



Reporting Practice Guide

GRPG 460 – Reinsurance Counterparty Data Collection


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About this guide

Reporting Practice Guides (RPGs) provide guidance on particular areas of APRA's reporting requirements to assist completion of the reporting forms. RPGs discuss requirements from legislation, regulations or APRA's reporting standards, but do not themselves create enforceable requirements.

Reporting Standard GRS 460.0 Reinsurance Assets by Counterparty (GRS 460.0), Reporting Standard GRS 460.1 Exposure Analysis by Reinsurance Counterparty (GRS 460.1), Reporting Standard GRS 460.0_G Reinsurance Assets by Counterparty (Level 2 Insurance Group) (GRS 460.0_G) and Reporting Standard GRS 460.1_G Exposure Analysis by Reinsurance Counterparty (Level 2 Insurance Group) (GRS 460.1_G) set out APRA's requirements in relation to reporting information to APRA under the *Financial Sector (Collection of Data) Act 2001*. This RPG aims to assist general insurers and Level 2 insurance groups in complying with APRA's requirements.

For the purposes of this guide, and consistent with the application of GRS 460.0, GRS 460.1, GRS 460.0_G and GRS 460.1_G, 'general insurer', 'Level 2 insurance group' and 'regulated institution' have the meaning given in *Prudential Standard GPS 001 Definitions (GPS 001)*. In addition, expressions in bold are defined in GPS 001.

Not all guidance outlined in this RPG will be relevant for every general insurer or Level 2 insurance group.

Contents

Reinsurance Assets by Counterparty (Reporting Form GRF 460.0 and Reporting Form GRF 460.0_G)	5
Introduction	5
Reporting threshold	5
Example reinsurance arrangements	6
Extract from GRF 460.0: Reinsurance Assets by Counterparty	7
Exposure Analysis by Reinsurance Counterparty (Reporting Form GRF 460.1 and Reporting Form GRF 460.1_G)	8
Introduction	8
Data and information	9
Components of the prescribed capital amount	9
Capital base	9
On-balance sheet reinsurance data	9
Reinsurance arrangements	9
Other information	9
Impact on the capital base	13
Impact on the Insurance Risk Charge	14
Impact on the Insurance Concentration Risk Charge	15
Natural perils vertical requirement	15
Natural perils horizontal requirement	15
Other accumulations vertical requirement	15
Impact on the Asset Risk Charge	19
Real interest rate stress	19
Default stress	19
Other impacts	19
Impact on the Asset Concentration Risk Charge	22
Increase in the ACRC	22
Decrease in the ACRC	22
Impact on the Operational Risk Charge	22
Impact on the prescribed capital amount	25
Treatment of collateral, guarantees and letters of credit	26
Impact on the capital base	26
Impact on the Insurance Risk Charge	26
Impact on the Asset Risk Charge	26
Impact on the Asset Concentration Risk Charge	27
Impact on the Operational Risk Charge	27

Reinsurance Assets by Counterparty (Reporting Form GRF 460.0 and Reporting Form GRF 460.0_G)

Introduction

1. *Reporting Form GRF 460.0 Reinsurance Assets by Counterparty* (GRF 460.0) and *Reporting Form GRF 460.0_G Reinsurance Assets by Counterparty (Level 2 Insurance Group)* (GRF 460.0_G) capture data in relation to reinsurance assets of a regulated institution.
2. The data collected under GRS 460.0 is not subject to regular audit review by the **Appointed Auditor** of the general insurer. The data collected under GRS 460.0_G is not subject to regular audit review by the **Group Auditor** of the Level 2 insurance group. APRA, however, may require the Appointed Auditor of the general insurer or Group Auditor of the Level 2 insurance group to undertake a special purpose review of the systems, processes and controls surrounding the completion of GRF 460.0 or GRF 460.0_G or the data contained within these forms.¹

3. The regulated institution will need to refer to the reporting form instructions when completing GRF 460.0 and GRF 460.0_G. This RPG sets out an example of how the reporting threshold in GRF 460.0 and GRF 460.0_G will operate and provides examples of how certain reinsurance arrangements would be reported in GRF 460.0 and GRF 460.0_G.

Reporting threshold

4. The instructions for GRF 460.0 and GRF 460.0_G set out the reporting threshold. The threshold is such that at least 95 per cent of the aggregate total of the central estimate of **reinsurance recoverables** and **deferred reinsurance expense (DRE)** must be reported for individual reinsurers. A balancing item, 'Other', is provided such that five per cent or less of the total is not allocated to individual reinsurers. The following provides an example of how the threshold works.

Example:

The following example refers to a general insurer and GRF 460.0; however, it is equally applicable to a Level 2 insurance group and GRF 460.0_G.

The general insurer has, at the end of the financial year:

- total central estimate reinsurance recoverables of \$300m, which includes:
 - \$20m of recoverables on paid claims overdue for more than 6 months; and
 - \$5m of recoverables outstanding from the second annual balance date after the event; and
- total DRE of \$200m.

The total exposure of \$500m is made up of exposures to individual reinsurance counterparties (Green Re, Red Re and Brown Re) and a number of other reinsurance counterparties. The exposures to the named reinsurers are:

- Green Re: \$225m, which includes \$18m of recoverables on paid claims overdue for more than 6 months and DRE of \$100m.
- Red Re: \$150m, which includes \$5m of recoverables outstanding from the second annual balance date after the event and DRE of \$25m.
- Brown Re: \$100m, which includes DRE of \$75m.

In aggregate the exposure to these counterparties is \$475m, or 95 per cent of the regulated institution's total exposure to reinsurance counterparties. Each of these counterparties is required to be reported as a line item.

¹ Refer to the 'Special Purpose Review' sections of *Prudential Standard GPS 310 Audit and Related Matters*.

Reinsurer	Central estimate of reinsurance recoverables	Net reinsurance recoverable on paid claims overdue for more than 6 months – central estimate	Reinsurance recoverable outstanding from second annual balance date after the event – central estimate	Deferred reinsurance expense (DRE)	Total of central estimate of reinsurance recoverables and DRE – <u>this column is not reported in the form</u>
Green Re	107	18		100	225
Red Re	120		5	25	150
Brown Re	25			75	100
Other*	23	2			25
Total	275	20	5	200	500

* Note that 'Other' is derived automatically by GRF 460.0 and is determined as the difference between the total that is reported by the insurer for that column and the sum of the individual exposures for that column.

A validation/limit control is embedded in the form. The general insurer will not be able to submit GRF 460.0 (and GRF 460.0_G) if the total of 'Other', \$25m in this example, is more than 5 per cent of the 'Total', \$500m in this example.

Example reinsurance arrangements

- APRA notes that some regulated institutions have reinsurance arrangements that are supported by collateral, guarantees or letters of credit, either in relation to recoverables outstanding from

the second annual balance date² or for other risk mitigation purposes. The following example shows how these types of arrangements would be reported for a general insurer on GRF 460.0. This is equally applicable to a Level 2 insurance group and GRF 460.0_G.

