INTERNATIONAL ASSOCIATION OF INSURANCE SUPERVISORS

Instructions for the May 2016 Quantitative Data Collection Exercise

("the Technical Specifications")

This is an IAIS working document used for 2016 Field Testing purposes. It does not purport to represent or prejudge the final proposals of the IAIS on ICS.

The Technical Specifications must be read in conjunction with the associated 2016 Field Testing Templates, Questionnaires and Yield curve documentation to provide an accurate and up-to-date understanding of the Field Testing exercise.

Notes:

1. The default reporting date used by Field Testing Volunteer Internationally Active Insurance Groups ("Volunteer IAIGs") was end-December 2015. Subject to previous discussion with the relevant group-wide supervisor, different valuation dates could be used for the purposes of this exercise, as long as the necessary efforts are made to ensure the internal consistency of the results. For example, with respect to key assumptions such as the reference date to determine currency exchange rates or yield curves.

2. Balance sheet items were valued in accordance with the specifications set out in the relevant sections.

Contents

1 Reporting date and context

1. The reporting date (or "balance date") to be used by all Volunteer IAIGs should be end December 2015. Subject to previous discussion with the relevant group-wide supervisor, different valuation dates can be used for the purposes of this exercise (e.g. 31 March 2015 for Volunteer IAIGs based in Japan), as long as the necessary efforts are made to ensure the internal consistency of the results. For example, with respect to key assumptions such as the reference date to determine currency exchange rates or yield curves.

2. Balance sheet items should be valued in accordance with the specifications set out in the relevant sections.

3. This exercise plays an important role in the IAIS' process of developing the Risk Based Global Insurance Capital Standard (ICS). The ICS will be one component of ComFrame, a comprehensive framework addressing qualitative as well as quantitative requirements for IAIGs. This framework may evolve and be refined over time. This exercise also fulfils the purposes of confidential reporting of the Basic Capital Requirements (BCR) and Higher Loss Absorbency (HLA) for Global Systemically Important Insurers (G-SIIs). To facilitate ongoing monitoring of the BCR and HLA, these calculations are requested of all Volunteer IAIGs.

2 Process and Timetable

4. The following table summarises the process and timetable to be followed:

Action	**Timeline**
Launch of quantitative Field Testing	20 May 2016
Period during which Volunteer IAIGs are required to complete the Templates and Questionnaires - FAQ procedure to be established: Main contact points are the Relationship Managers designated for each Volunteer IAIG - IAIS will regularly update a FAQ file on https://fieldtesting.iaisweb.org	Timelines for the various components of the exercise are set out below.
Deadline for the submission of Phase 1 by the group-wide supervisor (GWS) for the following worksheets of the Field Testing Template: • FT16.Participant • FT16.Baseline • FT16.BCR+HLA • FT16.BCR & ICS.Balance sheet • FT16.Deferred Tax Asset • FT16.Encumbered Assets • FT16.Financial Instruments • FT16.Non-Paid-Up Cap Resources • FT16.Valuation capital • FT16.Valuation assets • FT16.Valuation liabilities • FT16.Additional BCR Volunteer IAIGs should liaise with their GWS to ensure a timely delivery of the responses. Close coordination with the group-wide supervisor is needed, in light of the quality checks to be performed by the GWS in advance of the submission of responses. Instructions for the completion of these worksheets are included in **Phase 1 – Instructions for Data Due 3 August 2016** of this document.	3 August 2016
Deadline for the submission of all the remaining components of the Field Testing Template (including an update of the *FT16.Encumbered Assets* worksheet) and the Supplementary Data	15 September 2016

Collection (Non-Life) Template by the group-wide supervisors (GWS). Instructions for the completion of these worksheets are included in **Phase 2 – Instructions for Data Due 15 September 2016** of this document.	
Deadline for the submission of the Supplementary Data Collection (Life) Template and Supplementary Data Collection (Health) Template. Instructions for the completion of these Templates are included in **Phase 2+ – Instructions for Data Due 31 October 2016** of this document.	31 October 2016
Analysis by the Field Testing Analysis Team & discussions of summary results by the IAIS, leading up to the finalisation of ICS version 1.0.	August 2016 to Mid-2017
Launch of confidential reporting to supervisors of ICS version 1.0	Mid-2017

3 Scope of Application

5. The starting point for scope of application should be the consolidated balance sheet of the insurance holding company of an insurance group or financial holding company of a financial conglomerate subject to the adjustments set out below.

6. To ensure comparability of results, when reporting Balance Sheet information under both valuation methods (Market Adjusted Valuation ("MAV"), and GAAP with Adjustments ("GAAP Plus") – see respective sections of this document), Volunteer IAIGs should apply the calculations to the same set of group entities. This may require adjustments to one or both of the valuation approaches to ensure a consistent consolidated approach.

7. The scope of the group should include all related entities within a group which may be a potential source of risks to the insurance operations, including all entities with exposures to non-traditional, non-insurance (NTNI) risks.

8. Non-insurance financial entities must be included in the consolidation. Capital requirements for non-insurance financial entities subject to separate sector specific prudential supervision should be calculated separately according to the sectorial requirements as defined in the Baseline Current Regulatory Reporting section (section 5).

9. Entities in the group can be excluded from the scope only if they are truly immaterial, that is when they do not significantly contribute to the total group risks. It is important to note that materiality in this case relates to the materiality of the risks posed to the financial entities in the group, not the size of the operations.

10. Non-financial entities may be excluded from the consolidation if they are completely separate from the financial businesses in the group. This would mean no linkage to the holding company in terms of guarantees or other financial linkages, application of credit rating methodologies, shared treasury operations or shared resources such as IT platforms and buildings. The Volunteer IAIG must be able to establish that financial stress or bankruptcy of the non-financial businesses would have no financial or reputational effect on the financial entities, holding companies or ultimate holding company of the group.

11. The value of equity and debt owned by the Volunteer IAIG in entities that are excluded from the scope of the group should be deducted from the capital resources of the group for solvency purposes.

12. The consolidation approach for entities should be as follows (this is a non-exhaustive list):

a) all insurance entities and insurance holding companies that are subsidiaries of the ultimate holding company should be fully consolidated according to prevailing accounting

consolidation rules. U.S. stat only filers should follow the consolidation rules under the SAP Example of GAAP Plus;

b) any special purpose vehicles over which the ultimate holding company of the insurance group or the financial holding company has a dominant or significant influence should be fully consolidated according to prevailing accounting consolidation rules;

c) joint ventures on a proportional basis according to prevailing accounting practices for joint ventures;

d) on the basis of the equity method - all holdings in related insurance and insurance holding companies, that are not subsidiaries of the ultimate parent and that are not considered under points (a) and (c) above;

e) the market value of holdings in related undertakings other than those referred to in points (a) to (d) above.

13. Where the consolidation approach used for the purpose of the Field Testing differs from that set out above that should be disclosed in the Questionnaire and, where material, an estimate of the quantitative impacts of the differences.

14. In order to understand the impact of different scopes of consolidation, detailed information regarding the scope of consolidation is also requested under Phase 2 of Field Testing in 2016. Please see the section on Scope of Group under Phase 2 of this document.

4 General guiding principles

4.1 Substance over form

15. The economic substance of transactions and events should be recorded in the balance sheets rather than just their legal form in order to present a true and fair view of the risk profile of the entity. This may require the use of judgment on the part of the preparers of the balance sheets and any material assumptions should be disclosed in the Questionnaire.

4.2 Proportionality / Best effort

16. Calculations and valuation should be subject to the proportionality principle: when the Volunteer IAIG can demonstrate that taking into account a specific factor / rule in their calculation or valuation would lead to a significant increase in complexity, without material improvement to the quality of the figure produced, or to the assessment of risk linked to this figure, then this factor or rule can be ignored or simplified.

17. The materiality of the impact of using a simplification should be assessed with regard:

a) To the volume of the item valued

b) To the overall volume of the group's business and capital resources

c) To the assessment of risk

18. Moreover, even though the use of a simplification would lead to a figure possibly significantly different from the full fair value, it might nevertheless be used subject to appropriate adjustment, provided that no other applicable methodology would lead to a better proxy.

Example for best effort for MAV basis

Consider a portfolio of inflation indexed annuities. In theory, a full stochastic modelling of future inflation may be needed. However, considering the complexity of such a modelling (and justification of the associated parameters), and assuming that inflation and mortality are not correlated, Volunteer IAIGs can use a flat future level of inflation for deriving future annuity payments in the calculation of insurance liabilities.

Example

Consider a Volunteer IAIG with capital resources of 10, and insurance liabilities (savings contracts) of 100. The calculation of those insurance liabilities can be achieved either on a policy by policy basis, or by grouping all policies and using an average actuarial age and average lapse rates. The latter leads to a difference of 1% in the amount of insurance liabilities. Although such a difference can be considered as non-material with regard to the insurance liabilities, the relative impact on the capital resources is 10% (assuming the asset side is unchanged). This should be considered a material difference, and the simplification should be rejected. PLEASE NOTE THIS EXAMPLE IS IN NO WAY INTENDED TO MEAN THAT THE MATERIALITY THRESHOLD IS 10% OF CAPITAL RESOURCES.

4.3 Look-through

19. In the MAV approach, in order to properly assess the Market risk inherent in collective investment funds and other indirect exposures, their economic substance needs to be taken into account. This should be achieved, to the extent possible, by applying a Look-through approach in order to assess the risks of the assets underlying the investment vehicle. As the MAV approach to valuation will be used as a basis for testing the standard method for the ICS capital requirement, the application of a Look-through approach should be done in a manner consistent with section 14.2.1.

4.4 Use of current estimates

20. It is proposed, under the MAV approach as well as the GAAP Plus approach, that the use of current estimates will replace existing methodologies for calculation of Insurance liabilities. See section 6.3 in relation to the MAV approach and section 7 in relation to the GAAP Plus approach. The term 'best estimate' is the same concept.

21. Any risk or prudence margins currently embedded in the valuation of insurance liabilities should therefore be re-attributed directly to Capital Resources under the revalued balance sheet as GAAP-MOCE for the purposes of the BCR. Essentially GAAP-MOCE is a balancing item to allow for changes in valuation between the starting GAAP balances and MAV.

22. The IAIS is testing two different types of consistent and comparable MOCE (CC MOCE). These are to be separately reported.

23. The main objective of the use of current estimates is to increase the comparability of insurance liabilities' valuation, for the purposes of the work on the BCR and ICS. This is because the degrees of safety embedded in risk and/or prudence margins vary widely across jurisdictions, constituting a significant source of lack of comparability in this area.

4.5 Segmentation

24. Segmentation applied to insurance liabilities in 2016 Field Testing differs according to the purpose of the request. For the data required under Part 1 of the Technical Specifications, the segmentation required is the same as that required for 2014 and 2015 Field Testing and the definitions can be found in Insurance Line of Business Segmentation Definitions (Insurance Lines of Business Segmentation Definitions) with more detailed guidance in Annex 2 (Mapping of Jurisdictional Segments to Field Testing Lines of Business Segmentation).

25. The allocation of insurance liabilities to the segments used in 2016 Field Testing should follow the principle of substance over form. This means insurance liabilities should be allocated to the segment that best reflects the nature of the underlying risks rather than the legal form of the contract.

26. The allocation to specified segments applies on a best efforts basis. The Questionnaire should be used to identify important assumptions made in the allocations to the segments in Field Testing.

Phase 1 – Instructions for Data Due 3 August 2016

5 Baseline Current Regulatory Reporting

Relevant Worksheets in Template:	*FT16.Baseline*	*Due 3 August 2016*

27. Volunteer IAIGs are asked to report their existing group capital requirements and group capital resources, under the supervisory regime currently in force in their jurisdiction. This baseline information will be used to assess the impact of the BCR, HLA, and ICS (both in terms of capital requirements and capital resources) against existing or prospective group statutory requirements.

28. The *Baseline* worksheet is designed to obtain not only information about existing insurance-based group-wide capital requirements, but also other sectorial capital requirements.

29. Note that in addition, Volunteer IAIGs are asked to report their existing local capital requirements for each insurance legal entity (subsidiary) in the group in the *FT16.Baseline.Jurisdictional* tab. This is covered in a separation section under Phase 2.

5.1 Insurance-related baseline

30. The Insurance related capital requirement is the existing group capital requirements and group capital resources, under the group-wide supervisory regime currently in force in the home jurisdiction of the Volunteer IAIGs. However, the following exceptions apply:

a) Volunteer IAIGs based in the European Union should use Solvency II Group SCR as the capital requirement as at 1 January 2016 to be reported in the column "Insurance related".

b) Volunteer IAIGs based in the United States should provide a proxy baseline requirement as follows:

i. The analysis should start by identifying the top tier of regulated (insurance) entities. These top-tier entities should then be grouped by regulatory jurisdiction. The capital requirements and available regulatory capital should then be determined for those top-tiered entities based on each jurisdiction's existing capital rules. In doing so, consideration should be given to whether stacking is appropriately reflected. For instance, Risk-Based Capital (RBC) as used in the state-based insurance regulatory regime in the United States is structure-neutral for US entities, and assumes that the capital held for foreign subsidiaries is reasonable.

ii. Several separate figures are to be aggregated as part of this process. The first is the firm's minimum regulatory capital requirement as described in the next paragraph. The second is the firm's available regulatory capital. In addition, for U.S. life insurers, the Asset Valuation Reserve (AVR) and Interest Maintenance Reserve (IMR), which are to be

separately reported as memo accounts in the *Baseline* worksheet of the Template, should also be aggregated and provided.

iii. For each of the top-tier U.S insurance entities in an insurance group, the RBC Company Action Level of each insurer would be re-calibrated to the point at which regulatory action can be taken in any state based on RBC alone, i.e., the point at which the trend test begins which is one and a half times company action level. The re-calibrated amounts for each top-tier U.S. insurance entity would then be added together to approximate a combined re-calibrated RBC. This would provide a combined company view of the level at which regulatory action is triggered under the U.S. approach to insurance regulation for the subject insurance legal entities domiciled in the United States. Thus, this aggregation approach is to be used rather than a fully detailed RBC calculation on the combined entities' annual statement data. This resulting aggregated level of required capital, in turn, would be combined with that of other jurisdictions as described above in paragraph 30.b)i, pursuant to their respective existing capital requirements (as per the table below). For non-regulated entities, such as a U.S.-based holding company, there is no minimum regulatory capital requirement.

31. In addition to capital requirements, firms should aggregate available regulatory capital. For U.S.-domiciled insurers, this will be the statutory capital and surplus of each legal entity top-tier insurer per its year-end 2015 Annual Statement balance sheet. For insurers domiciled in other non-U.S. jurisdictions, and for other regulated financial sectors, this will be pursuant to each jurisdiction's/sector's respective rules. Additional guidance for the major non-U.S. jurisdictions is provided by the IAIS in the table below. For non-regulated entities, such as a U.S.-based holding company, available capital will be based on capital resources held within that entity, excluding the book value of its investment in insurance subsidiaries.

32. The total aggregated AVR and the total aggregated IMR should be reported with respect to all U.S. life insurance legal entities in the group.

33. Other examples of Group PCRs or entity PCRs for the purposes of an aggregated group PCR are provided in the table below. If a specific jurisdiction is not listed within this Table, and you are uncertain as to what is expected, please consult with your Supervisory Authority.

Table 1. Examples of jurisdictional group PCRs

Jurisdiction	Information provided
Australia	APRA's "Prudential Capital Requirement", as set out in prudential standards is the legal entity "MCR" under the ICPs. Groups also have to hold the "Prudential Capital Requirement" as set out in the prudential standards, again an MCR. The IAIS PCR is target capital as set by the insurer/group in accordance with APRA requirements. Effectively, this would be "Target capital under ICAAP". PCR is not a set multiple of MCR.

Bermuda	The Legal Entity PCR in Bermuda for medium and large commercial insurers is called "Enhanced Capital Requirement" (ECR) and is calibrated to TailVaR at 99% confidence level over a one year time horizon.
China	The PCR is 100% of the C-ROSS total capital as at 1 January 2016
Hong Kong	For Hong Kong, under the current rule-based capital regime, if applied similar to the concept of PCR of the IAIS Field Testing exercise, the regime's PCR would be 150% of MCR for life insurers and 200% of MCR for non-life insurers.
Japan	200% of solvency margin ratio is deemed as PCR
Singapore	Regarding Early Warning CAR (Equivalent of PCR) for Singapore under the current regime, the regime's PCR would be 120% of total risk requirement (i.e. capital requirement) for all registered insurers. In practice, insurers are expected to have capital management plans in place and hold a target CAR of more than 120%.
Chinese Taipei	The Chinese Taipei FSC does not impose a group PCR, and the capital requirement system for insurers (incl. Life, P&C, and Reinsurer) in Chinese Taipei is named "Risk-based Capital (RBC) System". The PCR level is set at 200% of RBC ratio, where RBC ratio = capital resources / risk-based capital requirement (based on a factor-approach).

34. *Qualifying Capital Resources* is the capital available to meet the capital requirement reported on this worksheet. Therefore, this should be reported on the same basis as the capital requirement.

35. *Equity* is the amount of equity that qualifies as capital resources within the jurisdictional capital framework.

36. *Deductions/exclusions of equity from qualifying capital resources* is the amount of assets deducted from equity within the jurisdictional capital framework and should be reported as a negative figure.

37. *Liabilities counted towards qualifying capital resources* is the amount of liabilities that qualifies as capital resources within the jurisdictional capital framework.

5.2 Securities-related baseline

38. The securities related capital requirement is any capital requirement imposed by a securities regulator on securities business within the group. The securities related qualifying capital resources is the regulatory capital available to meet the capital requirement reported on this worksheet. Therefore, this should be reported on the same basis as the securities-related capital requirement.

5.3 Banking-related baseline

39. For capital requirements related to banking activities, a separate table is provided in order to collect the total risk-weighted assets according to the Basel III Framework[1] (using the approach within the Basel III Framework that is used for regulatory reporting by banking entities in the group) and the total exposure measure for the Basel III leverage ratio framework.

40. The method of calculating risk-weighted assets for regulated banking activities should be the method of calculating risk-weighted assets that is used for reporting to the banking supervisor(s).

41. For unregulated banking business, Volunteer IAIGs are requested to apply the Basel III leverage ratio framework and the full RWA calculation under the Basel III Framework. The Basel III monitoring workbook is available to calculate these figures at http://www.bis.org/bcbs/qis/index.htm.

5.4 Assets under Management

42. The collection of baseline data on asset management business will serve two purposes. The first is to understand the amount of capital required to be held for that business under existing regulatory regimes. The second is to allow the IAIS to calculate the non-insurance component of the BCR, which mirrors the Basel II standardised approach for determining the Operational risk charge.

43. There are two columns, one for asset management business not related to banking (i.e. where a banking supervisor does not apply a capital requirement in relation to that business) and one for asset management business that is subject to a capital requirement from a banking supervisor. These columns are: *'Not related to Banking'* and *'Regulated Banking Business'*.

44. For both types of asset management business, the last 3 years of positive gross annual income must be reported. This income should relate only to third-party asset management, not the management of the Volunteer IAIG's own assets. Gross annual income is defined in paragraph 650 of the Basel II Comprehensive version[2].

45. For asset management business not related to banking, if any capital requirement is imposed by another supervisor (including an insurance supervisor[3]) this should be reported so as to facilitate a comparison to the calculation according to the Basel II standardised approach.

46. For asset management business subject to a capital requirement from a banking supervisor, the actual Operational risk risk charge reported to the banking supervisor(s) must be reported. If the banking supervisor(s) requires or allows the use of the standardised approach under Basel II, then this

[1] http://www.bis.org/bcbs/basel3.htm
[2] http://www.bis.org/publ/bcbs128.pdf
[3] Only relevant where the asset management business is conducted 'off-balance sheet' as is not included in the capital requirement reported on the Current Regulatory Baseline.

figure should be the same as that calculated from the input of the last 3 years of positive gross annual income from asset management business.

6 Market Adjusted Valuation ("MAV") Approach

Relevant Worksheets in Template:	*FT16.BCR & ICS Balance sheet* *FT16.Valuation capital* *FT16.Valuation assets* *FT16.Valuation liabilities*	*Due 3 August 2016*

47. Under the MAV approach, the Volunteer IAIG starts with the amounts as reported on its audited, consolidated, general-purpose balance sheet, whether that is on an IFRS or GAAP basis, and performs adjustments to get to a consolidated MAV balance sheet following these Technical Specifications.

6.1 Valuation principles

48. Volunteer IAIGs are not required to revalue every balance sheet item to a market-based methodology. The valuation of assets and liabilities other than insurance liabilities and financial instruments should generally be based on IFRS or GAAP valuations, as applicable for consolidated audited general-purpose financial statements (or statutory amounts in the case of U.S. mutuals). Section 6.2 provides guidance for various balance sheet items.

49. The Volunteer IAIG should make adjustments to the following items:

a) Insurance liabilities and reinsurance balances should be adjusted to comply with the sections on current estimate and margin over current estimate. Separate account/Unit-linked liabilities, where the policyholder bears the investment risks, may be valued according to Section 6.7 (Obligations replicable by a portfolio of assets), where appropriate.

b) Financial instruments, both assets and liabilities, including derivatives and mortgages/ loans made[4], should be adjusted to fair value using the fair value specification determined under the Volunteer IAIG's applicable IFRS or GAAP standards for reporting or disclosure purposes.

c) Non-insurance liabilities (including debt instruments issued by the Volunteer IAIG) should be adjusted to a value that does not take into account changes in the credit standing of the Volunteer IAIG.

[4] In this context, mortgages/loans made means mortgages/loans that the Volunteer IAIG has invested in or itself written as the offeror.

Example

Subordinated debt issued by the Volunteer IAIG should not be revalued to market prices. However, the present value of the liability should be updated to reflect changes in the time value of money (update of yield curves).

6.2 Guidance for specific balance sheet items

50. Volunteer IAIGs should apply the following adjustments to these specific balance sheet items for purposes of the 2016 Field Testing exercise:

a) Goodwill and other intangibles: the valuation of goodwill and other intangibles should be based on the Volunteer IAIG's reported IFRS or GAAP valuations, as applicable for consolidated audited general-purpose financial statements in each Volunteer IAIG's respective home jurisdiction. However, goodwill and other intangibles are subject to adjustments in deriving the value of capital resources.

b) Property (own use): For consistency with the treatment of investment property, the valuation of these items should be adjusted to fair value as determined under the Volunteer IAIG's IFRS or GAAP valuations.

c) Mortgages and loans made: See paragraph 49.b) above on Financial Instruments.

d) Reinsurance recoverables: these items should be reported on a basis consistent with the determination of insurance liabilities (refer to section 6.3). Recoverables on paid and unpaid balances will be reported net of allowances for estimated uncollectable amounts.

e) Pension assets/liabilities: Pension assets/liabilities should be based on the Volunteer IAIG's reported IFRS or GAAP valuations. However, pension assets are subject to adjustment in deriving the value of capital resources.

f) Deferred taxes (Assets/Liabilities): deferred taxes (assets/liabilities) should be treated according to the following specification:

i. Deferred tax Assets/Liabilities should be adjusted consistently with the relevant tax rules, to reflect the potentially new temporal differences between the MAV balance sheet and the tax balance sheet. In practice, this means the MAV balance sheet reflects the tax effects of the MAV adjustments.

ii. The adjusted numbers should then form the basis for the application of the criteria for the determination of qualifying capital resources, as well as the determination of the ICS capital requirements.

g) Deferred acquisition costs and future premium receivables (within contract boundaries): These should be adjusted to zero and acquisition cost/future premium (within contract boundaries) cash flows should be reflected in the value of insurance liabilities.

h) Other assets: The valuation of these items should be based on the Volunteer IAIG's reported IFRS or GAAP valuations.

i) Provisions other than insurance liabilities: The valuation of these items should be based on the Volunteer IAIG's reported IFRS or GAAP valuations.

j) Financial liabilities – Upon initial recognition the valuation of these items should be based on the IAIG's reported IFRS or GAAP valuations, but there should be no subsequent adjustment to take account of changes to the Volunteer IAIG's own credit standing. See paragraph 49.b) above on Financial Instruments.[5]

k) Contingent liabilities: Valuation of contingent liabilities should be based on the Volunteer IAIG's reported IFRS or GAAP valuations. Most contingent liabilities are disclosed in the notes to financial statements because estimates are not reliable and/or the IFRS/GAAP definition of a liability to be reported on the balance sheet is not met. If material contingent liabilities are not disclosed in the Volunteer IAIG's balance sheet due to local accounting rules, the Volunteer IAIG should nonetheless prepare a summary as part of the Questionnaire.

l) Other liabilities: Valuation of other liabilities should be based on the Volunteer IAIG's reported IFRS or GAAP valuations.

6.3 Methodology for calculation of current estimate

6.3.1 Basis for calculation

51. The current estimate should correspond to the probability-weighted average of the present values of the future cash flows associated with insurance liabilities using IAIS specified yield curves[6].

52. This entire section applies equally to the calculation of reinsurance recoverables. Reinsurance recoverables should be calculated so that they are consistent with the current estimates of insurance liabilities. Therefore the same assumptions and inputs should be used.

53. The calculation of the current estimate shall be based upon up-to-date and credible information and realistic assumptions. Implicit or explicit margins are not part of the current estimate.

[5] ICP Standard 14.6: "The value of insurance liabilities and other liabilities does not reflect the insurer's own credit standing."
[6] IAIS specified yield curves include the 35 specified yield curves in the Template and other yield curves derived using the methodology in section 6.3.14.1.

The determination of the current estimate has to be comprehensive, and objectivity is required in terms of observable input data.

54. Uncertainty in the future cash flows should be captured in the current estimate. Uncertainty in cash flows can arise from a number of sources, namely: (1) the timing, frequency and severity of claim events; (2) claims amounts, including uncertainty in claims inflation, and the period needed to settle claims; (3) the amount of expenses; (4) the value of an index/market values used to determine claim amounts; (5) policyholder behaviour; and, (6) path dependency. The calculation should consider the variability of the cash flows in order to ensure that the current estimate represents the mean of the distribution of cash flow values.

55. By definition, the current estimate is the average of the outcomes of all possible scenarios, weighted according to their respective probabilities. However, it may not be necessary or even possible to explicitly incorporate all possible scenarios in the valuation of insurance liabilities, or to develop explicit probability distributions in all cases. This depends mainly on the type of risks affecting the scenarios and the expected materiality of their financial impact in the overall calculation.

56. When valuing insurance liabilities, no adjustment should be made to take into account the own credit standing of the Volunteer IAIG.

6.3.2 Cash-flow projections

57. The current estimate corresponds to the probability-weighted average of the present values of the future cash flows associated with insurance liabilities discounted using the relevant yield curves to derive a present value.

58. Cash flow projections should reflect expected realistic future demographic, legal, medical, technological, social or economic developments. Appropriate inflation assumptions should also be incorporated in the cash flow projections, recognising the different types of inflation to which the entity can be exposed (e.g. consumer price index, medical inflation and salary inflation). Premium adjustment clauses, where relevant, may also need to be considered.

59. The current estimate should be calculated gross of reinsurance and special purpose vehicles. Recoverables from reinsurance or special purpose vehicles should be separately calculated and recognised as an asset.

60. The cash flows to be included in the calculation of current estimate should, at least, include:

a) benefit and claim payments

b) direct and indirect expenses incurred (a non-exhaustive list of examples includes: administrative expenses; investment management expenses; claims management expenses; handling expenses, and overhead expenses)

c) premiums received, provided they are included within the contract boundaries

d) subrogation payments and recoveries other than from reinsurance and special purpose vehicles

e) other payments made necessary in order to settle the claims

61. In determining the current estimate, Volunteer IAIGs should take into account taxation payments that are charged to policyholders.

6.3.3 Recognition / Derecognition of insurance liabilities

62. Without prejudice to the specifications set in the "contract boundaries" section, a liability should be recognised and valued as soon as the Volunteer IAIG becomes party to a contract, without any possibility to amend or cancel it, even though the insurance coverage has not started yet.

63. A contract should be derecognised when all possible claims linked to this contract have been completely settled, and all future cash flows are nil.

Example

Consider a contract providing a health coverage starting on 1 March 2016. The contract has been underwritten on 20 December 2015, with no possibility to change the terms of the contracts before the coverage starts. On 31 December 2015, this contract should be recognized in the balance sheet.

6.3.4 Contract boundaries

64. Only contracts existing at the valuation date, and recognised according to the section "recognition / derecognition", should be taken into account. This provision implies that no future business should be taken into account for the calculation of insurance liabilities.

65. Any obligations, including future premiums, relating to the contract shall belong to the contract. However, future premiums (and associated claims and expenses) relating to an existing and recognised contract beyond the following dates should not be considered in insurance liabilities, unless the Volunteer IAIG can demonstrate that they are able and willing to compel the policyholder to pay the premiums:

a) The future date where the Volunteer IAIG has a unilateral right to terminate the contract or reject the premiums payable under the contract; OR,

b) The future date where the Volunteer IAIG has a unilateral right to amend the premiums or the benefits payable under the contract in such a way that the premiums fully reflect the risks.

66. For group policies, similar rules apply. If premiums can be amended unilaterally for the entire portfolio in a way that fully reflects the risks of the portfolio, the second condition above will be fulfilled for group policies.

Example

Consider an annually renewable life protection policy sold on a group basis. The Volunteer IAIG does not manage this portfolio on a contract-by-contract basis, but can freely adjust the premiums for the entire portfolio at the policy anniversary date, to fully reflect the risks stemming from that portfolio. In this case, the conditions defined in paragraph 66 are deemed applicable. The calculation of current estimates should not include any premiums beyond the next future anniversary date where such adjustment is possible, along with the related claims and expenses.

Example

Consider a whole life policy, with a level premium. According to the terms of the insurance contract, the Volunteer IAIG cannot reject any premium, and the premium is constant throughout the life of the contract. Therefore, all (probability-weighted) future premiums of this contract should be taken into account in the insurance liabilities, along with the related claims and expenses.

Example

Consider a health policy (medical expenses), starting on 1 July 2015, with a premium paid monthly. Premium indexation is possible at each anniversary date, and the Volunteer IAIG has no right to cancel the policy during the first 12 months. On 31 December 2015, insurance liabilities should include 6 months of future premiums (January – June 2016), along with the related claims and expenses.

6.3.5 Time horizon

67. The projection horizon used in the calculation of the current estimate should cover the full lifetime of all the cash in- and out-flows required to settle the obligations (within contract boundaries) related to existing insurance and reinsurance contracts on the date of the valuation.

6.3.6 Data quality and setting of assumptions

68. When selecting data for the calculation of the current estimate, Volunteer IAIGs should consider:

a) the quality of data, for different data sets, based on the criteria of accuracy, completeness and appropriateness;

b) the use and setting of assumptions made in the collection, processing and application of data;

c) the frequency of regular updates and the circumstances that trigger additional updates.

69. In some cases, only limited or unreliable data may be available from the Volunteer IAIG's own experience of a particular type of contract or claim from which to base an assumption for that contract or claim. Historical data about the Volunteer IAIG's own experience should be supplemented when necessary with data from other sources. Adjustment should be made to these alternatives sources so that they are more consistent with the risk characteristics of the portfolio considering in particular whether:

a) The characteristics of the portfolio differ (or will differ, for example because of adverse selection) from those of the population that has been used as a basis for the historical data;

b) There is evidence that historical trends will not continue, that new trends will emerge or that economic, demographic and other changes may affect the cash flows that arise from the existing insurance contracts; or

c) There have been changes in items such as underwriting procedures and claims management procedures that may affect the relevance of historical data to the portfolio of insurance contracts.

70. The assumptions used to calculate the current estimate should reflect current expectations based on all information currently available. Rather than simply relying on recent historical or current experience, an assessment of expected future conditions should be made.

71. In particular, when calculating the current estimate consideration should be given to events not captured by the data that can impact the current estimate.

72. Consistency across assumptions is important to consider, e.g. the relationship between inflation and interest rates.

6.3.7 Possible methodologies

73. The calculation of insurance liabilities is typically based on valuation models. Where this is the case, these models should be comprehensive, transparent, based on current and reliable data, and

use appropriate actuarial and statistical methods. Valuation models and their parameters should be calibrated as much as possible on the basis of objectively observable data.

74. Volunteer IAIGs should use actuarial and statistical techniques for the calculation of the current estimate that appropriately reflect the risks that affect the cash flows. These may include simulation methods, deterministic techniques and analytical techniques. Following the application of the proportionality principle (section 4.2), in the case of more complex cash flow projections (e.g. future discretionary benefits relating to participating contracts or embedded options and guarantees), simulation techniques may lead to more robust valuation results. In other cases, deterministic and analytical techniques may be more appropriate.

6.3.8 Liabilities expressed in different currencies

75. Discounting of liabilities should be performed with the IAIS specified yield curves relevant to the particular currency. Please refer to the section on Discounting (6.3.14).

76. Conversion to the reporting currency, from other currencies, should be carried out according to the jurisdictional GAAP for consolidated group reporting. This will usually result in conversion at the currency conversion spot rate at the balance date.

6.3.9 Valuation of options and guarantees

77. Insurance contracts often include embedded options and guarantees, such as guarantees of minimum investment returns (including as part of death benefits), maximum charges for mortality, surrender options, or options for the policyholder to reduce or extend coverage. Expected cash flows for these options and guarantees should be included in the cash flows to determine current estimate liabilities. Expected cash flows related to these contracts should reflect expected policyholder behaviour (see section 6.3.10 on Policyholder behaviour). For the calculation of the time value of options and guarantees all payments connected to the risks insured have to be considered, especially profit participations.

78. Variable annuities may contain guaranteed living benefits (e.g. minimum maturity or withdrawal benefits) tied to the performance of specific assets. All these guarantees should be valued using techniques (such as risk neutral valuation) that do not allow for the possibility of arbitrage. The parameters used for the valuation of variable annuities should be consistent with the prices of options and other financial instruments observed in the market (for example, volatility assumptions should be based on implied rather than observed volatilities).

79. Options and guarantees should be valued using stochastic approaches. However, for the purposes of Field Testing and subject to a materiality assessment, simplified deterministic approaches can be used. Where a yield curve is needed as input to assume future financial market parameters and the future returns of the assets, Volunteer IAIGs are asked to use the relevant IAIS specified yield curves with adjustment.

6.3.10 Policyholder behaviour

80. Expected cash flows should reflect expected policyholder behaviour, particularly where the options or guarantees allow policyholders to take actions to change the amount, timing or nature of the benefits they will receive. In the case of long-term contracts, options available to policyholders can include the termination of a contract, guaranteed living benefits, guaranteed income benefits or any other contractual options.

81. The likelihood that policyholders will exercise contractual options should be taken into account, considering in particular:

a) past behaviour of policyholders;

b) how beneficial the exercise of options would be to policyholders under specific circumstances;

c) economic conditions;

d) past management actions.

82. The likelihood that policyholders will exercise contractual options, including lapses and surrenders, shall be based on a prospective view of expected policyholder behaviour that makes appropriate and justified assumptions about the elements mentioned above.

83. To the extent that it is deemed representative of the future expected behaviour, the assumptions on policyholder behaviour should be based on appropriate statistical and empirical evidence.

84. Realistic current expectations would incorporate at least some policyholder action or inaction consistent with observed policyholder behaviour and not only with expected economic best interest.

85. The assumptions concerning policyholder behaviour should be consistent with the assumptions for investment returns and should not, in general, be assumed to be independent of financial markets (it is expected that assumptions for investment returns are consistent with the IAIS specified yield curves with the adjustments referred to in the Discounting section). For instance policyholder behaviour may be linked to the interest rate scenario and associated assumptions.

86. The quantification of the impact on the current estimate of optionality or other non-symmetric cash flows could be done using a stochastic method considering the entire range of scenarios.

6.3.11 Valuation of future benefits

87. All future benefits that are non-discretionary should be included within the projection of cash flows according to the contractual obligation of the Volunteer IAIG and the economic or loss scenarios applicable for the current estimate.

88. For discretionary amounts such as bonuses or crediting rates, the current estimate should recognise the amounts expected to be paid consistent with expected future experience, the economic scenarios on which the liability valuation is based and policyholders' reasonable expectations[7]. For example, if a reference group of assets are expected to earn a greater amount than the contractual crediting rate and discretionary additional credit rates can be declared, the expected discretionary crediting rate should be taken into account.

89. This projection should be consistent with the yield curve applicable to the contract, with the adjustments (for each Reference Method and Option) referred to in the Discounting section (section 6.3.14).

90. Discretionary benefits and the exercise of policyholder options are usually connected in the projection of cash flows. Discretionary benefits often drive policyholder behaviour and so must be considered along with options and guarantees embedded within policies. A current estimate of cash flows will include the value of cash flows as a result of the exercise of discretionary benefits consistent with the assumed policyholder behaviour.

6.3.12 Management actions

91. Management actions should be objective, realistic and verifiable. They cannot be contrary to the Volunteer IAIG's obligations to policyholders or to legal provisions applicable to the Volunteer IAIG. Assumed future management actions should be consistent with the Volunteer IAIG's current business practice and business strategy unless there is sufficient evidence that the Volunteer IAIG will change its practices or strategy.

92. When calculating the current estimate, a Volunteer IAIG's future management actions could be taken into account if they can reasonably be expected to be carried out under the specific circumstances to which they apply.

93. Assumed future management actions should be consistent with each other. The assumptions about future management actions should take into account the time needed to implement the actions and any resulting incremental expenses.

[7] In the context of 2016 Field Testing, "discretionary amounts" should include those non-guaranteed amounts, on which the Volunteer IAIG has no discretion, for instance those bonuses linked to a legal or contractual obligation to distribute a portion of the financial / underwriting profits to policyholders.

6.3.13 Simplifications/approximations and appropriate adjustments

94. Where an existing approach (GAAP or economic valuation) provides a reasonably close approximation to the valuation principles outlined above for the MAV approach, it is acceptable to use these valuation frameworks as starting points and apply adjustments.

95. Possible adjustments could include approximating the MAV value by using sensitivities of economic values to using different yield curves for discounting.

96. For insurance business not including embedded options and guarantees (in particular insurance liabilities related to non-life insurance), there might be no need to perform stochastic valuations. In that case, the adjustment of GAAP values based on management's best estimates for determining MAV values could be limited to applying discounting to the insurance liabilities which were determined according to GAAP.

6.3.14 Discounting

97. Current estimates of insurance liabilities (and related reinsurance recoverables) should be calculated using the approach specified for the relevant Reference Method or Option. Details necessary to complete each reference method or options are contained in the 2016 Field Testing Yield Curves (provided separately).

6.3.14.1 Determination of Yield Curves for current estimate discounting

98. The approach chosen for this Field Testing exercise does not pre-empt the future development of alternative comparable approaches to discounting the current estimate that may better reflect the long term nature of insurance liabilities and that could be eventually used as part of IAIS capital standards. That applies to both the mechanics of the curve as well as any factors used in the calculation for the purposes of Field Testing.

99. Volunteer IAIGs should discount their insurance liabilities using an adjusted curve. The curve is based on:

a) risk adjusted liquid interest rate swaps or government bonds (where the latter are considered to be more liquid); and

b) an adjustment (as explained below).

100. Different methodologies for the design of the adjustment are being explored in 2016 Field Testing through the specified Reference Methods and Options. The detailed method of determining the adjusted curve is set out below in the description of each Reference Method and Option.

101. The details required to construct the yield curves for each Reference Method and Option are based on end-2015 market data for swaps and government bonds. In addition to this, data as of 31 March 2015 is also provided for several currencies.

102. Concerning the adjustment, in 2016 Field Testing the IAIS is testing different technical solutions under different market conditions to assess their effectiveness in the mitigation of excessive volatility of capital resources. The adjustment is applied to the first segment of the yield curve (see Diagram 1 below) until the start of extrapolation. There is then an extrapolation to the Long-Term Forward Rate (LTFR) for each currency which, for 2016 Field Testing, also includes a notional 10 basis points adjustment to reflect credit spread that can be earned in the long term.

103. For the assumed return on assets, the same basis as the discounting approach in each of the Reference Method and Options should be used. That is, cash flows related to asset returns should be consistent with the differences in spreads in each Reference Method and Option.

6.3.14.2 Methodology for the determination of "risk-free" yield curve

104. For 2016 Field Testing, the methodology used is based on a 3-segment approach (as per 2015 Field Testing):

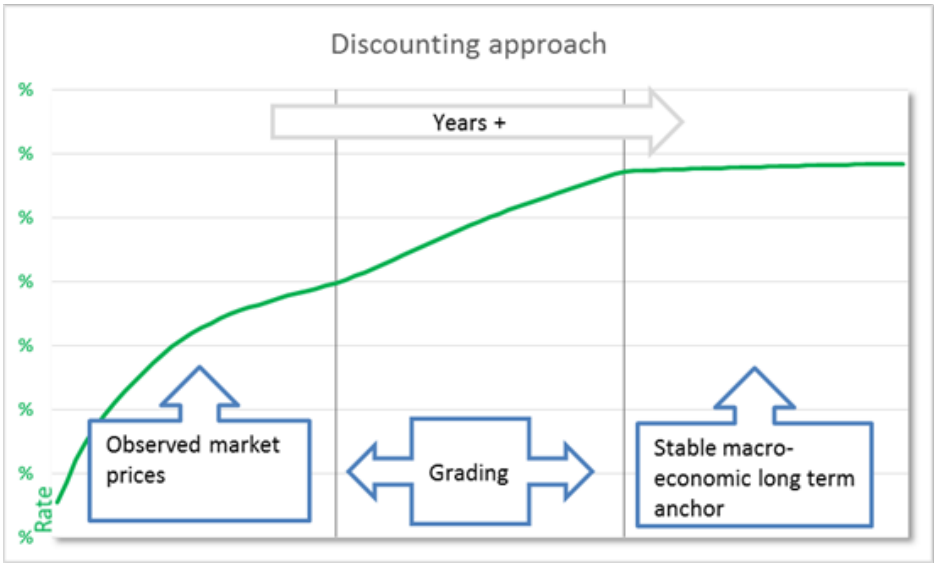
a) **Segment 1:** based on market information from government bonds or swaps (applying an appropriate adjustment where swaps are used to remove the Credit risk included in the pricing of these instruments);

b) **Segment 2:** extrapolation using the Smith-Wilson method;

c) **Segment 3:** based on a stable LTFR.

105. For each currency, the transition from the first to the second segment will occur at the last maturity for which market information can be observed in deep, liquid and transparent financial markets.

Diagram 1. Discounting Approach



106. For all currencies, the start of the third segment will occur at the maturity of 60 years. At this maturity, the forward rates implicit in each currency's spot curve should have largely converged to a LTFR.

107. The LTFR is currency-specific. These rates were determined following a macroeconomic approach using OECD information[8]:

Table 2. Long Term Forward Rates

Currency		Cut-off for extrapolation	Long term forward rate
AUD	Australia Dollar	30	4.0%
BRL	Brazil Real	10	7.3%
CAD	Canada Dollar	20	3.5%
CHF	Switzerland Franc	20	3.5%
CLP	Chile Peso	10	4.5%
CNY	China Yuan Renminbi	10	6.8%
COP	Colombia Peso	10	4.5%
CZK	Czech Republic Koruna	15	3.5%
DKK	Denmark Kroner	20	3.5%
EUR	Euro	20	3.5%
GBP	United Kingdom Pound	30	3.5%

[8] For further details please refer to http://www.oecd.org/eco/outlook/lookingto2060.htm

HKD	Hong Kong Dollar	15	3.5%
HUF	Hungary Forint	15	4.5%
IDR	Indonesia Rupiah	5	7.3%
ILS	Israeli New Shekel	20	3.5%
INR	Indian Rupees	10	6.8%
JPY	Japanese Yen	30	3.5%
KRW	South Korean Won	20	4.5%
MXN	Mexico Pesos	20	4.5%
MYR	Malaysia Ringgit	20	7.3%
NOK	Norway Kroner	10	4.0%
NZD	New Zealand Dollars	20	3.5%
PEN	Peruvian Nuevo Sol	10	4.5%
PHP	Philippine Peso	10	7.3%
PLN	Poland Zloty	15	4.0%
RON	Romania New Leu	10	3.5%
RUB	Russia Ruble	10	6.8%
SAR	Saudi Arabia Riyal	15	4.8%
SEK	Sweden Kronor	10	3.5%
SGD	Singapore Dollar	20	3.5%
THB	Thailand Baht	15	7.3%
TRY	Turkey Lira	15	6.5%
TWD	Taiwan New Dollar	10	6.8%
USD	United States Dollar	30	3.5%
ZAR	South Africa Rand	30	7.3%

6.3.14.3 Methodology for the determination of the adjustment to the "risk-free" yield curve

108. The IAIS specified yield curves include an adjustment to the basis "risk-free" curves meant to deal with the volatility of capital resources in periods where the widening of spreads affects assets subject to an illiquidity premium. The 2016 Field Testing exercise aims to evaluate the effectiveness and impact of three options tailored to mitigate the abovementioned volatility. **These options do not necessarily reflect the final design of the adjustment that will be included in the MAV approach, but were designed in a manner that will allow the IAIS to collect sufficient information to assess and reach a decision regarding the different possible design methodologies under consideration.**

109. All the options are based on an average spread corrected for Credit risk and any other risks, allowing the isolation of the illiquidity premium. The spread is defined as the difference between the

interest rate that could be earned from assets included in a representative portfolio and the corresponding risk-free interest rate.

110. Compared to the method used for the adjustment in 2014 and 2015 Field Testing (Reference Method 2), the options allow the testing of refinements to improve the risk-sensitivity of the adjustment. The refinements include the composition of the asset portfolio assumed to back insurance liabilities and the method for adjusting for Credit risk and any other risks.

111. The first two options focus on the portfolio composition used for the derivation of the average spread:

a) **Option 1** is designed to test the use of currency-specific representative portfolios.

b) **Option 2** is designed to test the use of a Volunteer IAIG-specific weighted average of multiple representative portfolios (WAMP).

112. **Option 3** is designed to test the use of a bucketing approach with different application ratios.

113. In addition to those three options, information is requested on the following three methods that will serve as reference points:

a) **Reference method 1**: "Risk-free" rates without adjustment - this will allow the benchmarking of the effectiveness of the three aforementioned options.

b) **Reference method 2**: 2015 adjustment methodology - this will allow the comparison with last year's exercise and assess the relative effectiveness of the three aforementioned options.

c) **Reference method 3**: Asset earned rate - this will allow the assessment of the impact of using an adjustment linked to the specific assets held by the Volunteer IAIG and will be comparable to option 3, as a similar bucketing methodology will be applied.

114. To assess the effectiveness and behaviour of the different options under different market conditions, calculations for all the three options and three reference methods should be performed under both the following scenarios:

a) current market conditions as at the balance date and

b) stressed spread conditions that are specified by the IAIS and based on different reference periods for different currencies, depending on when the most stressed recent market conditions have been observed.

115. The following table summarises the three options and three reference methods that Volunteer IAIGs are requested to calculate, for each of the two scenarios. In total, **Volunteer IAIGs are asked to run 12 different valuation calculations in Phase 1 of 2016 Field Testing**.

Table 3. Reference Methods and Options

		Reference Methods			Options		
		Risk-free	2015 methodology	Asset earned rate	Option 1: currency-specific	Option 2: firm-specific	Option 3: Bucketing
Liability segmentation (buckets)		N/A	1	3	1	1	3
Portfolio Composition		N/A	Reference portfolio per currency	Volunteer IAIG's own portfolio – own view of earning rate	Representative portfolio per currency	Weighted average based on firm's assets	Weighted average based on firm's assets
Default Deduction		N/A	Included in 60% deduction of spread	Risk Correction	Risk Correction	Risk Correction	Risk Correction
Liquidity buckets	1	0%	100%	80%	100%	100%	80%
	2			60%			60%
	3			40%			40%

116. The information provided by the IAIS and the calculations that Volunteer IAIGs are required to perform in order to derive the adjusted yield curves applicable in each scenario are summarised in Table 4 below.

Table 4. Summary of information provided by IAIS and calculations by Volunteer IAIG (applicable for both scenarios)

	Provided by IAIS	Calculations by Volunteer IAIG to derive adjusted yield curve
Reference Method 1: No Adjust.	Risk-free yield curves	None
Reference Method 2: 2015 Method	Risk-free yield curves Adjustment by currency/jurisdiction based on simple reference portfolio	None
Reference Method 3: Asset earned rate	Risk-free curves	Segmentation of the insurance liabilities into buckets Calculation of the average risk-corrected spread on the basis of the Volunteer IAIG's own asset earning rate – asset eligibility and risk correction based on IAIS specification for WAMP
Option 1	Risk-free yield curves Adjustment by currency/jurisdiction based on representative portfolio	None
Option 2	Risk-free yield curves Set of adjustments based on currency/jurisdiction, asset type and rating Risk corrections by asset type and rating	Calculation of the average risk-corrected spread on the basis of the firm-specific weighted average of representative portfolios
Option 3		Segmentation of the insurance liabilities into buckets Calculation of the average risk-corrected spread on the basis of the firm-specific weighted average of representative portfolios

6.4 Specifications for each of the scenarios

6.4.1 Reference Method 1 – No Adjustment

117. Under this method, Volunteer IAIGs are asked to discount their insurance liabilities using the relevant risk-free yield curves provided by the IAIS, without any adjustment.

6.4.2 Reference Method 2 – 2015 Methodology

118. Under this method the adjustments are grouped by three different buckets: 1) adjustment for currency/jurisdiction identity, 2) adjustment for currency unions and 3) adjustment for markets with small corporate bond markets.

119. The basis for this adjustment is an investment grade corporate bond or broad market index, where these are available.

120. The adjustment is then calculated as a fixed percentage upward shift and is based on the 10 year unadjusted rate (where available). To account for Credit risk and other risks as well as the predictability of insurance liabilities, only 40% of the actual corporate bond spread is used for the adjustment. The percentage adjustment that is applied to the curve is then relative to the (10 year) basic risk free rate. The adjustment is capped at the absolute spread as calculated at 10 years and subject to a zero floor (no negative adjustments).

$$interest\ rate_{adjustment,t} = min\left(basic\ risk\ free_t \frac{40\%\ times\ spread_{10}}{basic\ risk\ free\ rate_{10}}, spread_{10}\right)$$

121. In the case of currency unions, such as the Eurozone, both government bond and corporate bond spreads are taken into account. The adjustment has regard to the average composition of Volunteer IAIGs' assets between government bonds and corporate bonds. The adjustment is hence calculated as:

$$Weight\_Govt\ x\ Relevant\_Spread\_Govt\ +\ Weight\_Corp\ x\ Relevant\_Spread\_Corp.$$

122. For markets where a number of indicators (e.g. lack of index, low amount outstanding, few high quality bonds) suggest that the corporate bond market does not allow considerable investments by Volunteer IAIGs, a simple assumption is made that the adjustment will be 50 bps. Further investigation will be undertaken on the development of the local corporate bond markets.

123. For Segments 2 and 3 of the adjusted yield curve, the same extrapolation methodology as used for determining the base yield curve (see above) should be applied noting that a notional 10 basis point spread adjustment will be added to the LTFR.

124. Reference Method 2 will be used as a basis for the calculation of the BCR and the ICS Standard Method in 2016 Field Testing.

6.4.3 Reference Method 3 – Asset earned rate

125. Under this method**,** Volunteer IAIGs are asked to discount their insurance liabilities using the relevant risk-free IAIS specified yield curves, adjusted by a spread determined using the specific assets held by the Volunteer IAIG. The adjustment will be constructed at a more granular level than for other reference methods by using buckets related to the liquidity of the liabilities, similar to Option 3.

126. For Reference Method 3, a split between two groups of assets backing Life and Non-Life/Reinsurance liabilities is allowed. Assets backing Non-Life/Reinsurance liabilities should be used to determine the spread adjustment applicable for the third bucket whereas assets backing Life liabilities will be used to determine the spread adjustment for the first and second buckets. Assets backing Health Insurance liabilities should be assigned to the groups of assets following the split of liabilities used in the *FT16.BCR&ICS Balance sheet*.

127. To enable comparability with the different options and in particular Option 3, assets rated below investment grade (i.e. below BBB) should be assumed to earn a spread that may not exceed the spread for BBB assets in the same currency. Also, assets backing insurance liabilities that are denominated in a different currency than that of corresponding liabilities should be assumed to generate a spread adjustment equal to that calculated for similar assets denominated in the currency of the liability.

128. The spread is adjusted for Credit risk and any other risk. For the calculation of the Spread Adjustment and the Risk Correction, the asset eligibility rules set out for the WAMP approach should be followed.

129. The adjustment to the risk-free yield curve is derived as follows:

a) **Step 1:** Allocate liabilities to buckets depending on their liquidity characteristics, following the criteria set out for Option 3.

b) **Step 2:** Based on the separation criteria detailed above, identify the assets backing life liabilities (used to calculate the spread for buckets 1 and 2) and the assets backing non-life and reinsurance liabilities (used to calculate the spread for buckets 3). Note that only assets backing insurance liabilities (mainly those held in licenced insurance legal entities) are to be taken into account. Assets backing unit-linked/separate account liabilities should be excluded where such liabilities are deemed replicable by a portfolio of assets and calculated in line with section 6.7 (therefore not on the basis of the general current estimate methodology - probability-weighted average of future cash flows discounted with IAIS adjusted yield curves).

c) Then, for each group of assets by currency ("group of assets"):

i. **Step 3:** Net off any cash to determine the total portfolio of own assets backing liabilities in that group.

ii. **Step 4:** Identify the eligible own assets in the portfolio, according to Table 5 below.

iii. **Step 5:** Calculate the adjustment for the group of assets using the difference between the market and risk-free values of eligible own assets. Details of how to do this are set out below:

(1) Identify cash flows from eligible own assets backing the liabilities for the group of assets, ignoring expected defaults.

(2) Identify the market value of the eligible own assets (MV).

(3) Value the cash flows of eligible own assets (according to Table 5) allocated to the group of assets using the risk-free yield curve as set out in Reference Method 1 (RFV).

(4) The average spread over risk free for eligible own assets for each group of assets is then calculated as a single adjustment representing the difference between:

- The discount rate that, when used to value the cash flows from eligible own assets, results in a value equal to the MV; and

- The discount rate that, when used to value the cash flows from eligible own assets, results in a value equal to the RFV.

130. The resulting spread for each group of assets is adjusted for Credit risk and any other risk. For Reference Method 3, a single risk correction is calculated for each group of assets using the weightings of assets by rating in the portfolio and the risk corrections provided in the 2016 Field Testing Template.

131. The average Adjusted Spread for a given group of assets should be computed as follows (Note: For non-eligible assets, it is assumed that no spread is earned in excess of the risk-free rate.):

$$Adjusted\ Spread_{group\ of\ assets} =$$
$$\omega_{eligible} \cdot \left(Spread_{eligible} - RC_{eligible}\right)$$
$$+\omega_{non-eligible} \cdot 0$$

Where:

- $\omega_{eligible}$ denotes the weight of eligible assets in the total portfolio of assets for that group of assets;

- $Spread_{eligible}$ denotes the spread of eligible assets in the total portfolio of assets for that group of assets;

- RC denotes the single risk correction for eligible assets calculated as specified under paragraph 130.

- $\omega_{non-eligible}$ denotes the weight of non-eligible assets in the total portfolio of assets for that group of assets;

132. For each bucket, the adjustment to the yield curve will be determined as follows:

133. Bucket 1: 80% of the adjusted spread calculated for the group of assets backing life liabilities

134. Bucket 2: 60% of the adjusted spread calculated for the group of assets backing life liabilities

135. Bucket 3: 40% of the adjusted spread calculated for the group of assets backing non-life/reinsurance liabilities

136. The spread adjustment determined according to Reference Method 3 is to be applied as a parallel shift across the liquid part of the base yield curve (Segment 1 as defined above). For Segments 2 and 3 of the adjusted yield curve, the same extrapolation methodology as used for determining the base yield curve (see above) should be applied noting that a notional 10 basis point spread adjustment will be added to the LTFR.

6.4.4 Option 1 – Currency specific representative portfolio

137. For Option 1, the IAIS will provide the adjustment for each currency, based on a representative portfolio that reflects the assets typically held by all IAIGs in a particular currency. This portfolio includes all types of investments (except cash) assumed to back insurance liabilities (bonds, loans, securitisations, equities, properties).

138. The spread is adjusted for Credit risk and any other risk. For corporate bonds, risks other than liquidity risk are captured through the credit spread corresponding to the risk of default. The risk of default is derived from the annualised cumulative default experience for a hypothetical 15-year bond, computed on the basis of transition matrices[9]. A fraction of the credit spread accounting for observed defaults is then added. For government bonds, risks other than liquidity risk are assumed to represent 30% of the 10-year average of spread (where risk-free rates are determined based on swap rates). For currencies where risk-free rates are based on government bond rates, there should be no risk correction on investments in government bonds.

139. Under this option, 100% of the adjusted reference spread is used to discount all liabilities.

$$interest\ rate\ _{adjusted,t} = risk\ free_t + Adjusted\ Spread$$

140. Volunteer IAIGs should select and use the relevant adjusted yield curves according to the currency of the insurance liability cash outflows.

141. The spread adjustment determined according to Option 1 is to be applied as a parallel shift across the liquid part of the base yield curve (Segment 1 as defined above). For Segments 2 and 3 of the adjusted yield curve, the same extrapolation methodology as used for determining the base yield curve (see above) should be applied noting that a notional 10 basis point spread adjustment will be added to the LTFR.

[9] Data on defaults are from Moody's annual Corporate Default and Recovery study, spanning 1998 through 2014.

6.4.5 Options 2 and 3 – Volunteer-specific weighted average of representative portfolios

142. For Options 2 and 3, the IAIS has provided multiple indices differentiating between credit qualities and currencies, which should be used to construct an adjustment that reflects the assets held by the Volunteer IAIG.

143. The options are however distinct because bucketing is introduced for Option 3. Therefore, for Option 3, a split between two groups of assets backing Life and Non-Life/Reinsurance liabilities is required (as for Reference Method 3). Assets backing Non-Life/Reinsurance liabilities should be used to determine the spread adjustment for the third bucket whereas assets backing Life liabilities should be used to determine the spread adjustment for the first and second buckets. Assets backing Health Insurance liabilities should be assigned to the groups of assets following the split of liabilities used in the *FT16.BCR & ICS Balance sheet*.

144. Concerning Option 2, the adjustment is constructed as follows:

a) **Step 1**: Allocate assets to liabilities according to the currency of the liabilities. Note that only assets backing insurance liabilities (mainly those held in licenced insurance legal entities) are to be taken into account. Assets backing unit-linked/separate account liabilities should be excluded where such liabilities are deemed replicable by a portfolio of assets and calculated in line with the section 6.7 (therefore not on the basis of the general current estimate methodology - probability-weighted average of future cash flows discounted with IAIS adjusted yield curves).

   Assets backing insurance liabilities that are denominated in a currency that is different than the corresponding liabilities shall be included in the determination of the weights of the different representative portfolios (AAA, AA, …). However, when calculating the WAMP spread, only the representative portfolios in the currency of the liability shall be included in the weighting. In practical terms, this means that assets in different currencies are assumed to generate the same spread adjustment as those assets denominated in the currency of the liabilities.

   Assets rated below investment grade (i.e. below BBB) should be assigned to the weight of the BBB portfolio, which in practice means that the spread generated by such assets is capped at the level of BBB assets.

b) Then, for each currency:

   i. **Step 2**: Net off any cash to determine the total portfolio of assets backing liabilities in that currency.

   ii. **Step 3**: Identify the eligible assets in the portfolio, according to Table 5 below.

iii. **Step 4**: Determine the weights for each asset category as the total market value of the assets in that category divided by the market value of the total portfolio of assets (which includes the ineligible assets).

iv. **Step 5**: Calculate the weighted average adjustment for the currency applying these weights to the given adjustments per asset category.

145. The resulting spread is adjusted for Credit risk and any other risk, using the risk corrections provided in the Field Testing Template.

146. The average Adjusted Spread for a given currency should be computed as follows:

$$
\begin{aligned}
&Adjusted\ Spread = \\
&\omega_{gov} \cdot \left(Spread_{gov} - RC_{gov}\right) \\
&+\omega_{AAA} \cdot \left(Spread_{AAA} - RC_{AAA}\right) \\
&+\omega_{AA} \cdot \left(Spread_{AA} - RC_{AA}\right) \\
&+\omega_{A} \cdot \left(Spread_{A} - RC_{A}\right) \\
&+\omega_{BBB} \cdot \left(Spread_{BBB} - RC_{BBB}\right) \\
&+\omega_{non-eligible} \cdot 0
\end{aligned}
$$

Where:

- ω denotes the weight of the corresponding debt instrument;
- $Spread$ denotes the spread of the corresponding debt instrument ; $Spread_{gov}$ = 0 when the corresponding government bond rate is used for the risk-free yield curve
- RC denotes the risk correction for Credit risk and any other risk;
- $\omega_{non-eligible}$ denotes the weight of non-elegible assets in the total portfolio of assets for that currency.

147. The spread adjustment determined according to Options 2 and 3 is to be applied as a parallel shift across the liquid part of the base yield curve (Segment 1 as defined above). For Segments 2 and 3 of the adjusted yield curve, the same extrapolation methodology as used for determining the base yield curve (see above) should be applied noting that a notional 10 basis point spread adjustment will be added to the LTFR.

148. For Option 3, bucketing is introduced. Therefore, the calculation of the spread adjustment should follow the specification as described for Option 2, subject to the adjustments that are driven by the introduction of buckets (split of liabilities into buckets and allocation of assets to two groups of assets backing Life and Non-Life/Reinsurance liabilities). The specification of Reference Method 3 should be used to identify the additional steps).

149. Assets to be included in the representative portfolio are referenced in the table below:

Table 5. Assets to be included in the representative portfolio

Asset Class	Eligible
Cash and other liquid assets not for investment purposes	(Excluded from portfolio)
Investment income receivable / accrued	N
Fixed Interest Government Bonds	Y
Fixed interest Corporate Bonds	Y
Fixed Interest Municipal Bonds	Y
Variable Interest Government Bonds	Y
Variable interest Corporate Bonds	Y
Variable Interest Municipal Bonds	Y
Convertible notes	N
Residential Mortgage Loans	Y
Non-residential Mortgage Loans	Y
Other (non-mortgage) Loans	Y
Loans to policyholders	Y
Residential Mortgage Backed Securities	Y
Commercial Mortgage Backed Securities	Y
Insurance Linked Securities	N
Other structured securities	Y
Equities	N
Hedge Funds	N
Private equity	N
Real estate (for investment purposes)	N
Infrastructure	Y (if debt) N (if equity)
Other investment assets	N

150. Government bonds includes only debt instruments issued by central governments (excluding exposures to municipals and public sector entities).

151. Corporate bonds should be allocated according to their external credit rating. This includes all debt instruments issued by corporates as well as municipals and public sector entities. Specifically:

a) Unrated debt instruments should be allocated to the BBB bucket;

b) Sub-investment grade debt instruments should be allocated to the BBB bucket.

c) Assets backing unit-linked/separate account insurance liabilities should be included in the representative portfolio only if those insurance liabilities are valued as the sum of a current estimate and a margin over the current estimate (section 6.7 on Obligations replicable by a portfolio of assets does not apply).

152. For currencies other than those specified in Table 2 above, Volunteer IAIGs should use the average "world" spreads ("All others" in the Template).

153. In the case of currency unions (e.g. the Euro Area) the sovereign exposure (and the corresponding weight in the WAMP calculation) can be further detailed into the different Sovereign countries that contribute to the total exposure as set out in the Template.

6.4.6 Specificities of Option 3 and Reference Method 3 concerning allocation of spreads to the discounting of liabilities

154. Under the calculation of Option 3 and Reference Method 3, liabilities are allocated to buckets depending on their liquidity and each bucket applies a portion of the calculated spread adjustment ("Application Ratio").

Table 6. Option 3 & Reference Method 3 – Liabilities and Application Ratio for each bucket

Asset portfolios	Bucket	Mapping criteria	Application Ratio
Licenced life insurers*	Bucket 1	Life insurance and disability annuities in payment with no cash benefits on withdrawal	80% of the spread for the group of assets backing life liabilities
	Bucket 2	Life insurance liabilities with cash benefits on withdrawal	60% of the spread for the group of assets backing life liabilities
Licenced non-life insurers	Bucket 3	All other liabilities	40% of the spread for the group of assets backing non-life and reinsurance liabilities

**Note: Non-life disability annuities in payment shall be allocated to bucket 1*

6.4.7 Additional information collection on impact of liabilities that are backed by assets of different currency

155. Additional data points are requested to assess the materiality and impact of some of the policy options currently reflected in the design of the adjustment calculations.

156. In particular, the current design of the adjustment does not allow for spreads earned in assets denominated in different currencies from that of the liabilities to flow through to the discounting of such liabilities.

157. Volunteer IAIGs may decide to invest in assets in a currency different from the currency of a portfolio of their insurance liabilities. Volunteer IAIGs may enter such a currency mismatch for a number of reasons, including the search for better yield (particularly relevant in the current low yield environment), the search for better duration matching assets or because adequate assets do not exist in the currency of the liabilities. Currency mismatches may be hedged (fully or partially) back to the currency of the liabilities.

158. While such currency mismatches may be justifiable in certain circumstances, it is also important to ensure that the ICS:

a) in its entirety (Valuation and Standard Method) does not incentivise Volunteer IAIGs to assume risky investment strategies;

b) takes into account all potential risks arising from such transactions.

159. To assess the materiality and potential impact of the different approaches to this issue in the valuation of insurance liabilities, additional information is requested in the 2016 Field Testing Template (*FT16.Valuation assets*) and questions about the topic are also included in the Field Testing Questionnaire.

6.5 Stressed spreads scenarios

160. The three Reference Methods and three Options described above should be run twice: one time with the 2015 spreads and a second time with the stressed spreads.

