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Dear Chris,

Capital requirements for splitting the cover of home building compensation

1 Background and Scope

The Independent Pricing and Regulatory Tribunal of NSW (IPART) has engaged Taylor Fry to advise whether increasing the maximum home building compensation cover from \$340,000 to \$680,000 under split cover would significantly increase an insurer's costs in meeting APRA's capital requirements. The split cover will mean it is possible for homeowners to be covered under two separate insurance products, one for each of the following:

- Construction period cover: \$340,000 for risk of Non-Completion and associated Defects during the construction period
- Warranty period cover: \$340,000 for risk of Defects after completion.

IPART is seeking advice to support their response to stakeholders' concerns regarding the impact the increase will have on the cost of meeting capital requirements. The scope of our analysis is as follows:

- Analyse the effect that offering a split product would have on capital requirements compared to offering a combined product, including the nature of any additional APRA requirements
- Provide stylised worked examples of any additional capital required for offering split products compared to offering combined cover.

We have been requested to outline the capital impacts for the following situations:

- Single insurer offering both products as a single product with total maximum cover of \$680,000 (\$340,000 per cover type)
- Two insurers, one offering construction period cover and one offering warranty period cover, each with \$340,000 cover
- Two insurers, one offering construction period cover and the other offering warranty period cover, and combined cover under the products is \$340,000 (equivalent to the current maximum).

This analysis is done in comparison to the current arrangement of a combined policy with total maximum coverage per dwelling of \$340,000.

Our advice is set out in the following sections:

- Summary of Results
- Data and Approach
- Impact on Cost of Claims
- Capital Requirements
- Impact of Cost on Capital Requirements
- Conclusion and Recommendations

2 Summary of Results

To understand the potential impact on capital requirements on insurers as a result of the introduction of split cover (with each element covering \$340,000) it is necessary to first understand the potential impact on claims cost and then the impact on risk aggregation. A summary of the impact on claims costs and the resulting impact on capital are summarised below.

We note that the HBCF data does not naturally lend itself to the allocation of claims to construction period cover and warranty period cover. We have applied a range of proxies to provide a range in which the costs would be expected to lie as well as an absolute maximum (which is arguably implausible). We highlight this extreme scenario to make the very modest potential impact on capital of the introduction of split cover clear.

Claims Costs

To understand the potential impact on claims costs of the introduction of split cover we have analysed historical claim payment data. The first subset of payments analysed were those for claims which met the following criteria:

- Had both Defects and Non-Completion payments (and includes Defects payments relating to both Defects occurring during the construction period and the warranty period)
- Reached the combined cap of \$340,000 of total payments (excluding expenses).

Over the last 4 years, if it were assumed that all claims reaching the \$340,000 threshold (with both defects and non-completion payments) would have utilised the additional \$340,000 out of split cover because a defects claim was later made during the warranty period, then the claims costs would increase by 14%. Given claims are unlikely to reach a further \$340,000, this would seem to be an implausible outcome and an extreme maximum of the impact that the split cover could have.

We note that the claims considered by the criteria above includes claims that will have had both defects and non-completion payments in the “construction period” and no subsequent defect claim. For these claims, an additional \$340,000 of cover in the warranty period would not necessarily lead to any additional claims. Any defects identified in the construction period would not be covered under warranty period cover. Therefore, whilst there may be costs beyond the initial \$340,000 for defects, the warranty period cover is only triggered if new defects are identified.

To assess how many times both construction period and warranty period cover have been triggered we reviewed payments on policies which met the following criteria:

- Had separate Defects and Non-Completion claims (indicating a Defects claim occurred post completion, i.e. a warranty period claim)
- Reached the combined cap of \$340,000 of total payments (excluding expenses).

In that data we were able to find only one such instance, noting that there were five policies which had only Non-Completion claims but reached the maximum coverage amount and may have had a latent Defects claim if the maximum coverage amount was not already reached. This highlights that the increased cost of split cover might be expected to be trivial.

Based on the analysis outlined above, we consider that it is implausible for the potential impact to be as much as a 14% increase in claims costs. We consider that a 5% increase would likely be a conservative estimate and the increase in expected claims cost would more likely be around 2%.

Capital

The capital required to held by insurers is based on the expected cost of claims and not directly related to the amount of cover provided.