- The general insurer has reinsurance recoverables of \$1,220 (central estimate \$1,000) due from ABC Reinsurance. ABC Reinsurance is a non-APRA-authorized reinsurer, domiciled in Singapore and is rated as an APRA Counterparty Grade 3. ABC Reinsurance is part of AAA Group, domiciled in Switzerland. The insurer also has deferred reinsurance expense of \$150 to ABC Reinsurance. A small portion of the reinsurance recoverables (central estimate \$100) relate to an event that occurred prior to the two most recent annual balance dates. The general insurer has sought collateral to reduce the Asset Risk Charge for these reinsurance recoverables. The collateral covers the full amount of the recoverable and is provided by a bank domiciled in Australia which is rated as an APRA Counterparty Grade 2.
- The general insurer has reinsurance recoverables of \$1,064 (central estimate \$964) due from BCD Re, which is not part of a group. The general insurer has no deferred reinsurance expense exposure to BCD Re. The reinsurer is domiciled in Bermuda and is rated as an APRA Counterparty Grade 3. BCD Re has arranged for the reinsurance arrangement to be backed by collateral lodged in a foreign country. The reinsurance contract states that the payments to the general insurer will be made in Australia via a branch of the foreign bank that holds the collateral in the foreign country.
- The general insurer has reinsurance recoverables of \$5,300 (central estimate \$4,800) due from Inter Re which is a non-APRA-authorized reinsurer, domiciled in Germany and is rated as an APRA Counterparty Grade 4. There is no deferred reinsurance expense exposure. Inter Re is part of INT Group, which is also domiciled in Germany. The reinsurance recoverables are backed by a guarantee of \$4,000 from a third party with an APRA Counterparty Grade of 2. The guarantee does not cover the full amount of the central estimate of reinsurance recoverables.
- The general insurer has recoveries due from a catastrophe bond arrangement. In this example, the recovery is not considered reinsurance and so no entry is reported on GRF 460.0.

² Note this treatment does not apply to the **international business** of Level 2 insurance groups.

Extract from GRF 460.0: Reinsurance Assets by Counterparty

Example no.	Name of counterparty (reinsurer) (1)	Reinsurer identifier (2)	Counterparty group name (3)	APRA counterparty grade (4)	Major form of collateral / guarantee (5)	Amount of collateral / guarantee (6)	APRA counterparty grade after collateral / guarantee (7)	Counterparty domicile (8)	Group domicile (9)	Central estimate of reinsurance recoverables (10)	Net reinsurance recoverable on paid claims overdue for more than 6 months - central estimate (11)	Reinsurance recoverable outstanding from 2nd annual balance date after the event - central estimate (12)	Deferred reinsurance expense (13)
1	ABC Reinsurance	ABC0003	AAA Group	3	Collateral	1,220	2	Singapore	Switzerland	900		100	150
2	BCD Re	BCD0001		3				Bermuda		964			
3	Inter Re	INT0012	INT Group	4	Guarantee	4,000	2	Germany	Germany	4,800			
4	N/A												
Other						0				0	0	0	0
Total						5,220				6,664		100	150

Data entered by insurer

Derived data item

Exposure Analysis by Reinsurance Counterparty (Reporting Form GRF 460.1 and Reporting Form GRF 460.1_G)

Introduction

6. *Reporting Form GRF 460.1 Exposure Analysis by Reinsurance Counterparty* (GRF 460.1) and *Reporting Form GRF 460.1_G Exposure Analysis by Reinsurance Counterparty (Level 2 Insurance Group)* (GRF 460.1_G) capture data in relation to the impact on the **capital base** and **prescribed capital amount** of a regulated institution due to the failure of a material reinsurance counterparty.
7. The regulated institution is required under GRS 460.1 and GRS 460.1_G (as relevant) to undertake an exposure analysis and complete a row in GRF 460.1 or GRF 460.1_G for each reinsurance counterparty where the failure results in a decrease to capital coverage³ of five per cent or more.⁴ Where this is the case, each component needs to be analysed and a figure (whether zero or non-zero) needs to be reported. Under GRS 460.1 and GRS 460.1_G, the regulated institution is required to document the underlying assumptions and the calculations and provide this information to APRA on request.
8. The data collected under GRS 460.1 is not subject to regular audit review by the Appointed Auditor of the general insurer. The data collected under GRS 460.1_G is not subject to regular audit review by the Group Auditor of the Level 2 insurance group. APRA, however, may require the Appointed Auditor of the general insurer or Group Auditor of the Level 2 insurance group to undertake a special purpose review of the systems, processes and controls surrounding the completion of GRF 460.1 or GRF 460.1_G or the data contained within these forms.⁵
9. For the purposes of GRF 460.1 and GRF 460.1_G, the exposure analysis must assume that the regulated institution makes no recovery from the failed reinsurer and does not replace the reinsurer in any of its previous or current reinsurance arrangements. APRA accepts that the regulated institution may receive payment in the future of

³ Capital coverage is determined as capital base divided by prescribed capital amount.

⁴ For clarification, a five per cent decrease for a regulated institution with a solvency coverage of 1.80 times means its solvency coverage would decrease to 1.71 (not 1.75).

⁵ Refer to the 'Special Purpose Review' sections of *Prudential Standard GPS 310 Audit and Related Matters*.

some or all of the current reinsurance recoverables from the failed reinsurer. APRA also accepts that the regulated institution is likely to take management actions in relation to the current reinsurance arrangements to protect its exposures and capital position. However, for the purposes of the exposure analysis in GRF 460.1 and GRF 460.1_G, the zero recoverability assumption will allow APRA to collect information on a consistent basis. Management actions may be taken into account when the regulated institution is undertaking stress testing or scenario analysis as part of its **Internal Capital Adequacy Assessment Process**.

10. This RPG sets out the data needed to undertake the exposure analysis and then discusses each component of the capital base and prescribed capital amount. This RPG also sets out information on the treatment of collateral, guarantees and letters of credit. The regulated institution will need to refer to the reporting form instructions and to APRA's prudential standards relating to capital adequacy when undertaking the exposure analysis.
11. GRS 460.1 and GRS 460.1_G allow the regulated institution to make simplifying assumptions when undertaking this analysis, as long as these assumptions do not have a material impact on the resulting capital coverage. The RPG discusses possible simplifying assumptions as well as providing examples. APRA notes that there are other ways for the analysis to be undertaken and that other simplifying assumptions may be appropriate for the particular regulated institution.

Data and information

12. In order to undertake the exposure analysis by reinsurance counterparty, the regulated institution will need a suite of data and information. This would typically include:

- (a) pre-stress amounts for each component of the prescribed capital amount and the capital base;
- (b) on-balance sheet reinsurance data by reinsurance counterparty;
- (c) details of the catastrophe related reinsurance arrangements for the purposes of calculating the **Insurance Concentration Risk Charge** (ICRC); and
- (d) other regulated institution specific data for underlying calculations.

Each of these are discussed further below.

Components of the prescribed capital amount

13. The pre-stress components of the prescribed capital amount will include:

- (a) the **Insurance Risk Charge**;
- (b) the ICRC;
- (c) the **Asset Risk Charge**;
- (d) the **Asset Concentration Risk Charge** (ACRC);
- (e) the **Operational Risk Charge**;
- (f) the aggregation benefit; and
- (g) the prescribed capital amount.

These amounts will be reported on *Reporting Form GRF 110.1 Prescribed Capital Amount* (GRF 110.1) or *Reporting Form GRF 110.1_G Prescribed Capital Amount* (Level 2 Insurance Group).

