



Prudential Standard GPS 116

Capital Adequacy: Insurance Concentration Risk Charge

Objective and key requirements of this Prudential Standard

This Prudential Standard aims to ensure that general insurers and Level 2 insurance groups maintain adequate capital against the risks associated with insurance concentration in their activities. This Prudential Standard forms part of a comprehensive set of prudential standards that deal with the measurement of the capital adequacy of a general insurer and a Level 2 insurance group.

This Prudential Standard applies to all general insurers and Level 2 insurance groups.

The Insurance Concentration Risk Charge is the minimum amount of capital required to be held against insurance concentration risks. The Insurance Concentration Risk Charge relates to the risk of an adverse movement in the general insurer and a Level 2 insurance group's capital base due to a single large loss or series of losses.

This Prudential Standard sets out the method for calculating the Insurance Concentration Risk Charge. This charge is one of the components of the Standard Method for calculating the Prudential Capital Requirement for general insurers and Level 2 insurance groups.

Authority

1. This Prudential Standard is made under section 32 of the *Insurance Act 1973* (**the Act**).

Application

2. This Prudential Standard applies to each:
 - (a) **general insurer** authorised under the Act (**insurer**); and
 - (b) **Level 2 insurance group** as defined in *Prudential Standard GPS 001 Definitions (GPS 001)*.

Where a requirement applies to a Level 2 insurance group, the requirement is imposed on the **parent entity** of the Level 2 insurance group.

3. Subject to any specific transition rules, this Prudential Standard applies to insurers and Level 2 insurance groups (**regulated institutions**) from 1 January 2013 (effective date).

Interpretation

4. Unless otherwise defined in this Prudential Standard, expressions in bold are defined in GPS 001.
5. For the purposes of this Prudential Standard:
 - (a) **aggregate catastrophe reinsurance arrangements** refers to reinsurance cover that protects the regulated institution from an accumulation of retained losses from multiple events of a certain size;
 - (b) **aggregate stop-loss reinsurance arrangements** refers to reinsurance cover that protects the regulated institution from an accumulation of retained losses on a part or the totality of its portfolio;
 - (c) **natural perils** are all natural events, such as earthquakes, storms and cyclones, as well as man-made disasters, such as bushfires, that affect property risks and other classes of business to which a regulated institution is exposed; and
 - (d) **whole-of-portfolio** is an estimation approach that takes into account all possible perils in all possible regions to determine the size of loss that could occur from a single event at a certain exceedance probability for a regulated institution's portfolio. The time horizon to be considered is one year. For clarity, this does not assume that two or more events occur in the same year.

Insurance Concentration Risk Charge

6. This Prudential Standard sets out the method for calculating the **Insurance Concentration Risk Charge** for a regulated institution using the **Standard Method** to determine its **prescribed capital amount**.
7. The Insurance Concentration Risk Charge for a regulated institution represents the net financial impact on the regulated institution from either a single large event, or a series of smaller events, within a one year period. The determination of the net financial impact is based on the formulae and requirements set out in this Prudential Standard.

Insurance Concentration Risk Charge formula

8. The Insurance Concentration Risk Charge for a regulated institution is the greatest of the following amounts:
 - (a) the natural perils vertical requirement determined in accordance with paragraphs 10 to 19;
 - (b) the natural perils horizontal requirement determined in accordance with paragraphs 20 to 35;
 - (c) the other accumulations vertical requirement determined in accordance with paragraphs 36 to 47; and
 - (d) where applicable¹, lenders mortgage insurer concentration risk charge determined in accordance with paragraphs 48 to 50.

A regulated institution does not need to calculate amounts for each of sub-paragraphs (a) to (d) above if it can demonstrate that the amount determined for one or more of those sub-paragraphs is always expected to be materially lower than the amount determined for one of the other sub-paragraphs.

9. A regulated institution must not make tax adjustments to the amounts calculated in paragraph 8.

Natural perils vertical requirement

10. The natural perils vertical requirement (**NP VR**) for an insurer that has exposures to natural perils is calculated as:
 - (a) **NP PML** defined in paragraph 13; less
 - (b) **NP reinsurance recoverables** defined in paragraph 14; less
 - (c) **NP reinstatement premiums** defined in paragraph 15; plus

¹ Only a **lenders mortgage insurer** or Level 2 insurance group with **lenders mortgage insurance** business must calculate (d). The definition of lenders mortgage insurer in GPS 001 includes a reinsurer that writes lenders mortgage insurance. Therefore, a reinsurer that provides reinsurance on lenders mortgage insurance must calculate (d).

- (d) **NP reinstatement cost** defined in paragraph 16; less
 - (e) any other adjustments to NP VR in accordance with paragraph 17.
11. An insurer must be able to determine its NP VR at all times. An insurer must regularly monitor the level of its NP VR, including determining the impact of the occurrence of a catastrophic event.
 12. NP VR must be calculated and reported to APRA at each **reporting date**. The calculation of NP VR must take into account the reinsurance program in place at the reporting date and the reinsurance program for the next **reporting period**. Where the reinsurance programs in these two reporting periods differ, the largest NP VR must be used.