161. The stressed spreads scenarios are not historical scenarios but a stress test. Hence, Volunteer IAIGs should not change the balance sheet calculated as at the balance date, except:

a) On the asset side: the value of debt instruments should be re-evaluated to reflect the change in prescribed spreads under the stressed scenario.

b) On the liability side: the value of future benefits should be re-evaluated to account for the decrease in value of the debt instruments. For this purpose the following simplification may be used:

$$FDB_{stressed} = max(0; FDB_{2015} - \alpha \cdot (MVA_{2015} - MVA_{stressed}))$$

$$With \propto = min(1; \max(0; \frac{Net\ Insurance\ liabilities_{2015}}{Investment_{2015} + Assets\ in\ separate\ accounts_{2015}}))$$

MVA denotes the market value of assets.

6.6 Curves not provided by the IAIS

162. The IAIS is not able to provide details to determine adjusted yield curves for all currencies and countries where Volunteer IAIGs operate. In those cases, the Volunteer IAIG is asked to derive the curve following the approach set out above by complying with the principles presented in the following section and the methodologies for deriving adjustments set out for each reference method or option.

163. In order to derive these curves, Volunteer IAIGs may use a technique other than the Smith Wilson approach, such as the Nelson Siegel or Svensson approaches. In many cases the local central bank provides zero bond curves with maturities up to 30 years.

164. If a curve is provided by the IAIS, it must be used irrespective of the size of the business. Otherwise, if the share of the insurance obligations relative to the overall obligations is smaller than 10 percent of the total business, the Volunteer IAIG can provide a calculation based on its own estimates.

165. To allow comparison, in both cases, the Volunteer IAIG should provide information about the curves used. Where the Volunteer IAIG needs to derive an interest rate term structure it should describe the approach used and provide in the Questionnaire a copy of the term structure applied.

6.6.1 Method to derive risk free term structure for Field Testing purposes

166. For yield curves that are not provided by the IAIS, when deriving the basic risk-free curve, the Volunteer IAIG should take into account the following considerations:

a) The risk-free interest rate term structure should be determined on the basis of market data as of the balance date.

b) The relevant data should either be swaps or government bonds. Where this information is not available, other financial instruments similar to swaps can be used, subject to appropriate Credit risk adjustments.

c) If the risk-free rate is derived by using swaps, an appropriate (flat) basis point adjustment to the swap rates should be applied, by considering where possible the difference between the floating rates of the interest rate swap and the relevant overnight indexed swap rates of the same maturity. The Credit risk of sovereigns could be measured by looking at CDS premiums on government bonds. It is recognised though, that under certain market circumstances the relationship between government bonds and CDS prices can be weak. Therefore, for currencies where risk-free rates are based on government bond rates, there should be no adjustment.

d) The rates should be based on financial instruments for which a reliable market value is available. This requires a deep, liquid and transparent market.

e) Where the Credit risk assessment lacks a sufficiently robust basis, the adjustment should be approximated by multiplying the Credit risk adjustment used for USD multiplied by the respective interest rate differential.

f) The interpolation should be done in line with the approaches listed above. However, a simple linear interpolation between the observed spot rates is also acceptable.

6.7 Obligations replicable by a portfolio of assets

167. Where future cash flows associated with insurance obligations can be replicated reliably using financial instruments for which a reliable market value is observable, the value of insurance liabilities associated with those future cash flows can be determined on the basis of the market value of those financial instruments.

168. Insurance obligations are replicated reliably when their cash flows are in every circumstance precisely matched by cash flows of corresponding assets.

169. The cash flows associated with insurance obligations cannot be reliably replicated when:

a) policyholders can exercise contractual options, including lapses and surrenders;

b) obligations depend on mortality, disability, sickness and morbidity rates;

c) expenses associated with insurance obligations cannot be reliably replicated.

170. Financial instruments used to value insurance obligations must be traded in deep, liquid and transparent markets.

7 GAAP with Adjustments valuation approach ("GAAP Plus")

Relevant Worksheets in Template:	*FT16.BCR & ICS.Balance sheet (GAAP Plus sections)*	*Due 3 August 2016*

171. This section provides specifications for Volunteer IAIGs to report their consolidated financial statements prepared under the GAAP Plus approach. GAAP Plus begins with the consolidated balance sheet as reported in a Volunteer IAIG's general-purpose, audited financial statements, which for most Volunteer IAIGs is either IFRS or their local jurisdictional GAAP. The scope of consolidation used is as described in Section 0. Firms that do not report on a consolidated GAAP basis, e.g., U.S. mutual insurers, may provide aggregated statutory data using the corresponding guidance provided in the U.S. SAP example for GAAP Plus (section 7.3.1.3). For this section, such general-purpose reporting bases are collectively referred to as "GAAP." The following GAAP Plus sections provide guidelines and specific examples for adjustments under the various jurisdictional GAAPs applicable to Volunteer IAIGs in order that each can arrive at a consolidated GAAP Plus balance sheet following the application of these Technical Specifications.

172. See section 8 for detailed specifications on completing the worksheet *FT16.BCR & ICS.Balance sheet* columns [1 through 6] including balances reported under GAAP Plus.

173. Under the GAAP Plus approach, the Volunteer IAIG starts with column [1] of the worksheet *FT16.BCR&ICS.Balance Sheet* titled GAAP Valuation - Amounts per Audited Consolidated Financial Statements. That includes column [3] GAAP Valuation – Related to Insurance Activities, amounts which represent the insurance-related balances as reported in the Volunteer IAIG's GAAP financial statements.

174. A new column was added for 2016 Field Testing to report any reclassification of amounts that would be a result of differences in presentation between audited GAAP and GAAP Plus. Volunteer IAIGs should record in this column any amounts representing the transfer from one balance sheet row to another in order to conform to the format of the balance sheet. For example, some line items may be presented on a net basis on audited financial statements but would be required to be reported on a gross basis for purposes of the ICS (i.e. policy loans, reinsurance recoverables). These reclassification amounts should not include any valuation adjustments as proposed under the GAAP Plus examples, such as changes to assets or insurance liabilities or eliminations such as the elimination of deferred expenses.

175. The Volunteer IAIG should report balances on the basis of the GAAP Plus approach in the worksheet FT16.BCR&ICS.Balance Sheet column [x] GAAP Plus Valuation – Related to insurance activities. The balances should reflect any reclassification amounts as reported in column [5] and adjustments as specified in the applicable jurisdictional GAAP Plus example. See section 8 on the BCR and ICS Balance Sheet for additional instructions.

176. Adjustments from GAAP to the GAAP Plus approach should be in alignment with the following GAAP Plus guidelines [7.1] and, if applicable, one of the jurisdictional examples provided herein [7.3]. However, Volunteer IAIGs that report using other jurisdictional GAAPs where no example has been provided may need to develop their own set of adjustments based on the guidelines and other GAAP examples provided; it is suggested that such Volunteer IAIGs developing their own adjustments consider consulting with their supervisor representing them on the IAIS CSFWG.

177. The *FT16.BCR & ICS.Balance sheet* worksheet also includes additional requests for information related to GAAP Plus including the calculation of an AOCI Adjustment to Capital Resources that is being collected from non EU jurisdictions as well as a Reconciliation of insurance liabilities between GAAP and GAAP Plus and between GAAP Plus and MAV. Detailed instructions for these data requests can be found in section 9 (Reconciliation) and section 11.3.2 (on the GAAP Plus AOCI adjustment, under Capital Resources).

178. In addition, there are a series of questions included in the Questionnaire in order to collect detailed descriptions of the methods used to calculate any significant adjustments developed directly by Volunteer IAIGs under GAAP Plus as well as explanations for amounts reported in the liabilities reconciliation. Supplemental narratives to further describe methodologies employed, assumptions used, etc., are invited through the Questionnaire.

7.1 GAAP Plus Guidelines

179. These GAAP Plus Guidelines have been developed to create a consistent framework to be applied in the development of the various jurisdictional GAAP examples. This framework should also be applied by any Volunteer IAIG reporting on a jurisdictional GAAP basis for which an example has not been specified to develop their own GAAP Plus adjustments.

180. Like the MAV approach, (1) the adjustments to be made for the GAAP Plus approach will address only the most significant or material items on the balance sheet, specifically, insurance-related liabilities and invested assets, and (2) the proportionality principle applies (see section 4.2).

181. To the extent possible, adjustments should be based on amounts from the underlying audited GAAP financial reports, or which emanate from processes and/or systems that are subject to independent external audit. The intent is to derive the necessary adjustments in a manner that is both practicable and with a level of independent assurance given each Volunteer IAIG's existing GAAP basis, process of reporting, related internal controls as well as its audit function.

182. Invested assets should be valued on a basis that is consistent with reported balances in the Volunteer IAIG's audited GAAP financial statements (subject to the need for an adjustment due to paragraph 184 below).

183. Insurance liabilities (and any reinsurance assets/liabilities) should be valued on a basis that is consistent with reported balances in the Volunteer IAIG's audited GAAP financial statements and adjusted as necessary to approximate the current estimate (as defined under ICP 14 – Valuation; see

also section 4.4), to the extent practicable, using existing jurisdictional GAAP and any indicated adjustments derived therefrom (see ICP 14.7 for additional detailed information on current estimate).

184. Insurance assets and liabilities should be treated consistently such that non-economic volatility is minimised. To achieve a level of comparability across firms this may require an adjustment to capital resources to align the valuation of certain liabilities and assets for some jurisdictional GAAPs. In other cases, this objective is achieved through the adjustment of the yield curves used to discount insurance liabilities.

185. Capital resources and deductions – Aside from an adjustment for some jurisdictional GAAPs (e.g., U.S. GAAP) to address the consistent treatment of assets and liabilities and non-economic volatility, all adjustments detailed in the ICS Capital Resources section (section 11.4) would apply equally to GAAP Plus just as they would for MAV.

186. Tax effects – Deferred taxes should follow the same treatment as under MAV, but amounts would likely differ, due to different balance sheet values and no corresponding changes to the tax bases.

7.2 GAAP Plus General Considerations

187. The following general considerations are applicable to all Volunteer IAIGs regardless of the jurisdictional GAAP used for reporting:

a) Recognition / Derecognition of insurance liabilities: A liability should be recognised and derecognised in accordance with the Volunteer IAIG's jurisdictional GAAP.

b) Contract Boundaries: The definition of contract boundaries should be in accordance with the Volunteer IAIG's jurisdictional GAAP.

c) Discounting: GAAP Plus estimates of insurance liabilities (and related reinsurance recoverables) are to be calculated using yield curves or rates as specified under applicable jurisdictional GAAP rules or as outlined in the applicable specific GAAP example below.

d) The calculation of GAAP Plus adjustments shall be based upon up-to-date information and credible assumptions.

e) Policy Loans – Policy loans should be reported in the appropriate row under Invested Assets and not netted with insurance liabilities.

f) Separate Accounts – For purposes of GAAP Plus, Volunteer IAIGs should follow the jurisdictional GAAP definition for a separate account.

g) Non insurance liabilities should be reported in accordance with jurisdictional GAAP. Balances reported at cost should not be adjusted to fair value.

h) Margin over current estimate (MOCE) – Methods to calculate a consistent and comparable MOCE will be evaluated again during 2016 Field Testing (see section 13). The approaches to calculate a consistent and comparable MOCE for both GAAP Plus and MAV should be the same however the result could be different based on the differences in balance sheet valuations.

i) Deferred Taxes (Assets/Liabilities): these items should be based on the Volunteer IAIG's GAAP valuations. However, deferred tax balances should be adjusted consistently with other asset and liability adjustments made for Field Testing purposes. For example, certain other assets/liabilities are subject to adjustment in deriving their value which is to be used in determining the IAIG's qualifying capital resources; in such instances, a corresponding adjustment should be made to deferred tax assets/liabilities.

j) Offsets to adjustments (MAV approach offsets in the *FT16.BCR & ICS.Balance sheet* worksheet would work similarly): Most GAAP Plus adjustments require offsetting amounts in the equity section of the balance sheet. These pertain to the elimination of margins; related deferred tax adjustments; and possibly other adjustments made by the Volunteer IAIG. Such amounts are automatically calculated based on asset and liability adjustments and included in the equity portion of the balance sheet. The offsetting amount required to eliminate deferred acquisition costs, value of business acquired, and other deferred expense balances related to insurance should be reflected directly in GAAP Plus adjusted insurance liability balances. There should be no need to manually make adjustment to the equity section to report offsetting entries for GAAP Plus adjustments.

k) Data quality and setting of assumptions: When selecting data for the calculation of insurance liabilities under the GAAP Plus approach, Volunteer IAIGs should follow similar guidance as provided under the MAV approach including considerations for selecting data for the calculation, working with limited or unreliable data, and supplementing historical data with data from other sources.

l) Management Actions: When calculating the value for an insurance liability under GAAP Plus, Volunteer IAIG's future management actions may be taken into account following similar guidance as provided under the MAV approach (see section 6.3.12).

7.3 GAAP Plus Examples

188. The following provides examples of adjustments for GAAP Plus based on the guidance outlined above and utilizing a number of jurisdictional GAAP examples applicable to each respective Volunteer IAIG currently participating in 2016 Field Testing. The expectation is that similar adjustments would be developed and applied in other GAAP jurisdictions where specific examples have not been provided.

7.3.1 U.S. GAAP Example of GAAP Plus

189. The following guidance pertains to Volunteer IAIGs who report their audited consolidated financial statements on the basis of U.S. GAAP for the purpose of reporting the GAAP Plus balance sheet in 2016 Field Testing.

7.3.1.1 U.S. GAAP Example – Invested Assets Adjustment

190. Invested assets including fixed income, equity, derivatives, mortgages/ loans[10],real estate, and other alternative investments are to be reported under GAAP Plus as determined under U.S. GAAP standards for reporting. Therefore no adjustment is required under GAAP Plus.

191. It is expected that under U.S. GAAP the majority of investments will be valued at fair value. Investments valued at amortised cost such as securities designated as held to maturity, loans designated as held for investment and certain other investments should be reported net of any related valuation allowance or loan loss reserve.

7.3.1.2 U.S. GAAP Example - Insurance Liability Adjustments

192. Volunteer IAIGs currently filing U.S. GAAP reports should apply the following methods to calculate adjustments for reported insurance liabilities, reinsurance recoverables and reinsurance assumed.

193. Under U.S. GAAP there are several accounting models used to estimate insurance contract liabilities based on the characteristics of the product and length of the contract. The GAAP Plus approach leverages these accounting models and in certain cases outlines required adjustments to existing reported balances in order to approximate, to the extent possible, a current estimate. See section 6.3 on current estimate instructions.

194. GAAP Plus insurance liability assumptions and calculations should exclude any implicit or explicit margins in the calculations. In addition, no adjustments should be made to take into account the own credit standing of the Volunteer IAIG.

195. Reinsurance recoverables and any actuarially determined reinsurance payables should be calculated consistent with the GAAP Plus estimates of insurance liabilities. Therefore the same assumptions and inputs that are used for the subject insurance liabilities should be used for the corresponding insurance recoverables.

7.3.1.2.1 U.S. GAAP Example - Valuation of non-life and other short-term insurance liabilities

196. For insurance liability estimates for unpaid claims and other short-term insurance contracts that are measured under U.S. GAAP ASC 944-30-1 to 4, the valuation of these items should be based

[10] In this context, mortgages/loans made means mortgages/loans that the Volunteer IAIG has either originated or purchased as investments.

on the Volunteer IAIG's reported U.S. GAAP valuation which would be expected to be on an undiscounted basis, with any significant exceptions described in the Questionnaire.

7.3.1.2.2 U.S. GAAP Example - Valuation of life and other long-term insurance liabilities

197. For insurance liabilities that are measured under U.S. GAAP as the net present value of cash flows using current or updated assumptions, the valuation of these items should be based on the Volunteer IAIG's reported U.S. GAAP valuations.

198. For insurance liabilities that are valued using historical, locked-in assumptions (e.g. long-term insurance contracts measured according to ASC 944-30-7, formerly SFAS 60) or valued under a retrospective deposit method approach (e.g. universal life insurance contracts measured according to ASC 944-30-16, formerly SFAS 97) it will be necessary to adjust the liability utilizing the Gross Premium Valuation (GPV) approach as defined in loss recognition (premium deficiency) testing under U.S. GAAP ASC Topic 944-60.

199. The GPV is calculated by estimating the present value of future payments for benefits and related settlement and maintenance expenses less the present value of future gross premiums based on actual and anticipated experience. Projections may be based on a single best estimate scenario and may also include the impact of management actions, e.g., the current estimate of future premium rate increases (see section 6.3.12 on management actions). Any overhead expenses would be excluded. The discount rate applied would be based on a current portfolio yield and expected reinvestment asset yields and cash flows. Gross rates would be reduced for expected defaults and investment expenses.

7.3.1.2.3 U.S. GAAP Example - Valuation of options and guarantees

200. Insurance contracts may include embedded options and guarantees, such as guarantees of minimum investment returns (including as part of death benefits), maximum charges for mortality, surrender options, or options for the policyholder to reduce or extend coverage. Liabilities related to these options and guarantees should be valued in accordance with applicable U.S. GAAP rules. For options and guarantees that do not meet the definition of a derivative under U.S. GAAP, the applicable guidance would be ASC Subtopic 944-40-30-19a to 29 (formerly SOP 03-1). Any historical, locked in assumptions used in this calculation should be updated to reflect current information. For those guarantees/options that are considered to be derivatives under U.S. GAAP the applicable guidance would be ASC Topic 815 (formerly SFAS 133) and ASC Topic 820 (formerly SFAS 157). Equity backed guarantees should use an implied volatility estimate rather than an observed or historical best estimate. Estimates should also be based on risk neutral scenarios. Any adjustments made to reflect an exit value (market participant's view, e.g. adjustments to reflect the credit standing of the Volunteer IAIG and adjustments for market participant risk margin or 'load') should be excluded from the estimate.

7.3.1.3 U.S. GAAP Example – Other Adjustments

201. Deferred expenses related to insurance such as deferred acquisition costs, value of business acquired, sales inducement assets, etc. should be netted against the related insurance liability balance.

202. FAS 115 shadow adjustments: Adjustments to reflect in certain balance sheet items the impact of unrealised gains and losses on available for sale securities as if they had been realised should be reversed and should not be reflected in asset/liability balances and AOCI.

7.3.2 U.S. Mutual Life Insurers (U.S. SAP) Example of GAAP Plus

203. The following guidance pertains to U.S. mutual insurers that report audited results only on the basis of statutory accounting principles (SAP) as defined by state insurance regulators in the United States.

204. The general GAAP Plus guidance [section 7.1] is applicable to U.S. mutuals. However, and as described below, there are some balances that must be uniquely addressed by a U.S. mutual Volunteer IAIG in 2016 Field Testing.

7.3.2.1 U.S. SAP Example - Consolidated Financials

205. The Volunteer IAIG will need to prepare a group-level consolidated balance sheet that includes domestic insurance companies (whose financial statements are prepared in accordance with U.S. SAP); and foreign insurance company subsidiaries, non-insurance subsidiaries and affiliates (whose financial statements are typically prepared in accordance with U.S. GAAP in the case of subsidiaries and affiliates of a U.S.-based insurer or group).

206. Volunteer IAIGs should prepare a group level consolidated balance sheet as follows:

a) Aggregate all U.S. audited statutory financial statements for domestic insurance companies.

b) For all non U.S. audited statutory financial statements for foreign insurance companies, aggregate all balances after performing foreign currency translation into the reporting currency of the U.S. Holding Company or Head of Group entity as specified under FASB ASC Topic 830. Foreign currency translation adjustments should be recorded in the balance sheet equity account Accumulated Other Comprehensive Income (AOCI).

c) Identify other non-insurance domestic subsidiaries, affiliates and other entities where ownership is greater than 50% or where management controls an entity through the ability to make decisions that can significantly impact returns of the entity. For these entities, eliminate the equity investment in each subsidiary and for each balance sheet line item add in the corresponding value of reported gross assets and liabilities of those subsidiaries to

the parent statutory balances[11]. Include any minority interest amounts if applicable. Apply the same approach for foreign entities with the addition of performing foreign currency translation as specified in the paragraph above.

d) Make appropriate intercompany eliminations.

207. At this point, there will be a consolidated balance sheet on a mixed valuation basis. This amount should be recorded in worksheet BCR.Balance sheet, Column [1] labelled GAAP Valuation — Amounts per Audited Consolidated Financial Statements.

208. The worksheet *FT16.BCR & ICS.Balance sheet* then requires that balances be split between insurance-related and non-insurance related activities in Columns [2] and [3]. See Scope of Application section 0 for further instructions and definitions regarding insurance related and non-insurance related activities.

7.3.2.2 U.S. SAP Example – Asset-Related Adjustments

209. Long-term and short-term investments reported under SAP that meet the U.S. GAAP definition of available-for-sale or trading should be adjusted to fair value. This would mainly apply to debt securities, equities and derivatives.

210. Replication (synthetic) assets should be bifurcated and classified as debt securities and derivatives as per paragraph 209 above.

211. Real estate owned should be reported on a gross basis with any related debt balances reclassified as a liability.

212. Any life insurance deferred premium assets that exist for SAP when the mean reserve method is used for calculating reserves should be written off to Retained Earnings/Surplus.

213. Deferred taxes (assets/liabilities) should be based on the IAIG's SAP valuations, adjusted consistently with other asset and liability adjustments made for Field Testing purposes.

214. Non-admitted assets should be reported in the balance sheet using valuation methods that are consistent with U.S. GAAP.

7.3.2.3 U.S. SAP Example – Liability-Related Adjustments

215. Insurance liabilities should be based on the IAIG's reported SAP valuations.

a) For products that fall under FAS 60, 97, 120 for U.S. GAAP (disability income, long-term care, life insurance, pay-out annuities with life contingencies), adjust to a current estimate based

[11] This may be a mix of statutory, US GAAP and modified GAAP balances

on baseline cash flow testing. Apply the yield curve consistent with U.S. GAAP Plus example (See section 7.3.1.2.2)

b) For FAS 97 Investment Contracts, for retirement products, Volunteer IAIGs should use account value consistent with statutory accounting. For fixed and variable deferred annuities not included in AG43 and non-life contingent pay-outs, Volunteer IAIGs should use baseline cash flow testing per [a] above.

c) For options and guarantee liabilities (variable annuities) that fall under SOP 03-01 and FAS 133/157, adjust to CTE 0 from AG43 models (with appropriate modifications to eliminate conservative PADs/margins) or hedging models if AG 43 is not applicable.

d) The asset valuation reserve and interest maintenance reserve should be reclassified to the equity section of the balance sheet as Reserves – Unrestricted as specified under capital resources.

216. Any reinsurance recoverables that are netted against insurance liabilities for SAP should be reclassified as assets for GAAP Plus.

217. Pension liabilities: firms that have elected to defer surplus impacts of SAP rule change to reflect full pension benefit obligation should record a liability for the unamortised portion.

7.3.3 European IFRS (EU GAAP) Example of GAAP Plus

218. The following guidance pertains to European Union (EU) Volunteer IAIGs who report their audited consolidated financial statements on the basis of International Financial Reporting Standards (IFRS) for the purpose of reporting the GAAP Plus balance sheet in 2016 Field Testing.

219. The current status of development of IFRS concerning insurance contracts, as well as its implementation across the EU (significant differences across Member States), raise particular challenges regarding the development of a consistent approach to GAAP Plus. The focus of these specifications is on the implementation of the GAAP Plus Guidelines in a practical and consistent manner across EU Volunteer IAIGs.

7.3.3.1 EU GAAP Example – Invested Assets Adjustments

220. European insurers value their invested assets using IAS 39, which allows for the use of several valuation methodologies, under specific conditions (and IAS 40 for investment property). For the purpose of the GAAP Plus balance sheet, to ensure consistency with the valuation of insurance liabilities, invested assets should be reported at fair value. As a proxy, EU Volunteer IAIGs can apply the same adjustments as per the MAV basis (section 6.1).

7.3.3.2 EU GAAP Example - Insurance Liability and Reinsurance Recoverable Adjustments

221. There is currently no consistent method under IFRS for valuing insurance contracts in the financial statements of insurance companies. The current standard is an interim standard that allows for a wide degree of flexibility in its implementation. For this reason, current practices are significantly diverse, with IFRS being implemented differently by insurers headquartered in different countries.

222. In order to value insurance liabilities and reinsurance recoverables on a consistent basis following the guidelines outlining GAAP Plus, EU Volunteer IAIGs should use as a starting point for deriving their GAAP Plus figures their Solvency II regulatory valuation.

223. The following adjustments should be made to the Solvency II insurance liability balances in order to derive GAAP Plus figures:

a) Risk Margin should be removed from the valuation of insurance liabilities where insurance liabilities are not calculated as a whole.

b) The valuation of insurance liabilities should be adjusted to exclude the phasing in measures provided by the regulatory framework.

7.3.4 Japanese GAAP (J-GAAP) Example of GAAP Plus

224. The following guidance pertains to Japanese Volunteer IAIGs who report their audited consolidated financial statements on the basis of Japanese GAAP for the purpose of reporting the GAAP Plus balance sheet in 2016 Field Testing.

7.3.4.1 J-GAAP Example – Invested Assets Adjustments

225. Japanese Volunteer IAIGs should report invested assets consistent with the treatment under J-GAAP. Therefore no adjustment is required under GAAP Plus.

226. For investment securities, fair value should be applied to Available For Sale (AFS) and trading securities, and amortised cost should be applied to Held To Maturity (HTM) and Held for Policy Reserve (HFR) securities. Loans would be valued at amortised cost net of any loan loss reserve and real estate should be valued at cost net of depreciation.

7.3.4.2 J-GAAP Example – Insurance Liability Adjustments

227. The following adjustments aim to economically revalue insurance liabilities under the J-GAAP example of GAAP Plus utilising the Japanese GAAP statutory cash flow test pursuant to the Insurance Business Act in Japan.

228. Japanese Volunteer IAIGs should run the statutory cash flow test under a full time horizon assumption and fully reflect the test result in their GAAP Plus insurance liabilities. Under the full time

horizon cash flow analysis, life insurers are required to assess whether future cash flows generated from current assets cover the future cash flows (net of cash-inflows and cash-outflows) from insurance liabilities. The net amount in shortage or excess of insurance liabilities at the end of in-force business should be discounted and the resulting value is added to (or deducted from) insurance liabilities.

229. The actual current experience including mortality, lapse, expense ratio and interest rate should be used in the calculation of the future cash flows for insurance liabilities. New business should not be taken into consideration. Current assumptions for new money and reinvestment based on the current yield curve should be reflected in the assumptions related to asset portfolio and investment returns.

7.3.4.3 J-GAAP Example – Non-Life Insurance Liabilities

230. Non-life Volunteer IAIGs should apply full time horizon cash flow analysis and fully reflect its result into the J-GAAP insurance liabilities. Under the full time horizon cash flow analysis, non-life insurers are required to assess whether reported insurance liabilities (GAAP basis premium provision) is adequate to cover all expected future cash flow. Recognised shortage or excess of insurance liabilities should be adjusted into insurance liabilities. The actual experience including claim frequency, lapse, expense ratio and interest rate should be used for the calculation of the future cash flow in insurance liability, but new business should not be taken into consideration.

7.3.4.4 J-GAAP Example –Liabilities for Options and Guarantees

231. As for the valuation of option and guarantees, the same treatment should be applied in the GAAP Plus valuation of minimum guarantees for variable annuity products as required under Japanese GAAP.

7.3.5 Canadian IFRS (C-GAAP) Example of GAAP Plus

232. The following guidance pertains to Canadian Volunteer IAIGs who report their audited consolidated financial statements on the basis of IFRS for the purpose of reporting the GAAP Plus balance sheet in 2016 Field Testing.

7.3.5.1 C-GAAP Example – Invested Assets Adjustments

233. Canadian insurers measure their invested assets using IAS 39 (and IAS 40 for investment property). Although IAS 39 and IAS 40 allows the use of cost and amortised cost to value invested assets in specific cases, most invested assets on Canadian insurers' balance sheets are measured at fair value. No adjustments for GAAP Plus are proposed for invested assets, including those carried at cost or amortised cost, under the C-GAAP example.

7.3.5.2 C-GAAP Example - Insurance Liability Adjustments

234. Canadian Volunteer IAIGs currently use the Canadian Asset Valuation Method (CALM), as specified by the Standards of Practice of the Canadian Institute of Actuaries (CIA), to determine their

policy liabilities. For the C-GAAP example, the CALM base scenario liability (without margins) plus the margin for asset default (C1) should be used as the basis to adjust life insurance liabilities under GAAP Plus. The C1 margin should be added to the CALM base scenario liability (without margins) to reflect the fact that when higher yielding assets are used to support liabilities, at least part of the extra yield is to compensate for losses in asset values including defaults, and will not ultimately be realised. The C1 margin added should cover all assets supporting the liability, including non-fixed income assets.

7.3.5.3 C-GAAP Example – Non-Life Insurance Liabilities

235. Similar to the approach used for life insurance liabilities, Canadian Volunteer IAIGs should use the sum of GAAP claim liabilities and premium liabilities as the current estimate liability for the GAAP Plus approach, where the liabilities exclude the margins for claims development and reinsurance recoveries, but include the margin for investment return rates.

7.3.5.4 C-GAAP Example –Liabilities for guarantees on segregated funds products

236. Non-hedged portfolios: Canadian insurers currently value guarantees on separate account products using standards promulgated by the CIA. The valuations performed under these standards involve stochastic simulation, with insurers projecting many (e.g. 5,000 or 10,000) real-world scenarios based on historical data for equities, bonds, and other separate account assets, and calculating the company's payouts under each scenario. The GAAP balance sheet liability is determined by taking a confidence level statistic between CTE(60) and CTE(80) from the simulation results.

237. Since the projected scenarios are real world instead of risk neutral, and the model parameters are based on historical data instead of market data, the results produced by the GAAP valuation method do not estimate a market-consistent guarantee value. In order to bring the results closer to a market-consistent value, Volunteer IAIGs should run their GAAP valuation models using parameters that satisfy the calibration criteria promulgated by OSFI in 2010 for calculating regulatory capital.[12] These calibration criteria were derived to approximate the level produced by a market consistent valuation method, and would therefore have the effects of bringing liability valuations closer to their market consistent values (although in some cases substantial differences may remain) and making the results more comparable to those produced by valuation methods used in other jurisdictions. The confidence level taken from the model output using the revised parameters would be consistent with a confidence level that is appropriate for determining balance sheet liabilities in accordance with GAAP.

238. Hedged Portfolios: In an educational note promulgated more recently by the CIA[13], an adapted risk neutral approach is used for hedged portfolios whereby the liability "will converge towards a risk-neutral liability as more and more aspects of the liability are hedged". If substantially all of the Market risks of a portfolio are being hedged, the resulting liability calculated using this

[12] The criteria are contained in the Advisory: *Revised Guidance for Companies that Determine Segregated Fund Guarantee Capital Requirements Using an Approved Model* dated December 2010.
[13] Reflection of Hedging in Segregated Fund Valuation, May 2012.

method should approximate a current estimate of the market-consistent guarantee value. Consequently, Volunteer IAIGs may use reported GAAP liabilities for such portfolios for the GAAP Plus adjustments approach.

7.3.6 Korean IFRS (K-GAAP) Example of GAAP Plus

239. The following guidance pertains to Korean Volunteer IAIGs who report their audited consolidated financial statements on the basis of Korean IFRS for the purpose of reporting the GAAP Plus balance sheet in 2016 Field Testing.

7.3.6.1 K-GAAP Example – Invested Assets Adjustments

240. Korean Volunteer IAIGs should report invested assets at fair value under GAAP Plus consistent with the MAV Valuation approach. Any assets currently reported at amortised cost (e.g. loans, HTM securities, real estate) require an adjustment.

7.3.6.2 K-GAAP Example - Insurance Liability Adjustments

241. For the K-GAAP example, insurance liabilities (including both life and non-life) should be adjusted using the LAT (Liability Adequacy Test) under Korean GAAP. LAT is a method for reconciling the book value of policyholder reserves with a fair value estimate using unlocked assumptions. Volunteer IAIGs should estimate future net cash flows based on its experience. The fair value of policyholder reserves is calculated by discounting the estimated future net cash flows using the future investment rate of return.

242. For insurance liabilities that are not subject to LAT, Volunteer IAIGs should use the audited book value (based on locked assumptions). In summary, insurance liabilities of GAAP Plus consist of insurance liabilities subject to LAT (based on unlocked assumptions) and insurance liabilities not subject to LAT (based on locked assumptions). Insurance liabilities subject to LAT represents approximately 95% of all insurance liabilities, thus it is reasonably assumed that most of the insurance liabilities would be adjusted to a current estimate under GAAP Plus.

243. Reinsurance assets (Reinsurance recoverables) should be adjusted on a basis consistent with the determination of insurance liabilities using the LAT under Korean GAAP.

7.3.6.3 K-GAAP Example –Liabilities for Options and Guarantees

244. Guarantee reserves should be calculated using a stochastic method in accordance with the Appendix 24 of the Detailed Regulation on Supervision of I Insurance Business. Guarantee reserves represent options guaranteeing the minimum payment level in variable life products (e.g. GMAB, GMDB, GMWB, GLWB[14]) and other types of insurance products.

[14] Guaranteed Minimum Accumulation Benefit (GMAB), Guaranteed Minimum Death Benefit (GMDB), Guaranteed Minimum Withdrawal Benefit (GMWB, Guaranteed Lifetime Withdrawal Benefit (GMLB).

245. Dividend payments to policyholders in participating contracts should be included in cash outflows with reasonable assumptions in LAT, and the detailed methodology should be in accordance with the Appendix 26 of the Detailed Regulation on Supervision of I Insurance Business. For the contracts classified as investment contracts, book value (based on locked assumptions) audited under K-GAAP should be used, as these contracts are not subject to LAT according to Appendix 26.

246.

7.3.7 Chinese Taipei IFRS (T-GAAP) Example of GAAP Plus

247. The following guidance pertains to Chinese Taipei Volunteer IAIGs who report their audited consolidated financial statements on the basis of local jurisdictional GAAP for the purpose of reporting the GAAP Plus balance sheet in 2016 Field Testing.

7.3.7.1 T-GAAP Example – Invested Assets Adjustments

248. For the purpose of the GAAP Plus balance sheet, to ensure consistency with the valuation of insurance liabilities, invested assets should be reported at fair value. As a proxy, Chinese Taipei Volunteer IAIGs can apply the same adjustments as per the MAV basis (section 6.1).

7.3.7.2 T-GAAP Example - Insurance Liability Adjustments

249. For the T-GAAP example, Volunteer IAIGs currently filing Chinese Taipei GAAP reports should apply the following methods to calculate adjustments for reported insurance liabilities, and reinsurance recoverables and reinsurance assumed.

250. Reinsurance recoverables and any actuarial determined reinsurance payables should be calculated consistent with the GAAP Plus estimates of insurance liabilities. Therefore the same assumptions and inputs that are used for the subject insurance liabilities should be used for the corresponding insurance recoverables. Also, reinsurance recoverables should be reported net of allowances for estimated uncollectible amounts.

7.3.7.2.1 T-GAAP Example – Valuation of life and other long-term insurance liabilities

251. For insurance liabilities that are measured under Chinese Taipei GAAP using current or updated assumptions or using account value, the valuation of these items should be based on the Volunteer IAIG's reported Chinese Taipei GAAP valuation.

252. For insurance liabilities that are valued using historical, locked-in assumptions or valued in accordance with applicable Chinese Taipei regulatory valuation rules on universal life insurance contracts, single premium deferred annuity contracts, and investment linked contracts, it will be necessary to adjust the liability utilizing the Gross Premium Valuation (GPV) approach as defined in Liability Adequacy testing (LAT) under Chinese Taipei GAAP.

253. The GPV is calculated by estimating all future cash flows including the payments for benefits and related settlement, overhead and maintenance expenses less future gross premiums based on actual and anticipated experience. The discount rate applied should be based on a current portfolio yield and expected reinvestment asset yields and cash flows, adjusted by expected defaults and investment expenses.

7.3.7.2.2 *T- GAAP Example - Valuation of short-term insurance liabilities*

254. For insurance liability estimates for unpaid claims, the valuation of these items should be based on the Volunteer IAIG's reported Chinese Taipei GAAP valuation.

255. For insurance liability estimates for other short-term insurance contracts, it will be necessary to adjust the liability utilizing the Gross Premium Valuation (GPV) approach as defined in Liability Adequacy testing (LAT) under Chinese Taipei GAAP.

7.3.7.2.3 T-GAAP Example –Liabilities for Options and Guarantees

256. Variable annuities may contain guaranteed living benefits, such as minimum maturity or withdrawal benefits, tied to the performance of specific assets. Chinese Taipei insurers currently value the liabilities related to these options and guarantees using standards promulgated by FSC. For options and guarantees valuations that performed under the standards involving stochastic simulation, the liability under Chinese Taipei GAAP is determined by taking a confidence level statistic, at least CTE(65), from the simulation results. As for GAAP plus valuation, it will be necessary to adjust the liability to mean results from the simulation using the GAAP valuation model.

7.3.8 Singapore SFRS (S-GAAP) Example of GAAP Plus

257. The following guidance pertains to Singapore Volunteer IAIGs who report their audited consolidated financial statements on the basis of Singapore Financial Reporting Standards for the purpose of reporting the GAAP Plus balance sheet in 2016 Field Testing.

7.3.8.1 S-GAAP Example – Invested Assets Adjustments

258. Singapore insurers value their invested assets using IAS 39, which allows for the use of several valuation methodologies, under specific conditions. For the purpose of the GAAP Plus balance sheet, invested assets should be reported at fair value. As a guide, Singapore Volunteer IAIGs can apply the same adjustments as set out under the MAV approach.

259. Reinsurance Recoverables (on unpaid claims) should be valued and reported in a manner consistent with the calculation of insurance liabilities.

7.3.8.2 S-GAAP Example - Insurance Liability Adjustments

260. As there is currently no consistent method under IFRS for valuing insurance contracts, Singapore insurers typically adopt the local regulatory RBC valuation for the purpose of financial reporting. Reserves are calculated based on current assumptions, not locked-in assumptions, with margin for adverse deviation.

a) For general insurance products, the liability is the larger of the unearned premium reserve or unexpired risk reserve;

b) For life insurance products:

i. For participating policies, the discount rate is derived based on long term expected invested return of backing assets;

ii. For other policies, the discount curve for SGD denominated liabilities is determined based on Singapore government bond yields up to the longest available point specified by the regulator; cash flows with durations longer than the longest available point are discounted based on a long term risk free discount rate reflecting historical average. For non-SGD denominated policies, the market yield of the corresponding foreign government *securities of similar duration is used.*

261. To value insurance liabilities on a GAAP Plus basis, Singapore Volunteer IAIGs should make the following adjustments to their regulatory valuation:

a) Risk margin should be removed from the valuation of insurance liabilities.

b) Recognition of negative reserves.

262. Other adjustments include:

a) to remove from current estimates future transfers from Participating Fund to Shareholder which are recognised as a liability under GAAP basis inasmuch as these are transfers between funds rather than a liability from the insurance company perspective;

b) to adjust to participating products discretionary benefits through management actions to achieve targeted bonus supportability level (management actions are not recognised under GAAP basis); and

c) to change the current estimate for unit-linked products from the sterling reserve method to gross premium valuation method.

8 BCR and ICS Balance Sheet

Relevant Worksheets in Template:	*FT16.BCR & ICS.Balance sheet* *FT16.Deferred Tax Asset*	*Due 3 August 2016*

263. To avoid duplication of the data collected, one worksheet in the Template will be used to collect information needed for the BCR and ICS.

264. The starting point for the balance sheet is amounts per audited, consolidated financial statements or aggregated audited statutory financial statements (in the case of U.S. mutual insurers) in [Column 1] of the *FT16.BCR & ICS.Balance sheet* worksheet. Totals should tie directly to audited financial statements (i.e. Assets, Liabilities, Equity). Other significant balances to the extent possible should also tie directly to reported financial statements without any adjustment (e.g. Total Investments, Insurance Liabilities, Retained Earnings, AOCI, etc).

265. The next step is to identify balances related to insurance activities in [Column 3]. For the purpose of 2016 Field Testing, insurance activities are defined as activities of licensed insurers and regulated and unregulated entities that support the insurance activities (for example subsidiaries that provide claims management or asset management acting mainly for the insurance entities). (See also Annex 3.)

266. This will automatically populate the column Other than Related to Insurance Activities.

8.1 BCR and HLA Balance sheet

267. To avoid duplication of the data collected, the GAAP and MAV balance sheet will be collected as part of the information needed to calculate the BCR and HLA.

268. For the purpose of 2016 Field Testing, insurance activities are defined as activities of licensed insurers and regulated and unregulated entities that support the insurance activities (for example subsidiaries that provide claims management or asset management acting mainly for the insurance entities).

8.1.1 Assets

269. The value of assets should be reported using GAAP (as per the consolidated financial accounts) for both the Amounts per Audited Consolidated Financial Statements column and for the Assets Related to Insurance Activities column. The value of assets related to insurance activities should also be reported in line with the section on MAV.

8.1.2 Insurance liabilities

270. The value of insurance liabilities should be reported on the following bases:

a) GAAP, as per the consolidated financial accounts;

b) Current estimates calculated as described in section 6.3. Current estimates should be calculated using the IAIS specified yield curves. Volunteer IAIGs should report the current estimate gross of reinsurance recoverables, as well as the reinsurance recoverable amounts calculated consistently with the gross current estimate of the liabilities.

8.1.3 Non-insurance liabilities and equity

271. The value of non-insurance liabilities and equity should be reported using GAAP (as per the consolidated financial accounts) for both the Amounts per Audited Consolidated Financial Statements column and for the Assets Related to Insurance Activities column. The value of non-insurance liabilities and equity related to insurance activities should also be reported following the MAV approach (section 6).

8.2 MAV Balance Sheet

272. MAV - Reclassification from GAAP [Column 7] is a new addition to the balance sheet Template in 2016. The column should be used to reflect any entries to reclassify amounts from the audited, consolidated jurisdictional GAAP balances as reported in GAAP Valuation – Related to Insurance Activities [Column 3] to the MAV balance sheet. Such reclassification differences may result from consolidation rules, offsetting/netting rules, or variance in other accounting definitions (e.g. separate accounts). All reclassification entries should sum to zero. Volunteer IAIGs should provide narrative explanations for reclassification entries in the Questionnaire.

273. MAV – Related to Insurance Activities balances [Column 8] should reflect the changes in valuation of invested assets or liabilities as specified under MAV approach. The approach to be used for this is Reference Method 2 (see section 6.4.2).

274. Note that offsetting entries for valuation adjustments are calculated fields reported under the equity section of the balance sheet.

275. MAV – Consolidated [Column 9] is a calculated field [Column 2]+[Column 8].

8.3 GAAP Plus Valuation Balance Sheet (GAAP Plus)

276. GAAP Plus Valuation - Reclassification from GAAP [Column 4] is a new addition to the balance sheet Template in 2016. The objective for adding this column is to be able to segregate differences in presentation, or reclassifications, from adjustments to balances as defined under the jurisdictional GAAP Plus examples provided in these specifications. Volunteer IAIGs should record in this [column 4] any amounts representing the transfer from one balance sheet row to another in order to conform to

the format of the balance sheet. For example some line items may be presented on a net basis in audited financial statements but would be required to be reported on a gross basis for purposes of the ICS. These reclassification amounts should not include any valuation adjustments as proposed under the GAAP Plus examples (such as changes to assets or insurance liabilities) or eliminations (such as the elimination of deferred expenses). All reclassification entries should sum to zero. Volunteer IAIGs should provide narrative explanations for reclassification entries in the Questionnaire.

277. The Volunteer IAIG is to report balances on the basis of the GAAP Plus approach in the FT16.BCR & ICS.Balance sheet worksheet, under GAAP Plus Valuation – Related to insurance activities [column 5]. The balances should reflect any reclassification amounts as reported in GAAP Plus Valuation – Reclassification from GAAP [column 4] and adjustments as specified in the applicable jurisdictional GAAP Plus example. The GAAP Plus specifications can be found in section 7.

278. Note that offsetting entries for valuation adjustments are calculated fields reported under the equity section of the balance sheet.

279. GAAP Plus Valuation – Consolidated [Column 6] is a calculated field [Column 2] + [Column 5]

8.4 Balance Sheet Assets

280. General instructions for reporting of asset balances can be found below.

281. Balances in GAAP valuation – Amounts per Audited Consolidated Financial Statements [Column 1] should be reported as per the audited, consolidated financial accounts or per aggregated audited statutory financial statements (in the case of U.S. mutual insurers); in particular for Total Assets and Total Investments.

a) Investments – Adjustments to balances for GAAP Plus and MAV approaches should follow the respective specifications. The offsetting entry representing the sum of all adjustments to investment balances is a calculated field in the equity section of the balance sheet [Investment Adjustment Offset]

b) Assets Held in Separate Accounts – For the GAAP valuation balance in [Column 1] as well as the GAAP Plus valuation balance in [Column 5] the same separate account balance should be reported according to the definition applied under the Volunteer IAIG's jurisdictional GAAP. For purposes of reporting MAV under [Column 8], the definition per the MAV specifications should be applied (see paragraph 49.a)). Any reclassification adjustment should be reflected in [Column 7] MAV - Reclassification from GAAP. Volunteer IAIGs should also provide additional information on separate account assets in the table 'Allocation of assets held in separate accounts', which is a separate table in the worksheet *FT16.BCR & ICS.Balance sheet*.

c) Reinsurance Recoverable Adjustments to balances for GAAP Plus and MAV approaches should follow the respective specifications. Reinsurance recoverables should be reported gross and not netted against insurance liabilities.

d) Deferred Acquisition Costs – The deferred acquisition line item should include all deferred expense balances including Deferred Acquisition Costs, Value of Business Acquired, Deferred Sales Inducements and all similar deferred expense balances. For GAAP Plus and MAV approaches, these amounts are reversed and are adjusted through the related liability balance.

8.5 Balance Sheet Insurance liabilities (and Related Reinsurance Recoverables)

282. The value of insurance liabilities should be reported for the following measures:

a) A detailed table of insurance liabilities by ICS segment is included in the worksheet *FT16.BCR & ICS.Balance sheet*, below the balance sheet. Balances entered in the detailed table populate the insurance liability balance sheet line item. Balances in the Insurance Liabilities table, GAAP Valuation – Gross liabilities [Column 1] and GAAP Valuation – Reinsurance recoverables [Column 2] should be reported as per the audited, consolidated financial accounts.

b) Insurance liability adjustments to balances for GAAP Plus and MAV approaches should follow the respective specifications. Volunteer IAIGs should report insurance liabilities gross of reinsurance recoverables and policy loans.

c) The offsetting entry for valuation adjustments to insurance liabilities is a calculated field reported under the equity section of the balance sheet [Insurance/Reinsurance Liability Offset].

283. For liability balances related to reinsurance:

a) Amounts due on Reinsurance Contracts – Represents premium payable amounts on Reinsurance ceded. Any adjustment amounts to this line item are offset through a calculated field under the equity section of the balance sheet [Insurance Liability/Reinsurance Adjustment Offset]

b) Other Reinsurance Payable – This line item was included to capture reinsurance payable amounts related to Modified Coinsurance and funds withheld reinsurance. Any adjustment amounts to this line item are offset through a calculated field under the equity section of the balance sheet [Insurance Liability/Reinsurance Adjustment Offset]

8.6 Balance Sheet Non-insurance liabilities

284. The value of non-insurance liabilities in GAAP valuation – Amounts per Audited Consolidated Financial Statements [Column 1] should be reported using GAAP (as per the consolidated financial accounts) or per aggregated audited statutory financial statements (in the case of U.S. mutual insurers). Non-insurance liability adjustments to balances for GAAP Plus and MAV approaches should follow the respective specifications. Any adjustment amounts are offset through a calculated field under the equity section of the balance sheet [Non-Insurance Liabilities Adjustment Offset] except as noted below.

8.7 Balance Sheet Equity

285. Provide a breakdown of the components of equity as set out in the balance sheet. Definitions for many of the equity line items can be found in the Capital Resources section. In particular, please note that share premium and contributed surplus are reported separately.

286. Ordinary shares should be reported on a gross basis with Treasury Shares reported at cost on the separate line that has been added to the Template.

287. The value reported as a subset of minority/non-controlling interests (NCI) in the Balance Sheet is limited to NCI that represents a third party ownership interest not in the form of a financial instrument. This form of NCI must also meet the full description from the Capital Resources section (see section 11.3.1).

288. It may be necessary to deduct for any valuation adjustment offset amounts related to GAAP Plus or MAV that were included in NCI. This deduction can be reported in the Adjustment section row "(-)adjustments already included in other equity items".

9 Reconciliation from reported GAAP to GAAP Plus and to MAV

Relevant Worksheets in Template:	*FT16.BCR & ICS.Balance sheet*	*All due 3 August 2016*

289. A table in the *FT16.BCR & ICS.Balance sheet* worksheet has been provided for Volunteer IAIGs to reconcile reported GAAP insurance liability amounts to both MAV and GAAP Plus. This data is being collected in order to understand the significant adjustments applied to reported GAAP in order to produce a current estimate per the specifications for MAV and GAAP Plus valuation approaches.

290. For 2016 Field Testing, data will also be collected in order to identify the significant differences between MAV and GAAP Plus current estimate liabilities. In addition to the impact of the application of different discount rates/curves, additional columns are provided that can be self-defined by each Volunteer IAIG to further highlight other significant differences. The definitions used by a Volunteer IAIG for each of these columns and other relevant information necessary to understand the primary drivers of differences between MAV and GAAP Plus current estimates should be included in the Questionnaire response.

291. Volunteer IAIGs should provide a breakdown of adjustments from reported GAAP to MAV; from reported GAAP to GAAP Plus; and between GAAP Plus and MAV – in each case using the columns provided on a best efforts basis. A zero should be entered for any columns that are not applicable or where data is not available at the level of granularity requested. If the level of granularity is not available, Volunteer IAIGs should make use of the columns labelled 'Other' which, if used, should be supplemented with descriptive information in the Questionnaire (see prior paragraph).

292. Detailed narrative responses in the Questionnaire should also be provided to explain the process that was followed to calculate a current estimate under MAV and GAAP Plus including the purpose, method, significant judgments and any other information that may assist in understanding the nature of any adjustments.

293. For life insurance liabilities, Volunteer IAIGs should report a breakdown of adjustment amounts by the product categories provided.

294. For non-life liabilities, Volunteer IAIGs should aggregate product segments into Non-Life Traditional and Non-Life Non-Traditional. The reconciliation provides for a breakdown of these amounts between Unearned Premium Provisions and Claims liabilities. The Unearned Premium Provision, also referred to as a pre-claims liability, represents the portion of premium written relating to the portion of the policy term for which protection or other service has not yet been provided. Claims liability represents the estimate of costs to settle all reported losses and loss adjustment expenses (LAE) plus an estimate of losses and LAE incurred but not reported.

295. A description of the amount to be entered in each column is provided below:

296. Reconciliation of Reported GAAP to MAV

a) [1 – GAAP Reported] – A calculated field sourced from the Balance Sheet [Column 1]. Insurance liability balance by segment reported on a jurisdictional GAAP basis (or as adjusted for SAP filers under the SAP Plus example of GAAP Plus).

b) [2 – Adjustment due to Reclassification] – Represents any amounts reported in the Balance Sheet [Column 7] MAV - *Reclassification from GAAP*. These amounts represent any required reclassifications from one row to another from reported GAAP to MAV due to differences related to definitions (e.g. separate account), net/gross reporting, scope of group or consolidation accounting.

c) [3 – DAC Adjustment] – Represents the offset amount (debit) resulting from the reversal of deferred expense asset balances in the balance sheet (e.g. DAC, VOBA, DSI).

d) [4 - Contract Boundaries] – Represents the amount of the adjustment related to applying the definition of contract boundaries under MAV versus reported GAAP.

e) [5 - Cash Flows Impact/Update to MAV Assumptions] – Represents the impact to cash flows from updating any assumptions to MAV consistent assumptions. Volunteer IAIGs should separate cash flow [column 5] from discount impact [column 6] on a best efforts basis, but if not feasible the result should be combined in the cash flow column.

f) [6 – Discounting Impact/Update to an ICS Curve] – Represents the amount related to the impact of applying the ICS prescribed curve as defined under the MAV approach to discount insurance liability cash flows (the MAV method to be used for this is Reference Method 2 – see paragraph 273). For non-life segments, the impact of ICS discounting as specified under MAV should be reflected in this column.

g) [7 – Other] – Any additional amounts required to adjust reported GAAP liabilities to MAV. A description and breakdown of any material amounts reported in this column should be provided in the Questionnaire.

h) [8 – MAV] – Calculated field, sum of [column 1 to 7]. The amount should equal the amount reported under MAV - *related to insurance liabilities* [Column 8] on the balance sheet.

297. Reconciliation of Reported GAAP to GAAP Plus

a) [1 – GAAP Reported] – A calculated field sourced from the balance sheet [Column 1]. Insurance liability balance by segment reported on a jurisdictional GAAP basis (or as adjusted for SAP filers under the SAP Plus example of GAAP Plus).

b) [2 – Adjustment due to Reclassification] – Represents any amounts reported in the Balance Sheet [Column 4] GAAP Plus valuation - *Reclassification from GAAP*. These amounts represent any required reclassifications from one row to another from reported GAAP to GAAP Plus due to differences related to definitions (e.g. separate account), net/gross reporting, scope of group or consolidation accounting.

c) [3 – DAC Adjustment] – Represents the offset amount (debit) relating to the reversal of deferred expense asset balances in the balance sheet (e.g. DAC, VOBA, DSI).

d) [4 – Valuation Method Adjustments] – Represents the amount related to moving to a valuation based on the net present value of cash flows. For example, for life insurance the amount related to moving from net to gross premium valuation, reversing deferred profit liabilities, reversing shadow adjustments, removing fair value own credit and transfer risk adjustments for guarantees, etc. Only some, if any, of those examples may be applicable for a particular Volunteer IAIG.

e) [5 – Cash Flows Impact/Update of Assumptions] - Represents the amount related to updating any assumptions to current assumptions under the applicable GAAP Plus method, for example updating locked in assumptions for life insurance. Volunteer IAIGs should separate cash flow [column 5] from discount impact [column 6] on a best efforts basis, but if not feasible the result should be combined in the cash flow column.

f) [6 – Discounting Impact/Update of Rate or Curve] – Represents the amount related to the impact of the update of rates/curves applied to the discounting of cash flows under the applicable GAAP Plus method.

g) [7 – Other] – Any additional amounts required to adjust GAAP reported liabilities to GAAP Plus. Provide a description and breakdown of any material amounts in the Questionnaire.

h) [8 – GAAP Plus (GAAP Rates)] – Calculated field, sum of [column 1 to 7]. The amount should equal the amount reported under GAAP Plus - *related to insurance liabilities* [Column 5] on the balance sheet.

298. Reconciliation of GAAP Plus to MAV

a) [1 – GAAP Plus (GAAP Rates)] – Calculated field, from the GAAP to GAAP Plus reconciliation table [Column 8]. The amount should equal the amount reported under GAAP Plus - *related to insurance liabilities* [Column 5] on the balance sheet.

b) [2 – Discounting Impact/Update to IAIS Curve] - Represents the amount related to the impact of applying the ICS prescribed curve as defined under the MAV approach (Reference Method 2 – see paragraph 273) to discount insurance liability cash flows as calculated under the GAAP Plus valuation approach. Any amounts that were undiscounted for GAAP Plus in

column [1 – GAAP Plus (GAAP rates)], for example certain non-life products, should remain undiscounted for purposes of completing this column.

c) [3 to 5 – GAAP Plus to MAV (user defined)] – In order to understand the significant differences between GAAP Plus and MAV current estimate liabilities, additional columns have been provided that can be defined by Volunteer IAIGs to decompose differences that can be isolated. The definitions for these columns and other relevant information necessary to understand the primary drivers of differences between MAV and GAAP Plus current estimates should be included in the Questionnaire response.

d) [6 – Other] – Any additional amounts required to decompose the difference between GAAP Plus and MAV. Provide a description and breakdown of any material amounts in the Questionnaire response.

e) [7 – MAV] - Calculated field, sum of columns 1 to 6. The amount should equal the amount reported under MAV - related to insurance liabilities [Column 8] on the balance sheet.

f) [8 – GAAP Plus (IAIS rates)] – Calculated field, Sum of columns 1 + 2. This data is being collected for analysis purposes only. It is not used in the GAAP Plus calculation of the ICS ratio.

10 Supplemental Information on Deferred Tax Assets

Relevant Worksheets in Template:	*FT16.Deferred Tax Asset*	*Due 3 August 2016*

299. Volunteer IAIGs are requested to provide a breakdown of the components of the Deferred Tax Asset (DTA) by expiration bucket as provided in the worksheet *FT16.Deferred Tax Asset columns 2-5*. DTAs where recoverability is supported by management actions through tax planning strategies in excess of projected net income should be broken out in the column provided [Column 6].

300. This data should be provided for DTAs based on a jurisdictional GAAP, GAAP Plus and MAV basis.

301. Deferred tax liabilities and asset netting criteria for temporary differences that result under GAAP Plus and MAV should follow the same rules as applicable under the Volunteer IAIG's jurisdictional GAAP.

302. Home Country is the tax jurisdiction of the insurance holding company of the insurance group or financial holding company of a financial conglomerate subject to the ICS.

303. Line items representing the principle components of a DTA are grouped by Home Country and all other Foreign. The Home Country breakout include both domestic and foreign tax credit and carryforward line items to address jurisdictions that require consolidation of both domestic and foreign jurisdictions for tax purposes such as in the U.S.

304. Volunteer IAIGs are requested to provide a further breakdown of material amounts of DTAs in each foreign jurisdiction in the Questionnaire document.

305. The line item Future Tax deductions and carrybacks, should reflect temporary difference arising from valuation differences between Tax and the relevant GAAP/GAAP Plus/MAV in each respective table. The line item should also include amounts to be applied as carrybacks to prior tax periods (where allowable under jurisdictional tax rules).

306. Line items under "Foreign" relate to entities where foreign jurisdictional tax rates are applicable. For certain countries, such as the U.S., this would relate only to foreign entities where earnings are indefinitely reinvested outside the home country.

307. Please break out any material items included in the row "Other" and provide a description in the Questionnaire (e.g. investment related tax credits).

11 Qualifying Capital Resources

Relevant Worksheets in Template:	*FT16.BCR + HLA* *ICS* *FT16.Financial Instruments* *FT16.Non-Paid-Up Cap Resources* *FT16.Encumbered Assets*	*Due* *3 August 2016* *15 September 2016* *3 August 2016* *3 August 2016* *3 August 2016 for BCR Calculation, 15 September 2016 for ICS Calculation*

308. Qualifying capital resources are determined on a consolidated basis for all financial activities and comprise qualifying financial instruments and capital elements other than financial instruments.

309. Qualifying capital resources are subject to adjustments, exclusions and deductions defined further in the following sections. To avoid any double-counting, any item that is deducted from capital resources should not have a risk charge attributed to it in the calculation of the capital requirement.

310. In 2016 Field Testing, the intention is to gather data to enable the IAIS to make informed decisions on:

a) the classification of financial instruments and other capital elements into tiers, and

b) the appropriate capital composition requirements within the tiering framework.

11.1 Financial Instruments issued by Volunteer IAIGs

311. This section is relevant to the completion of worksheet *FT16.Financial Instruments*. The worksheet contains five tables:

a) Table T31 is in the upper left-hand section of the worksheet and provide summary information on financial instruments that qualify as BCR and ICS capital resources, respectively. All of the cells in these tables contain formulae and are populated automatically.

b) Table T32 is on the left-hand side of the worksheet and provides both the BCR and ICS classification results for each financial instrument reported, along with the qualifying amount for each instrument. The columns in this table source information from table T34 on the right-hand section of the worksheet. All of the cells in this table contain formulae

and are populated automatically. Financial instruments qualifying[15] as capital resources will be classified as either ICS Tier 1 Unlimited, Tier 1 Limited or Tier 2 Paid-Up capital, and as BCR Core or Additional capital. If a Volunteer IAIG considers that an instrument is not correctly classified within the worksheet, then this should be noted within the Questionnaire.

c) Table T33 is to the right of table T32 and is the table in which Volunteer IAIGs should report all relevant information on any issued financial instruments. All of the cells in this table are data entry cells.

d) Table T34 is to the right of table T33 and performs an automated classification of each financial instrument. The calculations use information reported in table T33 to assess the features of each financial instrument against the BCR qualification criteria (set out in Section 5 and Annex C of the document "Higher Loss Absorbency Requirement for Global Systemically Important Insurers (G-SIIs)"[16] ("HLA Document") published on 5 October 2015) and ICS qualification criteria (set out in section 11.1.2 of this document). All of the cells in this table contain formulae and are populated automatically. The classification results are then used to populate entries in table T32.

312. The rest of this section contains instructions for Volunteer IAIGs on the completion of table T33, i.e. what data to report and how to report it within the table. It also describes the ICS capital resources framework and how it is applied in table T34 to produce an automated classification of financial instruments.

313. Financial instruments may take a number of different forms including common or ordinary shares, preferred shares, hybrid capital instruments, subordinated bonds or debt, and surplus notes. table T33 column [2] ("Type of Financial Instrument") contains a drop-down menu of different types of financial instruments. For each financial instrument reported, Volunteer IAIGs should select the category that best describes the instrument. Volunteer IAIGs should not make any changes or additions to the list. The category does not influence the assessment of an instrument against the qualification criteria and is only used to facilitate data analysis.

314. Volunteer IAIGs should provide in table T33 all relevant information pertaining to paid-up financial instruments issued by the Volunteer IAIG and included on its consolidated balance sheet (a separate worksheet is dedicated to information on non-paid-up capital items). This includes senior debt issued by a holding company. The assessment of each financial instrument against the BCR and ICS qualifying criteria in table T34 focuses on the substance of the item (i.e. its permanence, availability to absorb losses, subordination and absence of encumbrances and mandatory servicing costs), rather than the legal form of the instrument (e.g. preferred shares or subordinated debt).

[15] In the context of capital resources, qualification is assessed against the criteria listed in sections 11.1.1 and 11.1.2, which will be subject to analysis, further review, and possible amendments.
[16] The document is available on the IAIS website at http://iaisweb.org/index.cfm?event=getPage&nodeId=25233

315. The information reported in table T33 should, to the extent possible, reflect the contractual terms and conditions of the financial instrument, rather than the features of the regulatory and/or legal environment in which it was issued (unless otherwise indicated).

316. Many of the columns in table T33 utilise drop-down menus in order to collect information in a specific format. Volunteer IAIGs should not amend the list of menu items under any circumstances. If Volunteer IAIGs have issued financial instruments with features that cannot be accurately captured within the Template, this should be noted in the Questionnaire.

317. Where a drop-down menu has not been provided (e.g. for dates, values, etc.), Volunteer IAIGs are asked to use the format indicated in the column header. Where a single entry within the worksheet is used to describe the features of multiple instruments (e.g. several common/ordinary share issuances), "various" does not constitute a valid entry for issue date. In this case, Volunteer IAIGs should either split the data into multiple entries by issue date, or provide the earliest such issue date for a combined entry. For perpetual instruments, no maturity date should be specified (i.e. table T33 column [13] should be left blank). When providing the date of any "first ordinary call" (table T33 column [14]), Volunteer IAIGs should provide information in respect of ordinary calls only, rather than extraordinary call rights. For the avoidance of doubt, Volunteer IAIGs should not enter a first call date that is the same as the issue date of an instrument.

318. For each financial instrument reported, Volunteer IAIGs should indicate in T33 column [4] the type of issuing entity. In instances where more than one description may apply to the issuing entity, please indicate the one that is considered most appropriate. The issuing entities listed in the drop-down menu are as follows:

a) Parent non-insurance holding company – this refers to parent holding companies (i.e. ultimate parents or intermediate parents) that do not undertake insurance activities

b) Parent insurance company

c) Insurance subsidiary – this refers to controlled subsidiaries of a parent that undertake insurance activities

d) Special purpose vehicle

e) Non-insurance financial subsidiary – this refers to controlled subsidiaries that undertake financial activities other than insurance, including banking subsidiaries.

f) Other

319. For each financial instrument reported, Volunteer IAIGs should indicate in T33 column [7] whether or not an instrument was issued by a consolidated subsidiary of the IAIG and is held by third parties (including those that generate a non-controlling interest). Volunteer IAIGs are requested to provide additional information on such instruments in columns [43] to [52] of table T33. Due to the

non-fungible nature of these instruments, the IAIS is collecting this additional information in order to inform future policy discussions on the potential need for a limit on their inclusion in qualifying capital resources.

320. When providing information on the distribution rate of a financial instrument in T33 column [20] (e.g. the coupon rate of a debt instrument), "various" is not a valid input to simultaneously describe the distribution rate of multiple instruments. Where financial instruments have different distribution rates, Volunteer IAIGs should report information on those instruments in separate entries.

321. Volunteer IAIGs are asked to provide information on any principle loss-absorbency mechanisms (i.e. write-down or conversion features) that an instrument possesses in T33 columns [21] to [24]. Please only provide information in columns [22] and [24] if relevant. If an instrument does not currently possess one of these features, but it is expected to be replaced by an instrument with one of these features upon redemption (for example, due to changes in local jurisdictional requirements), please indicate this in T33 columns [25] and [26].

322. Volunteer IAIGs are asked to provide information on requirements for supervisory approval of the redemption or repurchase of a financial instrument prior to contractual maturity in T33 column [27]. Redemption refers to the repayment, in whole or in part, of an investor's principal in a financial instrument at the issuing IAIG's option at any time prior to or at contractual maturity. This redemption right (i.e. call option) resides only with the issuer. Repurchase refers to an open market purchase of an IAIG's own financial instrument at market prices through a tender offer by private agreement with investors. Redeemed or repurchased financial instruments are cancelled by the issuer.

323. Volunteer IAIGs should provide information on any special conditions that apply to a financial instrument as it nears maturity in T33 columns [28] and [29]. This could include lock-in (i.e. suspension of repayment or redemption where there is non-compliance with a regulatory capital requirement), as specified in the legal terms of an instrument, or amortisation of the amount that can be recognised as qualifying capital. Amortisation is normally a feature of the local regulatory jurisdiction rather than being specified within the terms of an instrument. If the special conditions are other than a lock-in clause or amortisation, please specify 'Other' and provide additional details in the Questionnaire.