Capital base

14. The pre-stress components of the capital base will include:

- (a) total capital base; and
- (b) net surplus / deficit relating to insurance liabilities.

These amounts will be reported on *Reporting Form GRF 112.0 Determination of Capital Base*⁶ or *Reporting Form GRF 112.0_G Determination of Capital Base* (Level 2 Insurance Group).

On-balance sheet reinsurance data

15. The pre-stress on-balance sheet reinsurance data will include:

- (a) reinsurance recoverables by reinsurance counterparty;
- (b) expected reinsurance recoveries by reinsurance counterparty;
- (c) DRE by reinsurance counterparty; and
- (d) APRA counterparty grade and **APRA- authorised reinsurer** status for each reinsurance counterparty.

Some of this information will be available on GRF 460.0 or GRF 460.0_G, whilst other information will need to be sourced internally.

Reinsurance arrangements

16. Details of the reinsurance arrangements will include:

- (a) the **Reinsurance Arrangements Statement** (Reinsurance Statement); and
- (b) details of the calculation of the ICRC (usually contained in the Reinsurance Statement or **Reinsurance Management Strategy**).

Other information

17. The regulated institution will also need underlying information in relation to the calculation of the various components of the prescribed capital amount. Details of these are set out in the respective sections below.

⁶ For **Category C insurers**, this will be reported on GRF 110.1.

Example:

Consider a hypothetical diversified Australian general insurer that is not part of a Level 2 insurance group. The general insurer does not write non-natural peril exposures and does not write **lenders mortgage insurance**. This means that the general insurer does not have any risks associated with the Other Accumulations Vertical Requirement or Lenders Mortgage Insurer component of the ICRC.

Table 1: Pre-stress components of the prescribed capital amount

Component	\$m
Insurance risk charge - outstanding claims	200.0
Insurance risk charge - premiums liability	120.0
ICRC	100.0
Asset Risk Charge	260.0
Asset Concentration Risk Charge	0.0
Operational Risk Charge	70.0
Aggregation benefit	-143.6
Prescribed capital amount (after application of the aggregation benefit)	606.4
Capital base	1,000.0
Capital base: of which is net surplus relating to insurance liabilities	0.0

Table 2: On-balance sheet reinsurance data

Reinsurer	Reinsurance recoverables on outstanding claims - central estimate	Expected reinsurance recoveries on premiums liability - central estimate	DRE - balance sheet	APRA counterparty grade	APRA-authorized?
Green Re	80.0	22.0	55.0	2	No
Red Re	100.0	12.0	55.0	3	Yes
Brown Re	50.0	30.0	48.0	2	Yes
Blue Re	0.0	5.0	20.0	4	No

Table 3: Natural perils gross whole-of-portfolio losses

Probability of sufficiency (%)	Loss (\$m)
0.5	900.0
10.0	240.0
16.7	140.0

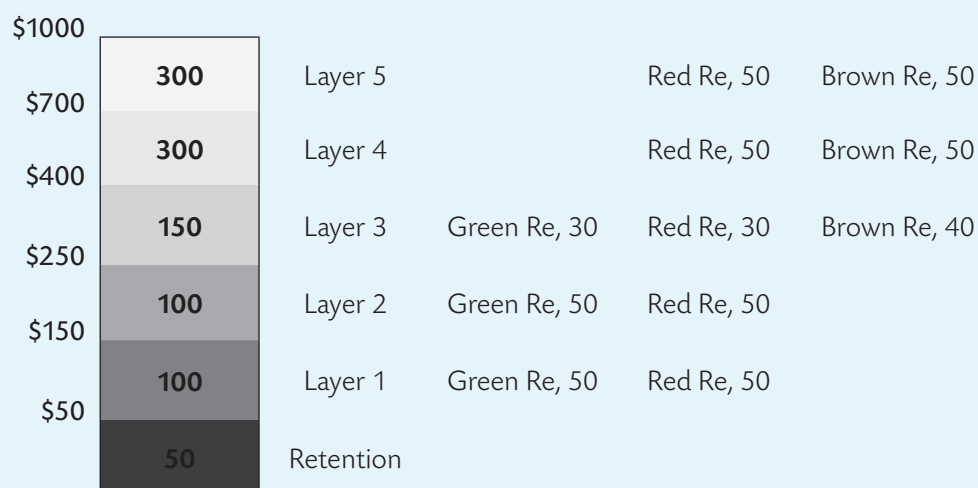
The reinsurance arrangements of the general insurer:

- cover all classes, regions and natural perils;
- comply with prudential requirements; and
- have a common inception date of 1 January.

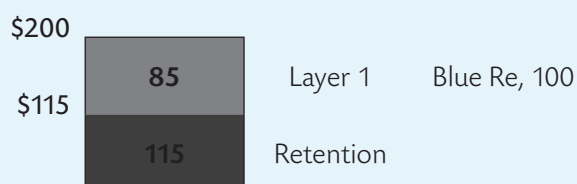
The figure below shows the limits and attachment points for the natural perils catastrophe reinsurance arrangements, which has one full pre-paid reinstatement. The reinsurers that participate in the catastrophe reinsurance arrangements are listed on the right. The general insurer also has an aggregate reinsurance arrangement in place.

Figure 1: Reinsurance arrangements

Catastrophe reinsurance arrangements – reinsurer and percentage taken



Aggregate reinsurance arrangements – reinsurer and percentage taken



The following table outlines the calculation of the ICRC for the general insurer. Note that the general insurer has already calculated the reinstatement costs for the purposes of the ICRC components as shown in the table.

Table 4: Calculation of the ICRC components

Component	NP VR	NP HR – H3 requirement	NP HR – H4 requirement
Gross loss	900.0	3 x 240.0 = 720.0	4 x 140.0 = 560.0
Potential reinsurance recoverables	850.0	3 x 190.0 = 570.0	4 x 90.0 = 360.0
Net loss	50.0	150.0	200.0
Aggregate offset	n/a	35.0	85.0
Reinstatement costs	0.0	20.0	30.0
PL offset	n/a	45.0	45.0
Requirement	50.0	90.0	100.0

The ICRC is \$100m, the greatest of the NP VR, NP HR (H3 requirement) and NP HR (H4 requirement).

Impact on the capital base

18. For the purposes of the exposure analysis, the capital base will be impacted by the failure of a material reinsurer. This will occur due to an increase in the net outstanding claims liability and net premiums liability, which in turn will decrease the capital base of the regulated institution.
19. APRA notes that the regulated institution will have reported information on the central estimate of individual reinsurance counterparty exposures on GRF 460.0 or GRF 460.0_G. To determine the impact on the capital base, however, the regulated institution will need the value of these exposures at a higher probability of sufficiency (i.e. inclusive of a risk margin). The regulated institution may have this information available. If the regulated institution does not have this information, it may choose to use simplifying assumptions to determine the individual reinsurance counterparty exposures that impact the capital base. For example, the regulated institution may use the average risk margin that applies to all reinsurance assets, rather than calculating risk margins for individual reinsurers.
20. APRA notes that the regulated institution may undertake this calculation in a number of ways, including:
- calculating the impact at a 75 per cent probability of sufficiency – this means the regulated institution does not need the breakdown of net surplus / deficit outlined in paragraph 14(b); or
 - calculating the impact at a higher per cent probability of sufficiency and then adjusting the net surplus / deficit in insurance liabilities.
- Under both methods, the regulated institution will need to assess the tax implications due to the loss of reinsurance assets. APRA expects that these two methods would arrive at the same impact on the capital base.
21. The impact on the capital base reported on GRF 460.1 or GRF 460.1_G will be the amount calculated under paragraph 20.

