INTERNATIONAL ASSOCIATION OF INSURANCE SUPERVISORS

Instructions for the April 2015 Quantitative Data Collection Exercise

("the Technical Specifications")

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

As with any field testing exercise, clarification was provided by the IAIS in response to questions asked by the volunteers. The questions and responses provided have been made available separately. The Technical Specifications, Template and Questionnaire must be read in conjunction with relevant Q&As and the Technical Explanation of 2015 Field Testing Yield Curves Derivation to provide an accurate and up-to-date understanding of the field testing exercise.

Notes:

1. The reporting date used by all Volunteer (IAIGs) was end-December 2014. 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

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3 Scope of Application

32. 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.
33. To ensure comparability of results, when reporting Balance Sheet information under both valuation methods (Market Adjusted Valuation, and GAAP Plus – see sections 6 and 10 respectively), Volunteer IAIGs[1] 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.
34. 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 (refer to Annex 3: Insurance Line of Business Segmentation Definitions for more details).
35. 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 section 5.
36. 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.
37. 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

[1] "Volunteer IAIG(s)" means those firms whose offer to participate in the Field Testing Project has been accepted by the IAIS.

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 effect financially or reputationally on the financial entities, holding companies or ultimate holding company of the group.

38. 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.

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

a) all insurance entities and insurance holding companies which 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, which are not subsidiaries of the ultimate parent and which 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.

40. Where the consolidation approach used for the purpose of the field test 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.

4 General/Guiding principles

4.1 Substance over form

41. 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

42. Calculations and valuation should be subject to the proportionality principle: when the participant 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.

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

- To the volume of the item valued
- To the overall volume of the group's business and capital resources
- To the assessment of risk

44. 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 Market-Adjusted 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, participants can use a flat future level of inflation for deriving future annuity payments in the calculation of insurance liabilities.

Example

Consider an insurer 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

45. In the Market-Adjusted 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 Market-Adjusted approach to valuation will be used as a basis for testing the example standard method for the ICS capital requirement, the application of a look through approach should be done in a manner consistent with section 13.3.1.

4.4 Use of current estimates

46. It is proposed, under the Market-Adjusted 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 Market-Adjusted approach and section 10 in relation to the GAAP with Adjustments approach. The term 'best estimate' is the same concept.

47. 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.

48. The IAIS is testing two different types of consistent and comparable MOCE (CC MOCE). These are to be separately reported (see section 12).

49. 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

50. Segmentation applied to insurance liabilities in 2015 Field Testing does differ 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 Field Testing and the definitions can be found in Annex 3: Insurance Line of Business Segmentation Definitions with more detailed guidance in Annex 4: Mapping of Jurisdictional Segments to Field Testing Line of Business Segmentation.
51. For Part 2, segmentation will be defined in the technical specifications for the relevant worksheets. In most instances, the segmentation for life insurance business follows the same segmentation as for Part 1. Segmentation for non-life varies in detail with jurisidictional lines of business requested to determine the premium risk charge and claims reserve/revision risk charge and then that is aggregated into six segments as described in section 13.4.1.7.
52. The allocation of insurance liabilities to the segments used in this field testing should follow the principle of substance over form. This means insurance liabilities should be allocated to the segment which better reflects the nature of the underlying risks. The target segmentation is based on the **nature of the risks underlying the contract** (substance) rather than the legal form of the contract (form). The legal classification of insurance contracts, for authorisation or accounting purposes, is not the determining criteria to be used for the re-allocation.
53. The allocation to specified segments apply on a best efforts basis. The Questionnaire should be used to identify important assumptions made in the allocations to the segments used in this field testing.
54. The segmentation used for assets throughout the Template is self-explanatory.

Part I – Instructions for Data due 30 June 2015

See section 2 for detailed timetable.

5 Baseline Current Regulatory Reporting

Relevant Worksheets in Template:	*Baseline*	*Due 30 June*

55. 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 and HLA and separately the 2015 version of ICS for field testing purposes (both in terms of capital requirements and capital resources) over existing or prospective group statutory requirements.
56. The *Baseline* worksheet is designed to obtain not only information about existing insurance-based group-wide capital requirements, but also other sectorial capital requirements.

5.1 Insurance-related baseline

57. 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 IAIG. However, the following exceptions apply:
    a) Volunteer IAIGs based in the European Union should use Solvency II Group SCR as the capital requirement to be reported in the column "Insurance related".
    b) Volunteer IAIGs based in the United States should provide a proxy baseline requirement as follows:
        a. 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.

b. 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.

c. 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 sectors/jurisdictions as described above in paragraph 1, pursuant to their respective existing capital requirements (as will be detailed in the table referenced in paragraph 1). For non-regulated entities, such as a U.S.-based holding company, there is no minimum regulatory capital requirement.

d. 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 2014 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 will be provided by the IAIS in the table referenced in paragraph 1. 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.

e. 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.

58. *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.

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

60. *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.

61. *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

62. 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

63. 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[2] (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.

64. 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).

65. 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

66. 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 capital charge.

67. 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'*.

[2] http://www.bis.org/bcbs/basel3.htm

68. For both types of asset management business, the last 3 years of positive gross annual income must be reported. Gross annual income is defined in paragraph 650 of the Basel II Comprehensive version[3].

69. For asset management business not related to banking, if any capital requirement is imposed by another supervisor (including an insurance supervisor[4]) this should be reported as a comparison to the calculation of a capital requirement according to the Basel II standardised approach.

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

[3] http://www.bis.org/publ/bcbs128.pdf

[4] 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.

6 Market Adjusted Valuation Approach

Relevant Worksheets in Template:	*BCR.Balance Sheet* *ICS Balance Sheet (MAV only)* *Cap Resources (MAV only)* *ICS Summary (MAV only)*	*All due 30 June*

71. Under the Market Adjusted Valuation ("Market-Adjusted") 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 Market-Adjusted valuation following these Technical Specifications.