324. For dated financial instruments that do not have a lock-in feature, the amount recognised as qualifying ICS capital resources will be amortised from 100% to 0% on a straight-line basis in the final five years prior to effective maturity, while the amount recognised as qualifying BCR capital resources will be amortised from 100% to 0% on a straight-line basis in the final five years to contractual maturity (the ICS amortisation calculations are applied automatically in columns [40] and [41] of table T34 and the BCR amortisation is applied automatically in columns [43] and [44] of table T34).

325. For each financial instrument reported, Volunteer IAIGs should provide the Par (Face) Value of the issued instrument in T33 column [30], and any share premium associated with the instrument in T33 column [31]. Volunteer IAIGs should not report the Par (Face) Value net of Treasury Stock or direct investments in own financial instruments as this information is captured elsewhere in the

Template. However, in situations where the Volunteer IAIG has redeemed or repurchased a portion of a financial instrument, the amount reported should be the Par Value of the outstanding portion of the instrument. In cases where a Volunteer IAIG is required by its local regulator to amortise the financial instrument's Par Value, the amount reported should be the Par Value before amortisation. This is because the IAIS will apply its own amortisation calculation in the Template. For a financial instrument that was issued by a consolidated subsidiary to third parties (i.e. for which the entry for T33 column [7] is "Y"), a Volunteer IAIG should report only its share of the Par Value and share premium associated with the instrument.

326. For debt issued by a parent non-insurance holding company, Volunteer IAIGs should indicate the amount of issuance that has been 'down-streamed' into insurance subsidiaries in T33 column [38]. Down-streaming refers to a situation where a parent non-insurance holding company issues an instrument directly to third party investors and then uses the proceeds to invest in its insurance subsidiary.

327. Table T33 columns [40]-[41] apply specifically to financial instruments issued out of a Special Purpose Vehicle ("SPV"). If an instrument was not issued out of an SPV, please select "N/A" from the drop-down menu.

328. The columns in table T34 contain a formula-based assessment against the qualifying BCR and ICS criteria for each financial instrument reported. These columns are populated automatically and Volunteer IAIGs should not manually enter any information in these columns. Each column header provides a brief description of the criterion being tested. The specific criteria references are provided above the column headers.

329. The outcome of the assessment against each criterion is specified as "Pass", "Fail" or "ERROR". A minimum amount of information must be provided by Volunteer IAIGs in table T33 in order for the automated classification algorithm to accurately classify a financial instrument as BCR or ICS capital resources. The assessment will return "ERROR" if the information provided is insufficient, or is entered in an incorrect format. Such error messages can be used by Volunteer IAIGs to identify whether amendments or additional data need to be provided in table T33. Volunteer IAIGs are encouraged to submit completed Templates that are free of error messages. If a Volunteer IAIG cannot determine the reason behind an error message then this should be explained in the Questionnaire.

11.1.1 Volunteer IAIG Classification of Financial Instruments as BCR Core and Additional Capital Resources

330. The classification of financial instruments as BCR Core and Additional qualifying capital resources, as well as adjustments and exclusions, are described in the BCR Document. Those details are not repeated in these Technical Specifications.

331. The naming convention for BCR Core and Additional criteria listed above table T34 in worksheet *FT16.Financial Instruments* is as follows:

a) There are nine instrument criteria that apply to BCR Core capital, numbered Ci. to Cix.

b) There are seven instrument criteria that apply to BCR Additional capital, numbered Ai. to Avii.

11.1.2 Classification of Financial Instruments as ICS Tier 1 and Tier 2 Capital Resources

332. The relevant criteria for classification of financial instruments as ICS Tier 1 and Tier 2 capital resources for the purposes of 2016 Field Testing are set out in the following sections. These qualification criteria are assessed in table T34 in worksheet *FT16.Financial Instruments*.

11.1.2.1 Tier 1 Financial Instruments issued by the Volunteer IAIG directly

333. For the purposes of 2016 Field Testing, financial instruments will qualify as Tier 1 capital for which there is no limit (referred to as "Tier 1 unlimited" in worksheet *FT16.Financial Instruments*) if all of the following criteria are met:

a) The instrument is fully paid-up.

b) The instrument is in the form of issued capital such that it is the first instrument to absorb losses as they occur.

c) The instrument represents the most subordinated claim in a winding-up of the Volunteer IAIG where the holder is entitled to a claim on the residual assets proportional to its share of the issued share capital after all claims have been repaid, and which is not subject to a fixed or capped amount.

d) The instrument is perpetual (i.e. it does not have a maturity date).

e) The principal amount of the instrument is not repaid outside winding-up, other than by means of discretionary repurchase permitted under national law, which is subject to prior supervisory approval.

f) There is not an expectation created at issuance by the Volunteer IAIG, or through the terms of the instrument, that the Volunteer IAIG will repurchase or cancel the instrument, or that such action will receive supervisory approval.

g) There are no circumstances under which a distribution is obligatory (non-payment is, therefore, not an event of default).

h) Distributions are paid out of distributable items, including retained earnings (i.e. distributions should reduce equity rather than the profit / loss of the current year).

i) The instrument is neither undermined nor rendered ineffective by encumbrances. In particular, priority of claims should not be compromised by guarantees or security arrangements given by either the Volunteer IAIG or another related entity over which the Volunteer IAIG exercises control or significant influence, for the benefit of investors.

j) Neither the Volunteer IAIG nor a related party over which the Volunteer IAIG exercises control or significant influence has purchased the instrument, nor has the Volunteer IAIG directly or indirectly funded the purchase of the instrument.

k) The paid-in amount is recognised as equity capital (i.e. not recognised as a liability) where a determination that liabilities exceed assets constitutes a test of insolvency.

334. For the purposes of 2016 Field Testing, financial instruments will qualify as Tier 1 capital for which there is a limit (referred to as "Tier 1 limited" in worksheet *FT16.Financial Instruments*) if all of the following criteria are met:

a) The instrument is fully paid-up.

b) The instrument is subordinated to policyholders and other non-subordinated creditors and holders of Tier 2 capital instruments but may rank senior to holders of Tier 1 capital instruments for which there is not a limit.

c) The instrument is perpetual (i.e. it does not have a maturity date).

d) The instrument does not contain a step-up or another incentive to redeem.

e) The instrument is only callable at the option of the issuer after a minimum of five years from the date of issue (i.e., the instrument is not retractable by the holder) and prior supervisory approval is required for any redemption.

f) The instrument may be repurchased by the issuer at any time with prior supervisory approval.

g) There is not an expectation created by the Volunteer IAIG, or through the terms of the instrument, that the Volunteer IAIG will repurchase the instrument or exercise any right to call the instrument, or that the repurchase or redemption will receive supervisory approval.

h) The Volunteer IAIG has full discretion at all times to forego or cancel distributions (i.e. dividends and coupon payments are non-cumulative). The IAIG's obligation to pay missed distributions is forever extinguished and non-payment is not an event of default.

i) Distributions are paid out of distributable items, including retained earnings (i.e. distributions should reduce equity rather than the profit / loss of the current year).

j) The instrument does not have distributions that are tied or linked to the credit standing or financial condition of the Volunteer IAIG or another related entity, such that those distributions may accelerate winding-up.

k) The instrument is neither undermined nor rendered ineffective by encumbrances (in particular, priority of claims should not be compromised by guarantees or security arrangements given by either the Volunteer IAIG or a related entity over which the Volunteer IAIG exercises control or significant influence, for the benefit of investors.

l) Neither the Volunteer IAIG nor a related party over which the Volunteer IAIG exercises control or significant influence has purchased the instrument, nor has the Volunteer IAIG directly or indirectly funded the purchase of the instrument.

m) If jurisdictional insolvency law includes a test of whether liabilities exceed assets, then the instrument is not treated as a liability for the purpose of that test.

n) The instrument cannot possess features that hinder recapitalisation, such as provisions that require the issuer to compensate investors if a new instrument is issued at a lower price during a specified time frame.

o) If the instrument is not issued out of an operating entity or the holding company of the Volunteer IAIG (e.g. it is issued out of an SPV), proceeds must be immediately available without limitation to an operating entity or the holding company of the Volunteer IAIG in a form that meets or exceeds all of the other criteria for inclusion in Tier 1 Capital for which there is a limit (i.e. the SPV may only hold assets that are intercompany instruments issued by the IAIG or a related entity with terms and conditions that meet or exceed the criteria for Tier 1 Capital for which there is a limit).

11.1.2.2 Tier 2 Financial Instruments issued by the IAIG directly

335. For the purposes of 2016 Field Testing, financial instruments will qualify as Tier 2 Paid-Up capital resources (subject to a limit – see section 11.5) if all of the following criteria are met:

a) The instrument is fully paid-up.

b) The instrument is subordinated to policyholders and other non-subordinated creditors of the Volunteer IAIG.

c) The instrument has an initial maturity of at least five years with its effective maturity date defined to be the earlier of:

i. the first occurrence of a call option together with a step-up or other incentive to redeem the instrument; and

ii. the contractual maturity date fixed in the instrument's terms and conditions.

d) The instrument's availability to absorb losses as it nears its effective maturity is captured by either:

   i. decreasing the qualifying amount of the instrument from 100% to 0% on a straight-line basis in the final five years prior to maturity; or

   ii. the existence of a lock-in clause, which is a requirement for the Volunteer IAIG to suspend repayment or redemption if it is in breach of its applicable regulatory capital requirement or would breach it if the instrument is repaid or redeemed.

e) The instrument is only callable at the option of the issuer after a minimum of five years from the date of issue (i.e. the instrument is not retractable by the holder) and prior supervisory approval is required for any redemption prior to contractual maturity.

f) The instrument may be repurchased by the issuer at any time with prior supervisory approval.

g) There is not an expectation created by the Volunteer IAIG, or through the terms of the instrument, that the Volunteer IAIG will repurchase the instrument or exercise its right to call the instrument, or that the repurchase or redemption will receive supervisory approval.

h) The instrument does not have distributions that are tied or linked to the credit standing or financial condition of the Volunteer IAIG or another related entity, such that those distributions may accelerate winding-up.

i) The instrument does not give holders rights to accelerate the repayment of future scheduled principal or coupon payments, except in winding-up.

j) The instrument is neither undermined nor rendered ineffective by encumbrances. In particular, priority of claims should not be compromised by guarantees or security arrangements given by either the Volunteer IAIG or a related entity over which the Volunteer IAIG exercises control or significant influence, for the benefit of investors.

k) Neither the Volunteer IAIG nor a related party over which the Volunteer IAIG exercises control or significant influence has purchased the instrument, nor has the Volunteer IAIG directly or indirectly funded the purchase of the instrument.

l) If the instrument is not issued out of an operating entity or the holding company of the Volunteer IAIG (e.g. it is issued out of an SPV), proceeds must be immediately available without limitation to an operating entity or the holding company of the Volunteer IAIG in a form that meets or exceeds all of the other criteria for inclusion in paid-up Tier 2 capital resources (i.e. the SPV may only hold assets that are intercompany instruments issued by the Volunteer IAIG or a related entity with terms and conditions that meet or exceed the criteria for paid-up Tier 2 capital resources).

11.2 Non-Paid-Up Capital Resources

336. This section is relevant to the completion of the worksheet *FT16.Non-Paid-Up Cap Resources*. The worksheet contains three tables:

a) Table T35 is in the upper left-hand section of the worksheet and provides summary information on financial items, contracts and arrangements that qualify as BCR and ICS capital resources, respectively. All of the cells in this table contains formulae and are populated automatically.

b) Table T36 is below table T35 and is the table in which Volunteer IAIGs should report all relevant information on non-paid up capital resources. All of the cells in this table are data entry cells, except for those in column [22], which performs an automated assessment of each non-paid up item against the qualifying criteria set out below.

337. Non-paid-up capital items may take a number of different forms, including unpaid preference shares, unpaid subordinated debt, letters of credit, guarantees and mutual member calls.

338. Volunteer IAIGs are asked to provide information regarding any non-paid-up items in columns [1] to [21] of table T36. Volunteer IAIGs should indicate the expected classification that the item would be afforded under the ICS framework, if the item was paid-up, as well as the expected ICS qualifying amount, in T36 columns [20] and [21], respectively. Volunteer IAIGs should also indicate the expected classification that the item would be afforded under the BCR, if the item was paid-up, as well as the expected BCR qualifying amount, in T36 columns [18] and [19], respectively.

339. For 2016 Field Testing, financial items, contracts and arrangements will qualify as Tier 2 Non-Paid Up capital resources (subject to a limit – see section 11.5) if all of the following criteria are met:

a) The item has been approved by the supervisor as satisfying all relevant criteria as to its characteristics and amount.

b) The item is callable on demand by the Volunteer IAIG and is not subject to any contingencies or conditions that prevent or act as a disincentive to the call being made or satisfied.

c) When called, the item becomes a financial instrument that meets in full the criteria for inclusion in Tier 1 capital resources (or Tier 2 Paid-Up) or as an element within Tier 1 capital resources.

d) The item is legally enforceable in each relevant jurisdiction.

e) The counterparty to the contract to provide capital resources is able and willing to pay the agreed amounts when called upon by the Volunteer IAIG.

f) The item is neither undermined nor rendered ineffective by encumbrances.

g) The Volunteer IAIG is under a duty to notify the supervisor of any changes of fact or circumstance that could affect the supervisor's approval of the item.

340. Since non-paid-up financial items and all "in-kind" (non-cash) payments are expected to be subject to supervisory approval, Volunteer IAIGs should provide full details of the nature of the arrangements and any special regulatory conditions (including supervisory approvals and regulatory limits) that apply in the Questionnaire.

11.3 Capital Elements other than Financial Instruments

341. Capital elements other than financial instruments that qualify as capital resources for BCR and/or ICS are captured in worksheets *FT16.BCR+HLA* and *ICS*. As these items may vary by local jurisdiction (in both type and designation), the information is collected for both MAV and GAAP Plus approaches for the ICS. These worksheets source information from other parts of the Template to avoid the collection of duplicate data. Where the treatment for a particular element is not clear in the Technical Specifications or there is uncertainty with respect to the treatment, interpretation or classification of an element (e.g. significant expert judgment is required), please provide additional details, relevant assumptions and rationale in the Questionnaire.

11.3.1 Capital elements other than Financial Instruments for ICS

342. For the purposes of 2016 Field Testing, Tier 1 capital elements other than financial instruments include the following items:

a) Retained earnings: the accumulated balance of income less losses resulting from operations, including earnings retained as surplus held in the participating policyholders' equity account for joint stock companies, and in the non-participating account for mutual companies.

b) Share premium resulting from the issuance of instruments included in Tier 1 and other forms of contributed surplus earned from sources other than profits (e.g. members' contributions and initial funds for mutual companies and other contributions by shareholders in excess of amounts allocated to share capital for joint stock companies).

c) Accumulated Other Comprehensive Income (AOCI), including an AOCI adjustment for GAAP Plus as defined in the following section on GAAP Plus AOCI Adjustment (section 11.3.2).

d) Unrestricted reserves as defined in section 11.3.3 on Regulatory Reserves below.

e) The fair market value of equity-settled employee stock options provided that a corresponding expense is recorded in the profit and loss account of the Volunteer IAIG under applicable accounting standards.[17,18]

f) Non-controlling interests (NCI), other than financial instruments issued by a consolidated subsidiary to third party investors, that are generated by an equity investment in an entity that is, for example, structured as a limited partnership (LPs) or a limited liability company (LLCs), and that are available to absorb losses from any source in the same way as other Tier 1 capital instruments or elements.

343. Tier 2 capital elements other than financial instruments include the following:

a) Share premium resulting from the issuance of instruments included in Tier 2 Paid-Up capital resources.

b) Restricted reserves as defined in section 11.3.3 on Regulatory Reserves below.

c) Up to 50% of each net pension plan surplus asset, net of any eligible Deferred Tax Liability (DTL), excluded from Tier 1 Capital.

d) Current realisable value of net DTA that relies on the future profitability of the IAIG and that has been deducted from Tier 1 capital resources.

e) Current realisable value of computer software intangibles (net of amortisation) deducted from Tier 1 capital resources.

11.3.2 GAAP Plus AOCI Adjustment

344. For purposes of 2016 Field Testing, data is being collected in respect of GAAP Plus in order to evaluate a possible adjustment to capital resources to address asymmetrical valuation of assets and liabilities. For Volunteer IAIGs submitting Solvency II data under GAAP Plus or for jurisdictions that do not record unrealised gains or losses in AOCI, this data is not required. This adjustment would not impact the balance sheet, rather it is recorded as a direct deduction/addition to capital resources. The adjustment represents the amount of net accumulated unrealised gains/losses from certain assets backing long term liabilities. For purposes of Field Testing this amount will be calculated as follows:

a) Starting with net AOCI as reported in the GAAP Plus balance sheet, identify the portion related to net unrealised gains/losses on Available for Sale (AFS) fixed income portfolio. Then, exclude any unrealised gains/losses relating to the following:

[17] Equity-settled employee stock options refer to contracts under which employees of the IAIG is granted rights to purchase shares of the IAIG at pre-determined strike prices. Employee stock options that can be settled in cash should not be included as Capital Resources.

[18] The granting (and vesting) of equity-settled employee stock options is capital neutral. Once an equity-settled employee stock option is exercised, Capital Resources would increase by the amount paid in by the employee to purchase the underlying shares at the applicable strike price.

i. equity securities

ii. assets that are backing non-life insurance liabilities

iii. assets where it is more likely than not that unrealised gains/losses would be realised through sale, conversion, prepayment, etc. For example, this could include callable bonds (excluding make whole calls), residential mortgage backed securities that are likely to be prepaid, and below investment grade assets.

b) Enter this result in the AOCI adjustment section of the worksheet *FT16.BCR & ICS.Balance sheet*.

345. Volunteer IAIGs following the U.S. SAP Example of GAAP Plus should perform the following steps to calculate an AOCI adjustment:

a) Identify all fixed income assets that are backing life insurance liabilities.

b) Quantify the total unrealised gains/losses by subtracting the value of those assets in GAAP Valuation – Insurance Activities [Column 3] from GAAP Plus Valuation – Insurance Activities [Column 5].

c) Remove all amounts where it is more likely than not that unrealised gains/losses would be realised through sale, conversion, prepayment, etc.

346. Enter the result in the AOCI adjustment section of the worksheet *FT16.BCR & ICS.Balance sheet*.

11.3.3 Regulatory reserves

347. This section describes the reporting and treatment of regulatory reserves within ICS capital resources for the purposes of 2016 Field Testing. Values should be entered in the worksheet *FT16.BCR & ICS.Balance sheet*, rows [72] and [74].

348. Unrestricted reserves are reserves or profits accumulated by the Volunteer IAIG that are unappropriated and available to absorb losses from any source in the same way as other Tier 1 capital instruments or elements. Further, reserves that have been appropriated or specifically allocated under legislative or supervisory authority for a particular risk or subset of risks and that may become unrestricted may be classified as unrestricted reserves, subject to the following conditions:

a) Supervisory authority re-characterises or designates the reserve as unrestricted and available to absorb losses from any source in the same way as qualifying Tier 1 capital instruments or elements. This supervisory re-characterisation or designation is not contingent upon a specific event or set of circumstances. The release of the reserve generates retained earnings and is subject to supervisory notification or approval.

b) Where supervisory notification or approval is required:

i. The circumstances of such supervisory notification or approval occurs under going concern conditions.

ii. Supervisory approval would not be unreasonably withheld as evidenced by prior approvals or explicit supervisory acknowledgement that approval would not be unreasonably withheld.

349. Restricted reserves are reserves or profits accumulated by the IAIG that are appropriated and set aside for a specific subset or class of risks and that would only be released and available to absorb losses relating to a specific subset or class of risks upon a specific event or set of circumstances. In winding-up, restricted reserves would be available to absorb losses related to all policyholder claims.

350. For the purposes of 2016 Field Testing, unrestricted reserves are classified as Tier 1 capital resources and restricted reserves are classified as Tier 2 capital resources.

351. In 2015 Field Testing, Volunteer IAIGs reported several different types of regulatory reserves. The following table lists the reserves that were observed during 2015 Field Testing, and sets out how Volunteer IAIGs should report those reserves within 2016 Field Testing.

Table 7. Treatment of specific types of reserves

Reserve	Treatment
Provision for Bonuses and Rebates (Germany)	Unrestricted (Tier 1)
FX Volatility Reserve (Chinese Taipei)	Restricted (Tier 2)
Legal Capital Reserve and Special Capital Reserve for Revaluation Increments of Property (Chinese Taipei)	Unrestricted (Tier 1)
Special Claim Reserve (Chinese Taipei)	Restricted (Tier 2)
Claim Fluctuation Reserve (Chinese Taipei)	Unrestricted (Tier 1)
Emergency Risk Reserve (Korea)	Restricted (Tier 2)
Legal Reserve (Korea)	Unrestricted (Tier 1)
Reserve for Business Rationalization (Korea)	Unrestricted (Tier 1)
Voluntary Reserve (Korea)	Unrestricted (Tier 1)
Contingency Reserves (Japan) Mortality/Longevity Interest Rate (negative spread) Minimum Guarantees Morbidity and Disability	Unrestricted (Tier 1)
Price Fluctuation Reserve (Japan)	Unrestricted (Tier 1)
Catastrophe Reserve (Japan)	Unrestricted (Tier 1)
Merger reserves (UK)	Unrestricted (Tier 1)
Share Premium Reserve (UK)	Unrestricted (Tier 1)
Asset Valuation Reserve (US Stat)	Unrestricted (Tier 1)
Interest Maintenance Reserve (US Stat)	Unrestricted (Tier 1)

352. Where a Volunteer IAIG has a regulatory reserve that is not included in the table, it is recommended that the IAIG consult with its supervisor to determine the appropriate classification. Furthermore, the Volunteer IAIG should provide a detailed description of the reserve in the Questionnaire.

11.4 Capital Adjustments and Deductions

353. For Field Testing purposes, there are a number of adjustments and deductions from capital. Volunteer IAIGs are asked to report if the adjustments are made directly in the balance sheet valuation of the local jurisdiction and also complete the section 'Information on assets subject to deduction from capital resources under MAV' in worksheet *FT16.BCR & ICS.Balance sheet*. In the worksheet *FT16.Financial Instruments,* Volunteer IAIGs should indicate in table T31 their direct investments in own capital instruments distinguished between Tier 1 and Tier 2 (treasury stock should be included in Tier 1). The deductions apply on both a BCR and ICS basis, so no distinction is made between the two.

11.4.1 Deductions from Tier 1 Capital Resources

354. To the extent that any items have not already been excluded through the valuation approach, the following items will be deducted from Tier 1 capital resources for the purposes of 2016 Field Testing:

a) Goodwill.

b) Intangible assets, including computer software intangibles.

c) Each net defined benefit pension fund that is an asset on the Volunteer IAIG's balance sheet and that cannot be easily and promptly accessed for the own use and on-going operations of the Volunteer IAIG.

d) DTAs that rely on the future profitability of the Volunteer IAIG. DTAs may be netted with associated DTLs only if the DTAs and DTLs relate to taxes levied by the same taxation authority and offsetting is permitted by the relevant taxation authority.

e) Reciprocal cross holdings, arranged either directly or indirectly between financial institutions and that artificially inflate the Tier 1 capital position of the Volunteer IAIG.

f) Direct investments in own Tier 1 capital instruments (indirect investments via the group should have already been eliminated).

g) Reinsurance assets arising from arrangements deemed to constitute non-qualifying reinsurance or arrangements that are either not legally binding or not executed within a six-month grace period from the effective date of reinsurance coverage. Non-qualifying insurance refers to agreements:

i. with entities providing reinsurance that are neither regulated nor subject to risk-based solvency supervision, including appropriate capital requirements; or

ii. that do not provide a sufficient transfer of risk.

h) Secured (encumbered) assets as described in section 11.4.2.

i) The value of equity and debt owned by the Volunteer IAIG in entities that are excluded from the scope of the group.

355. Items a) to c) listed above should be net of any associated DTL that would be extinguished if the item becomes impaired or derecognised under the valuation approach. DTLs are permitted to be netted against DTAs (item d) above) provided that it excludes amounts that have already been netted against items a) to c).

11.4.2 Treatment of Encumbered Assets

356. This section describes the treatment of encumbered assets within 2016 Field Testing. Volunteer IAIGs should provide the following information on worksheet *FT16.Encumbered Assets* in order to deduct from BCR Core capital resources and ICS Tier 1 capital resources the total value of secured/encumbered assets in excess of the sum of:

a) the value of the Volunteer IAIG's on-balance sheet liabilities secured by the encumbered assets; plus

b) the value of the Volunteer IAIG's incremental BCR/ICS (as appropriate) capital requirements for encumbered assets and secured liabilities.

357. For the avoidance of doubt, the incremental BCR/ICS capital requirement is equal to the difference between the BCR/ICS capital requirement of the Volunteer IAIG, and the BCR/ICS capital requirement of the IAIG excluding the encumbered assets and the liabilities they secure. No deduction is required for encumbered assets relating to off-balance sheet securities financing transactions (i.e., securities lending and borrowing, repos and reverse repos) that do not give rise to a liability on the balance sheet.

358. Volunteer IAIGs should also provide additional information in worksheet *FT16.Encumbered Assets* to indicate the pledging activity, the type of pledged asset, as well as the amounts related to the offset in calculating the deduction. The IAIS is collecting this additional information in order to inform future policy discussions on the appropriateness and extent of the deduction for encumbered assets.

11.4.3 Deductions from Tier 2 Capital Resources

359. To the extent that any items have not already been excluded through the valuation approach, the following items will be deducted from Tier 2 capital resources:

a) Reciprocal cross holdings, arranged either directly or indirectly between financial institutions and that artificially inflate the Tier 2 capital position of the Volunteer IAIG.

b) Direct investments in own Tier 2 capital instruments (indirect investments via the group should have already been eliminated).

11.5 Capital Composition Limits

360. Capital composition limits are used within a capital resources framework to appropriately reflect the quality of capital resources and the ability of those resources to absorb losses. Capital composition limits for the ICS will be explicitly tested in the 2016 Field Testing exercise.

361. The calculation of the BCR ratio is subject to the following capital composition limits:

a) Qualifying Additional capital cannot exceed 50% of the BCR capital requirement.

b) Non-paid-up capital items are limited to an amount not greater than 10% of the BCR capital requirement.

362. These limits are applied in worksheet *FT16.BCR+HLA* within the 2016 Field Testing Template.

363. Three capital composition limits applicable to the ICS will be tested in 2016 Field Testing:

a) a limit on Tier 1 Limited capital;

b) a limit on total Tier 2 capital; and

c) a limit on Tier 2 Non-Paid Up capital.

364. The following description of the ICS capital composition limits are for the purposes of 2016 Field Testing only. The basis of application and value of the limits has not been finalised. The limits are applied in the worksheet *ICS*.

11.5.1 ICS limit on Tier 2 Non-Paid Up capital resources

365. For the purposes of 2016 Field Testing, qualifying non-paid up capital items will be limited to an amount not greater than 10% of the ICS capital requirement.

11.5.2 ICS limit on Tier 2 capital resources

366. For the purposes of 2016 Field Testing, qualifying Tier 2 capital resources will be limited to an amount not greater than 50% of the ICS capital requirement.

11.5.3 ICS limit on Tier 1 Limited capital resources

367. There are two options being considered for the limit on Tier 1 Limited capital resources:

a) express the limit as a percentage of the ICS capital requirement; or

b) express the limit as a percentage of net Tier 1 capital resources, which is defined as total Tier 1 capital resources less capital adjustments and deductions.

368. The 2016 Field Testing Template includes functionality to apply the limit on Tier 1 Limited capital resources for both of these options. A 'Limit on Tier 1 Limited' flag is used to toggle between the options from a drop-down menu. The default option in the Template is the limit expressed as a percentage of the ICS capital requirement.

369. The value of the limit on Tier 1 Limited capital resources is still under consideration. Any Tier 1 Limited financial instruments that are in excess of the limit will be included in Tier 2 capital resources (subject to the limit on Tier 2 capital resources). For the purposes of 2016 Field Testing, the limit on Tier 1 Limited capital resources is set as either 10% of the ICS capital requirement or 20% of net Tier 1 capital resources.

12 BCR and HLA related data

Relevant Worksheets in Template:	*FT16.BCR+HLA* *FT16.Additional BCR* *FT16.BCR & ICS.Balance sheet*	*Due 3 August 2016*

12.1 Overview

370. The "IAIS Basic Capital Requirement for Global Systemically Important Insurers (G-SIIs)" ("BCR Document")[19] was published on 23 October 2014. The "IAIS Higher Loss Absorbency for G-SIIs" ("HLA Document")[20] was published on 5 October 2015. The HLA document includes some changes to the BCR relative to the BCR Document published in 2014. All Volunteer IAIGs (including both G-SIIs and other Volunteer IAIGs) are requested to provide information[21] on:

a) BCR Capital Resources (see section 11.1.1 of this document as well as the BCR Document)

b) BCR and HLA Required Capital amounts (in section 12.2 of this document) in order to facilitate monitoring

c) If necessary, refinement of the BCR in line with paragraph 30 of the BCR document, and

d) If necessary, refinement the HLA in line with paragraph 115 of the HLA document.

371. For G-SIIs, submission of data by 3 August 2016, in accordance with the requirements of these Technical Specifications, will meet the requirements for confidential reporting as stated in the IAIS document published on 18 December 2015, "Basic Capital Requirement and Higher Loss Absorbency – Confidential Reporting"[22]. For other Volunteer IAIGs, submission of this data will be relevant to the BCR and HLA and also the Field Testing of the ICS. In particular, the MAV balance sheet will be used for the purposes of the BCR, HLA and ICS. In addition, the BCR and HLA will serve as benchmarks in the development of the ICS along with existing jurisdictional baseline data.

12.2 BCR and HLA Required Capital

372. The calculations for the BCR and HLA Required Capital are automated in the Template.

[19] For the BCR Document see the public IAIS website (http://www.iaisweb.org/page/supervisory-material/financial-stability-and-macroprudential-policy-and-surveillance).
[20] For the HLA Document see the public IAIS website (http://www.iaisweb.org/page/supervisory-material/financial-stability-and-macroprudential-policy-and-surveillance).
[21] For avoidance of doubt, please refer to paragraph 2 of the HLA Document which states: "Together with the Basic Capital Requirement (BCR), the HLA will provide as globally comparable group capital standard that is intended to apply to all G-SIIs."
[22] For the 2015 Confidential Reporting see the public IAIS website (http://www.iaisweb.org/page/supervisory-material/financial-stability-and-macroprudential-policy-and-surveillance).

12.2.1 BCR Overview[23]

373. BCR Required Capital is calculated on a consolidated group-wide basis for all activities. All holding companies, insurance legal entities, banking legal entities and any other companies in the group will be included in the consolidation. Individual non-financial entities within the group may be excluded from the scope of the BCR if the risks of/from those entities are negligible.

374. The BCR Required Capital consists of three basic components:

a) Insurance, including Non-Traditional activities

b) Banking, which refers to regulated banking activities, and

c) Other non-insurance financial activities not currently subject to regulatory capital requirements.

375. In summary, the full BCR Required Capital is provided in formula form in the HLA Document, Annex E. This describes the uplift made from the 2014 requirement to the 2015 (current) requirement. This essentially, with the exception of NI regulatory capital held with respect to regulated banks, reflected applying a 1.33 scale factor to the 2014 regulatory capital requirements. Both the 2014 and updated factors are specified in the HLA document, Annex D.

376. The BCR Required Capital formula for 2015 is:

$$BCR = [TL_{BCR} + TNL_{BCR} + NT_{BCR} + A_{BCR}] + NI\text{-}RB_{BCR} + [NI\text{-}UB_{BCR} + NI\text{-}AUM_{BCR} + NI\text{-}O_{BCR}]$$

where

- $TL_{BCR} = \sum_{i=1}^{4} a_i \, TL_i$ with TL standing for 'Traditional Life'
- $TNL_{BCR} = \sum_{i=1}^{4} b_i \, TNL_i$ with TNL standing for 'Traditional Non-Life'
- $NT_{BCR} = \sum_{i=1}^{4} c_i \, NT_i$ with NT standing for 'Non-Traditional'
- $A_{BCR} = \sum_{i=1}^{3} d_i \, A_i$ with A standing for 'Traditional Life'
- $NI\text{-}RB_{BCR}$ is the BCR required capital for Non-Insurance (NI) Regulated banking
- $NI\text{-}UB_{BCR}$ is the BCR required capital for Non-Insurance (NI) Unregulated banking
- $NI\text{-}AUM_{BCR}$ is the BCR required capital for Non-Insurance (NI) Assets Under Management
- $NI\text{-}O_{BCR}$ is the BCR required capital for Non-Insurance (NI) Other business.

377. For the insurance related activities specific parameters a_i, b_i, c_i and d_i and their related exposures are given in the table below.

[23] Please also refer to the BCR Document, in particular sections 3.3 (noting the factors specified in this section have been updated) and 3.4 as well as Annex E, and the HLA Document, in particular Section 3 and Annexes D and E.

378. The Non-Insurance activities are discussed in more detail in section 12.5 below.

379. A transition period, for the purposes of BCR confidential reporting, is in place for 2016, 2017 and 2018:

a) In 2016 Field Testing, the transitional BCR amount is the sum of the BCR 2014 amount and one third of the increase to reach the BCR 2015 amount.

b) In 2017 Field Testing, the transitional BCR amount will be the sum of the BCR 2014 amount and two thirds of the increase to reach the BCR 2015 amount.

c) From 2018 onwards, the BCR amount will be the BCR 2015 amount.

380. During the transition period the calculation of the HLA insurance component and the HLA NI component will be calculated based on the BCR 2015, rather than the transitional BCR.

12.2.2 HLA Overview

381. Additional details regarding the following are available from to the HLA Document, in particular Sections 4.1 and 4.4.

382. The HLA required capital formula for 2015 is:

$$HLA = HLA\_Bucket_{TL}\, x\, TL_{BCR} + HLA\_Bucket_{TNL}\, x\, TNL_{BCR} + HLA\_Bucket_{NT}\, x\, NT_{BCR} + HLA\_Bucket_{A}\, x\, A_{BCR} + HLA\_Bucket_{NI-RB}\, x\, NI\_RB_{BCR} + HLA\_Bucket_{NI-UB}\, x\, NI\_UB_{BCR} + HLA\_Bucket_{NI-AUM}\, x\, NI\_AUM_{BCR} + HLA\_Bucket_{NI-O}\, x\, NI\_O_{BCR}$$

where

- The HLA-Bucket parameters are factors as given in Table 9 below.
- The exposure to which these factors are applied are the BCR Required Capital amounts computed using the full 2015 outcome.

12.3 BCR and HLA segments, exposure measures and factors for insurance related activities

383. The exposures and factors, for both the 2014 and the 2015 BCR Required Capital calculation are given in the table below.

Table 8. BCR Required Capital Factors and Exposures

BCR segment	BCR proxy measure for risk exposure	Factor	BCR Factor: 2014 value	BCR Factor: 2015 value
Traditional Life (TL)				
Protection life	Net Amount At Risk	a_1	0.06%	0.080%

Participating products	Net Current Estimate	a_2	0.60%	0.80%
Annuities	Net Current Estimate	a_3	1.2%	1.6%
Other life	Net Current Estimate	a_4	0.60%	0.80%
Traditional Non-life (TNL)				
Property	Premium Measure	b_1	6.3%	8.4%
Motor	Net Current Estimate	b_2	6.3%	8.4%
Casualty	Net Current Estimate	b_3	11.3%	15.0%
Other non-life	Net Current Estimate	b_4	7.5%	10.0%
Non-Traditional (NT)				
Variable annuities	Notional Value	c_1	1.2%	1.6%
Mortgage insurance	Risk in Force	c_2	4.0%	5.3%
GICS & Synthetic GICS	Notional Value	c_3	1.1%	1.46%
Other non-traditional	Net Current Estimate	c_4	1.3%	1.73%
Assets (A)				
Credit - investment grade	Fair Value	d_1	0.70%	0.93%
Credit - non investment grade	Fair Value	d_2	1.8%	2.4%
Equity, real estate & non-credit investment assets	Fair Value	d_3	8.4%	11.2%

384. All references to 'Net Current Estimate' in the table above are net of reinsurance ceded.

385. The exposures and factors, for both the HLA Required Capital calculation are given in the table below.

Table 9. HLA Required Capital Factors and Exposures

BCR required capital exposure	**HLA Factors**		
	Low Bucket	**Mid Bucket**	**High Bucket**
TL_{BCR}: Traditional Life insurance	6%	9%	13.5%
TNL_{BCR}: Traditional Non-Life insurance			
A_{BCR}: Assets			
NT_{BCR}: Non-Traditional insurance	12%	18%	27%
$NI\text{-}AUM_{BCR}$: Non-Insurance – Assets Under Management			
$NI\text{-}O_{BCR}$: Non-Insurance – Other			
$NI\text{-}RB_{BCR}$: Non-Insurance – Regulated Banking	8.5%	12.5%	18.75%
$NI\text{-}UB_{BCR}$: Non-Insurance – Unregulated banking	12.5%	18.75%	25%

386. The HLA exposures for insurance related risks are the BCR Required Capital amounts. Consequently, no additional data is required to be collected.

387. The HLA Required Capital amount is computed in the Template for all three buckets.

12.4 BCR data collection for insurance related activities

12.4.1 Assets

388. For the calculation of the BCR Required Capital for assets exposed to Credit risk, Volunteer IAIGs are required to provide the amounts of relevant assets that are of investment grade quality in the *FT16.BCR+HLA* worksheet.

12.4.2 Insurance liabilities

389. For the calculation of the BCR Required Capital for insurance liabilities, Volunteer IAIGs are requested to report, in the *FT16.BCR+HLA* worksheet, the following exposure measures not included on the balance sheet for the relevant insurance liabilities:

a) Written premium;

b) Sums insured for life segments only;

390. In addition for specific sub-segments of insurance liabilities, Volunteer IAIGs are required to provide additional measures as follows:

a) Additional exposure measures for some traditional life insurance liabilities

b) Net Amount At Risk (NAAR) for protection life. NAAR equals to the sum insured minus the Current Estimate, net of reinsurance recoverables, where the sum insured is the sum of all maximum amounts that the insurance group would have to pay out on policies in force within the Protection segment. The NAAR equals the maximum possible pay-outs in excess of the current estimate.

c) Additional exposure measures for some non-traditional insurance liabilities

391. Notional value of financial guarantees included in non-traditional life insurance liabilities. The notional value of variable annuities represents the present value of those pay-outs that are contractually guaranteed to each policyholder as of the valuation date. Before hedging, the main risk of loss in this business relates to declining interest rates and equity market prices. Notional value is deterministic, independent of jurisdictional accounting standards and always results in a positive exposure. The notional value varies as the book of business ages, and captures many of key contract terms, particularly the roll-up rates and the equity market ratchet features.

392. Notional value of a guaranteed investment contract (GIC) represents the present value of principal and interest payments that are contractually guaranteed by the Volunteer IAIG.

393. Net risk in force for the mortgage insurance exposures. Risk-in-force measures the insured outstanding principal of the mortgage loans insured.

12.5 Non-insurance

394. The NI-RB_{BCR} component of the BCR required capital relies on banking sector requirement (the Leverage ratio and Basel III Risk Weighted Assets (RWA)[24] requirements), and is computed as follows:

395. The 2014 BCR calculation is

$$\text{NI-}RB_{BCR} = 3\% \text{ Leverage ratio}$$

396. The 2015 BCR calculation is:

$$\text{NI-}RB_{BCR} = \text{Max [3\% Leverage ratio, 8\% RWA]}$$

397. The NI-UB_{BCR} component of the BCR required capital is computed as follows:

a) The 2014 BCR calculation is:

$$\text{NI-}UB_{BCR} = 3\% \text{ Leverage ratio}$$

b) The 2015 BCR calculation is the 2014 calculation multiplied by a factor of 1.33

398. The NI-AUM_{BCR} component of the BCR required capital is computed as follows:

a) The 2014 BCR calculation is:

$$\text{NI-}AUM_{BCR} = 12\% \text{ of gross income from such activities}$$

b) The 2015 BCR calculation is the 2014 calculation multiplied by a factor of 1.33

399. The NI-O_{BCR} component of the BCR required capital is computed as follows:

a) The 2014 BCR calculation is:

$$\text{NI-}AUM_{BCR} = 12\% \text{ of gross income from such activities (averaged over the most recent three years)}$$

b) The 2015 BCR calculation is the 2014 calculation multiplied by a factor of 1.33

400. For both regulated and non-regulated banking activities, the Basel III Leverage Ratio is to be applied.

[24] This formulation treats regulated banks in aggregate and not separately. In theory this permits offsetting between banks in the calculation. In practice this is considered unlikely to be a concern. If this is shown not to be the case then a review in the future will be considered.

401. Financial activities that are subjected to neither banking nor insurance regulation, such as some securities operations[25], are to be incorporated in the BCR by aggregating existing global capital requirements for such non-bank, non-insurance (NBNI) financial activities. In particular, third party asset management is a material activity for a number of Volunteer IAIGs. For the present Field Testing exercise, the standard indicator method for addressing Operational risk of asset management activities in Basel II[26] is to be applied to such activities, i.e. 12% of gross income from such activities.

402. The above information will be captured as part of the *FT16.Baseline* worksheet.

12.6 BCR Under Stressed Economic Conditions

403. Worksheet *FT16.Additional BCR* will collect information on how the BCR changes under stressed economic conditions. Most of the information in this worksheet will be sourced from other worksheets. Volunteer IAIGs are asked to provide information on BCR asset exposures under the stressed spread conditions for Reference Method 2, as described in the Technical Specifications for MAV.

[25] Some securities operations fall in the scope of either banking or insurance regulation. These are not intended to be included in this paragraph. The IAIS assumes that such operations are already covered by the consideration of the respective sectoral requirements of the insurance-related BCR. Additional consideration may be given in subsequent BCR analysis and calibration to the optimal way to incorporate off-balance sheet securities activities.
[26] Paragraph 654 of the Basel II Comprehensive Version (http://www.bis.org/publ/bcbs128.pdf)

Phase 2 – Additional Instructions for Data Due 15 September 2016

13 Consistent and comparable Margin Over Current Estimate

Relevant Worksheets in Template:	*ICS.MOCE* *ICS.MOCE.Pattern*	*Due 15 September 2016*

404. Consistent with ICP 14, the IAIS is committed to investigate the development of a consistent and comparable margin over current estimate (CC MOCE) to be included in the valuation of insurance liabilities. The CC MOCE would be a component of the valuation of insurance liabilities.

405. For the purposes of the 2016 Field Testing exercise, the IAIS will test two alternative approaches, i.e.:

a) The Cost of Capital MOCE (CoC- MOCE); and

b) The Prudence MOCE (P-MOCE).

406. **The approaches chosen for this Field Testing exercise do not pre-empt the future development of alternative comparable approaches to MOCE. That applies to both the mechanics of the MOCE as well as any factors used in the calculation for the purposes of Field Testing.**

13.1 Cost of Capital MOCE (CoC-MOCE)

407. Under this approach the MOCE could be expressed as:

$$MOCE = Cost\ of\ capital\ \cdot \sum_{t\geq 0} \frac{Expected\ capital\ required\ (t)}{(1+discount\ rate)^t}$$

408. The MOCE should be calculated individually for Life, Health and Non-Life risks.

409. For the purpose of the 2016 Field Testing, the cost of capital to be used is the rate in excess of the relevant risk free rate, which is set to be equal to 5%[27].The expected capital required is defined as the aggregation of the ICS capital requirement for a portfolio of assets and liabilities that minimise the ICS capital requirement (i.e. excluding all hedgeable risks). As a simplified implementation of the assumptions above, the risks to be covered by the expected capital required for the purpose of calculating the MOCE are (this initial step of calculation is embedded in the Template):

[27] The 5% cost of capital is set for the purpose of 2016 Field Testing and will be revisited for future exercises. The cost of capital is determined based on the observed historical risk premia in excess of the risk free rate. In the future the IAIS will consider possible changes to that methodology including, but not limited to, linking the cost of capital to some economic variable(s).

a) Insurance risks (covering Life, Health and Non-Life risks with the adjustment of Premium risk to reflect that, post transfer, the policies expiring during the one-year time horizon will not be renewed)[28]

b) Credit risk related to reinsurance recoverables[29]

c) Operational risk.

410. For the purpose of 2016 Field Testing, the sum of all discounted future expected capital required should be calculated as follow:

a) **Step 1:** allocation of the various components of the ICS capital requirement (e.g. non-life insurance risks, Catastrophe risk, components of life insurance risk, counterparty risk and Operational risk) between life, health and non-life business,

b) **Step 2:** projection of the capital required based on:

i. the Volunteer IAIG's own run-off pattern for life and health insurance liabilities; and

ii. the characteristics of the ICS segments provided by the IAIS for the non-life insurance liabilities.

c) **Step 3:** discounting of the projected ICS capital requirements by applying the risk free rate relevant for the IAIG currency.

d) **Step 4:** application of the cost of capital (5%).

13.1.1 Step 1: Determination of the capital requirement for future period:

411. The ICS capital requirement will be used as a starting point for the determination of the future capital requirement. The allocation of the different components of the projected ICS capital requirement (in particular between Life, Health and Non-Life risks) is performed in the Template.

412. Acknowledging the difference of durations and development between life, health and non-life insurance liabilities, the ICS capital requirement will be allocated between life, health and non-life insurance liabilities in order to project each component according to the relevant projection pattern. (see the 'CoC MOCE calculation' table in the Template). The allocation is automated in the Template, with the exception of the allocation of the Credit risk which requires a manual entry. The allocation is performed as follows:

[28] A more accurate calculation should consider all cash flows within the contract boundaries, so the adjustment using as a proxy 50% of the premium risk charge pre-diversification is a simplification for the purpose of Field Testing.

[29] For the purpose of 2016 Field Testing, credit risk associated with the reinsurance recoverables is deemed the only non-hedgeable component of the credit risk component.

a) The relevant individual charges are retrieved from the relevant ICS components (pre-diversification);

b) A diversified amount is calculated (using the ICS aggregation rules and correlations) and allocated back based on the diversified amount;

c) The catastrophe component is allocated between life and non-life and to the three non-life patterns according to their characteristics;

d) The Life risks (Mortality, Longevity, Lapse and Expenses) are kept separate to allow for different projection patterns;

e) The Health risks will be projected separately according to dedicated projection patterns;

f) The Non-Life risk is allocated between short, medium and long tail based on the characteristics of the ICS segments provided by the IAIS;

g) The Operational risk charge is allocated between life, health and non-life as per its original calculation;

h) The Credit risk charge (associated with reinsurance recoverable) is allocated between life and non-life based on percentage provided by Volunteer IAIGs – **Data entry required**.

13.1.2 Step 2: projection of the capital required

413. The capital that will be required, over the future periods, to cover the run off of the insurance liabilities is calculated based on the current ICS capital requirement and projection patterns used to determine how the required capital will run down over time. The run-off pattern should reflect the run-off of the risks associated with the insurance liabilities. For the determination of the run-off patterns for life and Health risks, only outgoing cash flows (i.e. claims paid and associated expenses) should be taken into account. If separate patterns are provided for the different risks (e.g. mortality, longevity, lapse), the run-off patterns should be calculated using outgoing cash flows excluding the amount not exposed to risk: For example, maturity benefit cash flows for Mortality risk. An alternative proxy for the projection of the required capital based on sums at risk could also be provided in the Template and described in the Questionnaire.

414. Life insurance risks structure for the 2016 Field Testing: the IAIS will collect data to assess how to differentiate the projection pattern for life and health insurance risks. Two dimensions have been selected for this exercise:

a) Currency: Volunteer IAIGs are allowed to differentiate between maximum seven currencies. If a Volunteer IAIG operates in more than seven currency zones, liabilities will have to be grouped as appropriate. The grouping of liabilities should be done based on their similarities regarding first the run-off patterns of the associated insurance risks and second regarding

the level of risk free rate (applied for the discounting of the return to be provided on the future capital requirement).

b) Life insurance risks: all four life insurance risks are separated: mortality, longevity, lapse and expenses. This split by risk might be too granular and not relevant for some businesses. Some risks might be grouped more naturally if associated from the same insurance products. Based on the 2016 data collection the IAIS will assess which split and granularity is more appropriate. If a Volunteer IAIG determines that separate patterns are not relevant or appropriate for different life insurance risks, it could use the same (ultimately a unique) pattern across risks.

c) Health insurance risks: a separate pattern is required for Health risks. As for Life risks, this could be split further by up to seven currencies.

415. Life and health insurance risks data entry: in order to provide the data described above the data entry is split in two steps – **Data entry required**:

a) **Allocation table**: selection of maximum seven currencies. Then for each life insurance risk and a single, combined Health risk, the percentage of the projected capital, for that risk, that should be allocated to each currency. The sum for each risk across currencies should be 100%. This allows a maximum of 35 different patterns (7 currencies x 5 risks). However Volunteer IAIGs might chose to select less than 7 currencies and could use the same pattern for several risks if that represent appropriately their business.

b) **Individual patterns**: entry for the patterns themselves. Patterns to be calculated as the percentage of risks remaining at the end of each year, determined based on cash out flows as described above.

416. For Non-Life insurance risks a similar approach as for the 2015 Field Testing is adopted: the capital requirement is allocated to the ICS segments based on non-life individual risk charges. For each ICS segment, the capital required will be projected based on three run-off patterns (short, medium and long tail) provided by the IAIS[30].

13.1.3 Step 3: Discounting

417. The projected capital requirements are discounted using the risk free rate for the relevant currency. The risk free rate and discount factors are provided in the 'Run off pattern' table. No input from Volunteer IAIG required.

[30] As a trade-off between simplicity and risk sensitivity, three run-off patterns are tested. The three run-off patterns are revised and longer than the patterns used during the 2015 FT. They were developed based on supervisory data

13.1.4 Step 4: Application of the Cost of Capital

418. The 5% cost of capital is applied to the discounted future capital requirements in order to calculate the Coc-MOCE.

13.2 Prudence MOCE (P-MOCE)

419. The P-MOCE is calculated based on the current estimate of insurance liabilities and a proxy for estimation uncertainty. The P-MOCE reflects the risks/uncertainty of the reserve and premium estimates of each Volunteer IAIG. It does not include Operational risk.

420. For Non-Life, the approach is based on avoiding the recognition of future profits. Non-life current estimates have two components: claims liabilities and unearned premium provisions. The latter covers cash flows associated with claims that have not yet occurred while the former covers claims that have already occurred. Given the differing nature of these risks, the P-MOCE for each will be calculated separately. For claims liabilities, where profits take the form of investment income on reserves, this takes the form of a discounting approach. The effect of discounting rises with the length of the cash flows, which is a proxy for estimation uncertainty. For unearned premiums, profits can result from investment and underwriting gains and can be calculated more directly using balance sheet inputs.

421. For non-life claims liabilities, P-MOCE is the difference between discounted and undiscounted claims liabilities as calculated net of reinsurance. These discounted liabilities are already entered on the ICS.Balance Sheet. The undiscounted claims liabilities should be calculated on the same basis but, instead of using the ICS yield curve, a discount rate of 0% should be used. The amounts entered here should tie with the total of the undiscounted net claims liabilities entered on the *ICS.Non-Life type risk* worksheet. The calculation of the MOCE related to the non-life claims liabilities will be floored at zero at the group level (the floor will be embedded in the Template).

422. For non-life Unearned Premium Provision (UPP), significant reporting issues were identified in 2015 Field Testing. Lack of a consistent current estimate for UPP presents difficulties in calculating a consistent MOCE. As such, more detail is being requested to identify inconsistencies in understanding or problems with the definition. While this data is being collected in the MOCE worksheet, this data may be used in analysis on other parts of the Template – particularly the balance sheet. What follows are definitions of the items being asked for as well as basic consistency checks. If there are types of policies for which some of the following assumptions are not appropriate, please identify or elaborate in the Questionnaire. Rows should correspond to 'Policy Year'. That is, the year of policy inception. This is not (necessarily) the same as the year when the policy was bound or when claim(s) are incurred. Numbers in the following paragraphs refer to columns in the table for P-MOCE – Non-Life UPP/Preclaims within the worksheet *ICS.MOCE*.

a) [1] NWP: For years 2013 to 2015, this intended to correspond to the Net Written Premiums entered elsewhere in the Template such as on the Operational risk worksheet. The '2016 and Later' row should only include future business that meets the 'Recognition Criteria' with the ICS (e.g. 'bound but not incepted' business). Do not report the full amount of estimated premiums for 2016. This entry will likely be significant lower than the full expected written premium and could even be zero.

b) [2] Acquisition Costs: There is not, as yet, a standardised definition of Acquisition Costs in the ICS. Some reporting is done on the GAAP Plus worksheet but that necessarily differs by local accounting regime. The function that this column will serve will be to identify expenses that could be considered earned as soon as the policy incepts. Column 6 shows an unearned premium reserve with acquisitions costs earned at same rate as premiums; column 8 shows UPR with acquisition costs earned at inception. All non-acquisition expenses will be earned at the same rate as premiums. Use whatever definition of acquisition costs you think is most appropriate but take care to ensure it is consistent with this function and the entries in later columns.

c) [3]-[5] Amount of NWP by FY: This is for reporting the amount of NWP that has actually been earned in each subsequent financial year. Note that premiums can only be earned in the same (or a later) year than the one in which they were written. Include amounts earned on policies written in '2012 and Prior' in the corresponding row. Premiums from policy years '2016 and Later', by definition, cannot yet have been earned. As a check, the sum of each row should equal the Net Earned Premiums entered on such other tabs as *ICS.Non-Life type risk* and *ICS.Operational risk*. Use the same definition of earning as used elsewhere in the ICS.

d) [6] UPR by PY: For each policy year, premiums that are written that have not yet been earned are considered 'unearned'. Generally speaking, unearned premium reserve (UPR) should not be negative. For a given financial year, the UPR is related to the written and earned premiums as follows: WP – EP = Change in UPR. Note that UPR is distinct from the UPP. For '2012 and Prior', there is not sufficient data in Template to calculate, so UPR must be entered manually. If a company does not write long-duration business, this amount will be zero.

e) [7] DAC: If acquisition costs are assumed to be earned at same rate as premiums, this creates a DAC asset. If there is any Deferred Acquisition Cost on policies written '2012 and Prior', enter accordingly. If a company does not write long-duration business, this amount will be zero.

f) [8] UPR Net of DAC: A UPP is based on future cash-flows. Acquisitions costs, as defined here, have already been paid and so would not be included in UPP. To compare the UPR to the UPP, therefore, Deferred Acquisition Costs should be removed. This is done automatically within the Template based on the previous columns.

g) [9]-[12] Breakdown of CE: A current estimate is the expected present value of future cash flows associated with fulfilling a Volunteer IAIG's obligations under an insurance policy. It includes—but is not limited to -- the unpaid portion of such items as losses, loss adjustment expenses, general expenses, commissions (if any are still unpaid) and premiums (if any have not yet been received). Calculating a current estimate for UPP directly is generally not possible. A common approach is to start with an unearned premium reserve and then remove relevant cash flows. As understood for ICS, the only differences remaining between the UPR and the UPP are thought to be deferred acquisition costs, profit and premiums not yet collected. The last of those items is entered in column 9. These amounts will generally be positive. However, it is possible there are other items not considered that should be added/removed. If that is the case, enter them in column 10. If not, enter zeroes in this column. It is expected for most companies that column 10 will be all zeroes. All remaining cash flows included in the current estimate should go into column 11. These amounts should generally be positive. Column 12 calculates the UPP current estimate by Policy Year. The sum of this column should be the same as the UPP current estimate net of reinsurance as found on the balance sheet. Take care that the sign (positive or negative) of the entries in columns 9 to 11 is consistent with the result in column 12.

h) [13]-[14] The difference between the UPR and the current estimate – after making proper adjustments for acquisition costs, uncollected premiums and, if necessary, other items – is the company's estimate of profitability. This profit will serve as the P-MOCE. An implied discounted Net Combined Ratio is provided in column 14. Please use this as a check on the reasonability of other entries.

i) [15]-[18] These columns make use of the relationship WP – EP = Change in UPR. No entries are needed. Note FY 2012 does not include prior years and 2016 does not include future years. Implied 'Net Earned Premiums' by financial year can be found in column 16. These can be compared to the Net Earned Premiums entered on such other worksheets as *ICS.Non-Life type risk* and *ICS.Operational risk*. UPR in column 18 can be compared against financial statements done in local GAAP or IFRS.

423. For Life and health Insurance liabilities the proposed approach is to use the relevant aggregated stress results at a 99.5% VaR point for each Volunteer IAIG (using the IAIS-prescribed diversification matrices contained in the Template), make reasonable distribution assumptions, estimate the standard deviation based on the assumed distribution and then take a percentage of that standard deviation as the measure of MOCE. This is automated in the Template.

424. For Life and Health risks, a MOCE will be calculated in the Template, using a quantitative method based on Field Testing data submissions. An estimated standard deviation above the current estimate for each Volunteer IAIG will be computed and an agreed percentage of that standard

deviation will be taken as the initial measure of MOCE. The initial value for that percentage will be 66.7%[31]. The required inputs are:

a) The current estimate (Proxy for 50%)

b) The stressed current estimate (Proxy for 99.5%)

c) Assumption of a loss distribution (initially assume to be normal)

425. The MOCE calculation utilises existing balance sheet information without any additional data requests.

[31] The presumption of a Normal Distribution and the initial percentage postulated of 66.7% are set aside for the purposes of 2016 Field Testing and will be revisited for future exercises.

14 The ICS Standard Method

426. This section contains Technical Specifications for completing the worksheets for each of the risks identified for the ICS. The inclusion of the standard method does not prejudge any aspect of the ICS development; rather it provides a basis for continuing discussion and development.

427. The main purpose of testing the ICS standard method in 2016 is to inform the design and calibration of ICS version 1.0, to be finalised by 2017. To this end, the calibrations included in this field test are subject to change as more fundamental calibration work is undertaken over the course of the ICS development. In particular, data is requested from Volunteer IAIGs on Life and Non-Life insurance risks to help with calibration work leading up to ICS version 1.0. Volunteer IAIGs are strongly encouraged to provide as comprehensive a submission as possible for this purpose. Regions where more data is received will benefit from more credible calibration. For regions where less data is provided, there will be reliance on data from other regions and this will require the use of a global bucket with a more prudent calibration.

428. In 2015 Field Testing, only some of the risks were tested using a GAAP Plus approach as well as a MAV approach. For 2016 Field Testing, a GAAP Plus approach is defined for every risk within the standard method in order to facilitate a comparison of the various components under the two valuation bases.

14.1 Approach

429. The approach taken in this standard method is to consider each risk category and determine an approach to measuring that risk which is suitable on an individual basis. Some risks are best measured on the basis of a stress approach. This is particularly the case where a risk could manifest in changes in the values of both assets and liabilities, or where the risk cannot be adequately captured by a single factor or item of the balance sheet (e.g. mortality/Longevity risk, Interest Rate risk). Other risks are measured using a factor-based approach. Cases where this is appropriate include cases where a risk exposure is appropriately captured by a balance sheet item. However, in the case of Catastrophe risk, a stochastic modelling approach also forms part of this standard method as this is likely to provide the greatest level of risk sensitivity and to adequately reflect the risk profile of the Volunteer IAIG.

430. The risks will be combined to recognise risk diversification. This is automatically done in the Template; Volunteer IAIGs do not have to enter any data for the aggregation.

431. For the purpose of 2016 Field Testing, a global approach based on the consolidated effective tax rate is used to derive a notional tax adjustment in the *ICS* worksheet. In order to inform the development of a holistic approach to the tax effects on ICS risk charges, further information is sought through the Questionnaire.

14.2 Calculation methods within the standard method

14.2.1 Look-through

432. For reasons of risk sensitivity and sound risk management, the Look-through approach should apply to indirect investment and insurance arrangements whenever and to the extent possible on the basis of the underlying current exposures at a point in time.

433. When a full Look-through is not possible, a partial Look-through could be applied, along the lines as provided by the Basel III framework.[32] For example, for an investment fund it could be assumed that the fund first invests, to the maximum extent allowed under its mandate, in the asset classes with the highest risk charge, and then continues making investments in descending order until the maximum total investment level is reached.

434. Finally, when no Look-through is possible, the full investment should be considered as unlisted equity.

435. In the context of Market risks, Look-through could be applied, for instance, to collective investment funds, hedge funds, mandatory convertible bonds, etc. in order to identify all the indirect exposures embedded in such instruments. A Look-through approach should be applied to the extent possible, in order to identify which assets are sensitive to the stress-based approaches to measuring risks.

436. In the context of insurance risks, the Look-through approach could be applied to the underlying risk of investments such as single tranche mortality bonds, catastrophe bonds, etc. This is in order to appropriately capture the effect on such instruments of the stress scenarios designed for mortality, longevity, catastrophe events and any other relevant scenario.

14.2.2 Risk mitigation

437. Risk mitigation techniques should be recognised in the ICS capital requirement calculation as long as they meet the following principles:

a) The risk mitigation technique must be legally effective and enforceable in all relevant jurisdictions and there must be an effective transfer of risk to a third party.

b) The contractual arrangement ensures that the risk transfer is clearly defined.

c) The calculation of the ICS capital requirement allows for the effects of risk mitigation techniques through a reduction in requirements commensurate with the extent of risk

[32] http://www.bis.org/publ/bcbs266.htm.

mitigation. It makes reasonable allowance for any basis risk effects due to changes in risk mitigation assumptions and relationships during a stress scenario and there is appropriate treatment of any corresponding risks embedded in the use of risk mitigation techniques (e.g. Credit risk). These two effects should be separated.

d) The calculation should be made on the basis of assets and liabilities existing at the reference date of the ICS calculation.

e) There should be no double counting of mitigation effects.

f) The Volunteer IAIG has, in the event of a default, insolvency or bankruptcy of a counterparty or other credit event set out in the transaction documentation for the arrangement, a direct claim on that counterparty.

g) Providers of risk mitigation should have adequate credit quality (demonstrable through either adequate rating, capitalisation or collateralisation levels) to guarantee with appropriate certainty that the Volunteer IAIG will receive the protection in the cases specified by the contracting parties. Credit quality should be assessed consistently with the definition of credit categories provided in the section on Credit risk.

438. Only risk-mitigation techniques that are in force for at least the next 12 months and that meet the criteria above shall be fully taken into account in the ICS capital requirement. Where risk mitigation techniques are in force for a period shorter than 12 months and meet the qualitative criteria above, the risk mitigation effect is to be taken into account in proportion to the shorter time.

439. Renewal of risk mitigation arrangements with respect to non-life insurance risks may be taken into account if the IAIG expects to renew and the costs of renewal within the time horizon are taken into account. The renewal of the arrangements should be taken into account only if:

a) The renewal is consistent with previous business practice and documented strategy.

b) The renewal is realistic with regards to availability of the arrangement and its cost (that will be reflected on the financial statements).

c) Any additional risk stemming from the risk mitigation arrangement (e.g. Credit risk) is taken into account in the ICS capital requirement.

440. The following principle also applies specifically to the recognition of financial risk mitigation techniques in the ICS:

a) There should be an explicit reference to specific exposures or a pool of exposures.

441. Due to the limited effectiveness of risk mitigation of Operational risk, risk mitigation should not be recognised in the calculation of the ICS risk charge for Operational risk.

14.2.3 Geographical segmentation

442. For a number of risk charges, a geographical segmentation is used in Field Testing:

a) EEA and Switzerland

b) USA and Canada

c) China

d) Japan

e) Other developed markets

f) Emerging markets

443. The following table sets out the definitions of each region.

Table 10. Geographical Segmentation Definitions

Region	Countries included
EEA and Switzerland	Austria, Belgium, Bulgaria, Croatia, Republic of Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom, Iceland, Liechtenstein, Norway and Switzerland
USA and Canada	USA[33] and Canada
China	Mainland China, Macao SAR
Japan	Japan
Other developed[34]	Australia, New Zealand, Israel, San Marino, Korea, Singapore, Chinese Taipei, Hong Kong SAR
Emerging markets	For a list of emerging markets, please see Table E of the Statistical Appendix of the IMF World Economic Outlook April 2016[35]. For completeness, if a country is not listed in the regions above, it should be classified as 'emerging market'.

[33] including NAIC members outside of the 50 United States: American Samoa, Guam, Northern Mariana Island, Puerto Rico and US Virgin Islands

[34] 'Other developed' taken from IMF list of advanced economies minus countries mentioned in other regions as of April 2016.

[35] See http://www.imf.org/external/pubs/ft/weo/2016/01/pdf/text.pdf (accessed on 12 May 2016)

444. Note that that these are not the same regions used in the Equity risk section. The definition of emerging and developed markets used for Equity risk in 2016 Field Testing is based on the FTSE Developed Index and the FTSE Emerging Markets Index.

445. For the purpose of filling in information related to insurance business, the Template should be completed on the basis of location of the risk. Where this information is not available, the location where the business was written may be used as a proxy and information on this should be provided in the related questions in the Questionnaire.

14.2.4 Management actions

446. For the purposes of the standard method in 2016 Field Testing, the definition of "management actions" is confined to:

a) reductions in liabilities for future bonuses or other discretionary benefits, and

b) changes to the level of premiums for contracts in the scope of Health risk, for those premiums falling within the contract boundaries.

447. Therefore the "After management actions" risk charges should only take into account these actions and the "Before management actions" positions must take into account no management actions whatsoever.

448. Management actions should be realistic and cannot be contrary to the Volunteer IAIG's obligations to policyholders or to legal provisions applicable to the Volunteer IAIG.

Example: Management actions considered after an equity stress

Consider a Volunteer IAIG with a portfolio of savings contracts. Those savings contracts do not include any legally enforceable profit participation, however the Volunteer IAIG has an internal policy aiming at redistributing approximately 80% of each year financial profits (when positive) to policyholders. Such a policy leads to an amount of 80 of discretionary benefits in the current estimate figure, corresponding to the maximum loss absorbency that the Volunteer IAIG would be able to pass through to policyholders in case of adverse financial scenarios.