Example:

The general insurer sources the current risk margin on net outstanding claims liabilities and net premiums liabilities from *Reporting Form GRF 115.0 Outstanding Claims Liabilities – Insurance Risk Charge* (GRF 115.0) and *Reporting Form GRF 115.1 Premiums Liabilities – Insurance Risk Charge* (GRF 115.1) respectively. These are 10 per cent and 15 per cent respectively. The general insurer determines that using the average risk margin for all reinsurance assets is appropriate. The general insurer is currently making a profit that will offset the loss of the reinsurance assets and assumes that its effective tax rate is 30 per cent.

Using the central estimate of reinsurance recoverables from Table 2, the values are grossed up to include the risk margin and then multiplied by the after tax rate (1 – 30%):

Table 5: Impact on the capital base

Reinsurer	Central estimate	Recoverables including risk margin	Calculation	Impact on capital base
Green Re	OCL: 80.0 PL: 22.0	OCL: 80.0 x 110% = 88.0 PL: 22.0 x 115% = 25.3	- (1-30%) x 88.0 - (1-30%) x 25.3	-79.3
Red Re	OCL: 100.0 PL: 12.0	OCL: 100.0 x 110% = 110.0 PL: 12.0 x 115% = 13.8	- (1-30%) x 110.0 - (1-30%) x 13.8	-86.7
Brown Re	OCL: 50.0 PL: 30.0	OCL: 50.0 x 110% = 55.0 PL: 30.0 x 115% = 34.5	- (1-30%) x 55.0 - (1-30%) x 34.5	-62.7
Blue Re	OCL: 0.0 PL: 5.0	OCL: 0.0 x 110% = 0.0 PL: 5.0 x 115% = 5.8	- (1-30%) x 0.0 - (1-30%) x 5.8	-4.0

Impact on the Insurance Risk Charge

22. For the purposes of the exposure analysis, the Insurance Risk Charge will be impacted by the failure of a material reinsurer, via an increase in the Outstanding Claims Risk Charge and Premiums Liability Risk Charge.
23. As with the impact on capital base, APRA notes that the regulated institution will have reported information on the central estimate of individual reinsurance counterparty exposures on GRF 460.0 or GRF 460.0_G. For the impact on the Insurance Risk Charge, however, the regulated institution will need these exposures at a 75 per cent probability of sufficiency (i.e. inclusive of a risk margin). The regulated institution may have this information available. If the regulated institution does not have this information, it may choose to make simplifying assumptions to determine the level of the individual reinsurance counterparty exposures.
- For example, the regulated institution may use the average risk margin that applies to all reinsurance assets, rather than calculating risk margins for individual reinsurers.
24. Once the regulated institution has this information, it will need to calculate the impact on the risk charges. It is likely that the regulated institution will not have a breakdown of individual reinsurance counterparty exposures by APRA class of business. In this case, the regulated institution may choose to use simplifying assumptions to determine the impact on the Insurance Risk Charge. For example, the regulated institution may use the average Outstanding Claims Risk Capital Factor and Premiums Liability Risk Capital Factor.
25. The impact on Insurance Risk Charge reported on GRF 460.1 or GRF 460.1_G will be the increase calculated in paragraph 24.

Example:

The general insurer sources the total Outstanding Claims Risk Charge and total Premiums Liability Risk Charge from GRF 115.0 and GRF 115.1 respectively. Using these, the average Outstanding Claims Risk Capital Factor and Premiums Liability Risk Capital Factor are calculated as 13 per cent and 15 per cent respectively. The general insurer determines that the average factors are appropriate. Using the after risk margin values from Table 5, the impact on the Insurance Risk Charge is:

Table 6: Impact on the Insurance Risk Charge

Reinsurer	Recoverables including risk margin	Calculation	Impact on capital base
Green Re	OCL: $80.0 \times 110\% = 88.0$ PL: $22.0 \times 115\% = 25.3$	$13\% \times 88.0 +$ $15\% \times 25.3$	15.2
Red Re	OCL: $100.0 \times 110\% = 110.0$ PL: $12.0 \times 115\% = 13.8$	$13\% \times 110 +$ $15\% \times 13.8$	16.4
Brown Re	OCL: $50.0 \times 110\% = 55.0$ PL: $30.0 \times 115\% = 34.5$	$13\% \times 55.0 +$ $15\% \times 34.5$	12.3
Blue Re	OCL: $0.0 \times 110\% = 0.0$ PL: $5.0 \times 115\% = 5.8$	$13\% \times 0.0 +$ $15\% \times 5.8$	0.9

Impact on the Insurance Concentration Risk Charge

26. For the purposes of the exposure analysis, the ICRC will be impacted by the failure of a material reinsurer. The impact on the ICRC will be dependent on the greatest component prior to the failure of the reinsurer and the structure of the reinsurance arrangements of the regulated institution. For example, the greatest component may currently be the natural perils horizontal requirement (NP HR); however, the loss of a major reinsurer on the catastrophe reinsurance arrangements may result in the natural perils vertical requirement (NP VR) becoming the greatest component. The impact for the exposure analysis will be the new ICRC less the current ICRC.
27. Under *Prudential Standard GPS 116 Capital Adequacy: Insurance Concentration Risk Charge* (GPS 116), a regulated institution does not need to calculate amounts for each component of the ICRC if the component is expected to be materially lower than the other components. This principle can also be applied in the exposure analysis. This means a regulated institution may need to only re-calculate one component of the ICRC to determine the results for the exposure analysis.
28. In accordance with the reporting instructions for GRF 460.1 and GRF 460.1_G, the regulated institution must assume that the reinsurer has not been replaced on any of the reinsurance arrangements.
29. A regulated institution will also need to consider whether the failure of the reinsurer impacts any credit given in the ICRC for alternative risk and capital mitigants provided by that reinsurer.

Natural perils vertical requirement

30. For some regulated institutions, the loss of a material reinsurer may result in a significant impact on the adequacy of reinsurance protection against a very large event. For example, one reinsurer may participate in multiple layers of the catastrophe reinsurance arrangements, and the loss of the reinsurer will result in a material increase in the

NP VR. Given the NP VR has a much higher probable maximum loss than the NP HR, it is likely that there would not be a need to re-calculate the NP HR.

Natural perils horizontal requirement

31. For some regulated institutions, the loss of a material reinsurer may result in a significant impact on the adequacy of reinsurance protection against a series of events. For example, one reinsurer may participate in multiple lower layers of more than one protection, but perhaps not on the higher layers, resulting in a material increase in the NP HR that outweighs the increase in the NP VR. Another example is the loss of a material reinsurer that is providing aggregate reinsurance protection, which may result in a material increase in the NP HR.
32. GPS 116 requires the regulated institution to include the cost of reinstating reinsurance cover after the first two losses (H3 requirement) or the first three losses (H4 requirement). This cost may include the assumption that the failed reinsurer will participate in additional reinsurance cover that has not yet been purchased. For the purposes of the exposure analysis, the regulated institution may assume that this future reinsurance would instead be purchased from alternative reinsurers. As a result, the potential reinsurance recoverables for cover not yet purchased, along with the reinstatement costs for that cover, do not need to be adjusted for the NP HR. For reinsurance that has been pre-paid, the regulated institution must assume that the reinsurance protection is no longer in place and adjust the NP HR accordingly. These two scenarios are shown in the example below.