NP PML

13. An insurer that has exposures to natural perils must determine a Probable Maximum Loss (**PML**) for its portfolio (**NP PML**). NP PML is the gross loss arising from the occurrence of a single event, such that the size of the loss from the event is equal to the whole-of-portfolio loss with a 0.5% probability of occurrence. NP PML must not include any allowance for potential **reinsurance recoverables**. The calculation of NP PML must include:
 - (a) the impact of the event on all classes of business of the insurer;
 - (b) an allowance for non-modelled risks²; and
 - (c) potential growth in the insurer's portfolio over the reporting period.

NP reinsurance recoverables

14. An insurer that has exposures to natural perils must determine the level of potential reinsurance recoverables in relation to the occurrence of NP PML (**NP reinsurance recoverables**). NP reinsurance recoverables must not include any amounts due from aggregate catastrophe reinsurance cover or aggregate stop-loss reinsurance cover. Refer to paragraphs 51 and 52 for further details on eligibility of potential reinsurance recoverables.

NP reinstatement premiums

15. An insurer that writes **reinsurance** may receive inwards reinstatement premiums from cedants as a result of the event that gives rise to its NP PML (**NP reinstatement premiums**). NP reinstatement premiums must only be included in NP VR if the insurer has contractually binding netting arrangements with the cedant.

² Where certain perils are material to an insurer but not included in its computer-based modelling techniques, an allowance for losses in respect of these perils would need to be estimated and added to the NP PML.

NP reinstatement cost

16. An insurer that has exposures to natural perils must determine the cost (if any) of reinstating all catastrophe reinsurance cover relating to the reinsurance recoverables determined in paragraph 14 (**NP reinstatement cost**). In determining this cost, where the insurer does not have contractually agreed rates for the reinsurance cover, the insurer must estimate the cost based on current reinsurance market conditions. The amount must not be less than the full original cost of the cover, with no deduction for the expiry of time since the inception of the reinsurance arrangements.

Other adjustments to NP VR

17. An insurer may apply to APRA to reduce its NP VR for potential reinsurance recoverables from aggregate catastrophe reinsurance or aggregate stop-loss reinsurance if the cover is in place for the current reporting period and the entirety of the next reporting period. The reinsurance arrangements must meet the requirements of paragraphs 51 and 52 to be considered under this paragraph. The insurer must agree with APRA a methodology for the determination of the credit that may be given to these types of reinsurance arrangements.

Level 2 insurance groups

18. A Level 2 insurance group must calculate a NP VR for each geographical region by applying the principles in paragraphs 10 to 17 and paragraph 53.³ The calculation must take account of the exposures in each region of all relevant entities of the Level 2 insurance group after consolidation of intra-group reinsurance arrangements. The regions would be expected to be consistent with the regions used for the Level 2 insurance group's **annual accounts** and must be agreed with APRA. Australia must be treated as a single region for the purposes of this paragraph.
19. The Level 2 insurance group's NP VR for the purposes of paragraph 8 will be the largest NP VR resulting from the calculation(s) in paragraph 18.

Natural perils horizontal requirement

20. The natural perils horizontal requirement (**NP HR**) for an insurer is calculated as:
- (a) the greater of **H3 requirement** and **H4 requirement** defined in paragraphs 22 and 27, respectively; less
 - (b) **aggregate offset** (if any) defined in paragraph 32; less
 - (c) **PL offset** (if any) defined in paragraph 33.

³ A Level 2 insurance group does not need to calculate amounts for each geographical region if it can demonstrate that the amount determined for one or more of the geographical regions is always expected to be materially lower than the amount for one of the other geographical regions.

21. NP HR must be calculated at the reporting date on or prior to the inception date of the insurer's catastrophe reinsurance program and then held constant for the remaining duration of the catastrophe reinsurance program. If the catastrophe reinsurance program of an insurer has multiple inception dates, the insurer should agree with APRA the reporting date that will apply to the calculation of NP HR. If there is a material change to the reinsurance program during the treaty year, the insurer must approach APRA to determine whether NP HR should be re-calculated.