However, for reasons of competitiveness and avoiding mass lapses, the Volunteer IAIG is in practice not likely to pass through the maximum possible amount of loss to policyholders. For instance, while a drop of 40% in the value of its equity investments would have a negative impact of 100 on the value of assets, and normally result in an amount of discretionary benefits reduced to 0 by applying the distribution policy unchanged, the Volunteer IAIG could assume that it would decide to distribute future discretionary benefits for an amount of 30. Therefore, the impact of the shock after management actions would be 100 – (80 – 30) = 50.

This example can be summarised as follows:

Balance sheet before shock:

Assets	**1000**	**Capital resources**	**150**
of which equity	*250*	**MOCE**	**50**
of which other	*750*	**Current estimate**	**800**
		of which discretionary	*80*

Balance sheet after shock, before management actions:

Assets	**900**	**Capital resources**	**50**
of which equity	*150*	**MOCE**	**50**
of which other	*750*	**Current estimate**	**800**
		of which discretionary	*80*

Balance sheet after shock, after management actions:

Assets	**900**	**Capital resources**	**100**
of which equity	*150*	**MOCE**	**50**
of which other	*750*	**Current estimate**	**750**
		of which discretionary	*30*

Example: Management actions after a mortality stress

Consider a portfolio of whole life policies, with contractually fixed premiums and a possibility (but no obligation) for the Volunteer IAIG to annually revalue the guaranteed capital. Each year the Volunteer IAIG produces a P&L account for this portfolio, and makes a decision on the revaluation of guarantees in such a way that after revaluation, the profit (if any) is half the profit before revaluation (in case of a loss, no revaluation of guarantees is applied). At the calculation date, the level of current estimate is -50, of which -100 for guaranteed benefits, and +50 of discretionary benefits (reflecting the redistribution of 50% of future profits to policyholders through revaluations). The application of an instantaneous mortality shock would lead to a rise in the current estimate (for guaranteed benefits) from -100 to -20; without any change to its distribution policy (50% of profits), the amount of current estimate relating to discretionary benefits would drop from +50 to +10. However, in order to preserve its profitability, the Volunteer IAIG would in such a case decide a complete freeze in revaluations, and therefore reduce the current estimate of discretionary benefits to 0.

At the end, the effect of the mortality shock before management actions would be (-20+50) – (-100+50) = 80. After management actions, it would be (-20+0) – (-100+50) = 30. The loss absorbing

effect of management actions is therefore 50 (corresponding to the full initial amount of the current estimate relating to discretionary benefits).

Balance sheet before shock:

Assets	**100**	**Capital resources**	**140**
		MOCE	**10**
		Current estimate	**-50**
		of which discretionary	*50*

Balance sheet after shock, before management actions:

Assets	**100**	**Capital resources**	**60**
		MOCE	**10**
		Current estimate	**30**
		of which discretionary	*50*

Balance sheet after shock, after management actions:

Assets	**100**	**Capital resources**	**110**
		MOCE	**10**
		Current estimate	**-20**
		of which discretionary	*0*

14.2.5 Margin Over Current Estimate (MOCE)

449. All stress-based calculations should include only current estimates in determining the Net Asset Value (NAV). Factors applied to insurance liabilities should only be applied to current estimates. No MOCE should be included.

14.3 Insurance risks

14.3.1 Grouping of Policies for Life Risks

450. A stress-based approach will be used for the 2016 Field Testing to calculate the risk charge for a number of insurance risks. To ensure consistency between the pre-stress and post-stress cash flows, where the stress-based approach is used, the projections of the stressed cash flows should be conducted at the same level of granularity as the pre-stress cash flows. In most cases, it is expected that the pre-stress projections should be done for each policy individually. However, where the pre-stress cash flows have been projected by applying some grouping of policies, to ensure consistency, the same grouping of policies should be applied to the stressed cash flows.

451. For some policies, an upward stress may produce an increase in risk charge, while for others a downward stress may result in an increase in risk charge. Even if cash flow projections are mostly performed at a policy level, to determine whether to apply an upward or a downward stress, it is necessary to decide on the appropriate grouping of policies. The level of prudence of the resulting risk charge would thus depend on the granularity of the policy groupings adopted by the Volunteer IAIG.

452. From a practicality standpoint, grouping by portfolios of products (or policies) exposed to homogeneous insurance risks within the class should be applied. In deciding on the appropriateness of grouping of policies, the Volunteer IAIG should ensure that portfolios of products (or policies) exposed to homogeneous insurance risk are grouped together. For instance, for the determination of Lapse risk charge, lapse supported and lapse sensitive products should not be grouped together. In the determination of the mortality and Longevity risk charge, products that are subject to Mortality risk should not be grouped with products subject to Longevity risk. Feedback is sought in the Questionnaire related to the grouping used by the Volunteer IAIG.

14.3.2 Supplementary data collection for Insurance risks

453. In order to determine an appropriate calibration level for the various insurance risks, granular historical data is requested from Volunteer IAIGs (see sections 19 and 20 for details). To the extent possible, Volunteer IAIGs are encouraged to provide comprehensive data for this calibration exercise, in order to enable an objective and sound calibration of stresses for geographic regions that are relevant to them.

454. For the Health risk charge, a data collection was conducted from December 2015 to January 2016. That data was used to determine the initial calibrations used for the Health risk charge in 2016 Field Testing. 2016 Field Testing is seen as an opportunity not only to test, but also to refine this calibration, by once more giving the opportunity to Volunteer IAIGs to provide historical data on their Health products, according to the same format as in January 2016. Therefore, Volunteer IAIGs are once again encouraged to provide as comprehensive data as possible for this second run of the calibration exercise, in order to refine the stresses for geographic regions that are relevant to them. Volunteer IAIGs who have already responded to this Health request need not re-submit the same data that was previously provided, but may choose to respond again if updated or improved data (e.g. improved data quality, or data for regions not previously submitted) is available.

455. In the absence of sufficient and reliable data, calibration for the insurance risks will be based mostly on supervisory judgment that is likely to incorporate an element of prudence to account for the uncertainty surrounding the calibration process leading up to ICS version 1.0. Regions for which more data is received will benefit from more credible calibration. For regions with less data provided, there will be reliance on data from other regions and this will require the use of a global bucket with a more prudent calibration.

456. Separate Templates have been distributed to Volunteer IAIGs for the purposes of these requests.

14.3.3 Mortality Risk

Relevant Worksheets in Template:	*ICS.Life type Risk*	*Due 15 September 2016*

457. For Mortality risk, a stress-based approach is applied in 2016 Field Testing. Under this approach, the value of the assets and the liabilities after the stress should reflect the impact of these risk mitigating mechanisms.

458. The following components could be included within a stress-based approach to Mortality risk:

a) Stress to the level of mortality

b) Stress to the trend in which mortality is expected to develop

c) Stress to the volatility of mortality rates.

459. Catastrophe Mortality risk is addressed as part of Catastrophe risk.

460. For the purposes of 2016 Field Testing, Volunteer IAIGs should estimate the risk charge for Mortality risk by stressing the level of mortality rates only. Further analysis will be done to determine whether other components could be allowed for either explicitly or implicitly.

461. The Mortality risk calculation only applies to those policies that are subject to Mortality risk.

462. Volunteer IAIGs may take into account management actions in the calculation of the Mortality risk charge. The effect of such management actions should be recorded separately in the worksheet *ICS.Life type risk* to enable a comparison of the change in Net Asset Value (NAV) before and after management actions. In the Questionnaire, Volunteer IAIGs are also asked to provide a description of management actions taken, along with documentation of its internal policies and/or procedures that would allow for such actions.

463. The Technical Specifications for Mortality Risk apply both to the MAV and GAAP Plus approaches. This section has been written from the perspective of the MAV approach; while somewhat different valuation data might be input for the GAAP Plus approach, the two approaches included in 2016 Field Testing are fundamentally the same for Mortality risk.

14.3.3.1 Geographical Segmentation

464. Volunteer IAIGs should provide data by the following geographical groupings:

a) EEA and Switzerland

b) US and Canada

c) China

d) Japan

e) Other developed markets

f) Emerging markets

14.3.3.2 Input data required

465. Input data required are:

a) The base NAV, i.e. value of assets less insurance liabilities before applying the prescribed shock, net of reinsurance;

b) The NAV after applying the prescribed shock, net of reinsurance, and before management actions;

c) Effects of the management actions on NAV after applying prescribed shocks.

14.3.3.3 Output data

466. The following output will be automatically calculated by the Template:

a) $Mortality\ Risk\ Charge$= Mortality risk charge before management actions

b) $Mortality\ Risk\ Charge^{\ mgmt}$ = Mortality risk charge after management actions. This is the risk charge that will be aggregated in the Template for the calculation of the ICS under the standard method.

14.3.3.4 Calculation

467. The Mortality risk charge is calculated as:

$$Mortality\ Risk\ Charge = \Delta NAV \mid shock$$

Where:

$\Delta NAV \mid shock$ = Change in NAV, i.e. value of assets less insurance liabilities (not including changes in the margin over current estimates) after applying the prescribed shock.

$shock$ = Increase of x% in mortality rates at all ages for all policies where an increase in mortality rates would lead to a decrease in the NAV, i.e. $(1 + \mathrm{x}\%) \times$ $base\ mortality\ assumptions$, with x as follows:

Table 11. Mortality Level Shocks

	X%
EEA and Switzerland	10%
US and Canada	10%
China	10%
Japan	10%
Other developed markets	10%
Emerging market	10%

468. The $Mortality\ Risk\ Charge$ should be first calculated under the condition that the scenario does not change the value of future discretionary benefits in the insurance liabilities.

469. Volunteer IAIGs should then determine the change in NAV, taking into account realistic management actions. For example, is the Volunteer IAIG able to change its assumptions in future bonus rates in response to the scenario? This is $Mortality\ Risk\ Charge^{\ mgmt}$.

470. The calibration proposed for the 2016 Field Testing is subject to refinements based on further analysis and evidence. For example, the IAIS will carry out further analysis to assess whether the shocks represented in the table above could vary by geographical grouping.

471. For the purposes of 2016 Field Testing, no geographical diversification is assumed when calculating the Mortality risk charge. Further data collections or analysis may be conducted to determine whether geographical diversification should be allowed. See the Supplementary Data Collection (Life insurance risks) under Phase 2+ of this document for the request for calibration data.

472. The stresses set out in the tables above should be applied to avoid double counting of the risk mitigating impact of reinsurance arrangements covering more than one geographical area.

14.3.4 Longevity Risk

Relevant Worksheets in Template:	*ICS.Life type Risk*	*Due 15 September 2016*

473. Similar to Mortality risk, for 2016 Field Testing a stress-based approach is applied to Longevity risk.

474. The following components could be included within a stress approach:

a) Stress to the level of longevity

b) Stress to the trend in which longevity is expected to develop

c) Stress to the volatility of longevity rates.

475. For the purposes of 2016 Field Testing, Volunteer IAIGs should estimate the capital charge for Longevity risk by stressing the level of longevity rates and the level of best estimate mortality improvement rates (i.e. the trend component). Further analysis will be done to determine whether the volatility component could be allowed for either explicitly or implicitly.

476. The Longevity risk calculation applies only to those policies that are subject to Longevity risk.

477. Volunteer IAIGs may take into account management actions in the calculation of the Longevity risk charge. The effect of such management actions should be recorded separately in the worksheet *ICS.Life type risk* to enable a comparison of the change in NAV before and after management actions. In the Questionnaire, Volunteer IAIGs are also asked to provide a description of management actions taken, along with documentation of its internal policies and/or procedures that would allow for such actions.

478. The Technical Specifications for Longevity Risk apply both to the MAV and GAAP Plus approaches. This section has been written from the perspective of the MAV approach; while somewhat different valuation data might be input for the GAAP Plus approach, the two approaches included in 2016 Field Testing are fundamentally the same for Longevity risk.

14.3.4.1 Geographical Segmentation

479. Volunteer IAIGs should provide data by the following geographical groupings:

a) EEA and Switzerland

b) US and Canada

c) China

d) Japan

e) Other developed markets

f) Emerging markets

14.3.4.2 Input data required

480. Two tables are provided in the Template to capture data for Longevity risk. One table corresponds to the trend component only. The other table corresponds to a combined level and trend shock.

481. For both tables, input data required are:

a) The base NAV, i.e. the value of assets less insurance liabilities before applying the prescribed shock, net of reinsurance;

b) The NAV after applying the prescribed shock, net of reinsurance, and before management actions;

c) Effects of the management actions on NAV after applying the prescribed shocks.

14.3.4.3 Output data

482. The following output will be automatically calculated by the Template:

a) $Longevity\ Risk\ Charge_{trend}$= Longevity risk charge for trend component only before management actions

b) $Longevity\ Risk\ Charge_{trend}^{mgmt}$ = Longevity risk charge for trend component only after management actions.

c) $Longevity\ Risk\ Charge$= Longevity risk charge for both level and trend components before management actions

d) $Longevity\ Risk\ Charge^{mgmt}$ = Longevity risk charge for both level and trend components after management actions. This is the risk charge that will be aggregated in the Template for the calculation of the ICS under the standard method.

14.3.4.4 Calculation

483. The Longevity risk charge is calculated as follows:

$$Longevity\ Risk\ Charge = \Delta NAV \mid shock$$

where

$\Delta NAV \mid shock$ = Change in net asset value, i.e. value of assets less insurance liabilities (not including changes in the margin over current estimates) after applying the prescribed shock

$shock$ = Simultaneous shock to mortality rates and mortality improvement rates

The shock is defined as an increase of x % in mortality improvement rates and a decrease of y% in mortality rates at all ages for all policies where an increase in mortality improvement rates and a decrease in mortality rates would lead to a decrease in the NAV, i.e. $y\% + best\ estimate\ mortality\ improvement\ assumption$ and $(1 - z\%)\ x\ base\ mortality\ assumptions (1 - y\%) \times base\ mortality\ assumptions$, with y and z as follows:

Table 12. Mortality Trend Shocks for Longevity Risk

	y%
EEA and Switzerland	1%
US and Canada	1%
China	1%
Japan	1%
Other developed markets	1%
Emerging market	1%

Table 13. Mortality Level Shocks for Longevity Risk

	z%
EEA and Switzerland	15%
US and Canada	15%
China	15%
Japan	15%
Other developed markets	15%
Emerging market	15%

484. For 2016 Field Testing, Volunteer IAIGs should first calculate the $Longevity\ Risk\ Charge_{trend}$ based on a shock to mortality improvement rates only and then calculate the $Longevity\ Risk\ Charge$ based on a shock to both mortality rates and mortality improvement rates.

485. The $Longevity\ Risk\ Charge$ and the $Longevity\ Risk\ Charge_{trend}$ should be first calculated under the condition that the scenario does not change the value of future discretionary benefits in the insurance liabilities.

486. Volunteer IAIGs should then determine the change in NAV, taking into account realistic management actions, e.g. the Volunteer IAIG is able to change its assumptions in future bonus rates

in response to the scenario. This is the $\text{Longevity Risk Charge}^{\text{mgmt}}$ and the $Longevity\ Risk\ Charge_{trend}^{mgmt}$.

487. The stresses set out in the tables above should be applied to avoid double counting of the risk mitigating impact for reinsurance arrangements that cover more than one geographical area.

488. The calibration proposed for the 2016 Field Testing is subject to refinements based on further analysis and evidence. For example, the IAIS will carry out further analysis to assess whether the shocks represented in the table above could vary by geographical grouping. See the Supplementary Data Collection (Life insurance risks) under Phase 2+ of this document for the request for calibration data.

489. For the purposes of 2016 Field Testing, no geographical diversification is assumed when calculating the Longevity risk charge. Further data collections or analysis may be conducted to determine whether geographical diversification should be allowed.

14.3.5 Health Risk (default approach for morbidity and disability risk)

Relevant Worksheets in Template:	*ICS.Health risk*	*Due 15 September 2016*

490. Two approaches to Morbidity and Disability risk are included in 2016 Field Testing. The Health risk approach outlined in this section is considered the default approach. As such, the results of this approach will be aggregated with the other risks to determine the ICS capital requirement.

491. The Technical Specifications for Health Risk apply both to the MAV and GAAP Plus approaches. This section has been written from the perspective of the MAV approach; while somewhat different valuation data might be input for the GAAP Plus approach, the two approaches included in 2016 Field Testing are fundamentally the same for Health risk.

14.3.5.1 Geographical Segmentation

492. Volunteer IAIGS should provide data by the following geographical groupings:

a) EEA and Switzerland

b) US and Canada

c) China

d) Japan

e) Other developed markets

f) Emerging market

14.3.5.2 Scope and segmentation of products for Health Risks

493. The Health risk capital charges should be calculated for all business providing guarantees considered in one of the risk categories listed below. When such guarantees are provided within other products (such as Life insurance products), the health component should generally be unbundled and treated with Health risks.

494. When the unbundling is not achievable in practice, it is recommended to calculate a prospective proportional allocation factor, based on the history of paid benefits, with any adjustment necessary to reflect material changes in the portfolio structure.

Example

If a given portfolio of policies (providing both Life and Health coverages where the health benefits are payable in addition to the life benefits) typically leads to the payment of 70% of life benefits and 30% of health benefits based on past experience, with no expected changes in structure for future claims experience, then it can be assumed that 70% of this portfolio is subject to the Life risks, and 30% to the Health risks. In this case, the projection of the cash flows relating to the Health component can be estimated by applying a 30% factor to the total cash flow projections of the combined Life and Health components, with all stresses in the Health module (i.e. health underwriting risk, health Lapse risk) applied to the projected health cash flows to obtain the capital requirements under the Health module. The life components can be determined as:

a) 100% of the Mortality/Longevity capital requirement;

b) 70% of the Lapse risk capital requirement; and

c) 70% of the Expense risk capital requirement.

495. For bundled products where the above examples may not capture the life and health components appropriately, the Volunteer IAIG may at its discretion use a method which is deemed to be more appropriate and provide the details of the method in the Questionnaire.

496. When Health guarantees included in a life policy do not actually provide additional protection (i.e. the occurrence of a health event would not materially change the total liability of the Volunteer IAIG to the policyholder), then such unbundling is not required and the given life policy is subject only to Life insurance risk.

Example

A life coverage can provide accelerated benefits in case of a critical illness event, where the accelerated benefits paid reduce the value of the policy in case of death, but does not otherwise change. For such a policy, the global amount of benefits paid by the Volunteer IAIG does not materially depend on the occurrence of a health event; therefore, for the sake of proportionality, such a policy should not be unbundled into its Life and Health components, and be fully subject to Life insurance risks.

497. Double-counting of risk with other risk modules should be avoided. In particular, business classified in the Non-Life lines of business should not be considered within Health risk. Similarly, business classified within Health risk should not be considered within Life insurance risk.

498. The selection of business to be treated under Health risks should be made irrespective of the time horizon of the policy; annual business as well as multi-annual business can be dealt with under Health risks, as soon as the nature of the benefits provided falls in one of the categories below.

499. For the purpose of the Health underwriting capital charge calculations, insurance policies shall be classified using the following categories / subcategories of risk:

a) **Category 1: Medical expenses**

i. Products providing any kind of compensation (either fixed or based on real costs) for medical expenses, in-patient or not. The compensation depends directly on the treatment or expenses incurred by the policyholder, and is not directly dependent on the time spent in a given health status.

ii. Typical examples are medical expense / supplemental medical contracts that provide benefits for practitioner fees, medication fees, vision and dental expenses, etc.

iii. When a policy provides a combination of benefits between Medical Expenses and Short-term recurring payments (Categories 1 and 3), it can be either split into both categories, or considered under Category 1 altogether.

b) **Category 2: Lump sum in case of a health event**

i. Products providing a single payment at the occurrence of a specified, and usually severe, health event, such as the diagnosis of a cancer or other types of dread disease, or the occurrence of an accident resulting in a certain level of disability.

ii. Typical examples are accident, critical illness, and permanent disability policies that provide a lump sum payment on occurrence of a claim. This category generally also includes Accidental Death and Dismemberment policies.

c) **Category 3: Short-term recurring payments**

i. Products providing a periodical amount of compensation[36] for a period depending on the time spent in a given temporary health status, such as unable to work, hospitalised, etc.

ii. Typical examples are hospital indemnity, personal accident / loss of income policy, short-term disability income protection (generally in the context of group insurance).

d) **Category 4: Long-term recurring payments**

i. Products providing a fixed annuity in case of long-term / permanently deteriorated health status.

ii. Typical examples are personal or group policies for permanent disability, long-term care, etc.

[36] For such short-term benefits, the periodicity of the payments will typically be daily or weekly. However another type of period (such as monthly) would not in itself disqualify a policy from this category.

500. The “typical examples” provided above are indicative, and are not meant to be exhaustive; the terminology may also vary across jurisdictions.

501. For recurring payments, the distinction should be made between payments relating to claims already incurred, and claims not yet incurred. The uplift factor will vary depending on the claim status, in order to recognise the lower uncertainty on claims already incurred.

502. The distinction between “short-term recurring” and “long-term recurring” should generally be made according to the temporary vs. permanent characteristic of the recurring benefit. A benefit that is contractually limited to a given period (typically no more than 5 years) should be classified as “short-term recurring”. A benefit that is to be paid lifelong, or until a time (for instance, retirement age) that makes it variable across policyholders, without upfront short-term limitation, should be considered as “long-term recurring”.

503. A policy/product may actually include coverage belonging to several of the above categories. For instance, a policy may provide:

a) Regular payments in case of short-term (temporary) disability

b) Regular payments in case of long-term disability

c) A lump sum in case of critical illness

504. Each of the different components of such a policy is subject to the relevant shock (see example 3 below for a policy with both short-term and long-term disability coverage).

505. When a complete identification of benefits to be paid under the different categories is not possible, the use of a proxy based on some proportion of claims paid is recommended. For instance, considering a portfolio of policies providing lump sum on first occurrence of cancer as well as medical expense coverage, if historically the lump sum part represents 60% of claims paid, it is acceptable to apply an uplift calculated as a 60% / 40% weighting of the uplift factors for Category 2 and Category 1 respectively.

506. For bundled products where the above example may not capture the breakdown of the health components appropriately, the Volunteer IAIG may at its discretion use a method which is deemed to be more appropriate and provide the details of the method in the Questionnaire.

14.3.5.3 Calculation of the capital charge for Health Risks

The capital charge for Health risks, H , will result from the aggregation of a Health underwriting risk charge $Health_{UW}$ and a Health Lapse risk charge $Health_L$ calculated in the following way:

$$H = \sqrt{Health_{UW}^2 + Health_L^2}$$

14.3.5.4 Health Underwriting risk

507. Health underwriting risk is intended to capture all risks on the level of future payments to policyholders and expense borne by the Volunteer IAIG in order to settle the claims (within the limits set by contract boundaries). Such risk primarily stems from:

a) changes in the frequency of claims

b) changes in the cost of a claim, either due to:

i. uncertainty in the length of claims (for those policies where payments depend on the duration of a given event)

ii. uncertainty in the level of payments (for those policies where payments are subject to revaluation and/or depend on some external variable)

c) changes in the level of operating expenses[37] the Volunteer IAIG may face in the future

508. An increase in the level of claims can, in some cases, be mitigated by management actions (e.g. reduction in bonuses paid to policyholders, reduction in revaluation of annuities, application of caps to claims paid, increase of premiums, etc.). Such management actions should be taken into account in a way similar as for Life insurance, provided that they fulfil the same requirements as set in the section on Management Actions (section 14.2.4).

509. Regarding the possibility to increase premiums, such ability should be considered only within the boundaries of the contract. In other words, only those premiums that enter the Current Estimate calculation can produce a loss absorbing effect. Following the definition of contract boundaries, the increase of such premiums can only have a partial mitigating effect (otherwise, they would be excluded from the contract boundaries).

14.3.5.4.1 *Input data required*

510. Input data required are:

a) The base NAV, i.e. value of assets less insurance liabilities before applying the prescribed shock, net of reinsurance;

b) The NAV after applying the prescribed shock, net of reinsurance, and before management actions;

c) Effects of the management actions on NAV after applying prescribed shocks.

[37] The expenses referred to here are those included in the current estimate calculation. They would include administrative expenses and overheads, management expenses and acquisition expenses excluding commissions expected to be incurred in future.

14.3.5.4.2 *Output data*

511. The following output will be automatically calculated by the Template:

a) $Health_{UW}$ = Health Underwriting risk charge before management actions

b) $Health_{UW}{}^{mgmt}$ = Health Underwriting risk charge after management actions.

14.3.5.4.3 *Calculation*

512. The Health Underwriting risk charge is calculated as:

$$Health_{UW} = \Delta NAV \mid shock$$

where:

$\Delta NAV \mid shock$ = change in net asset value (with a zero floor), i.e. value of assets less insurance liabilities (not including changes in the margin over current estimates) after applying the prescribed shock.

$shock$ = increase of x_i% in the amount of expected claim and expense payments as projected in the Current Estimate calculation, where the uplift factor x_i depends on the Health Category as per the following table:

Table 14. Uplift Factor for each Health Category

Health category	uplift factor (x_i)
1	21% x s1
2	26% x s2
3	18% x s3
3 (incurred claims)	10%
4	77% x s4
4 (incurred claims)	10%

513. The scaling factors s_i are calculated as:

$$s_i = max\left(\frac{C_i^{(1)}}{C_i}, f_i\right)$$

where:

- C_i is the total amount of future discounted claim payments for contracts in category i, as projected in the current estimate calculation

- $C_i^{(1)}$ is the total amount of discounted claims expected to be incurred in the forthcoming year

- $f_i = 50\%$ for $i = 1, 2, 3$; $f_i = 20\%$ for $i = 4$

514. $Health_{UW}$ should first be calculated under the condition that the scenario does not change the value of future discretionary benefits in the insurance liabilities.

515. Volunteer IAIGs should then determine the change in NAV, taking into account realistic management actions, e.g. the Volunteer IAIG is able to change its assumptions in future bonus rates in response to the scenario. This will give $Health_{UW}{}^{mgmt}$.

14.3.5.4.4 Calculation of Health Underwriting risk – practical examples

516. For all of the following examples, the reference date is the 31 December 2015. It is assumed that there is no reinsurance in place.

Example

Consider a one-year policy that provides Medical Expense coverage. The expected earned premiums for 2016 are 100. The expected claims and expenses to be paid, relating to past accident years (2015 and before) are 20, and the expected discounted claims and expenses to be paid in future years, relating to the accident year 2016, are 90. The current estimate for this policy on 31 Dec 2015 is 10 (= 20+90-100).

Following the specifications above, the Health Underwriting risk capital charge (before management actions) is equal to:
110 x 21% x max(90 / 110 , 50%) = 18.9

Example

Consider a lifelong policy that provides a lump sum payment at the first occurrence of a cancer, without any possibility for the Volunteer IAIG to amend the premium. At the reference date, past claims remaining to be paid is 20. Total future discounted premiums is 1,000, total expected discounted claim and expense payments (relating to accident years 2016 and following) is 1,200, with 100 relating to accident year 2016.
The current estimate at the reference date is 220.

The Health Underwriting risk capital charge (before management actions) is equal to:
1,220 x 26% x max(100 / 1,220 , 50%) = 158.6
Since the Volunteer IAIG has no ability to amend the premiums, there is no effect of management actions, and therefore the capital charge after management actions is also 158.6.

Example

Consider a one-year income protection policy that provides compensation for both short and long term disability.
The 2016 (expected) earned premium for this policy is 100.
The current estimate provision for reported claims at the reference date is:

- 20 for claim and expense payments relating to short-term disability
- 40 for claim and expense payments relating to long-term disability, of which 5 correspond to future discretionary revaluation of annuities

The current estimate for IBNR at the reference date is:

- 5 for claim and expense payments relating to short-term disability
- 10 for claim and expense payments relating to long-term disability

The amount of expected future claims and expenses relating to the 2016 accident year is:

- 40, relating to short-term liability
- 50, relating to long-term disability, of which 5 corresponds to future discretionary revaluations

The total current estimate at the reference date is 65.

The Health Underwriting risk capital charge (before management actions) is equal to:
40 x 18% x max(40 / 40, 50%) + 25 x 10% + 50 x 77% x max(50 / 50, 50%) + 50 x 10% = 53.2

Following such an increase in claim payments, the Volunteer IAIG may decide to reduce the expected revaluations of long-term disability annuities by one-half, thereby decreasing their value from 10 to 5.

The risk capital charge after management actions is therefore equal to 53.2 – 5 = 48.2

14.3.5.4.5 Health Lapse risk

517. Health Lapse risk is intended to capture the adverse impact on the Volunteer IAIG's balance sheet of a sudden mass lapse on Health policies. In this context, a lapse is defined as an immediate and complete cessation of payment of the premium by the policyholder, provided such a cessation is contractually permitted. As a result of a lapse, the Volunteer IAIG is not committed to paying any claims not yet incurred (but remains committed to paying all claims already incurred, whether reported or not).

Input data required

518. Input data required are:

a) The base NAV, i.e. value of assets less insurance liabilities before applying the prescribed shock, net of reinsurance;

b) The NAV after applying the prescribed shock, net of reinsurance, and before management actions;

c) Effects of the management actions on NAV after applying prescribed shocks.

Output data

519. The following output will be automatically calculated by the Template:

a) $Health_L$ = Health Lapse risk charge before management actions

b) ${Health_L}^{mgmt}$ = Health Lapse risk charge after management actions.

Calculation

520. The Health Lapse risk charge is calculated as:

$$Health_L = \Delta NAV \mid shock$$

where:

$\Delta NAV \mid shock$ = change in net asset value (with a zero floor), i.e. value of assets less insurance liabilities (not including changes in the margin over current estimates) after applying the prescribed shock, net of reinsurance.

$shock$ = immediate lapse of:

- 50% of all surrenderable Health policies (non-retail business); and
- 30% of all surrenderable Health policies (retail business)

521. $Health_L$ should first be calculated under the condition that the scenario does not change the value of future discretionary benefits in the insurance liabilities.

522. Volunteer IAIGs should then determine the change in NAV, taking into account realistic management actions, e.g. the Volunteer IAIG is able to increase premiums in response to the scenario. This will give ${Health_L}^{mgmt}$.

14.3.6 Morbidity and Disability Risk (alternative approach)

Relevant Worksheets in Template:	*ICS.Life type Risk*	*Due 15 September 2016*

523. Two approaches to Morbidity and Disability risk are included in 2016 Field Testing. The approach outlined in this section is considered an alternative approach. As such, the results of this approach will not be aggregated with the other risks to determine the ICS capital requirement, but will be assessed independently. In addition, this alternative approach will not be assessed on a GAAP Plus approach.

524. The charge determined for this risk reflects the impact of unexpected changes in the level, trend or volatility of disability, sickness and morbidity rates (the expected impacts are assumed to be incorporated in valuation methodologies) as well as unexpected changes in the level of claim payments. This risk category includes risk events that are caused by accident as well as by sickness. In summary, Morbidity/Disability risk covers all risks linked to unexpected changes in the health status of policyholders and their management.

525. Morbidity/Disability risk can be applied to both life and non-life business that is exposed to similar to life Morbidity/disability risk (see below for definition of the scope of disability/morbidity risk).

526. The risk charge relating to the Morbidity/Disability risk is obtained by the application of a stress scenario, designed as a combination of stresses as specified below.

14.3.6.1 Geographical Segmentation

527. Volunteer IAIGS should provide data by the following geographical groupings:

a) EEA and Switzerland

b) US and Canada

c) China

d) Japan

e) Other developed markets

f) Emerging market

14.3.6.2 Definition of the scope of the application of Morbidity/Disability risk

14.3.6.2.1 *Segmentation*

528. Morbidity/Disability risk is applied only to guarantees pursued on 'similar to life' technical bases. Therefore, a distinction should be made between products that should be included in life segments, and thus be included in the scope of Morbidity/Disability risk, and those that should be included in non-life segments and then not in the scope of this risk.

529. Irrespective of the legal or contractual classification of insurance obligations, generally the technical calculation basis of insurance obligations should form the decision criterion for the assignment to life or non-life activities. If and only if the technical basis is not consistent with the nature of the risk relating to the obligation the nature of the underlying risk of the contract should form the decision criterion.

Example

Segmentation of a "classic" health insurance product (no levelling of premiums) with a morbidity guarantee:

• If the health insurance guarantee insurance liabilities are calculated on the basis of claim triangles, this guarantee should be classified into a non-life segment. If the morbidity guarantee insurance liabilities calculations are based on a disability/morbidity table, then this guarantee should be into a life segment.

• In the case where the calculation methodology of insurance obligations changes after the occurrence of an event in order to reflect the evolution of the underlying risk, the segmentation should reflect this evolution.

Example

Segmentation of a disability product:

• The disability guarantee should be classified into a non-life segment during the period in which the policyholder does not have a declared disability, if the insurance liabilities calculation methodology is based on a claim triangle.

• If the insurance liabilities calculation methodology changes when a policyholder declares a disability and takes into account biometrical variables from that moment, this disability guarantee should be classified into a life segment after the occurrence of the claim.

14.3.6.2.2 *Sub risks to be covered*

530. The following is a (non-exhaustive) list of major types of Morbidity/Disability risks that have been identified, and can be pursued on "similar to life" technical bases:

a) Sickness

b) Accident at work/occupational disease while employed and post-employment (particularly with respect to occupational disease)

c) Critical illness, specifically tied to benefit availability depend on not dying in specified time period following confirmation of diagnosis

d) Disability, including temporary and permanent, temporary and full, physical and non-physical (mental)

e) Loss of income, including past and future income and includes (but not limited to) salary replacement

f) Long-term care - all forms of insurance that address full or partial loss of ability to perform all defined and established functions of daily living

g) Health insurance – medical and directly related expenses

h) Health insurance – other than medical and directly related expenses (particularly including preventative health and well-being benefits)

531. For the purpose of the calculation of the risk charge for morbidity/disability, 'similar to life' insurance obligations should be split in the two following mutually exclusive segments:

a) Medical Treatment insurance: Products that provide medical treatment due to illness, accident, disability or infirmity or financial compensation that is directly linked to the cost of such treatment.

b) Financial Compensation insurance: Products that provide a financial compensation arising from illness, accident, disability or infirmity that is not directly linked to the cost of medical treatment.

14.3.6.3 Input data required

532. Input data required for the three individual stresses (medical treatment, inception rate and recovery rate) are:

a) The base NAV, i.e. value of assets less insurance liabilities before applying the prescribed shock, net of reinsurance;

b) The NAV after applying the prescribed shock, net of reinsurance, and before management actions;

c) Effects of the management actions on NAV after applying prescribed shocks.

14.3.6.4 Output data

533. The following output will be automatically calculated by the Template:

a) $Morbidity/Disability\ Risk\ Charge^{mgmt} = Medical\ Treatment\ Risk\ Charge^{mgmt} + Financial\ Compensation\ Risk\ Charge^{mgmt}$

b) $Medical\ Treatment\ Risk\ Charge$ = Medical treatment risk charge before management actions

c) $Medical\ Treatment\ Risk\ Charge^{mgmt}$ = Medical treatment risk charge after management actions

d) $Financial\ Compensation\ Risk\ Charge = MAX\ (Inception\ Rate\ Risk\ Charge, Recovery\ Rate\ Risk\ Charge)$

e) $Financial\ Compensation\ Risk\ Charge^{mgmt} = MAX\ (Inception\ Rate\ Risk\ Charge^{mgmt}, Recovery\ Rate\ Risk\ Charge^{mgmt})$

f) $Inception\ Rate\ Risk\ Charge$ = Inception rate risk charge before management actions

g) $Inception\ Rate\ Risk\ Charge^{mgmt}$ = Inception rate risk charge after management actions

h) $Recovery\ Rate\ Risk\ Charge$ = Recovery rate risk charge before management actions

i) $Recovery\ Rate\ Risk\ Charge^{mgmt}$ = Recovery rate risk charge after management actions

14.3.6.5 Calculation

534. The Medical Treatment risk charge is calculated as:

$$Medical\ Treatment\ Risk\ Charge = \Delta NAV \mid shock$$

where:

$\Delta NAV \mid shock$ = change in net asset value after applying the prescribed shocks, net of reinsurance and before management actions.

$shock$ = Increase of x% in medical payment amounts, and an increase of y% in annual inflation, with x and y as follows:

Table 15. Medical treatment risk shocks

	x% (medical payment amounts)	*y% (annual inflation)*
EEA and Switzerland	5%	1%
US and Canada	5%	1%
Japan	5%	1%
Other developed markets	5%	1%
China	5%	3%
Emerging markets	5%	3%

535. The Inception Rate risk charge is calculated as:

$$Inception\ Rate\ Risk\ Charge = \Delta NAV \mid shock$$

where:

$\Delta NAV \mid shock$ = change in net asset value after applying the prescribed shocks, net of reinsurance and before management actions.

$shock$= increase in the inception rate used to calculate the current estimate of:

(1) 25% in the first year

(2) 15% after the first year

536. The Recovery Rate risk charge is calculated as:

$$Recovery\ Rate\ Risk\ Charge = \Delta NAV \mid shock$$

where:

$\Delta NAV \mid shock$ = change in net asset value after applying the prescribed shocks, net of reinsurance and before management actions.

$shock$ = decrease in the recovery rate of 20%

537. The three individual risk charges should first be calculated under the condition that the scenario does not change the value of future discretionary benefits in the insurance liabilities.

538. Volunteer IAIGs should then determine the change in NAV, taking into account realistic management actions, e.g. the Volunteer IAIG is able to change its assumptions in future bonus rates in response to the scenario.

14.3.7 Lapse Risk

Relevant Worksheets in Template:	*ICS.Life type risk* *ICS.Additional Info.Lapse* *ICS.Lapse sensitivity*	*Due 15 September 2016*

539. Lapse risk is the risk of adverse change in the value of qualifying capital resources due to unexpected changes in the level and trend of exercise rates of policyholder options. The risk charge takes into account all legal or contractual options that can change the value of future cash flows. This includes options to partially or fully terminate, surrender, renew, extend, reduce or increase insurance coverage as well as the reduction or suspension of premium payments and changes in take up rates of options such as annuitisation options. This risk is applicable only to Life business.

540. The Technical Specifications for Lapse Risk apply to both MAV and GAAP Plus approaches. This section has been written from the perspective of the MAV approach; while somewhat different valuation data might be used for the GAAP Plus approach, the two approaches included in this Field Testing exercise are fundamentally the same. In addition, a sheet has also been included to explore the sensitivity to different Lapse Risk shocks.

14.3.7.1 Geographical Segmentation

541. Volunteer IAIGS should provide data by the following geographical groupings:

a) EEA and Switzerland

b) US and Canada

c) China

d) Japan

e) Other developed markets

f) Emerging market

14.3.7.2 Input data required

542. For the level and trend component, the input data required are:

a) The base NAV, i.e. the value of assets less insurance liabilities before applying the prescribed upward or downward shocks (“base NAV”), net of reinsurance;

b) The NAV after applying the prescribed upward or downward shocks ("Post Shock NAV"), net of reinsurance (not including changes in the margin over current estimate) before management actions;

c) Effects of the management actions on Post Shock NAV, net of reinsurance.

543. For the mass lapse component, the input data required are:

a) The base NAV before applying the prescribed mass lapse shock ("base NAV"), net of reinsurance;

b) The NAV after applying the prescribed mass lapse shock ("Post Shock NAV"), net of reinsurance (not including changes in the margin over current estimate) before management actions;

c) Effects of the management actions on Post Shock NAV, net of reinsurance.

544. An additional worksheet (*ICS.Additional Info.Lapse*) should be completed for the level and trend component and the mass lapse component. Volunteer IAIGs are requested to provide a breakdown of the base NAV and Post Shock NAV (both before and after management actions) into the following components, by region and product category:

a) Asset values;

b) Value of expected future payments ("PV Benefits");

c) Value of future expenses expected to be incurred in policy administration and claims settlement ("PV Expenses")

d) Value of expected future receipts ("PV Premiums"); and

e) Current estimate of the policy liabilities (i.e. PV Benefits + PV Expenses - PV Premiums)

545. Estimates may be provided on a best efforts basis if Volunteer IAIGs are unable to provide exact figures due to system constraints. Where Volunteer IAIGs are unable to provide details of the NAV components listed above, Volunteer IAIGs should still provide the current estimate of their liabilities by region and product category. The effect of reinsurance should be reported consistently with the balance sheet, i.e. reinsurance recoverables should be included in the asset component of the NAV.

546. A brief description of the management actions taken for each region and product category for both level and trend component and mass lapse component is also requested from the Volunteer IAIG in the Questionnaire.

14.3.7.3 Output data

547. The following output should be reported:

a) $Lapse\ Risk\ Charge$ = Lapse risk charge before management actions

b) $Lapse\ Risk\ Charge^{mgmt}$ = MAX($Lapse\ Risk\ Charge_{level}^{mgmt}$, $Lapse\ Risk\ Charge_{mass}^{mgmt}$). This is the risk charge (after management actions) that will be aggregated in the Template for the calculation of the ICS under the standard method.

c) $Lapse\ Risk\ Charge_{level}^{mgmt}$ = Lapse risk charge for level and trend component after management action

d) $Lapse\ Risk\ Charge_{mass}^{mgmt}$ = Lapse risk charge for mass lapse component after management action

14.3.7.4 Calculation

14.3.7.4.1 *Level and Trend Component*

548. The Lapse risk charge for the level and trend component is calculated as:

$$Lapse\ Risk\ Charge_{level}^{mgmt} = MAX\ (Lapse\ Risk\ Charge_{up}^{mgmt}, Lapse\ Risk\ Charge_{down}^{mgmt}\ )$$

Where:

$$Lapse\ Risk\ Charge_{up}^{mgmt} = Lapse\ Risk\ Charge_{up}\ after\ management\ actions$$

$$Lapse\ Risk\ Charge_{down}^{mgmt} = Lapse\ Risk\ Charge_{down}\ after\ managment\ actions$$

$$Lapse\ Risk\ Charge_{up} = \Delta NAV\ |shock_{up}$$

$$Lapse\ Risk\ Charge_{down} = \Delta NAV\ |shock_{down}$$

$\Delta NAV \mid shock$ = Change in net asset value (not including changes in the margin over current estimates) after applying the prescribed shocks, net of reinsurance and before management actions.

$shock_{up}$ = Increase of 40% in the assumed option take-up rates in all future years for all homogeneous groups adversely affected by such risk. Options that allow for a reduction in insurance coverage (e.g. options to partially or fully terminate cover) will be affected by the increase in take-up rates. Where an option allows for an increase in insurance cover (e.g. extension of cover), the 40% increase should be applied to the rate that would apply if the option is not taken up. The resulting shocked lapse rate should not exceed 100%, i.e. $\mathrm{MIN}[100\%, (1 + 40\%) \times base\ option\ take\ up\ rate\ assumptions]$

$shock_{down}$ = Decrease of 40% in the assumed option take-up rates in all future years for all homogeneous groups adversely affected by such risk. Options that allow for a reduction in insurance coverage (e.g. options to partially or fully terminate cover) will be affected by the decrease in take-up rates. Where an option allows for increase in insurance cover (e.g. extension of cover), the 40% reduction should be applied to the rate that would apply if the option is not

taken up. Resulting shocked lapse rate should be floored at 0%, i.e. $\mathrm{MAX}[0\%, (1-40\%) \times base\ option\ take\ up\ rate\ assumptions]$

549. For each geographical segment, $Lapse\ Risk\ Charge_{level}^{mgmt}$ should first be determined for each homogeneous risk group[38] before aggregating across all homogeneous risk groups in the same geographical segment (Please refer to the example provided below).

550. The $Lapse\ Risk\ Charge_{up}$ and $Lapse\ Risk\ Charge_{down}$ should first be calculated under the condition that the scenario does not change the value of future discretionary benefits in the insurance liabilities.

551. Volunteer IAIGs should then determine the change in NAV (net of reinsurance and not including changes in the margin over current estimates), taking into account realistic management actions e.g. the Volunteer IAIG is able to change its assumptions in future bonus rates in response to the scenario. These will give $Lapse\ Risk\ Charge_{up}^{mgmt}$ and $Lapse\ Risk\ Charge_{down}^{mgmt}$.

Example for level and trend component

The following example illustrates how results should be aggregated in a given region A

Assuming that there are only 2 homogeneous groups for region A and all groups under "Protection – Life" product category

Reported in Template ("ICS.Additional Info.Lapse") for Region A

		Base NAV				
		Assets (incl. reinsurance recov.) (a)	PV Benefits (b)	PV Expenses (c)	PV Premiums (d)	Current Estimate (e)=(b)+(c)-(d)
Homogenous Group 1	Base	100	200	20	150	70
Homogenous Group 2	Base	80	100	10	50	60
Total		180	300	30	200	130

Base NAV for Region A=(100-70)+(80-60)=50

		Post Shock NAV (net of Reins and before Management Actions)				
		Assets (a)	PV Benefits (b)	PV Expenses (c)	PV Premiums (d)	Current Estimate (e)=(b)+(c)-(d)
Homogenous Group 1	Upward Shock	100	150	10	100	60
	Downward Shock	100	220	30	160	90
Homogenous Group 2	Upward Shock	60	80	10	40	50

[38] Please refer to section on "Grouping of Policies" for details on how grouping should be done.

	Downward Shock	80	110	20	70	60

Assuming no effect of management actions

		Post Shock NAV (net of Reins and after Management Actions)				
		Assets	PV Benefits	PV Expenses	PV Premiums	Current Estimate
Homogenous Group 1	Upward Shock	100	150	10	100	60
	Downward Shock	100	220	30	160	90
Homogenous Group 2	Upward Shock	60	80	10	40	50
	Downward Shock	80	110	20	70	60

Post shock NAV for Group 1 = Min(100-60,100-90)=10 (downward shock resulted in larger drop in NAV)

Post shock NAV for Group 2 = Min(60-50, 80-60)=10 (upward shock resulted in a larger drop in NAV)

Reported in Template ("ICS.Life type risk") for Region A
Lapse risk (Level and Trend component)

		Base NAV Net of Reins	Post Shock NAV (Net of Reins)[(1)]	Effect of management actions	Change in NAV after management actions	Change in NAV before management actions
Region A		50	20	0	30	30

14.3.7.4.2 *Mass Lapse Component*

552. The Lapse risk charge for the mass lapse component is calculated as:

$$Lapse\ Risk\ Charge_{mass}^{mgmt} = Lapse\ Risk\ Charge_{mass}\ after\ managment\ actions$$

$$Lapse\ Risk\ Charge_{mass} = \Delta NAV \mid shock$$

Where;

$\Delta NAV \mid shock$ = the change in net asset value after applying the prescribed shocks, net of reinsurance and before management actions.

$shock$ = immediate surrender of 30% of retail policies and an immediate surrender of 50% of non-retail policies , for all surrenderable products i.e. products that provide cash value upon surrender.

553. The $Lapse\ Risk\ Charge_{mass}$ should first be calculated under the condition that the scenario does not change the value of future discretionary benefits in the insurance liabilities.

554. Volunteer IAIGs should then determine the change in NAV (net of reinsurance and not including changes in the margin over current estimates), taking into account realistic management actions, e.g. the Volunteer IAIG is able to change its assumptions in future bonus rates in response to the scenario. This will give $Lapse\ Risk\ Charge_{mass}^{mgmt}$.

555. Both the level and trend component as well as the mass lapse component are applicable to products with dynamic lapse function[39] such as variable annuities and universal life products. The level and trend component shock is to be applied to the base rate of the dynamic lapse function.

14.3.7.4.3 *Sensitivity testing*

556. For the purpose of sensitivity testing, Volunteer IAIGs should:

a) determine the level and trend component based on a shock of 50% i.e.
$shock_{up}$ = Increase of 50% in the assumed option take-up rates in all future years for all homogeneous groups adversely affected by such risk. Affected by the increase are options which allow for reduction in insurance coverage (e.g. options to partly or fully terminate cover). Where an option allows for increase in insurance cover (e.g. extension of cover), the 50% increase should be applied to the rate that applies if the option is not taken up. Resulting shocked lapse rate should not exceed 100%, i.e. $\mathrm{MIN}[100\%, (1+50\%) \times base\ option\ take-up\ rate\ assumptions]$

$shock_{down}$ = Decrease of 50% in the assumed option take-up rates in all future years for all homogeneous groups adversely affected by such risk. Affected by the reduction are options which allows for reduction in insurance coverage (e.g. options to partly or fully terminate cover). Where an option allows for increase in insurance cover (e.g. extension of cover), the 50% reduction should be applied to the rate that applies if the option is not taken up. Resulting shocked lapse rate should be floored at 0%, i.e. $\mathrm{MAX}[0\%, (1-50\%) \times base\ option\ take-up\ rate\ assumptions]$

[39] A dynamic lapse function typically varies the lapse rate used in the calculation of liabilities depending on the difference between the return the Volunteer IAIG is providing on its policies and the returns provided by competitors.

b) determine the mass lapse component based on a shock of an immediate surrender of 20% of retail policies and an immediate surrender of 40% of non-retail policies, for all surrenderable products

557. Results should be reported in the worksheet *ICS.Lapse sensitivity*.

14.3.8 Expense Risk

Relevant Worksheets in Template:	*ICS.Life type risk* *ICS.Additional Info.Expense*	*Due 15 September 2016*

558. The Expense risk charge covers both basic Expense risk and expense inflation risk. Basic Expense risk is the risk of adverse change in the value of qualifying capital resources due to unexpected changes in the level and trend of expenses incorporated within the insurance liabilities. Such expenses would include administrative expenses and overheads, management expenses and acquisition expenses excluding commissions expected to be incurred in future.

559. Expense inflation risk is the risk of expenses inflating at a higher rate than assumed in the calculation of insurance liabilities due to adverse changes in factors relating specifically to the insurance sector. This risk is applicable only to life business.

560. The Technical Specifications for Expense Risk apply to both MAV basis and GAAP Plus approaches. This section has been written from the perspective of the MAV approach; while somewhat different valuation data might be used for the GAAP Plus approach, the two approaches included in this Field Testing exercise are fundamentally the same.

14.3.8.1 Geographical Segmentation

561. Volunteer IAIGS should provide data by the following geographical groupings:

a) EEA and Switzerland

b) US and Canada

c) China

d) Japan

e) Other developed markets

f) Emerging market

14.3.8.2 Input data required

562. Volunteer IAIGs should provide the following input data:

a) The base NAV, i.e. the value of assets less insurance liabilities before applying the prescribed shock ("base NAV"), net of reinsurance;

b) The base NAV after applying the prescribed shock ("Post Shock NAV"), net of reinsurance (not including changes in the margin over current estimate) before management actions;

c) Effects of the management actions on Post Shock NAV, net of reinsurance.

563. An additional worksheet (*ICS.Additional Info.Expense*) should be completed for both the unit expense and expense inflation components. Volunteer IAIGs are requested to provide a breakdown of the base NAV and Post Shock NAV (both before and after management actions) into the following components, by region:

a) Asset values;

b) Value of expected future payments ("PV Benefits");

c) Value of future expenses expected to be incurred in policy administration and claims settlement ("PV Expenses")

d) Value of expected future receipts ("PV Premiums"); and

e) Current estimate of the policy liabilities (i.e. PV Benefits + PV Expenses - PV Premiums)

564. Estimates may be provided on a best-efforts basis if the Volunteer IAIG is unable to provide exact figures due to system constraints. Where Volunteer IAIGs are unable to provide details of the NAV components listed above, Volunteer IAIGs should still provide the current estimate of their liabilities by region. The effect of reinsurance should be reported consistently with the balance sheet, i.e. reinsurance recoverables should be included in the asset component of the NAV.

565. A brief description of the management actions taken for each region for both the unit expense component and expense inflation component is also requested from the Volunteer IAIG in the Questionnaire.

14.3.8.3 Output data

566. The following output should be reported:

a) $Expense\ Risk\ Charge$= Expense risk charge before management actions

b) $Expense\ Risk\ Charge^{\ mgmt}$ = Expense risk charge after management actions. This is the risk charge that will be aggregated in the Template for the calculation of the ICS under the standard method.

14.3.8.4 Calculation

567. The Expense risk charge is calculated as:

$$Expense\ Risk\ Charge = \Delta NAV \mid shock$$

Where:

$\Delta NAV \mid shock$ = Change in the net asset value (not including changes in the margin over current estimates) after applying the prescribed shock

$shock$ = Increase of x% in unit expense assumptions, i.e. $(1 + x\%) \times base\ unit\ expense\ assumptions$; and an additive increase of y% per annum in expense inflation, with x and y as follows:

Table 16. Expense risk shocks

	x% ***(unit expense)***	***y% (expense inflation)***
EEA and Switzerland	6%	1%
US and Canada	6%	1%
Japan	6%	1%
Other developed markets	8%	2%
China	8%	3%
Emerging markets	8%	3%

568. The shocks to the unit expense and expense inflation assumptions should be applied simultaneously.

569. The Expense risk charge should be first calculated under the condition that the scenario does not change the value of future discretionary benefits in the insurance liabilities.

570. Volunteer IAIGs should then determine the change in NAV, taking into account realistic management actions, e.g. the Volunteer IAIG is able to change its assumptions in future bonus rates in response to the scenario. This will give $Expense\ Risk\ Charge^{\ mgmt}$

14.3.9 Premium Risk and Claims Reserve Risk

Relevant Worksheets in Template:	*ICS.Non-Life type risk*	*Due 15 September 2016*

571. The Technical Specifications for Premium risk and Claims Reserve risk apply both to the MAV and GAAP Plus approaches. This section has been written from the perspective of the MAV approach; while somewhat different valuation data might be input for the GAAP Plus approach, the two approaches included in 2016 Field Testing are fundamentally the same for Premium risk and Claims Reserve risk.

572. Premium risk and Claim Reserve risk in 2016 Field Testing are captured by a factor-based approach, with a factor applied to segments within defined regions.

573. The business subject to the Non-Life risk charge calculation is mutually exclusive from the business subject to the Health risk charge calculation. Guidance on which segments to include within non-life is contained below. Unless listed below, products with health-like exposures should be included in the Health risk charge calculation.

14.3.9.1 Geographical Segmentation

574. All data items in this worksheet will be aggregated into the following geographical segments:

a) EEA and Switzerland

b) US and Canada

c) Japan

d) China

e) Other developed markets

f) Emerging markets

575. See section 14.2.3 for further details on the definitions of these geographical segments.

14.3.9.2 Segments/lines of business

576. The worksheet should be completed on the basis of location of the risk. This is important to ensure that the appropriate factor is applied. Where this information is not available, the location

where the business was written may be used as a proxy and information on this should be provided in the related questions in the Questionnaire.

577. Each of the first four regions (EEA and Switzerland, US and Canada, Japan and China) is segmented into lines of business based on statutory reporting in those regions.

578. Additional countries (Australia and New Zealand, Hong Kong SAR, Korea, Singapore, Chinese Taipei) are listed along with their lines of business based on statutory reporting. For countries not listed, the segmentation in the following paragraph should be used.

579. Exposures to risks in countries not listed should be reported as part of 'other developed' or 'emerging markets', using the following segmentation:

a) Motor
b) Property damage
c) Accident, protection and health (APH)
d) Non-proportional motor, property damage and APH
e) Workers' compensation
f) Public liability
g) Product liability
h) Professional indemnity
i) Other liability
j) Non-proportional public liability
k) Non-proportional product liability
l) Non-proportional professional indemnity
m) Non-proportional other liability
n) Marine, Aviation, Transport (MAT)
o) Non-proportional MAT
p) Catastrophe reinsurance
q) Other short tail
r) Other medium tail
s) Other long tail
t) Mortgage insurance
u) Commercial credit insurance
v) Other non-traditional

580. The IAIS has provided definitions of lines of business at the end of this section.

581. For the purposes of 2016 Field Testing, each line of business has been assigned:

a) an ICS category: a high level grouping of the type of business (property-like, liability-like, other, non-traditional other, mortgage and credit)

b) a risk factor for the purpose of calculating the risk charge – each line of business has been assigned to one of eight buckets for Premium risk and one of eight buckets for Claims Reserve risk. Each bucket has been assigned a corresponding risk factor that is based on the associated risk of that line of business, and the factors aim to increase the exposure measures to a 99.5% VaR measure of the risk.

14.3.9.3 Input data required

582. Volunteer IAIGs should report the following amounts for each relevant region and segment within that region:

583. PREMIUM RISK

a) Net Earned Premium – most recent financial year ("FY") – Report the net earned premium as defined under statutory reporting in that country/region for the latest financial year (ending in 2015). The amount should be net of ceded reinsurance.

b) Net Earned Premium – most recent financial year minus 1 ("FY -1") – Report the net earned premium as defined under statutory reporting in that country/region for the previous financial year (ending in 2014). The amount should be net of ceded reinsurance. This data is not used for the calculation of the ICS and is therefore optional. It will assist the IAIS in considering other ways to calibrate the ICS and the IAIS encourages Volunteer IAIGs to provide this data.

c) Net Premium to be earned ("FY +1") – Report the expected premium to be earned in the next financial year (ending in 2016). This figure should be consistent with the business already written and must include expected new business. It should be net of ceded reinsurance subject section 14.2.2 on the recognition of risk mitigation.

d) The Premium risk charge for the line of business is then calculated as the relevant risk factor multiplied by the greater of net earned premium and net premium to be earned. Note that the risk factor is provided for Field Testing purposes only. The calibration of the factors will be refined using data collected from Volunteer IAIGs. Please refer to the the Supplementary Data Collection (Non-Life Insurance Risk) section for more details of this request.

584. RESERVE RISK

a) Net Current Estimates (undiscounted) – ("FY(undisc)") – Report the net current estimate as at the end of the most recent financial year (ending in 2015) on an undiscounted basis. For more information on the determination of Current Estimates, refer to section 6.3.

b) Net Current Estimates (discounted) – most recent financial year ("FY") – Report the discounted net current estimate as at the end of the most recent financial year (ending in 2015). For more information on the determination of current estimates, refer to section 6.3.

c) Net Current Estimates (discounted) – financial year minus 1 ("FY -1") – Report the net current estimate as at the end of the previous financial year (ending in 2014). For more information on the determination of current estimates, refer section 6.3. This data is not used for the calculation of the ICS and is therefore optional. It will assist the IAIS in considering other ways to calibrate the ICS and the IAIS encourages Volunteer IAIGs to provide this data.

d) The Claims Reserve risk charge for a segment is calculated as the relevant risk factor multiplied by the net current estimate. Note that the risk factor is provided for Field Testing purposes only. The calibration of the factors will be refined using data to be collected from Volunteer IAIGs. Please refer to the the Supplementary Data Collection (Non-Life Insurance Risk) section for more details of this request.

14.3.9.4 Aggregation

585. Aggregation is automated within the Template. Volunteer IAIGs do not have to enter any data with respect to the aggregation.

586. For the purposes of 2016 Field Testing, risk charges for each line of business or segment in each region are not simply added together, thus recognising that there is diversification across lines of business and regions.

587. The first step of aggregation is to combine each line of business' Premium risk and Claims Reserve risk based on the ICS category (with the exception of mortgage and credit as outlined in the paragraph below) using the respective correlation factor. The second step of aggregation is within region, where a correlation matrix is applied to the sum of each of the four IAIS categories. The third step of aggregation is across regions, where a correlation matrix is applied to each region's total risk charge.

588. Mortgage business and credit business are added across all regions and then aggregated with Real Estate risk and Credit risk, respectively.

589. The Questionnaire seeks feedback from Volunteer IAIGs on each of the correlation matrices.

14.3.9.5 Definition of lines of business

590. The definitions of lines of business are as follows:

Table 17. Definitions for Non-life Lines of Business Segmentation

EEA and Switzerland/Motor vehicle liability - Motor third party liability	Insurance obligations which cover all liabilities arising out of the use of motor vehicles operating on land (including carrier's liability).
EEA and Switzerland/Motor, other classes	Insurance obligations which cover all damage to or loss of land vehicles (including railway rolling stock).
EEA and Switzerland/Marine, aviation and transport	Insurance obligations which cover all damage or loss to sea, lake, river and canal vessels, aircraft, and damage to or loss of goods in transit or baggage irrespective of the form of transport. Insurance obligations which cover liabilities arising out of the use of aircraft, ships, vessels or boats on the sea, lakes, rivers or canals (including carrier's liability).
EEA and Switzerland/Fire and other damage	Insurance obligations which cover all damage to or loss of property (other than those included in motor (other) and marine/aviation/transport) due to fire, explosion, natural forces including storm, hail or frost, nuclear energy, land subsidence and any event such as theft.
EEA and Switzerland/General liability - third party liability	Insurance obligations which cover all liabilities other than those in motor vehicle liability and marine, aviation and transport
EEA and Switzerland/Credit and suretyship	Insurance obligations which cover insolvency, export credit, instalment credit, mortgages, agricultural credit and direct and indirect suretyship.
EEA and Switzerland/Legal expenses	Insurance obligations which cover legal expenses and cost of litigation.
EEA and Switzerland/Assistance	Insurance obligations which cover assistance for persons who get into difficulties while travelling, while away from home or while away from their habitual residence.
EEA and Switzerland/Miscellaneous financial loss	Insurance obligations which cover employment risk, insufficiency of income, bad weather, loss of benefit, continuing general expenses, unforeseen trading expenses, loss of market value, loss of rent or revenue, indirect trading losses other than those mentioned above, other financial loss (non-trading) as well as any other risk of non-life insurance not covered by the lines of business above.
EEA and Switzerland/Non-Proportional Casualty reinsurance	Reinsurance on a non-proportional basis of casualty classes (motor vehicle liability and general liability)

EEA and Switzerland/Non-proportional marine, aviation and transport reinsurance	Reinsurance on a non-proportional basis of marine, aviation and transport
EEA and Switzerland/Non-Proportional property reinsurance	Reinsurance on a non-proportional basis of property classes (other motor, fire, credit/suretyship, legal expenses and assistance)
Canada/Property - personal	Means insurance against the loss of, or damage to, property, and includes insurance against loss caused by forgery. It includes such classifications as habitational property and multi-peril policies, including residential contents of buildings such as apartments, rooming houses, motels, manufacturing and mercantile buildings and the liability exposure of personal package policies issued with indivisible premiums. This line would include fire policies, householder contents and homeowner personal risks, residential burglary and theft and special residential glass coverage. Casualty coverage such as personal liability for bodily injury would not be included in this category.
Canada/Home Warranty	Refers to a contract of insurance issued by a warranty provider covering defects in the construction of a new home and consequential losses or costs incurred by the owner.
Canada/Product Warranty	Means insurance not incidental to any other class of insurance against loss of, or damage to, personal property, other than a motor vehicle, under which an insurer undertakes to pay the costs of repairing or replacing the personal property.
Canada/Property - commercial	Means insurance against the loss of, or damage to, property, and includes insurance against loss caused by forgery and all commercial property and multi-peril policies, but excludes all separate classes of insurance as defined by regulators
Canada/Aircraft	Means insurance against 1. liability arising from bodily injury to, or the death of, a person, or the loss of, or damage to, property, in each case caused by an aircraft or the use of an aircraft; or 2. The loss of, the loss of use of, or damage to, an aircraft.
Canada/Automobile - liability/personal accident	Means insurance 1. against liability arising from bodily injury to, or the death of, a person, or the loss of, or damage to, property, in each case caused by an automobile or the use or operation of an automobile; or 2. that falls within clause (i) or (ii) of the definition of accident and sickness insurance, if the accident is caused by an automobile or the use or operation of an automobile, whether or not liability exists in respect of the accident, and the policy includes insurance against liability arising from bodily injury to, or the death of, a person caused by an automobile or the use or operation of an automobile.