Other accumulations vertical requirement

33. For some regulated institutions, the loss of a material reinsurer may result in a revision to the other accumulations vertical requirement. For example, where the reinsurer provides a significant amount of protection to non-natural perils or other accumulations from a common dependent source.

Example:

Using the reinsurance arrangements from earlier, the general insurer needs to recalculate the relevant components of the ICRC. Recall that the current ICRC is \$100m and the general insurer has one pre-paid reinstatement.

Green Re

Given the structure of the catastrophe reinsurance arrangements, the loss of Green Re will impact both the NP VR and NP HR.

Table 7: Impact on the ICRC components from the failure of Green Re

Component	NP VR	NP HR – H3 requirement	NP HR – H4 requirement
Gross loss	900.0	240.0	140.0
Requirement	50.0	90.0	100.0
Loss of potential reinsurance recoverables	50.0 in Layer 1 50.0 in Layer 2 45.0 in Layer 3	<u>Loss 1:</u> 50.0 in Layer 1 45.0 in Layer 2 <u>Loss 2 (pre-paid):</u> 50.0 in Layer 1 45.0 in Layer 2 <u>Loss 3:</u> Reinsurance has not yet been purchased for loss 3	<u>Loss 1:</u> 45.0 in Layer 1 <u>Loss 2 (pre-paid):</u> 45.0 in Layer 1 <u>Loss 3 and 4:</u> Reinsurance has not yet been purchased for losses 3 and 4.
Change in aggregate offset	n/a	No change as the failure of Green Re will not contribute to losses that can be applied to the aggregate program	No change as full credit already taken
Revised requirement	195.0	280.0	190.0

The greatest component continues to be the NP HR; however, it is now driven by H3 requirement and has increased to \$280m. The impact on the ICRC is \$180m.

Red Re

Given the structure of the catastrophe reinsurance arrangements, the loss of Red Re will impact both the NP VR and NP HR.

Table 8: Impact on the ICRC components from the failure of Red Re

Component	NP VR	NP HR – H3 requirement	NP HR – H4 requirement
Gross loss	900.0	240.0	140.0
Requirement	50.0	90.0	100.0
Loss of potential reinsurance recoverables	50.0 in Layer 1 50.0 in Layer 2 45.0 in Layer 3 150.0 in Layer 4 100.0 in Layer 5	<u>Loss 1:</u> 50.0 in Layer 1 45.0 in Layer 2 <u>Loss 2 (pre-paid):</u> 50.0 in Layer 1 45.0 in Layer 2 <u>Loss 3:</u> Reinsurance has not yet been purchased for loss 3	<u>Loss 1:</u> 45.0 in Layer 1 <u>Loss 2 (pre-paid):</u> 45.0 in Layer 1 <u>Loss 3 and 4:</u> Reinsurance has not yet been purchased for losses 3 and 4.
Change in aggregate offset	n/a	No change as the failure of Red Re will not contribute to losses that can be applied to the aggregate program	No change as full credit already taken
Revised requirement	445.0	280.0	190.0

The greatest component is now the NP VR and is \$445m. The impact on the ICRC is \$345m.

Brown Re

Given the structure of the catastrophe reinsurance arrangements and the size of the H3 and H4 gross losses, the loss of Brown Re will only impact the NP VR.

Table 9: Impact on the ICRC components from the failure of Brown Re

Component	NP VR
Gross loss	900.0
Requirement	50.0
Loss of potential reinsurance recoverables	60.0 in Layer 3 150.0 in Layer 4 100.0 in Layer 5
Revised requirement	360.0

The greatest component is now the NP VR and is \$360m. The impact on the ICRC is \$260m.

Blue Re

Given the structure of the catastrophe reinsurance arrangements, the loss of Blue Re will only impact the NP HR.

Table 10: Impact on the ICRC components from the failure of Blue Re

Component	NP HR – H3 requirement	NP HR – H4 requirement
Gross loss	240.0	140.0
Requirement	90.0	100.0
Loss of aggregate offset	35.0	85.0
Revised requirement	125.0	185.0

The greatest component continues to be the NP HR; however, it has increased to \$185m. The impact on the ICRC is \$85m.

In summary, the impact on the ICRC from the loss of each reinsurer is:

Table 11: Impact on the ICRC

Reinsurer	Impact on ICRC (\$m)
Green Re	+180.0
Red Re	+345.0
Brown Re	+260.0
Blue Re	+85.0

Impact on the Asset Risk Charge

34. For the purposes of the exposure analysis, the Asset Risk Charge will be impacted by the failure of a material reinsurer, via a change in the results for a number of the stresses in the risk charge calculation, including the real interest rate stress and default stress. Depending on the nature of the insurance liabilities, the value of the expected inflation stress and currency stress may also be impacted.

Real interest rate stress

35. The failure of a material reinsurer will increase the net outstanding claims liability and net unearned premium liability. This will affect the calculation for determining the impact on the capital base for a change in real interest rates.

36. It is likely that the regulated institution will not have a breakdown of reinsurance exposures by duration. In this case, the regulated institution may choose to make simplifying assumptions to determine the impact of the real interest rate stress. For example, the regulated institution may assume that the duration of the liabilities does not change and therefore re-calculate the outcome of the real interest rate stress by proportionally increasing the impact on the capital base.

37. The composition of the other assets and liabilities of the regulated institution will determine whether the applicable stress is the upward stress or the downward stress for the purposes of recalculating the Asset Risk Charge.

Default stress

38. Given the loss of reinsurance assets, the failure of a material reinsurer will decrease the default stress. The reinsurance asset information will be available on GRF 460.0 or GRF 460.0_G. The impact on the default stress will be the central estimate of the reinsurance recoverables and/or DRE (as a proxy for expected reinsurance recoveries on premiums liabilities) multiplied by the relevant default factor from paragraphs 65 to 76 of *Prudential Standard GPS 114 Capital Adequacy: Asset Risk Charge* (GPS 114).

Other impacts

39. A regulated institution will need to assess if any of the other stresses in the Asset Risk Charge are materially impacted by the failure of a material reinsurer. For example, if only a small portion of the insurance liabilities are subject to the expected inflation stress or denominated in a foreign currency, the impact on the expected inflation stress and the overall Asset Risk Charge may be immaterial.

40. After the impact on all relevant stresses has been calculated, a regulated institution will need to apply the aggregation formula to the revised risk charge components to determine the new Asset Risk Charge for the purposes of the exposure analysis. The regulated institution may make use of the APRA capital workbook to calculate the value of the aggregation formula outcome.⁷ Alternatively, as set out in the instructions to GRF 460.1 and GRF 460.1_G, the regulated institution may estimate the impact of the aggregation formula by applying the percentage of the aggregated risk charge components to the sum of the risk charge components of the current Asset Risk Charge.