6.1 Valuation principles

72. 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 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.

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

- Insurance liabilities and reinsurance balances should be adjusted to comply with sections 6.3 (current estimate) and 12 (margin over current estimate).
- Financial instruments, both assets and liabilities, including derivatives and mortgages/ loans made[5], should be adjusted to fair value as determined under the IAIG's applicable IFRS or GAAP standards for reporting or disclosure purposes.
- Liabilities should be adjusted to a value that does not take into account changes in the credit standing of the Volunteer IAIG.

6.2 Guidance for specific balance sheet items

74. Volunteer IAIGs should apply the following adjustments to these specific balance sheet items for purposes of the 2015 Field Testing exercise:

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

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

goodwill and other intangibles are subject to adjustments in deriving the value of capital resources.

b. Property (own use): For 2015 Field Testing, the valuation of these items should be based on the Volunteer IAIG's reported IFRS or GAAP valuations.
c. Mortgages and loans made: See section 6.1 above for financial instruments.
d. Reinsurance recoverables: these items should be reported on a basis consistent with the determination of insurance liabilities [refer to Section 6.3.3]. Recoverables on paid and unpaid balances will be reported net of allowances for estimated uncollectible amounts.
e. Pension assets/liabilities: For 2015 Field Testing, 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 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 reflection in the MAV balance sheet of the tax effects of the adjustment introduced for Invested Assets and Insurance Liabilities.
    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: should be adjusted to zero and acquisition cost cash flows should be reflected in the value of insurance liabilities.
h. Other assets: For 2015 Field Testing, 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 the change of the IAIG's own credit standing. See above section 6.1 for financial instruments.[6]
k. Contingent liabilities: valuation of contingent liabilities should be based on the 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 IAIG's balance sheet due to local accounting rules, the IAIG should nonetheless prepare a summary for review by the FTWG. This summary will be required as part of the Questionnaire.

[6] ICP Standard 14.6 The value of technical provisions and other liabilities does not reflect the insurer's own credit standing.

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

6.3 Methodology for calculation of current estimate

6.3.1 Basis for calculation

75. 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[7].

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

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

78. 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.

79. 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.

80. When valuing insurance liabilities no adjustment to take account of the own credit standing of the insurance or reinsurance company should be made.

[7] 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.

6.3.2 Cash-flow projections

81. 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 IAIS specified yield curves to derive a present value.

82. 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, appropriately recognizing 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.

83. 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 recognized as an asset.

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

- benefit and claim payments
- 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)
- premiums received, provided they are included within the contract boundaries
- subrogation payments and recoveries other than from reinsurance and special purpose vehicles
- other payments made necessary in order to settle the claims

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

6.3.3 Recognition / Derecognition of insurance liabilities

86. 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.

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

Example

Consider a contract providing a health coverage starting on 1 March 2014. The contract has been underwritten on 20 December 2013, with no possibility to change the terms of the contracts before the coverage starts. On 31 December 2013, this contract should be recognized in the balance sheet.

6.3.4 Contract boundaries

88. 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.

89. 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:

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

90. 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 insurance company 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 90 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 2014, with a premium paid monthly. Premium indexation is possible at each anniversary date, and the policyholder Volunteer IAIG has no right to cancel the policy during the first 12 months. On 31 December 2014, insurance liabilities should include 6 months of future premiums (January – June 2014), along with the related claims and expenses.

6.3.5 Time horizon

91. 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 related to existing insurance and reinsurance contracts on the date of the valuation.

6.3.6 Data quality and setting of assumptions

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

- the quality of data, for different data sets, based on the criteria of accuracy, completeness and appropriateness;
- the use and setting of assumptions made in the collection, processing and application of data;
- the frequency of regular updates and the circumstances that trigger additional updates.

93. 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:

- 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;
- 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
- 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.

94. 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.

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

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

6.3.7 Possible methodologies

97. 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.

98. Volunteer IAIGs should use actuarial and statistical techniques for the calculation of the current estimate which 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

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

100. 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, i.e. 31 December 2014.

6.3.9 Valuation of options and guarantees

101. 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 6.3.10 *Policyholders 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.

102. 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).

103. 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.

6.3.10 Policyholders' behaviour

104. 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.

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

- past behaviour of policyholders;
- how beneficial the exercise of options would be to policyholders under specific circumstances;
- economic conditions;
- past management actions.

106. 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.

107. 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,

108. 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.

109. The assumptions concerning policyholders' 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[8]). For instance policyholders' behaviour may be linked to the interest rate scenario and associated assumptions.

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

6.3.11 Valuation of future benefits

111. 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.

[8] Although consistency with the IAIS specified yield curves is needed, Volunteer IAIGs should avoid that the adjustment specified in 6.3.14.1 included in the discount rates distorts the determination of the likelihood that policyholders will exercise contractual options. In particular, the adjustment specified in 6.3.14.1 should not mechanistically imply that it is less beneficial for policyholders to surrender their contract.

112. 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[9]. 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. This projection should be consistent with the yield curve that is used to discount the cash flows for the contract (see section 6.3.14).

113. Discretionary benefits and the exercise of policyholder options are usually connected in the projection of cash flows. The application of discretions 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 discretions consistent with the assumed policyholder behaviour.

6.3.12 Management actions

114. 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.

115. 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 are applied.

116. 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.

[9] In the context of 2015 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 x% of the financial / underwriting profits to policyholders.

6.3.13 Simplifications/approximations and appropriate adjustments

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

118. Possible adjustments could include approximating the Market-Adjusted value by using sensitivities of economic values to using different yield curves for discounting.

119. 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 Market-Adjusted values could be limited to applying discounting to the insurance liabilities which were determined according to GAAP.

