial 1 July 2022 premium formula is summarised in Table 3.1.

Table 3.1 – Summary of average premium savings by class (1 July 2022 rates)

	Average savings (sample size)			
Product class	All record samples (QLD, NT, WA, Northern NSW)	Northern Australia (CRESTA 5-20)	High *total* premium band in Northern Australia[2]	Total sample size
Home	-6% (720,934)	-13% (143,500)	-28% (2,416)	720,934
SME[1]	-6% (34,700)	-9% (11,857)	-10% (274)	34,700
Strata	-11% (24,508)	-34% (1,905)	N/A[3]	24,508

[1]Policies with BLD cover

[2]Highest premium band defined as $1.50+ per $100SI for Home and SME

[3]Cannot be reliably estimated due to data limitations

For comparability, we have shown savings for the *highest total premium* band consistent with this table found in our Previous Report (though as noted earlier the premium saving amounts are not directly comparable because the underlying data which this analysis is applied to has changed).

The premium charged by insurers in respect of cyclone is a more direct measure of cyclone risk, and is also more directly related to the component of premium that the Cyclone Pool aims to reduce. Table 3.2 below shows the estimated savings for the *highest cyclone premium* policies (and the highest total premium for comparison). The two versions of the summaries represent alternate groupings of policies; the underlying distribution of outcomes is not different.

Table 3.2 – Summary of average premium savings for high risk policies (1 July 2022 rates)

	Average savings (sample size)	
Product class	High *cyclone* premium band[2]	High *total* premium band in Northern Australia[3]
Home	-42% (2,349)	-28% (2,416)
SME[1]	-24% (64)	-10% (274)
Strata	N/A[4]	N/A[4]

[1]Policies with BLD cover

[2]High cyclone premium defined as $1.00+ per $100SI for Home and SME

[3]Highest premium band defined as $1.50+ per $100SI for Home and SME

[4]Cannot be reliably estimated due to data limitations

This analysis, supported by feedback from insurers, shows that there are significant savings in premiums for cyclone risk, in particular for home. The level of savings is generally consistent with previous estimates, with differences arising because the sample datasets are different.

3.2 Insurer feedback

ARPC sought feedback from industry on the initial premium rates applying from 1 July 2022. There was a lot of detailed feedback received and some of the feedback was inconsistent between insurers. The main points consistently provided by insurers were as follows:

- Home insurance:
  - > The Cyclone Pool premium rates would generate significant savings for Northern Queensland
  - > Some savings are observed from South East Queensland
  - > Cyclone Pool premiums for some Western Australia areas appeared to be high.
- SME business insurance
  - > The Cyclone Pool generates premium discounts
  - > Cyclone Pool premiums for some Western Australia areas appeared to be high.
- Strata insurance
  - > Feedback was mixed, with some insurers observing savings while others suggested Cyclone Pool premiums were high
  - > Cyclone Pool premiums for some Western Australia areas appeared to be high.

The core feedback suggests that the Cyclone Pool is achieving what it needs to. Exceptions were observed in respect of the following:

- Modelling for Pilbara and Western Australia might overstate the risk.
- Cyclone Pool premiums for Geraldton and Perth appear high.
- Cyclone Pool premiums for high value strata buildings appear high.
- Some rating relativities were somewhat different than market practice, notably for ARPC to simplify by removing the home excess relativity for combined building/contents policies and the premium relativities applied to 'Timber/Weatherboard/Hardiplank' construction.

3.3 Assumption review

Finity undertook an internal review of the premium-setting assumptions for the Cyclone Pool, which included discussions with Aon in respect of catastrophe modelling assumptions. The review considered both **explicit and implicit** assumptions in the context of meeting the legislated **policy objectives**, including revenue neutrality, identifying areas for further review and potential rate changes for the 1 October 2022 rates.

The review generally concluded that the original analysis was reasonable. The areas highlighted for additional review for the 1 October 2022 premium rates were the following:

- The review by region highlighted Pilbara as the most likely to be anomalous, and this was strongly confirmed from the insurer feedback.
- The non-insurance assumption applied to estimate the premium pool requirement can lead to overstatement of the AAL.

4 Specific review areas for 1 October 2022 premium rates

Having reviewed the feedback from insurers, analysis of estimated premium outcomes from the insurer data provided, and the assumptions review, the following areas were identified as requiring additional focus and able to be addressed within the review timeframe:

1 Catastrophe modelling estimates for cyclone losses in Pilbara and Western Australia.

2 Premium relativities for large strata buildings insurance.

3 Impact of non-insurance for high cyclone wind areas.

4 Contents and business interruption premiums for SME business insurance products.

5 Other miscellaneous feedback provided by insurers.

4.1 Risk assessment for WA

4.1.1 Catastrophe modelling in the 1 July 2022 rates

The 1 July 2022 wind rates for all covered risks were developed using catastrophe models licensed by ARPC. These were run on current versions of the models, primarily by Aon. Various assumptions were applied both during the construction of the exposure dataset (compiled by Treasury and provided to Finity with insurers deidentified) and running of the models, in line with standard modelling procedures utilised by catastrophe modellers. These assumptions were discussed in detail with relevant experts from the model vendors and Aon and described in the Previous Report.

Generally, the 1 July rates were developed by Finity without making major modifications to the base model outputs provided earlier in the project. Some modifications were made in factor selections, etc., to achieve policy objectives and calibrate to insurer pricing, but the overall level of AAL was driven by the models run as described above, with rebalancing done to achieve overall revenue in line with AAL when various factor selections were made in the final rate development process.

4.1.2 Subsequent model evaluation during the consultation period

During the consultation period, several insurers provided additional data that suggested the 1 July 2022 wind rates indicated by the selected models were yielding results that were out of line with market practice in Western Australia (WA). This feedback indicated issues in both the highly exposed north-western part of the state and the Perth area.

Following this feedback, Aon was requested to provide commentary on modelling for WA. In summary, Aon indicated that the models adopted by ARPC tend to produced higher loss estimates for WA than other models not adopted by ARPC.

Further, analysis of actual claims data from several events in WA showed lower losses than implied by vulnerability curves in some of the catastrophe models, and that a reduced vulnerability curve from a prior catastrophe model version better matched the actual event experience in WA.

4.1.3 Conclusions and adjustment process for revised Cyclone Pool premiums

We found the evidence compelling that an adjustment to WA wind rates was warranted from the Aon analysis and insurer feedback. We were satisfied that the scientific and logical evidence was strong, not just that the previous results were out of line with market practice.

The loss estimate from the catastrophe model was adjusted to reflect a lower vulnerability curve from a previous model version, which reduced the estimated AAL for WA. As the information provided by this analysis pertained only to results in WA, no adjustment was made to underlying pricing inputs from other models or regions of Australia. The adjustment was made to home, SME, and strata in this region.

The change in the vulnerability curve in WA reduced the overall Cyclone Pool AAL by $45m.

4.1.4 Proposed Cyclone Pool premium formula adjustments

Considering the results of this analysis, insurer feedback, and Cyclone Pool policy objectives, three changes were made to the June rates due to the vulnerability curve issue in WA:

- The highest premium rate for home buildings has been reduced to $0.35 (mostly affecting Pilbara).
- Cyclone Pool rates in Southern WA have been reduced by between 10-15%.
- Rates in CRESTA zones throughout WA have been smoothed to reflect both model indications and a rational pricing differential between various locations.

There are similar effects across wind rates for home, SME, and strata.

4.2 Strata buildings

4.2.1 Insurer data

The 1 July strata premium rate calibration was based on very limited insurer premium data which meant that it was difficult to draw conclusions about the level of savings expected for strata buildings. As part of this consultation for the 1 October rates, we received a more granular and significantly larger sample of insurer data.

At a high-level we can make the following observations:

- Sum insured and total premium data were reasonable and broadly consistent with the estimates used for the 1 July rates.
- Not all rating factors for Cyclone Pool rates are available from insurers, so granularity of analysis remains limited.
- There were limitations in the data provided by insurers, mostly in that the estimated cyclone premium provided was not necessarily the premium actually charged.
- Premium information for wind risk looked significantly more reliable than flood or surge.

4.2.2 Insurer feedback

The feedback from insurers was mixed, with some insurers suggesting that there would be savings from the Pool, while others indicated that Cyclone Pool premiums were high.

Our analysis of the insurer data provided estimates that there will be savings to strata building policyholders, at least up to moderate sums insured. We placed greater reliance on conclusions where we have been able to understand and analyse data.

Specific insurer feedback on large strata buildings – sums insured over (say) $20m – indicated that Cyclone Pool premiums appear to be higher for large sums insured buildings. Limited specific data was able to be provided, and we are conscious that the insurer policy datasets available are under-represented for large strata buildings. This feedback was considered in relation to adjustments to the sum insured and number of levels relativities as

discussed in Section 4.2.4 below. However, care was taken to cross-reference the findings with other sources of knowledge so that decisions were not based solely on insurer opinion.

4.2.3 Other key considerations for rate adjustments

Catastrophe modelling

Our enquiries did not provide good and consistent evidence about inadequate model calibrations, but neither did it increase our confidence that any of the catastrophe models used are particularly well calibrated for strata. This is not surprising given the history and market structures for strata.

Information from the public catastrophe modelling project in Florida about the vulnerability of high rise buildings raises some doubts – one of the elements being that 20 metres off the ground wind speed can be 50% higher. This raises the prospect that at high wind speeds windows are penetrated leading to significant water ingress causing costly damage. However, this needs to be qualified by the unknown parameter of relative building quality standards.

Several insurers provided feedback that the cyclone technical cost indications they use to inform pricing are substantially below the AALs suggested by the catastrophe models.

ARPC received a limited amount of risk relativity modelling results based on the alternate catastrophe models which has informed the changes to strata rates and has also been used to adjust some of the risk relativities (reinforced concrete vs brick veneer and number of levels). This is discussed in Section 4.2.4 below.

Market rates

Market pricing for strata is much less sophisticated than residential in respect of perils. Variability in outcomes for strata is, therefore, to be anticipated due to the broad range of practices and sophistication in the strata insurance market. Less sophistication in insurer rating approaches can mean that insurers do not reflect as much shape in risks between locations as others. Alternatively, underwritten risks can better reflect the specific features of a building compared with a standardised formula. Some noteworthy observations are:

- The strata market is dominated by a few underwriting agencies.
- This means insurers' primary focus is catastrophe risk management.
- Strong underwriter influence rather than technical influence in underwriting and pricing high value strata buildings. These are commonly individually underwritten and can have bespoke insurance arrangements. Anomalous outcomes for these buildings are possible as the Cyclone Pool premium rate cannot consider factors that an underwriter can.

It is quite plausible that the market overall is undercharging for cyclone in strata relative to a technical risk pricing viewpoint, but it is difficult for us to confirm this hypothesis.

Scheme objectives

Notwithstanding the possibility the market is undercharging, the objectives of the scheme are to direct subsidies to the highest risk policies and not charging more (than the current premium) for lower risk policies.

4.2.4 Adjustments to strata risk relativities

We have made the following adjustments to strata risk relativities following consideration of the extra information available at this review:

- Sum insured curve: Analysing separate premium data provided by insurers shows that the sum insured premium relativity curve adopted in the market is steeper (i.e. lower relativities) at higher sum insureds than assumed in the 1 July rating tables. Adjustments to the sum insured relativity were applied for the 1 October 2022 premium rates.
- Construction year: We have revised the 2010+ year of construction relativity from 0.95 to 0.90, giving some recognition to model indications and market practice.
- Reinforced concrete construction: The 1 October rates further discount a reinforced concrete structure relative to a brick veneer structure from 15% to 35%. This was based on additional catastrophe model indications sourced by ARPC.
- Number of storeys: There are also adjustments to number of storeys relativity, having reconsidered modelling results, insurer benchmarks, and insurer feedback. These relativity adjustments are shown in Table 4.1.

Table 4.1 – Number of storeys relativity adjustment

Flood and Surge			Wind		
Number of Storeys	1 July 2022 rates	1 October 2022 rates	Number of Storeys	1 July 2022 rates	1 October 2022 rates
1-3	1.00	1.00	1-3	1.00	1.00
4-6	0.80	0.60	4-6	0.80	0.80
7-9	0.70	0.30	7-9	0.75	0.70
10-19	0.60	0.20	10-19	0.70	0.65
20+	0.50	0.15	20+	0.65	0.60
Unknown	1.00	1.00	Unknown	1.00	1.00

4.2.5 Summary of Strata changes

The changes proposed above represent changes to risk relativity factors and will reduce the estimated Cyclone Pool premium collection by ~$16m as follows.