41. The impact on the Asset Risk Charge reported on GRF 460.1 or GRF 460.1_G will be the new Asset Risk Charge less the current Asset Risk Charge. This value may be positive (an increase in the Asset Risk Charge) or negative (a decrease in the Asset Risk Charge).

⁷ Available at <http://www.apra.gov.au/CrossIndustry/Consultations/Pages/LAGIC-Reporting-Requirements-June-2012.aspx>.

Example:

The composition of the general insurer's assets and liabilities is such that the net impact on the capital base is negative from the upward stress. Therefore, the upward stress needs to be re-calculated taking into account the loss of the reinsurance assets in the outstanding claims liability and unearned premium liability. The general insurer sources the current values for relevant assets and liabilities and assesses the outcomes of the real interest rate stress.

Table 12: Current real interest rate stress calculation for the Asset Risk Charge

	Pre-stress	Post-stress	Capital base impact – upwards stress
Outstanding claims liability	1,400.0	1,360.0	+40.0
Unearned premium liability	800.0	795.0	+5.0
Other liabilities	1.0	1.0	+0.0
Assets	3,300.0	3,240.0	-60.0
Total impact for all assets and liabilities			-15.0

The general insurer then adjusts the pre-stress values for outstanding claims liability and unearned premium liability by increasing them by the value of the reinsurance recoverables and expected reinsurance recoveries including the risk margin:

Table 13: Revised pre-stress values for the Asset Risk Charge

Reinsurer	Recoverables including risk margin	Revised OCL and PL pre-stress
Green Re	OCL: 88.0 PL: 25.3	OCL: $1,400.0 + 88.0 = 1,488.0$ PL: $800.0 + 25.3 = 825.3$
Red Re	OCL: 110.0 PL: 13.8	OCL: $1,400.0 + 110.0 = 1,510.0$ PL: $800.0 + 13.8 = 813.8$
Brown Re	OCL: 55.0 PL: 34.5	OCL: $1,400.0 + 55.0 = 1,455.0$ PL: $800.0 + 34.5 = 834.5$
Blue Re	OCL: 0.0 PL: 5.8	OCL: $1,400.0 + 0.0 = 1,400.0$ PL: $800.0 + 5.8 = 805.8$

The general insurer deems it appropriate to assume that the duration of the net liabilities is unaffected by the failure of the reinsurer. Therefore, the recalculated real interest rate stress is undertaken by increasing the impact on the capital base by the proportional increase in liabilities.

Table 14: Impact on the real interest rate stress for the Asset Risk Charge

Reinsurer	Revised capital base impact for insurance liabilities	Outcome	Revised capital base impact – all assets and liabilities
Green Re	OCL (1,488.0/1,400.0 x 40.0) + PL (825.3/800.0 x 5.0)	+47.7	-12.3
Red Re	OCL (1,510.0/1,400.0 x 40.0) + PL (813.8/800.0 x 5.0)	+48.2	-11.8
Brown Re	OCL (1,455.0/1,400.0 x 40.0) + PL (834.5/800.0 x 5.0)	+46.8	-13.2
Blue Re	OCL (1,400.0/1,400.0 x 40.0) + PL (805.8/800.0 x 5.0)	+45.0	-15.0

The general insurer sources the current default stress (\$75 million) and then uses the loss of the reinsurance assets to reduce the default stress outcome by combining the default factor from GPS 114 with the central estimate of reinsurance recoverables and DRE.

Table 15: Impact on the default stress for the Asset Risk Charge

Reinsurer	Default factor	Calculation	Outcome	Revised default stress
Green Re	GPS 114 Table 3, grade 2 = 4%	-4% x [80.0 +55.0]	-5.4	69.6
Red Re	GPS 114 Table 2, grade 3 = 4%	-4 % x [100.0+55.0]	-6.2	68.8
Brown Re	GPS 114 Table 2, grade 2 = 2%	-2% x [50.0+48.0]	-2.0	73.0
Blue Re	GPS 114, Table 3, grade 4 = 8%	-8% x [0.0+20.0]	-1.6	73.4

The general insurer does not have any insurance liabilities that are subject to the expected inflation stress or currency stress. The other non-zero outcomes from the remaining stresses are expected inflation \$100m, equity \$115m and credit spreads \$44.5m. Using the aggregation formula in GPS 114 (via APRA's capital workbook), the impact on the Asset Risk Charge as a result of the changes in the real interest rate stress and default stress outlined above are:

Table 16: Impact on the Asset Risk Charge

Reinsurer	Impact on Asset Risk Charge
Green Re	-5.9
Red Re	-6.8
Brown Re	-2.3
Blue Re	-1.6

Impact on the Asset Concentration Risk Charge

42. For the purposes of the exposure analysis, the failure of a material reinsurer may impact the ACRC, depending on the current APRA counterparty grade of the reinsurer and the decrease in the capital base due to the increase in net insurance liabilities.
43. It is possible for both an increase and a decrease to the ACRC. The impact on the ACRC reported on GRF 460.1 or GRF 460.1_G will be the new ACRC (where applicable) less the current ACRC (where applicable). This value may be positive (an increase in the ACRC) or negative (a decrease in the ACRC).

Increase in the ACRC

44. The failure of a material reinsurer will decrease the capital base of a regulated institution. Under *Prudential Standard GPS 117 Capital Adequacy: Asset Concentration Risk Charge* (GPS 117), the ACRC limits for reinsurance and non-reinsurance exposures are expressed as a percentage of the capital base. Therefore, reinsurance or non-reinsurance exposures that were previously under the relevant limit from GPS 117 may now result in an ACRC. The regulated institution is expected to review its material exposures to assess whether there is an increase in an existing ACRC or a new ACRC as a result of the revised capital base due to the failed reinsurer (which would have been calculated in paragraphs 18 to 21).

Decrease in the ACRC

45. If a reinsurance counterparty has an APRA counterparty grade of 4 or below, it may result in an ACRC for the regulated institution, depending on the total exposure and the capital base of the regulated institution. The failure of a material reinsurer that is currently producing an ACRC will remove this risk charge, as the reinsurance exposure will no longer exist. APRA notes that a reinsurance counterparty with an APRA counterparty grade of 4 or below may not currently generate an ACRC if it is supported by eligible collateral, guarantee or letter of credit, and therefore there may be no impact on the ACRC.

Impact on the Operational Risk Charge

46. For the purposes of the exposure analysis, the failure of a material reinsurer may impact the Operational Risk Charge, depending on the relative size of the net central estimate of insurance liabilities and the gross written premium revenue of the regulated institution.
47. The majority of the information for the calculation will be available to the regulated institution on *Reporting Form GRF 118.0 Operational Risk Charge* (GRF 118.0) and GRF 460.0, or *Reporting Form GRF 118.0_G Operational Risk Charge (Level 2 Insurance Group)* and GRF 460.0_G. It is likely that the regulated institution will not have a breakdown of individual reinsurance counterparty exposures by direct or reinsurance business. In this case, the regulated institution may choose to make simplifying assumptions to determine the impact on the Operational Risk Charge. For example, the regulated institution may assume that the increase in the net central estimate of insurance liabilities is split in the same percentage as the current net central estimate of insurance liabilities to calculate any change in the components of the Operational Risk Charge.
48. The impact to be reported on GRF 460.1 or GRF 460.1_G will be the new Operational Risk Charge less the current Operational Risk Charge.

