January 2013

Prudential Standard LPS 115

Capital Adequacy: Insurance Risk Charge

Objective and key requirements of this Prudential Standard

This Prudential Standard requires a life company to maintain adequate capital against the insurance risks associated with its activities.

The ultimate responsibility for the prudent management of capital of a life company rests with its Board of directors. The Board must ensure that the life company maintains an adequate level and quality of capital commensurate with the scale, nature and complexity of its business and risk profile, such that it is able to meet its obligations under a wide range of circumstances.

The Insurance Risk Charge is the minimum amount of capital required to be held against insurance risks. The Insurance Risk Charge relates to the risk of adverse impacts due to movements in future mortality, morbidity, longevity, servicing expenses and lapses.

This Prudential Standard sets out the method for calculating the Insurance Risk Charge. This charge is one of the components of the Standard Method for calculating the prescribed capital amount for life company statutory funds and general funds.

Authority

1. This Prudential Standard is made under paragraph 230A(1)(a) of the *Life Insurance Act 1995* (the Act).

Application

2. This Prudential Standard applies to all life companies including **friendly societies** (together referred to as **life companies**) registered under the Act[1], except where expressly noted otherwise.

3. A life company must apply this Prudential Standard separately:

   (a) for a life company other than a friendly society: to each of its statutory funds; and

   (b) for a friendly society: to each of its approved benefit funds and its management fund.

4. This Prudential Standard only applies to the business of an **Eligible Foreign Life Insurance Company** which is carried out through its Australian statutory funds but not otherwise.[2]

5. This Prudential Standard applies to life companies from 1 January 2013.

Interpretation

6. Terms that are defined in *Prudential Standard LPS 001 Definitions* appear in bold the first time they are used in this Prudential Standard.

7. Unless otherwise indicated:

   (a) the term **statutory fund** will be used to refer to a statutory fund of a life company other than a friendly society, or an approved benefit fund of a friendly society, as relevant;

   (b) the term **general fund** will be used to refer to the shareholders' fund of a life company other than a friendly society, or the management fund of a friendly society, as relevant; and

   (c) the term 'fund' will be used to refer to a statutory fund or a general fund, as relevant.

Insurance Risk Charge

8. This Prudential Standard sets out the method for calculating the **Insurance Risk Charge.**

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[1] Refer to subsection 21(1) of the Act.
[2] Refer to section 16ZD of the Act.

9. The Insurance Risk Charge for a statutory fund provides a buffer against the risks of adverse experience or changes to **best estimate assumptions** with regards to:

   (a) mortality;

   (b) morbidity;

   (c) longevity;

   (d) lapses;

   (e) servicing expenses; and

   (f) other insurance risks such as option take-up rates.

10. The Insurance Risk Charge for a statutory fund is the reduction, if any, in the **capital base** that would occur if the **adjusted policy liabilities** were changed to an amount equal to the **stressed policy liabilities** determined under this Prudential Standard.

11. The Insurance Risk Charge for the general fund of a friendly society is the **servicing expense reserve** as defined in paragraphs 52 to 55.

12. There is no Insurance Risk Charge for the general fund of a life company other than a friendly society.

Stressed policy liabilities

13. The stressed policy liabilities for non-participating benefits must be determined in the same way as the **risk-free best estimate liability (**RFBEL**)**, but using 'stressed assumptions' instead of best estimate assumptions in respect of mortality, morbidity, longevity, lapses, servicing expenses and any other insurance risks such as take-up rates for non-financial options.

14. The stressed policy liabilities for participating benefits must be determined in the same way as the **participating policy liability** (PPL), but using stressed assumptions instead of best estimate assumptions in respect of mortality, morbidity, longevity, lapses, servicing expenses and any other insurance contingencies such as take-up rates for non-financial options.

15. Stressed assumptions must be used in determining the stressed policy liabilities for existing claims which have not yet been finalised, claims that have been incurred but not reported, and claims that are expected to be incurred in future.