Table 4.2 – Summary of Strata changes

Description of change	Premium pool impact ($m)
Sum insured relativity for wind	(6)
Increased discount for new buildings	(1)
Increased discount for concrete	(4)
Number of storeys for wind	(1)
Number of storeys for flood/surge	(4)
Total Strata impact	**(16)**

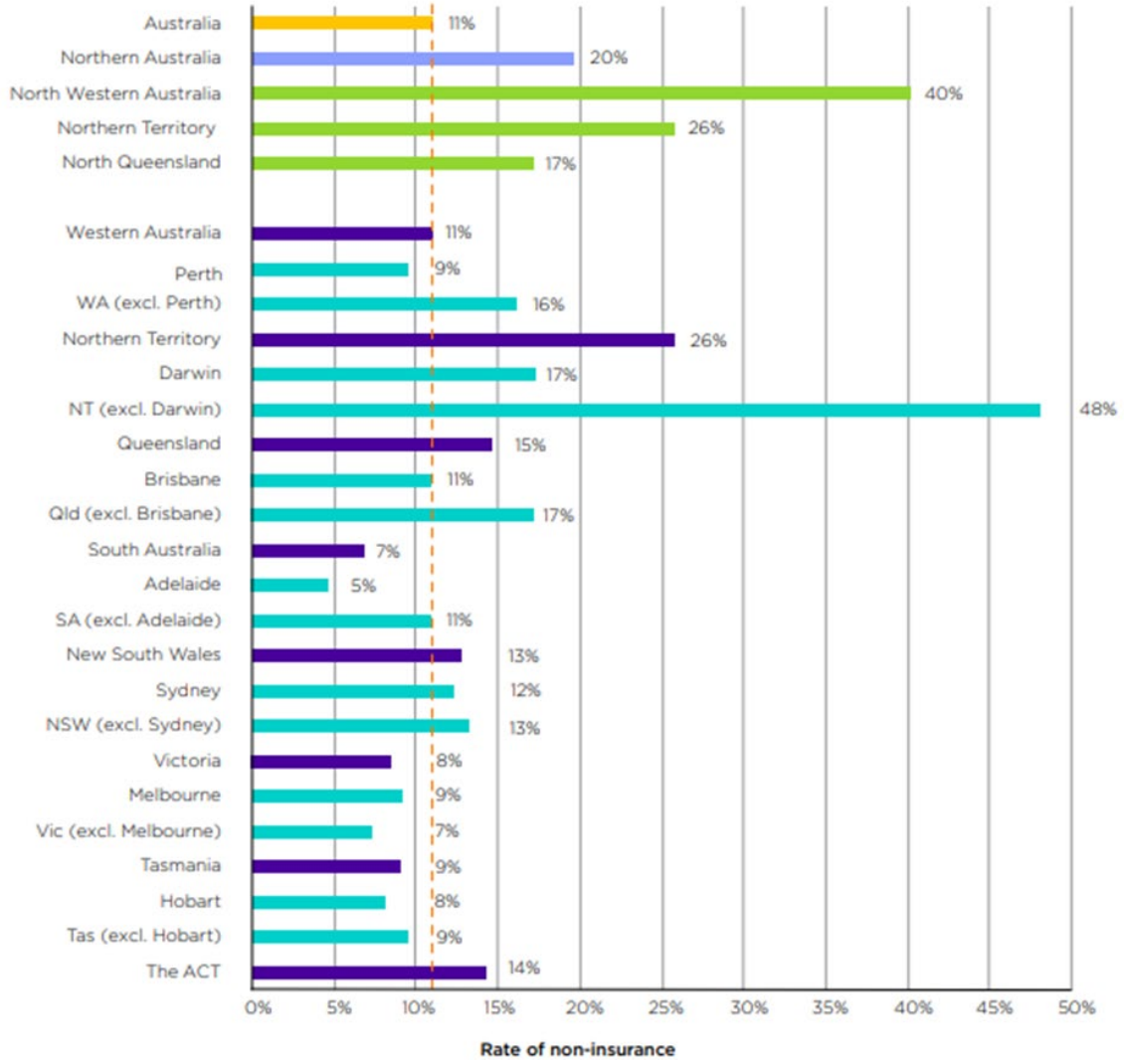
Having reviewed the additional modelling results, revisiting earlier modelling results and considering market feedback on catastrophe models, we considered it appropriate to reflect these adjustments one for one in the AAL estimate as well.

4.3 Non-insurance

It is widely understood that the take-up of residential insurance is not uniform across the country. It is entirely logical that the higher the quoted premium the less likely it is that the customer will choose to buy the insurance.

More specific information is difficult to come by. ACCC obtained a survey analysis that is helpful in this regard. This chart shows the ACCC estimates of the proportion of households in each region that have not taken up insurance.

Figure 4.1 – Non-insurance rates by region (ACCC)



4.3.1 Relevance to Cyclone Pool rate setting

The whole rate setting process was based on all of the residential properties in Australia, regardless of whether or not they are insured. (In fact, there has been no way of knowing whether they are insured). The AAL was estimated also on this basis (all properties) and led to the estimate of the amount available to the pool that can be applied as subsidies to high risk properties.

The subsidies are then spread across the population of properties in accordance with scheme objectives.

In practice, not all properties will be insured and, assuming that the higher risk properties have a lower take-up of insurance, then not all of the calculated subsidy will be used up.

The lower risk properties whose Cyclone Pool premiums are intended to generate the subsidies will continue to insure and create the subsidy opportunity. To the extent that higher risk properties still do not take up insurance, some part of the subsidy will remain.

While it is hoped that the take-up of insurance will increase after the Cyclone Pool gets going, it is unrealistic to think that it will match the rest of Australia at least for some time.

4.3.2 Allowance for insurance take up rates

It is appropriate to make some allowance for different take-up rates of insurance when setting premiums. The amount to allow is very difficult to estimate because of the data limitations, the absence of useful propensity models and the uncertainty about behavioural change in insurance purchasing in response to the pool.

We recommend an allowance, derived from conservative assumptions that are judgemental. The allowance is calculated by assuming that the insurance take-up rate in high risk wind zones is less than in other parts of Australia using the following ratios.

Table 4.3 – Assumed insurance take up rates

Wind risk zone	Take-up rate assumed for June rates	Take-up rate assumed for October rates
A-M	98%	98%
N-R	98%	95%
S-U	98%	91%
V-W	98%	83%

Running these assumptions through the models of the Cyclone Pool by region results in a reduction in target premium pool of $29m.

4.4 SME business insurance policies

4.4.1 Insurer feedback

The following aspects of the SME Cyclone Pool rates were reviewed arising from insurer feedback:

1 Assess the premium outcomes based of the Cyclone Pool premium rates, given the additional insurer data that we have received for this consultation, did not have geographical anomalies.

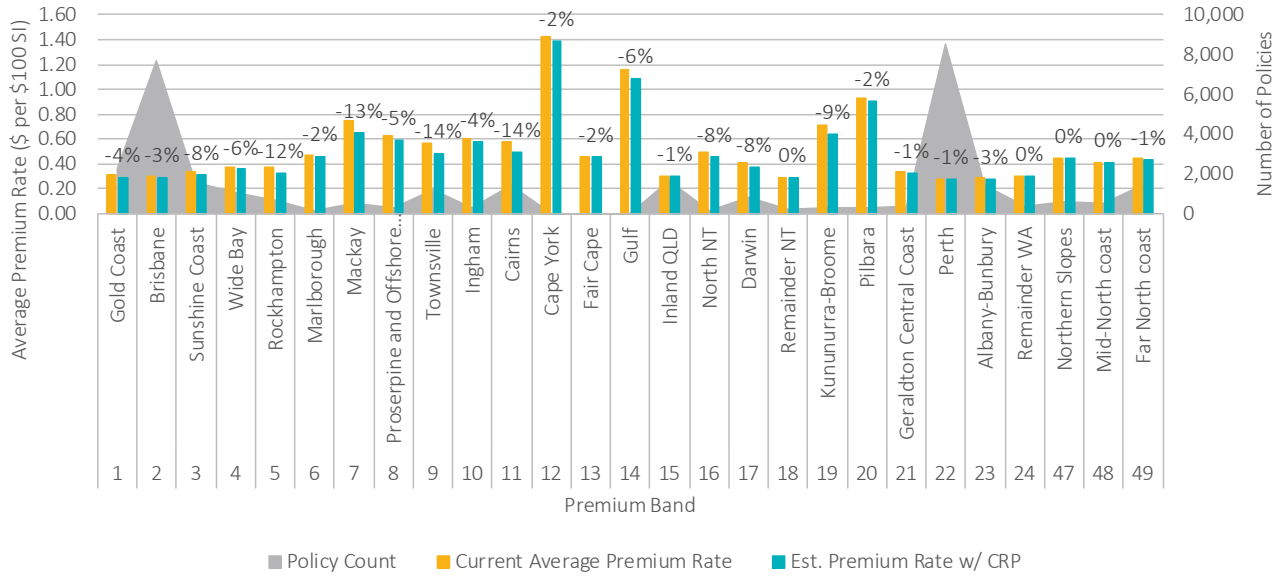
2 Assess that the Cyclone Pool premium rates for the BI and Contents cover were not higher than the market. We have reviewed the level and shape of rates for Contents and Business Interruption.

4.4.2 Geographical anomalies

Analysis of insurer data (see Section 3.1) showed 6% premium savings across the sample policyholder records we analysed, with higher savings directed at Northern Australia (9%).

We assessed the level of savings across the CRESTAs for contents cover (both with policies having either an associated BI cover or not), as shown in Figure 4.2. Analysis of buildings cover identified similar patterns (not shown here).

Figure 4.2 – Average SME premium impact by CRESTA (Contents)



The figure shows that greater premium savings are directed in the higher cyclone risk areas, and those that are in the lower risk regions have neutral or minor premium savings. These outcomes are in line with expectations in our initial calibration of the Cyclone Pool rates.

4.4.3 Contents and Business Interruption Cover

We conducted a review of the Cyclone Pool rates for Contents and BI to assess the appropriateness of the sum insured relativities and level of the rates, based on insurer feedback.

Our review of the risk relativities for contents and BI coverage suggest that the Cyclone Pool relativities are consistent with market levels.

Our review of the premium rate levels for the Cyclone Pool for contents and BI compared with the insurer charged premiums do not show that the Cyclone Pool rates are higher than the current market.

4.4.4 Conclusion on SME rates

We were not able to verify the feedback with the insurer data, and therefore no specific changes were applied to the SME rates.

4.5 Other changes to Cyclone Pool premium formula

The following changes to the Cyclone Pool premium formula have been applied following consideration of insurers and other stakeholder feedback:

- The excess relativity for combined home policies is removed for simplicity.
- Risk relativity for 'Timber/Weatherboard/Hardiplank' construction revised from 1.10 to 1.05.
- Risk relativity for slate roof revised from 0.90 to 1.00.
- Revisions to risk mitigation risk relativity descriptions.

5 Policyholder outcomes

5.1 How the Cyclone Pool design affects policyholder outcomes

5.1.1 The Cyclone Pool is a reinsurance arrangement

The Cyclone Pool is designed as a reinsurance facility which will cover eligible cyclone losses in exchange for a premium. As such it does not directly set consumer prices, but instead replaces private sector funding sources (such as insurer capital and reinsurance) with Cyclone Pool funding from its premium collections backed by a government guarantee. The Cyclone Pool will enable insurers to offer more affordable premiums to medium and high-risk consumers by reducing the cost of providing the cover. It will be insurers that ultimately decide on premiums to be paid by policyholders[4].

Insurers will need to restructure their reinsurance arrangements to account for the Cyclone Pool reducing reinsurance exposure and costs. As well as replacing some reinsurance, the Cyclone Pool will cover losses now retained by insurers.

5.1.2 Managing consumer impact

The need in Australia to address location risk issues in regional centres and isolated communities required that the Cyclone Pool provide coverage for small events at a property level. This means that ARPC had to carefully consider the effect of the Cyclone Pool at a policyholder level. Further, as a government entity, the Cyclone Pool must treat all insurers equally, meaning it must apply a single premium formula across the entire market.

In Australia there exists a wide range of prices for any given risk in the market. Thus, as the Cyclone Pool must hold overall premiums at a level similar to the private market in low risk areas and apply a single premium formula, it is inevitable that there will be some policyholders who receive increases if insurers passed along Cyclone Pool premiums directly.

The Cyclone Pool's design anticipated this problem by making it a reinsurance arrangement and allowing insurers discretion in how the savings are applied to individual policyholders, with the expectation that overall savings would be fully passed on, but not that every property would be charged exactly what the Cyclone Pool charges the insurer. We would expect the market, over time, to increasingly reflect the Cyclone Pool's premiums at a policy level, though during a transition period this will not be realistic.

For example, it is inevitable that there will be overs and unders from one policy to another in (say) low cyclone risk areas (because a single Cyclone Pool rate is replacing market prices). In this case, the insurer can choose to retain these offsetting movements in the prices it quotes.

Some insurers make commercial decisions to apply multi-policy or loyalty discounts. The implementation of the Cyclone Pool is not intended to unwind these commercial decisions, and provides flexibility for these to be retained.

5.2 Estimated Policyholder outcomes applying 1 October 2022 premiums

The reader should refer to Section 2.4 for a discussion on the interpretation of the savings shown in this section and limitations of the underlying data. The premium savings analysis is biased to the insurers that provided data and is not representative of all insured properties.

[4] The ACCC will monitor policyholder outcomes resulting from the Cyclone Pool's implementation.

5.2.1 Estimated overall savings

The estimated reduction in ***policyholder premiums*** when applying the 1 October 2022 premium formula is summarised in Table 5.1. In some instances, insurers noted (particularly for strata) that an estimate of cyclone premium was provided which may differ from the actual amount charged; this increases uncertainty in our estimated savings, and because of this we have not shown the savings for high cyclone risks for strata.

Table 5.1 – Summary of average premium savings by class (1 October 2022 rates)

	Average savings (sample size)			
Product class	All record samples (QLD, NT, WA, Northern NSW)	Northern Australia (CRESTA 5-20)	High *total* premium band in Northern Australia[2]	Total sample size
Home	-6% (720,934)	-13% (143,500)	-32% (2,416)	720,934
SME[1]	-6% (34,700)	-10% (11,857)	-13% (274)	34,700
Strata	-14% (24,508)	-37% (1,905)	N/A[4]	24,508

[1]Policies with BLD cover

[2]Highest premium band defined as $1.50+ per $100SI for Home and SME

[3]Cannot be reliably estimated due to data limitations

For comparability, we have shown savings for the ***highest total premium*** band consistent with this table found in our Previous Report[5]. The premium reductions presented, however, should not be directly compared to the Previous Report because the underlying dataset which this analysis is based on is different.

The premium charged by insurers in respect of the cyclone is a more direct measure of cyclone risk, and is also more directly related to the component of premium that the Cyclone Pool aims to reduce. We are able to better observe this with the more comprehensive data provided by insurers for this review. Table 5.2 below shows the estimated savings for the ***highest cyclone premium*** policies (and the highest total premium for comparison). The two versions of the summaries represent alternate groupings of policies; the underlying distribution of outcomes is not different.

Table 5.2 – Summary of average premium savings for high risk policies (1 October 2022 rates)

	Average savings (sample size)	
Product class	High *cyclone* premium band[2]	High *total* premium band in Northern Australia[3]
Home	-48% (2,349)	-32% (2,416)
SME[1]	-38% (64)	-13% (274)
Strata	N/A[4]	N/A[4]

[1]Policies with BLD cover

[2]High cyclone premium defined as $1.00+ per $100SI for Home and SME

[3]Highest premium band defined as $1.50+ per $100SI for Home and SME

[4]Cannot be reliably estimated due to data limitations

Savings are expected across each insurance segment from the data we analysed. Savings in Northern Australia are higher than across the whole dataset, consistent with the intention of the Cyclone Pool. Further, the policyholders currently paying the highest premiums will also get the greatest savings.