Example:

The general insurer sources the underlying data that it used to calculate the Operational Risk Charge from GRF 118.0. This includes:

Table 17: Underlying Operational Risk Charge data

Written premium revenue for past 12 months – direct business	1,875.0
Written premium revenue for 12 months prior to the past 12 months – direct business	2,000.0
Central estimate of net insurance liabilities – direct business	1,800.0
Written premium revenue for past 12 months – reinsurance business	574.5
Written premium revenue for 12 months prior to the past 12 months – reinsurance business	384.5
Central estimate of net insurance liabilities – reinsurance business	200.0

The general insurer assumes that the split of direct and reinsurance business will remain 90 per cent / 10 per cent.

Table 18: Revised central estimate of the net insurance liabilities

Reinsurer	Central estimate	Business type	Calculation	Revised amount
Green Re	OCL: 80.0 PL: 22.0 Total: 102.0	Direct	$90\% \times 102.0 + 1,800.0$	1,891.8
		Reinsurance	$10\% \times 102.0 + 200.0$	210.2
Red Re	OCL: 100.0 PL: 12.0 Total: 112.0	Direct	$90\% \times 112.0 + 1,800.0$	1,900.8
		Reinsurance	$10\% \times 112.0 + 200.0$	211.2
Brown Re	OCL: 50.0 PL: 30.0 Total: 80.0	Direct	$90\% \times 80.0 + 1,800.0$	1,872.0
		Reinsurance	$10\% \times 80.0 + 200.0$	208.0
Blue Re	OCL: 0.0 PL: 5.0 Total 5.0	Direct	$90\% \times 5.0 + 1,800.0$	1,804.5
		Reinsurance	$10\% \times 5.0 + 200.0$	200.5

The revised amounts for the net central estimate results in a change to the driver of the Operational Risk Charge for direct business for Green Re and Red Re. The risk charge for direct business (ORCNI) will need to be calculated using the formula from *Prudential Standard GPS 118 Capital Adequacy: Operational Risk Charge* and will result in an increase in the Operational Risk Charge.

Table 19: Impact on the Operational Risk Charge

Reinsurer	Calculation – current ORCNI	Calculation – revised ORCNI	Impact
Green Re	$3\% \times \{\text{maximum [1,875, 1,800]} + \text{maximum [0, (125-400)]}\}$ =56.3	$3\% \times \{\text{maximum [1,875, 1,891.8]} + \text{maximum [0, (125-400)]}\}$ = 56.8	0.5
Red Re	$3\% \times \{\text{maximum [1,875, 1,800]} + \text{maximum [0, (125-400)]}\}$ =56.3	$3\% \times \{\text{maximum [1,875, 1,900.8]} + \text{maximum [0, (125-400)]}\}$ =57.0	0.8
Brown Re	$3\% \times \{\text{maximum [1,875, 1,800]} + \text{maximum [0, (125-400)]}\}$ =56.3	$3\% \times \{\text{maximum [1,875, 1,872]} + \text{maximum [0, (125-400)]}\}$ =56.3	0.0
Blue Re	$3\% \times \{\text{maximum [1,875, 1,800]} + \text{maximum [0, (125-400)]}\}$ =56.3	$3\% \times \{\text{maximum [1,875, 1,804.5]} + \text{maximum [0, (125-400)]}\}$ =56.3	0.0

Impact on the prescribed capital amount

49. Once the regulated institution has calculated the impact on the Insurance Risk Charge, ICRC and Asset Risk Charge, it will need to recalculate the aggregation benefit in accordance with paragraph 32 of *Prudential Standard GPS 110 Capital Adequacy* (GPS 110). The impact for the purposes of the exposure analysis will be the new aggregation benefit less the current aggregation benefit. This amount is not reported on GRF 460.1 or GRF 460.1_G.

50. Once the regulated institution has calculated the new aggregation benefit, it would now calculate the net impact on the prescribed capital amount. This can be undertaken by combining the impact on each risk charge and the change in the aggregation benefit. Alternatively, the regulated institution can determine the new prescribed capital amount and deduct the current prescribed capital amount. The net impact would be reported on GRF 460.1 or GRF 460.1_G.

Example:

Using the information from the earlier calculations (and noting the general insurer does not have a revised ACRC), the general insurer can determine the amounts to be reported on GRF 460.1.

Table 20: Information for GRF 460.1

Reinsurer	Impact on capital base	Impact on IRC	Impact on ICRC	Impact on ARC	Impact on ACRC	Impact on ORC	Impact on prescribed capital amount*
Green Re	-79.3	15.2	180.0	-5.9	0.0	0.5	175.2
Red Re	-86.7	16.4	345.0	-6.8	0.0	0.8	332.6
Brown Re	-62.7	12.3	260.0	-2.3	0.0	0.0	249.2
Blue Re	-4.0	0.9	85.0	-1.6	0.0	0.0	76.0

* calculated as the sum of the impacts less the increase in the aggregation benefit. The increase in the aggregation benefit is calculated using the revised risk charges in the square root formula in GPS 110. In this example, the results for each reinsurer are an increase in the aggregation benefit of 14.6, 22.7, 20.8 and 8.3 respectively.

Treatment of collateral, guarantees and letters of credit

51. APRA notes that some regulated institutions have reinsurance arrangements that are supported by collateral, guarantees or letters of credit, either in relation to recoverables outstanding from the second annual balance date or for other risk mitigation purposes.
52. The existence of these mitigants will have an impact on a number of components of the exposure analysis. This is because the failure of the reinsurer may trigger the recognition of the provider of a letter of credit or the collateral as a substitute for the reinsurer in the reinsurance recoverables that relate to the outstanding claims liability. This section sets out the flow on impacts of this recognition on the various components.

Impact on the capital base

53. As explained in paragraph 18, the failure of the reinsurer will impact the capital base via an increase to the net outstanding claims liability. However, the recognition of collateral, guarantees or letters of credit as a substitute for the reinsurer may not result in the net outstanding claims liability increasing, or it may not increase by the full amount of the recoverables from the failed reinsurer. The regulated institution may recognise this smaller (or zero) decrease in the capital base in the calculations for, and reporting in, GRF 460.1 or GRF 460.1_G. APRA expects that the documentation of underlying calculations will reflect this additional detail.⁸

Impact on the Insurance Risk Charge

54. As explained in paragraph 22, the failure of a material reinsurer will increase the Outstanding Claims Risk Charge. However, the recognition of collateral, guarantees or letters of credit as a substitute for the reinsurer may not result in the net outstanding claims liability increasing, or it may not increase by the full amount of the recoverables from the failed reinsurer. The regulated institution may recognise this smaller (or zero) increase in the Insurance Risk Charge in the calculations for, and reporting in, GRF 460.1 or GRF 460.1_G. APRA expects that the documentation of underlying calculations will reflect this additional detail.

Impact on the Asset Risk Charge

55. As explained in paragraph 34, the failure of a material reinsurer will impact the Asset Risk Charge in a number of ways. However, the recognition of collateral, guarantees or letters of credit as a substitute for the reinsurer may not result in the net outstanding claims liability increasing, or it may not increase by the full amount of the recoverables from the failed reinsurer. This in turn impacts the calculation of the real interest rate stress. In addition, the substitution for the reinsurer will also impact the revised calculation of the default stress. The regulated institution may recognise these changes in the calculations for, and reporting in, GRF 460.1 or GRF 460.1_G. APRA expects that the documentation of underlying calculations will reflect this additional detail.

