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To all CEOs and Appointed Actuaries of life insurers (including friendly societies)

Interpretation of APRA capital adequacy standards

A taskforce from the Actuaries Institute has raised a number of questions with APRA regarding the ways that life insurers and their Appointed Actuaries have been interpreting the new capital adequacy standards. The areas of requested clarification include the insurance risk charge, the combined stress scenario adjustment, deferred tax and materiality.

The attachment to this letter provides guidance in the form of answers by APRA to questions about the application of the capital adequacy standards. The responses are consistent with the principles and overall objectives of the standards, as explained in the attachment. Please note that this letter does not create enforceable requirements, nor does it constitute legal advice.

Any queries in relation to this letter should be directed to Andrew Patterson (andrew.patterson@apra.gov.au).

Yours sincerely

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Policy, Statistics and International

Attachment – questions and answers

1. Objective of the capital adequacy standards

When interpreting the capital adequacy standards, insurers and Appointed Actuaries should bear in mind the objective of the prescribed capital amount as described in *Prudential Standard LPS 110 Capital Adequacy* (LPS 110):

> 'The prescribed capital amount of a fund determined under the Standard Method is intended to be sufficient, such that if a fund was to start the year with a capital base equal to the prescribed capital amount, and losses occurred at the 99.5 per cent confidence level then the assets remaining would be at least sufficient to provide for the adjusted policy liabilities and 'other liabilities' of the fund at the end of the year.'

Losses can be caused by a range of asset, insurance and operational risks. In respect of insurance risks, losses can occur due to adverse cash flows during the year and/or the strengthening of the assumptions used in determining the policy liabilities at the end of the year.

2. Insurance risk charge

In order to calculate the insurance risk charge, *Prudential Standard LPS 115 Capital Adequacy: Insurance Risk Charge* (LPS 115) prescribes a number of stresses that must be applied to an insurer's best estimate assumptions with regards to mortality, morbidity, longevity, lapses, servicing expenses and other insurance risks. LPS 115 is more principles-based than the other capital adequacy standards in that the values of many of the stress margins are not fixed and prescribed by APRA. Instead they must be determined by the insurer's Appointed Actuary, having regard to the specific features of the insurer's policy liabilities and the required confidence interval of 99.5 per cent over 12 months. Being more principles-based, there is greater potential for interpretations of this standard to vary between different insurers and different Appointed Actuaries.

Future stress – definition

The future stress margins apply from the reporting date for the remaining term of the liabilities. The future stress margins must be determined so as to allow for potential adverse changes to best estimate assumptions over the 12 months following the reporting date. Paragraph 34 of LPS 115 notes that these changes could occur because the best estimate assumptions were mis-estimated at the reporting date or because adverse trends have been identified.

Question 2.1: Paragraph 30 of LPS 115 states that the stress margins must be determined so that 'there is no more than a 0.5 per cent probability that the actual cost of claims will exceed the stressed estimate'. How should this requirement be interpreted with regard to the future stress margins?

Answer 2.1: In respect of the future stress margins, paragraph 30 should be interpreted to mean there is no more than a 0.5 per cent probability that the cost of claims calculated using the actual best estimate assumptions made 12 months after the reporting date would exceed the stressed estimate.

Adverse changes to the best estimate assumptions could occur for a number of reasons. It is not appropriate to set the future stress margins simply by presuming the usual assumption setting process will continue to be applied, but with 12 months of additional adverse experience data. At the 99.5 per cent confidence interval a range of other issues could affect the best estimate assumptions. These include, but are not limited to:

- changes to the life company's methodology for setting assumptions;
- the results of industry, population or other external experience investigations;
- the appearance of new diseases or new medical treatments;
- changes to underwriting standards or claims assessment procedures; and
- changes to best estimates of future trends.

Future stress – changes to best estimates of future trends

Question 2.2: How should the future stress margins allow for adverse changes to trends?

Answer 2.2: The future stress margins (LPS 115 paragraphs 33 and 34) must allow for potential adverse changes to trends (both long-term secular trends and shorter term cyclical trends) that might be incorporated in the best estimate assumptions that are determined 12 months after the reporting date. An adverse trend could for example result in a change to best estimates of future mortality improvements or morbidity deterioration. An adverse trend may result in a future stress margin that changes as the duration from the reporting date increases.

Some insurers incorporate short term loadings for cyclical trends (such as the impact of economic cycles on morbidity experience) within the best estimate assumptions. Other insurers use a longer time horizon and set best estimate assumptions that average the experience over the cycle. If the insurer adopts the latter approach, the Appointed Actuary should consider applying future stress margins that vary with duration from the reporting date.

Future stress – time horizon

Question 2.3: What time horizon should be used when setting the future stress margins?