Overall, the amount of capital held by an insurer per policy for the “Insurance Risk” component is less than 1% of the maximum coverage amount. Other capital risk charges will increase the overall amount of capital held however it will still be a small fraction of the maximum coverage amount. Therefore, the increase in maximum coverage from \$340,000 to \$680,000 will not increase the insurers capital requirements by \$340,000 per policy. We estimate the increase to be less than 10% overall and likely to be significantly less than 10%.

Conclusion

If maximum cover is increased to \$680,000 under split cover, capital requirements for insurers will not increase by \$340,000 per policy. The level of capital which should be held against an insurance policy is not equal to the maximum level of cover of that policy. The capital requirements will differ for each insurer however the change in cover should not significantly change any current barriers to entry insurers may be facing. Overall, splitting the cover is unlikely to increase expected claims costs per policy significantly and therefore there is unlikely to be a significant change to capital requirements. Any increase is expected to be under 10% and likely under 5%.

Recommendation

We recommend that IPART consider the impact on eligibility assessments that split cover will introduce and whether that impediment makes the introduction of split cover untenable or whether additional requirements in relation to the underwriting of split cover need to be introduced.

3 Data and Approach

3.1 Data

The following data was utilised as part of this review:

- PwC Valuation of NSW Home Building Compensation Fund as at 30 June 2020
- DAC Datamart extracts as at 30 June 2020:
 - claim_payment.csv
 - claim.csv
 - policy_part[1-7].csv
- Interim files as at 30 June 2020:
 - Hbc_policy.csv.

3.2 Approach

In order to determine the impact of the change in cover to the cost of claims we have taken the following approach:

- Analyse historic payment data to determine how many claims to date have met the following criteria:

- Had both Defects and Non-Completion payments
- Reached the combined cap of \$340,000 of total payments (excluding expenses)
- Analyse historic payment data to determine how many policies to date have met the following criteria:
 - Had separate Defects and Non-Completion claims (indicating a Defects claim occurred post completion, i.e. a warranty period claim)
 - Reached the combined cap of \$340,000 of total payments (excluding expenses)
- Determine the proportion of total payments each year which relate to the above claims which were identified
- Analyse different scenarios to demonstrate what the impact on the total cost of historic claims would be if the abovementioned claims were not limited to total payments of \$340,000. The maximum impact on total cost being an additional \$340,000 paid on each of these claims
- Applied the APRA capital requirements in a manner which deals with the material aspects, as opposed to precise calculations of the Prescribed Capital Requirement (PCR).

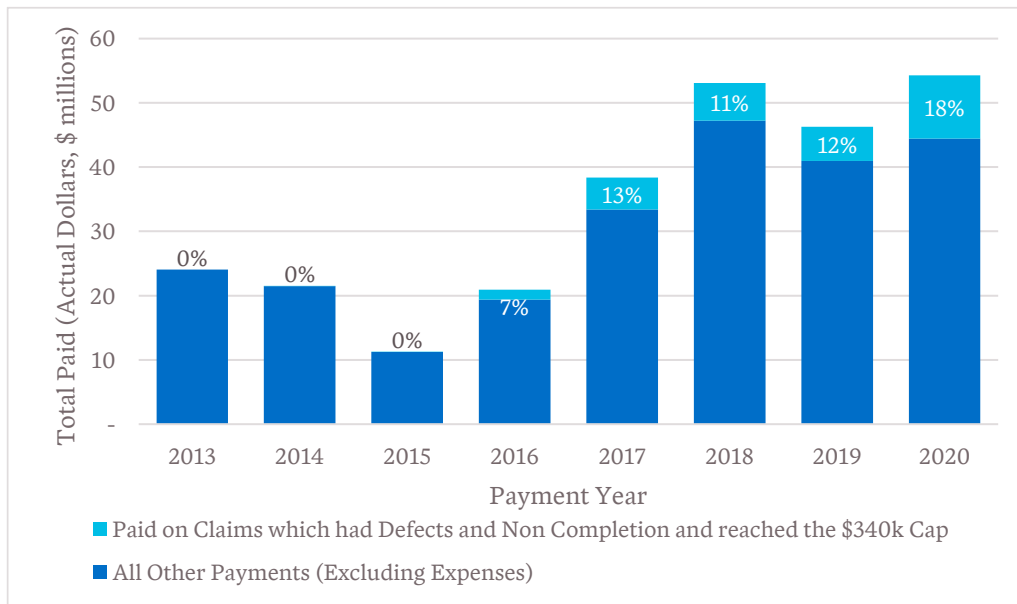
4 Impact on Cost of Claims

4.1 Results

Over the last eight notification years, 79 claims out of approximately 2,500 had both Defects and Non-Completion payments and reached the total maximum payment of \$340,000. This represents 3% of claims reported. However, as these are the largest possible claims, the payments on these claims have represented a larger proportion of total payments being approximately 10% of total payments in the last eight payment years.