H3 requirement

22. The **H3 requirement** is calculated as:
- (a) three times **H3 loss** as defined in paragraph 23; less
 - (b) **H3 reinsurance recoverables** as defined in paragraph 24; less
 - (c) **H3 reinstatement premiums** as defined in paragraph 25; plus
 - (d) **H3 reinstatement cost** as defined in paragraph 26.
23. An insurer that has exposures to natural perils must determine the gross loss arising from the occurrence of a single event, such that the size of the loss from the event is equal to the whole-of-portfolio loss with a 10% probability of occurrence (**H3 loss**). This amount must not include any allowance for potential reinsurance recoverables. The calculation of H3 loss must include:
- (a) the impact of the event on all classes of business of the insurer;
 - (b) an allowance for non-modelled risks⁴; and
 - (c) potential growth in the insurer's portfolio over the reporting period.
24. An insurer that has exposures to natural perils must determine the level of potential reinsurance recoverables in relation to the occurrence of three H3 losses over the catastrophe reinsurance program treaty year (**H3 reinsurance recoverables**). The reinsurance recoverables must not include any amounts due from aggregate catastrophe reinsurance or aggregate stop-loss reinsurance. Refer to paragraphs 51 and 52 for further details on eligibility of potential reinsurance recoverables.
25. An insurer that writes reinsurance may receive inwards reinstatement premiums from cedants as a result of the events that gives rise to the three H3 losses (**H3 reinstatement premiums**). H3 reinstatement premiums must only be included in the H3 requirement if the insurer has contractually binding netting arrangements with the cedant.
26. An insurer that has exposures to natural perils must determine the cost (if any) of reinstating catastrophe reinsurance cover after the occurrence of the first two

⁴ Where certain perils are material but not included in the modelling, an allowance for losses in respect of these perils would need to be estimated and added to the H3 loss.

H3 losses (**H3 reinstatement cost**). In determining this cost, if the insurer does not have contractually agreed rates for the reinsurance cover, the insurer must estimate the cost based on current reinsurance market conditions. The amount must not be less than the full original cost of the cover, with no deduction for the expiry of time since the inception of the reinsurance arrangements.

H4 requirement

27. The **H4 requirement** is calculated as:
- (a) four times **H4 loss** as defined in paragraph 28; less
 - (b) **H4 reinsurance recoverables** as defined in paragraph 29; less
 - (c) **H4 reinstatement premiums** as defined in paragraph 30; plus
 - (d) **H4 reinstatement cost** as defined in paragraph 31.
28. An insurer that has exposures to natural perils must determine the gross loss arising from the occurrence of a single event, such that the size of the loss from the event is equal to the whole-of-portfolio loss with a 16.7% probability of sufficiency (**H4 loss**). This amount must not include any allowance for potential reinsurance recoverables. The calculation of H4 loss must include:
- (a) the impact of the event on all classes of business of the insurer;
 - (b) an allowance for non-modelled risks⁵; and
 - (c) potential growth in the insurer's portfolio over the reporting period.
29. An insurer that has exposures to natural perils must determine the level of potential reinsurance recoverables in relation to the occurrence of four H4 losses over the catastrophe reinsurance program treaty year (**H4 reinsurance recoverables**). The reinsurance recoverables must not include any amounts due from aggregate catastrophe reinsurance or aggregate stop-loss reinsurance. Refer to paragraphs 51 and 52 for further details on eligibility of potential reinsurance recoverables.
30. An insurer that writes reinsurance may receive inwards reinstatement premiums from cedants as a result of the event that gives rise to the four H4 losses (**H4 reinstatement premiums**). H4 reinstatement premiums must only be included in the H4 requirement if the insurer has contractually binding netting arrangements with the cedant.
31. An insurer that has exposures to natural perils must determine the cost (if any) of reinstating catastrophe reinsurance cover after the occurrence of the first three H4 losses (**H4 reinstatement cost**). In determining this cost, if the insurer

⁵ Where certain perils are material but not included in the modelling, an allowance for losses in respect of these perils would need to be estimated and added to the H4 loss, by either calculating a loss exceedance curve or aggregating the 1 in 200 year loss from each peril using the square root of sum-of-squares approach.

does not have contractually agreed rates for the reinsurance cover, the insurer must estimate the cost based on the current reinsurance market conditions. The amount must not be less than the full original cost of the cover, with no deduction for the expiry of time since the inception of the reinsurance arrangements.

Aggregate offset

32. An insurer may reduce its H3 requirement and H4 requirement for potential reinsurance recoverables from aggregate catastrophe reinsurance or aggregate stop-loss reinsurance if the cover is in place for the current reporting period and the entirety of the next reporting period (**aggregate offset**). The reinsurance arrangements must meet the requirements of paragraphs 51 and 52 to be considered under this paragraph. The insurer must agree with APRA a methodology for the determination of the credit that may be given to these types of reinsurance arrangements.

PL offset

33. The Appointed Actuary of the insurer must determine the portion of the premiums liability provision which relates to catastrophic losses⁶ (**PL offset**). PL offset by class of business is determined by:
- (a) calculating the amount of the insurer's premiums liability central estimate provision that relates to catastrophic losses;
 - (b) annualising the amount from sub-paragraph (a); and
 - (c) applying the diversified risk margin⁷ and then the **Premiums Liability Risk Capital Factor**⁸, as a percentage, to the amount from sub-paragraph (b).

The Appointed Actuary must then sum the outcomes from sub-paragraph (c) by class of business to determine the total PL offset. The Appointed Actuary must include details of the determination of the PL offset in the **Insurance Liability Valuation Report**.