Answer 2.3: The future stress applies until the liabilities expire. However, depending on the nature of the liabilities, the stress may not have any impact beyond a certain duration. For example, it might be assumed that repricing of the premium rates by the insurer will negate the impact of the stress after 3 years. Stresses to the experience assumptions beyond this point will have no impact on the risk-free best estimate liability (RFBEL) or participating policy liability (PPL).

The allowance for trend risk can be simplified by using a constant margin that does not vary by duration. The size of the margin, however, would then depend on the period for which the adverse trend affects the RFBEL or PPL.

Future stress – allowance for operational risks

Question 2.4: Should the future stress margins allow for operational risks?

Answer 2.4: Changes to the best estimate mortality and morbidity assumptions could potentially occur due to operational risks. These might include the identification of errors in the experience data, errors in the experience investigations or poor claims management processes.

A minimum level of capital for operational risks must be held in the form of the operational risk charge. The formula for the operational risk charge is highly simplified and is intended to reflect a base level of risk. It is not sensitive to specific risks that insurers and Appointed Actuaries might be aware of such as poor quality data, systems or processes. Under the current capital adequacy standards, it is appropriate for Appointed Actuaries to allow for these risks in the future stress margins, if they are material.

Stress margins - diversification benefits

Question 2.5: Should the stress margins allow for diversification benefits?

Answer 2.5: APRA specifies the method that must be used for combining the impact of the random, future, event and longevity stresses, allowing for diversification between these risks (LPS 115 paragraphs 40 to 45). The standard does not specifically mention whether diversification benefits can be recognised in determining each of the stress margins.

Appointed Actuaries should allow for diversification benefits within each stress, having regard to the nature of the risks to which the company is exposed. For example the random and future morbidity stress margins can allow for diversification between: group and individual contracts; total and permanent disability benefits, trauma benefits and disability income benefits; active and disabled lives; and claim incidence and termination rates.

Future and random stresses - IBNR and RBNA

Question 2.6: Should both of the future and random stresses be applied to Incurred But Not Reported (IBNR) and Reported But Not Admitted (RBNA) claims reserves?

Answer 2.6: Yes both stresses should be applied.

The future stress margins should allow for the possibility of adverse changes to the best estimate assumptions used in determining the IBNR and RBNA reserves.

The random stress margins should allow for the possibility of adverse fluctuations in experience. Over the 12 month period following the reporting date there could be:

- a random increase in reported claims that were incurred prior to the reporting date; and
- a random increase in admitted claims that were reported prior to the reporting date.

Future and random stresses - CICP

Question 2.7: How should the future and random stresses be applied to reserves for disability claims that are in the course of payment (CICP)?

Answer 2.7: The random stress only applies to claim termination assumptions for the next 12 months (i.e. stressed termination rates must be lower than the best estimate). Beyond this point the random stress should not affect termination rates.

The future stress should allow for possible adverse changes to the best estimate termination rates used in determining the CICP reserves.

Stressed termination values 12 months after the reporting date

Question 2.8: Which stresses should be applied when calculating the stressed termination values 12 months after the reporting date?

Answer 2.8: Paragraph 16 of LPS 115 states that the stressed policy liabilities must provide for adjusted policy liabilities (calculated using the stressed assumptions) to be funded 12 months from the reporting date. The adjusted policy liabilities in 12 months are subject to a minimum of the stressed termination values in 12 months. APRA expects these stressed termination values to allow for the impact of the future and event stresses continuing beyond 12 months. The future stress will affect IBNR, RBNA and CICP reserves. The future and event stresses will affect reserves for unexpired risks.

Lapse stress – time horizon

Question 2.9: Over what time horizon should the stress margin for lapses be applied?

Answer 2.9: Paragraph 46 of LPS 115 states that the stress margin for lapses must be determined so that the insurance risk charge for the statutory fund has a 99.5 per cent probability of sufficiency over a 12 month period.

Paragraph 46 does not state whether the margin should apply for 12 months or for a longer period. There could be a change in lapse rates for the next 12 months only (i.e. a random stress), a change that applies for the remaining term of the liabilities (i.e. a future stress affecting best estimate assumptions), or some combination of the two. The over-riding requirement is that the margin be set so as to satisfy the required probability of sufficiency.

Lapse stress – group business

Question 2.10: How should the lapse stress be applied to group business?

Answer 2.10: The lapse stress can be either an increase or decrease in lapse rates, depending on the nature of the liabilities and the impact of the other insurance stresses. For group business, 'lapses' can refer to policy termination and to individual members leaving or joining the scheme. In some circumstances an increase in membership can be the adverse scenario.

3. Combined stress scenario adjustment

Question 3.1: Can simplified alternative methods be used to calculate the combined stress scenario adjustment?

Answer 3.1: Paragraphs 39 and 40 of LPS 110 explain the rationale for the combined stress scenario adjustment. The aim is to recognise the extent to which tax benefits and the exercise of management actions can be recognised in reducing the prescribed capital amount. The methodology for calculating the combined stress scenario adjustment is set out in Attachment B of LPS 110. The standard does not allow an insurer to vary this methodology other than on grounds of immateriality.