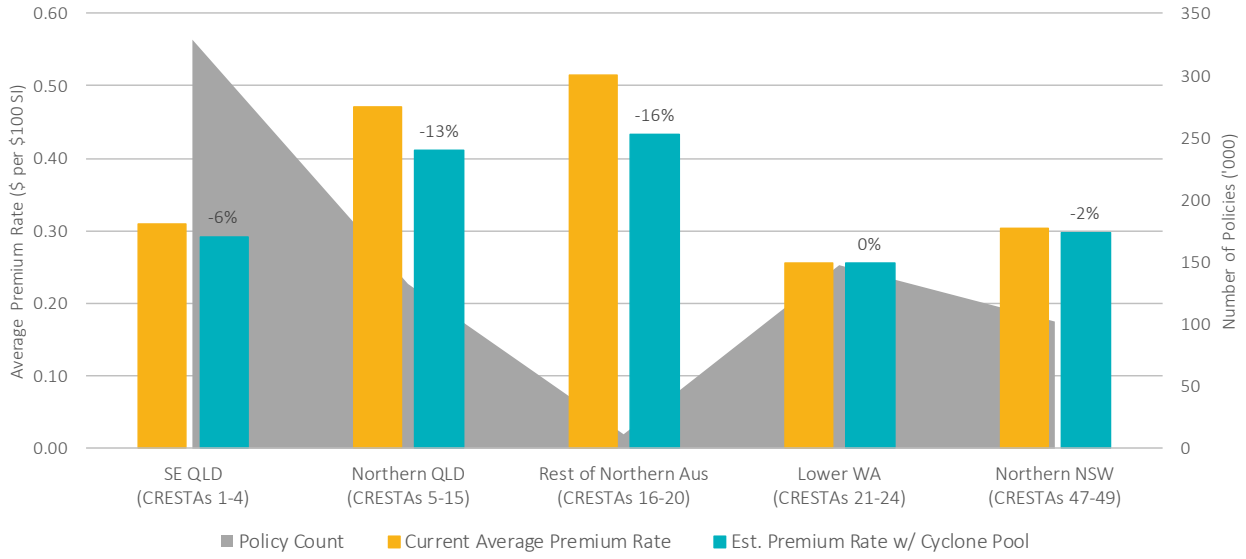
[5] It should be noted that the total premium can be high for reasons not just related to cyclone risk, such as if a home has exposures to other natural perils or the SME business involves dealing with hazardous materials.

The 1 October 2022 premium rates lead to greater savings for high cyclone risk policyholders compared to the 1 July 2022 premium rates (shown in Table 3.2) because of the changes to the modelling of the AAL and the premium formula outlined in Section 4 reduced the Cyclone Pool premiums.

5.2.2 Residential Home premium outcomes

Figure 5.1 shows the estimated savings by CRESTA for home buildings policies (with or without contents). The additional insurer data provided at this consultation has allowed us to form a clearer view of premium impact in areas outside of QLD. Where we previously had only received 100 policies collectively in WA and NT, we now have 160,000. The amount of data in QLD has also increased from 200,000 to 460,000.

Figure 5.1 – Estimated savings in insurance premiums by CRESTA



The updated rates show savings in all zones based on the insurer data provided. The main changes observable after the consultation are:

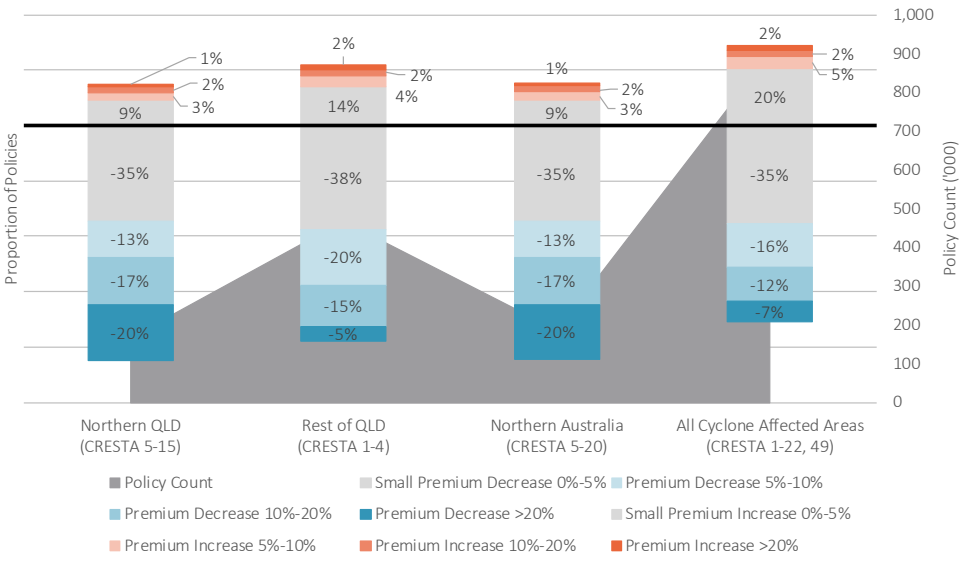
- Savings in the rest of Northern Australia are estimated at 16%. The savings are greater due to the lower rates for wind groups V and W.
- After reducing the cyclone pool premium rates in the southern parts of WA policyholder premiums in lower WA are estimated to be broadly neutral, noting that the cyclone premium represents a small component of the overall premium in these areas.

The estimated average saving in SE QLD is 6%. The legislative objectives are that premiums in low risk areas are comparable to premiums otherwise available in the market. The design of the Cyclone Pool means that insurers are able to smooth out offsetting premium impacts to policyholders, say across SE QLD. We consider that the estimated savings outcome in SE QLD meets the objectives of the Cyclone Pool for the following reasons:

- Analysis of insurer data and feedback from insurers was mixed. For some insurers in the data analysed, the SE QLD premium saving was in the order of 2%, which will mean that the premiums for the policyholder for those insurers would be 'comparable' in SE QLD.
- A number of assumptions are made in our modelling of savings. Each insurer will have different assumptions, such as their margins, which could mean the actual savings will be different to our estimates.

The chart below shows the distribution of the total premium impact for Home by geographic region. Note that the quality of data in the ±5% premium change group, shown in grey, does not allow for meaningful results and changes of this magnitude would be difficult to observe in practice.

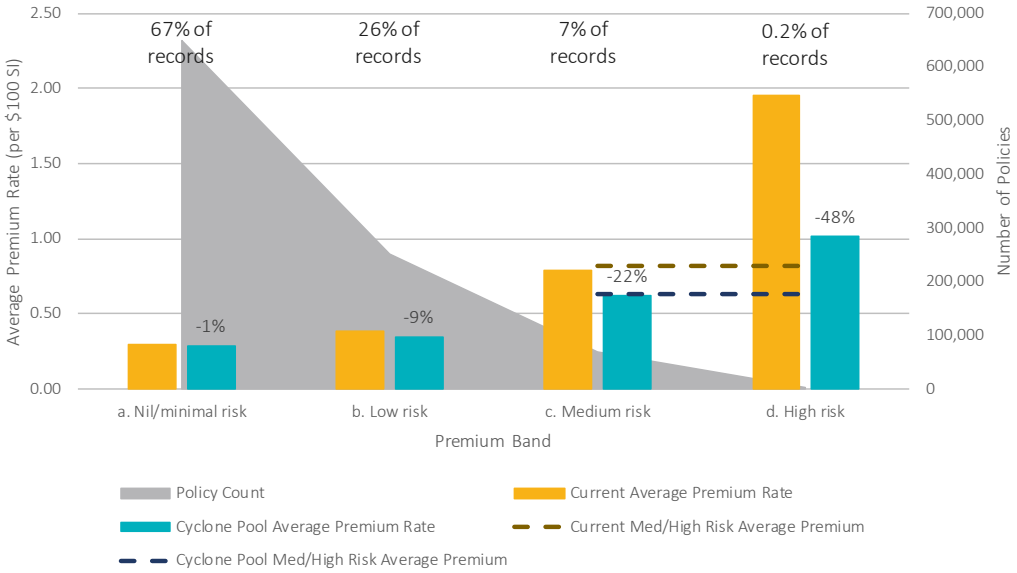
Figure 5.2 – Distribution of total premium impact for Home



This shows that Northern Australia has a high proportion of policyholders with premium savings of more than 20% relative to lower cyclone risk areas.

Figure 5.3 shows estimated overall outcomes for homes based on the risk inferred from current insurer pricing for cyclone risk (see Section 2.4.3).

Figure 5.3 – Estimated outcomes based on insurer provided premium data (home policies)

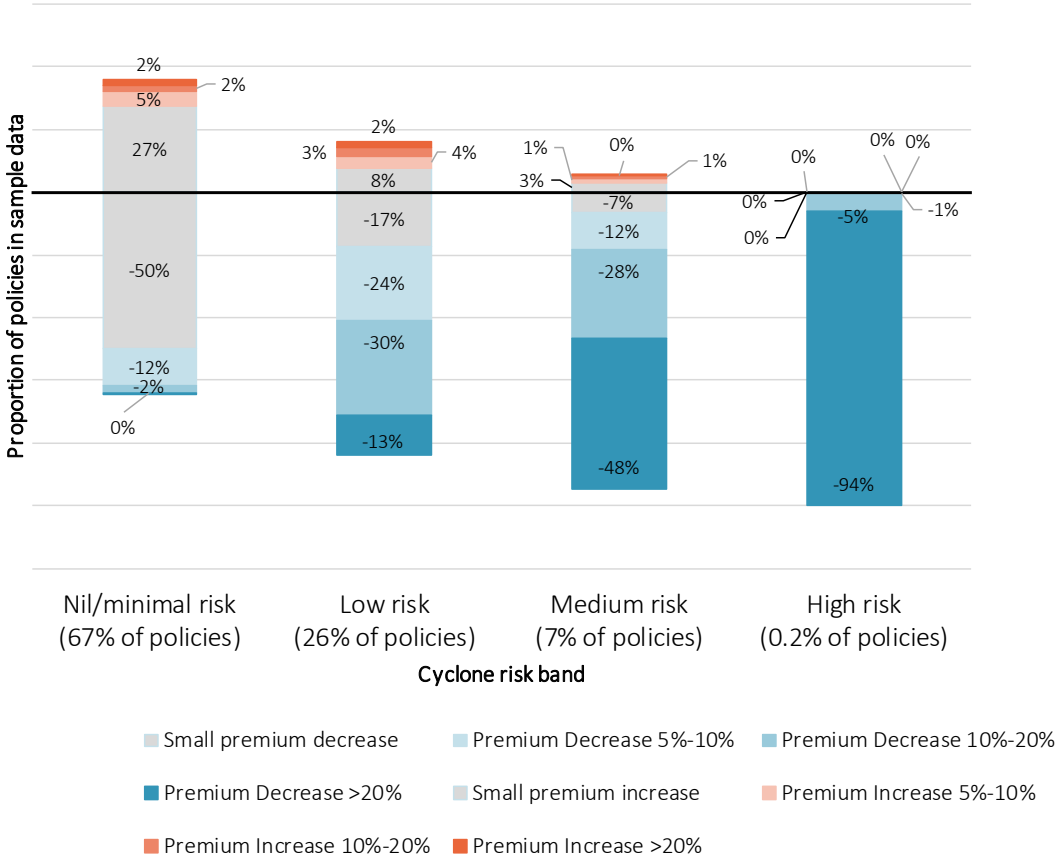


We estimate that the Cyclone Pool may lead to small premium reductions for nil/minimal and low risk properties in Northern Australia. Premium increases resulting from issues outside of the Cyclone Pool may mean that estimated premium reductions for nil/minimal and low risk properties may not be observed by the policyholder.

Substantial premium discounts are estimated for medium and high risk properties, consistent with the objectives of the Cyclone Pool.

Figure 5.4 below shows the distribution of premium savings for policies in low, medium and high risk cyclone regions.

Figure 5.4 – Premium impacts for Residential Home policies by cyclone risk

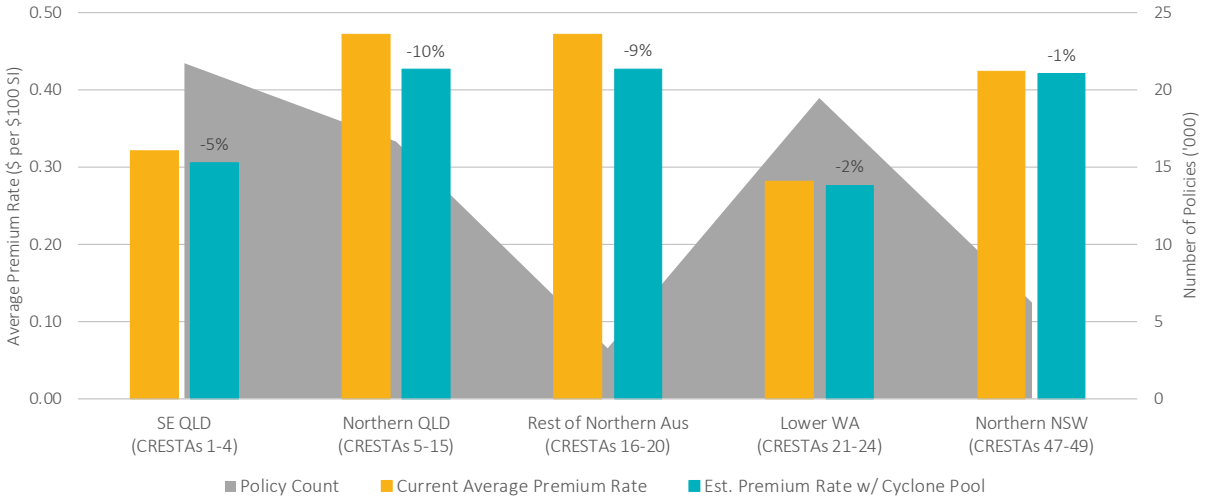


High levels of premium savings are expected to be directed towards policies that have high cyclone risk under the Cyclone Pool, in line with the objectives of the Cyclone Pool.