6.3.14 Discounting

120. Current estimates of insurance liabilities (and related reinsurance recoverables) should be calculated using the IAIS specified yield curves. The IAIS specified yield curves can be found in the FT 2015 Yield Curves Spreadsheet (provided separately).

6.3.14.1 IAIS Specified Yield Curves

121. **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 the IAIS standard. That applies to both the mechanics of the curve as well as any factors used in the calculation for the purposes of the field test.**

122. Volunteer IAIGs should discount their insurance liabilities using an **adjusted "risk free rate" curve**. The curve is based on risk adjusted liquid interest rate swaps or government bonds (where the latter are considered being more liquid) and an adjustment based on corporate bond indices.

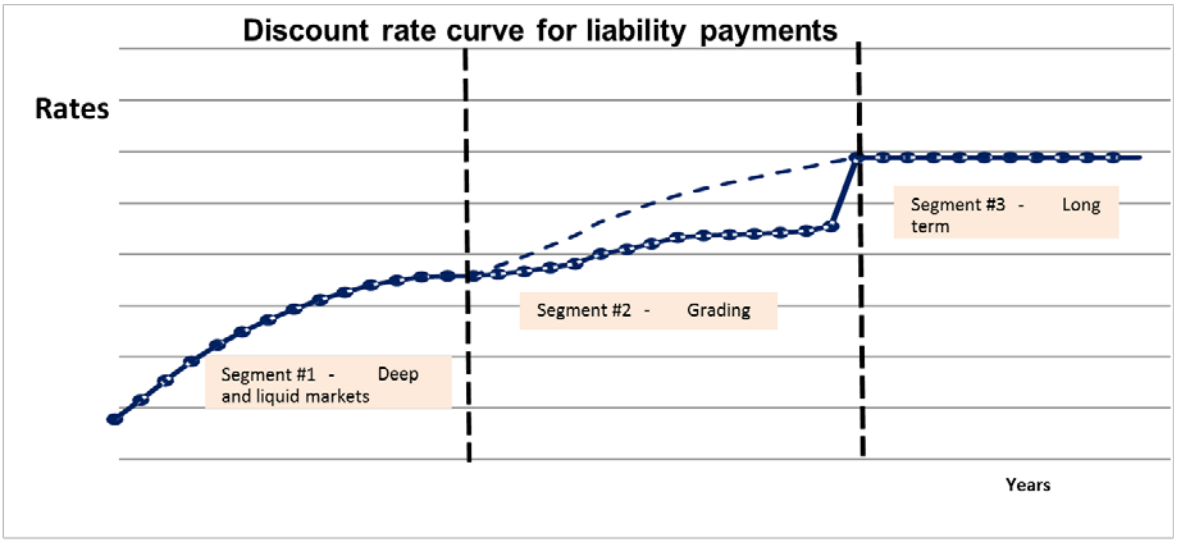
123. The curves are based on end 2014 market data for swaps and government bonds as well as an adjustment based on a relevant corporate bond index.

Methodology for the determination of discount curves

124. For the 2015 Field Testing exercise, the IAIS will test a methodology based on a 3-segment approach:

a. **Segment 1:** based on market information from swaps or government bonds, considering an appropriate adjustment to remove the credit risk included in the pricing of these instruments;
b. **Segment 2:** extrapolation using the Smith-Wilson method;
c. **Segment 3:** determined considering a stable long-term forward.

125. 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.



126. 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 long term forward rate.

127. The long term forward rate is currency-specific. These rates were determined following a macroeconomic approach using OECD information[10]:

Table 1. Long Term Forward Rates

Currency		Cut-off for extrapolation	Long term forward rate
AUD	Australia Dollars	30	4.0%
BRL	Brazil Reais	10	7.3%

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

CAD	Canada Dollars	20	3.5%
CHF	Switzerland Francs	20	3.5%
CLP	Chile Pesos	10	4.5%
CNY	China Yuan Renminbi	10	6.8%
COP	Colombia Pesos	10	4.5%
CZK	Czech Republic Koruny	15	3.5%
DKK	Denmark Kroner	20	3.5%
EUR	Euro	20	3.5%
GBP	United Kingdom Pounds	30	3.5%
HKD	Hong Kong Dollars	15	3.5%
HUF	Hungary Forint	15	4.5%
IDR	Indonesian Rupiah	5	7.3%
ILS	Israeli new shekel	20	3.5%
INR	India Rupees	10	6.8%
JPY	Japan Yen	30	3.5%
KRW	South Korea Won	30	4.5%
MXN	Mexico Pesos	20	4.5%
MYR	Malaysia Ringgits	20	7.3%
NOK	Norway Kroner	10	4.0%
NZD	New Zealand Dollars	20	3.5%
PEN	Peruvian Nuevo Sol	10	4.5%
PHP	Philipine Peso	10	7.3%
PLN	Poland Zlotych	15	4.0%
RON	Romania New Lei	10	3.5%
RUB	Russia Rubles	10	6.8%
SAR	Saudi Arabian Riyal	15	4.8%
SEK	Sweden Kronor	10	3.5%
SGD	Singapore Dollars	20	3.5%
THB	Thailand Baht	15	7.3%
TRY	Turkey Lira	15	6.5%
TWD	Taiwan New Dollars	10	6.8%
USD	United States Dollars	30	3.5%
ZAR	South Africa Rand	15	7.3%

Methodology for the determination of the adjustment

128. For 2015 Field Testing 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.

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

130. The adjustment is then calculated as a fixed percentage upward shift and is based on the 10 year unadjusted rate (where available). 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.

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

131. 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 * Relevant_Spread_Govt +Weight_Corp * Relevant_Spread_Corp.

132. For markets where a number of indicators (e.g. lack of index, low amount outstanding, few bonds 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 50bp. Further investigation will be undertaken on the development of the local corporate bond markets.