Canada/Automobile - other	Means insurance against the loss of, the loss of use of, or damage to, an automobile;
Canada/Boiler and Machinery	Means insurance 1. against liability arising from bodily injury to, or the death of, a person, or the loss of, or damage to, property, or against the loss of, or damage to, property, in each case caused by the explosion or rupture of, or accident to, pressure vessels of any kind or pipes, engines and machinery connected to or operated by those pressure vessels; or 2. against liability arising from bodily injury to, or the death of, a person, or the loss of, or damage to, property, or against the loss of, or damage to, property, in each case caused by a breakdown of machinery.
Canada/Equipment Warranty	Means the sub-class of boiler and machinery insurance that covers loss of or damage to a motor vehicle or to equipment arising from its mechanical failure, but does not include automobile insurance or insurance incidental to automobile insurance.
Canada/Credit Insurance	Means insurance against loss to a person who has granted credit if the loss is the result of the insolvency or default of the person to whom the credit was granted.
Canada/Credit Protection	Means insurance under which an insurer undertakes to pay off credit balances or debts of an individual, in whole or in part, in the event of an impairment or potential impairment in the individual's income or ability to earn an income.
Canada/Fidelity	Means insurance against loss caused by the theft, the abuse of trust or the unfaithful performance of duties by a person in a position of trust; and insurance under which an insurer undertakes to guarantee the proper fulfilment of the duties of an office.
Canada/Hail	Means insurance against the loss of, or damage to, crops in the field caused by hail.
Canada/Legal Expenses	Means insurance against the costs incurred by a person or persons for legal services specified in the policy, including any retainer and fees incurred for the services, and other costs incurred in respect of the provision of the services.
Canada/Liability	Means insurance, other than insurance that falls within another class of insurance, 1. against liability arising from bodily injury to a person or the disability or death of a person, including an employee; 2. against liability arising from the loss of, or damage to, property; or 3. if the policy includes the insurance described in sub-clause (i), against expenses arising from bodily injury to a person other than the insured or a member of the insured's family, whether or not liability exists. Includes general liability, cyber liability, directors & liability, excess liability, professional liability, umbrella liability and pollution liability

Canada/Mortgage	Means insurance against loss caused by default on the part of a borrower under a loan secured by a mortgage or charge on, or other security interest in, real property.
Canada/Surety	Means insurance under which an insurer undertakes to guarantee the due performance of a contract or undertaking or the payment of a penalty or indemnity for any default.
Canada/Title	Means insurance against loss or damage caused by 1. the existence of a mortgage, charge, lien, encumbrance, servitude or any other restriction on real property; 2. the existence of a mortgage, charge, lien, pledge, encumbrance or any other restriction on personal property; 3. a defect in any document that evidences the creation of any restriction referred to in sub-clause (i) or (ii); 4. a defect in the title to property; or 5. any other matter affecting the title to property or the right to the use and enjoyment of property.
Canada/Marine	Means insurance against liability arising from 1. bodily injury to, or the death of, a person; or 2. the loss of, or damage to, property; or 3. the loss of, or damage to, property, occurred during a voyage or marine adventure at sea or on an inland waterway, or during a delay or a transit other than by water that is incidental to a voyage or marine adventure at sea or on an inland waterway.
Canada/Other Approved Products	Means insurance against risks that do not fall within another class of insurance.
US/Auto physical damage	Any motor vehicle insurance coverage (including collision, vandalism, fire and theft) that insures against material damage to an insured's vehicle.
US/Homeowners/Farmowners	Homeowners: coverage for personal property and/or structure with broad personal liability coverage, for dwelling, appurtenant structures, unscheduled personal property and additional living expenses. Farmowners: similar, for farming and ranching risks; property + liability coverages for personal and business losses, on farm dwellings and contents (e.g. mobile equipment and livestock), barns, stables, other farm structures and farm inland marine.
US/Special property	Various, including: fire; allied lines; inland marine; earthquake; burglary and theft. Fire insurance includes the loss to real or personal property from damage caused by the peril of fire or lightning, including business interruption, loss of rents, etc. Allied lines are coverages generally written with property insurance, e.g., glass; tornado; windstorm and hail; sprinkler and water damage; explosion, riot, and civil commotion; growing crops; flood; rain; and damage from aircraft and vehicle, etc. Inland marine is coverage for property that may be in transit, held by a bailee, at a fixed location, a movable good that is often at different locations (e.g., off road construction equipment), or scheduled property (e.g., Homeowners Personal Floater) including items such as live animals and property with antique or collector's value. This line also includes

	instrumentalities of transportation and communication, such as bridges, tunnels piers, wharves, docks, pipelines, power and phone lines, and radio and television towers.
US/Private passenger auto liability/medical	Coverage for financial loss resulting from legal liability for motor vehicle related injuries (bodily injury and medical payments) or damage to the property of others caused by accidents arising out of the ownership, maintenance or use of a motor vehicle. Does not include coverage for vehicles used in a commercial business.
US/Commercial auto/truck liability/medical	Similar to private passenger auto liability/medical, except for commercial vehicles.
US/Worker's compensation	Insurance that covers an employer's liability for injuries, disability or death to persons in their employment, without regard to fault, as prescribed by state or Federal workers' compensation laws and other statutes. Includes employer's liability coverage against the common law liability for injuries to employees (as distinguished from the liability imposed by Workers' Compensation Laws). Excludes excess workers' compensation
US/Commercial multi-peril (liability)	When two or more insurance coverages for a commercial enterprise, including various property and liability risks, are included in same policy, liability classes should be allocated to this segment. Includes multi-peril policies (other than farmowners, homeowners and automobile policies) that include coverage for liability other than auto. If an exact allocation is not possible, then an approximate percentage is fine.
US/Commercial multi-peril (property)	When two or more insurance coverages for a commercial enterprise, including various property and liability risks, are included in same policy, property classes should be allocated to this segment. Frequently includes fire, allied lines (coverages which are generally written with property insurance, e.g., glass, tornado, windstorm and hail, sprinkler and water damage, explosion, riot, growing crops, flood and damage from aircraft and vehicle, etc.), various other coverages (e.g., differences in conditions). If an exact allocation is not possible, an approximate percentage is fine.
US/Medical professional liability (occ + claims made)	For a licensed health care provider or health care facility against legal liability resulting from the death or injury of any person due to the insured's misconduct, negligence, or incompetence in rendering professional services. The insurance covers events occurring during the policy coverage period and claims presented during the period of coverage.
US/Other Liability–Occurrence	Against legal liability resulting from negligence, carelessness, or a failure to act causing property damage or personal injury to others. Typically, coverage includes liability for the following: construction and alteration; contingent; contractual; elevators and escalators; errors and omissions; environmental pollution; excess stop loss, excess over insured or self-insured amounts and umbrella; liquor; personal injury; premises and operations; completed operations;

	nonmedical professional, etc. Also includes indemnification coverage provided to self-insured employers on an excess of loss basis (excess workers' compensation). The insurance covers events occurring during the policy coverage period.
US/Other Liability – Claims-Made	Same types of coverages as other liability – occurrence above except that the insurance covers claims presented during the period of coverage. The insurable event does not need to occur during the policy period.
US/Products liability	Products liability - occurrence: covers events occurring during coverage period. Products liability - claims made. - covers claims made during the coverage period. Coverage for the manufacturer, distributor, seller, or lessor of a product against legal liability resulting from a defective condition causing personal injury, or damage, to any individual or entity, associated with the use of the product. Products liability - occurrence: covers events occurring during coverage period. Products liability - claims made. - covers claims made during the coverage period. Coverage for the manufacturer, distributor, seller, or lessor of a product against legal liability resulting from a defective condition causing personal injury, or damage, to any individual or entity, associated with the use of the product. Products liability - occurrence: covers events occurring during coverage period. Products liability - claims made. - covers claims made during the coverage period. Coverage for the manufacturer, distributor, seller, or lessor of a product against legal liability resulting from a defective condition causing personal injury, or damage, to any individual or entity, associated with the use of the product.
US/Reinsurance - nonproportional assumed property	Nonproportional assumed liability reinsurance in fire allied lines, ocean marine, inland marine, earthquake, group accident and health, credit accident and health, other accident and health, auto physical damage, boiler and machinery, glass, burglary and theft and international (of the foregoing).
US/Reinsurance - nonproportional assumed liability	Nonproportional assumed liability reinsurance in farmowners multiple-peril, homeowners' multiple-peril, commercial multiple-peril, medical professional liability, workers' compensation, other liability, products liability, auto liability, aircraft (all perils) and international (of the foregoing).
US/Special liability	Various insurance coverages including ocean marine, aircraft (all perils), and boiler and machinery. Ocean marine is coverage for ocean and inland water transportation exposures; such as goods or cargoes; ships or hulls; earnings; and liability. Aircraft is coverage for aircraft (hull) and their contents; aircraft owner's and aircraft manufacturer's liability to passengers, airports and other third parties. Boiler and machinery is coverage for the failure of boilers, machinery and electrical equipment. Coverage includes the property of the insured, which has been directly damaged by an accident,

	costs of temporary repairs and expediting expenses and liability for damage to the property of others.
US/Mortgage insurance	Mortgage guaranty is indemnification of a lender from loss if a borrower fails to meet required mortgage payments.
US/Fidelity/surety	Fidelity is a bond covering an employer's loss resulting from an employee's dishonest act (e.g., loss of cash, securities, or valuables). Surety is a three-party agreement where the insurer agrees to pay a second party or make complete an obligation in response to the default, acts, or omissions of a third party.
US/Financial Guaranty	Financial guaranty is a surety bond, insurance policy, or when issued by an insurer, an indemnity contract and any guaranty similar to the foregoing types, under which loss is payable upon proof of occurrence of financial loss to an insured claimant, oblige or indemnitee as a result of failure to perform a financial obligation.
US/Other	Coverages not included elsewhere which includes credit coverages and, where considered part of property/casualty, accident and health coverages.
US/Other non-traditional non-life insurance	Coverages not included elsewhere that are non-traditional. Note this class is included for consistency in naming with 2015 FT; we understand that uncertainty in the definition of NTNI may make it difficult to map business to here.
US/Reinsurance - nonproportional assumed financial lines	Nonproportional assumed reinsurance in the following lines: mortgage guaranty, financial guaranty, fidelity, surety, credit, and international (in the foregoing).
Japan/Fire	This insurance covers property damage for either commercial or household caused by fire, windstorm, hail, water damage and earthquake
Japan/Hull	This insurance covers damage of vessel.
Japan/Cargo	This insurance covers damage on good and property in transit by vessel.
Japan/Transit	This insurance is called as Inland marine, which covers property being transported by other than vessel or aircraft.
Japan/Personal Accident	This insurance covers loss by accidental bodily injury. Under this insurance, policyholder is reimbursed based on actual losses occurred or receives a fixed benefit due to a certain accident event.
Japan/Automobile	This insurance covers personal injury or automobile damage sustained by the insured and liability to third parties for losses caused by the insured. Please note fleet automobile insurance should be included here.

Japan/Aviation	This insurance covers aircraft, goods or property in transit by aircraft and launch to the space, and liability arising from the loss of or damage to the goods or property in transit or bodily injury or property loss or damage to third parties
Japan/Guarantee Ins.	This insurance covers financial loss caused by the insolvency or payment default of customers to whom credit has been granted
Japan/Machinery	This insurance protects the insured against loss incurred as a result of machinery breakdown.
Japan/General Liability	This insurance covers any legal obligations to pay compensation and costs for bodily injury, property loss or damage to third parties
Japan/Contractor's All Risks	This insurance is purchased by contractors to cover damage to property under construction.
Japan/Movables All Risks	This insurance covers loss or damage to property other than motor, aircraft and vessel.
Japan/Worker's Compensation	This insurance covers no-fault basis compensation payments to employees who sustained bodily injury or occupational disease during or which arises out of the course of their employment, and provides employers with protections against claims which their employees make for bodily injury or occupational disease caused by tort.
Japan/Misc. Pecuniary Loss	This insurance provides the insured with tailor-made covers for consequential losses that are not covered by any other classes of business
Japan/Others	Any other non-life insurance not listed above should be included
China/Motor	A vehicle insurance that the object of insurance is vehicle itself and related liability to pay compensation.
China/Property, including commercial, personal and engineering	Insurance that the object of insurance is property and related interests.
China/Marine and Special	Insurance that the object of insurance is watercraft and related liability to pay compensation.
China/Liability	Insurance that the object of insurance is assumed liability of the insurant to pay compensation to the third party
China/Agriculture	Insurance that the object of insurance is the property loss of agriculture caused by disasters.

China/Credit	Insurance that the object of insurance is the economical loss of loaner because of the debtor's incapacity or refusing to pay for the debt
China/Short-term Life	A short term life insurance, the object of insurance is the lift of insurant. The period of insurance is usually no more than one year.
China/Others	Other insurances.
Australia&NZ/Householders	This class covers the common Householders policies, including the following classes/risks: contents, personal property, arson and burglary. Public liability normally attaching to these products is to be separated. This class also covers proportional reinsurance of householders business
Australia&NZ/Commercial Motor	Motor vehicle insurance (including third party property damage) other than insurance covering vehicles defined below under Domestic Motor. It includes long and medium haul trucks, cranes and special vehicles, and policies covering fleets. This class also covers proportional reinsurance of commercial motor
Australia&NZ/Domestic Motor	Motor vehicle insurance (including third party property damage) covering private use motor vehicles including utilities and lorries, motor cycles, private caravans, box and boat trailers, and other vehicles not normally covered by business or commercial policies. This class also covers proportional reinsurance of domestic motor
Australia&NZ/Other type A	Other classes of business with similar characteristics to householders and motor This class also covers proportional reinsurance of other type A
Australia&NZ/Travel	Insurance against losses associated with travel including loss of baggage and personal effects, losses on flight cancellations and overseas medical costs. This class also covers proportional reinsurance of travel insurance
Australia&NZ/Fire and ISR	Includes all policies normally classified as fire (includes sprinkler leakage, subsidence, windstorm, hailstone, crop, arson and loss of profits) and Industrial Special Risk This class also covers proportional reinsurance of fire and industrial special risk.
Australia&NZ/Marine and Aviation	Includes Marine Hull and Marine Liability (including pleasure craft), and Marine Cargo (including sea and inland transit insurance). Also includes Aviation (including aircraft hull and aircraft liability). This class also covers proportional reinsurance of marine and aviation
Australia&NZ/Consumer Credit	Insurance to protect a consumer's ability to meet the loan repayments on personal loans and credit card finance in the event of death or loss of income due to injury, illness or unemployment. This class also covers proportional reinsurance of consumer credit

Australia&NZ/Other Accident	Includes miscellaneous accident, all risks (baggage, sporting equipment, guns), engineering when not part of Fire & ISR, plate glass when not package, livestock, pluvius and sickness and accident This class also covers proportional reinsurance of other accident
Australia&NZ/Other type B	Other classes of business with similar characteristics to Fire & ISR, marine, aviation, consumer credit and other accident This class also covers proportional reinsurance of other type B
Australia&NZ/Mortgage	Insurance against losses to a lender in the event of borrower default on a loan secured by a mortgage over residential or other property. This class also covers proportional reinsurance of mortgage
Australia&NZ/CTP	Compulsory Third Party business This class also covers proportional reinsurance of CTP
Australia&NZ/Public and Product Liability	Public Liability covers legal liability to the public in respect of bodily injury or property damage arising out of the operation of the insured's business. Product Liability includes policies that provide for compensation for loss and/or injury caused by, or as a result of, the use of goods and environmental clean-up caused by pollution spills where not covered by Fire and ISR policies. Includes builders warranty and public liability attaching to householders policies This class also covers proportional reinsurance of public and product liability
Australia&NZ/Professional Indemnity	PI covers professionals against liability incurred as a result of errors and omissions made in performing professional services that has resulted in economic losses suffered by third parties. Includes Directors' and Officers' Liability insurance plus legal expense insurance. Cover for legal expenses is generally included in this type of policy. This class also covers proportional reinsurance of professional indemnity.
Australia&NZ/Employers' Liability	Includes workers' compensation, seaman's compensation and domestic workers' compensation This class also covers proportional reinsurance of employer's liability
Australia&NZ/Other type C	Other classes of business with similar characteristics to mortgage, CTP, and other liability This class also covers proportional reinsurance of other type C
Australia&NZ/Householders - non-prop reins	Non-Proportional reinsurance of householders business (refer definition)
Australia&NZ/Commercial Motor - non-prop reins	Non-Proportional reinsurance of commercial motor (refer definition)
Australia&NZ/Domestic Motor - non-prop reins	Non-Proportional reinsurance of domestic motor business (refer definition)
Australia&NZ/Other non-prop reins type A	Non-Proportional reinsurance of other type A business (refer definition)

Australia&NZ/Travel - non-prop reins	Non-Proportional reinsurance of travel business (refer definition)
Australia&NZ/Fire and ISR - non-prop reins	Non-Proportional reinsurance of Fire & ISR business (refer definition)
Australia&NZ/Marine and Aviation - non-prop reins	Non-Proportional reinsurance of marine and aviation business (refer definition)
Australia&NZ/Consumer Credit - non-prop reins	Non-Proportional reinsurance of consumer credit business (refer definition)
Australia&NZ/Other Accident - non-prop reins	Non-Proportional reinsurance of other accident business (refer definition)
Australia&NZ/Other non-prop reins type B	Non-Proportional reinsurance of other type B business (refer definition)
Australia&NZ/Mortgage - non-prop reins	Non-Proportional reinsurance of mortgage business (refer definition)
Australia&NZ/CTP - non-prop reins	Non-Proportional reinsurance of CTP business (refer definition)
Australia&NZ/Public and Product Liability - non-prop reins	Non-Proportional reinsurance of public and product liability business (refer definition)
Australia&NZ/Professional Indemnity - non-prop reins	Non-Proportional reinsurance of professional indemnity business (refer definition)
Australia&NZ/Employers' Liability - non-prop reins	Non-Proportional reinsurance of employers' liability business (refer definition)
Australia&NZ/Other non-prop reins type C	Non-Proportional reinsurance of other type C business (refer definition)
Hong Kong/Motor vehicle, damage and liability	This includes 1. Insurance against the risk of the person sustaining injury or dying as a result of travelling as passenger on motor vehicle; 2. Insurance upon loss of or damage to vehicles used on land, including motor vehicles but excluding railway rolling stock; or 3. Insurance against damage arising out of or in connection with the use of motor vehicles on land, including third-party risks and carrier's liability.
Hong Kong/Aircraft, damage and liability	This includes 1. Insurance against the risk of the person sustaining injury or dying as a result of travelling as passenger on aircraft; 2. Insurance upon aircraft or upon the machinery, tackle, furniture or

	equipment of aircraft; or 3. Insurance against damage arising out of or in connection with the use of aircraft, including third-party risks and carrier's liability.
Hong Kong/Ships, damage and liability	This includes 1. Insurance against the risk of the person sustaining injury or dying as a result of travelling as passenger on marine transport; 2. Insurance upon vessels used on the sea or on inland water, or upon the machinery, tackle, furniture or equipment of such vessels; or 3. Insurance against damage arising out of or in connection with the use of vessels on the sea or on inland water, including third-party risks and carrier's liability.
Hong Kong/Goods in transit	Insurance upon loss of or damage to merchandise, baggage and all other goods in transit, irrespective of the form of transport (i.e. include goods in transit via motor, aircraft, ships and other transport).
Hong Kong/Fire and Property damage	This includes insurance against loss of or damage to property (other than property to which motor, aircraft, ships or goods in transit relates) due to 1. Fire, explosion, storm, natural forces other than storm, nuclear energy or land subsidence; or 2. hail or frost or to any event (such as theft) other than those mentioned in 1.
Hong Kong/General liability	Insurance against risks of the persons insured incurring liabilities to third parties, the risks in question not being risks to which motor, aircraft or ships relates.
Hong Kong/Pecuniary loss	This includes: 1. Insurance against risks of loss to the persons insured arising from the insolvency or failure of debtors of theirs; 2. Suretyship; 3. Insurance against risks attributable to interruptions of the carrying on of business carried on by them or to reduction of the scope of business so carried on; or 4. Insurance against risks of loss to the persons insured attributable to their incurring legal expenses (including costs of litigation).
Hong Kong/Non-proportional treaty reinsurance	In the event that it is impracticable to allocate the treaty reinsurance business to the respective eight accounting classes of general business above, such business may be shown under 2 broad classes, namely, Non-proportional Treaty Reinsurance and Proportional Treaty Reinsurance
Hong Kong/Proportional treaty reinsurance	In the event that it is impracticable to allocate the treaty reinsurance business to the respective eight accounting classes of general business above, such business may be shown under 2 broad classes, namely, Non-proportional Treaty Reinsurance and Proportional Treaty Reinsurance
Korea/ Fire, technology, overseas	This includes fire insurance, technology insurance, original overseas insurance, reinsurance assumed from overseas - fire insurance: insurance for residential fire, factory fire, general fire (insurance for fire in any ordinary building and movable property therein, excluding residential houses and factories) and other fire. - technology insurance: insurance for construction, assembling, machinery, electronic devices and others. The definitions for each

	are set out below. 1) construction: protection against damage and liability for damage to a building under construction 2) assembly: protection against damage and liability for damage to a structure in assembling progress 3) machinery: insurance for damage to machinery 4) electronic devices: insurance for damage to electronic devices and costs and expenses for restoration of data - original overseas insurance: insurance for property damage, bodily injury, or liability for damages in connection with any goods located in a foreign country - reinsurance assumed from overseas: assuming other insurer's risk as a reinsurer from oversea
Korea/Package	This includes package insurance for household and for business - for household: insurance for two or more types of damage among insurance for an individual person's property damage, bodily injury, and liability for damages - for business: insurance for two or more types of damage among an enterprise's property damage, liability for damages, and insurance for bodily injury of its members
Korea/Maritime	This includes Marine, Transportation and aviation. More specifically this includes cargo, ship, general maritime, marine liability, transportation, aviation, space, and other maritime. 1) cargo: insurance for risks in marine transportation of cargoes 2) ship: insurance for damage to a ship 3) general maritime: insurance for risks in marine activities, such as risks in marine construction 4) marine liability: protection against liability for damage on the seas, such as insurance of liability for marine contamination (excluding ship and general marine) 5) transportation: insurance for risks in cargoes in inland transportation 6) aviation: insurance for damage to aircraft, such as operation and navigation of aircraft (property) and protection against liability for damages related to accidents of aircraft (liability for damages) 7) space: insurance for risks in successful launching and performance of missions of artificial satellites (property) and protection against liability for damages related to accidents of artificial satellites (liability for damages) 8) other maritime: marine insurance products other than those classified above
Korea/Workers accident, liability	This includes insurance for workers' compensation for accidents and insurance for liability. - Worker’s compensation for accidents includes ; 1) domestic: indemnity for accidents and employer's liability 2) overseas: indemnity for accidents and employer's liability 3) seafarers: indemnity for accidents and employer's liability 4) occupational trainee: indemnity for accidents and employer's

	liability - Insurance for liability includes ; 1) general liability: personal liability, business liability, shipowner's liability, excursion and ferry ship business, road transportation business, gas accident, sports facilities, local government and others 2) product liability: product liability, product recall and product guarantee 3) professional liability: malpractice and errors and omissions (E&O)
Korea/Foreigners	This includes insurance for injury, travel and others provided for foreigners.
Korea/Advance payment refund guarantee	Insurance purchased by a builder for damage that a buyer may sustain due to non-performance of repayment of advance payment in connection of building of a ship or construction of marine facilities.
Korea/Other non-life	General insurance products other than those specified above.
Korea/Private vehicle(personal injury)	This means insurance that indemnifies the policyholder from the liability for damages incurred to a victim by killing or injuring another person as a consequence of an accident incurred while the insured owns or manages a vehicle, among covers provided under an automobile insurance policy for a private motor vehicle, which shall include the liability insurance under Article 5 (1) of the Guarantee of Automobile Accident Compensation Act.
Korea/Private vehicle(property, vehicles damage)	This means insurance that indemnifies the policyholder from the liability for damages incurred to another vehicle or the policyholder's own vehicle as a consequence of an accident incurred while the policyholder owns or manages a vehicle, among covers provided under an automobile insurance policy for a private motor vehicle.
Korea/Vehicle for commercial or business purpose(personal injury)	This means insurance that indemnifies the policyholder from the liability for damages incurred to a victim by killing or injuring another person as a consequence of an accident incurred while the policyholder owns or manages a motor vehicle, among covers provided under an automobile insurance policy for a motor vehicle for commercial or business purpose, which shall include the liability insurance under Article 5 (1) of the Guarantee of Automobile Accident Compensation Act.
Korea/Vehicle for commercial or business purpose(property, vehicles)	This means insurance that indemnifies the policyholder from the liability for damages incurred to another vehicle or the policyholder's own vehicle as a consequence of an accident incurred while the policyholder owns or manages a vehicle, among covers provided under an automobile insurance policy for a motor vehicle for commercial or business purpose.
Korea/Other motor	Automobile insurance other than insurance products specified above.

Singapore/Personal Accident	Refers to the insurance business of writing personal accident policy.
Singapore/Fire	This insurance covers property damage for either commercial or household caused by fire, windstorm, hail, water damage and earthquake
Singapore/Marine and Aviation - Cargo	Includes insurance against risk of loss or damage of any cargo in transit, and any liability arising from such cargo in transit arising from the use of a vessel or ship or aircraft.
Singapore/Motor	Includes insurance against risk of loss, damage or liability arising out of or in connection with the use of motor vehicles.
Singapore/Work Injury Compensation	This insurance covers compensation payments to employees who sustained bodily injury or occupational disease during or which arises out of the course of their employment.
Singapore/Bonds	Includes maid insurance and insurance under which an insurer undertakes to guarantee (other than guarantees to which "Credit/ Credit related" relates to) the due performance of a contract or undertaking, or the payment of a penalty or indemnity for any default.
Singapore/Engineering Construction	Includes insurance against construction, erection, or engineering risks such as the loss or damage involved in a construction project, and installation and erection of ready built-engineering projects. It also includes boiler and pressure vessel insurance, construction all risk insurance, engineering all risk insurance, erection all risk insurance, machinery all risk insurance and insurance on any other specialised equipment or machinery that are excluded from the standard property insurance.
Singapore/Credit	Insurance protecting against the risk of non-payment of goods and services by buyers and importers
Singapore/Mortgage	Insurance protecting against losses on mortgage loans arising from default by borrowers
Singapore/Others- non liability class	Other non-liability classes not covered elsewhere
Singapore/Marine and Aviation - Hull	Includes insurance against risk of physical loss or damage of vessel or ship used on sea or inland water or aircraft, any liability arising from such vessel or ship or aircraft, and damage of vessel or ship or aircraft while under construction. It also includes marine terminal operator insurance and airport operator insurance and insurance against aerospace risks.

Singapore/Professional indemnity	Includes insurance for professionals against risk of their liability to their principals, clients, principal's clients, or any third parties arising out of neglect, omission or error in the discharge of their professional duties. It also includes directors and officers liability insurance, and errors and omission insurance.
Singapore/Public liability	Includes insurance against risk of the insured's liability to third party in respect of bodily injury, property damage or any monetary losses arising out of negligence (other than liability to which business classes "Cargo", "Marine Hull", "Aviation Hull" and "Motor" relate to).
Singapore/Others- liability class	Other liability classes not covered elsewhere
Chinese Taipei/Fire - residence	Fire insurance for personal residence
Chinese Taipei/Fire - commercial	Fire insurance for commercial building
Chinese Taipei/Marine - inland cargo	Marine insurance for inland cargo
Chinese Taipei/Marine - overseas cargo	Marine insurance for overseas cargo
Chinese Taipei/Marine - hull	Marine insurance for hull
Chinese Taipei/Marine - fish boat	Marine insurance for fish boat/vessel
Chinese Taipei/Marine - aircraft	Aviation insurance for aircraft
Chinese Taipei/Motor - personal vehicle	Motor insurance for personal vehicle
Chinese Taipei/Motor - commercial vehicle	Motor insurance for commercial vehicle
Chinese Taipei/Motor - personal liability	Motor insurance for personal liabilities
Chinese Taipei/Motor - commercial liability	Motor insurance for commercial liabilities
Chinese Taipei/Liability - public, employer, product, etc.	Public liability insurance, employer liability insurance, product liability insurance, etc.

Chinese Taipei/Liability - professional	Professional liability insurance
Chinese Taipei/Engineering	Engineering insurance
Chinese Taipei/Nuclear power station	Insurance for nuclear power station
Chinese Taipei/Guarantee - surety, fidelity	Surety insurance, fidelity insurance, mortgage insurance, etc.
Chinese Taipei/Credit	Trade credit insurance, credit card insurance, small-amount loan credit insurance, etc.
Chinese Taipei/Other property damage	Property damage insurances not included in other LOBs, e.g. cash insurance, theft insurance, glass insurance, etc.
Chinese Taipei/Property Damage - commercial earthquake	Earthquake insurance (other than compulsory earthquake insurance)
Chinese Taipei/Comprehensive - personal property and liability	Comprehensive insurance for personal property and liabilities
Chinese Taipei/Comprehensive - commercial property and liability	Comprehensive insurance for commercial property and liabilities
Chinese Taipei/Property damage - typhoon and flood	Typhoon and flood insurance
Chinese Taipei/Property damage - compulsory earthquake	Compulsory earthquake insurance (compulsory for personal residence)
OTHER/Motor	This includes: Motor property damage: Damage to own and third-party motor vehicles (and related property damage) through accident, theft, fire and weather events, excluding liability for personal injury; and Motor bodily insurances: Insurances relating to the injury or death of third parties due to or related to motor vehicles and accidents involving them. This may also extend to include the driver involved.
OTHER/Property damage	This includes, but is not limited to: 1. Property: Insurance of house or other property (including house contents) against loss through fire, windstorm etc., insurance of contents against losses due to theft, fire, windstorm, earthquake, impact, damages, water damage, and other natural and man-made perils. Contents insurances may

	extend to loss or damage to property outside the home or its usual location. 2. Fire and industrial: Loss or damage and loss of earnings due to damage to commercial buildings and other physical infrastructure due to fire, windstorm and other perils. 3. Consequential losses: Products covering consequential losses (such as 'loss of profits' or 'business interruption') should also be included in this segment; 4 Construction: This includes 'construction all risks and erection all risks' (CAR/EAR) or similar written in connection with construction projects. This includes the construction and erection of infrastructure projects and buildings.
OTHER/Accident, protection and health (APH)	This includes, but is not limited to: 1 Accident and sickness: Accident cover provides benefits if an accident result in bodily injury or death. Benefits are lump sum or periodic (typically for at most 2 years). Sickness cover is often an extension of accident insurance; 2 Other consumer accident: Property damage other than householders or motor vehicle. For example, travel insurance. 3. Other commercial accident: Commercial property insurance other than Fire and Industrial risk and MAT, and other than commercial long-term liability; 4 Consumer credit: Guarantee of repayments on consumer credit contracts due to involuntary loss of employment; 5. Consumer liability: Private individual's liability for personal injury through personal actions or property
OTHER/Other short tail	Any non-Life products which do not fit into the segments above, does not fit the definition of non-life non-traditional business and where claims are usually made during the term of the policy or shortly (typically, up to 1 year) up to after the policy has expired.
OTHER/Marine, Air, Transport (MAT)	This includes: 1. All damage or loss of river, canal, lake and sea vessels, aircraft, goods in transit, liabilities from use of aircraft, ships and boats.; 2 Loss or damage to property, consequential third party liability for damages to the property of others, and consequential third party liability for personal injury to operators, passengers and other should be included.
OTHER/Other medium tail	Any non-life products which do not fit into the defined segments above, does not fit the definition of non-life non-traditional business and where claims are usually made during the term of the policy or some time (typically between 1 and 5 years) after the policy has expired.
OTHER/Workers' compensation	This insurance covers compensation payments to employees who sustained bodily injury or occupational disease during or which arises out of the course of their employment.
OTHER/Public liability	Public liability insurance for bodily injury or damage to property
OTHER/Product liability	Product liability insurance for bodily injury or damage to property for claims attributed to the use of products.

OTHER/Professional indemnity	Professional indemnity for a professional person or organisation for claims for losses legal and other) attributed to professional negligence (and related) in the services provided. For example, medical malpractice and directors and officers insurance products
OTHER/Other liability	All other liability classes not covered elsewhere
OTHER/Other long tail	Any non-life products which do not fit into the defined segments above, does not fit the definition of non-life non-traditional business and where claims may be made many years (typically 5 or more years) after the coverage period of the insurance has expired.
OTHER/Non-proportional motor, property damage and APH	Non-Proportional reinsurance of motor, property damage and accident/protection/health business (refer definition)
OTHER/Catastrophe reinsurance	Catastrophe Reinsurance is an inwards reinsurance line of business providing excess of loss protection or proportional protection in respect of aggregate losses arising from a single event or a combination of events. Typically, such business is covering damages to property and is sold with an 'hours' clause and provides protection against natural catastrophe perils such as windstorms, earthquakes and man-made catastrophe such as acts of terrorism.
OTHER/Non-proportional MAT	Non-Proportional reinsurance of marine, aviation and transport (refer definition)
OTHER/Non-proportional public liability	Non-Proportional reinsurance of public liability (refer definition)
OTHER/Non-proportional product liability	Non-Proportional reinsurance off product liability (refer definition)
OTHER/Non-proportional professional indemnity	Non-Proportional reinsurance of professional indemnity (refer definition)
OTHER/Non-proportional other liability	Non-Proportional reinsurance of other liability (refer definition)
OTHER/Mortgage insurance	Indemnity to credit providers for losses due to the failure of a borrower to repay a loan secured by a mortgage over property
OTHER/Commercial credit insurance	Indemnity for financial losses due to the failure of a commercial entity to repay outstanding credit contracts or failure to perform contracted services or deliver contracted products other than short-term trade credit and suretyship insurance.
OTHER/Other non-traditional	Any other non-life Non-Traditional insurance products other than the above and not included in non-life Traditional insurance segments above. This includes, but is not limited to: Financing or monetising Insurance-linked securities (ILS, for example catastrophe bonds). For example, embedded Value/Present Value of Future

	Profit securitisations, ILS with financial risk as material trigger condition.

14.3.10 Catastrophe Risk

Relevant Worksheets in Template:	*ICS.Catastrophe*	*Due 15 September 2016*

591. Catastrophe risk covers risks associated with claims events that are yet to happen, particularly low frequency and high severity events. This includes individual major claims as well as the aggregation of multiple claims arising from a single event. Catastrophe risk affects life, health and non-life business. It considers all losses arising as a consequence of events occurring at any point in time in the next 12 months and may take into account expected business volumes including expected new business to be written during the next 12 months.

592. Also included within Catastrophe risk is a 'latent liability' scenario. This was referred to as a 'liability catastrophe' scenario during 2015 Field Testing. As with the Catastrophe risks above, the purpose of this scenario is to capture risk on liability exposures that is not adequately captured by historical claims experience. While analogous, there are some fundamental differences. As usually understood, a catastrophe results in sudden and mass destruction and only poses a threat to business inforce at the time of occurence. Latent liability exposure can develop over many years and can also affect written business that has already been fully earned.

593. Allowance may be made for any risk mitigation arrangements, e.g. outwards reinsurance protection purchased, which may reduce overall Catastrophe risk. Renewal of risk mitigation arrangements with respect to non-life insurance risks may be taken into account if the Volunteer IAIG expects to renew, and the costs of renewal within the time horizon are taken into account (see section 14.2.2 on risk mitigation). The Catastrophe risk charge should be calculated assuming that the payments from mitigation arrangements will always be fully recovered where applicable. The contingent Credit risk associated with such recoveries should be assessed as part of Credit risk based on the recoverable amount determined within the catastrophe component (see section 14.5 on Credit risk). The calculation of the recoverable amount by rating category is described at the end of this section.

594. Catastrophe risk is segmented at the risk/peril level. "Peril" is interpreted in its broader sense to cover both naturally occurring perils ("natural catastrophe") and man-made perils/scenarios ("other catastrophe") and their consequences.

14.3.10.1 Scope of calculation

595. When calculating the Catastrophe risk charge, the Volunteer IAIG should consider all lines of business exposed to Catastrophe risk. For example, a natural catastrophe such as an earthquake could impact not only the residential property, commercial property, auto and marine (incl. energy offshore) lines of business, but also specie/fine art, personal accident, aviation, liability, workers compensation

and some life or health insurance lines of business. To avoid double counting with the other components of the ICS capital requirement, the following principles should be applied:

a) Life and Health insurance products should be included only for the pandemic and the terrorism scenario (see below).

b) The impact on financial markets and the whole economy (Market and Credit risks) should not be included in the calculation of Catastrophe risk.

596. The impact of catastrophe claims events should include not only the main peril (e.g. windstorm, earthquake), but also the secondary perils associated with the primary peril. Secondary perils can, in principle, affect all lines of business within the scope of the calculation. For example, the main peril tropical cyclone may cause secondary perils such as storm surge and events such as dam breaking as well as demand surge or loss amplification. Similarly, fire or tsunami following an earthquake, sprinkler leakage and demand surge or loss amplification should be associated with the earthquake scenario as appropriate.

597. Before performing a detailed calculation, Volunteer IAIGs should assess the materiality of the impact of catastrophe events based on their contractual exposure to the perils and scenarios listed. For the purpose of 2016 Field Testing, if the Volunteer IAIG establishes that its possible exposure to a specific scenario is immaterial, then a detailed calculation is not required. In such cases, Volunteer IAIGs should provide explanations in the Catastrophe risk part of the Questionnaire.

598. Volunteer IAIGs are required to report losses gross as well as net of protection from qualifying risk mitigation arrangements. The amounts reported gross of protections should be calculated net of reinstatement premium received (i.e. net of inward reinstatement premium). The amounts reported net of protections should take into account any reinstatement premiums received and paid (i.e. net of inward and outward reinstatement premium).

14.3.10.2 Input data required

599. Volunteer IAIGs are required to report the following perils:

a) Natural catastrophe:
   i. Tropical cyclone, hurricane, typhoon
   ii. Extra-tropical windstorm / winter-storm
   iii. Earthquake
   iv. Other material natural perils such as:
      (1) Flood
      (2) Tornado, hail, convective storms
      (3) Other risks
b) Other catastrophe scenarios
   i. Terrorist attack
   ii. Latent Liability

iii. Pandemic
iv. Marine
v. Aviation
vi. Credit and surety

14.3.10.3 Natural catastrophe

600. For the purpose of 2016 Field Testing, Volunteer IAIGs are required to report the total annual aggregate loss amounts for the perils, risk measures and confidence levels specified in the Template:

a) losses gross of protections (e.g. gross of external reinsurance protections);

b) losses net of protections (e.g. net of external reinsurance protections).

c) the resulting risk charge will be calculated as the difference between the 99.5th percentile and the mean of the losses net of protections. (In 2015 Field Testing, only the 99.5th percentile was used.)

d) the annual aggregate losses should be calculated as the aggregation of losses across all regions and perils.

601. The loss amounts should be calculated considering:

a) the impact of the natural catastrophe on all lines of business affected;

b) an allowance for non-modelled exposures including expected new business over the target time horizon of one year that could be affected by the listed perils;

c) an allowance for non-modelled perils and regions should be reported as part of the "other" natural catastrophe losses. This could include perils and regions that are not modelled individually or specifically but for which potential losses are assessed using other approaches.

602. For 2016 Field Testing, Volunteer IAIGs are allowed to use stochastic catastrophe models (vendor or proprietary) to calculate the loss amounts resulting from natural catastrophe events.

603. The calculation should include the secondary perils/effects associated with the primary peril modelled such as, but not limited to, fire following earthquake, storm surge and including demand surge and loss amplification, if relevant.

14.3.10.4 Other catastrophe scenarios

604. For catastrophe exposures other than natural perils, Volunteer IAIGs are requested to report the loss amounts for the event scenarios described below. The impact of the scenarios should be

calculated for all lines of business affected by the respective scenario unless otherwise specified in the scope of the calculation paragraph 595.

605. For each scenario below, the loss amounts gross and net of external protections should be reported. For scenarios that are not material, Volunteer IAIGs may adopt a simplified and prudent approach to provide a reasonable approximation.

14.3.10.4.1 Terrorist attack

606. The scenario is defined as the total loss of property (including building, content, motor vehicles) and the impact on other insurance contracts resulting directly from the loss of property (e.g. business interruption) as well as the losses from life insurance contracts, health coverage and workers compensation.

607. The scenario is a 1-tonne bomb blast and should be calculated for the largest geographical risk concentration partly or fully located within a radius of 200 meters. In determining this concentration, all buildings (including own-use properties) should be considered.

608. For property damage and related covers (e.g. business interruption), a 50% damage ratio within a circular zone of a 100m radius, and a 20% damage ratio beyond 100m up to 200m should be assumed. Property damage should take into account insured properties as well as own properties (e.g. for own use). For fatalities, a 10% fatality rate within a circular zone of a 100m radius and a 1% fatality rate beyond 100m up to 200m should be assumed. For disabilities, a 15% disability rate within a circular zone of a 100m radius, and a 5% disability rate beyond 100m up to 200m should be assumed. Fatalities and disabilities should take into account liabilities from insurance contracts (e.g. life and health insurance policies) as well as liabilities to own staff (e.g. through benefits or other forms of exposure). For life insurance liabilities for which the geographical location is not available, Volunteer IAIGs should make a best effort estimation of the concentration of exposures considering, in particular, group policies.

14.3.10.4.2 *Latent Liability*

609. The scenario for latent liability risks presented below covers “mass tort”. Further scenarios, along with refinements to the approach, specifically for product liability, are under consideration. In 2015 Field Testing, the corresponding scenario was called “liability catastrophe”.

610. The scenario is that, during the one-year time horizon considered for the ICS capital requirement, for example following a court decision, a general and potentially legally enforceable opinion emerges that a specific product or substance causes observed or potential future adverse effects such as bodily injury, property damage or environmental damage. This is expected to lead, during the year and later, to claims on the product liability insurance of the producers, followed by mass litigation against companies that are distributing or using or have distributed or used the product or substance, leading to an accumulation of potentially worldwide claims on general commercial liability and workers compensation/employers liability insurance policies. Losses can be incurred on

many policy years. These not only include the current policy year but also prior years not excluded by policy terms such as "claims made" coverage or statutes of limitations. The scenario takes into consideration that the amount recognised at the end of the one-year time horizon is smaller than the maximum possible ultimate loss from the scenario, due to incompleteness of available information and uncertainty on the subsequent development.

611. The net loss to the Volunteer IAIG from the scenario is the one-year current estimate reserve increase due to the scenario and is calculated by applying prescribed factors to Volunteer IAIGs' exposure measures for each latent liability segment, where a latent liability segment is a combination of:

a) line of business: product liability; general commercial liability, employers liability/workers compensation;

b) region: "EEA and Switzerland", "USA and Canada", "Japan", "China", "Other developed markets", "Emerging markets"; and

c) type of business: direct and proportional, non-proportional

612. Note that these segments do not map perfectly onto the segments used in ICS reporting. A mapping to the closest available segment is provided in the Template. Generally speaking, where more than one of the following classes is contained in a segment, the factors for General Commercial Liability are used. Refinements to non-life segmentation are being considered and further refinement to this mapping may be made in the development of ICS version 1.0. Similarly, the appropriate treatment of potentially latent liability exposed segments that are being mapped to Health (e.g. EEA&S Workers' Compensation) is under consideration.

613. The exposure factors for each segment deemed to be impacted by the scenario are determined so as to reflect that multiple policy years would be impacted (taking into consideration the potential time period during which the product and substance has been on the market). In the analysis to develop the factors, the number of affected policy years was assumed to be eight years for all latent liability segments with the exception of the line of business employers' liability/workers compensation and the region "USA and Canada", for which it is 3 years, reflecting local statutes of limitations.

614. The Volunteer IAIGs' exposure measure is defined as the average of the net earned premiums for the current policy year and the previous seven policy years. To avoid the need to collect granular exposure measures for multiple years, a simplified approach is adopted where a historical premium adjustment factor is calculated to reflect material changes in exposures across the impacted years.

615. To calculate the exposure measure per latent liability segment, Volunteer IAIGs are asked to enter into the Template (*ICS.Catastrophe*) their gross and net earned premiums for each affected policy year for their 10 largest segments, as measured by the product of the current policy year net premium and the corresponding exposure factors below.

616. The exposure factors to be applied to the Volunteer IAIGs' exposure measure by latent liability segment are shown below.

Table 18. Exposure factors for latent liability segment

Selected Factors	product liability	product liability	gen comm liability	gen comm liability	empl liab/ workers comp	empl liab/ workers comp
	P	NP	P	NP	P	NP
EEA and Switzerland	45%	90%	25%	50%	25%	50%
US/Canada	65%	130%	35%	75%	15%	30%
Japan	35%	65%	20%	35%	20%	35%
China	25%	50%	15%	30%	15%	30%
Other developed markets	30%	60%	15%	35%	15%	35%
Emerging markets	25%	50%	15%	30%	15%	30%

617. To determine the impact of the scenario, the factors are applied to the automatically matched latent liability segments provided for the Premium and Claims Reserve risk calculation (in the *ICS.Non-Life type risk* worksheet). The historical premium adjustment and an estimated "gross-to-net" calculation is then performed in the *ICS.Catastrophe* worksheet.

14.3.10.4.3 *Pandemic*

618. The scenario is defined as the increase in the number of deaths following a global pandemic.

619. The scenario should be calculated as the total loss amount to all individual and group insurance products covering Mortality risk in any part of the world resulting from the increase in the number of deaths per thousand insured of 1.0. Losses both gross and net of qualifying outward reinsurance should be reported in the Template.

14.3.10.4.4 *Marine*

620. The scenario is defined as the total loss amount resulting from the loss of a vessel (e.g. oil and gas tanker, cruise ship) or offshore platform. The total loss amount should include exposure to the vessel or the platform itself (including possible expenses for the removal of wreckage), liability insurance and reinsurance, pollution insurance and reinsurance and other insurance loss resulting directly from the loss of the vessel or platform (e.g. the loss of production income).

621. The scenario should be calculated for the largest net loss amount resulting from the above specified scenario. Losses both gross and net of qualifying outward reinsurance should be reported in the Template.

14.3.10.4.5 *Aviation*

622. The scenario is defined as the total loss amount resulting from the collision of two aircrafts (e.g. commercial airliners). The total loss amount should include exposure to the aircrafts and the aviation and, if relevant, product liability.

623. The scenario should be calculated for the largest net loss amount resulting from the above specified scenario. Losses both gross and net of qualifying outward reinsurance should be reported in the Template.

14.3.10.4.6 *Credit and surety*

624. The risk charge for this scenario is the sum of the losses calculated for the three components detailed below:

a) Mortgage insurance

b) Trade credit

c) Surety

Mortgage insurance

625. The credit stress scenario for mortgage insurance is defined as a decline in home prices that leads to an increase in default frequencies. Each Volunteer IAIG should apply the nationwide home price declines in the table below to each region where the Volunteer IAIG is active. The decline in home prices is assumed to persist for the entire one-year time period. The total loss amount should include the impact of both an increase in frequency of delinquency and defaults and an increased loss severity that result from the decline in home prices.

626. In implementing the stress scenario and to account for differences in risk profiles across various exposures and activities, Volunteer IAIGs should segment their portfolios and business activities into categories based on common or related risk characteristics. Companies should use appropriate models to translate the relevant risk factor (home price decline) into the financial impact (increased losses, decrease in the cures rate). Where applicable, those models that the Volunteer IAIG already uses to calculate stress losses, premium deficiency reserves or other loss measures should be used.

Table 19. Credit Stresses for Mortgage Insurance

Factor	1 Year change in house price
EEA and Switzerland	-30%
USA and Canada	-30%
Japan	-30%
China	-30%
Rest of World	-30%

627. The scenario should be calculated as an aggregate loss amount resulting from an increase in frequency and severity due to the specified decline in home prices.

Trade Credit

628. The credit stress scenario for Trade Credit is defined as the total loss amount due to the inability of customers of the insured to pay for goods delivered and/or services provided. The trade credit coverage indemnifies the insured policyholder for bad debt losses incurred due to a customer's inability to pay. An insured's customer inability to pay is indicated by an increase in both the probability of default and the loss given default of that customer.

629. To help approximate these total loss amounts, the Volunteer IAIG should first calculate its aggregate net earned premium for Trade Credit by external credit rating category: investment grade vs. non-investment grade. Then the following factors should be applied to net premiums earned in the past year by rating category. Considering that the scenario does not require the identification of specific defaulting customers, the factors should be applied to the net premium earned as a way to reflect the impact of reinsurance. As the impact of reinsurance will be reflected by using the net premium, no further adjustment for reinsurance protection (e.g. non-proportional reinsurance) is required to the loss amount.

Table 20. Credit Stresses for Trade Credit

Rating category	Factor
Investment Grade	80%
Non-Investment Grade	200%

630. The investment grade and non-investment grade categories should be determined using current rating of the insured customer's (if available). If an insured customer is not rated the Volunteer IAIG should use its internal rating system and/or for non-rated entities assume it is non-investment grade.

631. If the Volunteer IAIG is not able to apply the above factors due to internal data limitations, the company should apply a stress loss ratio equal to the worst experience from 2008-2010 to the net earned premium for Trade Credit.

632. The total loss amount should be adjusted for any existing loss mitigation, including reimbursements from insured, retention etc.

Surety

633. The credit stress scenario for surety is defined as the total net potential loss amount based on the penal sum of the surety bond. A surety bond indemnifies the insured from the principal inability to perform its contractual obligation. The penal sum represents the maximum amount that the IAIG is required to pay the insured. The Volunteer IAIG should calculate the largest net potential losses for its ten largest exposures to Surety Counterparties ("principals") using the methodology described

below. The total net potential loss amount will be calculated assuming that the two largest net losses have occurred, so it is equal to the sum of the two largest net losses.

634. The net potential loss amount for a principal is calculated using the gross exposure of the principal (after any contractual amortisation that has occurred). The loss severity model 95% PML factor is applied to the gross exposure. For U.S. exposures the loss severity model 90% PML for each principal can be calculated using the most current construction loss severity model developed by the Surety & Fidelity Association of America. For non-U.S. exposures, the Volunteer IAIG should use a loss severity model 95% PML worst gross loss to exposure ratio for the past 10 years in that country or for that exposure type, whichever is the most granular. Then the loss amount should be adjusted for any co-surety arrangements, acceptable cash collateral (currently in the custody of the Volunteer IAIG) and any reinsurance arrangements. Please use the example below as a guide.

Example of Credit Stress for Surety

	Loss calculation	Surety Exposure
1	Gross Exposure for Principal	10,000,000
2	Loss Severity Model 95% PML Factor	0.4
3	Loss Severity Model 95% PML Amount = (1) * (2)	4,000,000
4	Adjustment for co-surety (co-surety % * (3))	400,000
5	Net PML Amount after Co-surety = (3) - (4)	3,600,000
6	Acceptable cash collateral	100,000
7	Net PML amount = (5) - (6)	3,500,000
8	Adjustment for reinsurance	50,000
9	Net potential Loss amount	3,450,000

635. The co-surety amount and the adjustment for reinsurance should be calculated using existing terms of the surety exposure. In addition the Volunteer IAIG should only adjust for cash collateral already in custody with the firm or in a trust in which the firm is a beneficiary. As noted above, the Volunteer IAIG should aggregate the two largest net potential loss amount from its ten largest surety exposures and report it as the total loss amount for surety.

14.3.10.5 Aggregation of Catastrophe risks

636. For the purpose of calculating the Catastrophe risk charge, the other catastrophe scenarios are assumed to be mutually independent and independent of the natural catastrophe perils. Consequently, the total ICS catastrophe capital charge will be calculated as follow:

$$ICS_{Cat} = \sqrt{ICS_{NatCat}^2 + ICS_{NaTerror}^2 + ICS_{Liab}^2 + ICS_{Pand}^2 + ICS_{Marine}^2 + ICS_{Aviation}^2 + ICS_{Credit}^2}$$

14.3.10.6 Calculation of the recoverable amount to be used for the calculation of the contingent Credit risk

637. For the purpose of the Catastrophe risk charge calculation, the following simplification will be applied: The recoverable amount should be calculated as the difference between the risk charge for Catastrophe risk calculated as if the risk mitigation arrangements did not exist, and the risk charge for Catastrophe risk calculated taking into account qualifying risk mitigation arrangements.

638. In order to apply the Credit risk standard method, the recoverable amount is allocated by rating categories. This should be done by the following steps (see an example of the calculation provided below):

a) For the aggregate of the Natural Catastrophe risk and for each other catastrophe scenario, calculate the recoveries by rating class and the gross and net losses.

b) Aggregate all gross and net losses using the aggregation approach described above. The difference between aggregated gross and net losses is the total recoverable.

c) The recoverable by rating class is equal to the total recoverable multiplied by the ratio of the sum over all scenarios of the recoveries in that rating class and the sum over all scenarios of the recoveries for all rating classes.

639. The approach is illustrated by the following example, where we assume for simplicity that Terrorism is the only other catastrophe scenario and where the “ICS cat charge” is the square root of the sum of the square of the Natural cat charge and the Terrorism charge.

Example

		Natural cat	*Terrorism*	*ICS cat charge*
Gross Loss: A	Rating category	150	50	158
Reinsurance recoverable				
Recovery 1: B1	1	20	10	
Recovery 2: B2	1	20	10	
Recovery 3: B3	2	10	5	
Net loss: C = A - B1 - B2 - B3		100	25	103
Recoverable amount: D= A - C				55

All recoverable in rating category 1: B1 + B2	40	20	60
All recoverable in rating category 2: B3	10	5	15
% recoverable category 1 : E1 = (B1 + B2) / (B1 + B2 + B3)			80%
% recoverable category 1 : E2 = B3 / (B1 + B2 + B3)			20%
Total recoverable amount = D			55
Recoverable category 1: D * E1			44
Recoverable category 2: D * E2			11

640. The recoverable amounts by rating categories should be reported in the column "Reduction in ICS capital requirements" of the relevant Credit risk worksheet and should be subject to the 1-2 years maturity risk charge.

14.4 Market risks

641. When considering Market risks, it is not only the direct impact on the value of balance sheet items that must be considered, but also the consequential impact of market changes on policyholder behaviour. For instance, with respect to policy lapses:

a) Unexpected increases in future interest rates for non-participating products may lead to the products being perceived as less attractive compared with newer insurance or investment products.

b) Reduction in bonus rates as a response to equity losses or decreases in interest rates may result in policyholders perceiving their coverage to be less valuable or attractive.

14.4.1 Interest Rate Risk

Relevant Worksheets in Template:	*ICS.Market.Interest rate*	*Due 15 September 2016*

14.4.1.1 MAV approach

642. For the MAV approach, the specified stressed yield curves are provided for the 35 currencies for which the IAIS has specified yield curves. Volunteer IAIGs should use the provided stressed yield curves for the relevant currencies. The formulas given below are to be applied to other currencies' yield curves after they are determined according to specifications set out under MAV for determining curves not provided by the IAIS in section 6.6.

643. Under the stress approach being used for 2016 Field Testing, the changes in the values of assets and liabilities are calculated by balance sheet segment for each stress scenario (for assets segments please refer to Interest Rate risk stress segmentation; for Non-Life, no segmentation is required – please report one figure for total Non-Life).

644. The stress calculations should capture changes in the values of all assets and liabilities that are sensitive to changes in interest rates (see also sections 4.3 and 14.2.1 on Look-through). Non-interest sensitive assets such as cash, investment income due and accrued and common shares are excluded from the calculation and should not show any change under the interest rate stresses. Non-discounted liabilities are included in the calculation, but should not show any movement under the interest rate stresses. The Volunteer IAIG should report (in the 'Assets' table) the changes in value of all financial instruments used for hedging Interest Rate risk that are in place on the measurement date.

645. For insurance liabilities with a dynamic lapse function that uses interest rate as an input variable, the Volunteer IAIG needs to hold the base lapse assumption unchanged, while allowing lapse to increase or decrease as a reaction to interest rate movements.

646. For 2016 Field Testing, the shocked interest rate curves have been generated by using the Principal Component Analysis (PCA) with a confidence level set at VaR 99.5% and time horizon of one year. Unlike 2015 Field Testing, interest rate shock calibrations are based on each currency's specific volatility (in 2015 Field Testing a single volatility was applied across all currencies).

647. Calibration by PCA is based on 12 observable maturities – i.e. Years 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20, and 30. If the last observable data is before the 30 years maturity, extrapolation starts from that maturity. This approach is similar to the one used for the construction of the base yield curves for MAV.

648. Where possible and available, for all currencies, the datasets used for the Interest Rate risk calibrations contain weekly interest rate observations since 1 January 2010 (R_t). No filtering adjustment has been applied to the raw dataset to derive the calibration. Over the coming years, the datasets used for calibration will be expanded.

649. To derive the shocked interest rate curves, the weekly changes in the past data are captured by the formula at the end of this paragraph. The focus is on the annual interest factor (1+r) used for discounting: (1+r)^-t. Multiplicative movements $e^{s(i)}$ for maturity *i* can be derived using the following formula:

$$\mathrm{s} \sim \ln\left(\frac{1+R_{t+1}^{i}}{1+R_{t}^{i}}\right) \quad (\mathrm{i} = 1,2,3,4,5,6,7,8,9,10,20,30)$$

650. Extrapolation with the Smith-Wilson methodology has been applied from the last observable maturity to the LTFR. Both the last observable maturity and the LTFR differ from currency to currency. To derive long-term curves, the LTFR has been shocked by 15% (the base LTFR without the notional 10 basis points spread adjustment set out in the MAV section of this document) based on expert judgment. For the up shock stress, the base LTFR has been increased by 15%. For the down and flattening shock stresses, the base LTFR has been decreased by 15%. For the purposes of 2016 Field Testing and without prejudice to further developments in the design and calibration of Interest Rate risk, the 15% shock to the LTFR has to be considered as a placeholder. Improvements to the design and calibration of Interest Rate risk will be explored as ICS version 1.0 is developed.

651. For 2016 Field Testing, the first two principle components were used to generate shocks[40]. The first principal component provides up and down shock curves and the second principal component provides flattening and steepening curves.

652. The risk amount from the first principle component stress is the maximum of the up and down shocks.

653. As a steepening shock curve is not expected to produce a material adverse impact on Volunteer IAIGs, the Interest Rate risk amount under a steepening shock stress is not requested. In other words, the Interest Rate risk amount from the second principle component should always be calculated from the flattening shock stress.

654. As the results of principle components are deemed to be linearly uncorrelated, for the calculation of the overall Interest Rate risk charge, the risk amounts from the two principle components are aggregated by using the following formula where PC is 'principal component':

$$\sqrt{(Risk\ amount\ from\ 1st\ PC)^2 + (Risk\ amount\ from\ 2nd\ PC)^2}$$

[40] Note: The result is automatically converted to an additive set of three equivalent results to accommodate the differentiated correlation parameters with Equity risk.

655. As Volunteer IAIGs operate in various countries, they have exposure to Interest Rate risk in more than one currency. For the purposes of 2016 Field Testing, no correlation and diversification effect across currencies is recognised. However, this issue will be further discussed during the development of ICS version 1.0.

Table 21. Interest Rate risk asset segmentation

Interest Rate risk asset category	Balance sheet asset segment
Bonds	Fixed Interest Government Bonds
	Fixed Interest Corporate Bonds
	Fixed Interest Municipal Bonds
	Variable Interest Government Bonds
	Variable Interest Corporate Bonds
	Variable Interest Municipal Bonds
	Convertible notes
Loans	Residential Mortgage Loans
	Non-residential Mortgage Loans
	Other (non-mortgage) Loans
Structured securities	Residential Mortgage Backed Securities
	Commercial Mortgage Backed Securities
	Insurance Linked Securities
	Other structured securities
Other investments assets	Other investment assets
Assets held in separate accounts	Assets held in separate accounts
Reinsurance recoverables/assets	Reinsurance recoverables
	Other reinsurance assets
Non-investment assets	Other non-investment assets
Fair values of financial instruments used for hedging	On balance sheet value of market-related off-balance sheet exposures
	On balance sheet value of non-market-related off-balance sheet exposures

14.4.1.2 GAAP Plus approach

14.4.1.2.1 Background

656. Under GAAP Plus in certain jurisdictions (e.g., the U.S.), the valuation of long-term insurance current estimates utilises a discount rate representing a blend of the portfolio return rate and a reinvestment rate based on current market assumptions.

657. Short-term changes in interest rates would impact reinvestment assumptions, but have little to no impact on a long-term average portfolio return rate.

658. The interest rate stress under the MAV approach, which shocks the discount rate applied to liability cash flows at each tenor, and fair values assets, would not be consistent with the GAAP Plus approach where liability valuation and capital resources are largely based on book values.

659. Nonetheless, for analytical purposes, data is requested from Volunteer IAIGs to evaluate the approach for Interest Rate risk under MAV if it were applied to GAAP Plus ("Method 1" as described herein).

660. In addition, the IAIS is exploring an alternative approach for valuing liabilities under the interest rate stress that is more consistent with the proposed GAAP Plus stress on the assets backing them. The impact of the interest rate shock is reflected in the reinvestment rate. ("Method 2" as described herein).

661. Volunteer IAIGs are requested to provide responses to both methods for Field Testing analysis purposes. The method used to compute Market risk and the ICS is a selectable option in the Template.

14.4.1.2.2 Method 1

Assets

662. The stress applied under Method 1 the same as that used in the standard method for MAV, except where assets are measured at cost (e.g. loans, and bonds classified as held to maturity) and thus are not impacted by the market value-based stress scenario.

Liabilities

663. For insurance liabilities where a market discount curve is directly applied under GAAP Plus, such as guarantees and options, the interest rate stress would be the same as under MAV.

664. For insurance liabilities where a Volunteer IAIG uses discount rates for each tenor (based on portfolio earned rates, reinvestment rates or other assumptions), the Volunteer IAIG should apply the differences between the IAIS base and stressed yield curves to corresponding own discount rates at each tenor.

665. For all other insurance liabilities where a single discount rate is applied, Volunteer IAIGs should apply single rate stresses based on the average difference between the IAIS base and stressed yield curves over tenor buckets that correspond to effective duration of each liability:

a) The use of tenor buckets is a means to translate points along the IAIS specified yield curves into a single discount rate stress for each bucket.

b) The stress will be applied to the pre-stress discount rate used for the GAAP methodologies and the stressed liability valuation will be calculated to derive the liability stress.

Example

If a Volunteer IAIG has five insurance liabilities with effective liability duration of 3 years, 7 years, 9 years, 12 years, and 13 years, the corresponding stresses would be:

	Differences between the IAIS base and stress yield curves			GAAP+ Shocks			
	Up	Down	Flattening	Tenor bucket	Up	Down	Flattening
Year 1	30 bps	-50 bps	50 bps	0-5	=average (30,50,100 ,150,200) = 106 bps	=average (-50,-110, -160,-190, -200) = -142 bps	=average (50,40,30, 30,30) = 36 bps
Year 2	50 bps	-110 bps	40 bps				
Year 3	100 bps	-160 bps	30 bps				
Year 4	150 bps	-190 bps	30 bps				
Year 5	200 bps	-200 bps	30 bps				
Year 6	200 bps	-200 bps	20 bps	5-10	196 bps	-196 bps	10 bps
Year 7	200 bps	-200 bps	20 bps				
Year 8	200 bps	-200 bps	10 bps				
Year 9	190 bps	-190 bps	10 bps				
Year 10	190 bps	-190 bps	-10 bps				
Year 11	180 bps	-190 bps	-10 bps	10-20	155 bps	-160 bps	-25 bps
Year 12	170 bps	-190 bps	-10 bps				
Year 13	170 bps	-180 bps	-20 bps				
Year 14	160 bps	-180 bps	-20 bps				
Year 15	160 bps	-170 bps	-30 bps				
…	…	…	…				
Year 20	…	…	…				
…	…	…	…	20-30	…	…	…
Year 30	…	…	…				

	Effective duration	GAAP+		
		Up	Down	Flattening
Insurance Liab1	3 years	106 bps	-142 bps	36 bps
Insurance Liab2	7 years	196 bps	-196 bps	10 bps
Insurance Liab3	9 years	196 bps	-196 bps	10 bps
Insurance Liab4	12 years	155 bps	-160 bps	-25 bps
Insurance Liab5	13 years	155 bps	-160 bps	-25 bps

14.4.1.2.3 Method 2

Assets

666. The stress applied under Method 2 the same as that used in the standard method for MAV, except where assets are measured at cost (e.g. loans, and bonds classified as held to maturity) and are thus not impacted by the market value-based stress scenario.

667. An "AOCI adjustment" as included in GAAP Plus capital resources should be reflected under this method. I.e., fixed income investments that back long-term insurance liabilities and that have a relatively lower liquidity risk would be measured at amortised cost and would not be impacted by the stressed curves.

Liabilities

668. For insurance liabilities where a market discount curve is directly applied under GAAP Plus, such as guarantees and options, the interest rate stress would be the same as under MAV.

669. For all other insurance liabilities that are discounted using a portfolio earned rate/curve, long-term insurance liabilities should be discounted using a blended rate of the portfolio earned rate on existing investments and the stressed IAIS yield curves for reinvestment at each tenor and currency.

14.4.1.3 Data Entry

14.4.1.3.1 Assets and Liabilities before stress

670. For both the MAV and GAAP Plus valuation bases, report values based on the discounted cash flows from assets and liabilities (using the specified segmentation) occurring in the specified maturity buckets. The data reported in each segment in these specified maturity buckets should sum to the figures reported on FT16.BCR & ICS.Balance sheet for the relevant asset and liability segments.

671. The specified maturity buckets are:

a) " Years 0-5"

b) " Years 5-10"

c) " Years 10-20"

d) "Years 20-30"

e) "Years 30+"

672. Insurance liabilities should be also be reported according to three liability buckets in the same manner as for the bucketing approach for the discounting adjustment Option 3 and Reference Method 3 for MAV. The table setting out the definitions of those buckets is repeated below for convenience. The total insurance liabilities reported in these three buckets should equal the total insurance liabilities reported in the more granular segmentation above in each relevant table.

Table 22. Liability Bucketing

Asset portfolios	Bucket	Mapping criteria
Licenced life insurers*	Bucket 1	Life insurance and disability annuities in payment with no cash benefits on withdrawal
	Bucket 2	Life insurance liabilities with cash benefits on withdrawal
Licenced non-life insurers	Bucket 3	All other liabilities

**Note: Non-life disability annuities in payment shall be allocated to bucket 1*

14.4.1.3.2 Assets and Liabilities after stresses after management actions

673. For each of the interest rate stress scenarios, taking into account management actions, and for both the MAV and GAAP Plus valuation bases, report values related to cash flows from assets and liabilities (using the specified segmentation) occurring in the specified maturity buckets. The data reported in each segment in these specified maturity buckets should sum to the total value for each segment after the impact of the stress scenario.

674. For each of the interest rate stress scenarios and for both the MAV and GAAP Plus valuation bases, insurance liabilities after each stress scenario, taking into account management actions, should be also be reported according to three liability buckets in the same manner as for the bucketing approach for the discounting adjustment Option 3 and Reference Method 3 for MAV. The total insurance liabilities reported in these three buckets should equal the total insurance liabilities reported in the more granular segmentation above in each relevant table.

675. For the GAAP Plus valuation basis, the data is required to be provided for both Method 1 and Method 2.

14.4.1.3.3 Assets less Liabilities after stresses before management actions

676. Assets less liabilities is to be reported in total for each of the stress scenarios after the impact of stresses but before management actions. The purpose of this data is to gauge the impact of management actions post stress.

14.4.1.3.4 For GAAP Plus - Additional information on methods 1 and 2 - Assets

677. For GAAP Plus, with respect to Method 1, data is also requested on a pre-stress basis about the amount of assets measured at cost in the GAAP Plus balance sheet of the Volunteer IAIG. This data is to be provided in the same segmentation as other asset data on the ICS.Market.Interest rate worksheet.

678. For GAAP Plus, with respect to Method 2, data is also requested on a pre-stress basis about the amount of assets measured at cost in the GAAP Plus balance sheet of the Volunteer IAIG. This data is to be provided in the same segmentation as other asset data on the ICS.Market.Interest rate worksheet. In addition, the amount of those assets backing long term insurance liabilities is also requested to be reported.

14.4.1.3.5 For GAAP Plus - Additional information on methods 1 and 2 - Liabilities

679. For GAAP Plus, with respect to Method 1, data is also requested on a pre-stress basis about the amount of insurance liabilities in the GAAP Plus balance sheet of the Volunteer IAIG

a) valued using discount rates with multiple tenors and

b) valued using discount rates with a single tenor.