Figure 4.1 outlines by payment year, the proportion of claim payments related to claims which have had both Defects and Non-Completion payments and have reached the maximum total payment of \$340,000.

Figure 4.1 – Proportion of historic claim payments which have multiple claim types and have been capped



Over the last four payment years, the proportion of payments relating to claims which have had both defects and non-completion claims and have reached the \$340,000 limit have averaged 14% of total claims payments. It is expected that over time, more claims are expected to reach the \$340,000 threshold as this threshold does not increase with inflation whereas construction costs will. Of the 79 claims, only one was from a non-structural renovation and the rest were either new builds or structural alterations.

Table 4.1 outlines the impact on average claims paid for the last four years for different scenarios of additional payments on claims which reached the cap.

Table 4.1 – Impact of increasing maximum cover on historic claim payments

	Average Annual Payments (Last 4 years)
	\$ millions
Base Scenario	48.0
All capped claims have an extra \$340,000 paid (100% of additional maximum)	54.5
<i>Change</i>	14%
All capped claims have an extra \$255,000 paid (75% of additional maximum)	52.9
<i>Change</i>	10%
All capped claims have an extra \$170,000 paid (50% of additional maximum)	51.3
<i>Change</i>	7%
All capped claims have an extra \$85,000 paid (25% of additional maximum)	49.6
<i>Change</i>	3%

Based on historic experience, the maximum impact on claims paid would be to add a further \$340,000 (to reflect each warranty period cover and construction period cover product having a total allowance of \$340,000 each). This would result in an increase in the overall claims costs of approximately 14% when using the average of the last four years as the basis for forecasting. This assumes that even though all of these Defects claims occurred under the same claim number as the Non-Completion component, that they are not associated Defects which would be covered under the construction period cover (and therefore cover capped at \$340,000). Such an assumption seems implausible, hence we consider the 14% increase to be an absolute upper limit of the impact of the introduction of split cover.

To determine potential claims on both the construction period cover and the warranty period cover we analysed historic data to find policies which had a Non-Completion claim paid (the construction period) and then later on had a separate Defects claim (warranty period cover) and reached the combined maximum of \$340,000. We found only one instance where this occurred in the historic data. This may be understated slightly as Defects may emerge several years post completion and therefore there may be some warranty period claims on policies which have already had a Non-Completion claim which have not yet emerged.

There are two other aspects which may lead to the assessment of multiple claims on a single policy being understated:

- There is potential for inconsistent recording of claims with some “new” claims potentially being dealt with under a previous or existing claim

- Policies which reach the cap under the construction period will not have a subsequent claim in the data as they are ineligible for further benefits. We note that there are five policies in the historic data which reached the cap of \$340,000 on Non-Completion payments alone. It is possible that these policies would have had a warranty period claim emerge later on if they had not already reached the limit.

Based on the analysis outlined above, the additional claims costs as a result of introducing split cover is expected to be between 0% and 14% with an estimate of 5% likely to be on the conservative side of a central estimate.

5 Capital Requirements

5.1 Pricing and Capital

- Capital can be defined as the amount in which assets of an insurance company exceed liabilities (including outstanding claims and premium liabilities).
- Insurance policies are priced so that premium paid is expected to cover the cost of claims arising from that policy as well as any additional expenses incurred and an allowance for profit or return on capital. Assets should therefore be able to cover the central estimate of outstanding claims.
- Additional capital should be held on top of premiums received to allow for fluctuations in claims cost from what was priced for
- The capital required relates to the expected cost of claims and the potential distribution of those costs. Capital requirements are not directly related to the maximum level of insurance coverage provided.