Level 2 insurance groups

34. A Level 2 insurance group must calculate a NP HR for each geographical region by applying the principles in paragraphs 20 to 33 and paragraph 53.⁹ The

⁶ Catastrophic losses are those that give rise to a relatively significant number of claims and occur no more frequently than every three months. The Appointed Actuary needs to consider historical data over an appropriate period of time.

⁷ The diversified risk margin will already be determined in accordance with *Prudential Standard GPS 320 Actuarial and Related Matters (GPS 320)* and does not need to be split into a catastrophic and attritional loss component.

⁸ The Premiums Liability Risk Capital Factor will be the prescribed factor for that class of business from *Prudential Standard GPS 115 Capital Adequacy: Insurance Risk Charge*

⁹ A Level 2 insurance group does not need to calculate amounts for each geographical region if it can demonstrate that the amount determined for one or more of the geographical regions is

calculation must take account of the exposures in each region of all relevant entities of the Level 2 insurance group after consolidation of intra-group reinsurance arrangements. The regions would be expected to be consistent with the regions used for the Level 2 insurance group's annual accounts and must be agreed with APRA. Australia must be treated as a single region for the purposes of this paragraph.

35. The Level 2 insurance group's NP HR for the purposes of paragraph 8 will be the largest NP HR resulting from the calculation(s) in paragraph 34.

Other accumulations vertical requirement

36. The other accumulations vertical requirement (**OA VR**) for an insurer that has exposures to other accumulations is calculated as:
- (a) **OA PML** defined in paragraphs 39 and 40; less
 - (b) **OA reinsurance recoverables** defined in paragraph 41; plus
 - (c) **OA reinstatement cost** defined in paragraph 45.
37. An insurer must be able to determine its OA VR at all times. An insurer must regularly monitor the level of its OA VR, including determining the impact of the occurrence of an event.
38. OA VR must be calculated and reported to APRA at each reporting date. The calculation of OA VR must take into account the reinsurance program in place at the reporting date and the reinsurance program for the next reporting period. Where the reinsurance programs in these two reporting periods differ, the largest OA VR must be used.

OA PML

39. An insurer that has exposures to accumulations of losses arising from a common dependent source or non-natural perils (**other accumulations**) must determine a PML for its portfolio (**OA PML**).¹⁰ OA PML is the gross loss arising from the occurrence of a single event, such that the size of the loss from the event is equal to the whole-of-portfolio loss with a 0.5% probability of occurrence. An insurer must consider all classes of business in determining the largest loss scenario. OA PML must not include any allowance for potential reinsurance recoverables.
40. An insurer that has exposures to other accumulations may reduce OA PML for any losses within the other accumulations scenario that are already specifically allowed for in the **premiums liabilities** of the insurer. This amount must be

always expected to be materially lower than the amount for one of the other geographical regions.

¹⁰ The determination of OA PML must consider the nature of products provided, losses that may lead to an aggregation of multiple per-risk or per-policy losses arising from one dependent cause, the potential for multiple classes of insurance and/or portfolios to be impacted from this one dependent cause and whether the upper limit of reinsurance cover purchased is sufficiently high to cover the OA PML.

determined by the Appointed Actuary and included in the Insurance Liability Valuation Report. APRA may require the insurer to modify the adjustment to OA PML.

OA reinsurance recoverables

41. An insurer that has exposures to other accumulations must determine the level of potential reinsurance recoverables¹¹ in relation to the occurrence of OA PML (**OA reinsurance recoverables**). The reinsurance recoverables may include any amounts due from aggregate stop-loss reinsurance if the cover is in place for the current reporting period and the entirety of the next reporting period. Refer to paragraphs 51 and 52 for further details on eligibility of potential reinsurance recoverables.
42. An insurer may reduce the retention on any aggregate stop-loss reinsurance arrangements for any portion of paid and outstanding claims and premiums liabilities that contribute to the insurer's retained losses. An insurer must only make this adjustment if these amounts affect the retention during the current reporting period and the entirety of the next reporting period. APRA may require the insurer to modify the adjustment to the retention on the aggregate stop-loss reinsurance arrangements.
43. An insurer may discount the retention on any aggregate stop-loss reinsurance arrangements for the time value of money if the retention is fixed and not indexed for inflation. The discount period must not be greater than the average period of discount in determining the premiums liability provision. The discount rate must be the relevant risk-free discount rates used by the Appointed Actuary in the Insurance Liability Valuation Report.
44. An insurer must only apply the premiums liability adjustment in paragraph 40 or paragraph 42. The insurer cannot apply the adjustment from both paragraphs 40 or 42 as this will result in the premiums liability provisions being deducted twice.

OA reinstatement cost

45. An insurer that has exposures to other accumulations must determine the cost (if any) of reinstating all catastrophe reinsurance cover relating to the reinsurance recoverables determined in paragraph 41 (**OA reinstatement cost**). In determining this cost, if the insurer does not have contractually agreed rates for the reinsurance cover, the insurer must estimate the cost based on current reinsurance market conditions. The amount must not be less than the full original cost of the cover, with no deduction for the expiry of time since the inception of the reinsurance arrangements.