680. This data is to be provided in the same segmentation as other asset data on the *ICS.Market.Interest* rate worksheet.

681. For GAAP Plus, with respect to Method 2, data is also requested on a pre-stress basis about the portion of insurance liabilities using blended discount rates for stressed scenarios. This data is to be provided in the same segmentation as other liability data on the *ICS.Market.Interest rate* worksheet including the bucketing of liabilities into three buckets.

14.4.2 Equity Risk

Relevant Worksheets in Template:	*ICS.Market.Equity*	*Due 15 September 2016*

682. The Technical Specifications for Equity risk apply both to the MAV and GAAP Plus approaches. This section has been written from the perspective of the MAV approach; while somewhat different valuation data might be input for the GAAP Plus approach, the two approaches included in 2016 Field Testing are fundamentally the same for Equity risk.

14.4.2.1 Definition of Equity risk

683. In the context of the standard method for the ICS capital requirement in 2016 Field Testing, the "Equity risk" should capture all direct and indirect impacts on the financial situation of the Volunteer IAIG of a stress on the value of equities. Equity risk exposures refer to all financial resources with values sensitive to changes in the level or volatility of market prices for equities.

684. The indirect impacts are linked to products held by the Volunteer IAIG that may be sensitive to a change in value or behaviour of the equity prices. Such indirect exposures may include, but are not limited to:

a) Mutual funds invested in equity (see sections 4.3 and 14.2.1 on Look-through)
b) Derivatives sensitive to equity prices/volatilities
c) Unit-linked products (especially those providing guarantees)
d) Participating products in general
e) More complex insurance products, such as variable annuities

14.4.2.2 Segmentation

685. For the calculation of the risk charge for Equity risk, the following segmentation of assets is used in the Template:

a) Listed equity in developed markets

b) Listed equity in emerging markets

c) Hybrid debt / preference shares

d) Other equity

686. "Listed equity in developed markets" includes equities listed on the securities exchanges of countries used in the calculation of the FTSE Developed Index: Austria, Australia, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Ireland, Israel, Italy, Japan, Korea,

Luxembourg, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, UK, and USA.

687. While the FTSE Emerging Markets index is based on only 21 countries, for the purposes of 2016 Field Testing, any country not included in the FTSE Developed Market index is to be considered an 'emerging market'.

688. Preference shares are defined as a company's shares that generally entitle the holder to receive dividends (often fixed) before common-share dividends are issued and are to be paid out before common shares in the event of bankruptcy, but that do not have any voting rights. All subordinated debt and subordinated loans should be included in the segment "Hybrid debt / preference shares" and consequently should not bear any Credit risk charge.

689. The segment "Other equity" comprises equities that are not listed, hedge funds, limited partnerships, commodities, infrastructure and other alternative investments.

690. The value for each of these asset segments should be provided before any shocks (columns 1 and 2), and under each scenario. Separate columns are provided for direct or indirect ownership equity (i.e. direct ownership or indirect ownership as described in paragraph 684) and derivatives.

691. The impact on insurance liabilities should be reported in the Template with a distinction between life and non-life business. Moreover, the life business should be segmented following the general IAIS segmentation for life business (please refer to Annex 1). The impact on reinsurance recoverables/assets should be separately disclosed.

692. The impact on liabilities other than insurance liabilities should also be reported in the Template.

14.4.2.3 Calculation of the Equity risk charge

693. The risk charge for Equity risk is calculated as the variation in capital resources of the Volunteer IAIG following the occurrence of the scenario described below, taking into account all the Volunteer IAIG's individual direct and indirect exposures to Equity risk as defined above.

694. The scenario is to be calculated before and after management actions.

695. The standard method Equity risk charge used for the aggregation of the global capital risk charge will be calculated after management actions.

14.4.2.3.1 Scenario (prices down, volatility up):

696. A shock consisting in a simultaneous:

a) Instantaneous relative decrease by 35% of the market prices of all listed shares in developed markets

b) Instantaneous relative decrease by 48% of the market prices of all listed shares in emerging markets

c) Instantaneous relative decrease by 49% of the market prices of all other types of assets

d) Instantaneous relative increase by x% of the implied volatilities of all the asset classes listed above, with x having the following values :

x	Maturity in months
210%	1
137%	3
112%	6
92%	12
80%	24
74%	36
72%	48

e) For maturities not specified above, the value of the increase shall be linearly interpolated. For maturities shorter than 1 month, the increase to be used is 210%. For maturities longer than 48 months, the increase to be used is 72%.

f) Instantaneous relative decrease of the market prices of hybrid debt / preference shares by:

4%	when the item is rated AAA/AA
6%	when the item is rated A
11%	when the item is rated BBB
21%	when the item is rated BB
35%	when the item rated b or below

14.4.3 Real Estate Risk

Relevant Worksheets in Template:	*ICS.Market.Real estate*	*Due 15 September 2016*

697. Real Estate risk is defined as the risk of adverse change in the value of capital resources resulting from changes in the level or volatility of market prices of real estate or from the amount and timing of cash-flows from investments in real estate. Note that real estate that is deducted from capital resources (due to an encumbered asset deduction, or any other deduction) is not subject to a risk charge.

698. The Technical Specifications for Real Estate risk apply both to the MAV and GAAP Plus approaches. This section has been written from the perspective of the MAV approach, while somewhat different valuation data might be input for the GAAP Plus approach, the two approaches included in 2016 Field Testing are in many cases the same for Real Estate risk.

699. Of note with respect to the GAAP Plus approach, for owner-occupied property, the Real Estate risk charge is calculated as the difference, if positive, of the balance sheet value at the balance date less 70% of the property's fair value at the balance date. If the fair value of such a property is not available then the risk charge is 30% of the property's book value. The risk charge is determined on a property-by-property basis.

700. A simplified approach has been retained for Real Estate risk for the standard method tested as part of 2016 Field Testing with only a change in the level of real estate prices.

701. In order to capture realistic management actions in a post stress situation – when material - the Real Estate risk charge is based on stressing the market value of real estate exposures.

702. Real estate exposures subject to this risk include both direct and indirect exposures to real estate (see sections 4.3 and 14.2.1 on Look-through).

703. Direct exposure includes real estate held for own use. When such assets are not carried on the ICS balance sheet at their realisable value, the exposure should be adjusted to the realisable value.

704. Mortgage values of assets secured by mortgages are not included in the Real Estate risk (see section on Credit risk).

705. Investments in companies engaged in real estate management, facility management or real estate administration, or investments in companies engaged in real estate project development or similar activities are excluded from Real Estate risk for 2016 Field Testing.

14.4.3.1 Results (Real Estate risk summary)

706. After Management Actions – The Real Estate risk charge is defined as the change in NAV after applying the prescribed stress and after management actions, and is calculated automatically within the Template based on input data.

707. Before Management Actions – The change in NAV before management actions is also required (see section 14.2.4 on Management Actions and is calculated automatically within the Template based on input data.

14.4.3.2 Input data

708. Input data required for this risk charge are:

a) Value Pre-Shock – The pre-shock value of assets and liabilities sensitive to real estate price, including direct and indirect exposures, for

i. Commercial investment, according to:

(1) Direct ownership

(2) Look-through

ii. Residential investment, according to:

(1) Direct ownership

(2) Look-through

iii. Real Estate for own use

iv. Other assets

v. Liabilities – this includes insurance liabilities and other liabilities

b) Post-Shock NAV before management actions – The net asset value after applying prescribed shocks before management actions, but including any direct effect on current estimates values (e.g. unit-linked current estimates);

c) Effect of management actions – Effects of the management actions and risk mitigation on NAV after applying prescribed shocks. This should be entered as a positive number.

14.4.3.2.1 *Calculation*

709. The Real Estate risk charge is calculated as:

$$Real\ estate\ Risk\ Charge = \Delta NAV \mid shock$$

where

$\Delta NAV \mid shock$ = Change in net asset value after applying the prescribed shock

$shock$ = simultaneous decrease of 30% in the value of all property exposures.

710. The relative riskiness of residential real estate or real estate held for own use against commercial real estate has been set to 100%, due to the unavailability of reliable data for different calibration levels.

14.4.4 Currency Risk

Relevant Worksheets in Template:	*ICS.Market.Currency*	*Due 15 September 2016*

711. The Technical Specifications for Currency risk apply both to the MAV and GAAP Plus approaches. This section has been written from the perspective of the MAV approach; while somewhat different valuation data might be input for the GAAP Plus approach, the two approaches included in 2016 Field Testing are fundamentally the same for Currency risk.

712. The Look-through approach should be applied on a best efforts basis for the purposes of 2016 Field Testing. The approach set out in the Currency risk section requires granular data that may not be readily available from indirect investments. Volunteer IAIGs may need to make assumptions about currency exposures from indirect investment vehicles. Volunteer IAIGs should report these assumptions in the Questionnaire.

713. Currency risk exposures consist of 35 predefined currencies. A "World Bucket"[41] has been added for any currency exposures not included in the predefined list. In choosing the currencies to report in this worksheet, the general principles of best efforts and proportionality should be taken into account.

714. In the table of exposures, report the net open position in each currency. Net long positions should be reported as positive entries, and net short positions should be reported as negative entries. All positions should be reported in units of the Volunteer IAIG's base currency, converted using spot exchange rates in effect at the reporting date. The net open position for each currency is calculated by deducting up to 10% of net insurance liabilities in each currency from the sum of the following:

a) the net spot position, defined as all asset items less all liability items, including accrued interest and accrued expenses

b) the net forward position, defined as all net amounts under forward foreign exchange transactions, including currency futures and the principal on currency swaps

c) the delta equivalent amounts of currency options

d) guarantees and similar instruments that are certain to be called and are likely to be irrevocable

[41] The one exception to the World bucket is the BND. The stresses for the BND are the same as the SGD. BND against the SGD will receive the lowest stress factor, which is 5%.

e) at the discretion of the Volunteer IAIG, net future income and expenses not yet accrued but already fully hedged

f) any other item representing a profit or loss in the foreign currency.

The deduction of up to 10% of net insurance liabilities should only be applied to long positions and may not change any long position to a short position.

715. The net open currency position should exclude assets that are fully deducted from capital resources (e.g. goodwill), and liability items that qualify for inclusion in consolidated capital resources (e.g. subordinated debt).

716. The net insurance liability reported for each currency should consist of gross insurance liabilities net of any reinsurance assets, plus all deferred tax assets and liabilities associated with the insurance liabilities and reinsurance assets. This amount should be reported within the worksheet *FT16.Sovereign*, while the offsetting amount applied to the net open position (i.e. up to 10% of net insurance liabilities) should be reported within the worksheet *ICS.Market.Currency.*

717. Forward currency positions should be valued at spot market exchange rates as at the balance date. Volunteer IAIGs should not use forward exchange rates, as these rates reflect current interest rate differentials.

718. A Volunteer IAIG's net capital investment in a foreign subsidiary includes all positions arising from instruments issued by the subsidiary to the Volunteer IAIG that meet the criteria for qualifying capital resources. If the Currency risk relating to a capital investment in a foreign subsidiary is hedged, the currency position for the investment should be reported net of the associated hedges (please also refer to the section of this document on Risk Mitigation).

719. Report the new value of each net open currency position under the following stress scenarios:

a) Scenario 1: All of the currencies in which the Volunteer IAIG has a net long position decrease in value, while all of the currencies in which the Volunteer IAIG has a net short position remain unchanged. The amount of the decrease of each foreign currency relative to the reporting currency is found in the currency stress matrix in Table 23 below. Volunteer IAIGs should look up the reference currency (in the far left column) and the other currency (in the top row) within the matrix to determine the amount of the decrease.

b) Scenario 2: All of the currencies in which the Volunteer IAIG has a net short position increase in value, while all of the currencies in which the Volunteer IAIG has a net long position remain unchanged. The amount of the increase of each foreign currency relative to the reporting currency is found in the currency stress matrix in Table 23. Volunteer IAIGs should look up the reference currency (in the far left column) and the other currency (in the top row) within the matrix to determine the amount of the increase.

720. For each scenario, the losses by currency are aggregated using a correlation formula for which the assumed correlation of losses between each pair of foreign currencies is 50%. The Currency risk charge is equal to the higher of the aggregated losses incurred under the two scenarios.

Table 23. Currency Risk Stress Matrix

	Against											
Ref Curr	AUD	BRL	CAD	CHF	CLP	CNY	COP	CZK	DKK	EUR	GBP	HKD
AUD	0%	50%	30%	45%	40%	40%	45%	40%	35%	35%	35%	40%
BRL	50%	0%	50%	65%	50%	55%	55%	60%	60%	60%	55%	55%
CAD	30%	50%	0%	40%	35%	25%	35%	35%	30%	30%	30%	25%
CHF	45%	65%	40%	0%	45%	35%	50%	30%	20%	20%	30%	35%
CLP	40%	50%	35%	45%	0%	30%	40%	45%	40%	40%	35%	30%
CNY	40%	55%	25%	35%	30%	0%	35%	40%	30%	30%	25%	5%
COP	45%	55%	35%	50%	40%	35%	0%	50%	45%	45%	40%	35%
CZK	40%	60%	35%	30%	45%	40%	50%	0%	15%	15%	30%	40%
DKK	35%	60%	30%	20%	40%	30%	45%	15%	0%	5%	25%	30%
EUR	35%	60%	30%	20%	40%	30%	45%	15%	5%	0%	25%	30%
GBP	35%	55%	30%	30%	35%	25%	40%	30%	25%	25%	0%	25%
HKD	40%	55%	25%	35%	30%	5%	35%	40%	30%	30%	25%	0%
HUF	40%	60%	40%	40%	50%	45%	50%	25%	25%	25%	35%	45%
IDR	50%	65%	45%	55%	45%	40%	45%	55%	50%	50%	45%	40%
ILS	50%	65%	35%	45%	40%	25%	45%	50%	40%	40%	40%	25%
INR	35%	55%	25%	35%	30%	20%	35%	40%	30%	30%	30%	20%
JPY	55%	70%	40%	40%	45%	30%	50%	45%	40%	40%	40%	30%
KRW	35%	55%	25%	40%	35%	25%	35%	40%	35%	35%	30%	25%
MXN	35%	50%	30%	45%	30%	30%	35%	40%	40%	40%	35%	30%
MYR	35%	55%	25%	35%	30%	15%	30%	35%	30%	30%	25%	15%
NOK	35%	60%	30%	30%	40%	35%	45%	25%	20%	20%	30%	35%
NZD	25%	55%	30%	45%	40%	40%	45%	40%	35%	35%	35%	40%
PEN	40%	55%	25%	35%	30%	15%	35%	40%	30%	30%	30%	10%
PHP	30%	40%	20%	40%	25%	15%	30%	35%	30%	30%	25%	15%
PLN	40%	60%	35%	40%	45%	45%	50%	25%	30%	30%	35%	45%
RON	40%	50%	35%	35%	40%	35%	45%	30%	25%	25%	30%	35%
RUB	50%	65%	40%	50%	45%	35%	45%	45%	40%	40%	40%	35%
SAR	40%	55%	25%	35%	35%	5%	35%	40%	30%	30%	25%	5%
SEK	35%	60%	30%	30%	40%	35%	45%	25%	20%	20%	30%	35%
SGD	30%	55%	20%	30%	30%	15%	35%	30%	25%	25%	25%	15%
THB	40%	55%	30%	35%	35%	20%	35%	40%	30%	30%	30%	20%
TRY	65%	70%	60%	70%	65%	65%	65%	65%	65%	65%	65%	65%
TWD	35%	55%	25%	30%	30%	10%	35%	35%	30%	30%	25%	10%
USD	40%	55%	25%	35%	35%	5%	35%	40%	30%	30%	25%	5%
ZAR	45%	65%	45%	55%	50%	50%	55%	50%	50%	50%	50%	55%

	Against											
Ref Curr	HUF	IDR	ILS	INR	JPY	KRW	MXN	MYR	NOK	NZD	PEN	PHP
AUD	40%	50%	50%	35%	55%	35%	35%	35%	35%	25%	40%	30%
BRL	60%	65%	65%	55%	70%	55%	50%	55%	60%	55%	55%	40%
CAD	40%	45%	35%	25%	40%	25%	30%	25%	30%	30%	25%	20%
CHF	40%	55%	45%	35%	40%	40%	45%	35%	30%	45%	35%	40%
CLP	50%	45%	40%	30%	45%	35%	30%	30%	40%	40%	30%	25%
CNY	45%	40%	25%	20%	30%	25%	30%	15%	35%	40%	15%	15%
COP	50%	45%	45%	35%	50%	35%	35%	30%	45%	45%	35%	30%
CZK	25%	55%	50%	40%	45%	40%	40%	35%	25%	40%	40%	35%
DKK	25%	50%	40%	30%	40%	35%	40%	30%	20%	35%	30%	30%
EUR	25%	50%	40%	30%	40%	35%	40%	30%	20%	35%	30%	30%
GBP	35%	45%	40%	30%	40%	30%	35%	25%	30%	35%	30%	25%
HKD	45%	40%	25%	20%	30%	25%	30%	15%	35%	40%	10%	15%
HUF	0%	60%	55%	45%	55%	45%	45%	40%	30%	40%	45%	45%
IDR	60%	0%	50%	40%	50%	40%	45%	40%	50%	50%	40%	20%
ILS	55%	50%	0%	30%	40%	40%	40%	30%	45%	50%	30%	30%
INR	45%	40%	30%	0%	35%	25%	25%	15%	35%	35%	20%	20%
JPY	55%	50%	40%	35%	0%	40%	50%	35%	45%	50%	35%	30%
KRW	45%	40%	40%	25%	40%	0%	30%	25%	35%	35%	30%	20%
MXN	45%	45%	40%	25%	50%	30%	0%	25%	40%	40%	30%	25%
MYR	40%	40%	30%	15%	35%	25%	25%	0%	30%	35%	20%	20%
NOK	30%	50%	45%	35%	45%	35%	40%	30%	0%	35%	35%	30%
NZD	40%	50%	50%	35%	50%	35%	40%	35%	35%	0%	40%	35%
PEN	45%	40%	30%	20%	35%	30%	30%	20%	35%	40%	0%	15%
PHP	45%	20%	30%	20%	30%	20%	25%	20%	30%	35%	15%	0%
PLN	25%	55%	55%	40%	55%	40%	40%	40%	30%	40%	40%	35%
RON	35%	50%	45%	35%	45%	35%	40%	30%	30%	40%	35%	30%
RUB	50%	50%	45%	35%	50%	40%	40%	35%	45%	50%	35%	50%
SAR	45%	40%	25%	20%	30%	30%	30%	15%	35%	40%	10%	15%
SEK	30%	50%	45%	35%	45%	35%	40%	35%	20%	35%	35%	30%
SGD	40%	35%	30%	15%	30%	20%	25%	15%	30%	35%	15%	15%
THB	45%	40%	30%	20%	35%	30%	35%	20%	35%	40%	20%	15%
TRY	65%	70%	70%	60%	75%	60%	65%	60%	65%	65%	65%	25%
TWD	40%	40%	25%	15%	30%	20%	30%	15%	30%	35%	15%	15%
USD	45%	40%	25%	20%	30%	30%	30%	15%	35%	40%	10%	15%
ZAR	50%	65%	60%	50%	65%	45%	45%	45%	45%	50%	50%	40%

	Against										
Ref Curr	PLN	RON	RUB	SAR	SEK	SGD	THB	TRY	TWD	USD	ZAR
AUD	40%	40%	50%	40%	35%	30%	40%	65%	35%	40%	45%
BRL	60%	50%	65%	55%	60%	55%	55%	70%	55%	55%	65%
CAD	35%	35%	40%	25%	30%	20%	30%	60%	25%	25%	45%
CHF	40%	35%	50%	35%	30%	30%	35%	70%	30%	35%	55%
CLP	45%	40%	45%	35%	40%	30%	35%	65%	30%	35%	50%
CNY	45%	35%	35%	5%	35%	15%	20%	65%	10%	5%	50%
COP	50%	45%	45%	35%	45%	35%	35%	65%	35%	35%	55%
CZK	25%	30%	45%	40%	25%	30%	40%	65%	35%	40%	50%
DKK	30%	25%	40%	30%	20%	25%	30%	65%	30%	30%	50%
EUR	30%	25%	40%	30%	20%	25%	30%	65%	30%	30%	50%
GBP	35%	30%	40%	25%	30%	25%	30%	65%	25%	25%	50%
HKD	45%	35%	35%	5%	35%	15%	20%	65%	10%	5%	55%
HUF	25%	35%	50%	45%	30%	40%	45%	65%	40%	45%	50%
IDR	55%	50%	50%	40%	50%	35%	40%	70%	40%	40%	65%
ILS	55%	45%	45%	25%	45%	30%	30%	70%	25%	25%	60%
INR	40%	35%	35%	20%	35%	15%	20%	60%	15%	20%	50%
JPY	55%	45%	50%	30%	45%	30%	35%	75%	30%	30%	65%
KRW	40%	35%	40%	30%	35%	20%	30%	60%	20%	30%	45%
MXN	40%	40%	40%	30%	40%	25%	35%	65%	30%	30%	45%
MYR	40%	30%	35%	15%	35%	15%	20%	60%	15%	15%	45%
NOK	30%	30%	45%	35%	20%	30%	35%	65%	30%	35%	45%
NZD	40%	40%	50%	40%	35%	35%	40%	65%	35%	40%	50%
PEN	40%	35%	35%	10%	35%	15%	20%	65%	15%	10%	50%
PHP	35%	30%	50%	15%	30%	15%	15%	25%	15%	15%	40%
PLN	0%	35%	50%	45%	30%	35%	45%	65%	40%	45%	50%
RON	35%	0%	40%	35%	30%	30%	35%	65%	30%	35%	50%
RUB	50%	40%	0%	35%	45%	35%	40%	70%	35%	35%	55%
SAR	45%	35%	35%	0%	35%	15%	20%	65%	10%	5%	55%
SEK	30%	30%	45%	35%	0%	30%	35%	65%	35%	35%	50%
SGD	35%	30%	35%	15%	30%	0%	20%	60%	10%	15%	45%
THB	45%	35%	40%	20%	35%	20%	0%	65%	20%	20%	50%
TRY	65%	65%	70%	65%	65%	60%	65%	0%	60%	65%	65%
TWD	40%	30%	35%	10%	35%	10%	20%	60%	0%	10%	50%
USD	45%	35%	35%	5%	35%	15%	20%	65%	10%	0%	55%
ZAR	50%	50%	55%	55%	50%	45%	50%	65%	50%	55%	0%

14.4.5 Asset Concentration Risk

Relevant Worksheets in Template:	*ICS.Market.Asset concentration*	*Due 15 September 2016*

721. The Technical Specifications for Asset Concentration risk apply both to the MAV and GAAP Plus approaches. While somewhat different valuation data might be input for the GAAP Plus approach, the two approaches included in 2016 Field Testing are fundamentally the same for Asset Concentration risk.

722. The Asset Concentration risk threshold is automatically calculated using total assets (***for insurance business***, excluding assets in separate accounts or where the investment risks fully flow-through[42] to policyholders) based upon the applicable valuation basis (MAV or GAAP Plus approach).

723. The table for calculating the Asset Concentration risk charge only applies to amounts of net exposures ***in excess*** of the Asset Concentration risk threshold.

724. Counterparty related – Net exposures should be determined on the basis of ***non-affiliated*** single counterparties or connected group of counterparties (including for reinsurers). For the purposes of 2016 Field Testing, the BCBS definition[43] of a connected group of counterparties should be used. Specifically, two or more natural or legal persons should be deemed a group of connected counterparties if at least one of the following criteria is satisfied:

a) Control relationship: one of the counterparties, directly or indirectly, has control over the other(s);

b) Economic interdependence: if one of the counterparties were to experience financial problems, in particular funding or repayment difficulties, the other(s), as a result, would also be likely to encounter funding or repayment difficulties.

725. Property – Net exposures should be determined for property exposures. Property exposures should be based upon single property, or group of properties in very close proximity to each other (for example, two properties within 250 metres of each other), including exposures from both direct and indirect (such as funds of properties and mortgage) holdings.

726. 2016 Field Testing does not require the Asset Concentration risk charge to be applied to sovereign exposures. Sub-sovereign obligations (e.g. provincial/state or municipal bonds) are to be included within the worksheet.

[42] Not considering any guarantee to policyholders that may exist on the value of the overall investment fund(s) such as on variable annuity products

[43] As specified in the BCBS publication *Supervisory framework for measuring and controlling large exposures* (April 2014), which also outlines criteria for assessing whether 'control' or 'economic interdependence' exists.

727. The determination of the **gross** counterparty and property exposures should include both on- and off-balance sheet positions, and should consider the following:

a) Exposures to reinsurance counterparties should be included, but should not be assessed on a 'stress basis'; in other words, it should not take into account the contingent Credit risk arising from catastrophe scenarios applied;

b) Similar to the specifications within the ICS Credit risk section, the determination of OTC derivatives exposures should be based on a credit-equivalent basis as applicable, and exposures to central counterparties should be excluded from ICS risk charges;

c) Include exposures based upon a 'Look-through' for investment funds, structured products etc. For practical considerations, the 'Look-through' approach to be utilised for determining risk exposures within other modules of the ICS standard method should also apply here. Where a Look-through approach in other modules allows for practical exceptions, the investment fund, structured product etc. should be assessed as a separate counterparty for Asset Concentration risk purposes. When the issuer of a security is a trust (SPV or a similar entity) that has no (material) creditworthiness, and the source of interest and principal payments is the assets in the trust, and there is no guarantor for the payments, Look-through to the trust's assets is appropriate, and the assets are then also subject to the asset concentration limit. When there is a guarantor that is responsible for maintaining assets in the trust sufficient for interest and principal payments, or directly guarantees those payments, the guarantor (such as a GSE – government sponsored entity) is subject to Asset Concentration risk, and the assets in the trust provide additional credit support should the guarantor (such as a GSE) not be able to honor its obligations.

d) Include non-affiliated (external) guarantees made, commitments given, bank deposits, receivables and any other item subject to the possibility of financial loss due to counterparty default;

e) Gross exposures should be calculated based upon the applicable valuation basis (MAV or GAAP Plus), except where otherwise specified (such as use of 'credit-equivalent' amounts).

728. For determination of net counterparty and property exposures, the following should be considered:

a) Exposures from assets held in separate accounts or in respect of life insurance contracts where the investment risks fully flow-through to policyholders (not considering any guarantee to policyholders that may exist on the value of the overall investment fund(s) such as on variable annuity products) should be excluded;

b) Asset exposures should only be netted against liability exposures to the extent that they are subject to a legally enforceable right of offset;

c) For collateral and for unconditional and irrevocable guarantees, the 'substitution approach' specified within the ICS Credit risk section may be used, if favourable, for the portion of exposure that is covered by the collateral and guarantees. There should be no gross exposure reduction for amounts of over-collateralisation. The exposure to the collateral or guarantor counterparty should replace the exposure of the primary obligation counterparty, reducing the aggregate exposure to the counterparty of the primary obligation and increasing that of the collateral or guarantor counterparties. This approach should also be used for bank deposits, if an explicit guarantee (such as a sovereign guarantee) exists. Where sovereign exposures are substituted for corporate exposures, such amounts are excluded from the determination of Asset Concentration risk charges within 2016 Field Testing.

729. Aggregate amount exceeding threshold – This figure is the total of:

a) Exposures to each non-affiliated single counterparty (to the Volunteer IAIG) or group of connected counterparties exceeding the threshold

b) Exposures to each single real estate property exceeding the threshold

c) Exposures to each group of very close proximity properties (see paragraph 725) exceeding the threshold

730. Only the aggregate net exposure amounts by counterparty (or connected counterparties) or property ***in excess of*** the Asset Concentration risk threshold, and further segmented by the applicable weighted-average credit quality, should be included in this figure. This column should be filled in, if applicable, for each group of ICS Rating Categories and for property.

731. The worksheet also includes columns to capture additional information on:

a) "# of CPs/properties exceeding threshold" – The number of non-affiliated single counterparties or group of connected counterparties, or single or group of very close proximity properties, whose net exposures exceed the thresholds set out in each group of ICS Rating Categories in each risk charge category; and

b) "# of reinsurance providers in CPs exceeding threshold" – As a subset of the number of counterparties identified in a) above, the number of these counterparties that are also currently reinsurance providers to any entities within the group.

732. The incremental risk charge factors are for 2016 Field Testing purposes, and should not be viewed as indicative of the level of risk charges, if any, that may be applicable for Asset Concentration risk within ICS version 1.0.

733. A separate section is included for the supplementary reporting of certain information:

a) Information on ‘own-use’ property, as a subset of the property exposures exceeding the applicable thresholds.

14.5 Credit Risk

Relevant Worksheets in Template:	*ICS.Credit Risk, ICS.Credit Risk (NAIC), ICS.Credit Risk (-NAIC)*	*Due 15 September 2016*

734. The Technical Specifications for Credit risk apply both to the MAV and GAAP Plus approaches. This section has been written from the perspective of the MAV approach; while somewhat different valuation data might be input for the GAAP Plus approach, the two approaches included in 2016 Field Testing are fundamentally the same for Credit risk.

735. The Credit risk requirement being tested is based on external ratings. The IAIS is monitoring developments at the BCBS, and may revise the structure of the Credit risk requirement if a practicable approach that does not rely on rating agencies emerges. For 2016 Field Testing, data is being collected both on the basis of Volunteer IAIGs being able to use NAIC designations as applicable (similar to 2015 Field Testing) and on the basis of Volunteer IAIGs not being able to use NAIC designations for ICS Credit risk determination. For this purpose, Volunteer IAIGs are asked to complete **three Credit risk worksheets** – one incorporating the use of NAIC designations (as applicable), one without using NAIC designations, and the third for information applicable to both.

736. Volunteer IAIGs are also asked to complete supplementary tables in the *ICS.Credit Risk* worksheet, which aim to gather information on the migration of ICS ratings when going from using NAIC designations to not using NAIC designations within the ICS Credit risk calculation.

737. The Look-through approach set out in sections 4.3 and 14.2.1 should be applied on a best efforts basis for the purposes of 2016 Field Testing. The approach set out in the Credit risk section requires granular data that may not be readily available from indirect investments. Volunteer IAIGs may need to make assumptions about rating categories and maturities of the underlying investments of indirect investment vehicles. Volunteer IAIGs should report these assumptions in the Questionnaire.

738. The MAV values of on-balance sheet assets should be entered in column [1] of the *ICS.Credit risk (NAIC)* and *ICS.Credit risk (-NAIC)* worksheets, broken down by exposure class and rating category, and the credit equivalent amounts (see below) of off-balance sheet credit exposures should be entered in columns [2] and [3]. The risk charge is determined by applying specified stress factors based on exposure class, rating category and maturity to the net exposure amounts, then taking into consideration management actions, and summing. The following gives instructions on how to classify credit exposures by exposure class, rating category, and maturity, and how to account for the presence of qualifying collateral and guarantees.

14.5.1 Exposure classes

739. The Credit risk charge applies to all senior debt obligations to specified exposure classes of issuers and borrowers. Preferred shares, hybrid obligations and subordinated debt are excluded from the Credit risk charge, and are instead subject to the Equity risk charge for hybrid securities described in section 14.4.2.

740. Credit exposures to national governments and their central banks are not required to be reported as part of the calculation of the Credit risk charge. Exposures to multilateral development banks and supranational organisations should be treated as credit exposures to national governments. Regional governments and municipal authorities are classified as public sector entities. The public sector entity class also includes administrative bodies responsible to national governments, regional governments or municipal authorities. Exposures to commercial undertakings owned by governments or municipal authorities should be classified in the corporate category and not in the public sector entity category.

741. The corporate category includes exposures to banks and securities dealers, but excludes exposures to reinsurers, which are reported separately in the Reinsurance Exposures table. Unsecured loans and rated commercial mortgages are included in the corporate exposure class.

742. The class of securitisation exposures reported in the Securitisations table includes all holdings of asset-backed securities, mortgage-backed securities, and asset-backed commercial paper. It also includes any other assets where the cash flow from an underlying pool of exposures is used to service at least two different tranches reflecting different degrees of Credit risk. If any of the assets in the pool of exposures underlying a securitisation exposure is itself a securitisation, then the exposure must be reported as a re-securitisation in the Re-securitisations table.

743. Residential mortgages and commercial mortgages should be reported in their respective tables, and miscellaneous assets in the relevant separate table. These exposures are not broken down by rating category. The category "short-term obligations of regulated banks" only includes demand deposits and other obligations that have an original maturity of less than three months, and that are drawn on a bank subject to the solvency requirements of the Basel Framework. All other bank exposures should be included in the corporate exposure class in the Corporate Entities table.

14.5.2 Definition of rating categories

744. Volunteer IAIGs may recognise the agency rating categories listed in the table below (and from A.M. Best for reinsurance exposures, see section on *reinsurance exposures*). Modifiers such as + or – do not affect the rating category. Where two ratings are listed in a cell, the first rating represents a long-term rating, and the second rating represents the short-term rating mapped to the same ICS rating category.

Table 24. Mapping to ICS Rating Category

ICS Rating Category	S&P	Moody's	Fitch	JCR	R&I	DBRS
1	AAA	Aaa	AAA	AAA	AAA	AAA
2	AA / A-1	Aa / P-1	AA / F1	AA / J-1	AA / a-1	AA / R-1
3	A / A-2	A / P-2	A / F2	A / J-2	A / a-2	A / R-2
4	BBB / A-3	Baa / P-3	BBB / F3	BBB / J-3	BBB / a-3	BBB / R-3
5	BB	Ba	BB	BB	BB	BB
6	B / B	B / NP	B / B	B / NJ	B / b	B / R-4
7	CCC / C and lower	Caa and lower	CCC / C and lower	CCC and lower	CCC / c and lower	CCC / R-5 and lower

745. Additionally, Volunteer IAIGs may recognise any rating agency that the banking regulator in its jurisdiction has recognised as an External Credit Assessment Institution (ECAI) under the Basel II framework. The ICS rating category corresponding to a rating produced by such an agency is the S&P Basel II rating category to which the supervisor has mapped the rating (the combined rating class AAA/AA corresponds to ICS rating category 2). For the purposes of 2015 Field Testing, ICS Rating Categories 1 to 4 in the table above should be considered as investment grade.

746. Also, Volunteer IAIGs may recognise any ratings agency currently recognised by their home insurance regulator for local capital determination purposes, subject to clear instructions provided by the home regulator on how to map those credit agency ratings to the ICS Rating categories and explicit acceptance of the use of those ratings by the IAIS as indicated through future communications provided to Volunteer IAIGs in advance of Field Testing submission deadlines.

747. If a Volunteer IAIG wishes to recognise ratings produced by any other rating agency, the agency must be regulated or recognised by a suitable government authority in all of the jurisdictions in which the agency issues ratings that the Volunteer IAIG wishes to recognise. In addition, the rating agency must have published, publicly available default and transition statistics extending back at least seven years, and must satisfy all of the following six criteria:

a) Objectivity: The rating agency's methodology for assigning credit assessments must be rigorous, systematic, and subject to some form of validation based on historical experience. Moreover, assessments must be subject to ongoing review and responsive to changes in financial condition. The agency must have an assessment methodology for each market

segment, including rigorous back testing that has been established for at least one year and preferably three years.

b) Independence: A rating agency should be independent and should not be subject to political or economic pressures that may influence the rating. The assessment process should be as free as possible from any constraints that could arise in situations where the composition of the board of directors or the shareholder structure of the assessment institution may be seen as creating a conflict of interest.

c) International access/Transparency: The individual assessments, the key elements underlining the assessments and whether the issuer participated in the assessment process should be publically available on a non-selective basis. In addition, the general procedures, methodologies and assumptions for arriving at assessments used by the rating agency should be publicly available.

d) Disclosure: A rating agency should disclose the following information: its code of conduct; the general nature of its compensation arrangements with assessed entities; its assessment methodologies, including the definition of default, the time horizon, and the meaning of each rating; the actual default rates experienced in each assessment category; and the transitions of the assessments, e.g. the likelihood of AA ratings becoming A over time.

e) Resources: A rating agency should have sufficient resources to carry out high quality credit assessments. These resources should allow for substantial ongoing contact with senior and operational levels within the entities assessed in order to add value to the credit assessments. Such assessments should be based on methodologies combining qualitative and quantitative approaches.

f) Credibility: To some extent, credibility is derived from the criteria above. In addition, the reliance on a rating agency's external credit assessments by independent parties (investors, insurers, trading partners) is evidence of the credibility of its assessments. The credibility of a rating agency is also underpinned by the existence of internal procedures to prevent the misuse of confidential information. In order to be eligible for recognition, an agency does not have to assess firms in more than one country.

748. The mapping of the agency's ratings to ICS rating grades will be based on the average of the three-year cumulative default rates (CDRs) associated with the agency's ratings, as follows:

749.

Table 25. Mapping of Ratings by Other Rating Agencies

ICS Rating Category	Average 3-year CDR based on over 20 years of published data	Average 3-year CDR based on between 7 and 20 years of published data

1		
2	0 ≤ CDR ≤ 0.15%	
3	0.15% < CDR ≤ 0.35%	0 ≤ CDR ≤ 0.15%
4	0.35% < CDR ≤ 1.20%	0.15% < CDR ≤ 0.35%
5	1.20% < CDR ≤ 10.00%	0.35% < CDR ≤ 1.20%
6	10.00% < CDR ≤ 25.00%	1.20% < CDR ≤ 10.00%
7	CDR > 25%	CDR > 10%

750. If a Volunteer IAIG is using one or more rating agencies for which it is performing its own mapping to ICS rating categories based on the three-year CDR, for each rating agency it must indicate in the Questionnaire:

a) The name of the rating agency

b) The name of the national authority that regulates or has recognised the rating agency, along with a summary of how the authority regulates, or the criteria that the authority uses for recognizing rating agencies

c) The rating agency's definition of default, including a link to where the definition is posted

d) The rating agency's average three-year CDR, the number of years of default data on which this average is based, the number of credits for each rating on which the average is based, and a link to where all of the information is posted

e) Which agency ratings the Volunteer IAIG has mapped to which ICS rating categories.

14.5.3 Instructions around the use of ratings

751. A Volunteer IAIG must choose the rating agencies it intends to rely on and then use their ratings consistently for each type of claim. Volunteer IAIGs may not cherry pick the assessments provided by different rating agencies.

752. Any rating used to determine an ICS rating category must be publicly available, i.e. the rating must be published in an accessible form and included in the rating agency's transition matrix. Ratings that are made available only to the parties to a transaction do not satisfy this requirement.

753. If a Volunteer IAIG is relying on multiple rating agencies and there is only one assessment for a particular claim, that assessment should be used to determine the ICS rating category for the claim. If there are two assessments from the rating agencies used by a Volunteer IAIG and these assessments differ, the Volunteer IAIG should use the ICS rating category corresponding to the lower of the two ratings. If there are three or more assessments for a claim from a Volunteer IAIG's chosen rating agencies, the Volunteer IAIG should exclude one of the ratings that corresponds to the highest ICS rating category, and then use the rating that corresponds to the highest rating category of those that remain (i.e. the Volunteer IAIG should use the second-highest rating from those available, allowing for multiple occurrences of the highest rating).

754. Where a Volunteer IAIG holds a particular securities issue that carries one or more issue-specific assessments, the ICS rating category for the claim will be based on these assessments. Where a Volunteer IAIG's claim is not an investment in a specifically rated security, the following principles apply:

a) In circumstances where the borrower has a specific rating for an issued debt security, but the Volunteer IAIG's claim is not an investment in this particular security, a rating category of 4 or better on the rated security may only be applied to the Volunteer IAIG's unrated claim if this claim ranks pari passu or senior to the rated claim in all respects. If not, the credit rating cannot be used and the Volunteer IAIG's claim must be treated as an unrated obligation.

b) In circumstances where the borrower has an issuer rating, this assessment typically applies to senior unsecured claims on that issuer. Consequently, only senior claims on that issuer will benefit from an investment-grade (category 4 or better) issuer assessment; other unassessed claims on the issuer will be treated as unrated. If either the issuer or one of its issues has a rating category of 5 or lower, this rating should be used to determine the ICS rating category for an unrated claim on the issuer.

c) Short-term assessments are deemed to be issue specific. They can only be used to derive rating categories for claims arising from the rated facility. They cannot be generalised to other short-term claims, and in no event can a short-term rating be used to support a rating category assignment for an unrated long-term claim.

d) Where the rating category for an unrated exposure is based on the rating of an equivalent exposure to the borrower, foreign currency ratings should be used for exposures in foreign currency. Domestic currency ratings, if separate, should only be used to determine the rating category for claims denominated in the domestic currency.

755. The following additional conditions apply to the use of ratings:

a) External assessments for one entity within a corporate group may not be used to determine the rating category for other entities within the same group.

b) No rating may be inferred for an unrated entity based on assets that the entity possesses. The use of internal ratings is not being allowed due to a lack of uniformity of methodology and calibration and the lack of a method that would ensure a uniform mapping of ratings.

c) In order to avoid the double counting of credit enhancement factors, Volunteer IAIGs may not recognise collateral or guarantees if these credit enhancements have already been reflected in the issue-specific rating.

d) A Volunteer IAIG may not recognise a rating if the rating is at least partly based on unfunded support (e.g. guarantees, credit enhancement or liquidity facilities) provided by the Volunteer IAIG itself or one of its affiliates.

e) Any assessment used must take into account and reflect the entire amount of Credit risk exposure an insurer has with regard to all payments owed to it. In particular, if a Volunteer IAIG is owed both principal and interest, the assessment must fully take into account and reflect the Credit risk associated with repayment of both principal and interest.

14.5.4 Exposures in default

756. Any asset for which there is reasonable doubt about the timely collection of the full amount of principal or interest, should be reported in the row for defaulted exposures within the asset's exposure class. This row should include any asset that is contractually more than 90 days in arrears.

757. The exposure amount for a defaulted asset should be reported net of all balance sheet write-downs and specific provisions that have been recorded for the asset.

14.5.5 Redistribution of exposures for Credit risk mitigation

758. Eligible Credit risk mitigation (i.e. collateral and guarantees) is recognised by substituting the Credit risk factor of the collateral or guarantor for that of the underlying exposure. If an exposure is eligible according to the criteria in the sections below (as well as section 14.2.2 on risk mitigation) for recognition of Credit risk mitigation, the effect of the Credit risk mitigation will be to transfer the exposure from the class of the borrower to that of the collateral or the guarantor. This is done in the Template by including the negative amount of the exposure in column [4] of the row corresponding to the class of the underlying exposure, and including the positive amount of the exposure in column [4] of the row corresponding to the class of the collateral or of the guarantor. The total entry in each row of column [4] is the net sum of the (positive) exposures redistributed into and (negative) exposures redistributed out of the exposure class. The sum of all entries in column [4] taken over all exposure classes must be zero.

14.5.6 Distribution of exposures by maturity

759. Volunteer IAIGs must calculate the effective maturity for each credit exposure in a particular rating category and include it in the cell for the corresponding maturity bucket. The effective maturity should be classified by exposure (e.g. for each asset or each counterparty exposure). Volunteer IAIGs should aggregate all exposures to a connected group within each rating category before calculating the maturity for the exposures. When an exposure is redistributed into another rating category due to the presence of an eligible guarantee or collateral, effective maturity should be calculated based on the term of the underlying exposure, not the term of the guarantee or the collateral.

760. Effective maturity is calculated as follows:

a) For an instrument subject to a determined cash flow schedule, effective maturity is defined as:

$$\text{Effective Maturity} = \sum_t t * CF_t \,/\, \sum_t CF_t$$

where CF_t denotes the cash flows (principal, interest payments and fees) contractually payable by the borrower in period t.

b) If a Volunteer IAIG is not in a position to calculate the effective maturity of the contracted payments as noted above, it is allowed to use a more conservative measure, such as the maximum remaining time (in years) that the borrower is permitted to take to fully discharge its contractual obligation (principal, interest, and fees) under the terms of loan agreement. Normally, this will correspond to the nominal maturity of the instrument.

c) For OTC derivatives subject to a master netting agreement, the weighted average maturity of the transactions should be used when applying the explicit maturity adjustment. Further, the notional amount of each transaction should be used for weighting the maturity.

14.5.7 Reinsurance exposures

761. Volunteer IAIGs can use A.M. Best credit ratings only for purposes of calculating the risk charge on reinsurance exposures. The mapping of A.M. Best insurer financial strength ratings to the ICS ratings categories is as follows:

Table 26. Mapping of A.M. Best ratings to ICS ratings

ICS Rating Category	A.M. Best
1	
2	A+
3	A

4	B+
5	B
6	C+
7	C and lower

762. Reinsurance exposures include all positive on-balance sheet reinsurance assets and receivables (negative exposures should not be included as they reduce reported credit exposures), which should be reported in column [1]. Amounts in column [1] should be net of cessions to mandatory insurance pools that are backed by either a governmental entity or jointly by the insurance market. Cessions to these mandatory pools should instead be reported separately. Reinsurance exposures also include all credit that a Volunteer IAIG takes in its ICS capital requirements due to the presence of reinsurance, which should be reported in column [3] of *ICS.Credit Risk*. When a Volunteer IAIG reduces its ICS capital requirements on account of reinsurance, the Credit risk charge is applied on the capital reduction.

763. In the case of catastrophe scenarios and life insurance stresses, the impact of the scenarios and stresses (before management actions) should be calculated on a gross and net of reinsurance basis. The difference between the gross and net of reinsurance basis should then be allocated to Credit risk categories based on the profile of the reinsurers that have provided cover. This calculation needs to occur at the Catastrophe risk charge and life insurance risk charge level (i.e. after diversification of the components of those risk charges).

764. Modified coinsurance and funds withheld arrangements are subject to a risk charge even if there is no on-balance sheet reinsurance asset or the reinsurance asset is fully offset by payables.

765. For funds withheld and similar arrangements, a Volunteer IAIG may treat payables and other liabilities due to a reinsurer in the same manner as collateral provided that the arrangement meets the following conditions:

a) The Volunteer IAIG has executed a written, bilateral netting contract or agreement with the reinsurer from which the asset is due that creates a single legal obligation. The result of such an agreement must be that the Volunteer IAIG would have only one obligation for payment or one claim to receive funds based on the net sum of the liabilities and amounts due in the event the reinsurer failed to perform due to any of the following: default, bankruptcy, liquidation or similar circumstances.

b) The Volunteer IAIG must have written and reasoned legal opinions that, in the event of any legal challenge, the relevant courts or administrative authorities would find the amount owed under the netting agreement to be the net amount under the laws of all relevant jurisdictions. In reaching this conclusion, legal opinions must address the validity and enforceability of the entire netting agreement under its terms.

i. The laws of "all relevant jurisdictions" are: a) the law of the jurisdiction where the reinsurer is incorporated and, if the foreign branch of a reinsurer is involved, the laws of the jurisdiction in which the branch is located; b) the law governing the individual insurance transaction; and c) the law governing any contracts or agreements required to effect the netting arrangement.

ii. A legal opinion must be generally recognised as such by the legal community in the Volunteer IAIG's home country or by a memorandum of law that addresses all relevant issues in a reasoned manner.

c) The Volunteer IAIG must have procedures in place to update legal opinions as necessary to ensure continuing enforceability of the netting arrangement in light of possible changes in relevant law.

14.5.8 Securities financing transactions

766. Volunteer IAIGs should include exposures arising from on-balance sheet securities financing transactions in column [1], and exposures arising from off-balance sheet securities financing transactions (full notional amount) in column [3]. The rating category for a securities financing transaction is the lower of that of the counterparty to the transaction, or that of the securities lent. Volunteer IAIGs may recognise collateral received under securities financing transactions according to the same criteria as for collateral received under regular lending transactions.

14.5.9 Credit risk stress factors

767. The following tables contain the ICS Credit risk stress factors for the exposure classes by ICS rating category and maturity[44]:

Table 27. Credit Risk Stress Factors for Public Sector Entities

Rating Category	Maturity: 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10+
1 or 2	0.1%	0.3%	0.4%	0.6%	0.7%	0.8%	0.9%	0.9%	1.0%	1.0%	1.1%
3	0.4%	1.0%	1.2%	1.5%	1.7%	2.0%	2.2%	2.3%	2.5%	2.6%	2.7%
4	1.0%	2.2%	2.6%	3.0%	3.3%	3.6%	3.8%	4.0%	4.2%	4.4%	4.5%
5	2.5%	5.1%	6.0%	6.6%	7.0%	7.3%	7.4%	7.5%	7.6%	7.7%	7.7%
6	6.3%	10.7%	11.8%	12.3%	12.5%	12.6%	12.7%	12.7%	12.7%	12.7%	12.7%
7	23.4%	26.2%	26.6%	26.8%	26.8%	26.8%	26.8%	26.8%	26.8%	26.8%	26.8%
Unrated	2.5%	5.1%	6.0%	6.6%	7.0%	7.3%	7.4%	7.5%	7.6%	7.7%	7.7%

[44] These stress factors were developed using the Basel single risk factor IRB model of default risk, combined with the model for credit deterioration risk presented in the 2002 paper "The Distribution of Loan Portfolio Value" by O. A. Vasicek.

In Default	38%	38%	38%	38%	38%	38%	38%	38%	38%	38%	38%

Table 28. Credit Risk Stress Factors for Corporate and Reinsurance:

Rating Category	Maturity: 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10+
1 or 2	0.2%	0.7%	0.9%	1.2%	1.4%	1.6%	1.7%	1.9%	2.0%	2.1%	2.2%
3	0.6%	1.3%	1.6%	1.8%	2.1%	2.3%	2.6%	2.8%	3.0%	3.2%	3.3%
4	1.4%	3.0%	3.6%	4.1%	4.5%	4.9%	5.1%	5.3%	5.4%	5.6%	5.7%
5	3.6%	7.1%	8.3%	9.0%	9.4%	9.7%	9.8%	9.8%	9.8%	9.8%	9.8%
6	8.9%	14.4%	15.3%	15.6%	15.6%	15.6%	15.6%	15.6%	15.6%	15.6%	15.6%
7	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%
Unrated	6.3%	10.7%	11.8%	12.3%	12.5%	12.6%	12.7%	12.7%	12.7%	12.7%	12.7%
In Default	38%	38%	38%	38%	38%	38%	38%	38%	38%	38%	38%

Table 29. Credit Risk Stress Factors for Securitisations:

Rating Category	Maturity: 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10+
1 or 2	0.2%	0.7%	0.9%	1.2%	1.4%	1.6%	1.7%	1.9%	2.0%	2.1%	2.2%
3	0.6%	1.3%	1.6%	1.8%	2.1%	2.3%	2.6%	2.8%	3.0%	3.2%	3.3%
4	1.4%	3.0%	3.6%	4.1%	4.5%	4.9%	5.1%	5.3%	5.4%	5.6%	5.7%
5	10.8%	21.3%	25.0%	27.1%	28.3%	29.0%	29.3%	29.3%	29.3%	29.3%	29.3%
6	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
7	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Unrated	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
In Default	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table 30. Credit Risk Stress Factors for Re-securitisations:

Rating Category	Maturity: 0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10+
1 or 2	0.4%	1.4%	1.8%	2.3%	2.8%	3.2%	3.5%	3.7%	3.9%	4.2%	4.4%
3	1.2%	2.6%	3.1%	3.7%	4.2%	4.7%	5.2%	5.6%	5.9%	6.3%	6.6%
4	2.8%	6.1%	7.2%	8.3%	9.1%	9.7%	10.2%	10.5%	10.9%	11.2%	11.5%
5	21.6%	42.7%	50.1%	54.2%	56.5%	58.0%	58.6%	58.6%	58.6%	58.6%	58.6%
6	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
7	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Unrated	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
In Default	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

768. The Credit risk stress factor for policy loans (which are to be reported under the 'Miscellaneous Assets' table in the Template) is 0%. The stress factor for deposits and other short-term obligations of regulated banks is 0.4%. All other assets receive a stress factor of 8%, but outstanding premiums can be excluded from the exposure if insurance liabilities are recorded for the contracts relating to the outstanding premiums and the outstanding premiums are unrecorded in line with the release of the insurance liabilities when the contracts expire upon the policyholder's default.

14.5.10 Mortgage Loans

14.5.10.1 Commercial Mortgages

769. Based on data availability, the risk charge should be calculated using one of the three following methods:

a) Tier 1: Risk Charge Determined By Loan To Value (LTV) And Debt Service Coverage Ratio (DSCR)

b) Tier 2: Risk Charge Determined By LTV Only

c) Tier 3: No Credit Quality Differentiator Data Used

770. For Commercial Tier 1, the following stress factors should be used:

Table 31. Stress Factors for Commercial Tier 1

ICS CM Categories	ICS Stress Factors
CM1	2.8%
CM2	5.5%
CM3	9.4%
CM4	15.8%
CM5	23.5%
CM6	38%
CM7	38%

Where "CM1" means "Commercial Mortgage Factor 1", CM6 and CM7 are delinquent loans and loans in foreclosure, and the mapping of the ICS CM categories according to LTV and DSCR data is based upon the following matrix:

Table 32. Mapping of ICS CM Categories

	Tier 1								
	LTV								
	CM	<50%	50% to 59.9%	60% to 69.9%	70% to 79.9%	80% to 89.9%	90% to 99.9%	100% to 109.9%	110% to 119.9%	120% or greater
DSCR	< 0.6	3	3	3	3	3	4	4	5	5
	0.6 to 0.79	3	3	3	3	3	4	4	5	5
	0.8 to 0.99	3	3	3	3	3	4	4	5	5
	1 to 1.19	2	2	2	2	3	3	4	4	4
	1.2 to 1.39	2	2	2	2	2	2	3	3	3
	1.4 to 1.59	2	2	2	2	2	2	3	3	3
	1.6 to 1.79	1	1	1	1	1	2	3	3	3

1.8 to 1.99	1	1	1	1	1	2	2	2	2
2 or greater	1	1	1	1	1	2	2	2	2

771. For Commercial Tier 2, where only LTV data is available, the following stress factors should be used:

Table 34. Stress Factors for Commercial Tier 2

ICS CM Categories	ICS Stress Factors	LTV Minimum	LTV Maximum
CM1	2.8%	0%	67%
CM2	5.5%	68%	75%
CM3	9.4%	76%	85%
CM4	15.8%	86%	90%
CM5	23.5%	91%	NA
CM6	38%		
CM7	38%		

772. For Commercial Tier 3, where LTV and DSCR data is not available, a flat 8% stress factor should be used.

14.5.10.2 Agricultural Mortgage Loans

773. For agricultural mortgage loans, the following stress factors should be used:

Table 35. Stress Factors for Agricultural Mortgage Loans

ICS CM Categories	ICS Stress Factors	LTV Minimum	LTV Maximum
CM1	2.8%	0%	59.9%
CM2	5.5%	60%	69.9%
CM3	9.4%	70%	89.9%
CM4	15.8%	90%	110%
CM5	23.5%	110%	NA
CM6	38%		
CM7	38%		

774. For agricultural mortgage loans for which there is no LTV data available, a flat 8% stress factor should be used.

14.5.10.3 Residential Mortgages

775. For residential mortgages, the following stress factors should be used:

a) Performing loans = 3.6%

b) Non-performing loans = 38% (Non-Performing defined as 90+ days delinquent or in the process of foreclosure)

14.5.10.4 Criteria for recognition of collateral

776. A collateralised transaction is one in which:

a) a Volunteer IAIG has a credit exposure or potential credit exposure; and

b) that credit exposure or potential credit exposure is hedged in whole or in part by collateral posted by a counterparty or by a third party on behalf of the counterparty.

777. The following standards must be met before relief will be granted in respect of any form of collateral:

a) The effects of collateral may not be double counted. Therefore, Volunteer IAIGs may not recognise collateral on claims for which an issue-specific rating is used that already reflects that collateral. All criteria around the use of ratings remain applicable to collateral.

b) All documentation used in collateralised transactions must be binding on all parties and legally enforceable in all relevant jurisdictions. Volunteer IAIGs must have conducted sufficient legal review to verify this and have a well-founded legal basis to reach this conclusion, and undertake such further review as necessary to ensure continuing enforceability.

c) The legal mechanism by which collateral is pledged or transferred must ensure that the Volunteer IAIG has the right to liquidate or take legal possession of it, in a timely manner, in the event of the default, insolvency or bankruptcy (or one or more otherwise-defined credit events set out in the transaction documentation) of the counterparty (and, where applicable, of the custodian holding the collateral). Furthermore, Volunteer IAIGs must take all steps necessary to fulfil those requirements under the law applicable to the Volunteer IAIGs' interest in the collateral for obtaining and maintaining an enforceable security interest, e.g. by registering it with a registrar, or for exercising a right to net or set off in relation to title transfer collateral.

d) The credit quality of the counterparty and the value of the collateral must not have a material positive correlation. For example, securities issued by the counterparty – or by any related group entity – provide little protection and are therefore ineligible.

e) Volunteer IAIGs must have clear and robust procedures for the timely liquidation of collateral to ensure that any legal conditions required for declaring the default of the counterparty and liquidating the collateral are observed, and that collateral can be liquidated promptly.

f) Where collateral is held by a custodian, Volunteer IAIGs must take reasonable steps to ensure that the custodian segregates the collateral from its own assets.

778. Only the following collateral instruments are eligible to be recognised:

a) Rated debt securities where these securities are:

i. rated category 5 or better and issued by a sovereign; or

ii. rated category 4 or better and issued by other entities (including banks, insurance companies, and securities firms)

b) Gold

c) Mutual funds where:

i. a price for the units is publicly quoted daily; and

ii. the mutual fund is limited to investing in the eligible instruments listed above.

d) Letters of credit.

779. For collateral to be recognised, it must be pledged for at least the life of the exposure. The market value of collateral that is denominated in a currency different from that of the credit exposure must be reduced by 20%. The portion of an exposure that is collateralised by the market value of eligible financial collateral is redistributed into the rating category applicable to the collateral instrument, while the remainder of the loan is assigned the rating category appropriate to the counterparty.

14.5.11 Criteria for recognition of guarantees and credit derivatives

780. Where guarantees or credit derivatives are direct, explicit, irrevocable and unconditional, and Volunteer IAIGs fulfil certain minimum operational conditions relating to risk management processes, they will be allowed to take account of such credit protection in determining the ICS rating category. The capital treatment is founded on the substitution approach, whereby the protected portion of a counterparty exposure is assigned the rating category of the guarantor or protection provider, while the uncovered portion retains the rating category of the underlying counterparty. Thus only guarantees issued by or protection provided by entities with a higher rating category than the underlying counterparty will lead to reduced risk charges. A range of guarantors and protection providers is recognised.

14.5.11.1 Operational requirements

781. The effects of credit protection may not be double counted. Therefore, no recognition is given to credit protection on claims for which an issue-specific rating is used that already reflects that protection. All criteria around the use of ratings remain applicable to guarantees and credit derivatives.

782. A guarantee (counter-guarantee) or credit derivative must represent a direct claim on the protection provider and must be explicitly referenced to a specific exposure or pool of exposures, so that the extent of the cover is clearly defined and incontrovertible. Other than non-payment by a protection purchaser of money due in respect of the credit protection contract it must be irrevocable;

there must be no clause in the contract that would allow the protection provider unilaterally to cancel the credit cover or that would increase the effective cost of cover as a result of deteriorating credit quality in the hedged exposure. It must also be unconditional: there should be no clause in the protection contract outside the direct control of the Volunteer IAIG that could prevent the protection provider from being obliged to pay out in a timely manner in the event that the original counterparty fails to make the payment(s) due.

783. All documentation used for documenting guarantees and credit derivatives must be binding on all parties and legally enforceable in all relevant jurisdictions. Volunteer IAIGs must have conducted sufficient legal review to verify this and have a well-founded legal basis to reach this conclusion, and undertake such further review as necessary to ensure continuing enforceability.

784. The following conditions must be satisfied in order for a guarantee to be recognised:

a) On the qualifying default/non-payment of the counterparty, the Volunteer IAIG may in a timely manner pursue the guarantor for any monies outstanding under the documentation governing the transaction. The guarantor may make one lump sum payment of all monies under such documentation to the Volunteer IAIG, or the guarantor may assume the future payment obligations of the counterparty covered by the guarantee. The Volunteer IAIG must have the right to receive any such payments from the guarantor without first having to take legal action in order to pursue the counterparty for payment.

b) The guarantee is an explicitly documented obligation assumed by the guarantor.

c) Except as noted in the following sentence, the guarantee covers all types of payments the underlying obligor is expected to make under the documentation governing the transaction, for example notional amount, margin payments etc. Where a guarantee covers payment of principal only, interest and other uncovered payments should be treated as an unsecured amount.

785. In addition to the conditions above, the following conditions must be satisfied in order for a credit derivative contract to be recognised:

a) The credit events specified by the contracting parties must at a minimum cover:

i. failure to pay the amounts due under terms of the underlying obligation that are in effect at the time of such failure (with a grace period that is closely in line with the grace period in the underlying obligation);

ii. bankruptcy, insolvency or inability of the obligor to pay its debts, or its failure or admission in writing of its inability generally to pay its debts as they become due, and analogous events; and

iii. restructuring of the underlying obligation involving forgiveness or postponement of principal, interest or fees that results in a credit loss event (i.e. charge-off, specific provision or other similar debit to the profit and loss account). Refer to the exception below when restructuring is not specified as a credit event.

b) If the credit derivative covers obligations that do not include the underlying obligation, section g) below governs whether the asset mismatch is permissible.

c) The credit derivative shall not terminate prior to expiration of any grace period required for a default on the underlying obligation to occur as a result of a failure to pay.

d) Credit derivatives allowing for cash settlement are recognised for capital purposes insofar as a robust valuation process is in place in order to estimate loss reliably. There must be a clearly specified period for obtaining post-credit event valuations of the underlying obligation. If the reference obligation specified in the credit derivative for purposes of cash settlement is different than the underlying obligation, section g) below governs whether the asset mismatch is permissible.

e) If the protection purchaser's right/ability to transfer the underlying obligation to the protection provider is required for settlement, the terms of the underlying obligation must provide that any required consent to such transfer may not be unreasonably withheld.

f) The identity of the parties responsible for determining whether a credit event has occurred must be clearly defined. This determination must not be the sole responsibility of the protection seller. The protection buyer must have the right/ability to inform the protection provider of the occurrence of a credit event.

g) A mismatch between the underlying obligation and the reference obligation under the credit derivative (i.e. the obligation used for purposes of determining cash settlement value or the deliverable obligation) is permissible if (1) the reference obligation ranks pari passu with or is junior to the underlying obligation, and (2) the underlying obligation and reference obligation share the same obligor (i.e. the same legal entity) and legally enforceable cross-default or cross-acceleration clauses are in place.

h) A mismatch between the underlying obligation and the obligation used for purposes of determining whether a credit event has occurred is permissible if (1) the latter obligation ranks pari passu with or is junior to the underlying obligation, and (2) the underlying obligation and reference obligation share the same obligor (i.e. the same legal entity) and legally enforceable cross-default or cross-acceleration clauses are in place.

786. When the restructuring of the underlying obligation is not covered by the credit derivative, but the other requirements above are met, partial recognition of the credit derivative will be allowed. If the amount of the credit derivative is less than or equal to the amount of the underlying obligation, 60% of the amount of the hedge can be recognised as covered. If the amount of the credit derivative

is larger than that of the underlying obligation, then the amount of eligible hedge is capped at 60% of the amount of the underlying obligation.

787. Only credit default swaps and total return swaps that provide credit protection equivalent to guarantees are eligible for recognition. Where a Volunteer IAIG buys credit protection through a total return swap and records the net payments received on the swap as net income, but does not record offsetting deterioration in the value of the asset that is protected (either through reductions in fair value or by increasing provisions), the credit protection will not be recognised.

788. Other types of credit derivatives are not eligible for recognition.

14.5.11.2 Eligible guarantors

789. Volunteer IAIGs may recognise credit protection given by the following entities:

a) sovereigns;

b) externally rated public sector entities, banks and securities firms with a higher rating category than that of the counterparty; and

c) other entities. This includes credit protection provided by parent, subsidiary and affiliate companies of an obligor when they have a higher rating category than that of the obligor.

790. However, a Volunteer IAIG may not recognise a guarantee or credit protection on an exposure to a third party when the guarantee or credit protection is provided by a related party (parent, subsidiary or affiliate) of the Volunteer IAIG. This treatment follows the principle that guarantees within a corporate group are not a substitute for capital.

14.5.11.3 Capital treatment

791. The protected portion of a counterparty exposure is assigned the rating category of the protection provider. The uncovered portion of the exposure is assigned the factor of the underlying counterparty.

792. Where the amount guaranteed, or against which credit protection is held, is less than the amount of the exposure, and the secured and unsecured portions are of equal seniority (i.e. the Volunteer IAIG and the guarantor share losses on a pro-rata basis), capital relief will be afforded on a proportional basis, so that the protected portion of the exposure will be receive the treatment applicable to eligible guarantees and credit derivatives, and the remainder will be treated as unsecured. Where a Volunteer IAIG transfers a portion of the risk of an exposure in one or more tranches to a protection seller or sellers and retains some level of risk, and the risk transferred and the risk retained are of different seniority, the Volunteer IAIG may obtain credit protection for the senior tranches (e.g. second-loss position) or the junior tranches (e.g. first-loss position). In this case, all tranches should be reported as securitisation exposures based on the ratings of the guarantors. If

a tranche does not carry a rating, it must be reported as an unrated securitisation exposure even if the underlying exposure is rated.

793. Materiality thresholds on payments below which no payment is made in the event of loss are equivalent to retained first-loss positions, and must be reported as unrated securitisation exposures.

14.5.11.4 Currency mismatches

794. Where the credit protection is denominated in a currency different from that in which the exposure is denominated, the amount of the exposure deemed to be protected will be 80% of the nominal amount of the credit protection, converted at current exchange rates.

14.5.11.5 Maturity mismatches

795. A maturity mismatch occurs when the residual maturity of the credit protection is less than that of the underlying exposure. If there is a maturity mismatch and the credit protection has an original maturity less than one year, the protection may not be recognised. As a result, the maturity of protection for exposures with original maturities less than one year must be matched to be recognised. Additionally, credit protection with a residual maturity of three months or less may not be recognised if there is a maturity mismatch. Credit protection will be partially recognised in other cases where there is a maturity mismatch.