5.2 APRA Capital Requirements

APRA has minimum capital requirements to ensure that insurers are holding enough capital to allow for the full range of risks the insurer is exposed to with the aim of ensuring that insurers remain solvent. APRA requires insurers to meet a minimum capital requirement, referred to as the the 'Prudential Capital Requirement' (PCR). Insurers must hold capital in excess of this amount at all times. The PCR is subject to a minimum of \$5 million and is made up of the following components:

- Insurance Risk Charge
 - Mitigate risk that actual liabilities are greater than the 'central estimate' built into insurance pricing
- Insurance Concentration Risk Charge
 - Mitigate risk of a single large loss or a series of losses
- Asset Risk Charge
 - Mitigate risk of adverse movements in balance sheet exposures
- Asset Concentration Risk Charge
 - Mitigate risk resulting from concentration of exposure to counterparties
- Operational Risk Charge
 - Mitigate risk of loss resulting from failed processes, people or systems
- Aggregation Benefit
 - An allowance for diversification between asset risk and insurance/ insurance concentration risk

The PCR is designed to ensure that an insurer will remain solvent in the event of a 1 in 200 year loss as well as being able to accommodate multiple smaller, but significant, losses in any one year.

5.3 Required Capital Builds Up Over Time

Given losses are not reported and settled within a year the level of capital required for a new entrant builds up over time. This will reach a steady state somewhere around 10 years post commencement for warranty period claims and around five years post commencement for construction period claims.

By way of example, for an insurer starting from scratch, the first year of capital required will only relate to one year of policies. In year two there will be a requirement to allow for the new year and the not yet settled losses remaining for the first year. Each year build up until the addition of a new year is offset by the reduction from years as they run-off.

6 Impact of Cost on Capital Requirements

We have been asked to consider the following three scenarios when assessing the impact of the change in cover on capital requirements:

- Single insurer offering both products as a single product with total maximum cover of \$680,000 (\$340,000 per cover type)
- Two insurers, one offering construction period cover and one offering warranty period cover, each with \$340,000 cover
- Two insurers, one offering construction period cover and the other offering warranty period cover, and combined cover under the products is \$340,000 (equivalent to the current maximum).

We will start by outlining the concept of how much capital is currently required to be held per policy, and then assess the impact for the three different situations.

6.1 Capital Held per Policy

We understand that submissions to IPART indicated that the expansion of cover would result in an extra \$340,000 of capital per policy being required to support the business. This implies that insurers are currently required to hold \$340,000 per policy as this is the maximum coverage amount. APRA does not require insurers to hold capital equal to the maximum level of coverage, rather, the level of capital required is a calculation based on the expected claims cost per policy and the variability in claims costs.

Table 6.1 outlines the expected claims cost per policy using assumptions from the PwC valuation as at 30 June 2020. This is an illustrative example as the split between Defects and Non-Completion is not synonymous with the split between construction period and warranty period. We note that these figures are based on an assumed mix of business between construction types (PwC's projected number of certificates for 2020/21) and any differences in mix would change the overall results presented.

Table 6.1 – Expected claims cost per certificate as per PwC June 2020 valuation

	Defects	Non-Completion
Claim Frequency	0.95%	0.30%
Average Claim Size	\$142,577	\$77,276
Risk Premium (after investigation expenses, inflation and discounting)	\$1,788	\$251
Large Event Loading	\$64	\$59
Expected Cost per \$340,000 of Cover	\$1,852	\$310
Expected Cost after Risk Margin	\$2,130	\$357
Cost as a percentage of \$340,000	0.627%	0.105%

Table 6.1 shows that for one certificate with a total of \$340,000 in cover, only \$2,130 is expected to be paid for a Defects claim and \$357 for a Non-Completion claim. This is equivalent to about 0.6% of the maximum coverage amount¹. This expected cost forms the basis for the required premium and required capital. Consequently, the net liability (the expected cost across all policies) is an input in the assessment of required capital.

The key point to note is that the expected claims costs is a small fraction of the maximum coverage amount.

6.2 Impact on Minimum Capital Requirements

The two main components of APRA's PCR which are affected by splitting of cover are the Insurance Risk Charge and the Insurance Concentration Risk Charge, which were outlined in section 5.2.

6.2.1 Insurance Risk Charge (IRC)

The IRC is calculated by multiplying the outstanding claims liability and the premium liability by a capital risk factor as determined by APRA (the factor depends on the class of business). This risk charge aims to allow for the actual cost of claims varying from what the premium charged expected. The relevant factors for the HBCF are 14% for outstanding claims liabilities and 21% for premium liabilities. As these risk capital factors do not change based on the overall amount of the liability, the insurance risk charge will increase by the same percentage as the increase in liability as a result of the split. This increase in liability is estimated to be 14% when based off the last 4 years of payments data (as discussed in section 4.1 and the same as the risk charge factor by coincidence).