5.2.3 SME business insurance

Figure 5.5 shows estimated premium savings for SME businesses by region.

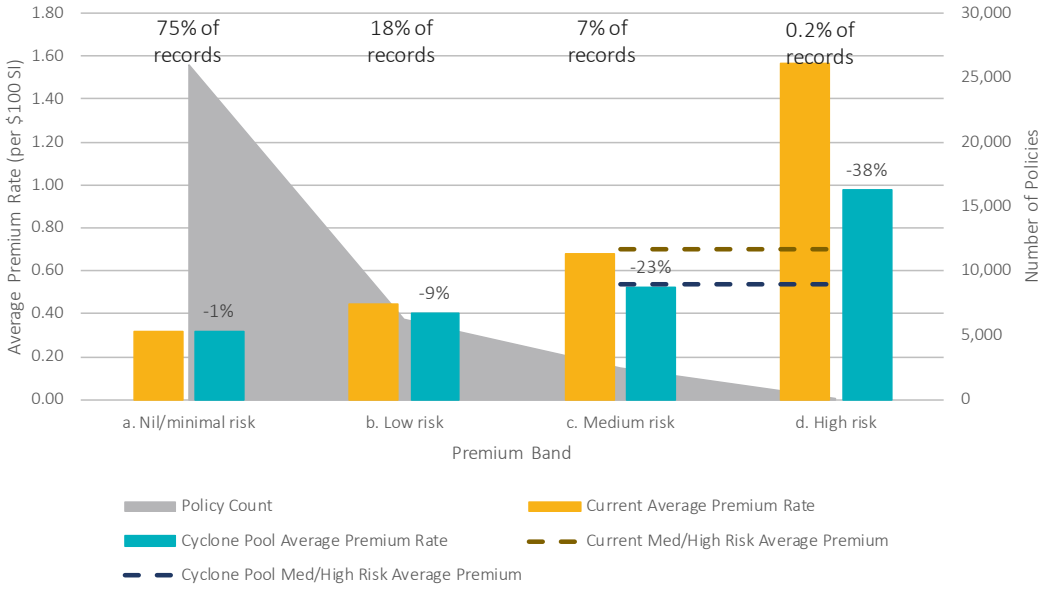
Figure 5.5 – Estimated savings in SME insurance premium by region



By region, we observe that the Cyclone Pool rates achieve savings in higher cyclone risk areas as intended. Premiums in lower risk areas such as South-East Queensland and Perth are broadly comparable to current premiums.

Figure 5.6 shows estimated overall outcomes for SME insurance policies based on the current insurer cyclone premium (see Section 2.4.3). This figure shows SME policies where there is building coverage.

Figure 5.6 – Estimated outcomes based on insurer provided premium data (SME insurance)

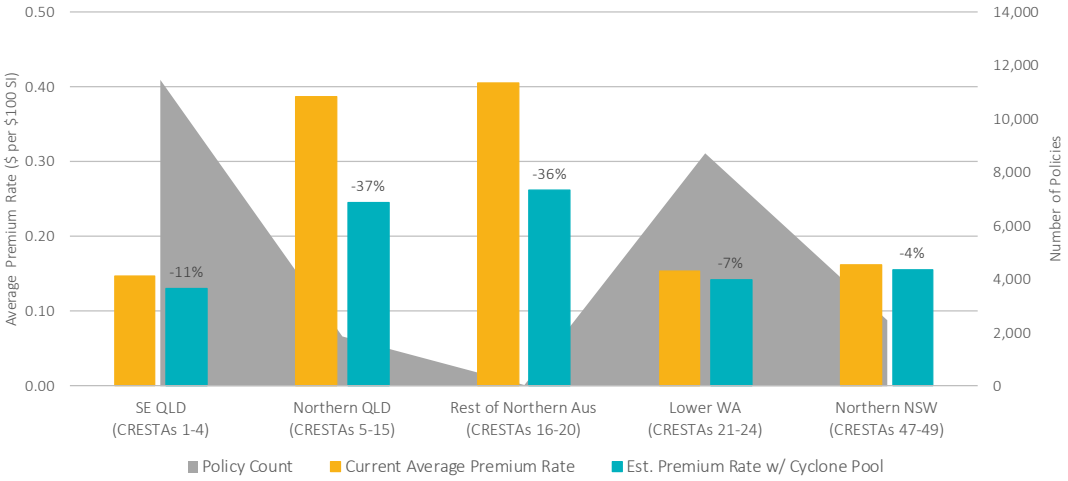


We observe greater reductions for higher cyclone risk premium bands.

5.2.4 Strata

Figure 5.7 shows estimated total premium savings for strata by region as a result of the Cyclone Pool.

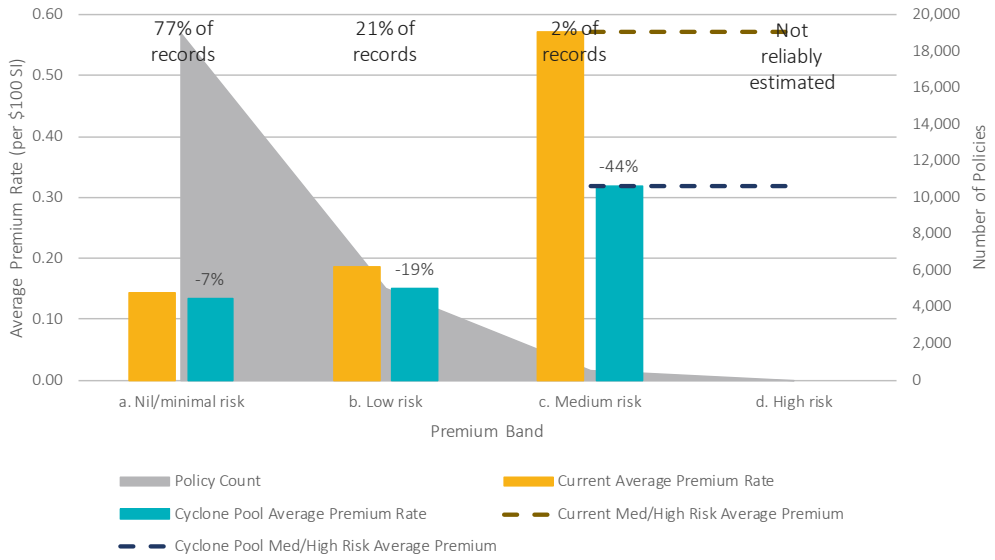
Figure 5.7 – Estimated savings in strata insurance premium by region



The savings for strata are heavily weighted towards higher cyclone risk policies in Northern Australia. Savings for South East Queensland are estimated in the order of 11%.

Figure 5.8 shows estimated overall outcomes for strata insurance policies based on the current insurer cyclone premium (see Section 2.4.3).

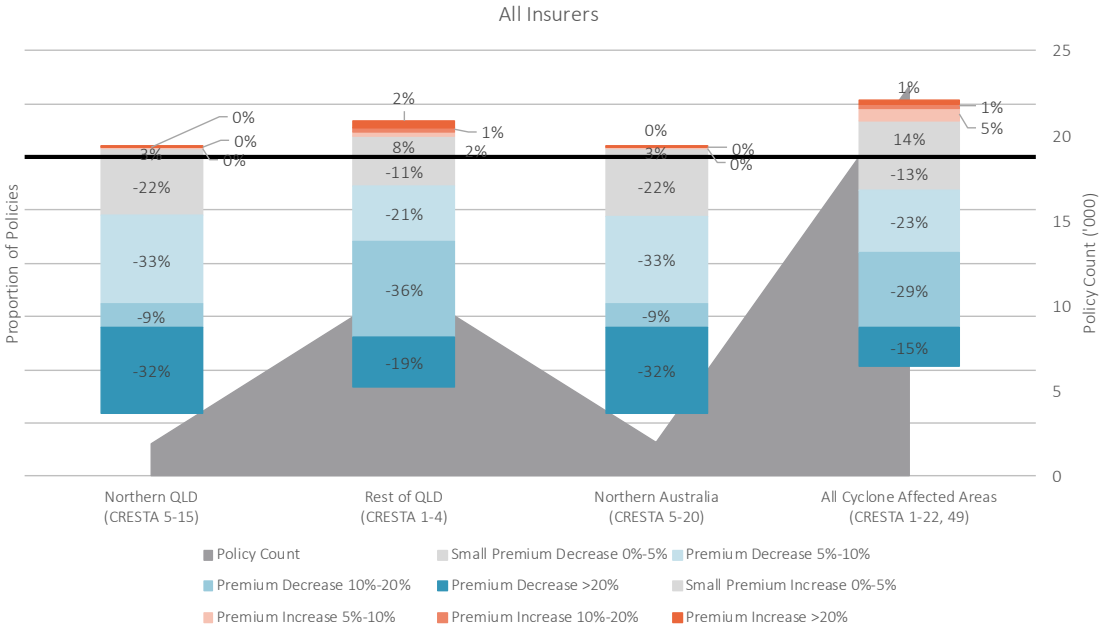
Figure 5.8 – Estimated outcomes based on insurer provided premium data (strata insurance)



There is generally more savings for the higher premium bands.

The outcomes observed for strata buildings varies significantly by region, as shown in Figure 5.9. Note that the quality of data in the ±5% premium change group, shown in grey, does not allow for meaningful results and changes of this magnitude would be difficult to observe in practice.

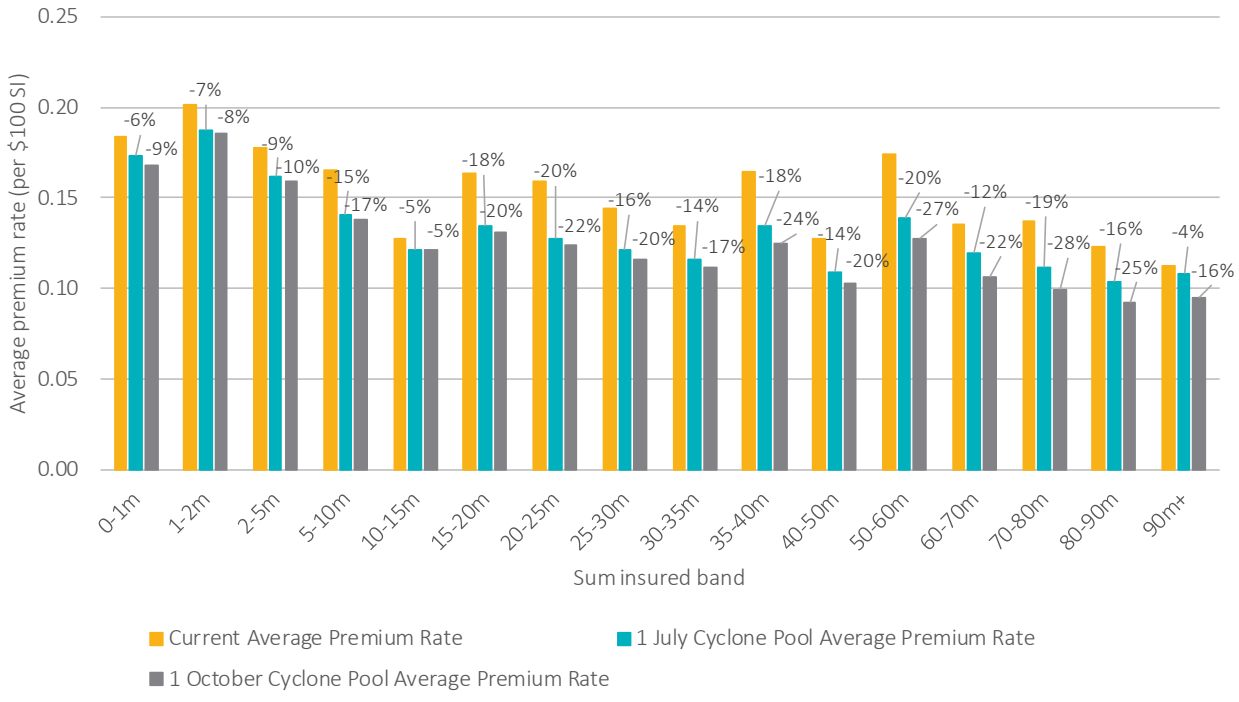
Figure 5.9 – Distribution of estimated premium outcomes for strata buildings



Actual variability in outcomes may be more pronounced due to the broad range of practices and sophistication in the strata insurance market. Less sophistication in insurer rating approaches can mean that insurers do not reflect as much shape in risks between locations as others. Alternatively, individually underwritten risks can better reflect the specifics of a building compared with a standardised formula.

There were material changes to risk relativities for strata policies recommended in this report, particularly in relation to larger strata buildings. Figure 5.10 shows the estimated savings by sum insured band for strata buildings in Northern Australia

Figure 5.10 – Estimated savings in strata insurance premium by region (Northern Australia)



As intended, more savings are estimated for higher sums insured buildings.

A limitation of the strata comparisons set out here is that higher value strata buildings (say >$20m) will be under-represented in the data received from those insurers that provided data. This means that we are not able to compare the policyholder outcomes for high value strata buildings underwritten by specialist insurers for this segment.

There are additional limitations for strata that increase the uncertainty of savings estimates, including:

- Risks tend to be non-homogenous relative to other classes: There are varying types of strata properties, ranging from duplexes to a small set of villas or townhouses, and up to high rise apartment blocks. The variety of different risks complicates the pricing set by insurers and the premium impact outcomes.
- Large sum insureds: Some residential strata properties can be very large, exceeding $100m in sum insured (and a small number of buildings costing multiples of this amount). Therefore, a small change in pricing between the insurer and Cyclone Pool rates can have a material impact on the total premium outcome for a building.
- More underwriter control of pricing: Strata insurance is typically sold through underwriting agencies, which usually retain responsibility for pricing. They are also generally distributed through intermediated channels, so the final premiums charged can be subject to negotiation with the broker. There is a wide range of pricing practices for strata insurance, meaning that assumptions we have made in our analysis can be materially different to what strata underwriting agencies assume.
- Engineering of some buildings: Given some of the larger strata properties are more complex in nature, the structural engineering of the property becomes more important for cyclone risk, and a large strata building with more robust construction will have considerable benefits against cyclone wind risk.
- Insurer practices are less technical: Our understanding of the pricing practices adopted by strata insurers and underwriting agencies is that it is less sophisticated than Home, meaning current premiums may not suitably follow the Cyclone Pool's technical view of cyclone risk. We have various insurers also providing feedback saying they do not follow modelled losses in parts of the strata market, notably lower risk areas.
- Limited view of market: We were only provided data from a few insurers, and therefore the analysis is missing a number of key players in the strata market.