796. The maturity of the underlying exposure and the maturity of the credit protection should both be measured conservatively. The effective maturity of the underlying exposure should be gauged as the longest possible remaining time before the counterparty is scheduled to fulfil its obligation, taking into account any applicable grace period. For the credit protection, embedded options that may reduce the term of the protection should be taken into account so that the shortest possible effective maturity is used. Where a call is at the discretion of the protection seller, the maturity will always be at the first call date. If the call is at the discretion of the Volunteer IAIG buying protection but the terms of the arrangement at origination contain a positive incentive for the Volunteer IAIG to call the transaction before contractual maturity, the remaining time to the first call date will be deemed to be the effective maturity. For example, where there is a step-up cost in conjunction with a call feature or where the effective cost of cover increases over time even if credit quality remains the same or improves, the effective maturity will be the remaining time to the first call.

797. When there is a maturity mismatch, the following adjustment will be applied:

$$P_a = P \times \frac{t - 0.25}{T - 0.25}$$ where:

- Pa is the value of the credit protection adjusted for maturity mismatch
- P is the nominal amount of the credit protection, adjusted for currency mismatch if applicable
- T is the lower of 5 or the residual maturity of the exposure expressed in years

- t is the lower of T or the residual maturity of the credit protection arrangement expressed in years

14.5.11.6 Sovereign counter-guarantees

798. Some claims may be covered by a guarantee that is indirectly counter-guaranteed by a sovereign. Such claims may be treated as covered by a sovereign guarantee provided that:

a) the sovereign counter-guarantee covers all Credit risk elements of the claim;

b) both the original guarantee and the counter-guarantee meet all the operational requirements for guarantees, except that the counter-guarantee need not be direct and explicit to the original claim; and

c) the cover is robust, and there is no historical evidence suggesting that the coverage of the counter-guarantee is less than effectively equivalent to that of a direct sovereign guarantee.

14.5.11.7 Other items

799. In the case where an Volunteer IAIG has multiple types of mitigators covering a single exposure (e.g. both collateral and a guarantee partially cover an exposure), it will be required to subdivide the exposure into portions covered by each type of mitigator (e.g. portion covered by collateral, portion covered by guarantee) and the rating category for each portion must be determined separately. When credit protection provided by a single protection provider has differing maturities, these must be subdivided into separate protection as well.

14.5.12 Credit equivalent amount for OTC derivatives

800. Volunteer IAIGs must calculate the credit equivalent amount of exposures to OTC derivatives counterparties and report them in column [2]. The credit equivalent amount is calculated using the current exposure method from Annex 4, section VII of the Basel Framework. Under the Current Exposure Method, Volunteer IAIGs must calculate the current replacement cost by marking contracts to market, thus capturing the current exposure without any need for estimation, and then adding a factor (the "add-on") to reflect the potential future exposure over the remaining life of the contract. In order to calculate the credit equivalent amount of these instruments under this current exposure method, a Volunteer IAIG sums:

a) The total replacement cost (obtained by "marking to market") of all its contracts with positive value; and

b) An amount for potential future credit exposure calculated on the basis of the total notional principal amount of its book, split by residual maturity as follows:

Table 36. Calculation of Potential Future Credit Exposure

Residual Maturity	Interest Rate	Exchange Rate and Gold	Equity	Precious Metals Except Gold	Other Commodities
One year or less	0.0%	1.0%	6.0%	7.0%	10.0%
Over one year to five years	0.5%	5.0%	8.0%	7.0%	12.0%
Over five years	1.5%	7.5%	10.0%	8.0%	15.0%

Notes:

1. Credit derivatives are not subject to the current exposure method. Credit protection that is received should be treated according to the instructions for guarantees and credit derivatives, while credit protection that is sold should be treated as an off-balance sheet direct credit substitute subject to a 100% credit conversion factor.
2. For contracts with multiple exchanges of principal, the factors are to be multiplied by the number of remaining payments in the contract.
3. For contracts that are structured to settle outstanding exposure following specified payment dates and where the terms are reset so that the market value of the contract is zero on these specified dates, the residual maturity is considered to be the time until the next reset date. In the case of interest rate contracts with remaining maturities of more than one year and that meet the above criteria, the add-on factor is subject to a floor of 0.5%.
4. Contracts not covered by any of the columns of this matrix are to be treated as "other commodities."
5. No potential credit exposure is calculated for single currency floating/floating interest rate swaps; the credit exposure on these contracts is evaluated solely on the basis of their mark-to-market value.
6. The add-ons are based on effective rather than stated notional amounts. In the event that the stated notional amount is leveraged or enhanced by the structure of the transaction, Volunteer IAIGs must use the actual or effective notional amount when determining potential future exposure. For example, a stated notional amount of $1 million with payments calculated at two times LIBOR would have an effective notional amount of $2 million.
7. Potential credit exposure is to be calculated for all OTC contracts (with the exception of single currency floating/floating interest rate swaps), regardless of whether the replacement cost is positive or negative.

801. Volunteer IAIGs may net contracts that are subject to novation or any other legally valid form of netting. Novation refers to a written bilateral contract between two counterparties under which any obligation to each other to deliver a given currency on a given date is automatically amalgamated

with all other obligations for the same currency and value date, legally substituting one single amount for the previous gross obligations.

802. Volunteer IAIGs that wish to net transactions under either novation or another form of bilateral netting must satisfy the following conditions:

a) The Volunteer IAIG has executed a written, bilateral netting contract or agreement with each counterparty that creates a single legal obligation, covering all included bilateral transactions subject to netting. The result of such an arrangement is that the Volunteer IAIG only has one obligation for payment or one claim to receive funds based on the net sum of the positive and negative mark-to-market values of all the transactions with that counterparty in the event that counterparty fails to perform due to any of the following: default, bankruptcy, liquidation or similar circumstances.

b) The Volunteer IAIG must have written and reasoned legal opinions that, in the event of any legal challenge, the relevant courts or administrative authorities would find the exposure under the netting agreement to be the net amount under the laws of all relevant jurisdictions. In reaching this conclusion, legal opinions must address the validity and enforceability of the entire netting agreement under its terms.

i. The laws of "all relevant jurisdictions" are: a) the law of the jurisdictions where the counterparties are incorporated and, if the foreign branch of a counterparty is involved, the laws of the jurisdiction in which the branch is located; b) the law governing the individual transactions; and c) the law governing any contracts or agreements required to effect netting.

ii. A legal opinion must be generally recognised as such by the legal community in the Volunteer IAIG's home country or by a memorandum of law that addresses all relevant issues in a reasoned manner.

c) The Volunteer IAIG has internal procedures to verify that, prior to recognizing a transaction as being subject to netting for capital purposes, the transaction is covered by legal opinions that meet the above criteria.

d) The Volunteer IAIG must have procedures in place to update legal opinions as necessary to ensure continuing enforceability of the netting arrangements in light of possible changes in relevant law.

e) The Volunteer IAIG maintains all required documentation in its files.

803. Any contract containing a walkaway clause will not be eligible to qualify for netting for the purpose of calculating risk charges. A walkaway clause is a provision within the contract that permits a non-defaulting counterparty to make only limited payments, or no payments, to the defaulter.

804. Credit exposure on bilaterally netted forwards, swaps, purchased options and similar derivatives transactions is calculated as the sum of the net mark-to-market replacement cost, if positive, plus an add-on based on the notional principal of the individual underlying contracts. However, for purposes of calculating potential future credit exposure of contracts subject to legally enforceable netting agreements in which notional principal is equivalent to cash flows, notional principal is defined as the net receipts falling due on each value date in each currency.

805. The reason that these contracts are treated as a single contract is that offsetting contracts in the same currency maturing on the same date will have lower potential future exposure as well as lower current exposure. For multilateral netting schemes, current exposure (i.e., replacement cost) is a function of the loss allocation rules of the clearing house.

806. The calculation of the gross add-ons should be based on the legal cash flow obligations in all currencies. This is calculated by netting all receivable and payable amounts in the same currency for each value date. The netted cash flow obligations are converted to the reporting currency using the current forward rates for each value date. Once converted the amounts receivable for the value date are added together and the gross add-on is calculated by multiplying the receivable amount by the appropriate add-on factor.

807. The future credit exposure for netted transactions (ANet) equals the sum of: (i) 40% of the add-on as presently calculated (AGross) ; and (ii) 60% of the add-on multiplied by the ratio of net current replacement cost to positive current replacement cost (NGR) where:

NGR = level of net replacement cost / level of positive replacement cost for transactions subject to legally enforceable netting agreements.

808. The calculation of NGR can be made on a counterparty by counterparty basis or on an aggregate basis for all transactions subject to legally enforceable netting agreements. On a counterparty by counterparty basis a unique NGR is calculated for each counterparty. On an aggregate basis, one NGR is calculated and applied to all counterparties.

14.5.13 Credit equivalent amount for other off-balance sheet exposures

809. Off-balance sheet exposures that not arising from OTC derivatives should be reported in column [3]. Off-balance-sheet items are converted into credit exposure equivalents through the use of credit conversion factors (CCFs) applied to the items' notional amounts:

a) Commitments with an original maturity up to one year and commitments with an original maturity over one year receive a CCF of 20% and 50%, respectively. However, any commitments that are unconditionally cancellable at any time by the Volunteer IAIG without prior notice, or that effectively provide for automatic cancellation due to deterioration in a borrower's creditworthiness, receive a 0% CCF.

b) Direct credit substitutes, e.g. credit derivatives sold, general guarantees of indebtedness (including standby letters of credit serving as financial guarantees for loans and securities)

and acceptances (including endorsements with the character of acceptances) receive a CCF of 100%. If a Volunteer IAIG has guaranteed a debt security (e.g., through the sale of a credit derivative), the risk charge is the same as if the Volunteer IAIG were to hold the underlying security directly. Such exposures should be reported in column [3] ("Other off-balance sheet") of the Template, in the row corresponding to the guaranteed security.

c) Sale and repurchase agreements and asset sales with recourse, where the Credit risk remains with the Volunteer IAIG, receive a CCF of 100%.

d) Forward asset purchases, forward deposits and partly-paid shares and securities, which represent commitments with certain drawdown, will receive a CCF of 100%.

e) Transaction-related contingent items (e.g. performance bonds, bid bonds, warranties and standby letters of credit related to particular transactions) receive a CCF of 50%.

f) Note issuance facilities (NIFs) and revolving underwriting facilities (RUFs) receive a CCF of 50%.

g) Short-term self-liquidating trade letters of credit that a Volunteer IAIG either issues or confirms arising from the movement of goods (e.g. documentary credits collateralised by the underlying shipment) receive a 20% CCF.

h) Where there is an undertaking to provide a commitment on an off-balance sheet item, Volunteer IAIGs are to apply the lower of the two applicable CCFs.

i) All off-balance sheet securitisation exposures receive a CCF of 100%.

14.5.14 Data collection on use of NAIC Designations

810. For 2016 Field Testing purposes, for situations where Volunteer IAIGs are able to access NAIC[45] designations, the IAIS will collect data on from those Volunteer IAIGs. The NAIC designations will be recorded on the basis of the completion of an identical Credit risk Template called *ICS.Credit Risk (NAIC)*. The only difference between this worksheet and the *ICS.Credit Risk (-NAIC)* worksheet is the use or non-use of NAIC designations.

Table 37. Mapping of NAIC Designations to ICS Rating Categories

[45] The National Association of Insurance Commissioners (NAIC) has developed proprietary technical and analytical products that are used by the states and territories of the US to regulate insurance, including the NAIC Designation, used to assess the quality of assets as part of financial solvency monitoring efforts of US state insurance regulators. The NAIC is not a rating agency.

ICS Rating Category	NAIC Designations
1	
2	
3	1
4	2
5	3
6	4
7	5

14.6 Operational Risk

Relevant Worksheets in Template:	*ICS.Operational risk*	*Due 15 September 2016*

811. The Technical Specifications for Operational risk apply both to the MAV and GAAP Plus approach. This section has been written from the perspective of the MAV approach. While somewhat different valuation data might be input for GAAP Plus, the two approaches included in 2016 Field Testing are fundamentally the same for Operational risk.

14.6.1 Geographical Segmentation

812. All data items in this worksheet should be split into the proposed geographical segments:

a) EEA and Switzerland

b) US and Canada

c) China

d) Japan

e) Other developed

f) Emerging market

813. See section 14.2.3 for further details on the definitions of these geographical segments.

14.6.2 Line of business segmentation

814. All data items in this worksheet should be split into the following line of business segments:

a) Non-life – insurance products that do not relate to life or health, often referred to as property and casualty or general insurance. Products include auto/motor, property, workers' compensation/employers' liability, other liability, and credit/surety/pecuniary. Does not include European Workers' Compensation.

b) Health – insurance products providing protection in case of deteriorated health status. Products considered here are described in section 14.3.5 on Health risk.

c) Life (risk) – risk insurance products providing protection related to the length of human life. Products would include individual life, group life, group pension and annuities (with a life aspect).

d) Life (non-risk) – products where the policyholder bears the investment risk. It will include segmented funds and accumulation annuities.

815. In addition, non-life, health and life (risk) should be split into:

a) Direct – insurance written directly to the policyholder (rather than assumed indirectly via reinsurance)

b) Assumed – insurance written indirectly through reinsurance by accepting risks from another insurance company outside the Volunteer IAIG

14.6.3 Input data required

816. The initial design and calibration proposed for the 2016 Field Testing is subject to refinements based on further analysis and evidence. As such, additional information is collected in this worksheet for supplementary testing.

817. In addition, the IAIS will continue to test the design of the Operational risk charge as a factor of the remaining components of the ICS. No extra data is needed for this as the ICS is calculated in other tabs.

818. *Gross written premium - most recent financial year (for non-life, health and life (risk))*

a) Report the gross written premium for the most recent financial year up until the balance date. The figure should be before the effect of ceded reinsurance and on a consolidated basis. The geographical segmentation should be based on where the risk is written.

b) For example, for a Volunteer IAIG with a balance date of 31 December, this item is gross written premium from 1 January 2015 to 31 December 2015.

819. *Gross written premium - financial year minus 1 (for non-life, health and life (risk))*

a) Report the gross written premium for the financial year before the most recent financial year. The figure should be before the effect of ceded reinsurance and on a consolidated basis. The geographical segmentation should be based on where the risk is written.

b) For example, for a Volunteer IAIG with a balance date on 31 December, this item is gross written premium from 1 January 2014 to 31 December 2014.

820. *Gross written premium - financial year minus 2 (for non-life, health and life (risk))*

a) Report the gross written premium for the year two years before the most recent financial year. The figure should be before the effect of ceded reinsurance and on a consolidated basis. The geographical segmentation should be based on where the risk is written.

b) For example, for a Volunteer IAIG that balances on 31 December, this item is gross written premium from 1 January 2013 to 31 December 2013.

821. *Gross written premium – growth in premium above threshold (for non-life, health and life (risk))*

a) This does not require any input and is calculated based on the growth in gross written premium from the financial year minus 2 to the most recent financial year that is in excess of the set threshold of 20% (which is for field testing purposes only). The threshold is applied at the direct and assumed level and at this stage does not consider growth at a regional level (for the purposes of Field Testing only)

822. *Net written premium - most recent financial year (for non-life, health and life (risk))*

a) Report the net written premium for the most recent financial year up until the balance date. The figure should be after the effect of ceded reinsurance and on a consolidated basis. The geographical segmentation should be based on where the risk is written.

b) For example, for a Volunteer IAIG that balances on 31 December, this item net written premiumr from 1 January 2015 to 31 December 2015.

823. *Gross earned premium - most recent financial year(for non-life, health and life (risk))*

a) Report the gross earned premium for the most recent financial year up until the balance date. The figure should be before the effect of ceded reinsurance and on a consolidated basis. The geographical segmentation should be based on where the risk is written.

b) For example, for a Volunteer IAIG that balances on 31 December, this item is gross earned premium from 1 January 2015 to 31 December 2015.

824. *Gross earned premium - financial year minus 1 (for non-life, health and life (risk))*

a) Report the gross earned premium for the financial year before the most recent financial year. The figure should be before the effect of ceded reinsurance and on a consolidated basis. The geographical segmentation should be based on where the risk is written.

b) For example, for a Volunteer IAIG that balances on 31 December, this item is gross earned premium from 1 January 2014 to 31 December 2014

825. *Gross earned premium - financial year minus 2 (for non-life, health and life (risk))*

a) Report the gross written premium for the financial year two years before the most recent financial year. The figure should be before the effect of ceded reinsurance and on a consolidated basis. The geographical segmentation should be based on where the risk is written.

b) For example, for a Volunteer IAIG that balances on 31 December, this item is gross earned premium from 1 January 2013 to 31 December 2013.

826. *Net earned premium - most recent financial year (for non-life, health and life (risk))*

a) Report the net earned premium for the most recent financial year up until the balance date. The figure should be after the effect of ceded reinsurance and on a consolidated basis. The geographical segmentation should be based on where the risk is written.

b) For example, for a Volunteer IAIG that balances on 31 December, this item is net earned premium from 1 January 2015 to 31 December 2015.

827. *Gross current estimate of insurance liabilities on a MAV basis (for non-life, health, life (risk) and life (non-risk))*

a) Report the gross current estimate of insurance liabilities on a MAV basis using the specified segmentation. The current estimate should be reported before any allowance for reinsurance or other related recoverables. For further information on the definition and determination of current estimates, refer to section 6.3.

828. *Net current estimate of insurance liabilities on a MAV basis (for non-life, health, life (risk) and life (non-risk))*

a) Report the net current estimate of insurance liabilities on a MAV basis using the specified segmentation. The current estimate should be reported after allowance for all reinsurance or other related recoverables. For further information on the definition and determination of current estimates, refer to section 6.3.

829. *Gross current estimate of insurance liabilities on a GAAP Plus basis (for non-life, health, life(risk) and life (non-risk))*

a) Report the gross insurance liabilities on a GAAP Plus basis using the specified segmentation. The current estimate should be reported before any allowance for reinsurance or other related recoverables. For further information on the definition and determination of current estimates, refer to section 7.

830. *Net current estimate of insurance liabilities on a GAAP Plus basis (for non-life, health, life(risk) and life (non-risk))*

a) Report the net current estimate of insurance liabilities on a GAAP Plus basis using the specified segmentation. The current estimate should be reported after allowance for all reinsurance or other related recoverables. For further information on the definition and determination of current estimates, refer to section 7 on the GAAP Plus approach.

14.6.4 Operational risk charge

831. The Operational risk charge is calculated as follows:

$$
\begin{aligned}
Op\ risk\ charge\ = \ & \max\left[non\_life\_op\_risk_{\ premium}, non\_life\_op\_risk_{\ liabilities}\right] \\
& + \ non\_life\_op\_risk_{growth} \\
& + \ \max\left[health\_op\_risk_{premium}, health\_op\_risk_{liabilities}\right] \\
& + \ health\_op\_risk_{growth} \\
& + max\left[life\_(risk)\_op\_risk_{premium},\ life\_(risk)\_op\_risk_{liabilities}\right] \\
& + \ life\_(risk)\_op\_risk_{growth} \ + \ Life\_(non\_risk)\_op\_risk_{liabilities}
\end{aligned}
$$

832. For 2016 Field Testing purposes, the Operational risk components are computed as factors multiplied by risk exposures. The same factors are applied across geographical segments. The Operational risk factors applied to determine the Operational risk charge have not been finalised and are for the purposes of Field Testing only. The factors are contained in the Template and the Operational risk charge is calculated based on the inputted risk exposures.

833. The exposures and factors currently proposed for Operational risk are set in the following table.

Table 38. Operational Risk Exposures and Factors

	Premium	**Liabilities**	**Growth**
Non-life operational risk			
Exposure	Gross written premium most recent financial year	Gross current estimate	Gross written premium most recent financial year exceeding the growth threshold compared to the previous year
Factor	3% [direct] 2.5% [assumed]	3% [direct] 2.5% [assumed]	3% [direct] 2.5% [assumed]
Health Operational risk			
Exposure	Gross written premium most recent financial year	Gross current estimate	Gross written premium most recent financial year exceeding the growth threshold compared to the previous year

Factor	4% [direct] 3.5% [assumed]	0.4% [direct] 0.35% [assumed]	4% [direct] 3.5% [assumed]
Life (risk) Operational risk			
Exposure	Gross written premium most recent financial year	Gross current estimate	Gross written premium most recent financial year exceeding the growth threshold compared to the previous year
Factor	4% [direct] 3.5% [assumed]	0.4% [direct] 0.35% [assumed]	4% [direct] 3.5% [assumed]
Life (non-risk) Operational risk			
Exposure		Gross current estimate	
Factor		0.45%	

14.7 Aggregation / Diversification

834. The Technical Specifications for Aggregation and Diversification apply both to the MAV and GAAP Plus approach. This section has been written from the perspective of the MAV approach; while somewhat different valuation data might be input for GAAP Plus, the two approaches included in 2016 Field Testing are fundamentally the same for Aggregation and Diversification.

835. The standard method will define methods to calculate risk charges for individual risks. The risk charges correspond to a specific measure, confidence level and time horizon, for instance 99.5% VaR over a one-year horizon. The aggregation of these individual risk charges will then reflect some degree of diversification between the individual risks, as a consequence of the dependency specified between the risks.

836. The individual risk charges are aggregated using correlation matrices. The implicit assumptions and limitations of such approach are recognised, although not discussed here. Pair-wise correlations necessary to fully specify the aggregation, are proposed by the IAIS considering the ICS principles, and the supervisory experience. Following Field Testing the IAIS will consider if this needs to be refined.

837. Considering the feedback received during the ICS consultation, a multiple steps approach is adopted for 2016 Field Testing. This approach involves several relatively small matrices being defined and calibrated in order to aggregate several capital charges following the multi steps approach. This will be done automatically in the Template – Volunteer IAIGs do not have to enter any data with respect to aggregation and diversification in the Template.

838. The Correlation matrix used for 2016 Field Testing is:

Table 39. Correlation Matrix Across Risks

Diversification calculation - ICS						
	Non-life	Catastrophe	Life	Health	Market	Credit
Non-life	100.0%	25.0%	0.0%	0.0%	25.0%	25.0%
Catastrophe	25.0%	100.0%	25.0%	25.0%	25.0%	25.0%
Life	0.0%	25.0%	100.0%	25.0%	25.0%	25.0%
Health	0.0%	25.0%	25.0%	100.0%	25.0%	25.0%
Market	25.0%	25.0%	25.0%	25.0%	100.0%	25.0%

Credit	25.0%	25.0%	25.0%	25.0%	25.0%	100.0%

15 Baseline Jurisdictional Legal-Entity Capital Requirements

Relevant Worksheets in Template:	*FT16.Baseline.Jurisdictional*	*Due 15 September 2016*

839. Volunteer IAIGs are asked to report their existing local capital requirements for each material insurance legal entity (subsidiary) in the group (please use the same definition of 'material entity' as provided in the 'Scope of Group' section of this document; local capital requirements for all entities under the materiality threshold should be reported on an aggregated basis per country). It is important that this reporting is at the legal entity level rather than a sub-group consolidation within a jurisdiction. This baseline information will be used in further analysis of options in dealing with Currency risk and capital resources, and to assess how to deal with fungibility of capital issues in ComFrame (including the possibility of some quantitative adjustment to the ICS).

15.1 Country

840. The country column has drop down lists in each cell listing all countries according to the World Bank list of countries (http://data.worldbank.org/country) with Chinese Taipei and the Falkland Islands added. Please select one country per subsidiary. It is expected that some Volunteer IAIGs will have multiple subsidiaries in some jurisdictions.

15.2 Legal Entity identification

841. Please provide the name of the legal entity, as well as the ISO 17442 Legal Entity Identifier (if available). If reporting an aggregated amount per country for multiple immaterial subsidiaries, please indicate 'Multiple Immaterial Entities' as the legal entity name.

15.3 Assets and Liabilities in the jurisdiction

842. Record the assets and liabilities held in each subsidiary according to the requirements of local regulatory reporting (i.e. no need to adjust MAV or GAAP Plus) with one exception (see below). Please do not report on the basis of local GAAP unless that is the basis of local regulatory reporting. You are also asked to provide details of intra-group assets and liabilities (for instance, intra-group reinsurance recoverables, intra-group loans etc.).

843. The IAIS will not specify how particular items are to be treated as assets, liabilities or equity under the capital resources column. These must be reported according to the requirements of local regulatory reporting.

844. If local regulatory reporting of insurance liabilities is on a net basis, please attempt, on a best efforts basis, to record insurance liabilities on a gross amount instead so that the IAIS can understand the extent of intra-group reinsurance arrangements.

845. Information on the proportion of assets and liabilities within an entity that arise due to intra-group transactions are also requested. For this purpose, intra-group transactions take the form of direct and indirect claims with other legal entities within the scope of the group. Examples of intra-group assets may include:

a) Reinsurance recoverables from other legal entities within the group;

b) Shareholdings in other legal entities within the group;

c) Loans provided to other legal entities within the group;

d) Receivables for sale of assets to other legal entities within the group; or

e) Receivables for services provided to other legal entities within the group.

846. Examples of intra-group liabilities may be:

a) Reinsurance claims payable to other legal entities within the group;

b) Borrowings from other legal entities in the group;

c) Amounts payable for purchases of assets from other legal entities within the group;

d) Dividends payable to other legal entities that are shareholders of the legal entity;

e) Liabilities for services received from other legal entities; or

f) Liabilities arising out of transactions with a central treasury operation performed by another legal entity within the group.

15.4 Local capital requirement

847. Record the local capital requirement at a PCR level (see ICP 17) imposed by the respective jurisdictional insurance supervisor.

848. For example, the PCR should be reported on the following basis:

a) Subsidiaries based in the European Union should use the Solvency II Solo SCR as the PCR.

b) For US subsidiaries, the RBC Company Action Level of each insurer should be re-calibrated to the point at which regulatory action can be taken in any state based on RBC alone, i.e., the point at which the trend test begins which is one and a half times company action level.

c) For Australian subsidiaries, the PCR is the target capital as set by the insurer/group in accordance with APRA requirements. Effectively, this would be "Target capital under ICAAP". PCR is not a set multiple of MCR.

d) For Bermudian subsidiaries, the Legal Entity PCR in Bermuda for medium and large commercial insurers is called the "Enhanced Capital Requirement" (ECR) and is calibrated to TailVaR at 99% confidence level over a one-year time horizon.

e) For Hong Kong subsidiaries, under the current rule-based capital regime, if applied similar to the concept of PCR, the regime's PCR would be 150% of MCR for life insurers and 200% of MCR for non-life insurers.

f) For Japanese subsidiaries, the PCR is the solvency margin ratio of 200%.

g) For Singaporean subsidiaries, the PCR is 120% of total risk requirement (i.e. capital requirement).

h) For Chinese Taipei subsidiaries, the PCR is 200% of RBC ratio.

i) For Chinese subsidiaries, the PCR is 100% of the C-ROSS total capital as at 1 January 2016.

15.5 Local capital resources

849. Record the available capital resources recognised by the respective jurisdictional insurance supervisor. The total qualifying capital resources should be the result of the sum of equity items from the balance sheet, plus any debt that is recognised as qualifying capital resources (e.g. subordinated debt), less any deductions from capital resources (or inadmissible assets).

850. In addition, three components of capital resources are requested (these three components are components of local capital resources and are not expected to sum to total local capital resources):

a) First, the amount of capital resources represented by equity on the regulatory balance sheet of the subsidiary. This is automatically determined in the Template as the difference between assets and liabilities reported on the regulatory balance sheet.

b) Second, any financial instruments that are issued from the subsidiary that are not issued intra-group and are recognised as available capital resources by the jurisdictional insurance supervisor. These may also be recorded as non-controlling interests for ICS capital resources. However, the ICS capital resources criteria may not be the same as the criteria for available capital resources applied by the jurisdictional insurance supervisor. Where there are available capital resources issued to third parties that are recognised by the jurisdictional insurance supervisor but not under 2016 Field Testing (see section 11 on capital resources) please provide details in the Questionnaire, including a cross-reference to where these instruments are shown on the *FT16.Financial Instruments* worksheet.

c) Third, is available capital resources that are not financial instruments. Please record the amount of balance sheet items recognised by the jurisdictional insurance supervisor as available capital resources that are not financial instruments. This will include items like the retained earnings, accumulated other comprehensive income and certain reserves. (This is not intended to be a balancing item, i.e. the three 'of which' components need not sum to total capital resources).

16 Baseline Supplementary Internal Model data

Relevant Worksheets in Template:	*FT16.Baseline.Internal Models*	*Due 15 September 2016*

851. As an additional reference point in considering the overall calibration of the ICS and its components, Volunteer IAIGs are requested to provide internal model results structured in the same way as the ICS. **This is a voluntary submission**. The IAIS fully understands that internal models may not be structured in the same way as the ICS. However, to facilitate the analysis, Volunteer IAIGs are asked to proxy the results in a similar way to the structure of the ICS and its components. The Questionnaire will contain questions asking Volunteer IAIGs to explain differences in definitions of risks, issues in restructuring internal model results and other issues that may affect the reported results. When answering these questions, please give an indication of the materiality of structural differences such as differences in the definitions of risks.

852. As the purpose of this part of 2016 Field Testing is to support the analysis of the calibration of the ICS and its components, Volunteer IAIGs may choose to only fill this sheet in partially, if that is all that is possible. The cells are deliberately not aggregated to a total capital requirement to allow for the input of individual items.

853. This request applies not only to those Volunteer IAIGs that have internal models that have been approved by their group-wide supervisors for the purposes of calculating regulatory capital requirements. This request is intended also for those Volunteer IAIGs who maintain internal models for internal risk management purposes where those internal models are not subject to regulatory approval. However, in the Questionnaire Volunteer IAIGs are asked to identify which outputs are from internal models subject to regulatory approval.

16.1 Calibration

854. In order for any data submitted in this worksheet to assist the IAIS in considering the calibration of the ICS, the results presented should be provided by Volunteer IAIGs by using the same target criteria and time horizon as set out for the calculation of the ICS, i.e. 99.5% VaR risk measure over a one-year time horizon. Where Volunteer IAIGs' internal models are not targeting exactly this risk measure but are able to proxy the results, Volunteer IAIGs should explain the basis of the results reported in the Questionnaire.

16.2 Balance Sheet items

855. Volunteer IAIGs are asked to only complete the balance sheet items section if a full internal model is being used to measure all quantifiable risks. There is no need to complete this section of the

worksheet if partial internal models are used. Please provide details in the Questionnaire about the valuation basis including the approach to discounting liabilities.

16.3 Required Capital

856. Components of capital requirements are requested using the same structure as the ICS (including the same definitions for each of the risks). Where it is only possible to report capital requirements at a high level of aggregation, e.g. Market risk as compared to Interest Rate risk etc., report only that figure. Where the Volunteer IAIG has the ability to proxy the more granular risk measures in a credible way, please complete the additional granular data request.

857. The IAIS will get more information from the qualitative information provided about the internal model results than the results themselves. Of particular interest is any comparisons or contrasts with the results of the ICS Standard Method such that the IAIS can understand where there are material differences in the calibration of the measurement of certain risks.

17 Scope of Group

Relevant Worksheets in Template:	*ICS.ReportingScope*	*Due 15 September 2016*

17.1 General comments

858. The purpose of this worksheet is to enable the IAIS to identify differences that arise from a different choice of entities included in the consolidated data submitted as part of Field Testing, rather than differences which arise from the MAV and GAAP Plus.

859. Only material entities or sub-groups need to be included in this analysis (see definition of 'Material Entity' at the end of this section).

860. Where more practical a Volunteer IAIG may group similar or related entities together in a single 'sub-group' and complete only one line in the worksheet in respect of all such entities in a sub-group.

861. Where a related entity or a number of related entities are excluded from the consolidated data, but would individually or in aggregate represent more than 5% of the group gross assets, then please include those entities in the Template individually or in aggregate.

17.2 Name of entity

862. Please provide the legal name of the entity. Please include the ISO 17442 Legal Entity Identifier if available. If a 'sub-group' is being reported please indicate a descriptive name in the field for entity name.

17.3 Cross-reference to group structure chart

863. For material entities appearing on the group structure diagram (see Questionnaire), please include a cross-reference to the relevant line in the *ICS.ReportingScope* worksheet.

17.4 Type of entity

864. Please select the type of entity being described from the drop-down list. Refer to the list of types of entity provided below.

Table 40. Types of Entities

Type of entity
Insurance company
Holding company
Service company
Special purpose entity

Financial regulated company
Investment vehicle
Lloyd's corporate member
Excluded entity
Other entity not listed elsewhere

17.5 Percentage interest in related entity

865. Please provide the percentage interest that the group has in the related entity. That interest should be group's share of the economic value of the related entity if different from the proportion of the controlling or voting rights which the group can exercise.

17.6 Consolidation criteria

866. Please describe the criteria applied to determine the consolidation technique used for the entity included in the consolidated Field Testing data. You may select from the criteria in the drop-down list. The criteria may be based on the accounting consolidation standards adopted, regulatory rules applied or the requirement in the Technical Specification to include entities which may be a potential source of risks to the insurance operations. Please identify which apply and the key criteria relevant to each related entity in the Template. For example, key criteria may be particular terms defined according to an accounting standard, such as "dominant influence", "significant influence", "joint venture" or "investment".

867. For excluded entities (paragraph 861 above) please describe the reason for their exclusion as per the table below. These are included in the same drop down box as the example consolidation criteria above. For 'other' criteria this can be further specified in the adjacent column.

Table 41. Reasons for excluding entities from consolidation

Consolidation criteria
Not material to consolidate
Not practical to consolidate
Other (please specify)

17.7 Consolidation technique

868. Please select the consolidation technique used in preparing the data submitted as part of 2016 Field Testing from the drop-down list provided.

Table 42. Consolidation Techniques

Consolidation technique
Line-by-line consoidation (with deduction of non-controlling interest as single line item)
Line-by-line proportional consolidation
Single line item

Valued at nil in the consolidated balance sheet (ie any value is deducted from capital)
Other (please specify)

17.8 Valuation basis

869. Assets and liabilities included in the consolidated data and reported in the 'Related to Insurance Activities' column of the ICS Balance Sheet should be valued in that Balance Sheet on both a Market Adjusted Valuation basis and GAAP with Adjustments basis. However, legal entities that are unconsolidated or are included in the 'Other than Related to Insurance Business' column may be valued under a different set of accounting rules. Thus we are requesting that Volunteer IAIGs select the accounting basis that was used to measure either the Net assets or Gross assets being reported under the corresponding columns in this scope of group template.

870. From the drop-down list provided, please select the valuation basis used to report Net Assets or Gross Assets in the template as per the table below.

Table 43. Valuation Basis

Valuation basis
IAIS valuation (MAV or GAAP+) - select this option if the legal entity was consolidated and reported under the 'Related to Insurance Activities' column in the ICS balance sheet template; and where gross or net assets were valued as per the GAAP+ and MAV Field Testing Specifications.
Local accounting standards – Select this option if the legal entity was either consolidated and reported under the 'Other than Related to Insurance Business' column in the ICS balance sheet template or was not consolidated; and gross or net assets were valued using local GAAP.
Regulatory valuation rules - Select this option if the legal entity was either consolidated and reported under the 'Other than Related to Insurance Business' column in the ICS balance sheet template or was not consolidated; and gross or net assets were valued using regulatory valuation rules.
Other (please specify) – Please provide a narrative explanation in the adjacent column to the right

871. The majority of assets and liabilities included in the consolidated data submitted will be valued on both a MAV basis and GAAP Plus basis — that being one of the principle objectives of 2016 Field Testing. However, we wish to identify the extent to which other bases are used in the data submitted. This may be because local accounting rules are applied to the assets and liabilities of the related entity (which may not be the same accounting rules as are used for the preparation of the consolidated accounts). It may be because the entity is a financial entity which is subject to regulation by another sector authority and those regulatory valuation rules have been applied.

17.9 Main activity

872. Please describe the main activity or purpose of the entity.

17.10 Main risk

873. Please describe the main risk, or risks, that the entity poses to the group.

17.11 Net asset value of related entity and excluded special purpose entities

874. Please provide the NAV of related entities in which the group has an interest of more than 20% but less than or equal to 50% (i.e. including joint ventures).

17.12 Gross asset value of related entity and excluded special purpose entities

875. Please provide the gross asset value of all special purpose entities which have been excluded from the consolidated data submitted for 2016 Field Testing.

17.13 Definitions

17.13.1 Material entity

876. A material entity is one which contributes significantly to the total group risks. We consider that materiality in this case relates to the materiality of the risks posed to the financial entities in the group, not the size of the operations of the related entity. In considering what might significantly contribute to group risks, you may like to consider whether the related entity's gross assets are more than 5% of the group's gross assets and whether its revenue or profits are more than 5% of the group's revenue (or premium income) or profits.

17.13.2 Insurance company

877. A company required to be authorised to carry on insurance or reinsurance business in a jurisdiction. Branches are considered part of a company (legal entity) and if a branch requires authorisation, then the legal entity requires authorisation.

17.13.3 Holding company

878. A holding company is a company whose main purpose is to acquire and hold a controlling financial interest in another company.

17.13.4 Service company

879. A service company is a company, other than a financial regulated company or insurance company, whose main purpose is to provide services which support the insurance business of authorised insurance companies in the same group and which does not provide material services to companies not in the same group.

17.13.5 Special purpose entity

880. A special purpose entity is an entity created (not necessarily incorporated) to fulfil narrow, specific or temporary objectives for one or more of the following purposes: to isolate the insurance group from financial risk; to improve the apparent profitability by excluding debt; to obscure relationships between different entities which are in fact related to each other; to acquire and finance specific assets; to separate the risks of an underlying pool of exposures from the insurance group and to reallocate them to investors willing to take on those risks; to reduce the tax burden of the insurance group; or to minimise regulatory capital requirements of the insurance group.

881. This is a deliberately wide definition. It is not the criteria for consolidation, but a description which distinguishes a special purpose entity from other types of entities.

17.13.6 Financial regulated company

882. A financial regulated company is a company, other than an insurance company, which is required to be authorised to carry on financial business in a jurisdiction such as the business of banking or securities management.

17.13.7 Investment vehicle

883. An investment vehicle is an entity whose purpose is to hold and manage investments on behalf of an insurance company in the group.

17.13.8 Lloyd's corporate member

884. An incorporated entity which is an underwriting member of Lloyd's of London.

885. Corporate members comprise body corporates (including limited companies and limited liability partnerships) and Scottish limited partnerships formed exclusively to underwrite insurance business at Lloyd's. Limited liability partnerships are a type of corporate entity formed by being incorporated under the Limited Liability Partnerships Act 2000.

18 Supplementary Data Collection (Net Insurance Liabilities and National Government Exposures)

Relevant Worksheets in Template:	*FT16.Sovereign*	*Due 15 September 2016*

886. Exposures should be based on the MAV approach, considered only in relation to the group's ***insurance business***, and excluding assets in separate accounts or where the investment risks fully flow-through to policyholders (not considering any guarantee to policyholders that may exist on the value of the overall investment fund(s), such as on variable annuity products).

887. The intent of the tables is to collect jurisdictional data on net insurance liabilities and on national government exposures (by issued sovereign or monetary union[46] currency, otherwise considered as the 'official currency' of the jurisdiction, and by different (foreign) currency). Sovereign currency is based on the notion that the jurisdiction is a monetary sovereignty with the power to exercise legal control over its currency. A monetary union currency involves two or more states with an agreement to use and manage a common currency. Some jurisdictions issue debt instruments denominated in currencies other than their official (sovereign or monetary union) currency, particularly some emerging markets issue debt instruments in US dollars. In the Template, please record all exposures in the official (sovereign or monetary union) currency of the jurisdiction issuing the debt in the column 'National Government Exposures in Official Currency'. In the Template, please record all exposures in another currency other than the official (sovereign or monetary union) currency of the jurisdiction issuing the debt in the column 'National Government Exposures in Different Currency'.

888. Consistent with the Currency risk section, the net insurance liability reported for each currency should consist of gross insurance liabilities net of any reinsurance assets, plus all deferred tax assets and liabilities associated with the insurance liabilities and reinsurance assets.

889. The determination of the national government exposures should include both on- and off-balance sheet positions, and should consider the following:

a) National government debt investments held;

b) Exposures to national governments through derivatives activities, such as by national governments being counterparties in OTC derivatives transactions or the national government exposure being underlying within the derivatives contract, such as a credit default swap on a national government debt.

[46] A monetary union involves two or more states sharing the same currency. For purposes of 2016 Field Testing, the monetary union should involve a formal agreement, establishment by those states of a common monetary policy and an issuing authority for their common currency. For example, the Euro currency.

c) Similar to the specifications within the ICS Credit risk section, the determination of OTC derivatives exposures should be based on a credit-equivalent basis as applicable;

d) Other national government exposures based on:

i. a 'Look-through' for investment funds, structured products etc. where it is not overly burdensome to do so;

ii. application of the 'substitution approach' in the Credit risk section, if national government guarantees and collateral instruments are being used to lower ICS Credit risk charges; and

iii. any other readily identifiable national government exposure not captured above.

890. A separate table is being used to collect data on exposures to multilateral banks and supranational obligations.

19 Supplementary Data Collection (Non-Life Insurance Risks)

Separate Template:	***Supplementary Data Collection (Non-Life) template*** *(Note that the Template provided includes dummy data to provide some insight into what is expected)*	*Due 15 September 2016*

19.1 General

891. In order to determine an appropriate calibration level for each non-life line of business by geographic region, the IAIS is collecting more granular premium and loss triangle data from Volunteer IAIGs. To the extent possible, Volunteer IAIGs are encouraged to provide data for this calibration exercise, in order to enable an objective and sound calibration of the factors for the lines of business and geographic regions that are relevant to them. In the absence of sufficient and reliable data, calibration will be based mostly on supervisory judgment that is likely to incorporate an element of prudence to account for the uncertainty surrounding the calibration process leading up to ICS version 1.0. Regions where more data is received will benefit from more credible calibration. For regions where less data is provided, there will be reliance on data from other regions and this will require the use of a global bucket with a more prudent calibration.

892. The goal of this data collection exercise is to improve on the design, methodology and calibration of the Non-Life risk components in time for ICS version 1.0. More specifically, the goal is to develop common methods for developing factors. The IAIS has not yet determined what methodology should be used. Feedback on which method(s) to use are welcome; particularly methods that can make use of the requested data.

893. To improve the design, methodology and calibration of the Non-Life risk components, the IAIS would like to rely, where possible, on data that is readily available. This would help to ease the burden on Volunteer IAIGs and also keep the eventual process practical. The IAIS does not intend to develop a process based on data that will not be readily available in the future.

894. When completing this Template, Volunteer IAIGs should take note of the following:

a) This part of 2016 Field Testing is on a voluntary basis. The IAIS recognises that the data collection is extensive, but the IAIS acknowledges that these data submissions would be very valuable in determining future calibrations of the non-life premium and reserve risks.

b) As the purpose of this part of 2016 Field Testing is to support the analysis and derivation of future calibration of the Non-Life risk components, Volunteer IAIGs may choose to only fill out these sheets partially. Areas of higher priority and areas that can be left blank are

indicated. In particular, it is expected that Volunteer IAIGs will focus their effort in providing data for lines of business that are more material for them.

c) For calibration purposes, the main data to be used are in the left-hand columns of the 'Experience Data' tab.

d) When filling out the Template, Volunteer IAIGs should prioritise completion of the "Segment Summary" where basic information on each submitted line of business can be provided.

e) When Volunteer IAIGs are uncertain how to fill out in the Template they should request assistance through their relationship manager. Alternatively, when in doubt, Volunteer IAIGs should leave cells blank or put in "Not Available". Volunteer IAIGs should not smooth, interpolate, remove outliers, etc. Doing so may result in a process that produces unreasonably high factors when presented with unmodified data.

f) Below the column headers in the Template are notes on the data to be entered. Similar information is detailed below.

895. Specifics on the data to be filled out are described below.

19.2 Segment Summary

896. In this tab, Volunteer IAIGs should provide high level information on the segments for which experience data is being provided. This is a higher priority item.

897. Note that the Template is set up to accommodate data on up to 50 submitted segments. Volunteer IAIGs may choose to only fill in these sheets partially, prioritising areas of materiality to them.

898. **High Priority Columns** to be filled in:

a) **Volunteer Name:** The name of your Volunteer IAIG.

b) **Name of Segment:** Provide a name that describes this segment.

c) **Segment Currency:** Currency in which the segment is reported. A drop-down menu of currencies used in ICS is provided. As much as possible, the segmentation provided should be sufficiently granular that multiple currencies are not needed.

d) **Currency Multiplier:** If triangles are entered in some multiple of a currency (e.g. millions of US Dollars or billions of Japanese Yen), then enter this multiple.

e) **Risk Region:** This is a dropdown menu showing all regions for which there are currently ICS factors. Pick the region that is most appropriate. Note that 'Region' is meant to represent where the insured risks are located and not, necessarily, the location of the office where the risk was underwritten.

f) **Regional Detail (Optional):** If the ICS Regions are not sufficiently granular to capture the region in which this risk is located, make a further entry. Some examples: "United Kingdom", "Central America", "Southeast Asia", "India", "Mexico".

g) **ICS Segment:** Enter the ICS Segment to which this segment would be mapped to for reporting purposes. It is fine to report segments at a more granular level than the ICS.

899. Optional information:

a) **Brief Description of Segment:** A written description of the segment that may provide information beyond the name. This information will help put the loss experience in context.

b) **Currency / Region / ICS Segment Mapping:** If there were any issues in filling in these items, please give further information.

c) **Definition of Catastrophe:** On the experience data tab, a breakdown of losses into Natural Catastrophe, Other Catastrophe and Non-Catastrophe is requested. Comments on this breakdown can go here.

d) **Data Issues:** Issues of note in data. If there are outliers that you think should be removed, please indicate here.

e) **General Comments:** Further information, if any, on this segment that may be useful.

19.3 Experience Data Summary

900. **High Priority Columns** to be filled in:

a) **Gross/Net:** Net Data is preferred. Only report gross if (1) net data are not available or (2) gross is provided in addition to a net triangle. For (2), net and gross should be reported on separate lines in the Template.

b) **AY/PY:** If possible, enter figures on an Accident Year (AY) basis. If not, use Policy Year (PY). Unless otherwise noted, other formulas in the sheet assume AY though, at least for approximation purposes, these formulas should work reasonably well for PY.

c) **Earned Premium / Written Premium:** Premiums earned/written over the course of each year.

d) **Paid/Ultimate Loss + LAE:** Paid (or ultimate) loss and expense to date. It is understood that the exact definition of the expenses to be included may vary by Volunteer IAIG but should, at a minimum, include loss adjustment expenses. The column should be the same as the diagonal of the provided paid (or ultimate) triangles.

e) **Paid L+LAE Triangle:** Triangle should be cumulative by development year. Data may not be available for all cells -- where not available enter "Not Available". As in all parts of this Template, please do not smooth, interpolate, remove outliers, etc.

f) **Ultimate L+LAE Triangle:** Triangle should be cumulative by development year. "Ultimate" includes losses that are paid and unpaid (case reserve, incurred but not reported, etc). Data may not be available for all cells -- where not available enter "Not Available". As in all parts of this Template, please do not smooth, interpolate, remove outliers, etc.

901. **Lower Priority Data**: While the following items are still important, it is anticipated that they may not be as readily available. But if, with reasonable effort, the following can be provided, it would be very valuable for the development of the factors.

a) **Cat Breakdown:** Where possible, provide a breakdown of the ultimate loss and expense into natural catastrophe and other catastrophe. (The implied non-cat ultimate will then be calculated automatically.) Fill in these columns as follows. Do not leave blank. (i) if a breakdown is available, put in an amount using your best definition of catastrophe; this amount could be zero (ii) if there are catastrophe losses but no breakdown , then put in "Not available" (iii) if no breakdown is available as catastrophe exposure is not thought to be material for this segment, then enter "Not material". ***Note***: It is understood that the definition of catastrophe used in the Volunteer IAIG's own breakdown may not align perfectly with the definitions used in the ICS. However, comments on the 'Definition of Catastrophe' column of the 'Segment Summary' would be welcome.

b) **Expected Undiscounted Net Loss Ratio:** Premium risk calibration will likely involve comparing actual to expected net loss ratios. It would be useful to know what the Volunteer IAIG's own expected loss ratio was for each Accident Year. If available, please provide the expected loss ratio with and without catastrophes. If not available, then leave blank. It is expected that for many Volunteer IAIGs, this data will be partly or wholly unavailable. Please do not estimate what the expected amount would have been or enter the actual (i.e. realised) loss ratio. Doing so would likely understate the actual volatility and will result in unreasonably large factors when a developed methodology is applied to unadjusted data. For reference, the IAIS has provided two loss ratios that these expected amounts may be compared to. Note that other comparisons will be made as well.

c) **Unpaid Loss for All Accident Years at Beginning of FY:** This should include the unpaid losses for all accident years as at the beginning of this financial year. If the definition is unclear, see columns to the right. These demonstrate the same statistic calculated for just 4 (and not

all) accident years. Include as many financial years as are available -- if not available, please leave blank. Note that this will require data beyond what is available in the triangle.

d) **Actual One Year Reserve Development on All Accident Years During This FY:** This should include the combined development, for all accident years, that happens over each financial year. If the definition is unclear, see columns to the right. These demonstrate the same statistic calculated for just 4 (and not all) accident years. Include as many financial years as are available -- if not available, please leave blank. Note this will require data beyond what is available in the triangle.

e) **Cumulative Payment Pattern:** Note this is by development and not accident year. It is assumed to be 100% at last year.

f) **Approx Avg Time of Payment:** For ICS analysis, the default setting is mid-year payments and that all payments after 10 years happen at 15 years. These figures are primarily used for discounting analyses. If these figures are not appropriate, please provide more reasonable estimates.

g) **Gross Data:** These are for comparison purposes. Only enter if other data is on net basis. If not available, then leave blank.

19.4 Connection to Net Current Estimates (NCE)

902. In the calibration process, many implicit assumptions are made about the connection between historical experience and current estimates. The point of these columns is to lay out some of those assumptions and give Volunteer IAIGs the opportunity to help with refinement.

903. This worksheet is not a reconciliation -- we do not expect these figures to exactly match the ICS balance sheet. Small differences are to be expected. Larger differences could be an indication that further understanding is needed. This worksheet is set up for Net Current Estimates, though data provided may also be used to look at Gross Current Estimates as well.

904. Several "approximations" are included. These are not expected to be perfect but may be useful where data is missing. Understanding where these approximations are (and are not) appropriate is also valuable.

905. Data items to be provided are below. Note all of these items are optional. Pay attention not just to the definitions below but also to reasonableness of the results produced by the formulas.

a) **Other Payments / Other Unpaid Amounts:** While a current estimate is based on all future cash-flows, it is likely that the historical data provided excludes certain items. Examples could include ULAE, Salvage and Subrogation, etc. Enter these items undiscounted by year. Do not include any cash flows relating to the expense ratio in a later column. Enter the amounts paid and the unpaid amounts in the respective columns.

b) **Unpaid on Prior Years:** Enter the total amount unpaid for years prior to 2006. For most segments, this would be the same as the undiscounted current estimate for these years.

c) **UW Expenses Not Already Included:** Examples could include, but are not limited to, commissions, acquisition costs and general expenses. Do not double count and input expenses already included elsewhere. This amount will be used to calculate a combined ratio for each accident year that can be compared across segments and companies. If no input is made, an expense ratio of 30% will be used. (While arbitrary, 30% is likely more realistic than 0%.) With input from Volunteer IAIGs, the realism of this value could be improved significantly.

d) **Discount Estimated by Company:** Enter the discounted current estimate as a percentage of the undiscounted current estimate for each AY. The 2006 entry should include prior years. It's likely that Volunteer IAIGs are able to improve on the crude approximation of a discount rate given in the Template. The discount implied by these figures will be compared to the undiscounted and discounted Net Current Estimates entered in the Template.

19.5 30 Year Experience for Select Segments

906. While more accident years would potentially be valuable, for many lines of business this value may be offset by reporting and data issues. (E.g. impact of mergers, subsegments entering runoff, change in policy terms, etc.) Where data allows, please enter up to 30 years of experience data for select segments.

907. Volunteer IAIGs do not need to provide a 30 years of history for every segment. Volunteer IAIGs may decide which segments to include, but particular focus should be given to longer tailed segments (e.g. casualty reinsurance, workers' compensation, general liability, etc.).

908. Definitions of each column are the same as in the 'Experience Data' tab. Note that the data requested here is less detailed than in the main 'Experience Data' tab.

Phase 2+ – Additional Instructions for Data Due 31 October 2016

20 Life Insurance Risk – Supplementary Data Collection

Separate Templates:	***Supplementary Data Collection (Life) template***	*Due 31 October 2016*
	Supplementary Data Collection (Health) template	*Due 31 October 2016*

909. In order to determine an appropriate calibration level for stresses for life insurance risks, the IAIS intends to collect more granular historical data from Volunteer IAIGs. To the extent possible, Volunteer IAIGs are encouraged to provide comprehensive data for this calibration exercise, in order to enable an objective and sound calibration of stresses for geographic regions that are relevant to them. In the absence of sufficient and reliable data, calibration will be based mostly on supervisory judgment that is likely to incorporate an element of prudence to account for the uncertainty surrounding the calibration process leading up to ICS version 1.0. Regions where more data is received would benefit from more credible calibration. For regions where less data is provided, there will be reliance on data from other regions and this will require the use of a global bucket with a more prudent calibration.

910. Volunteer IAIGs are encouraged to provide as much historical data as possible on a best-efforts basis. Although the template is set up to collect a long historical period, the IAIS recognises that it will not always be possible to provide the entire period requested. Even if the entire period cannot be provided, the IAIS will use the data provided in its analysis. At a minimum, Volunteer IAIGs are requested to provide five years of historical data.

911. Volunteer IAIGs should provide the requested information on a financial year basis where the end of the financial year corresponds to the Volunteer IAIG's balance date for the reporting of the ICS. For example, Volunteer IAIGs may provide annual data corresponding to the year ending on 31 March or 31 December.

20.1 Mortality and Longevity Risk

912. For the purpose of 2016 Field Testing, Volunteer IAIGs are requested to provide base data for mortality assumptions. Such data will be used by the IAIS to calculate mortality assumptions (mortality rates, mortality improvement rates, etc.) and to calibrate appropriate stress levels for mortality risk and longevity risk.

913. Volunteer IAIGs should provide data on gross business and include assumed business when all risks associated with the policies have been assumed (e.g acquisition through reinsurance) but

exclude assumed business when only mortality risk has been assumed or the assumed business is under risk pooling treaties.

914. Volunteer IAIGs are asked to provide the following data, along with any information that is deemed relevant to explain any trends or changes in the data. A template to collect the data has been prepared by the IAIS.

a) Data on policies inforce and expected and actual deaths for ten-year age bands by (1) sum insured and (2) number of policies. Volunteer IAIGs are requested to provide data from 2015 going back as far as possible. The template is set for 20 years as a default but Volunteer IAIGs can add rows for longer histories of data.

b) Data is requested by the geographical segmentation defined in the ICS.

c) To consider any differences in the sensitivity to mortality risk or longevity risk, data is requested to be reported in two separate groups using product segments defined in the ICS segmentation: (1) Protection - Life, Protection –Other and Participating products and (2) Annuities. Volunteer IAIGs should provide data on individual policies only, rather than group policies, even if the group contract provides individual certificates.

d) Further differentiations are not included, such as by individual product, gender, etc.

20.2 Morbidity and Disability Risk (alternative approach)

915. For the purpose of 2016 Field Testing, Volunteer IAIGs are requested to provide base data for morbidity/disability assumptions. Such data will be used by the IAIS to calibrate appropriate stress levels for morbidity/disability assumptions. The data collection relates to life and non-life business that is exposed to similar to life morbidity/disability risk (as defined in the 2016 Field Testing Technical Specifications). The data collection comprises Financial Compensation insurance (*Morbidity-Disability Rates* worksheet) and Medical Treatment insurance (*Morbidity-Disability Expenses* worksheet).

916. Volunteer IAIGs should provide data on gross business and include assumed business when all risks associated with the policies falling under “Financial Compensation Insurance” have been assumed.

917. Volunteer IAIGs should provide data on gross business and include assumed business when all risks associated with the policies falling under “Medical Treatment Insurance” have been assumed.

918. In the worksheet *Morbidity-Disability Rates* Volunteer IAIGs are asked to provide the following data with respect to Financial Compensation insurance:

a) For each financial year, data on

i. (1) number of active individuals, total number of disabled individuals, number of expected disablements, number of disablements occurred, number of expected recoveries, number of recoveries occurred,

ii. (2) annual gross premiums written, total amount of claim payments, additional claim payments caused by new disablements, sum of monthly claim payments corresponding to recoveries during the year. For the determination of the latter, an additional example is given in the worksheet. If gross premiums written are not available Volunteer IAIGs may provide corresponding figures on gross premiums earned.

b) Volunteer IAIGs are requested to provide data from 2015 going back to 1986. The template is set for 30 years as a default but Volunteer IAIGs can add rows for longer histories of data, if available.

c) Data is requested by the geographical segmentation defined in the ICS.

d) Volunteer IAIGs should provide data on individual policies only, rather than group policies.

e) Further differentiations are not included, such as by individual product, gender, age, etc.

f) Additionally, Volunteer IAIGs are requested to provide any information that is deemed relevant to explain any trends or changes in the data.

919. In the table " Morbidity-Disability Expenses“, Volunteer IAIGs are asked to provide the following data with respect to Medical Treatment insurance:

a) number of individuals insured, annual gross premiums written, claims provisions, expected claim payments and actual claim payments. If gross premiums written are not available Volunteer IAIGs may provide corresponding figures on gross premiums earned.

b) Volunteer IAIGs are requested to provide data from 2015 going back to 1986. The template is set for 30 years as a default but Volunteer IAIGs can add rows for longer histories of data, if available.

c) Data is requested by the geographical segmentation defined in the ICS.

d) Volunteer IAIGs should provide data on individual policies only, rather than group policies.

e) Further differentiations are not included, such as by individual product, gender, age, etc.

920. Additionally Volunteer IAIGs are requested to provide any information that is deemed relevant to explain any trends or changes in the data.

20.3 Lapse Risk

921. For the purpose of 2016 Field Testing, Volunteer IAIGs are requested to provide base data for lapse assumptions. Such data will be used by the IAIS to calibrate appropriate stress levels for lapse risk.

922. Volunteer IAIGs should provide data on gross business and include assumed business when all risks associated with the policies have been assumed (e.g. acquisition through reinsurance).

923. Volunteer IAIGs are asked to fill out the following six worksheets:

- *Lapse Data – NOP*: lapse information by number of policies
- *Lapse Data* – SA: lapse information by sum assured
- *Lapse Data* – AP: lapse information by annualised premium
- *Lapse Data – NOP_AFC*: lapse information by number of policies during the Asian Financial Crisis
- *Lapse Data* – SA_AFC: lapse information by sum assured during the Asian Financial Crisis
- *Lapse Data* – AP_AFC: lapse information by annualised premium during the Asian Financial Crisis

924. In the *Lapse Data – NOP* worksheet, Volunteer IAIGs are asked to provide the following lapse information on the basis of number of policies:

a) (1) the number of policies in force at the end of the year or month, (2) the number of policies expected to lapse within the year or month and (3) the number of policies that actually lapsed within the year or month. This data should be provided for individual policies and group policies, broken down into Protection Type Products and Savings Type Products, and Annuities.

b) The number of policies should include riders attached to the base policy. For example, if an in force basic policy has a rider attached, the number of policies reported should be 2.

c) Protection Type Products refers to the product segmentation in ICS, namely Protection-Life and Protection-Other. Savings Type Products refers Participating Products and Savings without Guarantees or Living Benefits.

d) Volunteer IAIGs are requested to provide data starting with financial year 1996, but if more data is available, please add rows to provide the additional information.

e) Yearly data is requested, except for financial years 2008 and 2009, where monthly data is requested in order to calibrate an appropriate mass lapse shock. If monthly data is not available, then please provide yearly data for 2008 and 2009.

f) Data is requested by the geographical segmentation defined in the ICS.

925. In the *Lapse Data – SA* worksheet, Volunteer IAIGs are asked to provide the following lapse information on the basis of total sum insured:

a) (1) the total sum insured for policies in force at the end of the year or month, (2) the total sum insured for policies expected to lapse within the year or month and (3) the total sum insured for policies that actually lapsed within the year or month. This data should be provided for individual and group policies, broken down into Protection Type Products and Savings Type Products, and Annuities.

b) The sum insured should include any riders and any accrued bonuses.

c) Protection Type Products refers to the product segmentation in ICS, namely Protection-Life and Protection-Other. Savings Type Products refers Participating Products and Savings without Guarantees or Living Benefits.

d) Volunteer IAIGs are requested to provide data starting with financial year 1996, but if more data is available, please add rows to provide the additional information.

e) Yearly data is requested, except for financial years 2008 and 2009, where monthly data is requested in order to calibrate an appropriate mass lapse shock. If monthly data is not available, then please provide yearly data for 2008 and 2009.

f) Data is requested by the geographical segmentation defined in the ICS.

926. In the *Lapse Data – AP* worksheet, Volunteer IAIGs are asked to provide the following lapse information on the basis of total annualised premium:

a) (1) the total annualised premium for policies in force at the end of the year or month, (2) the total annualised premium for policies expected to lapse within the year or month and (3) the total annualised premium for policies that actually lapsed within the year or month. This data should be provided for individual and group policies, broken down into Protection Type Products, Savings Type Products and Annuities.

b) The annualised premium should include any riders and any additional/extra/sub-standard premiums.

c) Protection Type Products refers to the product segmentation in ICS, namely Protection-Life and Protection-Other. Savings Type Products refers Participating Products and Savings without Guarantees or Living Benefits.

d) Volunteer IAIGs are requested to provide data starting with financial year 1996, but if more data is available, please add rows to provide the additional information.

e) Yearly data is requested, except for financial years 2008 and 2009, where monthly data is requested in order to calibrate an appropriate mass lapse shock. If monthly data is not available, then please provide yearly data for 2008 and 2009.

f) Data is requested by the geographical segmentation defined in the ICS.

927. In the Lapse Data – NOP_AFC worksheet, Volunteer IAIGs are asked to provide monthly lapse information for financial years 1997 and 1998 for business written in Asia only. The information requested in this worksheet is therefore a subset of the information requested in Lapse Data – NOP worksheet. The intention is to collect information on additional lapses that may have been caused by the Asian Financial Crisis. The following data is requested:

a) (1) the number of policies in force at the end of the month, (2) the number of policies expected to lapse within the month and (3) the number of policies that actually lapsed within the month. This data should be provided for individual policies and group policies, broken down into Protection Type Products and Savings Type Products, and Annuities.

928. In the Lapse Data – SA_AFC worksheet, Volunteer IAIGs are asked to provide monthly lapse information for financial years 1997 and 1998 for business written in Asia only. The information requested in this worksheet is therefore a subset of the information requested in Lapse Data – SA worksheet. The intention is to collect information on additional lapses that may have been caused by the Asian Financial Crisis. The following data is requested:

a) (1) the total sum insured for policies in force at the end of the month, (2) the total sum insured for policies expected to lapse within the month and (3) the total sum insured for policies that actually lapsed within the month. This data should be provided for individual policies and group policies, broken down into Protection Type Products and Savings Type Products, and Annuities.

929. In the Lapse Data – AP_AFC worksheet, Volunteer IAIGs are asked to provide monthly lapse information for financial years 1997 and 1998 for business written in Asia only. The information requested in this worksheet is therefore a subset of the information requested in Lapse Data – AP worksheet. The intention is to collect information on additional lapses that may have been caused by the Asian Financial Crisis. The following data is requested:

a) (1) the total annualised premium for policies in force at the end of the month, (2) the total annualised premium for policies expected to lapse within the month and (3) the total annualised premium for policies that actually lapsed within the month. This data should be provided for individual and group policies, broken down into Protection Type Products, Savings Type Products and Annuities.

20.4 Expense Risk

930. For the purpose of 2016 Field Testing, Volunteer IAIGs are requested to provide base data for expense assumptions. Such data will be used by the IAIS to calibrate appropriate stress levels for expense risk.

931. Volunteer IAIGs should provide data on gross business and include assumed business when all risks associated with the policies have been assumed (e.g acquisition through reinsurance)

932. In the *Expense Data* worksheet, Volunteer IAIGs are asked to provide the following management expense information:

a) (1) expected amount of expenses during the year and (2) actual amount of expenses during the year.

b) Management expenses include administrative expenses and overheads, investment management expenses, claims management expenses, handling expenses and acquisition expenses excluding commissions expected to be incurred in the future.

c) Volunteer IAIGs are requested to provide data starting with financial year 1996, but if more data is available, please add rows to provide the additional information.

d) Data is requested by the geographical segmentation defined in the ICS.

20.5 Health Risk

933. For the purpose of 2016 Field testing, Volunteer IAIGs are requested to provide base data for health assumptions. Such data will be used by the IAIS to assess characteristics of the probability distribution of claims, both in terms of frequency and severity, for calibration purposes.

934. The IAIS previously requested this data in December 2015 from all Volunteer IAIGs. Those Volunteer IAIGs that previously provided this data are not required to submit data again, unless improved data compared to the last data collection exercise is available. Those Volunteer IAIGs that were unable to previously provide this data are encouraged to provide data through this supplementary data collection.

935. Volunteer IAIGs should provide data on gross business and include assumed business when it can be segmented in a similar way as direct business.