133. The IAIS provides the yield curves for a number of currencies/jurisdictions. To ensure comparability, for a given currency, each volunteer is asked to use the relevant curve provided by the IAIS for this second field testing exercise.

6.3.14.2 Curves not provided by the IAIS

134. The IAIS is not able to provide 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 section 6.3.14.3.

135. 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.

136. If a curve is provided by the IAIS, it has to 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.

137. To allow comparison, in both cases, the Volunteer IAIG should provide information about the curves used. This information should be provided in the Questionnaire.

6.3.14.3 Method to derive risk free term structure for field testing purposes

138. The IAIS cannot provide yield curves for all markets where Volunteer IAIG's operate. However, it is likely that most of the businesses are covered by the curves provided. For consistency purposes, where the Volunteer IAIG needs to derive an interest rate term structure it should describe the approach used and provide a copy of the term structure applied in the Questionnaire.

139. 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:

- The risk free interest rate term structure should be determined on the basis of market data as of the valuation date, i.e. 31 December 2014.
- The relevant data should either be swaps or government bonds, both adjusted for credit risk. Where this information is not available, other financial instruments similar to swaps can be used, subject to appropriate credit risk adjustments.
- 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.
- The rates should be based on financial instruments for which a reliable market value is available. This requires a deep, liquid and transparent market.
- 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.
- The interpolation should be done in line with the approaches mentioned in the technical specifications. However, a simple linear interpolation between the observed spot rates is also acceptable.

6.3.15 Obligations replicable by a portfolio of assets

140. 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.

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

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

- policy holders can exercise contractual options, including lapses and surrenders;
- obligations depend on mortality, disability, sickness and morbidity rates;
- expenses associated with insurance obligation cannot be reliably replicated.

143. Financial instruments used to value insurance obligations must be traded in Deep, Liquid and Transparent markets.

7 Qualifying capital resources

Relevant Worksheets in Template:	*BCR.Capital resources* *ICS.Capital resources* *FT15.Financial Instruments* *FT15.Non-Paid-Up Cap Resources*	*All due 30 June*

144. 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.

145. Qualifying capital resources are subject to adjustments, exclusions and deductions defined further in the following sections.

146. In 2015 Field Testing, the intention is to gather data to enable an informed decision on the classification of capital instruments into tiers and appropriate capital composition requirements within the tiers, as well as to collect data on capital elements other than financial instruments.

7.1 Capital Instruments issued by Volunteer IAIGs

147. This section relates to the completion of worksheet *FT15.Financial Instruments*.

148. 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.

149. Financial instruments qualifying[11] as capital resources will be classified into either Tier 1 or Paid-Up Tier 2 capital for the purposes of the ICS in 2015 Field Testing, or Core or Additional Capital for the purposes of the BCR. Volunteer IAIGs should concentrate 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). The *FT15.Financial Instruments* Worksheet Columns F to AM will assist in identifying when a financial instrument qualifies as either Tier 1 or Tier 2 capital for the purposes of 2015 Field Testing of the ICS.

[11] In the context of capital resources, "qualify" means in relation to the field testing criteria listed in 7.1.1 and 7.1.2, which will be subject to analysis, further review, and possible change after the completion of field testing.

150. Volunteer IAIGs should complete the *FT15.Financial Instruments* worksheet in relation to all 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 the holding company. Using a formula approach, the information from Columns F to AM is used to classify an instrument as Tier 1 or Tier 2 capital in the columns "ICS Classification and Amount" for ICS purposes. A similar approach is used to classify an instrument as Core or Additional Capital in the columns "BCR Classification and Amount" for BCR purposes. Where a Volunteer IAIG believes an instrument should be classified as Tier 1 or Tier 2 capital and the *FT15.Financial Instruments* worksheet does not produce the expected classification, Volunteer IAIGs should note this in the Questionnaire.

151. Many of the columns on the worksheet utilize a drop-down menu in order to collect information in a specific format for the classification of instruments. Where drop-down menus cannot be used (e.g. dates, values, etc.), Volunteer IAIGs are asked to use the format indicated in the column header.

152. 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 columns U to X. Please only provide an answer in Columns V and X for any capital instruments for which you answered 'yes' in the column before. 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 Columns Y and Z.

153. For each financial instrument listed in the *FT15.Financial Instruments* worksheet, the Volunteer IAIGs should indicate the Par (Face) Value of the issued instrument in Column AD. Any share premium associated with the instrument should be indicated in Column AE.

154. For each financial instrument listed in the *FT15.Financial Instruments* worksheet, the Volunteer IAIG should indicate in Column G whether or not an instrument was issued by a consolidated subsidiary of the IAIG and is held by third parties (i.e. a non-controlling interest). The Volunteer IAIG's share of the Par Value of the non-controlling interest should be reported in Column AD. Volunteer IAIGs should report their share of any share premium associated with the non-controlling interest in Column AE. Further, Volunteer IAIGs should provide additional information on non-controlling interests in Columns AX to BG if the input in column G is "Y".

155. Columns AK and AL apply specifically to 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.

156. Columns BJ to CG provide an assessment of each instrument against the criteria for BCR (Core and Additional capital) and ICS (Tier 1 and Tier 2 capital). Volunteer IAIGs are not required to enter any information in these columns. Rather, these columns take process information already collected in the Template and indicate which the criterion (or criteria) that the instrument does not meet for classification purposes.

157. If insufficient information is provided by Volunteer IAIGs, it will not be possible to classify the instrument. As such, if information is missing, an Error message will appear in the column relevant assessment columns (from BJ to CG.). The Error flag can be used by volunteer IAIGs to identify the input columns (from C to AM) for which additional information is required to complete the assessment.