¹¹ For the purposes of this paragraph, 'potential reinsurance recoverables' include reinsurance assets receivable from the Commonwealth Government in respect of:

- (a) a high cost claim indemnity as defined under the *Medical Indemnity Act 2002* (**Medical Indemnity Act**); and
- (b) amounts payable under the High Cost Claims Protocol as defined under the Medical Indemnity Act.

Level 2 insurance groups

46. A Level 2 insurance group must calculate the OA VR for each geographical region by applying the principles in paragraphs 36 to 45 and paragraph 53.¹² The calculation must take account of all the exposures in each region of all relevant entities of the Level 2 insurance group after consolidation of intra-group reinsurance arrangements. The regions would be expected to be consistent with the regions used for the Level 2 insurance group's annual accounts and must be agreed with APRA. Australia must be treated as a single region for the purposes of this paragraph.
47. The Level 2 insurance group's OA VR for the purposes of paragraph 8 will be the largest OA VR resulting from the calculations in paragraph 46.

Lenders mortgage insurer concentration risk charge

48. A lenders mortgage insurer must determine the lenders mortgage insurer concentration risk charge (**LMICRC**) by applying Attachment A.

Level 2 insurance groups

49. A Level 2 insurance group which writes lenders mortgage insurance business must apply the principles of Attachment A to each geographical region. The calculation must take account of the exposures in each region of all relevant entities of the Level 2 insurance group after consolidation of intra-group reinsurance arrangements. The regions would be expected to be consistent with the regions used for the Level 2 insurance group's annual accounts and must be agreed with APRA. Australia must be treated as a single region for the purposes of this paragraph.
50. The Level 2 insurance group's LMICRC for the purposes of paragraph 8 will be the largest LMICRC from the calculation(s) in paragraph 49.

Reinsurance arrangements

51. In calculating potential reinsurance recoverables in any component of the Insurance Concentration Risk Charge¹³, an insurer may take into account potential reinsurance recoverables receivable from a reinsurance arrangement to which it is a party only if the reinsurance arrangement:
- (a) complies with the two month and six month rules imposed under *Prudential Standard GPS 230 Reinsurance Management (GPS 230)*; or

¹² A Level 2 insurance group does not need to calculate amounts for each geographical region if it can demonstrate that the amount determined for one or more of the geographical regions is always expected to be materially lower than the amount for one of the other geographical regions.

¹³ This includes the determination of reinsurance for lenders mortgage insurance in Attachment A.

- (b) fails to comply with those rules as at the date of the relevant deadline, but:
 - (i) subsequent to the deadline specified under the two month rule, the reinsurance arrangement is documented in accordance with the other requirements of the two month rule (in which case the reinsurance recoverables from the reinsurance arrangement may be taken into account until the reinsurance arrangement fails to comply with the six month rule); or
 - (ii) subsequent to the deadline specified under the six month rule, the reinsurance arrangement is documented in accordance with the other requirements of the six month rule; or
 - (c) has been treated by APRA, under GPS 230, as complying with the two month rule and six month rule.
52. In calculating potential reinsurance recoverables in any component of the Insurance Concentration Risk Charge¹⁴, an insurer may take into account potential reinsurance recoverables receivable from a reinsurance arrangement only if the reinsurance arrangement meets the ‘governing law’ and ‘dispute’ requirements of paragraph 31 of GPS 230.
53. In calculating potential reinsurance recoverables in any component of the Insurance Concentration Risk Charge¹⁵, a Level 2 insurance group may take into account:
- (a) potential reinsurance recoverables receivable from a reinsurance arrangement of a Level 1 insurer within the group only if it meets the requirements of paragraphs 51 and 52; and
 - (b) potential reinsurance recoverables receivable from a reinsurance arrangement of any other consolidated entity within the group carrying on insurance business in a foreign jurisdiction unless the reinsurance arrangement fails to comply with requirements for documentation of reinsurance contracts applicable in that jurisdiction.
54. A regulated institution must have in place a contractually agreed reinstatement, at an agreed price or rate, of its catastrophe reinsurance arrangements at the inception date of its catastrophe reinsurance program.
55. During the period of the catastrophe reinsurance program, a regulated institution must review and consider the adequacy of reinstatements of all or parts of its reinsurance program. This review must consider the financial and operational implications of not having a sufficient number of contractually agreed reinstatements during the period of cover. Details of this review must be included in the regulated institution’s **Reinsurance Management Strategy (ReMS)** and **Internal Capital Adequacy Assessment Process**.

¹⁴ This includes the determination of reinsurance for lenders mortgage insurance in Attachment A.

¹⁵ This includes the determination of reinsurance for lenders mortgage insurance in Attachment A.

Securitisation

56. If a regulated institution securitises insurance liabilities, the net insurance liabilities may reduce. The regulated institution must consult APRA prior to entering into the securitisation transaction in order to be able to reduce the Insurance Concentration Risk Charge.