5.3 Concluding comment on overall savings

While the commentary above reflects a significant degree of uncertainty around individual policy outcomes, largely reflecting the limited quality of data available, there is higher confidence in the overall level of savings in the aggregate. By pricing the Cyclone Pool at expected cost without capital margins, including those incurred by both reinsurers and insurers on their retained risk, significant cost will be removed from the system. In addition, the Cyclone Pool will be able to offer a stable source of cyclone coverage not subject to market fluctuations, such as those now being experienced following recent bushfires and floods.

However, the combination of:

- the Cyclone Pool being designed to hold overall premiums at levels similar to those in the private market for low risk policyholders,
- the need to apply a uniform pricing structure across insurers, and
- the wide variety of prices currently charged by private insurers in the market

makes it inevitable that some policyholders could see price increases if Cyclone Pool rates are implemented without some smoothing. We have carefully considered this issue and done as much as possible to mitigate adverse outcomes given the government's policy objectives.

The Cyclone Pool was deliberately designed to allow insurers a degree of discretion in passing these savings along to policyholders to smooth the inevitable situations where past practices, such as commercial decisions, have resulted in some premiums being below those which are indicated by the Cyclone Pool's rate formula.

When viewing the overall effect of the Cyclone Pool on the market, four points should be kept in mind:

- *Properties currently not insured or which are underinsured due to price pressure.* The advent of the Cyclone Pool should create incentives over time for more insurers to offer policies in high risk regions or for consumers to reconsider decisions to not fully insure their properties due to cost. Generally, our analysis has not attempted to quantify effects such as these, which directionally should increase the level of savings and/or positive consumer outcomes.
- *Effect of capping.* The Cyclone Pool will effectively cap the price for insuring cyclone risk at a level which should be affordable for most consumers. Despite the inevitable situations where the Cyclone Pool could result in some increases for individual consumers, overall it will remove the pressure for high cyclone premiums.
- *Risk arising from non-cyclone related flood cover.* Many areas subject to cyclone risk are also prone to non-cyclone flood risk. As the Cyclone Pool's design does not address non-cyclone flood, high prices for overall coverage may persist in such areas despite the savings generated by the Cyclone Pool.
- *Reinsurance market factors*. Across the market reinsurance programs are varied, tailored to individual insurer needs, and subject to complex negotiating practices. It will take time for insurers and reinsurers to realign their covers to account for the Cyclone Pool. While a detailed discussion of this topic is beyond the scope of this report, we note the following:
    - Recent losses from bushfires, storms, and non-cyclone flooding have placed upward pressure on reinsurance prices. Insurers may see reinsurance price increases despite the savings generated by replacing private market cyclone cover with the Cyclone Pool. This could lead to incorrect perceptions that the Cyclone Pool is not delivering expected savings.
    - Some insurers have benefitted by a "diversification benefit", whereby the cost of cover is shared across large perils, such as a major cyclone in Brisbane and a catastrophic earthquake in Melbourne or Wellington. This is particularly true in upper layers providing capital for extreme events. In some cases, removing the cyclone risk from these programs will not achieve savings proportionate to the reduction in expected loss, due to the need to supply reinsurance capital for extreme risk from earthquakes. The Cyclone Pool should remove the need to charge high premiums for cyclone risk, but there may be some offsetting pricing effects in other extreme perils. This is a known and expected consequence of the Cyclone Pool's design.
    - While the Cyclone Pool will primarily affect catastrophe excess of loss covers, many types of reinsurance, such as proportional, facultative or per risk excess, also provide cyclone cover and will need to be restructured. This issue is particularly relevant in the strata market due to the size of the sums insured. Reworking these covers will take time and may result in outcomes which were beyond the scope of this analysis.

Over time, we expect that the market will reach an equilibrium where policyholders will benefit from significant premium savings reflecting policy objectives.

6 Reliances and Limitations

This report and the analysis contained therein summarises work completed solely for ARPC for the purposes of determining the Cyclone Pool premium. This summary report has been provided to insurers to assist with their own implementation of the Cyclone Pool. We understand that ARPC may publish this report on its website.

Insurers, or any other third party, should recognise that the furnishing of this report is not a substitute for their own due diligence and should place no reliance on this report or the data contained herein which would result in the creation of any duty or liability by Finity to the third party.

We have relied on exposure data furnished to Treasury by insurers. A number of assumptions were required to standardise that exposure and render it useful for this analysis.

We have relied on catastrophe models (from a number of providers) commissioned by ARPC, and in many cases run by Aon for ARPC, for the purpose of informing this work. We have not independently verified nor have we independently validated the data or outcomes. We have reviewed the findings for reasonableness and suitability for the purpose of this report.

Some insurers provided additional data to ARPC for the purposes of reviewing the Cyclone Pool premium rates. This data was provided on a best endeavours basis. Finity undertook reasonableness checks on the insurer data provided. We were unable to verify this data for completeness and accuracy. Some insurers informed ARPC that the data provided had known discrepancies, such as the cyclone book premium not being reflective of the actual premium paid by the policyholder. Furthermore, the data was not consistent between insurers; Finity adjusted the raw data for comparability purposes by making assumptions on the insurer expense and commission rates.

We have formed our views based on the current environment and what we know today. If future circumstances change, it is possible that our findings may not prove to be correct.

This report concentrates on changes proposed to the 1 July premium rates and needs to be read in conjunction with the previous report. The underlying exhibits and attachments contained in our report are an integral part of this report and should be considered in order to place our report in its appropriate context. We have prepared this report in conformity with its intended use by persons technically competent in insurance matters. Judgements as to the conclusions drawn in this report should be made only after considering the report in its entirety.

Appendices

A Glossary of key terms

Term	Definition
AAL	Average Annual Loss
ACCC	Australian Competition and Consumer Commission
AICOW	Additional Increased Costs of Working An additional benefit available for business interruption coverage.
ARPC	Australian Reinsurance Pool Corporation
BI	Business Interruption
BOM	Bureau of Meteorology
Cadastre	A digital representation of land parcels
Cat XoL or Catastrophe XoL	Catastrophe Excess of Loss This is a common reinsurance treaty purchased by insurers to protect against aggregation of claim costs from a common event, such as a natural peril.
CRESTA	Catastrophe Risk Evaluating and Standardising Target Accumulations This is a commonly used grouping of geographical regions for the purposes of summarising insurance costs affecting different areas across Australia.
Cyclone Pool	Cyclone and Cyclone Related Flooding Reinsurance Pool
G-NAF	Geocoded National Address File
Northern Australia	Defined as CRESTA zones 5 to 20
Responsible Minister	The Minister responsible for the Cyclone Pool, who has the ability to make Ministerial Determinations in respect of the Cyclone Pool's operations.
SME	Small to Medium Enterprise
Vulnerability Curve	A function linking a modelled event to damage caused by that event. E.g. for cyclone, the vulnerability curve may describe the link between wind speed and building damage.

B Premium calculation

B.1 The Cyclone Pool premium formula

At a high level, the Cyclone Pool premium formula has the following structure when calculated in respect of each eligible policy.

$$CRP\ premium_{product\ type,peril} = Policy\ sum\ insured \times CRP\ base\ rate_{product\ type,location,peril}$$

$$\times \left[risk\ rating\ factor_{1,product\ type,peril} \times risk\ rating\ factor_{2,product\ type,peril} \times \ldots\right] / 100$$

There are different risk rating factors for each peril and insurance product.

The following insurance products are covered by the Cyclone Pool:

- Home:
  - Building
  - Contents.
- SME
  - Building
  - Contents
  - Business Interruption.
- Strata
  - Buildings and common contents combined.

A separate Cyclone Pool premium formula applies for each insurance segments and for each of the risks posed by cyclone (wind, flood, and storm surge). Flood and storm surge premiums need only be calculated where the policy conditions include coverage for these perils.

For example, where a SME business purchases insurance coverage for contents and business interruption, and the Business Packages policy excludes coverage for flood risk, then the Cyclone Pool premium applicable for that insurance policy will be the aggregate of the following calculations:

- SME contents for wind risks.
- SME contents for storm surge risks.
- SME business interruption for wind risks.
- SME business interruption for storm surge risks.

If the above example SME policy includes flood coverage, then the Cyclone Pool flood premium will also need to be calculated for each of the contents and business interruption policy sections.

The base rate is expressed per $100 Sum Insured (SI). The base rate is dependent on the location of the risk, and varies by peril:

- Wind: Each suburb in Australia has been allocated to one of 26 Wind Bands, designated by the letters A to Z. Each Wind Band has a base rate to be applied per $100 SI.

- Flood and storm surge: Each GNAF in Australia has been allocated to one of 8 flood / storm surge bands (Nil, Minimum, Very Low, Low, Medium, High, Very High and Maximum). Each flood / storm surge band has a base rate to be applied per $100 SI.

The relativities are dependent on the individual characteristics of the risk and associated policy and can be found in Appendices E, F and G.

B.2 Calculation of sum insured risk relativity

The sum insured risk relativity is determined such that there is no 'saw-tooth' pattern to calculated Cyclone Pool premiums as the sum insured increases.

The sum insured risk relativity is calculated using the formula below.

$$\frac{\text{Start of SI band} \times \text{Relativity}_{start\ of\ SI\ band} + (\text{SI} - \text{Start of SI band}) \times \text{Relativity}_{marginal\ for\ the\ SI\ band}}{\text{SI}}$$

SI refers to sum insured in the above formula.

For example, for a home building with sum insured of $790,000, the start of the sum insured band would be $700,000, which has a relativity of 0.9740. The marginal additional $90,000 sum insured has a relativity of 0.9000. The sum insured relativity applying to this policy is the weighted average of these amounts, which is 0.9656.

Instead of applying the above formula, insurers may instead calculate the implied relativity for each sum insured value resulting in a large look up table.

B.3 Worked example

Below is a worked example of the Cyclone Pool premium calculation for a one storey, freestanding timber and terracotta roof home insured for $450,000 located in Cairns City (4870, which is risk band Q), built in 1975. The owner has retrofitted shutters to the windows. Looking up the address of this property in the Cyclone Pool's G-NAF dataset shows Medium flood risk and Maximum storm surge risk.

The insurance policy includes coverage for flood and storm surge. There is a $250 excess on the policy. This insurance product offers coverage consistent with ARPC's A category.

The Cyclone Pool premium is calculated as follows.

		Wind	Flood	Storm surge	Total
Sum insured		$450,000	$450,000	$450,000	
Risk band		Band Q	Medium	Maximum	
Base rate		0.1400	0.0400	0.0500	
Risk Relativities					
Sum insured	$450,000	1.016			
Policy excess	$250 excess	1.060	1.060	1.060	
Building type	Freestanding home	1.000			
Construction type	Timber	1.050	1.050	1.050	
Roof type	Terracotta Tile	0.900			
Construction year	1975	1.400	1.000	1.000	
Landlords flag	No	1.000	1.000	1.000	
Number of storeys	1		1.000	1.000	
Policy coverage level	A	1.030	1.030	1.030	
Risk mitigation relativities					
Garage doors	No	1.000			
Window openings	Shutters installed	0.900			
Replaced roof	No	1.000			
Total risk relativity (product of all relativities)		1.320	1.146	1.146	
Cyclone Pool premium (ex taxes and levies)		$832	$206	$258	$1,296

Note that the sum insured relativity for the wind risk is calculated as follows to give a relativity of 1.016

$$\frac{400{,}000 \times 1.030 + (450{,}000 - 400{,}000) \times 0.900}{450{,}000}$$

The total Cyclone Pool premium for this property is $1,296, excluding taxes and levies, summing up the wind, flood, and storm surge components of the premium.

C Estimated Cyclone Pool premiums by CRESTA

C.1 Home insurance summary

CRESTA	Name	Number of policies	Average SI ($)	Total Cyclone Pool premium ($m)	Average Cyclone Pool premium ($)	Average wind premium ($)	Proportion of policies with flood	Average non-zero flood premium ($)	Proportion of policies with surge	Average non-zero surge premium ($)
1	Gold Coast	315,187	427,353	42	132	90	33%	89	18%	69
2	Brisbane	1,120,955	504,961	116	103	82	18%	104	4%	55
3	Sunshine Coast	198,669	467,883	31	157	132	13%	91	21%	67
4	Wide Bay	131,906	470,096	21	157	144	11%	69	10%	57
5	Rockhampton	71,169	467,678	21	294	288	10%	52	1%	49
6	Marlborough	19,095	519,695	8	413	408	5%	67	4%	45
7	Mackay	51,778	477,856	41	788	776	8%	92	10%	48
8	Proserpine and Offshore Islands	19,895	485,921	16	828	804	4%	73	21%	98
9	Townsville	97,686	468,138	61	624	576	29%	96	17%	122
10	Ingham	29,834	470,385	16	537	474	34%	95	24%	126
11	Cairns	111,384	449,760	48	427	397	19%	62	24%	78
12	Cape York	4,208	557,864	1	236	218	13%	53	10%	106
13	Fair Cape	6,693	708,721	3	379	357	2%	60	18%	114
14	Gulf	3,221	538,119	1	357	275	43%	82	35%	132
15	Inland QLD	253,239	501,866	13	52	31	17%	121	0%	-
16	North NT	19,850	710,296	5	252	242	8%	92	3%	99
17	Darwin	54,441	533,151	25	457	452	3%	70	9%	35
18	Remainder NT	16,314	640,178	0	8	2	6%	93	0%	-
19	Kununurra-Broome	16,403	543,192	19	1,173	1,099	6%	31	59%	122
20	Pilbara	31,498	532,482	48	1,530	1,484	1%	202	38%	116
21	Geraldton Central Coast	44,013	497,820	15	346	332	10%	58	5%	145
22	Perth	1,093,997	488,776	97	89	82	2%	119	5%	86
23	Albany-Bunbury	140,140	510,920	13	91	78	8%	94	11%	54
24	Remainder WA	65,703	485,971	3	45	42	8%	44	0%	-
47	Northern Slopes	101,623	561,926	1	9	0	10%	90	0%	-
48	Mid-North coast	106,070	517,056	1	11	9	0%	-	4%	38
49	Far North coast	178,434	508,352	18	100	63	27%	53	23%	98
Total		4,303,405		684						

Note that the total cyclone premium for home insurance does not allow for non-insurance as discussed in Section 4.3. This means the total Cyclone Pool premium shown is greater than we expect to be achieved because some property owners who would be eligible for the Cyclone Pool do not insure their property.