158. In the *FT15.Financial Instruments* worksheet, for all qualifying paid-up Tier 2 Capital instruments for the purposes of 2015 Field Testing of the ICS, it is requested that volunteer IAIGs indicate the type of special regulatory conditions that apply prior to maturity and the relevant period prior to the effective maturity. If the special conditions are other than a lock-in clause or amortization, please specify Other on the worksheet and explain its nature in the Questionnaire.

7.1.1 Classification of Capital Instruments into Core and Additional for BCR

159. With respect to the BCR, for details of how capital resources are classified into Core and Additional Qualifying Capital Resources (as well as adjustments and exclusions), please see Section 4 and Annex D of the document "Basic Capital Requirements for Global Systemically Important Insurers"[12] ("**BCR Document**") published on 23 October 2014B. Those details are not repeated in these technical specifications.

7.1.2 Classification of Capital Instruments into Tier 1 and Tier 2 for ICS

[12] The document is available on the IAIS website at http://iaisweb.org/index.cfm?event=getPage&nodeId=25233

160. With respect to the 2015 Field Testing of the ICS, details of how capital resources are classified as either Tier 1 or Tier 2 capital resources and how adjustments and exclusions apply are provided below. The worksheet *ICS* will be automatically populated.

161. The criteria for classification of financial instruments into Tier 1 and Tier 2 for the purposes of 2015 field testing are set out below.

7.1.2.1 Tier 1 Capital Instruments issued by the Volunteer IAIG directly

162. For the purposes of 2015 Field Testing, financial instruments will qualify as Tier 1 capital for which there is no limit if all of the following criteria are met:

i. The instrument is fully paid-up.
ii. The instrument is in the form of issued capital such that it is the first instrument to absorb losses as they occur.
iii. 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.
iv. The instrument is perpetual (i.e. it does not have a maturity date) and the principal is not repaid outside winding-up, other than by means of discretionary repurchase permitted under national law, which is subject to prior supervisory review or approval.
v. 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.
vi. There are no circumstances under which a distribution is obligatory (non-payment is, therefore, not an event of default).
vii. 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).
viii. 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.
ix. 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.
x. 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.

163. For the purposes of 2015 Field Testing, financial instruments will qualify as Tier 1 capital for which there is a limit if all of the following criteria are met:

i. The instrument is fully paid-up.
ii. 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.
iii. The instrument is perpetual (i.e. it does not have a maturity date and it does not contain a step-up or another incentive to redeem).
iv. The instrument is only redeemable 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 the redemption is subject to prior supervisory review or approval.
v. The instrument may be repurchased by the issuer at any time with prior supervisory review or approval provided that at least in the first five years after issuance such repurchase is funded out of the proceeds of a new issue of an instrument of the same or better quality.
vi. 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.
vii. The Volunteer IAIG has full discretion at all times to cancel distributions (i.e. dividends and coupon payments are non-cumulative). Non-payment is, therefore, not an event of default.
viii. Distributions are paid out of distributable items.
ix. 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.
x. 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.
xi. 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.
xii. The paid-in amount is not recognised as a liability where a determination that liabilities exceed assets constitutes a test of insolvency.
xiii. The instrument cannot possess features that hinder recapitalization, 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.
xiv. 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 a special purpose vehicle – "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).

7.1.2.2 Tier 2 Capital Instruments issued by the IAIG directly

164. For the purposes of 2015 Field Testing, financial instruments will qualify as Paid-Up Tier 2 capital resources if all of the following criteria are met:

i. The instrument is fully paid-up.
ii. The instrument is subordinated to policyholders and other non-subordinated creditors of the Volunteer IAIG.
iii. The instrument has an initial maturity of at least five years with its effective maturity date defined to be the earlier of:
    a. the first occurrence of a call option together with a step-up or other incentive to redeem the instrument; and
    b. the contractual maturity date fixed in the instrument's terms and conditions.
iv. The instrument's availability to absorb losses as it nears its effective maturity is captured by either:
    a. 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
    b. 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 ICS capital requirement or would breach it if the instrument is repaid or redeemed.
v. The instrument is only redeemable 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 the redemption is subject to prior supervisory review or approval.
vi. The instrument may be repurchased by the issuer at any time with prior supervisory review or approval provided that at least in the first five years after issuance such repurchase is funded out of the proceeds of a new issue of an instrument of the same or better quality.
vii. 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.
viii. 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.
ix. The instrument does not give holders rights to accelerate the repayment of future scheduled principal or coupon payments, except in winding-up.

x. 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.

xi. 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.

xii. 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 a special purpose vehicle – "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).

165. In the *FT15.Financial Instruments* worksheet, for all qualifying paid-up Tier 2 Capital instruments, it is requested that Volunteer IAIGs indicate the type of special regulatory conditions that apply prior to maturity and the relevant period prior to the effective maturity. If the special conditions are other than a lock-in clause or amortization, please specify "Other" on the worksheet and explain its nature in the Questionnaire.

7.2 Non-Paid-Up Capital Instruments

166. This section relates to the completion of the worksheet *FT15.Non-Paid-Up Cap Resources*.

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

168. Volunteer IAIGs are asked to provide information regarding the non-paid-up item in Columns C to S. Volunteer IAIGs should indicate the classification that the item would be afforded under the ICS, if the item was paid-up, as well as the ICS amount. Volunteer IAIGs should also indicate the classification that the item would be afforded under the BCR, if the item was paid-up, as well as the BCR amount.

169. For 2015 Field Testing, financial items, contracts and arrangements will qualify as non-paid-up Tier 2 capital resources if all of the following criteria are met:

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

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

iii. When called, the item becomes a financial instrument that meets in full the criteria for inclusion in Tier 1 capital resources [or Paid-Up Tier 2] or as an element within Tier 1 capital resources.
iv. The item is legally enforceable in each relevant jurisdiction.
v. 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.
vi. The item is neither undermined nor rendered ineffective by encumbrances.
vii. The Volunteer IAIG is under a duty to notify the supervisor of any changes of fact or circumstance which could affect the supervisor's approval of the item.