16. The stressed policy liabilities must provide for adjusted policy liabilities (calculated using the stressed assumptions) to be funded 12 months from the reporting date for those policies that are projected to remain in force at that date. This test must be applied separately for the following groups:

    (a) non-participating benefits without entitlement to **discretionary additions**;

    (b) non-participating benefits with entitlement to discretionary additions; and

    (c) participating benefits.

    The stressed policy liabilities must be determined at sub-group level if the policy benefits for a sub-group of policies are determined by reference to the performance of particular assets that the life company has allocated to the liabilities for that sub-group.

Recognition of tax benefits

17. Any tax benefits that would arise as a result of increasing the policy liabilities from the adjusted policy liabilities to the stressed policy liabilities should be assumed to be realisable for the purpose of determining the Insurance Risk Charge. An adjustment must be made to the **prescribed capital amount** when the capital charges are aggregated, if some or all of the tax benefits cannot be offset against deferred tax liabilities.

Management actions

18. When determining the impact of each individual stress margin, and when determining the stressed policy liabilities, a life company must make allowance for the actions that it would expect to take in response to each type of stress, subject to the restrictions described below.

19. These actions may include, but are not limited to:

    (a) reducing termination values;

    (b) reducing discretionary additions to benefits;

    (c) increasing premium rates;

    (d) increasing the fees deducted from policies; and

    (e) reducing the fees payable by a friendly society benefit fund to its management fund.

20. The allowances for management actions must be appropriate, justifiable and equitable in each of the scenarios. Any representations made in the relevant product disclosure documents must be taken into account in determining the management actions that would be applied. Management actions must satisfy policy owners' reasonable expectations.

21. Termination values cannot be assumed to be reduced below **minimum termination values**.

22. Premium rate and fee increases cannot be assumed to occur within 12 months of the reporting date.[3] The 12 month period must be extended to allow for the time it would take for the life company to increase premium rates or fees in response to stresses occurring over the 12 month period. Any contractual guarantees that may restrict the timing and amount of premium rate or fee increases must be recognised.

23. Premium rate or fee increases cannot be assumed as a response to the random mortality stress, the random morbidity stress or the event stress.

24. The present value of any assumed premium or fee increases (determined using stressed assumptions) cannot exceed the increase in the present value of claims and expenses incurred after the date at which the premium or fees increases are assumed to become effective. This test must be applied to each group of policies that would be affected by the assumed premium or fee increases.

25. The management actions for friendly societies must be in accordance with the existing rules of the benefit fund and not the broader range of management actions that may be accessed through a process of amending those rules.

Stress margins

26. The stressed assumptions must be determined by a life company, by applying 'stress margins' to the best estimate assumptions. The stress margins must reflect the risk that outcomes may be worse than the best estimate assumptions.

27. The following stress margins are required:

    (a) mortality random stress;

    (b) morbidity random stress;

    (c) mortality future stress;

    (d) morbidity future stress;

    (e) event stress;

    (f) longevity stress;

    (g) lapse stress;

    (h) servicing expense stress; and

    (i) other insurance contingencies.

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3 Fee and premium rate increases that have been approved by a life company prior to the reporting date, but not yet implemented, are exempt from this requirement.

28. The stress margins for random, future, event and longevity risks must be adjusted to allow for diversification between these risks as described in the section starting at paragraph 40.

29. The mortality random and future stresses must only be applied to life policies where an increase in future mortality rates would increase net cash outflows from the life company. The longevity stress must only be applied to life policies where an increase in future mortality rates would reduce net cash outflows from the life company.

30. The stress margins, before the adjustment for diversification, must be determined at a 99.5 per cent probability of sufficiency over a 12 month period. This means that, in the assessment of the **Appointed Actuary**, there is no more than a 0.5 per cent probability that the actual cost of claims will exceed the stressed estimate.

31. For each type of stress, different margins may be applied to different types of policies. For example, there may be different morbidity random stresses for lump sum policies and disability income insurance policies. For disability income insurance policies, separate margins must be applied to the best estimate claim incidence and claim termination assumptions.