936. Health risk has its own Template, separate from the Life Insurance Risk - Supplementary Data Collection Template.

937. The segmentation to use for this reporting should be based on 3 variables:

a) product type: medical expenses, lump sum on Health event, recurring payments (short), recurring payments (long), and other

b) geographical region: EEA and Switzerland, US and Canada, China, Japan, Other developed markets, Emerging markets

c) payment type: fixed or variable

938. The following definitions should be used in order to classify Health products by product type:

a) Medical expenses: products providing any kind of compensation (arbitrary or based on real costs) for medical expense. The compensation depends only on the occurrence of a treatment / expenses by the policyholder, not on the time spent in a given health status. Typical examples include medical expense / supplemental medical contracts, providing benefits for practitioner fees, purchase of medicines, vision and dental expenses, etc.

b) Lump sum in case of a Health event: products providing a single payment at the occurrence of a specified health event; usually a severe one (such as the diagnosis of a cancer or other type of dread disease, or the occurrence of an invalidating accident). Typical examples include accident, critical illness, permanent disability policies, providing a lump sum payment on occurrence.

c) Recurring payments (short): products providing a fixed daily / weekly amount of compensation, for a period depending on the time spent in a given temporary health status (for instance: unable to work, hospitalised, etc.). Typical examples include hospital indemnity, personal accident / loss of income policy, short-term disability income protection (generally in the context of group insurance).

d) Recurring payments (long): products providing a fixed annuity in case of long-term / permanently deteriorated health status. Typical examples include personal or group policies for permanent disability, long-term care.

939. The following definitions should be used in order to classify Health products by payment type:

a) Fixed: products where the level of payments (either single or recurring) is contractually fixed, and does not vary in time, or according to any exogenous variable.

b) Variable: products where the level of benefits depends on some exogenous variable (e.g.: the level of salary for income protection policies), and/or can vary over time (following an index for instance).

940. One worksheet should be completed for each combination of "product type" x " geographical region" x "payment type" (please duplicate the Health worksheet as many times as necessary). If and when this level of granularity cannot be used, it is acceptable to remove the "geographical area"

and/or the "payment type" (please specify in the remarks box). However, the distinction by "product type" should always remain.

941. Conversely, to address the situation were the requested granularity would lead to aggregate products so heterogeneous that the standard deviation information requested (see under) would be meaningless, an optional additional level of segmentation can be used to handle the situation.

942. Please note that for the "product type", a category "Other" has been provided; however, please restrict the use of this "Other" category only to those products that cannot be classified otherwise. When using the "Other" category, please provide a comprehensive qualitative description of the guarantees in the remarks box.

943. The "geographical region" should correspond to the location where the risk is underwritten.

944. For hybrid products that provide both life and health coverage, the products should be unbundled and only the health component should be reported (possibly based on estimates). When the product is essentially a life product with an immaterial health component, it is not necessary to report this product. However, when the main risk driver relates to the Health component, the total amount (including all claims) may be reported in the template, without unbundling. Whatever choice is made, please provide a qualitative description in the remarks box.

945. The accident year is the year during which the claim event happened. In the case where several different guarantees are successively triggered (for instance: short term disability, followed by long term disability, reported under two separate products), the accident year for the second guarantee should, in principle, be the same as for the first guarantee. However, it is also acceptable to use the year during which this second guarantee is triggered for the accident year. In such a case, please provide details in the remarks box. In cases where the accident year is unavailable, the reporting year should be used, and this should be noted in the remarks box.

946. For each accident year, the claims should be split (both in number and amounts) according to their settlement status:

a) fully settled as at 31 December 2015 (or 31 March 2015 for those Volunteer IAIGs whose balance date is 31 March)

b) reported but not settled (RBNS) as at 31 December 2015 (or 31 March 2015 for those Volunteer IAIGs whose balance date is 31 March)

c) incurred but not reported (IBNR) as at 31 December 2015 (or 31 March 2015 for those Volunteer IAIGs whose balance date is 31 March) (best estimate)

947. The average number of people insured can be approximated as: (#insured people beginning of year + #insured people end of year) / 2. To calculate this, the number of policies issued may be

used; however, policies covering more than 1 person should be appropriately counted for the number of people they cover.

948. The risk exposure measure should be:

a) for annual business: the amount of earned premium or, if not available, the amount of written premium

b) for multi-annual business (with level premiums): the amount of expected claims, based on the initial pricing assumptions

949. Number of claims should be determined based on a per person and per accident date basis, irrespective of the number of files / payments generated by this claim. If any other convention is deemed appropriate and used for filling in the template, please provide a description in the remarks box.

950. For the reporting of IBNRs:

a) in cases where no IBNRs are calculated as at 31 December 2015 (or 31 March 2015 for those Volunteer IAIGs whose balance date is 31 March), Volunteer IAIGs may use some information gathered after this date in order to fill in the figures (for instance, by counting the number and amounts of claims incurred in 2014 but reported only in 2015). Alternatively, the respondent may also derive from their own experience the proportion of claims usually reported after the accident year, and use this proportion to derive estimates. Ultimately, if none of these alternatives are applicable, the IBNR column should be filled in with 0 and an explanation should be provided in the remark box (that, for instance, all claims are already accounted for under "settled" and "RBNS").

b) in cases where IBNRs are calculated based on claim amounts only (and not number of claims), the respondent should leave the "number of IBNRs" field blank, and comment in the remarks box that IBNR calculations are based only on claim amounts. However, the amount of IBNR should still be reported in the corresponding column.

951. The standard deviation should be calculated for fully settled claims only, by applying the following formula:

$$StD = \sqrt{\frac{1}{n}\sum_{i}[C_i - \bar{C}]^2}$$

where:

- n is the number of claims
- i is running across all claims
- $C_i =$ sum of all payments made for claim i

$$\bar{C} = \frac{1}{n}\sum_{i} C_i$$

(the same formula applies for the standard deviation of length of claims, by replacing the "sum of all payments" for Ci by the "length of claims", defined as the number of days that generated claim payments)

Annexes

Annex 1 Insurance Line of Business Segmentation Definitions

Introduction

This Annex provides definitions of each segment of Insurance liabilities for the purposes of filling out the worksheet *FT16.BCR & ICS.Balance sheet*. This worksheet applies to the BCR, HLA and ICS. Do note however that under the ICS Standard Method, definitions of risks and segments are also provided that may differ somewhat from the segments below. (For example, segments that are relevant to the Health risk [default approach for morbidity and disability] section are included below under both Life and Non-Life sections; definitions of certain risks also include all policies exposed to that risk regardless of their segmentation indicated in this document. For details please refer to the scope defined under each risk in the standard method.)

Some general points which are broadly applicable:

- Insurance products should generally be classified by their principal class of their coverage. This is particularly the case when other types of insurance provided may not be material or when it is too difficult to unbundle products. Where relevant, the unbundling of products should be carried out on a best efforts basis.
- Unless specifically stated to the contrary, assumed reinsurance is included in the same segments as directly written business. Note there are several separate Non-Life segments for non-proportional reinsurance written).
- Unless specifically stated to the contrary, products that are either open to new business or closed to new business (runoff) are included in the same segment.
- The focus of descriptions is on the substance of products rather than their names (as specific terms having varying meanings across jurisdictions). To support comparability of data collected, please use the definitions/descriptions provided (e.g. Annex 3) for terms that may be in common use.

Detail of Insurance line of business segments

Label	Segment	Definition
Life Insurance – Traditional (L_T)		
L_T01	Protection – Life	Policies which: • Provide a defined benefit upon the insured person's death, provided that the death occurs within a certain specified time period. • Are not 'participating' (See L_T06). • Have no or small (immaterial) surrender values. Notes: 1 The dominant insurance risk insured against for these products is mortality risk. When risks insured against include both mortality and morbidity/disability these products should be reported in their separate segments if possible or, if necessary, in the single segment in which the primary risk insured against resides. 2 If there are material surrender values then the business is reported under L_T03. 3 Both individual and group insurance products are included in this segment. 4 Group insurance products with some form of profit sharing arrangement between the group (eg an employer) and the insurer are to be included in this segment.
L_T02	Protection – Accident & health	Policies which: • Provide the policyholder with a benefit upon a health (or health related) or accident event to the insured person, provided that the event occurs within a certain specified time period • Are not 'participating' (See L_T06). • Have no or small (immaterial) surrender values. Notes:

Label	Segment	Definition
		1 The dominant insurance risks insured against for these products are morbidity or disability risks. When risks insured against include both mortality and morbidity/accident these products should be reported in their separate segments if possible or, if necessary, in the single segment in which the primary risk insured against resides. 2 Benefits payable may be capped and/or have deductibles applied. Benefits may be either defined indemnity (with benefits payable specified in advance of insured events occurring) or on a reimbursement basis reflecting costs incurred relating to the insured event. 3 This segment thus includes Critical Illness and Income Protection products 4 Long term care (LTC) products commonly would be included in this segment. LTC cover typically includes indemnity for the long-term medical and related care of an incapacitated policyholder or beneficiary usually until their death. 5 If there are material surrender values then the business is reported under L_T07 since dominant risks insured against are morbidity or disability risks, not mortality risks. 6 Both individual and group insurance products are included in this segment. 7 Group insurance products with some form of profit sharing arrangement between the group (eg an employer) and the insurer are to be included in this segment. 8 Death benefits attached to products in this segment which are not materially in excess of minimum regulatory obligations do not affect the classification of the product into this segment.
L_T03	Protection - Other	Policies which: • Provide a defined benefit upon the insured person's death, provided that the death occurs within a certain specified time period. • Are not 'participating' (See L_T06). • Have material surrender values that are contractually specified and that do not depend on investment performance or other experience. Notes: 1 Products that should be reported in this segment include, but are not limited to

Label	Segment	Definition
		2 Non-participating Whole-of-Life and Endowment products. 3 Other products, such as 'level term' insurances and single premium insurances. 4 Both individual and group insurance products are included in this segment.
L_T04	Savings without guarantees or living benefits	A savings product: • Has the primary purpose of increasing the wealth of the policyholder by the insurer investing in various assets. • Has benefit payments that are not contingent on the life expectancy or health of the beneficiary. • Typically has an account value that fluctuates based on investment performance, and that is commonly disclosed to the policyholder. Notes: 1 Unitised investment products provide returns to policyholder through unit prices directly reflecting Investment performance the underlying assets of the insurer which are separately identified for these products. Non-unitised investment products provide returns to policyholders through discretionary means (with methodologies contractually defined) such as crediting rates which may not directly reflect the movement in the underlying value of the assets held by the insurer to support these products. 2 A product which has underlying assets separately identified for those products can be termed a 'separate account' product. The identification of the underlying assets may be notional or more formal (for example, through statutory funds). In all cases changes to the underlying assets must be managed through a formal process and all premiums and withdrawals for the product flow in and out of the underlying assets. 3 Products include in this segment must reflect both positive and negative investment performance in a consistent manner. If a product has features such as a commitment that crediting rates will not be negative or unit prices will not decline (either in general or only on withdrawal) then these products are to be reported in a Non-Traditional product segment. 4 Both unitised and non-unitised investment products (without investment or other guarantees) are included in this segment 5 A Variable Annuity (VA) is an Investment product, intended for the long term, under which the insurer agrees to make periodic payments (either for a fixed term or life) to the beneficiary. Payments may commence immediately or be deferred. VAs may be purchased with either a single payment or multiple payments. In both the accumulation and pay-out phases of a VA, a number of investment options are typically available to the policyholder. VAs may, but are not necessarily, be administered as unitised

Label	Segment	Definition
		investment products. VAs are tax advantaged, with earnings on withdrawals taxed at ordinary rates after withdrawal. VAs have a death benefit, typically at least the amount of purchase payments, in the accumulation period. For the purpose of this data collection, VAs with no guarantees other than such death benefits are considered to be without guarantees and are to be included here. VAs may also have a variety of other guarantees, often termed living benefits, attached to them. VAs with any guarantees other than the death benefit noted previously are to be included as Non-Traditional Life products. 6 Investment products which are structured as 'participating' products should be included under L_T06. 7 Death benefits attached to products in this segment which are not materially in excess of minimum regulatory obligations do not affect the classification of the product into this segment.
L_T05	Annuities	All types of annuity products are included: • This includes Life annuities (reflecting payments to beneficiaries being made until death, with or without reversions), Term annuities (with or without residual values) and Deferred annuities (that is, annuity payments are deferred into the future, and includes premiums that may be paid in a single amount of over time). • The product reflects the underlying experience at a group level not at experience at an individual level. • The products provide guarantees on the regular payments made (includes both indexed and level (not indexed) payment streams) Notes: 1 This includes annuity products stemming from either life or non-life insurance contracts (including, for example structured settlements from all sources). 2 Benefits in a payment stream from policies due to the occurrence of an insured event (such as an income protection policy) should be included under L_T02, as the payment of such benefits would be paid until recovery or death whichever comes first. 3 Products (typically retirement income products) which reflect the experience of an individual (including investment choice and the possibility of discretionary withdrawals) and do not have guarantees (in particular, guarantees related to mortality) are not considered annuities and are to be reported as Savings products (guided be whether there are any guarantees provided) since they do not directly mitigate mortality risk. 4 Death benefits attached to products in this segment which are not materially in excess of minimum regulatory obligations do not affect the classification of the product into this segment.

Label	Segment	Definition
		5 Annuity products which are structured as 'participating' products but are substantively intended to provide annuity benefits, are to be included in this segment.
L_T06	Participating products	A participating policy is such that: • The policyholder shares with the insurer the 'profit' made by the insurer (typically on an annual basis, and terminal bonuses may also be attributed). • The 'profit' sharing process is typically implemented through the attribution of bonuses to policyholders. Such policies are often also known as 'with profits' policies. • The components of the 'profit' shared typically (but not necessarily) include investment 'profits' from gains from the performance of the underlying investment portfolio that supports the policies, mortality gains, expense gains, and lapse gains. Notes: 1 Participating products may be whole-of-life policies (which provide insurance cover on the life insured for his/her entire life, or up to a specified high termination age, such as 100). Such policies typically generate significant liabilities and surrender values. 2 Participating products may be endowment policies (which provide a defined benefit within a certain period or at a certain age (of the life insured) after which the policy matures. At the time of maturity, a lump sum is paid to the beneficiary. 3 Both whole-of-life and endowment polices typically include an investment component, which accumulates a cash value that the policy owner can withdraw or borrow against. 4 Investment products where the benefits structured as participating products, with discretionary benefits, are included in this segment. 5 Other products, such as 'level term' insurances and single premium insurances, may also be structured to be participating products. If so, they are to be included in this segment.

Label	Segment	Definition
L_T07	Other life traditional	Any life insurance products not included in the segments above and not included in the Life Non-Traditional segments below. Notes: 1 All products in this segment should be non-participating. 2 A brief description of products included in this segment is to be provided in the Questionnaire, including a summary of their relative contribution to the insurance data reported.
Life insurance - Non-Traditional (NT) (L_NT)		
L_NT01	Separate accounts with guarantees	Any separate accounts business where a guarantee is also provided. This includes, but it not limited to: • Products that give the policyholder opportunities to potentially benefit from investment options that essentially create put options for their benefit (see L_NT03). • Annuity or Variable Annuity – Guaranteed Minimum Income Benefit (GMIB) or Guaranteed Minimum Accumulation Benefit (GMAB) • Guaranteed minimum annuitisation rate • Guaranteed Minimum Withdrawal Benefit (GMWB) • Contingent Deferred Annuity • Unit-linked accounts with guaranteed account values or non-negative returns • Unit-linked accounts or variable annuities that provide guarantees for any form of living benefit. Two specific subsets of this segment are requested in L_NT02 and L_NT03

Label	Segment	Definition
		Notes: 1 The value to be included for this segment is the combination of the separate account value and guarantee value. 2 The term 'separate account' product is specified in L_T04 3 Such product may be Variable Annuities, but are not limited to Variable Annuities.
L_NT02	of which guarantee	The full value of all guarantees in relation to the separate accounts reported under L_NT01 are included here. Notes: 1 The values reported for this segment are included in the values reported in L_NT01 as this segment is a subsegment of L_NT01
L_NT03	Separate accounts with portfolio choice and guarantee	Products that give the policyholder opportunities to potentially benefit from investment options that essentially create put options for their benefit. This includes, but is not limited to: • Products with investment options that provide the policyholder the right to choose to invest premiums in different markets (e.g. the equities market), at the commencement of or throughout the contract, in conjunction with a guaranteed minimum performance of the account. • Products that give the policyholder a considerable long-term performance promise and a tangible short-term liquidity promise, which cannot be matched simultaneously by a portfolio of existing cash and market securities. Notes: 1 The values reported for this segment are included in the values reported in L_NT01 as this segment is a subsegment of L_NT01 2 In this segment the primary direct focus of products is on investment performance. 3 The term 'separate account' product is specified in L_T04. 4 Such products may be Variable Annuities, but are not limited to Variable Annuities.

Label	Segment	Definition
L_NT04	Guaranteed Investment Contracts	Guaranteed Investment Contracts (GICs) Notes: 1 This includes GIC products for which the insurer bears or substantially provides the guarantees directly or indirectly (for example, through an independent third party) 2 Variable Annuity products should not be reported in this segment.
L_NT05	Synthetic GICs	Synthetic GIC products where the insurer bears (or substantially bears) market value/return risk Notes: 1 This includes 'stable value wraps' products. 2 Variable Annuity products should not be reported in this segment.
L_NT06	Other life Non-Traditional	Any other life Non-Traditional insurance products other than the above and not included in life Traditional insurance segments above. Notes: 1 A brief description of products included in this segment is to be provided in the Questionnaire, including a summary of their relative contribution to the insurance data reported.
Non-Life Insurance – Traditional (NL_T)		
NL_T01	Motor	This includes: • Motor property damage: Damage to own and third-party motor vehicles (and related property damage) through accident, theft, fire and weather events, excluding liability for personal injury

Label	Segment	Definition
		• Motor bodily insurances: Insurances relating to the injury or death of third parties due to or related to motor vehicles and accidents involving them. This may also extend to include the driver involved. Notes: • This segment covers both private, commercial and other uses of motor vehicles
NL_T02	Property damage	This includes, but is not limited to: • Property: Insurance of house or other property (including house contents) against loss through fire, windstorm etc, insurance of contents against losses due to theft, fire, windstorm, earthquake, impact, damages, water damage, and other natural and man-made perils. Contents insurances may extend to loss or damage to property outside the home or its usual location. • Fire and industrial: Loss or damage and loss of earnings due to damage to commercial buildings and other physical infrastructure due to fire, windstorm and other perils. • Consequential losses: Products covering consequential losses (such as 'loss of profits' or 'business interruption') should also be included in this segment • Construction: This includes 'construction all risks and erection all risks' (CAR/EAR) or similar written in connection with construction projects. This includes the construction and erection of infrastructure projects and buildings. Notes: 1 In essence, this segment refers to insurances for property which is stationary or fixed in place. 2 This segment refers to both private and commercial property insurances.
NL_T03	Accident, protection and health (APH)	This includes, but is not limited to: • Accident and sickness: Accident cover provides benefits if an accident result in bodily injury or death. Benefits are lump sum or periodic (typically for at most 2 years). Sickness cover is often an extension of accident insurance • Other consumer accident: Property damage other than householders or motor vehicle. For example, travel insurance.

Label	Segment	Definition
		• Other commercial accident: Commercial property insurance other than Fire and Industrial risk and MAT, and other than commercial long-term liability • Consumer credit: Guarantee of repayments on consumer credit contracts due to involuntary loss of employment • Consumer liability: Private individual's liability for personal injury through personal actions or property Notes: 1 Products included in this segment are short term products 2 Products included in this segment typically permit the insurer to not offer to renew the policy. 3 In particular, in the context of accident and health policies offered by Non-Life insurers, the capacity of the insurer to not offer to renew the policy to specific policyholders indicates such products should be included in this segment (not in L_T02) 4 Both individual and group insurance products are included in this segment.
NL_T04	Non-proportional Motor, Property damage and APH	As above for the NL_T01, NL_T02 and NL_T03 (Motor, Property Damage, and Accident, Protection and Health (APH)) segments, non-proportional reinsurance assumed Notes: 1 This is principally a line of business for inwards reinsurance but some direct business may also fit into this segment. 2 See also Catastrophe Reinsurance definition (NT_T09).
NL_T05	Other liability	This includes, but is not limited to: • Products that provide covers for liabilities matters such as for personal injury, consequences of unsafe workplaces or products, negligent practices or other losses likely to take in excess of one year to settle. Such products include, but are not limited to: o Workers compensation insurance o Public liability insurance for bodily injury or damage to property o Product liability insurance for bodily injury or damage to property for claims attributed to the use of products.

Label	Segment	Definition
		○ Professional indemnity for a professional person or organisation for claims for losses legal and other) attributed to professional negligence (and related) in the services provided. For example, medical malpractice and directors and officers insurance products ○ Builder warranty for private homes and other buildings following construction. Notes: 1 Products in this segment include those issued to both individuals and organisations, and to both private and commercial policies.
NL_T06	Non-proportional Other liability	As above for the NL_T05 (Other liability) segment, non-proportional reinsurance assumed. Notes: 1 This is principally a line of business for inwards reinsurance but some direct business may also fit into this segment.
NL_T07	Marine, Air, Transport (MAT)	This includes: • All damage or loss of river, canal, lake and sea vessels, aircraft, goods in transit, liabilities from use of aircraft, ships and boats. • Loss or damage to property, consequential third party liability for damages to the property of others, and consequential third party liability for personal injury to operators, passengers and other should be included. Notes: 1 In essence, this segment refers to insurances for property which is moving (not stationary, see NL_T02) or to goods and materials that may be being moved with regard to the MAT component. 2 This segment focuses on commercial (not private or personal) insurance products.
NL_T08	Non-proportional MAT	As above for the NL_T07 (MAT) segment, non-proportional reinsurance assumed. Notes: 1 This is principally a line of business for inwards reinsurance but some direct business may also fit into this segment.

Label	Segment	Definition
NL_T09	Catastrophe Reinsurance	Catastrophe Reinsurance is an inwards reinsurance line of business providing excess of loss protection or proportional protection in respect of aggregate losses arising from a single event or a combination of events. Typically, such business is covering damages to property and is sold with an 'hours' clause and provides protection against natural catastrophe perils such as windstorms, earthquakes and man-made catastrophe such as acts of terrorism. Notes: 1 Property Catastrophe Reinsurance would then be excluded from the definition of Non-proportional property business 2 Catastrophe Reinsurance will also include stop loss treaties when the main coverage is the combination of events. 3 This segment does not cover products in NL_T06 and NL_T08.
NL_T10	Other traditional - short-tail	Any Non-Life products which do not fit into the segments above, does not fit the definition of non-life non-traditional business and where claims are usually made during the term of the policy or shortly (typically, up to 1 year) up to after the policy has expired. This may include, but not be limited to: • Credit (trade credit) insurance: Insurance coverage against debtors failing to make due payments. Notes: 1 A brief description of products included in this segment is to be provided in the Questionnaire, including a summary of their relative contribution to the insurance data reported. 2 Both proportional and non-proportional reinsurance for products in this segment are included in this segment.
NL_T11	Other traditional – medium-tail	Any non-life products which do not fit into the defined segments above, does not fit the definition of non-life non-traditional business and where claims are usually made during the term of the policy or some time (typically between 1 and 5 years) after the policy has expired.

Label	Segment	Definition
		Notes: 1 A brief description of products included in this segment is to be provided in the Questionnaire, including a summary of their relative contribution to the insurance data reported. 2 Both proportional and non-proportional reinsurance for products in this segment are included in this segment
NL_T12	Other traditional - long-tail	Any non-life products which do not fit into the defined segments above, does not fit the definition of non-life non-traditional business and where claims may be made many years (typically 5 or more years) after the coverage period of the insurance has expired. Notes: 1 A brief description of products included in this segment is to be provided in the Questionnaire, including a summary of their relative contribution to the insurance data reported. 2 Both proportional and non-proportional reinsurance for products in this segment are included in this segment
Non-life Insurance - Non-Traditional (NL_NT)		
NL_NT01	Mortgage Insurance	Indemnity to credit providers for losses due to the failure of a borrower to repay a loan secured by a mortgage over property Notes: 1 This includes both residential and non-residential property. 2 Both proportional and non-proportional reinsurance for products in this segment are included in this segment

Label	Segment	Definition
NL_NT02	Commercial credit insurance including suretyship	Indemnity for financial losses due to the failure of a commercial entity to repay outstanding credit contracts or failure to perform contracted services or deliver contracted products other than short-term trade credit and suretyship insurance. Notes: 1 By 'short term' coverage at issue of one year or less is meant. Such short term policies should be reported under NL_T10. 2 Financial guarantee business should be captured in this category including insurance of public finance bonds, structured finance, and all other type of bonds. 3 Both proportional and non-proportional reinsurance for products in this segment are included in this segment
NL_NT03	Other Non-Life Non-Traditional insurance	Any other non-life Non-Traditional insurance products other than the above and not included in non-life Traditional insurance segments above. This includes, but is not limited to: • Financing or monetising Insurance-linked securities (ILS, for example catastrophe bonds). For example, embedded Value/Present Value of Future Profit securitisations, ILS with financial risk as material trigger condition. Notes: 1 A brief description of products included in this segment is to be provided in the Questionnaire, including a summary of their relative contribution to the insurance data reported. 2 Both proportional and non-proportional reinsurance for products in this segment are included in this segment

Annex 2 Mapping of Jurisdictional Segments to Field Testing Line of Business Segmentation

Australia

Mapping to IAIS	Code	Segment Level 1	Segment Level 2	Description
Life Insurance				
L_T06	L1	Conventional Participating		Includes whole of life policies and endowment policies (participating).
L_T06	L2	Participating Investment Account		Investment account business within the meaning of section 14 of the *Life Insurance Act 1995* that pays participating benefits within the meaning of Section 15 of the Act (participating).
L_T05	L3	Annuity with Longevity Risk		Annuities providing periodic payments that are dependent of the continuance of human life (non-participating).
L_T01	L4	Individual Lump Sum Risk		Lump sum risk policies issued on an individual (retail) basis. Includes non-participating conventional policies (non-participating).
L_T02	L5	Individual Disability Income Insurance		Disability income insurance policies issued to individuals (non-participating).
L_T01	L6	Group Lump Sum Risk		Lump sum risk policies issued on a group (wholesale) basis (non-participating).

L_T02	L7	Group Disability Income Insurance		Disability income insurance policies issued on a group (wholelsale) basis (non-participating).
L_T04	L8	Investment Linked		Investment linked policies where policy benefits are associated with the perfomance of the supporting assets (non-participating).
L_NT01 and L_NT03	L9	Non-participating Investment Policy with Discretionary Additions		Investment account business within the meaning of section 14 of the *Life Insurance Act 1995* that pays non-participating benefits within the meaning of section 15 of the Act (non-participating).
L_T04	L10	Other Non-participating Investment Policy		Includes all other non-participating investment products not specifically categorised in 'Investment Linked' or 'Non-participating Investment Policy with Discretionary Additions'. However, do not use this Product Group unless APRA has been consulted beforehand (non-participating).
L_T05	L11	Annuity without Longevity Risk		Annuities providing periodic payments that are not dependent on the continuance of human life (non-participating).
L_T07	L12	Other		Includes all other policies not specifically categorised above. However, do not use this Product Group unless APRA has been consulted beforehand (both participating and non-participating).
Friendly societies - we provide these for completeness, however have not mapped these as friendly societies will not be within a GSII				
NA	F1	Education		

NA	F2	Investment Account		As defined in section 14 of the *Life Insurance Act 1995.*
NA	F3	Annuity & Superannuation		
NA	F4	Defined Benefit Risk		All products classified as defined benefit, including defined benefit funeral products.
NA	F5	Capital Guaranteed Defined Contribution Funeral		Capital guaranteed funeral products that are classified as Defined Contribution.
NA	F6	Investment Linked		As defined in section 14 of the *Life Insurance Act 1995*.
General Insurance		Direct classes of business		

NL_T02 NL_T04 (RI Non-prop)	GI1		Householders	This class covers the common Householders policies, including the following classes/risks: • Contents; • Personal property; • Arson; and • Burglary. Public liability normally attaching to these products is to be separated and included in the Public and Product Liability class of business – item (m). Similarly, Domestic Workers' Compensation attaching to these products is to be separated and included in the Employers' Liability class of business – item (o).
NL_T01 NL_T04 (RI Non-prop)	GI2		Commercial Motor	Motor vehicle insurance (including third party property damage) other than insurance covering vehicles defined below under Domestic Motor. It includes long and medium haul trucks, cranes and special vehicles, and policies covering fleets.
NL_T01 NL_T04 (RI Non-prop)	GI3		Domestic Motor	Motor vehicle insurance (including third party property damage) covering private use motor vehicles including utilities and lorries, motor cycles, private caravans, box and boat trailers, and other vehicles not normally covered by business or commercial policies.

NL_T03 NL_T04 (RI Non-prop)	GI4		Travel	Insurance against losses associated with travel including loss of baggage and personal effects, losses on flight cancellations and overseas medical costs.
NL_T03 NL_T04 (RI Non-prop)	GI5		Fire and Industrial Special Risks	Fire Includes all policies normally classified as 'Fire' and includes: • Sprinkler leakage; • Subsidence; • Windstorm; • Hailstone; • Crop; • Arson; and • loss of profits and any extraneous risk normally covered under fire policies, e.g. flood. ISR Standard policy wordings exist for this type of policy. All policies that contain such standard wordings or substantially similar wording are to be classified as ISR.
NL_T07 NL_T08 (RI Non-prop)	GI6		Marine	Includes Marine Hull and Marine Liability (including pleasure craft), and Marine Cargo (including sea and inland transit insurance).
NL_T07 NL_T08 (RI Non-prop)	GI7		Aviation	Aviation (including aircraft hull and aircraft liability).
NL_NT01	GI8		Mortgage	Insurance against losses to a lender in the event of borrower default on a loan secured by a mortgage over residential or other property.

NL_T03 NL_T04 (RI Non-prop)	GI9		Consumer Credit	Insurance to protect a consumer's ability to meet the loan repayments on personal loans and credit card finance in the event of death or loss of income due to injury, illness or unemployment.
NL_T03 NL_T04 (RI Non-prop)	GI10		Other Accident	Includes the following types of insurance: • Miscellaneous accident (involving cash in transit, theft, loss of money); • All risks (baggage, sporting equipment, guns); • Engineering when not part of ISR or Fire policy; • Plate glass when not part of packaged policy (e.g. Householders); • Livestock; • Pluvius; and • Sickness and Accident, which, by the terms of the policy, provides benefits for no more than 3 years.
NL_T10 or NL_T11 or NT_T12	GI11		Other	All other insurance business not specifically mentioned elsewhere. It includes: • Trade Credit; • Extended Warranty (includes insurance by a third party for a period in excess of the manufacturer's or seller's normal warranty); • Kidnap and Ransom; and • Contingency.
NL_T01	GI12		Compulsary Third Party	This class consists only of CTP business.

NL_T05 NL_T06 (RI Non-prop)	GI13		Public and Product Liability	Public Liability covers legal liability to the public in respect of bodily injury or property damage arising out of the operation of the insured's business. Product Liability includes policies that provide for compensation for loss and/or injury caused by, or as a result of, the use of goods and environmental clean-up caused by pollution spills where not covered by Fire and ISR policies. • Includes Builders Warranty Insurance. • Includes public liability attaching to Householders policies.
NL_T05 NL_T06 (RI Non-prop)	GI14		Professional Liability	• PI covers professionals against liability incurred as a result of errors and omissions made in performing professional services that has resulted in economic losses suffered by third parties. • Includes Directors' and Officers' Liability insurance plus legal expense insurance. Cover for legal expenses is generally included in this type of policy.
NL_T05 NL_T06 (RI Non-prop)	GI15		Employers' Liability	Includes: • Workers' Compensation; • Seamen's Compensation; and • Domestic Workers' Compensation.
		Reinsurance classes of business		

As per the direct classes above	GI16		Proportional reinsurance	This refers to either: (i) traditional forms of quota share and/or surplus reinsurance placed on a treaty reinsurance basis; or (ii) reinsurance written on an individual offer and acceptance basis; where the reinsurer and reinsured share, in proportion, the premium and losses of the reinsured.
See above	GI17		Non-proportional reinsurance	This refers to either: (i) traditional forms of excess of loss reinsurance arrangements written on a treaty reinsurance arrangement basis; or (ii) reinsurance written on an individual offer and acceptance basis; where the reinsurer pays losses only above an agreed retention/deductible up to an agreed maximum limit.

Mapping to IAIS	Code	Segment Level 1	Segment Level 2	Description
L_T01			Term Life Insurance	Group and individual term life including term to 100, accidental death, and all other non-participating life policies with immaterial surrender values.
L_T02			Accident And Health	Group and individual disability, medical, critical illness, long-term care, and all other miscellaneous non-participating health policies with immaterial surrender values
L_T03			Life Insurance With Nonforfeiture Benefits	Group and individual non-participating life products having material surrender values that are contractually specified and do not depend on experience, including whole life, traditional universal life, endowments, and other cash-value policies.
L_T04			Savings Without Guarantees Or Living Benefits	Mutual funds, variable annuities, segregated funds and variable universal life policies with no guarantees or with only death benefit guarantees.

L_T05			Annuities	Non-participating group and individual payout annuities, including deferred, immediate, term certain, indexed and life annuities, and retirement products.
L_T06			Participating Products	All participating insurance, annuity and retirement products that pay meaningful discretionary dividends.
L_T07			Other Traditional Life And Health	Includes accident and health policies having material surrender values.
L_NT01			Separate Accounts With Guarantees	Segregated funds and variable annuities with GMMB, GMIB, GMWB, or any other living benefits, but excluding funds with GMDB only. Variable universal life products with minimum return guarantees or other guaranteed living benefits.
L_NT03			Separate Accounts With Portfolio Choice And Guarantees	The subset of products in L_NT01 where the policyholder has the right to move the account value between different investment funds.
L_NT04			GICs	All GICs including group and individual savings products.
To be mapped to similar IAIS segments as for similar products			Adjustable Products	Products with adjustable premiums

that are not adjustable				

EU

Mapping to IAIS	Code	Segment Level 1	Segment Level 2	Description	Mapping to IAIS
Life					
L_T02	LoB29	Health Insurance		Health insurance obligations where the underlying business is pursued on a similar technical basis to that of life insurance, other than those included in line of business 33.	
L_T05 L_T06 (a)	LoB30	Insurance with profit participation		Insurance obligations with profit participation other than obligations included in line of business 33 and 34.	(a) For the business with profit participation in the form of Annuities
L_T04 L_NT01 (b)	LoB31	Index-linked and unit-linked insurance		Insurance obligations with index-linked and unit-linked benefits other than those included in lines of business 33 and 34.	(b) For the business with guarantees implies also identifying the subcomponents included in L_NT02 and L_NT03).
L_T01 L_T03 L_T05 L_T07	LoB32	Other life insurance		Other life insurance obligations other than obligations included in lines of business 29 to 31, 33 and 34.	

L_T05	LoB33	Annuities stemming from non-life insurance contracts and relating to health insurance obligations			
L_T05	LoB34	Annuities stemming from non-life insurance contracts and relating to insurance obligations other than health insurance obligations			
L_T02	LoB35	Health reinsurance		Reinsurance obligations which relate to the obligations included in lines of business 29 and 33.	

L_T01 (c)	LoB36	Life reinsurance		Reinsurance obligations which relate to the obligations included in lines of business 30 to 32 and 34.	(c) Expected to be allocated mainly to L_T01, but could be allocated to other L_T lines where relevant.
Non-Life					
NL_T03	LoB1 LoB13	Medical expense insurance		Medical expense insurance obligations where the underlying business is not pursued on a similar technical basis to that of life insurance, other than obligations included in the line of business 3.	
NL_T03	LoB2 LoB14	Income protection insurance		Income protection insurance obligations where the underlying business is not pursued on a similar technical basis to that of life insurance, other than obligations included in the line of business 3.	
NL_T05	LoB3 LoB15	Workers' compensation insurance		Health insurance obligations which relate to accidents at work, industrial injury and occupational diseases and where the underlying business is not pursued on a similar technical basis to that of life insurance.	
NL_T01	LoB4 LoB16	Motor vehicle liability insurance		Insurance obligations which cover all liabilities arising out of the use of motor vehicles operating on land (including carrier's liability).	

NL_T01	LoB5 LoB17	Other motor insurance		Insurance obligations which cover all damage to or loss of land vehicles (including railway rolling stock).	
NL_T07	LoB6 LoB18	Marine, aviation and transport insurance		Insurance obligations which cover all damage or loss to sea, lake, river and canal vessels, aircraft, and damage to or loss of goods in transit or baggage irrespective of the form of transport. Insurance obligations which cover liabilities arising out of the use of aircraft, ships, vessels or boats on the sea, lakes, rivers or canals (including carrier's liability).	
NL_T02 NL_T09 (d)	LoB7 LoB19	Fire and other damage to property insurance		Insurance obligations which cover all damage to or loss of property other than those included in the lines of business 5 and 6 due to fire, explosion, natural forces including storm, hail or frost, nuclear energy, land subsidence and any event such as theft.	(d) Regarding the Proportional Reinsurance part.
NL_T05	LoB8 LoB20	General liability insurance		Insurance obligations which cover all liabilities other than those in the lines of business 4 and 6.	
NL_T10 (e) NL_NT02	LoB9 LoB21	Credit and suretyship insurance		Insurance obligations which cover insolvency, export credit, instalment credit, mortgages, agricultural credit and direct and indirect suretyship.	(e) Regarding the short term business.

NL_T11 (f)	LoB10 LoB22	Legal expenses insurance		Insurance obligations which cover legal expenses and cost of litigation.	(f) Allocated fully to Medium Tail for simplification.
NL_T10	LoB11 LoB23	Assistance		Insurance obligations which cover assistance for persons who get into difficulties while travelling, while away from home or while away from their habitual residence.	
NL_T11 (g)	LoB12 LoB24	Miscellaneous financial loss		Insurance obligations which cover employment risk, insufficiency of income, bad weather, loss of benefit, continuing general expenses, unforeseen trading expenses, loss of market value, loss of rent or revenue, indirect trading losses other than those mentioned above, other financial loss (non-trading) as well as any other risk of non-life insurance not covered by the lines of business 1 to 11.	(g) Allocated fully to Medium Tail for simplification.
NL_T04 NL_T06 (h)	LoB25	Non-proportional health reinsurance		Non-proportional reinsurance obligations relating to insurance obligations included in lines of business 1 to 3.	(h) Regarding the Workers Compensation component.
NL_T06	LoB26	Non-proportional casualty reinsurance		Non-proportional reinsurance obligations relating to insurance obligations included in lines of business 4 and 8.	

NL_T08	LoB27	Non-proportional marine, aviation and transport reinsurance		Non-proportional reinsurance obligations relating to insurance obligations included in line of business 6.	
NL_T04 (i) NL_T09	LoB28	Non-proportional property reinsurance		Non-proportional reinsurance obligations relating to insurance obligations included in lines of business 5, 7 and 9 to 12.	(i) For any business not fulfilling the definition of NL_T09.

Japan

Mapping to IAIS	Code	Segment Level 1	Segment Level 2	Description
Life				
	L1	Individual Life		Any insurance if insurers offer some protection to an individual should be categorised.
L_T03, L_T06			Whole Life Insurance	This insurance has following features: A) providing death protection over the insured's whole life. B) its accumulated fund can be payable upon surrender. Also it has usually (not always) participating feature.
L_T01, L_T06			Term Insurance	This insurance provides death protection for a set period. Also it has usually (not always) participating feature.

L_T03, L_T06			Endowment Insurance	This insurance enables assets formation over a set period while providing death benefit. That means the same amount of benefit is payable at maturity or at prior death. Also it has usually (not always) participating feature.
L_T02, L_T03, L_T06			Medical Life Insurance	This insurance covers hospitalization and surgery, etc. Please note cancer incurance should be included in this product.
L_T06			Variable Life	The maturity benefit and surrender value of this insurance vary according to the investment performance of separate account. However the death benefit is guaranteed.
L_T06			Nursing Care Ins.	This Insurance provides benefit to meet specified conditions requiring the insured to be nursed. Also it has usually (not always) participating feature.
Depending on the nature of insurance			Others	Other individual life insurance not listed above should be included.
	L2	Individual Annuity		
L_T05			Fixed Annuity	This insurance provides an arrangement under which the policyholder is guaranteed to receive benefit over a fixed or variable period, commencing either immediately or at some future date.
L_T04, L_NT01, L_NT02, L_NT03			Variable Annuity	This insurance provides an arrangement under which the policyholder receives benefit over a fixed or variable period, commencing either immediately or at some future date under assuming investment risk. Therefore surrender value, maturity benefit and death benefit can rise or fall depending on the investment performance of the separate account. Also there is variable annuity product with guaranteed benefit.

	L3	Group Life		Insurance protecting a group of persons, usually employees of an entity and their dependents. A single insurance contract is issued to their employer or other representative of the group.
L_T01, L_T06			Group Term	This insurance provides a one-year term insurance with death protection for groups. This segment includes general welfare group term insurance which plans for retirement funds payable on employee's death and condolence payments.
L_T06			Group Credit	This insurance is another kind of term insurance that is issued to borrowers for the amount and term of the outstanding debt. It is usually associated with residential mortgage and consumer debt, and provide benefit should the borrowers die before the debt is repaid or expire at the end of the term.
Depending on the nature of insurance			Others	Other group life insurance not listed above should be included.
L_T05	L4	Group Annuity		This insurance provides annuity benefit for groups. Under the insurance, an employee of the group is eligible to receive annuity benefit for whole life or a fixed term depending on the contract.
Depending on the nature of insurance	L5	Others		Any other life insurance not listed above should be included (e.g. Workers' Asset-Formation Insurance).
Non-Life				
NL_T02, NL_T04, NL_T09	NL1	Fire		This insurance covers property damage for either commercial or household caused by fire, windstorm, hail, water damage and earthquake

	NL2	Marine		
NL_T07, NL_T08			Hull	This insurance covers damage of vessel.
NL_T07, NL_T08			Cargo	This insurance covers damage on good and property in transit by vessel.
NL_T07, NL_T08	NL3	Transit		This insurance is called as Inland marine, which covers property being transported by other than vessel or aircraft.
NL_T03, L_T02, L_T07	NL4	Personal Accident		This insurance covers loss by accidental bodily injury. Under this insurance, policyholder is reimbursed based on actual losses occurred or receives a fixed benefit due to a certain accident event. Long term personal accident insurance and long term income indemnify insurance should be classified into 'L_T07' under the IAIS segmentation.
NL_T01	NL5	Automobile		This insurance covers personal injury or automobile damage sustained by the insured and liability to third parties for losses caused by the insured. Please note fleet automobile insurance should be included here.
	NL6	Others		
NL_T07, NL_T08			Aviation	This insurance covers aircraft, goods or property in transit by aircraft and launch to the space, and liability arising from the loss of or damage to the goods or property in transit or bodily injury or property loss or damage to third parties.
NL_T10, NL_NT01, NL_NT02			Guarantee Ins.	This insurance covers financial loss caused by the insolvency or payment default of customers to whom credit has been granted.

NL_T02, NL_T04			Machinery	This insurance protects the insured against loss incurred as a result of machinery breakdown.
NL_T05, NL_T06			General Liability	This insurance covers any legal obligations to pay compensation and costs for bodily injury, property loss or damage to third parties.
NL_T02, NL_T04			Contractor's All Risks	This insurance is purchased by contractors to cover damage to property under construction.
NL_T02, NL_T04			Movables All Risks	This insurance covers loss or damage to property other than motor, aircraft and vessel.
NL_T05, NL_T06			Worker's Compensation	This insurance covers no-fault basis compensation payments to employees who sustained bodily injury or occupational disease during or which arises out of the course of their employment, and provides employers with protections against claims which their employees make for bodily injury or occupational disease caused by tort.
NL_T10			Misc. Pecuniary Loss	This insurance provides the insured with tailor-made covers for consequential losses that are not covered by any other classes of insurance.
L_T02			Nursing Care Ins.	This Insurance provides benefit to meet specified conditions requiring the insured to be nursed. Under this insurance, policyholder is reimbursed based on actual cost incurred or receives a fixed benefit for nursing care.
Depending on the nature of insurance			Others	Any other non-life insurance not listed above should be included

Mapping to IAIS	Code	Segment Level 1	Segment Level 2	Description
Life				
L_T01 - Protection - Protection - life		Term life - level term		Term product with level premiums for a specified length of time that becomes annually renewable term after level term period.
L_T01 - Protection - Protection - life		Term life - yearly renewable term		Tem product with annually increasing premiums.
L_T01 - Protection - Protection - life		Group Term		Term product sold to employees of sponsoring groups.
L_T02 - Other Life - Protection - Accident & Health		Waiver of Premium		Disability provision attached to a Group Life policy to help totally disabled employees maintain adequate life insurance protection. Coverage generally stops at a specified age but some provide lifetime coverage a reduced amount after normal retirement age.
L_T02 - Other Life - Protection - Accident & Health		Accidental Death and Dismemberment		Provides insurance payment upon accidental death or dismemberment.
L_T02 - Other Life - Protection - Accident & Health		Long-term care - non-participating		Long-term care - non-participating
L_T02 - Other Life - Protection - Accident & Health		Individual Short Term Disability Income		Short term income replacement insurance which usually covers 13 weeks to 2 years of disability.
L_T02 - Other Life - Protection - Accident & Health		Individual Long Term Disability Income		Provides partial replacement of an employee's lost earnings during an extended period of disability.

OR (for par) L_T06L_T02 - Other Life - Protection - Accident & Health				
L_T02 - Other Life - Protection - Accident & Health		Group Short Term Disability		Short term income replacement insurance which usually covers 13 weeks to 2 years of disability.
L_T02 - Other Life - Protection - Accident & Health		Group Long Term Disability		Provides partial replacement of an employee's lost earnings during an extended period of disability.
L_T02 - Other Life - Protection - Accident & Health		Fixed Indemnity - Critical Illness		Critical Illness - Long Term (pmt on specified illness/treatment)
L_T02 - Other Life - Protection - Accident & Health		Fixed Indemnity - ICU		Intensive Care - Long Term (payment on admission to an ICU)
L_T02 - Other Life - Protection - Accident & Health		Fixed Indemnity - Accident		Accident - Long Term (pmt on covered accident/treatment)
L_T02 - Other Life - Protection - Accident & Health		Fixed Indemnity - Accident & Sickness		Accident, Sickness (long-term); fixed indemnity payment related to accident or illness (includes hospital indemnity in the US)
L_T02 - Other Life - Protection - Accident & Health		Dental		Provides reimbursement for certain costs or fixed indemnity benefits associated with Dental Care
L_T02 - Other Life - Protection - Accident & Health		Vision		Provides reimbursement for certain costs or fixed indemnity benefits associated with Vision Care
L_T02 - Other Life - Protection - Accident & Health		Accident & Health - Expense Reimbursement -		Private form of medical insurance for Medicare beneficiaries. Benefits help cover gaps left my Medicare such as deductibles, co-pays and co-insurance.

		Medicare Supplement		
L_T03 - Other Life - Protection - Other		Whole Life - Limited Payment		Level premium, level death benefit plans with premiums payable to a specified age or for a specified period of time.
L_T03 - Other Life - Protection - Other		Whole Life / Adjustable Life - Non-Participating		Whole Life policy with no policyholder dividends
L_T03 - Other Life - Protection - Other		Whole Life - Single Premium		Whole Life with non-guaranteed interest rate and no policyholder dividends
L_T03 - Other Life - Protection - Other		Endowment		Level premium and level death benefit policies whose death benefit is paid at the earlier of the endowment age/endowment date or the date of death; death benefit during insurance period, survival benefit after expiration of insurance period.
L_T04 - Other Life - Savings without guarantees or living benefits		Group Variable Universal Life		Employee pay Variable Universal Life product sold to employees of sponsoring groups.
L_T04 - Other Life - Savings without guarantees or living benefits		Variable Universal Life		Life insurance policy whose premiums are deposited into a fixed account or various separate account investment funds based on the decisions of the policyholder. Changes in investment fund values are passed to the policyholder and the policy is charged periodic deductions for mortality, rider benefits, and expenses.

L_T04 - Other Life - Savings without guarantees or living benefits		Variable Deferred Annuity - with death benefit only		Deferred annuity whose premiums are deposited into a fixed account or various separate account investment funds based on the decisions of the policyholder. Changes in investment fund values are passed to the policyholder and policy is charged periodic deductions for rider benefits and expenses. GMBD-only guarantee provides minimum death benefit.
L_T04 - Other Life - Savings without guarantees or living benefits		Variable Deferred Annuity - No Guarantee		Deferred annuity whose premiums are deposited into a fixed account or various separate account investment funds based on the decisions of the policyholder. Changes in investment fund values are passed to the policyholder and policy is charged periodic deductions for rider benefits and expenses.
L_T04 - Other Life - Savings without guarantees or living benefits		Indexed Annuities		Performance linked to equity/bond index performance
L_T04 - Other Life - Savings without guarantees or living benefits		Variable Universal Life - Secondary Guarantees		VUL policy that is guaranteed to stay in-force so long as a minimum premium amount is paid on a periodic basis. Guarantee durations are for a specified number of years or to a particular age.
L_T05 - Annuities		Book Value Separate Account		Product established to fund nonqualified annuities for retired executives of corporate employers. Annuities are nonparticipating, life-contingent annuities.
L_T05 - Annuities		Annuity - Immediate, Single Premium		Immediate annuity purchased directly by annuitant. Income payable for lifetime of annuitant or in case of joint and survivorship annuity, so long as either annuitant is living. Payouts are level for majority of policies but there are some with increasing payment amounts.
L_T05 - Annuities		Annuity - Certain		Individual annuity contract with non-life contingent payout period. Includes annuitized lottery.

L_T05 - Annuities		Group Annuity - Single Premium, Charitable Gift		Single premium group annuity contracts purchased by non-profit institutions sponsoring charitable gift annuity programs that specifies fixed periodic payments.
L_T05 - Annuities		Group Annuity - Closeout Contracts		Group annuity benefits purchased for retired and terminated employees or employees covered under terminating or ongoing pension plans. Both immediate and deferred annuities may be purchased by a single premium at issue.
L_T05 - Annuities		Group Annuity - Terminal Funding		Non-participating group annuity that is available for purchasing guaranteed payout annuities for employees upon retirement or termination of employment. May be life contingent or non-life contingent.
L_T05 - Annuities		Structured Settlements		Customized annuities designed to serve as an alternative to a lump-sum payment in a lawsuit initiated because of personal injury, wrongful death, worker's compensation claim or other claim for damages.
L_T05 - Annuities		Group Annuity - Separate Account - Immediate Participation Guarantee		Funds to pay benefits to participants are accumulated in an unallocated Pension Reserve Account that then pays benefits to group annuitants.
L_T05 - Annuities		Group Annuity - Separate Account Participating Contracts		Group annuity benefits purchased for retired and terminated employees or employees covered under terminating or ongoing pension plans. Both immediate and deferred annuities may be purchased by a single premium at issue.
L_T05 - Annuities		General Account Immediate Participation Guarantee		Funds to pay benefits to participants are accumulated in an unallocated Pension Reserve Account that then pays benefits to group annuitants.

L_T05 - Annuities		Survivor Income Contracts		At insured's death monthly benefit is paid to beneficiaries for life or in case of spouse may end upon remarriage.
L_T05 - Annuities		Supplementary Contracts not Involving Life Contingencies		Settlement option purchased by policy proceeds that provides for periodic payments and may be commutable.
L_T05 - Annuities		Supplementary Contracts Involving Life Contingencies		Provides income payable for lifetime of annuitant or if joint, for as long as either annuitant is living. May involve a term certain period.
L_T05 - Annuities		Immediate annuities - with surrender		
L_T06 - Participating products		Group Universal Life		Employee pay Universal Life product sold to employees of sponsoring groups.
L_T06 - Participating products		Deferred Annuity - Flexible Premium		Fixed Account deferred annuity that allows ongoing deposits and provides current guaranteed interest rate(s) for a specified period, typically subject to a contractual minimum interest rate.
L_T06 - Participating products		Deferred Annuity - Single Premium		Fixed Account deferred annuity that provides current guaranteed interest rate(s) for a specified period, typically subject to a contractual minimum interest rate.
L_T06 - Participating products		Universal Life		Life insurance policy whose premiums are deposited into policyholder accumulation funds with periodic deduction of charges for mortality, rider benefits and expenses. Interest is credited to fund based on declared credited rate and there are guarantees related to minimum credited rates and maximum policy charges.

L_T06 - Participating products		Universal Life - General Account - COLI/BOLI		COLI: Life insurance designed to meet the needs of supplemental executive compensation marketplace. Flexible premium. BOLI: Life insurance designed to allow banks to use life insurance to fund certain benefit-related expenses. Both: Provide term insurance and a discretionary fund.
L_T06 - Participating products		Universal Life - Separate Account - COLI/BOLI		COLI: Life insurance designed to meet the needs of supplemental executive compensation marketplace. Flexible premium. BOLI: Life insurance designed to allow banks to use life insurance to fund certain benefit-related expenses. Both: Provide term insurance and a discretionary fund that is housed in a separate account. COLI:Life insurance designed to meet the needs of supplemental executive compensation marketplace. Flexible premium.
L_T06 - Participating products		Whole Life - Participating		Whole Life paying dividends based on underlying portfolio experience
L_T06 - Participating products		Whole Life - Industrial		Participating whole life policies with small face amounts. Premium payments have been waived.
L_T06 - Participating products		Whole Life - Reduced Paid-Up		Participating whole life policy that has gone into non-forfeiture status.
L_T06 - Participating products		Universal Life - participating		Universal Life policy that pays dividends. Includes maximum loan products
L_T06 - Participating products		Long-term care - participating		Long Term Care - participating

L_T06 - Participating products		Retained Asset Account		Policy settlement option where policy proceeds are deposited into a fund with a guaranteed minimum interest rate and penalty free immediate withdrawals or a fund with a guaranteed interest rate for a specified period at time with a penalty for withdrawals.
L_T06 - Participating products		Universal Life - with secondary guarantees		Universal Life policy that stays in-force so long as a secondary account value is greater than zero. Charges and interest credited rates for the secondary account are guaranteed and the secondary account is not available as a dollar amount upon surrender.
L_NT01 - Other non-traditional - Separate accounts with guarantees		Variable Deferred Annuity - with living benefits		Deferred annuity whose premiums are deposited into a fixed account or various separate account investment funds based on the decisions of the policyholder. Changes in investment fund values are passed to the policyholder and policy is charged periodic deductions for rider benefits and expenses. GMxB guarantee provides minimum accumulation benefit, minimum withdrawal benefit, or minimum income benefit (and perhaps a minimum death benefit also)
L_NT04 - GICs & Synthetic GICs - Guaranteed Investment Contracts		Funding Agreements		Funding Agreements credits with a fixed rate of interest for the life of the contract. Earned interest is capitalized and paid out with principal to the contract holder on the maturity date. Includes the FarmerMac Funding Agreement program (that sells funding agreements collateralized by agricultural mortgage loans to FarmerMac) Includes General Account Life Insurance Funding Accounts, that allow pre-funding of the cost of employee retiree life plan. Funding Agreements credits with a fixed rate of interest for the life of the contract. Earned interest is capitalized and paid out with principal to the contract holder on the maturity date.

L_NT04 - GICs & Synthetic GICs - Guaranteed Investment Contracts		Guaranteed Investment Contracts		A fixed or floating rate contract that provides a guarantee of principal and interest for a stated term with a fixed maturity date(s). Includes the following GIC types: Stable Value, Trust, Municipal, Global
Non-Life/P&C				
NL_T01 - Motor		Auto physical damage		Any motor vehicle insurance coverage (including collision, vandalism, fire and theft) that insures against material damage to an insured's vehicle.
NL_T02 - Property - Property damage (divided between NL_T02 and NL_T05)		Homeowners/farm owners		Homeowners: coverage for personal property and/or structure with broad personal liability coverage, for dwelling, appurtenant structures, unscheduled personal property and additional living expenses. Farmowners: similar, for farming and ranching risks; property + liability coverages for personal and business losses, on farm dwellings and contents (e.g. mobile equipment and livestock), barns, stables, other farm structures and farm inland marine.

NL_T02 - Property - Property damage		Special property		Various, including: fire; allied lines; inland marine; earthquake; burglary and theft. Fire insurance includes the loss to real or personal property from damage caused by the peril of fire or lightning, including business interruption, loss of rents, etc. Allied lines are coverages generally written with property insurance, e.g., glass; tornado; windstorm and hail; sprinkler and water damage; explosion, riot, and civil commotion; growing crops; flood; rain; and damage from aircraft and vehicle, etc. Inland marine is coverage for property that may be in transit, held by a bailee, at a fixed location, a movable good that is often at different locations (e.g., off road construction equipment), or scheduled property (e.g., Homeowners Personal Floater) including items such as live animals and property with antique or collector's value. This line also includes instrumentalities of transportation and communication, such as bridges, tunnels piers, wharves, docks, pipelines, power and phone lines, and radio and television towers.
NL_T03 - Property - Accident, protection and health (APH)		Private passenger auto liability/medical		Coverage for financial loss resulting from legal liability for motor vehicle related injuries (bodily injury and medical payments) or damage to the property of others caused by accidents arising out of the ownership, maintenance or use of a motor vehicle. Does not include coverage for vehicles used in a commercial business.
NL_T03 - Property - Accident, protection and health (APH)		Commercial auto/truck liability/medical		Similar to private passenger auto liability/medical, except for commercial vehicles.

NL_T05 - Casualty - Other liability		Worker's Compensation		Employer's liability for injuries, disability or death to employees without regard to fault, as prescribed by workers' compensation laws or other statutes. Includes employer's liability coverage against common law liability for injuries to employees. Does not include excess workers compensation.
NL_T05 - Casualty - Other liability (when also property risk, split between T05 and T02)		Commercial multi-peril		Two or more insurance coverages for a commercial enterprise, including various property and liability risks. Frequently includes fire, allied lines (coverages which are generally written with property insurance, e.g., glass, tornado, windstorm and hail, sprinkler and water damage, explosion, riot, growing crops, flood and damage from aircraft and vehicle, etc.), various other coverages (e.g., differences in conditions) and liability coverage. Includes multi-peril policies (other than farmowners, homeowners and automobile policies) that include coverage for liability other than auto.
NL_T05 - Casualty - Other liability		Medical professional liability - occurrence		For a licensed health care provider or health care facility against legal liability resulting from the death or injury of any person due to the insured's misconduct, negligence, or incompetence in rendering professional services. The insurance covers events occurring during the policy coverage period.
NL_T05 - Casualty - Other liability		Medical professional liability - claims made		Same type of insurance as medical professional liability – occurrence above except that the insurance covers claims presented during the period of coverage. The insurable event does not need to occur during the policy period.

NL_T05 - Casualty - Other liability		Other liability - occurrence		Against legal liability resulting from negligence, carelessness, or a failure to act causing property damage or personal injury to others. Typically, coverage includes liability for the following: construction and alteration; contingent ; contractual; elevators and escalators; errors and omissions; environmental pollution; excess stop loss, excess over insured or self-insured amounts and umbrella; liquor; personal injury; premises and operations; completed operations; nonmedical professional, etc. Also includes indemnification coverage provided to self-insured employers on an excess of loss basis (excess workers' compensation). The insurance covers events occurring during the policy coverage period.
NL_T05 - Casualty - Other liability		Other liability - claims-made		Same types of coverages as other liability – occurrence above except that the insurance covers claims presented during the period of coverage. The insurable event does not need to occur during the policy period.

NL_T05 - Casualty - Other liability		Products liability		Products liability - occurrence: covers events occurring during coverage period Products liability - claims made. - covers claims made during the coverage period. Coverage for the manufacturer, distributor, seller, or lessor of a product against legal liability resulting from a defective condition causing personal injury, or damage, to any individual or entity, associated with the use of the product. Products liability - occurrence: covers events occurring during coverage period Products liability - claims made. - covers claims made during the coverage period. Coverage for the manufacturer, distributor, seller, or lessor of a product against legal liability resulting from a defective condition causing personal injury, or damage, to any individual or entity, associated with the use of the product. Products liability - occurrence: covers events occurring during coverage period Products liability - claims made. - covers claims made during the coverage period. Coverage for the manufacturer, distributor, seller, or lessor of a product against legal liability resulting from a defective condition causing personal injury, or damage, to any individual or entity, associated with the use of the product.
NL_T06 - Casualty - Non-proportional Other liability		Reinsurance - nonproportional assumed property		Nonproportional assumed liability reinsurance in fire allied lines, ocean marine, inland marine, earthquake, group accident and health, credit accident and health, other accident and health, auto physical damage, boiler and machinery, glass, burglary and theft and international (of the foregoing).

NL_T06 - Casualty - Non-proportional Other liability		Reinsurance - nonproportional assumed liability		Nonproportional assumed liability reinsurance in farmowners multiple-peril, homeowners multiple-peril, commercial multiple-peril, medical professional liability, workers' compensation, other liability, products liability, auto liability, aircraft (all perils) and international (of the foregoing).
NL_T07 - Other non-life - Marine, Aviation and Transport (MAT)		Special liability		Various insurance coverages including ocean marine, aircraft (all perils), and boiler and machinery. Ocean marine is coverage for ocean and inland water transportation exposures; such as goods or cargoes; ships or hulls; earnings; and liability. Aircraft is coverage for aircraft (hull) and their contents; aircraft owner's and aircraft manufacturer's liability to passengers, airports and other third parties. Boiler and machinery is coverage for the failure of boilers, machinery and electrical equipment. Coverage includes the property of the insured, which has been directly damaged by an accident, costs of temporary repairs and expediting expenses and liability for damage to the property of others.
NL_NT01 - Mortgage insurance		Mortgage insurance		Mortgage guaranty is indemnification of a lender from loss if a borrower fails to meet required mortgage payments.
NL_NT02 - Commercial credit insurance including Suretyship		Fidelity/surety		Fidelity is a bond covering an employer's loss resulting from an employee's dishonest act (e.g., loss of cash, securities, or valuables). Surety is a three-party agreement where the insurer agrees to pay a second party or make complete an obligation in response to the default, acts, or omissions of a third party.
NL_NT02 - Commercial credit insurance including Suretyship		Financial Guaranty		Financial guaranty is a surety bond, insurance policy, or when issued by an insurer, an indemnity contract and any guaranty similar to the foregoing types, under which loss is payable upon proof of occurrence of financial loss to an insured claimant, oblige or indemnitee as a result of failure to perform a financial obligation.

NL_NT03 - Other non-traditional - Other Non-Life Non-Traditional Insurance		Other		Coverages not included elsewhere which includes credit coverages and accident and health.
NL_NT03 - Other non-traditional - Other Non-Life Non-Traditional Insurance		Other non-traditional non-life insurance		
Depends on the underlying product		Reinsurance - nonproportional assumed financial lines		Nonproprotional assumed reinsurance in the following lines: mortgage guaranty, financial guaranty, fidelity, surety, credit, and international (in the foregoing).

Annex 3 Supplementary Definitions of Key Terms

This list is supplementary in nature. It is not meant to be an exhaustive index. Further definitions can be found in the Technical Specifications.

Terminology	Meaning
Infrastructure	Infrastructure includes all instruments secured by the assets a particular infrastructure item itself or an entity set up solely for the purpose of owning and operating the infrastructure item (e.g. a toll road or company set up solely to manage a particular toll road). Amounts should not be included here where there is a general claim on a company or government body related to borrowing to construct an infrastructure item where the terms of the security do not directly relate to the infrastructure assets.
insurance activities	For the purposes of field testing, insurance activities are: activities of licensed insurers and regulated and unregulated entities that support the insurance activities (for example, subsidiaries that provide claims management or asset management acting mainly for the insurance entities)
Insurance Linked Securities (ILS)	Insurance Linked Securities (ILS) are securities whose return depends on the occurrence of a specific insurance event. From the July 2012 IAIS Paper "Reinsurance and Financial Stability" the following additional definition can be found: '… a broad category including catastrophe bonds (or cat bonds in short) and various variants of securitisation products in the life insurance sector… does not include derivative products such as CDS, which were developed outside the insurance sector and are not treated as insurance products for regulatory and accounting purposes.' Examples of insurance linked securities include: any investments in catastrophe bonds, longevity swaps, life settlements securitization, embedded value securitization, and reserve funding securitization.
Life annuity	Also sometimes known as a perpetual annuity.
non-financial activities	For the purposes of field testing, non-financial activities are: any activities conducted by non-financial entities that are not reported under insurance activities, regulated banking activities, unregulated banking activities or securities activities. Financial activities conducted by non-financial entities are to be reported as non-financial activities unless they qualify as shadow banking activities as set out in Q1.2.2 above. For example, an entity that manufactures motor vehicles that has a derivative portfolio, would report that activity as nonfinancial activity.
Non-residential Mortgage Loans	refer to "Residential Mortgage Loans"
Residential Mortgage Loans	The Template provides for a separation between residential mortgage loans and non-residential mortgage loans. The separation is based on the underlying security for the mortgages rather than the characteristics of the borrower. Therefore, residential mortgage loans will be those secured by residential dwellings and non-residential mortgage loans will be those secured by other types of property.

securities activities	For the purposes of field testing, securities activities are: all activities conducted from subsidiaries that are supervised or regulated by a securities regulator or supervisor. This would include, for example, asset management activity subject to securities regulation (rather than insurance regulation or banking regulation) but excluding the asset management activities captured as part of the insurance activities (see above)
Unregulated banking activities	For the purposes of field testing, 'Unregulated banking activities' are: financial activities that are conducted outside of a regulated insurance company or regulated banking subsidiary. Unregulated banking business is conducted from a subsidiary to which no regulatory capital requirement is applied. All financial activities conducted from unregulated entities should be included in unregulated banking business. For example, aircraft leasing carried out by a non-regulated subsidiary should be reported in columns in the Template related to unregulated banking activities and the on and off-balance sheet values related to that activity should then be reported on the Unreg Lev Ratio Worksheet. Activities that classify as shadow banking according to FSB's definition (http://www.financialstabilityboard.org/publications/r_130829c.pdf) should be reported as unregulated banking activities, regardless of their legal form. The FSB definition is based on the assessment of 5 economic functions: · management of collective investment vehicles with features that make them susceptible to runs, · loan provision that is dependent on short-term funding, · intermediation of market activities that is dependent on short-term funding or on secured funding of client assets, · facilitation of credit creation
UPP	Uneared Premium Provisions (also referred to as pre-claims liabilities)