170. Since non-paid-up financial items and all "in-kind" (non-cash) payments are expected to be subject to supervisory review or 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.

7.3 Capital Elements other than financial instruments

171. The sections "Potential Capital Elements Other than Capital Instruments" in the worksheets *BCR.Capital Resources* and *ICS.Capital Resources* are designed to capture and show information on a number of capital elements other than financial instruments under consideration for inclusion in either Tier 1 or Tier 2 ICS Capital (as well as Core and Additional capital for BCR). As these items may vary by local jurisdiction (in both type and designation), the information is collected for both Market-Adjusted and GAAP Plus approaches for the ICS. To the extent possible, this worksheet sources information from other worksheets to limit 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.

172. Volunteer IAIGs should indicate any other potential Tier 2 qualifying capital elements other than financial instruments that are not captured within the worksheet and provide a detailed explanation of the nature of the item in the accompanying Questionnaire so that the IAIS may assess its potential inclusion.

173. With respect to the BCR, for details of how capital resources are classified into Core and Additional Qualifying Capital Resources (as well as adjustments and exclusions), please see Section

4 and Annex D of the BCR Document. Those details are not repeated in these technical specifications.

7.3.1 Examples of Capital elements other than Financial Instruments for ICS

174. For the purposes of 2015 Field Testing, Tier 1 capital elements other than financial instruments may include, for example:

a. Retained earnings: net income from operations that is retained by the Volunteer IAIG rather than distributed to its owners and members, including participating policyholders' equity or account for joint stock companies and non-participating accounts for mutual companies.
b. Share premium resulting from the issuance of instruments included in Tier 1 and other contributed surplus (e.g. members' contributions and initial funds for mutual companies)
c. Accumulated Other Comprehensive Income (AOCI).
d. Unrestricted reserves: reserves or profits accumulated by the IAIG that are unappropriated and available to absorb losses pari passu with retained earnings and common/ordinary shares.
e. Reserves that are set up under regulatory requirements to cover specific types of risks and can be appropriated under supervisory approval.

175. Tier 2 Capital elements other than financial instruments may include specific capital elements other than financial instruments that were excluded from Tier 1 Capital, for example:

- Share premium resulting from the issuance of instruments included in Paid-Up Tier 2 capital resources
- Restricted reserves: reserves or profits accumulated by the IAIG that are appropriated or set aside for a specific subset or class of policyholders or creditors

a. Up to 50% of each net pension plan surplus asset, net of any eligible Deferred Tax Liability (DTL), excluded from Tier 1 Capital;
b. Net value of a DTA that relies on the future profitability of IAIG and that has been excluded from Tier 1 Capital (not to exceed the currently estimated realisable value of the DTA); and
c. Current realizable value of computer software intangibles (net of amortization) excluded from Tier 1 Capital.

176. Data on non-paid-up Tier 2 capital elements should be provided in the *FT15.Non-Paid-Up Cap Resources* worksheet, as described in section 7.2 above.

177. Volunteer IAIGs should indicate any other potential Tier 2 qualifying capital elements other than financial instruments that are not captured within the worksheet and provide a detailed

explanation of the nature of the item in the accompanying Questionnaire so that the IAIS may assess its potential inclusion.

7.4 Capital adjustments and exclusions

178. For field testing purposes, there are a number of adjustments and exclusions from capital. Volunteer IAIGs are asked to report if the adjustments or exclusions are made directly in the balance sheet valuation of the local jurisdiction and also complete the other columns included in the worksheet *CapResources* under "Exclusions from Tier 1 and Core Capital," "Exclusions from Tier 2 and Additional Capital" and "Adjustments." Volunteer IAIGs are asked to report the exclusion amount on both a Market-Adjusted and GAAP Plus approach. To the extent possible, this worksheet sources information from other worksheets to limit the collection of duplicate data. The majority of exclusions apply on both a BCR and ICS basis, so no distinction is made between the two.

7.4.1 Exclusions tier 1 capital resources

179. To the extent that any items have not already been excluded through the valuation approach, the following items should be excluded from Tier 1 capital for the purposes of 2015 Field Testing:

a) 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.

b) Deferred Tax Assets (DTAs) that rely on the future profitability of the Volunteer IAIG. DTAs may be netted with associated deferred tax liabilities (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.

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

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

e) 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:

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

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

f) total 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 supervisory capital requirements for liabilities secured by the (encumbered) assets; plus

c. the value of the Volunteer IAIG's incremental supervisory capital requirements for secured (encumbered) assets

180. No deduction is required for encumbered assets relating to off-balance sheet securities financing transactions (e.g. securities lending and borrowing, repos and reverse repos) that do not give rise to any liability on the balance sheet.

181. Items listed under points a) to c) 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 provided that it excludes amounts that have been netted against items a) to c).

7.4.2 Adjustments, exclusions and deductions from Tier 2 capital resources

182. To the extent that any items have not already been excluded through the valuation approach, the following items should be excluded or 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 been eliminated)

8 BCR Related data

Relevant Worksheets in Template:	*BCR*	*Due 30 June*

8.1 Overview

183. The BCR Document was published on 23 October 2014. All Volunteer IAIGs (including both G-SIIs and other Volunteer IAIGs) are requested to provide information[13] on BCR Capital Resources (see section 7 on qualifying capital resources) and BCR Required Capital (in section 8.2) in order to facilitate monitoring and, if necessary, refinement of the BCR in line with paragraph 30 of the BCR document.