As an example, using the figures in Table 6.1, the Insurance Risk Charge for one certificate for the Defects outstanding claims liability will be \$298 ($\$2,130 \times 14\%$) and \$50 ($\$357 \times 14\%$) for the Non Completion outstanding claims liability (\$348 total) plus an allowance for claims handling expenses. This is around 0.1% of the maximum cover amount. Note that the actual Insurance Risk Charge will be slightly higher as a proportion of the liability will be premium liabilities which incur a 21% risk charge. The risk charge on premium liabilities is higher than on outstanding claims liabilities as premium liabilities are likely to carry more risk due to the policy not being fully earned and therefore the certainty around any claims which may arise is higher.

Increasing the expected claims cost by 14% due to the splitting of coverage would increase the Insurance Risk Charge on a combined policy to \$397 (from \$348) which represents 0.06% of the maximum cover amount (\$680,000) or 0.1% of the current limit of \$340,000.

Overall, the IRC is not directly linked to the maximum level of coverage, rather it is a proportion of the expected claims cost to arise from a policy. Based on the PwC 2020 valuation, the Insurance Risk Charge for icare as at 30 June 2020 would be approximately \$238.6 million.

6.2.2 Insurance Concentration Risk Charge (ICRC)

The ICRC is a capital allowance for any large events which could result in catastrophic losses or losses via concentrations of risk. In the case of home building compensation cover in NSW, the event would be expected to arise via a large builder becoming insolvent, resulting in substantial construction period costs and potentially warranty period costs. The ICRC will be equal to the expected total loss (claims costs) of an event with a 0.5% probability of occurrence being, in this case, the larger of the failure of one of the largest domestic builders in NSW and a severe downturn in the building cycle .

¹ In the PwC valuation report, 0.955% is the total expected cost of claims as a percentage of contract value, noting that some contracts have contract value significantly less than \$340,000.

Based on detailed analysis we undertake for another jurisdiction, for a mature builder and an insurer in a steady state, we anticipate the claims costs arising from a builder failure to not exceed around 15-20% of the annual contract value of works completed by that builder. For a smaller start-up, the potential percentage of contract value which may be incurred in losses may be significantly higher than this, however the maximum actual amount (in dollars) of potential losses will be much lower due to the lower accumulated contract values.

Table 6.2 outlines the ten largest builders by contract value over 2020:

Table 6.2 – Ten largest builders by contract value written in 2020

Builder ID	Total Contract Value of Policies Issued in 2020	15% of Contract Value	20% of Contract Value
	\$ millions	\$ millions	\$ millions
26849	462.19	69.33	92.44
10864	249.77	37.47	49.95
6987	222.60	33.39	44.52
16822	194.59	29.19	38.92
26210	158.55	23.78	31.71
25970	147.58	22.14	29.52
21073	139.34	20.90	27.87
7835	137.31	20.60	27.46
27748	135.90	20.38	27.18
28697	105.11	15.77	21.02

The table above shows that if one insurer were to write all the policies for the largest builder, the potential claims costs in event of a single builder failure would be \$70-\$92 million (\$462 million x 15% or 20%).

As part of HBCF's premium filing in the past, they have estimated the ICRC to be the losses expected as a result of a 1 in 200 year building cycle downturn to be \$353 million as at 30 June 2018 which is much higher than the single builder failure risk. This amount is a result of the accumulation of all risks of the HBCF and it would not be this high for a new insurer in the market. The accumulation risk would be lower and potentially lower than the single builder failure risk for a given insurer, depending on their portfolio of builders.

The value of the ICRC may represent a significant barrier to entry for some smaller monoline insurers looking to enter the market. The ICRC is unlikely to represent a significant barrier for large multiline insurers on the basis that their catastrophe and accumulation risks for other portfolios are likely to exceed the ICRC for their HBC portfolio. The increase in cover from a maximum of \$340,000 to \$680,000 is unlikely to significantly change the ICRC to a point where it represents a barrier to entry that the \$340,000 limit did not already impose such a barrier. This is especially true given that any associated Defects will still be covered under the combined \$340,000 cover with the initial Non-Completion claim. Given the immaterial number of claims which reach the cap of \$340,000 and have payments in both the construction period and warranty period, doubling this cover will not double the ICRC and is anticipated to have a relatively modest impact – based on the range of claim cost impacts somewhere between 0% and 14% with a 5% impact expected to be a conservative estimate.