Question 3.2: Is the combined stress scenario adjustment intended to only address tax and management actions?

Answer 3.2: As a consequence of the prescribed methodology, the adjustment is also affected by second order interactions between stresses. For example, the longevity stress will increase the duration of annuity payments – this will have a secondary impact on the impacts of the real interest rates and expected inflation stresses.

Question 3.3: How should the diversification factors be applied?

Answer 3.3: Attachment B of LPS 110 requires that the diversification factors be applied to the adjusted stress margins used in determining the insurance risk charge and to the stresses using in determining the asset risk charge. The stresses for the asset risk charge are the specified parameter changes. For the equity and property stresses these can be taken to be the percentage falls in value rather than the margins added to dividend and rental yields.

Question 3.4: Should asset risk stresses always be applied in the direction that was adverse when determining the asset risk charge?

Answer 3.4: Some of the asset risk stresses apply in two directions. In calculating the asset risk charge, an insurer must apply the real interest rates, expected inflation and currency stresses by both increasing and reducing rates. The directions of the stresses that determine the asset risk charge must then be used in the combined stress scenario adjustment, except in the situation described in paragraph 10 of Attachment B (a statutory fund with policies that provide participating benefits or discretionary additions). In some circumstances this may mean that the real interest rates, expected inflation and currency stresses reduce the size of the combined stress scenario adjustment.

Question 3.5: How should the diversification factors be determined if the directions of the asset risk stresses change?

Answer 3.5: For the scenario described in paragraph 10, where the direction of the asset risk stresses for real interest rates and expected inflation are both down, the aggregation diversification factor and asset risk diversification factor should be the factors determined according to paragraph 6 and 7, even if the direction of one or both of these stresses was reversed when determining the asset risk charge.

Question 3.6: Should there be an adjustment for non-linearity of the insurance risk stresses?

Answer 3.6: APRA recognises that there is a difference between paragraphs 43 to 45 of LPS 115, which require an adjustment for non-linearity, and the combined stress scenario methodology in Attachment B of LPS 110, where the aggregation diversification factor must be applied without such an adjustment. The combined stress scenario adjustment would typically be higher if the aggregation diversification factor was adjusted for non-linearity, but LPS 110 does not require or permit such an adjustment to be made.

Combined stress scenario adjustment for friendly society benefit funds

Question 3.7: How should the diversification factors be calculated if a benefit fund has a zero capital base?

Answer 3.7: For some friendly society benefit funds, the insurance risk charge and asset risk charge can both be zero. The capital base of the fund may be zero both before and after application of each of the stresses if the 'discretionary component of adjusted policy liabilities' absorbs the impact of the stresses. The discretionary component is defined in the instructions to *Reporting Form LRF 114.0 Asset Risk Charge*. It is still essential to calculate the combined stress scenario adjustment in these circumstances. This adjustment will be non-zero if, when all stresses are applied simultaneously, the discretionary component is insufficient to absorb the losses.

In order to determine the combined stress scenario adjustment, diversification factors must be calculated as described in paragraphs 6 and 7 of Attachment B of LPS 110. The factor described in paragraph 6 requires a division by the sum of the insurance risk charge and the asset risk charge. The factor described in paragraph 7 requires a division of the asset risk charge by the sum of the capital charges for the seven asset risk stresses.

It may not always be possible to calculate the diversification factors. If the denominator is zero there will be a 'divide by zero' error. In this circumstance, the diversification factors should be calculated by measuring the impact of each of the stresses on the discretionary component of adjusted policy liabilities instead of on the capital base.

4. Deferred tax

Question 4.1: Can the calculations relating to netting of tax assets and liabilities be simplified by an insurer?

Answer 4.1: Netting of deferred tax assets and liabilities can become a complex exercise if an insurer has several tax pools to consider. Attachment B of *Prudential Standard LPS 112 Capital Adequacy: Measurement of Capital* is specific about the criteria that must be satisfied for tax assets and liabilities to be netted. LPS 110 is also specific that allowance must be made for tax assets and liabilities accruing over the 12 months after the reporting date when calculating the combined stress scenario adjustment. The materiality provisions of LPS 110 can be used, when applicable, to simplify these calculations.

5. Materiality

Question 5.1: Can the calculations be simplified if an insurer uses methods that are likely to give a conservative result (i.e. a higher prescribed capital amount)?

Answer 5.1: Paragraph 53 of LPS 110 states that: 'a life company may take into account materiality when calculating its capital base and prescribed capital amount' providing the results are not likely to be misleading to the users of the information. This paragraph allows insurers to use approximations in order to simplify their calculations. Any approximations, however, should not intentionally cause material bias to the results.