Catastrophe models

57. It is common practice for a regulated institution to use computer-based modelling techniques, developed either in-house or by external providers, to estimate likely losses under different catastrophe scenarios. If a regulated institution uses such a model, the model must be conceptually sound and capable of consistently producing realistic calculations. APRA will expect the regulated institution to be able to demonstrate an understanding of the model used in estimating losses. This understanding will include:
- (a) the type of data and assumptions used in the model;
 - (b) the methodology used to incorporate the data and assumptions into the model;
 - (c) the sensitivity of the resulting figures to changes in the model's assumptions; and
 - (d) the perils and elements that are not included in the model.
58. A regulated institution must be able to demonstrate that they have thoroughly researched the model and tested each type of catastrophic event that may affect their portfolio of risks at varying exceedance probabilities. Similarly, a regulated institution must calculate its losses using data that is consistent, accurate and complete. Where a regulated institution lacks access to the relevant data, it must be able to explain the rationale for, and details of, any estimates of data that it uses. This would include analysis of the sensitivity of the results to changes in the estimates and assumptions.

Review and reporting

59. A regulated institution must document in its ReMS the process and methodologies for setting and monitoring its Insurance Concentration Risk Charge. This must also include justification for any adjustments or assumptions made, such as all allowances made for aggregate reinsurance arrangements and adjustments to OA VR. GPS 230 sets out further details on this requirement.
60. In addition to the requirements of paragraph 59, a regulated institution that writes lenders mortgage insurance business must outline in its ReMS how it manages the exposures and mitigants in place for the risk in relation to future reinsurance arrangements.
61. The Appointed Actuary of an insurer must review and comment on the adequacy of the calculation of the Insurance Concentration Risk Charge as part of the **Financial Condition Report**. For an insurer that has other accumulations

exposures, the review must include the exposure to multiple events in a year and whether this would materially alter the Insurance Concentration Risk Charge.

62. The Group Actuary of a Level 2 insurance group must review and comment on the adequacy of the calculation of the Insurance Concentration Risk Charge for the Level 2 insurance group as part of the Level 2 insurance group's Insurance Liability Valuation Report.
63. An insurer must inform APRA within 20 business days of any changes to its Insurance Concentration Risk Charge that results from any changes in its ReMS, risk profile, classes of business underwritten or reinsurance program.

Adjustments and exclusions

64. APRA may, by notice in writing to a regulated institution, adjust or exclude a specific requirement in this Prudential Standard in relation to that regulated institution.

Transition

65. On application by a regulated institution, APRA may grant transitional relief from the obligation for the regulated institution to comply with any requirement in this Prudential Standard up until 31 December 2014.

Determinations made under previous Prudential Standards

66. An exercise of APRA's discretion under a previous version of this Prudential Standard does not continue to have effect under this Prudential Standard. For the purposes of this paragraph, 'a previous version of this Prudential Standard' includes:
 - (a) *Prudential Standard GPS 116 Capital Adequacy: Concentration Risk Charge (GPS 116)* made on 18 June 2010;
 - (b) GPS 116 made on 10 March 2010; and
 - (c) GPS 116 made on 23 June 2008.

Attachment A**Lenders mortgage insurer concentration risk charge**

1. This Attachment applies to a lenders mortgage insurer (**LMI**) for the purposes of determining the lenders mortgage insurer concentration risk charge (**LMICRC**).
2. For the purposes of this Attachment:
 - (a) **Loans**, as referred to in this Attachment, are loans secured by an insured mortgage over residential or other property;
 - (b) **Sum insured** is the original exposure amount for an LMI as stated in the mortgage insurance policy;
 - (c) **Loan-to-Valuation Ratio (LVR)** is the ratio of the amount of the loan to the value of the secured residential property, as at the date of origination of the loan. Where the mortgage insurance premium is capitalised in the loan amount, the LVR must be calculated including the premium; that is, the loan amount must be increased by the amount of the capitalised premium, irrespective of whether the premium is insured. The inclusion of a First Home Owners Grant in the deposit for a mortgaged property will not otherwise increase the LVR of a loan;
 - (d) Probability of default (**PD**) is the risk of default by the borrower;
 - (e) Loss given default (**LGD**) is the loss to the LMI upon default by the borrower;
 - (f) **Age** is the length of time from the date of origination of the loan to the date of calculation for the purposes of determining the seasoning factors in Table A;
 - (g) A **standard loan** is a loan predominantly secured by residential property and meets the following criteria:
 - (i) the LMI or lender has formally verified the borrower's income and employment; and
 - (ii) the borrower passes standard credit checks and income requirements as documented in the LMI or lender's underwriting or credit policies and procedures;
 - (h) A **non-standard loan** is a loan predominantly secured by residential property which does not meet the criteria in paragraph 2(g) above;
 - (i) A **commercial loan** is a loan that is not predominantly secured by a registered mortgage over residential property;
 - (j) **Coverage type** refers to whether the **LMI policy** of insurance provided is for 100 per cent of the loan or pool amount, or less than 100 per cent of the loan amount or pool amount. The latter is referred to as top cover for

individual LMI policies and partial cover for **pooled LMI policies**;