6.3 Situation Analysis

Situation 1: Single insurer/ single product with combined maximum cover of \$680,000

- This is the situation most likely to arise if icare remains the sole provider of HBC
- The effects of this are broadly discussed above where the overall increase to some components of the minimum capital requirements are unlikely to be more than 14% and will likely be much lower. Other components of the PCR such as the ARC and ACRC may represent a significant component of the overall capital requirement and will remain unchanged with the changes in coverage
- Thus, the increased capital requirements are expected to be well under 10% of the current PCR and likely less than 5%.

Situation 2: Two insurers/ two products with individual maximum cover of \$340,000

- For large, multiline insurers the impact on capital requirements is in line with Situation 1 discussed above. However, there may be a multitude of different insurance companies that enter the market all with different current portfolios and sizes.
- There are risks involved with insurers being able to offer only one of the two cover types. In particular there is a risk that insurers may only write the construction period risks, to avoid any long-term exposure, which results in icare becoming a default insurer of last resort and subject to (proportionally) much higher capital requirements than the insurer writing the construction period risk.
- At a high level, the cost of the warranty period cover compared with the construction period cover will not be exactly equal to the difference in cost between Defects and Non-Completion (as seen in Table 6.1). A proportion of the Defects cost will be “Associated Defects” and will be covered under the construction period cover. A high level review of payments suggests that 25%-35% of defects payments are likely to be associated to non-completion claims (and therefore covered by the construction period policy. This would mean that the construction period cover would be expected to be 55%-80% of the warranty period cover. Note that these figures are indicative only.
- The overall level of capital required across all insurers may be higher. This is because:
 - Some insurers will have an PCR less than the minimum and will therefore have to hold the minimum of \$5 million anyway.
 - Some of the larger insurers may have a riskier portfolio with the addition of home building compensation cover and therefore have to meet an increased capital requirement – the maximum increase being equivalent to a monoline insurer underwriting home building compensation cover in NSW.
 - Smaller insurers with fewer other lines of business will have a higher overall capital requirement due to higher concentration of risk and less diversification benefits.
- We note that having two insurers (or one other insurer and icare) offering part of the product each raises an issue of aligning eligibility requirements. A builder will need to meet both insurers’ eligibility requirements in order to purchase all required insurances, which means they will always need to meet the stricter requirements. Insurers’ looking to enter the market may have wanted to gain a competitive edge based on their eligibility requirements and this model would mean this is not possible.

Situation 3: Two insurers/ two products with combined maximum cover of \$340,000

- We consider that it is not practical to have two insurers with combined maximum cover largely due to the incentives to assign costs to the other insurer.
- Non-Completion claims tend to be paid earlier than Defects claims. Thus, the construction period insurer would be on risk for \$340,000 while the warranty period insurer would only be on risk for the amount above the construction period claims up to a maximum of \$340,000. By way of example:

- Insurer A writes all of the Non-Completion exposure for Builder X
 - Insurer B writes all of the Defects exposure for Builder X.
 - Builder X becomes insolvent and has many buildings with large contract values currently in progress.
 - These buildings are incomplete and Insurer A pays out the Non-Completion claims on these buildings, all of which (say) reach the maximum cover level of \$340,000.
 - Years later, defects emerge from the building works done prior to Builder X becoming insolvent.
 - Insurer B cannot pay out any of the Defects claims as the claim has already capped out in total costs of \$340,000.
- The impact on capital of split cover with a combined maximum would be expected to be trivial in aggregate (although the impact on individual insurers could be significant).
 - We note that the same issue applies in this situation as in Situation 2 regarding eligibility requirements.

7 Conclusions and Recommendation

If maximum cover is increased to \$680,000 under split cover, capital requirements for insurers will not increase by \$340,000 per policy. The level of capital which should be held against an insurance policy is not equal to the maximum level of cover of that policy. The capital requirements will differ for each insurer however the change in cover should not significantly change any current barriers to entry insurers may be facing. Overall, splitting the cover is unlikely to increase expected claims costs per policy significantly and therefore there is unlikely to be a significant change to capital requirements. Any increase is expected to be well under 10% and likely under 5%.

We recommend that IPART consider the impact on eligibility assessments that split cover will introduce and whether that impediment makes the introduction of split cover untenable or whether additional requirements in relation to the underwriting of split cover need to be introduced.

Yours sincerely



Daniel Smith

Fellow of the Institute of Actuaries Australia