184. For G-SIIs, submission of data by 30 June 2015, in accordance with the requirements of these technical specifications, will meet the requirements for confidential reporting as per paragraph 58 of the BCR Document. For other Volunteer IAIGs, submission of this data will not only be relevant to the BCR but also the field testing of the ICS. In particular, the Market-Adjusted balance sheet will be used for the purposes of both the BCR and the ICS. In addition, the BCR will serve as a benchmark in the development of the ICS along with existing jurisdictional baseline data.

8.2 BCR Balance sheet

Relevant Worksheets in Template:	*BCR.Balance sheet*	*Due 30 June*

185. To avoid duplication of the data collected, the GAAP and Market-Adjusted balance sheet will be collected as part of the information needed to calculate the BCR.

186. For the purpose of 2015 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).

[13] For avoidance of doubt, please refer to paragraph 28 of the BCR Document which states: "The BCR will apply to G-SIIs only and serves as a comparable basis for the application of proposed HLA requirements. The IAIS has determined that the BCR will not apply to Internationally Active Insurance Groups (IAIGs) that are not G-SIIs."

8.2.1 Assets

187. The value of assets should be reported using GAAP (as per the consolidated financial accounts) for both the consolidated and for the assets related to the insurance activities. The value of assets related to insurance activities should also be reported following the market adjusted valuation described in section 6.

8.2.2 Insurance liabilities

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

a. GAAP, as per the consolidated financial accounts;

b. Current estimates, should be calculated as described in section 6. Current estimates should be calculated using the IAIS prescribed yield curve. Volunteer IAIGs should report the current estimate gross of reinsurance recoverable as well as the reinsurance recoverable amount calculated consistently with the gross current estimate of the liabilities.

8.2.3 Non-insurance liabilities and equity

189. The value of non-insurance liabilities and equity should be reported using GAAP (as per the consolidated financial accounts) for both the consolidated and for the assets related to the insurance activities. The value of non-insurance liabilities and equity related to insurance activities should also be reported following the Market-Adjusted valuation described in section 6.

8.3 BCR Required Capital

Relevant Worksheets in Template:	*BCR.Balance Sheet* *5. Current Regulatory Baseline* *6.1 BCR.IAIS_FT_2015*

8.3.1 Overview

190. With regards to the following text, please also refer to the BCR Document, in particular Sections 3.3 and 3.4 as well as Annex E.

191. BCR Required Capital is to be 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.

192. The BCR required capital consists of three basic components: an insurance component (including Non-Traditional activities); a banking component that applies the Basel III Leverage

Ratio; and a component for other non-insurance financial activities not currently subject to regulatory capital requirements.

193. As a formula, the BCR Required Capital is:

$$BCR\ Required\ Capital = \alpha \left[\sum_{i=1}^{4} a_i\, TL_i + \sum_{i=1}^{4} b_i\, TNL_i + \sum_{i=1}^{4} c_i\, NT_i + \sum_{i=1}^{3} d_i\, A_i \right] + \sum_{i=1}^{n} NI_i$$

where:

- α (alpha) is the scalar (presently set at 100%) to determine the overall BCR level
- a_i, b_i c_i and d_i represent the factors applied to the exposures.
- TL_i, TNL_i, NT_i, and A_i represent the exposures
- NI reflects the charges provided by sectoral rules for non-insurance activities – for example, Basel Accord requirements, established by the Basel Committee on Banking Supervision (BCBS).

8.4 BCR segments, exposure measures and factors for insurance related activities

Table 2. BCR Required Capital Factors and Proxies

BCR segment	Proxy measure for risk exposure	Factor	Factor value
Traditional Life (TL)			
Protection life	Net Amount At Risk	a_1	0.06%
Participating products[14]	Net Current Estimate	a_2	0.6%
Annuities	Net Current Estimate	a_3	1.2%
Other life	Net Current Estimate	a_4	0.6%
Traditional Non-life (TNL)			
Property	Premium Measure	b_1	6.3%
Motor	Net Current Estimate	b_2	6.3%
Casualty	Net Current Estimate	b_3	11.3%
Other non-life	Net Current Estimate	b_4	7.5%
Non-Traditional (NT)			
Variable annuities	Notional Value	c_1	1.2%
Mortgage insurance	Risk in Force	c_2	4.0%
GICS & Synthetic GICS	Notional Value	c_3	1.1%
Other non-traditional[15]	Net Current Estimate	c_4	1.3%
Assets (A)			
Credit – investment grade	Fair Value	d_1	0.7%
Credit – non investment grade	Fair Value	d_2	1.8%
Equity, real estate & non-credit investment assets	Fair Value	d_3	8.4%

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

[14] The IAIS recognises that some participating contracts have a risk profile lower than that of non-participating business. This could be considered in a lower factor. However, a number of products with different risk profiles were included in the participating products segment. The IAIS will assess whether improvements can be made to the granularity of the definition of participating products during the confidential reporting period from 2015 to 2018, in order to better evaluate the relative risk profiles.

[15] The IAIS recognises that the "Other non-traditional" factor, when applied to the net current estimate proxy for non-life risks, generates a lower charge than the factor for "Other traditional non–life insurance" which also uses net current estimate as a proxy. This is due to the dominance of life insurance data in the other non-traditional category and the limited amount of non-life insurance data in the other non-traditional category. A majority of current G-SIIs are engaged predominantly in life insurance business. Furthermore, the factors in the BCR alone do not account for systemic risks. Further analysis as part of the HLA development, might lead to a refinement of the proxy measure for risk exposure; the types of business that should be subject to an HLA uplift; and/or the risk factor values.

8.5 BCR data collection for insurance related activities

195. To avoid duplication of the data collected, the Market-Adjusted balance sheet will be collected as part of the information needed to calculate the BCR.

196. For the purpose of 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).

8.5.1 Assets

197. For the calculation of the BCR charge for assets exposed to credit risk, Volunteers IAIGs are required to provide the amounts of relevant assets that are of investment grade quality in the BCR worksheet.