- (k) **Individual LMI policy** is lenders mortgage insurance underwritten and issued in respect of an individual loan. Bulk and/or tranche transactions associated with securitisations where each loan is individually insured falls into this category;
- (l) **Pooled LMI policy** is lenders mortgage insurance underwritten and issued in respect of a pool of loans. For clarity, each loan is not individually insured;
- (m) **Premiums liability**, as referred to in this Attachment, is calculated in accordance with GPS 320. **Net premiums liability** is the premiums liability after netting of **reinsurance recoverables** and **non-reinsurance recoveries**. Net premiums liability is also calculated in accordance with GPS 320; and
- (n) **Outstanding claims liabilities (OCL)**, as referred to in this Attachment, are as calculated in accordance with GPS 320.

PML and Prescribed Stress Scenario

- 3. For the purpose of this Attachment, the **Probable Maximum Loss (PML)** is assumed to arise from a catastrophic event such that the size of loss from the three year event is equal to a loss with a 0.5% probability of occurrence. APRA requires the PML to be determined on the basis of a Prescribed Stress Scenario as defined in paragraph 4 of this Attachment.
- 4. The **Prescribed Stress Scenario** is in the form of a three-year economic or property downturn, and is applied to the business in force as at the calculation date. The LMI must assume a constant aggregate sum insured over the three-year scenario (except for LMIs in run-off as provided in paragraph 18 of this Attachment).
- 5. The modelled losses must be allocated in the proportion of 25 per cent to year one, 50 per cent to year two and 25 per cent to year three of the downturn. These losses include future claim payments in the lenders mortgage insurer's Premiums Liabilities that relate to an economic downturn.

Determining the lenders mortgage insurer concentration risk charge

- 6. Subject to paragraph 7 of this Attachment, the LMICRC is calculated by:
 - (a) working out the PML in accordance with paragraphs 8 to 18 'Prescribed Calculation of PML' of this Attachment;
 - (b) deducting the amount of Allowable Reinsurance in accordance with paragraphs 19 to 24 of this Attachment; and
 - (c) deducting the amount of net premiums liability relating to an economic downturn, in accordance with paragraph 25 of this Attachment.

7. LMICRC must not be less than 10 per cent of the PML as determined in paragraph 6(a) of this Attachment. This means that the sum of the deductions in 6(b) and 6(c) of this Attachment cannot exceed 90 per cent of the PML.

Prescribed calculation of PML

8. The PML of an LMI is calculated by the addition of the amounts calculated in paragraph 9 to 18 of this Attachment for all LMI policies in force at the calculation date.
9. For each individual LMI policy, the PML is the sum insured multiplied by all of the relevant factors that apply to the policy loan type as set out in Table A.
10. Where a policy or loan has characteristics of more than one loan and/or coverage type, the exposure must be recognised in the category that produces the highest PML for that exposure.
11. For each pooled LMI policy, the PML is calculated by applying the principles in paragraphs 9 and 10 of this Attachment and then applying the terms of the pool cover to the calculated PML amount.¹⁶
12. For an LMI writing inwards reinsurance on a non-proportional basis, the PML for each of these contracts is calculated by:
 - (a) determining the impact of the Prescribed Stress Scenario on the business that is reinsured by applying the rules in paragraphs 8 to 11 of this Attachment; and
 - (b) determining under the terms of the inwards reinsurance contract, the amount of claim by the cedant against the LMI that will arise under (a) above.

This amount becomes the LMI's PML.

13. For an LMI writing coverage for an additional loan, or otherwise changing or extending an individual LMI policy, the LMI must determine the PML based on the total sum insured to which it is exposed and the LVR must be based on the total loan as at the most recent date of underwriting (and in accordance with paragraph 2(b) of this Attachment). The age of the individual LMI policy must be based on the origination date of the original loan and not the date of the extension to the individual LMI policy, unless a different methodology has been agreed with APRA.
14. For an LMI writing any other lenders mortgage insurance business not captured in paragraphs 9 to 13 of this Attachment, the LMI must consult with APRA. APRA must approve the method for calculating the PML in these instances.

¹⁶ For example, reducing the PML amount by any aggregate deductible, applying a maximum cover limit or other partial cover factors, if applicable.

15. APRA may direct an LMI to assume that the sum insured, LVR or age of a particular loan or group of loans is either:
 - (a) the sum insured, LVR or age as specified in APRA's direction; or
 - (b) the sum insured, LVR or age worked out by applying instructions contained in APRA's direction.
16. APRA may determine a formula for the calculation of the PML in relation to an exposure that does not readily fit into the definitions of loans and / or coverage types.
17. APRA may direct an LMI to reclassify a loan where it considers the relevant factor(s) in Table A of the original classification do not reflect the inherent risk of the loan.