C.2 SME business insurance summary

CRESTA	Name	Number of policies	Average SI ($)	Total Cyclone Pool premium ($m)	Average Cyclone Pool premium ($)	Average wind premium ($)	Proportion of policies with flood	Average non-zero flood premium ($)	Proportion of policies with surge	Average non-zero surge premium ($)
1	Gold Coast	19,641	406,845	1	64	41	31%	43	16%	65
2	Brisbane	77,945	473,725	4	54	24	32%	87	6%	45
3	Sunshine Coast	15,632	398,311	1	45	30	15%	48	18%	46
4	Wide Bay	10,850	443,215	1	53	37	24%	53	6%	53
5	Rockhampton	7,118	578,607	1	147	138	13%	61	2%	58
6	Marlborough	1,202	376,835	0	162	156	14%	27	13%	19
7	Mackay	5,200	511,180	2	392	383	8%	51	11%	47
8	Proserpine and Offshore Islands	2,058	452,431	1	400	372	6%	54	29%	85
9	Townsville	8,627	508,355	3	376	330	28%	59	23%	125
10	Ingham	2,358	460,232	1	286	223	47%	106	19%	74
11	Cairns	10,123	477,870	4	349	247	33%	87	48%	153
12	Cape York	111	369,410	0	58	52	13%	23	1%	279
13	Fair Cape	192	468,347	0	284	280	0%	-	12%	33
14	Gulf	101	556,574	0	360	253	36%	85	35%	220
15	Inland QLD	24,863	474,234	1	22	11	21%	53	0%	-
16	North NT	1,968	579,788	0	92	80	17%	67	0%	50
17	Darwin	7,107	727,217	3	368	363	3%	33	12%	34
18	Remainder NT	2,270	643,836	0	3	2	2%	66	0%	16
19	Kununurra-Broome	1,720	556,459	1	723	634	9%	41	64%	134
20	Pilbara	1,999	581,472	3	1,695	1,634	3%	24	50%	120
21	Geraldton Central Coast	3,666	448,725	1	192	179	20%	32	6%	107
22	Perth	68,094	504,625	1	19	15	2%	65	5%	74
23	Albany-Bunbury	13,344	495,189	1	39	21	13%	55	17%	64
24	Remainder WA	5,062	491,478	0	34	18	16%	101	0%	-
47	Northern Slopes	13,450	435,219	0	10	-	16%	59	0%	-
48	Mid-North coast	10,549	427,976	0	4	3	0%	-	3%	26
49	Far North coast	19,354	426,865	1	77	22	41%	71	28%	93
Total		334,604		31						

C.3 Strata insurance summary

CRESTA	Name	Number of policies	Average SI ($)	Total Cyclone Pool premium ($m)	Average Cyclone Pool premium ($)	Average wind premium ($)	Proportion of policies with flood	Average non-zero flood premium ($)	Proportion of policies with surge	Average non-zero surge premium ($)
1	Gold Coast	12,692	5,306,846	16	1,224	847	38%	499	22%	861
2	Brisbane	17,512	6,751,879	14	775	530	22%	1,001	3%	617
3	Sunshine Coast	6,280	4,231,376	6	1,029	762	19%	567	30%	526
4	Wide Bay	1,401	2,867,110	1	673	536	13%	319	16%	574
5	Rockhampton	841	3,344,034	1	1,219	1,193	7%	335	2%	196
6	Marlborough	239	3,581,325	0	1,543	1,534	3%	135	3%	165
7	Mackay	1,045	2,146,505	3	2,462	2,398	13%	293	14%	175
8	Proserpine and Offshore Islands	355	4,705,605	1	3,192	2,980	3%	450	21%	945
9	Townsville	1,560	3,684,607	5	3,334	2,954	35%	335	33%	803
10	Ingham	182	2,851,474	0	2,567	2,280	23%	189	38%	643
11	Cairns	2,228	5,225,877	9	3,957	3,268	26%	746	43%	1,154
12	Cape York	-	-	-	-	-	0%	-	0%	-
13	Fair Cape	103	1,509,654	0	1,173	1,167	8%	51	3%	53
14	Gulf	-	-	-	-	-	0%	-	0%	-
15	Inland QLD	3,198	1,699,079	0	92	69	9%	239	0%	-
16	North NT	86	3,421,600	0	313	275	15%	248	0%	-
17	Darwin	2,023	4,772,808	4	2,068	2,024	3%	309	15%	224
18	Remainder NT	514	2,590,676	-	-	-	0%	-	0%	-
19	Kununurra-Broome	457	2,073,507	2	3,538	3,159	5%	123	68%	542
20	Pilbara	691	3,088,946	6	8,564	8,252	0%	-	53%	584
21	Geraldton Central Coast	938	1,966,335	1	1,076	1,005	7%	171	8%	734
22	Perth	64,541	1,828,886	14	215	194	1%	404	4%	435
23	Albany-Bunbury	3,857	1,678,450	1	258	191	14%	156	24%	189
24	Remainder WA	1,840	1,237,764	0	15	10	2%	221	0%	-
47	Northern Slopes	939	1,446,372	0	18	-	6%	290	0%	-
48	Mid-North coast	3,676	2,082,582	0	42	38	0%	-	3%	126
49	Far North coast	8,011	2,015,239	3	433	239	34%	242	34%	330
Total		135,209		88						

D List of changes for 1 October 2022 premium rates

The following list outlines all of the changes made for the recommended 1 October 2022 premium rates:

Base rate changes:

- Premium rate for wind band V has been reduced.
- Premium rate for wind band W has been reduced.
- Premium rate for wind band U for home contents changed to $0.2000.
- Risk bands for suburbs in Southern WA have changed.
- Storm surge rates for SME BI for high and very high risks revised to $0.0250.
- The GNAF dataset for wind, flood and surge rating has been updated to latest GNAF dataset from the Geoscape February 2022 update.
- The postcode wind rating table updated to include all postcode in the latest Australia Post postcodes dataset as at 31 August 2022. This now includes postcodes which are exclusively used for P.O. boxes.

Changes to risk relativities:

- The wind, flood and surge 'Timber/Weatherboard/Hardiplank' relativity was changed from 1.10 to 1.05 for all insurance classes and each of wind, flood and surge premium.
- The construction year bands for all insurance classes changed from '2000-2009' and '2010-2019' to '2000-2011' and '2012-2019' respectively.
- The construction year relativity for post-2012 buildings has changed from 0.95 to 0.9 for wind risk.
- Home insurance specific changes:
  - The roof type relativity for slate increased from 0.9 to 1.0 for home buildings and contents for wind risk.
  - The excess relativity for combined home policies was changed for wind, flood, and surge risks.
  - The roller door mitigation for wind risk has been updated to 'Roller door bracing upgrade or retrofit replacement of roller door (compliant with AS 4505:2012) – on homes built pre-2012'.
  - The definition of the roof replacement mitigation for home wind changed from applying to homes built pre-2002 to homes built pre-1982.
- Strata specific changes
  - The sum insured relativity for wind risk was revised above $20m.
  - Construction type relativity for wind risk for reinforced concrete was lowered from 0.85 to 0.65.
  - The number of stories relativities for wind have changed.
  - The number of stories relativities for flood and surge risk have changed.

Note that base rates and rating factors are up to 4 decimal places only.

E Home building premium rates

Changes from the previous premium rate tables have been highlighted.

E.1 Wind Base Rates per $100 SI

	Wind	
Band	Buildings	Contents
A	0.0000	0.0000
B	0.0040	0.0028
C	0.0080	0.0056
D	0.0120	0.0084
E	0.0160	0.0112
F	0.0200	0.0140
G	0.0240	0.0168
H	0.0280	0.0196
I	0.0320	0.0230
J	0.0360	0.0259
K	0.0400	0.0288
L	0.0500	0.0450
M	0.0600	0.0540
N	0.0800	0.0720
O	0.1000	0.0900
P	0.1200	0.1080
Q	0.1400	0.1260
R	0.1600	0.1440
S	0.1800	0.1620
T	0.2000	0.1800
U	0.2000	0.2000
V	0.2500	0.2500
W	0.3500	0.3500
X	#N/A	#N/A
Y	#N/A	#N/A
Z	#N/A	#N/A

E.2 Flood and Surge Base Rates per $100 SI

	Flood		Surge	
Band	Buildings	Contents	Buildings	Contents
Nil	0.0000	0.0000	0.0000	0.0000
Minimum	0.0100	0.0115	0.0060	0.0067
Very Low	0.0200	0.0230	0.0120	0.0134
Low	0.0300	0.0345	0.0200	0.0224
Medium	0.0400	0.0460	0.0300	0.0336
High	0.0500	0.0575	0.0400	0.0448
Very High	0.0700	0.0805	0.0500	0.0560
Maximum	0.1000	0.2000	0.0500	0.1000

E.3 Sum Insured

Buildings		Wind		Contents		Wind	
Sum Insured Min	Sum Insured Max	Relativity applied to min. of band	Marginal relativity	Sum Insured Min	Sum Insured Max	Relativity applied to min. of band	Marginal relativity
0	99,999	0.0000	1.2000	0	9,999	0.0000	1.2500
100,000	199,999	1.2000	1.0500	10,000	19,999	1.2500	1.0800
200,000	299,999	1.1250	0.9500	20,000	29,999	1.1650	1.0200
300,000	399,999	1.0670	0.9200	30,000	39,999	1.1170	0.8500
400,000	499,999	1.0300	0.9000	40,000	49,999	1.0500	0.8200
500,000	599,999	1.0040	0.9000	50,000	59,999	1.0040	0.8200
600,000	699,999	0.9870	0.9000	60,000	69,999	0.9730	0.8200
700,000	799,999	0.9740	0.9000	70,000	79,999	0.9510	0.8200
800,000	899,999	0.9650	0.9000	80,000	89,999	0.9350	0.8200
900,000	999,999	0.9580	0.9000	90,000	99,999	0.9220	0.8200
1,000,000	1,099,999	0.9520	0.9000	100,000	109,999	0.9120	0.8200
1,100,000	1,199,999	0.9470	0.9000	110,000	119,999	0.9040	0.8200
1,200,000	1,299,999	0.9430	0.9000	120,000	129,999	0.8970	0.8200
1,300,000	1,399,999	0.9400	0.9000	130,000	139,999	0.8910	0.8200
1,400,000	1,499,999	0.9370	0.9000	140,000	149,999	0.8860	0.8200
1,500,000	1,599,999	0.9350	0.9000	150,000	159,999	0.8810	0.8200
1,600,000	1,699,999	0.9320	0.9000	160,000	169,999	0.8770	0.8200
1,700,000	1,799,999	0.9310	0.9000	170,000	179,999	0.8740	0.8200
1,800,000	1,899,999	0.9290	0.9000	180,000	189,999	0.8710	0.8200
1,900,000	1,999,999	0.9270	0.9000	190,000	199,999	0.8680	0.8200
2,000,000	100,000,000	0.9260	0.9000	200,000	209,999	0.8660	0.8200
				210,000	219,999	0.8640	0.8200
				220,000	229,999	0.8620	0.8200
				230,000	239,999	0.8600	0.8200
				240,000	249,999	0.8580	0.8200
				250,000	259,999	0.8570	0.8200
				260,000	269,999	0.8550	0.8200
				270,000	279,999	0.8540	0.8200
				280,000	289,999	0.8530	0.8200
				290,000	299,999	0.8520	0.8200
				300,000	100,000,000	0.8510	0.8200

E.4 Excess

Buildings					Contents				
Excess Min	Excess Max	Wind	Flood	Surge	Excess Min	Excess Max	Wind	Flood	Surge
0	99	1.1200	1.1200	1.1200	0	99	1.1200	1.1200	1.1200
100	199	1.1000	1.1000	1.1000	100	199	1.1000	1.1000	1.1000
200	299	1.0600	1.0600	1.0600	200	299	1.0600	1.0600	1.0600
300	399	1.0450	1.0450	1.0450	300	399	1.0450	1.0450	1.0450
400	499	1.0300	1.0300	1.0300	400	499	1.0300	1.0300	1.0300
500	599	1.0000	1.0000	1.0000	500	599	1.0000	1.0000	1.0000
600	699	0.9880	0.9880	0.9880	600	699	0.9880	0.9880	0.9880
700	799	0.9760	0.9760	0.9760	700	799	0.9760	0.9760	0.9760
800	899	0.9640	0.9640	0.9640	800	899	0.9640	0.9640	0.9640
900	999	0.9520	0.9520	0.9520	900	999	0.9520	0.9520	0.9520
1,000	1,249	0.9400	0.9400	0.9400	1,000	1,249	0.9400	0.9400	0.9400
1,250	1,499	0.9350	0.9350	0.9350	1,250	1,499	0.9350	0.9350	0.9350
1,500	1,749	0.9300	0.9300	0.9300	1,500	1,749	0.9300	0.9300	0.9300
1,750	1,999	0.9250	0.9250	0.9250	1,750	1,999	0.9250	0.9250	0.9250
2,000	2,999	0.9200	0.9200	0.9200	2,000	2,999	0.9200	0.9200	0.9200
3,000	3,999	0.9133	0.9133	0.9133	3,000	3,999	0.9133	0.9133	0.9133
4,000	4,999	0.9067	0.9067	0.9067	4,000	4,999	0.9067	0.9067	0.9067
5,000	1,000,000	0.9000	0.9000	0.9000	5,000	1,000,000	0.9000	0.9000	0.9000