Random stresses for mortality and morbidity

32. The 'random stress' margins, before the adjustment for diversification, must be determined by the Appointed Actuary, having regard to the nature of the mortality and morbidity risks to which the company is exposed. The margins for random stresses must be applied for 12 months from the reporting date. Each random stress must reflect the uncertainty arising due to adverse fluctuations in experience, but excluding the impact of single events such as pandemics, terrorist attacks and natural catastrophes that could cause large numbers of claims. The size of these margins will depend on factors such as the number of expected claims, the distribution of sums insured, and the impact of existing **reinsurance** arrangements.

Future stresses for mortality and morbidity

33. The 'future stress' margins, before the adjustment for diversification, must be determined by the Appointed Actuary, having regard to the nature of the mortality and morbidity risks to which the company is exposed.

34. The margins for future stress must be applied from the reporting date for the remaining term of the liabilities. They must allow for the possibility that the best estimate assumptions may need to be changed in 12 months time, either because they were misestimated at the reporting date or because adverse trends have been identified during this period. The size of the margin will depend on the adequacy of the investigations used to determine the best estimate assumptions, and the range of adverse factors that could affect trends in claims experience.

Event stress

35. The ‘event stress’ allows for the impact of single events that could commence in the 12 months following the reporting date and cause multiple claims. These events could include pandemics, terrorist attacks and natural catastrophes and may affect either or both mortality and morbidity experience. The Appointed Actuary must determine an appropriate event stress that provides a 99.5 per cent probability of sufficiency with respect to single events that could potentially commence over the following 12 months.

36. The event stress, before adjustment for diversification, must at a minimum include a pandemic scenario with the following impacts on mortality and morbidity claims experience:

    (a) annual mortality rates at each age increase by 0.5 per thousand for the two years following the reporting date;

    (b) an annual incidence rate of total disablement at each age, as a result of the event, of 10 per cent of lives insured for the two years following the reporting date;

    (c) of those lives becoming disabled as a result of the event, half remain disabled after 14 days, one quarter remain disabled after 30 days and none remain disabled after 60 days; and

    (d) if disability continues to the end of the policy waiting period, one month’s benefit will be paid. For waiting periods other than zero, 14, 30 or 60 days, interpolation must be used to find the proportion of policies for which a benefit will be paid.

37. The pandemic scenario may be assumed to reduce the stressed policy liabilities for policies subject to longevity risk. However the outcome of applying the pandemic scenario must not result in stressed policy liabilities being less than adjusted policy liabilities for any of the product groups defined in paragraph 16.

Longevity stress

38. The ‘longevity stress’, before adjustment for diversification, is a 20 per cent decrease in the best estimate mortality rate for each age from the reporting date for the remaining term of the liabilities.

Impact of individual stress margins

39. The impact of applying each of the random, future, event and longevity stresses must be determined in isolation as the increase to:

    (a) the RFBEL for non-participating benefits; and

    (b) the PPL for participating benefits.

Diversification factors and adjusted stress margins

40. The stressed policy liabilities must be determined using ‘adjusted stress margins’ and management actions for the random, future, event and longevity risks. The adjustments are to allow for diversification between risks. The method for determining the adjusted stress margins and management actions is described in the following paragraphs.

41. The combined impact of the random, future, event and longevity stresses, after allowing for correlations between these stresses must be determined using the formula:

$$\sqrt{\sum_{x,y} Corr_{x,y} \, . \, A_x \, . \, A_y}$$

where:

(a) A_x is the capital charge for insurance stress x, summed over all policies in the statutory fund;

(b) $\sum_{x,y}$ is the sum over all combinations of stresses; and

(c) $Corr_{x,y}$ is the correlation between stresses x and y.

42. The specified correlation matrix is:

	Mortality		**Morbidity**		**Event**	**Longevity**
	Future	**Random**	**Future**	**Random**		
Mortality Future	1	0	0.25	0	0	-0.25
Mortality Random	0	1	0	0	0	0
Morbidity Future	0.25	0	1	0	0	0
Morbidity Random	0	0	0	1	0	0
Event	0	0	0	0	1	0
Longevity	-0.25	0	0	0	0	1

43. The adjusted stress margins must be determined so that when the adjusted stress margins and management actions for the random, future, event and longevity stresses are applied simultaneously, the increase in RFBEL and PPL equals the combined impact of the individual stresses, as determined using the formula in paragraph 41.