⁸ The regulated institution is required under GRS 460.1 and GRS 460.1_G to document underlying calculations and provide these to APRA on request.

Impact on the Asset Concentration Risk Charge

56. As explained in paragraph 42, the failure of a material reinsurer may impact the ACRC in a number of ways, either increasing (due to the decrease in the capital base) or decreasing (due to the reinsurer failing) the ACRC. However, the recognition of collateral, guarantees or letters of credit as a substitute for the reinsurer may not result in a decrease in capital base and therefore there may not be an increase in the ACRC which would otherwise be the case. In a similar manner, the recognition of collateral, guarantees or letters of credit as a substitute for the reinsurer may not decrease the ACRC as the regulated institution may have already recognised the collateral, guarantee or letter of credit when calculating the ACRC. APRA notes that, under GPS 117, an insurer may choose how it determines its ACRC in relation to reinsurance recoverables from non-APRA-authorized reinsurers that are supported by collateral, guarantees and letters of credit. Therefore, the impact on the ACRC, due to the recognition of collateral, guarantees or letters of credit as a substitute for the reinsurer, will depend on the current recognition by the regulated institution for these particular assets.⁹

Impact on the Operational Risk Charge

57. As explained in paragraph 46, the failure of a material reinsurer may increase the Operational Risk Charge. However, the recognition of collateral, guarantees or letters of credit as a substitute for the reinsurer may not result in the net outstanding claims liability increasing, or it may not increase by the full amount of the recoverables from the failed reinsurer. The regulated institution may recognise the smaller (or zero) increase in the net outstanding claims liability and resulting impact on Operational Risk Charge in the calculations for, and reporting in, GRF 460.1 or GRF 460.1_G. APRA expects that the documentation of underlying calculations will reflect this additional detail.

Example:

The general insurer from the earlier example puts in place a letter of credit (LOC) that meets the requirements of GPS 114 for \$60m of the reinsurance recoverables from Green Re. The calculations, with and without the LOC, are as follows:

Table 21: Impact on the capital base

Reinsurer	Central estimate	Recoverables including risk margin	Calculation	Impact on capital base
Green Re – without LOC	OCL: 80.0 PL: 22.0	OCL: 80.0 x 110% = 88.0 PL: 22.0 x 115% = 25.3	- (1- 30%) x 88.0 - (1-30%) x 25.3	-79.3
Green Re – with \$60m LOC	OCL: 80.0 PL: 22.0	OCL: 80.0 x 110% = 88.0 PL: 22.0 x 115% = 25.3	- (1- 30%) x [88.0-60.0] - (1-30%) x 25.3	-37.3

⁹ Note this treatment does not apply to the international business of Level 2 insurance groups.

Table 22: Impact on the Insurance Risk Charge

Reinsurer	Recoverables including risk margin	Calculation	Impact on capital base
Green Re – without LOC	OCL: 80.0 x 110% = 88.0 PL: 22.0 x 115% = 25.3	13% x 88.0 + 15% x 25.3	15.2
Green Re – <u>with \$60m LOC</u>	OCL: 80.0 x 110% = 88.0 PL: 22.0 x 115% = 25.3	13% x [88.0 - <u>60.0</u>] + 15% x 25.3	7.4

Table 23: Revised pre-stress values for the Asset Risk Charge

Reinsurer	Recoverables including risk margin	Revised OCL and PL pre-stress
Green Re – without LOC	OCL: 88.0 PL: 25.3	OCL: 1,400.0 + 88.0 = 1,488.0 PL: 800.0 + 25.3 = 825.3
Green Re – <u>with \$60m LOC</u>	OCL: 88.0 PL: 25.3	OCL: 1,400.0 + 88.0 - <u>60.0</u> = 1,428.0 PL: 800.0 + 25.3 = 825.3

Table 24: Impact on the real interest rate stress for the Asset Risk Charge

Reinsurer	Revised capital base impact for insurance liabilities	Outcome	Revised capital base impact – all assets and liabilities
Green Re – without LOC	OCL (1,488.0 / 1,400.0 x 40.0) + PL (825.3 / 800.0 x 5.0)	+47.7	-12.3
Green Re – <u>with \$60m LOC</u>	OCL (1,428.0 / 1,400.0 x 40.0) + PL (825.3 / 800.0 x 5.0)	+46.0	-14.0

Table 25: Impact on the default stress for the Asset Risk Charge

Reinsurer	Default factor	Calculation	Outcome	Revised default stress
Green Re – without LOC	GPS 114 Table 3, grade 2 = 4%	-4% x [80.0 + 55.0]	-5.4	69.6
Green Re – <u>with \$60m LOC</u>	GPS 114 Table 3, grade 2 = 4%	-4% x [80.0 - <u>60.0</u> + 55.0]	-3.0	72.0

Table 26: Impact on the Asset Risk Charge

Reinsurer	Impact on Asset Risk Charge
Green Re – without LOC	-5.9
Green Re – <u>with \$60m LOC</u>	-3.2

Table 27: Revised central estimate of net insurance liabilities for the Operational Risk Charge

Reinsurer	Central estimate	Business type	Calculation	Revised amount
Green Re – without LOC	OCL: 80.0 PL: 22.0 Total: 102.0	Direct	$90\% \times 102.0 + 1,800.0$	1,891.8
		Reinsurance	$10\% \times 102.0 + 200.0$	210.2
Green Re – with \$60m LOC	OCL: 80.0 PL: 22.0 Total: 102.0	Direct	$90\% \times [102.0 - 60.0] + 1,800.0$	1,837.8
		Reinsurance	$10\% \times [102.0 - 60.0] + 200.0$	204.2

Table 28: Impact on the Operational Risk Charge

Reinsurer	Calculation – current ORCNI	Calculation – revised ORCNI	Impact
Green Re – without LOC	$3\% \times \{\text{maximum}[1,875, 1,800] + \text{maximum}[0, (125-400)]\}$ =56.3	$3\% \times \{\text{maximum}[1,875, 1,891.8] + \text{maximum}[0, (125-400)]\}$ = 56.8	0.5
Green Re – with \$60m LOC	$3\% \times \{\text{maximum}[1,875, 1,800] + \text{maximum}[0, (125-400)]\}$ =56.3	$3\% \times \{\text{maximum}[1,875, 1,837.8] + \text{maximum}[0, (125-400)]\}$ = 56.3	0.0

Table 29: Information for GRF 460.1

Reinsurer	Impact on capital base	Impact on IRC	Impact on ICRC	Impact on ARC	Impact on ACRC	Impact on ORC	Impact on prescribed capital amount*
Green Re – without LOC	-79.3	15.2	180.0	-5.9	0.0	0.5	175.2
Green Re – with \$60m LOC	-37.3	7.4	180.0	-3.2	0.0	0.0	168.8

* calculated as the sum of the impacts less the increase in the aggregation benefit. The increase in the aggregation benefit is calculated using the revised risk charges in the square root formula in GPS 110. In this example, the results are an increase in the aggregation benefit of 14.6 and 15.4 respectively.



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