E.5 Building Type

	Wind	
Building Type	Buildings	Contents
Freestanding house	1.0000	1.0000
Semi detached, duplex or terrace	1.0000	1.0000
Unit, flat or apartment	1.0000	1.0000
Townhouse or villa	1.0000	1.0000
Caravan, mobile or relocatable home	2.0000	2.0000
Other	1.0000	1.0000
Unknown	1.0000	1.0000

E.6 Construction Type

	Wind								Flood		Surge	
	Buildings				Contents				Buildings	Contents	Buildings	Contents
Construction Type	A	B	C	D	A	B	C	D				
Brick Veneer	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Fibro/Asbestos	1.2500	1.2500	1.2500	1.2500	1.1000	1.1000	1.1000	1.1000	1.1000	1.0000	1.1000	1.0000
Concrete/Cement/Hebel	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.9000	1.0000	0.9000	1.0000
Timber/Weatherboard/Hardiplank	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0000	1.0500	1.0000
Double Brick	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9500	1.0000	0.9500	1.0000
Metal Sheeting	1.1500	1.1500	1.1500	1.1500	1.1000	1.1000	1.1000	1.1000	1.0000	1.0000	1.0000	1.0000
Metal Frame	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.9000	1.0000	0.9000	1.0000
Mudbrick/Rammed Earth	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Stone	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
EPS	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Caravan, mobile or relocatable home	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Unknown	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

E.7 Roof Type

	Wind	
Roof Type	Buildings	Contents
Concrete Tiles	0.9000	0.9000
Terracotta Tile	0.9000	0.9000
Metal/Colorbond	1.0000	1.0000
Concrete	0.9000	0.9000
Fibro/Asbestos Cement	1.1000	1.0000
Shingle	1.0000	1.0000
Slate	1.0000	1.0000
Timber	1.0000	1.0000
Decramastic	1.0000	1.0000
Thatched	1.2000	1.2000
Caravan, mobile or relocatable home	1.0000	1.0000
Other	1.0000	1.0000
Unknown	0.9500	0.9500

E.8 Construction Year

	Wind								Flood		Surge	
	Buildings				Contents				Buildings	Contents	Buildings	Contents
Construction Year	A	B	C	D	A	B	C	D				
Pre 1920	1.3000	1.3500	1.4000	1.6000	1.3000	1.3500	1.4000	1.6000	1.0000	1.0000	1.0000	1.0000
1920 - 1949	1.3000	1.3500	1.4000	1.6000	1.3000	1.3500	1.4000	1.6000	1.0000	1.0000	1.0000	1.0000
1950 - 1959	1.3000	1.3500	1.4000	1.6000	1.3000	1.3500	1.4000	1.6000	1.0000	1.0000	1.0000	1.0000
1960 - 1969	1.3000	1.3500	1.4000	1.6000	1.3000	1.3500	1.4000	1.6000	1.0000	1.0000	1.0000	1.0000
1970 - 1981	1.3000	1.3500	1.4000	1.6000	1.3000	1.3500	1.4000	1.6000	1.0000	1.0000	1.0000	1.0000
1982 - 1989	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1990 - 1999	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2000 - 2011	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2012 - 2019	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	1.0000	1.0000	1.0000	1.0000
2020+	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	1.0000	1.0000	1.0000	1.0000
Caravan, mobile or relocatable home	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Unknown	1.3000	1.3500	1.4000	1.6000	1.3000	1.3500	1.4000	1.6000	1.0000	1.0000	1.0000	1.0000

E.9 Landlords Flag

	Wind		Flood		Surge	
Landlords Flag	Buildings	Contents	Buildings	Contents	Buildings	Contents
Non-Landlords	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Landlords	1.1000	1.0000	1.1000	1.0000	1.1000	1.0000

E.10 Number of Storeys

	Flood		Surge	
Number of Storeys	Buildings	Contents	Buildings	Contents
1	1.0000	1.0000	1.0000	1.0000
2	0.8000	0.6000	0.8000	0.6000
3+	0.6000	0.4000	0.6000	0.4000
1 Storey elevated (>1m)	0.5000	0.4000	0.5000	0.4000
2 Storeys elevated (>1m)	0.4500	0.3500	0.4500	0.3500
3 Storeys elevated (>1m)	0.4000	0.3000	0.4000	0.3000
Caravan, mobile or relocatable home	1.0000	1.0000	1.0000	1.0000
Unknown	1.0000	1.0000	1.0000	1.0000

E.11 Coverage Level

		Wind		Flood		Surge	
Level	Building Coverage Level	Buildings	Contents	Buildings	Contents	Buildings	Contents
Home_G01	A	1.0300	#N/A	1.0300	#N/A	1.0300	#N/A
Home_G02	B	1.0000	#N/A	1.0000	#N/A	1.0000	#N/A
Home_G03	C	0.9700	#N/A	0.9700	#N/A	0.9700	#N/A
Home_G04	Not Applicable	1.0000	#N/A	1.0000	#N/A	1.0000	#N/A

E.12 Mitigation – Roller Door

	Wind	
Mitigation	Buildings	Contents
No roller door bracing	1.0000	1.0000
Roller door bracing upgrade or retrofit replacement of roller door (compliant with AS 4505:2012) – on homes built pre-2012	0.9200	0.9200

E.13 Mitigation – Window Protection

	Wind	
Mitigation	Buildings	Contents
No window protection	1.0000	1.0000
Window protection to all windows (e.g. cyclone shutters)	0.9000	0.9000

E.14 Mitigation – Roof Replacement

	Wind	
Mitigation	Buildings	Contents
No roof replacement	1.0000	1.0000
Roof structure tie-down upgrades (e.g. over-batten roof system) - on homes built pre 1982	0.8000	0.8000
Complete roof replacement and structure tie-down upgrades to current standards - on homes built pre 1982	0.7000	0.7000

F SME business insurance premium rates

Changes from the previous premium rate tables have been highlighted.

F.1 Wind Base Rates per $100 SI

	Wind		
Band	Buildings	Contents	BI
A	0.0000	0.0000	0.0000
B	0.0028	0.0010	0.0018
C	0.0056	0.0020	0.0036
D	0.0084	0.0032	0.0055
E	0.0112	0.0045	0.0073
F	0.0140	0.0056	0.0091
G	0.0168	0.0071	0.0109
H	0.0196	0.0082	0.0127
I	0.0240	0.0108	0.0156
J	0.0288	0.0130	0.0187
K	0.0380	0.0182	0.0247
L	0.0475	0.0228	0.0309
M	0.0570	0.0274	0.0371
N	0.0760	0.0365	0.0494
O	0.0950	0.0456	0.0618
P	0.1176	0.0564	0.0764
Q	0.1372	0.0659	0.0892
R	0.1568	0.0753	0.1019
S	0.1764	0.0882	0.1058
T	0.2000	0.1080	0.1100
U	0.2000	0.1200	0.1200
V	0.2125	0.1275	0.1594
W	0.3500	0.3500	0.1750
X	#N/A	#N/A	#N/A
Y	#N/A	#N/A	#N/A
Z	#N/A	#N/A	#N/A

F.2 Flood and Surge Base Rates per $100 SI

	Flood			Surge		
Band	Buildings	Contents	BI	Buildings	Contents	BI
Nil	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Minimum	0.0077	0.0105	0.0044	0.0049	0.0075	0.0041
Very Low	0.0154	0.0210	0.0088	0.0097	0.0150	0.0083
Low	0.0231	0.0315	0.0132	0.0162	0.0250	0.0138
Medium	0.0308	0.0420	0.0176	0.0243	0.0375	0.0207
High	0.0385	0.0525	0.0220	0.0324	0.0500	0.0250
Very High	0.0539	0.0735	0.0308	0.0405	0.0625	0.0250
Maximum	0.1000	0.2000	0.0500	0.0500	0.1000	0.0250

F.3 Sum Insured

Buildings		Wind		Contents		Wind		Business Interruption		Business Interruption	
Sum Insured Min	Sum Insured Max	Relativity applied to min. of band	Marginal relativity	Sum Insured Min	Sum Insured Max	Relativity applied to min. of band	Marginal relativity	Sum Insured Min	Sum Insured Max	Relativity applied to min. of band	Marginal relativity
0	99,999	0.0000	1.1500	0	99,999	0.0000	1.0500	0	99,999	0.0000	1.0500
100,000	199,999	1.1500	1.1500	100,000	199,999	1.0500	0.9500	100,000	199,999	1.0500	0.9800
200,000	299,999	1.1500	1.1500	200,000	299,999	1.0000	0.9500	200,000	299,999	1.0150	0.9500
300,000	399,999	1.1500	0.9500	300,000	399,999	0.9830	0.9000	300,000	399,999	0.9930	0.9500
400,000	499,999	1.1000	0.9500	400,000	499,999	0.9620	0.8500	400,000	499,999	0.9820	0.9500
500,000	599,999	1.0700	0.9500	500,000	599,999	0.9400	0.8500	500,000	599,999	0.9760	0.9500
600,000	699,999	1.0500	0.9500	600,000	699,999	0.9250	0.8000	600,000	699,999	0.9720	0.9500
700,000	799,999	1.0360	0.9500	700,000	799,999	0.9070	0.8000	700,000	799,999	0.9690	0.9000
800,000	899,999	1.0250	0.9500	800,000	899,999	0.8940	0.8000	800,000	899,999	0.9600	0.9000
900,000	999,999	1.0170	0.9500	900,000	999,999	0.8830	0.8000	900,000	999,999	0.9530	0.9000
1,000,000	1,099,999	1.0100	0.9000	1,000,000	1,099,999	0.8750	0.8000	1,000,000	1,099,999	0.9480	0.9000
1,100,000	1,199,999	1.0000	0.9000	1,100,000	1,199,999	0.8680	0.8000	1,100,000	1,199,999	0.9440	0.9000
1,200,000	1,299,999	0.9920	0.9000	1,200,000	1,299,999	0.8620	0.8000	1,200,000	1,299,999	0.9400	0.9000
1,300,000	1,399,999	0.9850	0.9000	1,300,000	1,399,999	0.8580	0.8000	1,300,000	1,399,999	0.9370	0.9000
1,400,000	1,499,999	0.9790	0.9000	1,400,000	1,499,999	0.8540	0.8000	1,400,000	1,499,999	0.9340	0.9000
1,500,000	1,999,999	0.9730	0.9000	1,500,000	1,999,999	0.8500	0.8000	1,500,000	1,999,999	0.9320	0.9000
2,000,000	2,499,999	0.9550	0.9000	2,000,000	2,499,999	0.8370	0.7500	2,000,000	2,499,999	0.9240	0.9000
2,500,000	2,999,999	0.9440	0.8500	2,500,000	2,999,999	0.8200	0.7500	2,500,000	2,999,999	0.9190	0.9000
3,000,000	3,499,999	0.9280	0.8500	3,000,000	3,499,999	0.8080	0.7500	3,000,000	3,499,999	0.9160	0.9000
3,500,000	3,999,999	0.9170	0.8000	3,500,000	3,999,999	0.8000	0.7000	3,500,000	3,999,999	0.9140	0.9000
4,000,000	4,499,999	0.9020	0.8000	4,000,000	4,499,999	0.7870	0.7000	4,000,000	4,499,999	0.9120	0.9000
4,500,000	5,000,000	0.8910	0.8000	4,500,000	5,000,000	0.7780	0.7000	4,500,000	5,000,000	0.9110	0.9000

F.4 Sum Insured Type

	Business Interruption
Industry Group	Gross Profit Relativity
Wholesale Trade	2.0000
Retail Trade	2.0000
Accommodation	1.5000
Food and Beverage Services	2.0000
Professional, Scientific and Technical Services	1.5000
Health Care and Social Assistance	1.5000
Arts and Recreation Services	1.5000
Repair and Maintenance	1.5000
Personal and Other Services	1.5000
Private Households Employing Staff and Undifferentiated Goods	1.0000
Property Owner Only	1.0000
Standard/Default	1.5000

F.5 Excess

		Buildings					Contents			
Excess Min	Excess Max	Wind	Flood	Surge	Excess Min	Excess Max	Wind	Flood	Surge
0	249	1.1000	1.1000	1.1000	0	249	1.1000	1.1000	1.1000
250	499	1.1000	1.1000	1.1000	250	499	1.1000	1.1000	1.1000
500	749	1.0000	1.0000	1.0000	500	749	1.0000	1.0000	1.0000
750	999	0.9750	0.9750	0.9750	750	999	0.9750	0.9750	0.9750
1,000	1,499	0.9500	0.9500	0.9500	1,000	1,499	0.9500	0.9500	0.9500
1,500	1,999	0.9250	0.9250	0.9250	1,500	1,999	0.9250	0.9250	0.9250
2,000	4,999	0.9000	0.9000	0.9000	2,000	4,999	0.9000	0.9000	0.9000
5,000	9,999	0.8500	0.8500	0.8500	5,000	9,999	0.8500	0.8500	0.8500
10,000	24,999	0.8000	0.8000	0.8000	10,000	24,999	0.8000	0.8000	0.8000
25,000	49,999	0.7500	0.7500	0.7500	25,000	49,999	0.7500	0.7500	0.7500
50,000	99,999	0.7000	0.7000	0.7000	50,000	99,999	0.7000	0.7000	0.7000
100,000	1,000,000	0.6500	0.6500	0.6500	100,000	1,000,000	0.6500	0.6500	0.6500

F.6 Industry Group

	Wind		Business Interruption
Industry Group	Buildings	Contents	Business Interruption
Wholesale Trade	1.0000	1.0000	0.9500
Retail Trade	1.0000	1.0000	0.9500
Accommodation	1.0000	1.0000	1.2500
Food and Beverage Services	1.0000	1.0000	1.1000
Professional, Scientific and Technical Services	1.0000	1.0000	0.8000
Health Care and Social Assistance	1.0000	1.0000	0.7000
Arts and Recreation Services	1.0000	1.0000	1.0000
Repair and Maintenance	1.0000	1.0000	0.8500
Personal and Other Services	1.0000	1.0000	0.8500
Private Households Employing Staff and Undifferentiated Goods	1.0000	1.0000	0.8500
Property Owner Only	1.0000	1.0000	1.0000
Standard/Default	1.0000	1.0000	1.0000