LMIs in run-off

18. For an LMI no longer writing new business (i.e. in run-off), the sum insured is expected to decrease over the three-year scenario and it may be appropriate for an LMI in run-off to adjust its PML downwards. The methodology for adjusting an LMI's PML in a run-off situation must be approved by APRA and documented in the LMI's ReMS.

Available Reinsurance

19. In addition to the requirements on potential reinsurance recoverables in the body of this Prudential Standard (refer to paragraphs 51 and 52 of the main body of the Prudential Standard), only reinsurance arrangements that are contractually committed may be applied during the Prescribed Stress Scenario.
20. APRA recognises that the business that is covered by an LMI's reinsurance arrangements and therefore relevant to the Available Reinsurance calculation will vary for each LMI. In some cases, the level of paid claims, Outstanding Claims Liability and/or Premiums Liability¹⁷ for the period of the Prescribed Stress Scenario may need to be allowed for in determining how much reinsurance will be available to meet claims arising from the Prescribed Stress Scenario. If an LMI allows for any of these amounts in its Available Reinsurance calculation, the level must be subject to review by the Appointed Actuary, as part of prescribed actuarial advice¹⁸ or through other written advice.
21. An LMI must allocate the PML, and any addition to this in accordance with paragraph 20 of this Attachment, over each year of the prescribed three-year stress scenario and then apply its reinsurance program(s) to the resulting projected claims. To the extent that approximations are necessary, a best estimate approach must be used.

¹⁷ Outstanding claims liability and premiums liability provisions in excess of a 75 per cent level of sufficiency must not be recognised.

¹⁸ The Insurance Liability Valuation Report or Financial Condition Report that are required to be completed by the Appointed Actuary in accordance with GPS 320.

22. In calculating Available Reinsurance, the LMI must consider the impact of the Prescribed Stress Scenario on its overall reinsurance arrangements and take account of all the relevant financial impacts.¹⁹
23. APRA may require the LMI to vary the amount of Available Reinsurance applied in the LMI's calculation of its LMICRC.²⁰

Allowable Reinsurance

24. The amount of Available Reinsurance to be deducted from the PML in determining the LMICRC is limited to a maximum of 60 per cent of the PML, irrespective of the amount available under paragraphs 19 to 23 of this Attachment. This amount of Available Reinsurance is referred to as **Allowable Reinsurance**.

Net premiums liability deduction

25. Net premiums liability of the LMI that relate to an economic downturn may be deducted from the PML in determining the LMICRC. The percentage of total net premiums liability of the LMI that is deducted must be determined by the Appointed Actuary. The methodology for the determination of the percentage must be included in the Insurance Liability Valuation Report.

¹⁹ This might include, for example, allowing for reversing accruals for experience bonus or other financial adjustments.

²⁰ APRA will review the allowable reinsurance calculation as set out in the ReMS when making this determination.

Table A - PD, LGD and seasoning factors to be applied in determining the PML of LMIs

Standard loans

The aggregate PD and LGD factors by LVR, over the three-year scenario, for standard loans are:

LVR	PD factor	LGD factor – 100 per cent cover	LGD factor – top cover
Greater than 100%	14.0%	40%	
95.01 – 100%	8.2%	40%	
90.01 – 95%	5.1%	40%	Minimum of:
85.01 – 90%	3.2%	30%	100%; or
80.01 – 85%	2.0%	30%	LGD factor /
70.01 – 80%	1.9%	30%	Top cover % ²¹
60.01 – 70%	0.9%	20%	
Less than 60.01%	0.6%	20%	

The seasoning factors by age for standard loans are:

Age of loan	Seasoning factor
Less than 3 years	100%
3 years to less than 5 years	75%
5 years to less than 10 years	25%
10 years or more	5%

²¹ Top cover % is the percentage of the loan amount covered by the lenders mortgage insurance.

Non-standard loans

The aggregate PD and LGD factors by LVR, over the three-year scenario, for non-standard loans are:

LVR	PD factor	LGD factor – 100 per cent cover	LGD factor – top cover
Greater than 100%	31.5%	40%	
95.01 – 100%	18.5%	40%	
90.01 – 95%	11.5%	40%	Minimum of:
85.01 – 90%	7.2%	30%	100%; or
80.01 – 85%	4.5%	30%	LGD factor /
70.01 – 80%	4.3%	30%	Top cover % ²²
60.01 – 70%	2.0%	20%	
Less than 60.01%	0.9%	20%	

The seasoning factors by age for non-standard loans are:

Age of loan	Seasoning factor
Less than 3 years	100%
3 years to less than 5 years	75%
5 years to less than 10 years	25%
10 years or more	5%

Commercial loans

The PML for the three-year scenario is the sum insured multiplied by 8%. No seasoning factor applies to commercial loans.

²² Top cover % is the percentage of the loan amount covered by the lenders mortgage insurance.