44. If the stressed RFBEL or stressed PPL changes in a linear relationship with changes in the stressed margin, the adjusted stress margin can be determined by multiplying the unadjusted stress margins by a diversification factor. The diversification factor is determined by taking the combined impact of the individual stresses, as determined using the formula in paragraph 41, and dividing this amount by the sum of the individual stress impacts.

45. If the relationship between stressed RFBEL or stressed PPL, and stressed margin is not linear, an alternative method of determining the adjusted stress margin must be used that satisfies the requirements of paragraph 43. An alternative method must always be used for determining the adjusted stress margin for Disability Income Insurance claim termination rates.

Lapses

46. The stress margin for lapses[4] must be determined by the Appointed Actuary, having regard to the nature of the company’s lapse risks. The stress 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. The lapse stress may allow for correlations with other insurance stresses, with the exception of servicing expenses. The lapse stress may vary for different types of policy. A decision as to whether to increase or reduce lapse rates must be made for each type of policy depending on whether an increase or reduction would increase the stressed policy liabilities.

Servicing expenses

47. The stress margin for servicing expenses is a 10 per cent increase to the best estimate of future unit costs for servicing expenses.

48. The stress need not be applied to any component of the statutory fund expenses which is contractually agreed for the life of the policy, for example, renewal commission. The stress need not be applied to the fees payable by a friendly society benefit fund to its management fund.

49. Unit costs must cover the expected maintenance cost of servicing each policy in the twelve months following the reporting date.

50. If the Best Estimate Assumption depends on a service agreement or other contractual arrangement which does not adequately reflect the long term, sustainable costs of operating the business, the stress of 10 per cent must be increased to make up for the shortfall between actual and long term, sustainable costs.

Other insurance risks

51. The Appointed Actuary must determine an appropriate stress margin for risks arising from any other contingencies not specifically mentioned above. These

[4] Lapses, for this purpose, include policy terminations that occur at the request of the policy owner, policy terminations occurring as a result of non-payment of premiums and the lapse of individual members covered by group policies.

risks may include, but are not limited to, changes to take-up rates on insurance options and premium dormancy rates. The stress 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. The stress may include allowance for correlations with other insurance stresses, with the exception of servicing expenses.

Servicing expense reserve

52. The Insurance Risk Charge for the general (management) fund of a friendly society is the servicing expense reserve. The servicing expense reserve must be determined as:

    (a) three times the deficiency (if any) expected to arise over the 12 months subsequent to the reporting date, between expected management fees in that period and expected servicing expenses relating to its life insurance activities; plus

    (b) any additional deficiency that would arise if expected servicing expenses were increased by 10 per cent.

53. Where an allocation of the expenses of the management fund relating to life insurance activities into **expense categories** is not undertaken by a friendly society, servicing expenses are to be taken as 50 per cent of the total expenses related to the life insurance business.

54. If the management actions assumed in response to the asset risk or insurance risk stresses include a reduction in management fees paid by a benefit fund to the management fund, the reduced management fees must be used when determining the servicing expense reserve.

55. Any tax benefits that would arise as a result of including the servicing expense reserve in the liabilities of the friendly society for tax purposes should be assumed to be realisable for the purpose of determining the Insurance Risk Charge. An adjustment must be made to the prescribed capital amount when the capital charges are aggregated, if some or all of the tax benefits cannot be offset against deferred tax liabilities.

Adjustments and exclusions

56. APRA may, by notice in writing to a life company, adjust or exclude a specific requirement in this Prudential Standard in relation to that life company.

Transition

57. On application by a life company, APRA may grant transitional relief from the obligation for the life company to comply with any requirement in this Prudential Standard. Any relief granted by APRA under this paragraph will have effect until no later than 31 December 2014.