F.7 Construction Type

	Wind												Flood			Surge		
	Buildings				Contents				BI				Building	Content	BI	Building	Content	BI
Construction Type	A	B	C	D	A	B	C	D	A	B	C	D						
Brick Veneer	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Fibro/Asbestos	1.2500	1.2500	1.2500	1.2500	1.1000	1.1000	1.1000	1.1000	1.2500	1.2500	1.2500	1.2500	1.1000	1.0000	1.1000	1.1000	1.0000	1.1000
Concrete/Cement/Hebel	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.9000	1.0000	0.9000	0.9000	1.0000	0.9000
Timber/Weatherboard/Hardiplank	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0000	1.0500	1.0500	1.0000	1.0500
Double Brick	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9500	1.0000	0.9500	0.9500	1.0000	0.9500
Metal Sheeting	1.1500	1.1500	1.1500	1.1500	1.1000	1.1000	1.1000	1.1000	1.1500	1.1500	1.1500	1.1500	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Metal Frame	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.9000	1.0000	0.9000	0.9000	1.0000	0.9000
Mudbrick/Rammed Earth	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Stone	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
EPS	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Unknown	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	0.9500	1.0000	0.9500

F.8 Roof Type

	Wind		
Roof Type	Buildings	Contents	BI
Concrete Tiles	0.9000	0.9000	0.9000
Terracotta Tile	0.9000	0.9000	0.9000
Metal/Colorbond	1.0000	1.0000	1.0000
Concrete	0.9000	0.9000	0.9000
Fibro/Asbestos Cement	1.1000	1.1000	1.1000
Shingle	1.1000	1.1000	1.1000
Slate	1.0000	1.0000	1.0000
Timber	1.0000	1.0000	1.0000
Decramastic	1.0000	1.0000	1.0000
Thatched	1.2000	1.2000	1.2000
Other	1.0000	1.0000	1.0000
Unknown	1.0000	1.0000	1.0000

F.9 Construction Year

	Wind												Flood			Surge		
	Buildings				Contents				BI				Buildings	Contents	BI	Buildings	Contents	BI
Construction Year	A	B	C	D	A	B	C	D	A	B	C	D						
Pre 1920	1.3000	1.3500	1.4000	1.6000	1.3000	1.3500	1.4000	1.6000	1.3000	1.3500	1.4000	1.6000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1920 - 1949	1.3000	1.3500	1.4000	1.6000	1.3000	1.3500	1.4000	1.6000	1.3000	1.3500	1.4000	1.6000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1950 - 1959	1.3000	1.3500	1.4000	1.6000	1.3000	1.3500	1.4000	1.6000	1.3000	1.3500	1.4000	1.6000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1960 - 1969	1.3000	1.3500	1.4000	1.6000	1.3000	1.3500	1.4000	1.6000	1.3000	1.3500	1.4000	1.6000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1970 - 1981	1.3000	1.3500	1.4000	1.6000	1.3000	1.3500	1.4000	1.6000	1.3000	1.3500	1.4000	1.6000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1982 - 1989	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1990 - 1999	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2000 - 2011	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2012 - 2019	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2020+	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Unknown	1.3000	1.3500	1.4000	1.6000	1.3000	1.3500	1.4000	1.6000	1.3000	1.3500	1.4000	1.6000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

F.10 Number of Storeys

	Flood			Surge		
Number of Storeys	Buildings	Contents	BI	Buildings	Contents	BI
1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2-3	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
4-6	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000
7+	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
Unknown	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

F.11 AICOW

	Business Interruption
AICOW	Business Interruption
No	1.0000
Yes	1.3000

F.12 Coverage Level

	Wind		Flood		Surge		Business Interruption
Coverage Level	Buildings	Contents	Buildings	Contents	Buildings	Contents	Business Interruption
A	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
B	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
C	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Not Applicable	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

F.13 Duration of Cover

	Business Interruption
Duration of Cover	Business Interruption
3 Months	0.6000
6 Months	0.8000
12 Months	1.0000
18 Months	1.1000
24 Months	1.2000
36 Months	1.3000

G Strata building premium rates

Changes from the previous premium rate tables have been highlighted.

G.1 Wind Base Rates per $100 SI

Band	Wind
A	0.0000
B	0.0038
C	0.0076
D	0.0114
E	0.0144
F	0.0180
G	0.0216
H	0.0252
I	0.0288
J	0.0324
K	0.0360
L	0.0450
M	0.0552
N	0.0736
O	0.0920
P	0.1104
Q	0.1288
R	0.1472
S	0.1656
T	0.1840
U	0.2000
V	0.2500
W	0.3500
X	#N/A
Y	#N/A
Z	#N/A

G.2 Flood and Surge Base Rates per $100 SI

Band	Flood	Surge
Nil	0.0000	0.0000
Minimum	0.0086	0.0056
Very Low	0.0172	0.0113
Low	0.0258	0.0188
Medium	0.0344	0.0282
High	0.0430	0.0376
Very High	0.0602	0.0470
Maximum	0.1000	0.0500

G.3 Sum Insured

		Wind	
Sum Insured Min	Sum Insured Max	Relativity applied to min. of band	Marginal relativity
0	499,999	0.0000	1.0000
500,000	999,999	1.0000	1.0000
1,000,000	1,999,999	1.0000	1.0000
2,000,000	2,999,999	1.0000	1.0000
3,000,000	3,999,999	1.0000	1.0000
4,000,000	4,999,999	1.0000	1.0000
5,000,000	5,999,999	1.0000	1.0000
6,000,000	6,999,999	1.0000	1.0000
7,000,000	7,999,999	1.0000	1.0000
8,000,000	8,999,999	1.0000	1.0000
9,000,000	9,999,999	1.0000	1.0000
10,000,000	14,999,999	1.0000	1.0000
15,000,000	19,999,999	1.0000	1.0000
20,000,000	24,999,999	1.0000	0.7500
25,000,000	29,999,999	0.9500	0.7500
30,000,000	34,999,999	0.9167	0.5000
35,000,000	39,999,999	0.8571	0.5000
40,000,000	44,999,999	0.8125	0.5000
45,000,000	49,999,999	0.7778	0.5000
50,000,000	54,999,999	0.7500	0.5000
55,000,000	59,999,999	0.7273	0.5000
60,000,000	64,999,999	0.7083	0.2500
65,000,000	69,999,999	0.6731	0.2500
70,000,000	74,999,999	0.6429	0.2500
75,000,000	79,999,999	0.6167	0.2500
80,000,000	84,999,999	0.5937	0.2500
85,000,000	89,999,999	0.5735	0.2500
90,000,000	94,999,999	0.5556	0.2500
95,000,000	99,999,999	0.5395	0.2500
100,000,000	119,999,999	0.5250	0.2500
120,000,000	139,999,999	0.4792	0.2500
140,000,000	159,999,999	0.4464	0.2500
160,000,000	179,999,999	0.4219	0.2500
180,000,000	199,999,999	0.4028	0.2500
200,000,000	249,999,999	0.3875	0.2500
250,000,000	299,999,999	0.3600	0.2500
300,000,000	349,999,999	0.3417	0.2500
350,000,000	399,999,999	0.3286	0.2500
400,000,000	449,999,999	0.3187	0.2500
450,000,000	499,999,999	0.3111	0.2500
500,000,000	549,999,999	0.3050	0.2500
550,000,000	599,999,999	0.3000	0.2500
600,000,000	649,999,999	0.2958	0.2500
650,000,000	699,999,999	0.2923	0.2500
700,000,000	749,999,999	0.2893	0.2500
750,000,000	100,000,000,000	0.2867	0.2500

G.4 Excess

Excess Min	Excess Max	Wind	Flood	Surge
0	499	1.0200	1.0200	1.0200
500	999	1.0000	1.0000	1.0000
1,000	1,999	0.9800	0.9800	0.9800
2,000	4,999	0.9600	0.9600	0.9600
5,000	9,999	0.9200	0.9200	0.9200
10,000	24,999	0.9000	0.9000	0.9000
25,000	49,999	0.8800	0.8800	0.8800
50,000	99,999	0.8500	0.8500	0.8500
100,000	249,999	0.8000	0.8000	0.8000
250,000	499,999	0.7500	0.7500	0.7500
500,000	749,999	0.7000	0.7000	0.7000
750,000	999,999	0.7000	0.7000	0.7000
1,000,000	100,000,000	0.7000	0.7000	0.7000

G.5 Flood and Surge Sublimits

	Flood					Surge				
	Sum insured band					Sum insured band				
Sublimit as % of sum insured	0-$10m	$10m-$20m	$20m-$50m	$50m-$100m	$100m+	0-$10m	$10m-$20m	$20m-$50m	$50m-$100m	$100m+
0-5%	0.4500	0.4900	0.5500	0.6200	0.7600	0.4500	0.4900	0.5500	0.6200	0.7600
5%-10%	0.6200	0.6700	0.7200	0.7600	0.8500	0.6200	0.6700	0.7200	0.7600	0.8500
10%-20%	0.7100	0.7700	0.8200	0.8500	0.8900	0.7100	0.7700	0.8200	0.8500	0.8900
20%-30%	0.7700	0.8300	0.8900	0.9200	0.9300	0.7700	0.8300	0.8900	0.9200	0.9300
30%-50%	0.8400	0.9100	0.9600	0.9700	0.9800	0.8400	0.9100	0.9600	0.9700	0.9800
50-100%	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

G.6 Construction Type

	Wind				Flood	Surge
Construction Type	A	B	C	D		
Brick Veneer	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Fibro/Asbestos	1.2500	1.2500	1.2500	1.2500	1.1000	1.1000
Concrete/Cement/Hebel	0.6500	0.6500	0.6500	0.6500	0.9000	0.9000
Timber/Weatherboard/Hardiplank	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
Double Brick	1.0000	1.0000	1.0000	1.0000	0.9500	0.9500
Metal Sheeting	1.1500	1.1500	1.1500	1.1500	1.0000	1.0000
Metal Frame	0.8500	0.8500	0.8500	0.8500	0.9000	0.9000
Stone	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
EPS	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Unknown	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

G.7 Roof Type

Roof Type	Wind
Concrete Tiles	1.0000
Terracotta Tile	1.0000
Metal/Colorbond	1.0000
Concrete	0.9000
Fibro/Asbestos Cement	1.1000
Shingle	1.0000
Slate	1.0000
Timber	1.1000
Decramastic	1.0000
Aluminium	1.0000
Iron	1.0000
Copper	1.0000
Other	1.0000
Unknown	1.0000

G.8 Construction Year

	Wind				Flood	Surge
Construction Year	A	B	C	D		
Pre 1920	1.3000	1.3500	1.4000	1.6000	1.0000	1.0000
1920 - 1949	1.3000	1.3500	1.4000	1.6000	1.0000	1.0000
1950 - 1959	1.3000	1.3500	1.4000	1.6000	1.0000	1.0000
1960 - 1969	1.3000	1.3500	1.4000	1.6000	1.0000	1.0000
1970 - 1981	1.3000	1.3500	1.4000	1.6000	1.0000	1.0000
1982 - 1989	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1990 - 1999	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2000 - 2011	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2012 - 2019	0.9000	0.9000	0.9000	0.9000	1.0000	1.0000
2020+	0.9000	0.9000	0.9000	0.9000	1.0000	1.0000
Unknown	1.3000	1.3500	1.4000	1.6000	1.0000	1.0000

G.9 Number of Storeys

Number of Storeys	Wind	Flood	Surge
1-3	1.0000	1.0000	1.0000
4-6	0.8000	0.6000	0.6000
7-9	0.7000	0.3000	0.3000
10-19	0.6500	0.2000	0.2000
20+	0.6000	0.1500	0.1500
Unknown	1.0000	1.0000	1.0000

G.10 Number of Basement Levels

Number of Basement Levels	Flood	Surge
0	1.0000	1.0000
1	1.4000	1.4000
2	1.5000	1.5000
3+	1.6000	1.6000
Unknown	1.0000	1.0000

G.11 Coverage Level

Coverage Level	Wind	Flood	Surge
A	1.0000	1.0000	1.0000
B	1.0000	1.0000	1.0000
C	1.0000	1.0000	1.0000
Not Applicable	1.0000	1.0000	1.0000

H Comparison to insurer provided data

The primary source of information for comparing the Cyclone Pool premiums to the current market is premium data provided by insurers. The data was furnished to ARPC with details of the providing insurer deidentified prior to Finity receiving the data. Insurers were asked for information on the following (amongst other items):

- Location of the property.
- Sum insured.
- Details of risk factors, such as construction type.
- Total premium (excluding taxes and levies).
- Cyclone premium.
- Flood premium (if applicable).

The data provided by insurers was on a best endeavours basis. Finity was not able to independently assess the veracity of the data. Further, the data between the insurer sources was not on a consistent basis.

Where fluvial flood premium was provided, this was for all flood and not limited to cyclone related flooding – this would be considered typical market practice. Therefore, we estimated the cyclone related flood premium by applying the suggested allocation of cyclone related flooding from our 'Cyclone Reinsurance Pool – Determination of Cyclone Related Flood Proportions' report, dated 13 May 2022 and available on ARPC's website.

Thus, the process we followed for comparing policyholder outcomes can be summarised as:

1. Adjusted the cyclone premium provided by insurer to be inclusive of expenses, commissions and margins. This is so that the comparisons are like for like between insurers. This required assumptions on expense, commissions and margins to be made, where these were not included in the original data.
2. Estimated the cyclone flood premium for the policy (described above).
3. The cyclone premium is compared with the Cyclone Pool premium for wind and storm surge risk applicable to that policy. The estimated cyclone related flood premium is compared with the Cyclone Pool premium for flood, where the policy has flood cover. We have included estimates for policy expenses and commissions that are likely required in addition to the Cyclone Pool published reinsurance premium rates.

Home insurance typically includes flood coverage. Some home insurers offer an opt-out for flood coverage.

Flood coverage is optional for strata and SME business insurance policies, and generally not widely optioned where properties are located in high flood risk zones.