8.5.2 Insurance liabilities

198. For the calculation of the BCR charge for insurance liabilities, Volunteers IAIGs are requested to report, in the BCR 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;

199. in addition for specific sub-segments of insurance liabilities, IAIGs volunteers are required to provide additional measures as follows:

200. Additional exposure measures for some traditional life insurance liabilities

a. 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.

201. Additional exposure measures for some non-traditional insurance liabilities

a. 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.

b. 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.

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

8.6 Non-insurance

202. The NI component of BCR Required Capital can be summarised as:

$$\begin{aligned} NI\ Capital\ Component \\ &= \sum_{i=1}^{n} \text{Regulated Banking requirement}_i \\ &+ \sum_{i=1}^{n} x * \text{Non} - \text{Regulated Banking requirement}_i \\ &+ \sum_{i=1}^{n} \text{Securities and other requirements}_i \end{aligned}$$

where the summations are taken over the appropriate number of entities.

203. For both regulated and non-regulated banking activities, the Basel III Leverage Ratio is to be applied. The scalar x in the formula above is presently set at 100%. This figure is obtained from the worksheet *Baseline* (see section 5)

204. Financial activities which are subjected to neither banking nor insurance regulation, such as some securities operations[16], 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,

[16] 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.

the standard indicator method for addressing operational risk of asset management activities in Basel II[17] is to be applied to such activities, i.e. 12% of gross income from such activities. Once again this figure is obtained from the *Baseline* worksheet (see section 5).

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

[17] Paragraph 654 of the Basel II Comprehensive Version (http://www.bis.org/publ/bcbs128.pdf)

9 *[This section has been intentionally left blank]*

Part II – Further Instructions for Data due 14 August 2015

See section 2 for detailed timetable.

10 GAAP with Adjustments valuation approach

Relevant Worksheets in Template:	*ICS.Balance Sheet (GAAP+ sections)* *ICS.Capital resources (GAAP+ sections)*	*All due 14 August*

209. This section provides specifications for Volunteer IAIGs to report their consolidated financial statements prepared under the GAAP with Adjustments valuation approach ("GAAP Plus"). 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 their local jurisdictional GAAP. The scope of consolidation used is as described in Section 3 and consolidation should be at the level of the ultimate holding company of the insurance group or the financial holding company for financial conglomerates. Firms that do not report on a 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 10.3.2)).

210. The following GAAP Plus sections provide guidelines for adjustments and specific examples of adjustments under several jurisdictional GAAPs in order to arrive at a consolidated GAAP Plus balance sheet following these Technical Specifications.

211. Under the GAAP Plus approach, the Volunteer IAIG starts with the portions of the *ICS.Balance Sheet* worksheet that had already been completed as part of the June 30 deliverables relating to reported consolidated GAAP amounts and the Market Adjusted Valuations. That includes column [3] GAAP Valuation – *Related to Insurance Activities*, amounts which represent the insurance-related balances as reported on the Volunteer IAIG's audited, consolidated, general-purpose balance sheet, whether that be on an IFRS, U.S. or Japanese GAAP, or statutory (in the case of U.S.

mutual insurers) basis as appropriate for the respective Volunteer IAIG. For this section, such general-purpose reporting bases are collectively referred to as "GAAP."

212. For the 14 August 2015 submission, the Volunteer IAIG is to provide additional information relating to the GAAP Plus approach in the *ICS.Balance Sheet* worksheet. While adjustments will be made to adjust from GAAP to GAAP Plus, the worksheet design calls for the Volunteer to entering the GAAP Plus ending balances in Column 9; the arithmetic difference between Column 9 and Column 3 then is the impact of the adjustments made by the Volunteer IAIG to adjust from GAAP to GAAP Plus, with respect to amounts attributable to insurance activities.

213. Adjustments from GAAP to the GAAP Plus approach should be in alignment with the following GAAP Plus guidelines [10.1] and, if applicable, one of the jurisdictional examples provided herein [10.3]. However, Volunteer IAIGs that report using other jurisdictional GAAPs may need to develop an alternate 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 FTWG.

214. 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 adjustments developed directly by volunteers under GAAP Plus. Columns provide a means for Volunteer IAIGs to reference a specific adjustment shown in the *ICS.Balance Sheet* worksheet to the corresponding explanation in the Questionnaire, for example, by use of a unique numeric or alpha letter code.

215. Volunteers should quantitatively reconcile reported GAAP balances to corresponding amounts, both per GAAP Plus as well as per the Market-Adjusted approach. Supplemental narratives to further describe reconciling items, assumptions used, etc., are invited through the Questionnaire. Specifications pertaining to the reconciliation are included in section 11.

10.1 GAAP Plus Guidelines

216. Like the Market-Adjusted 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).

217. 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.

218. Insurance assets and liabilities should be treated consistently such that non-economic volatility is minimised. This may require some alignment between valuation of certain liabilities and assets. Because a level of comparability is sought across firms, how this principle is ultimately achieved will entail data collection such that, in the analysis phase, testing of certain alternatives can be performed and to inform future field testing exercises.

219. Insurance liabilities (and any reinsurance assets) should be as reported on the 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).

220. Invested assets should be as reported in the balance sheet of the audited GAAP financial statements, which for different portions of the portfolio could be at amortized cost or market value[18].

221. Capital resources and deductions - An adjustment to Accumulated Other Comprehensive Income (AOCI) to address the consistent treatment of assets and liabilities and non-economic volatility will be evaluated as part of 2015 Field Testing. No other adjustments for capital resources that would be unique to the GAAP Plus valuation basis are expected. Conversely, all adjustments detailed in the ICS Capital Resources section (section 7.4) would apply to GAAP Plus just as they do to Market-Adjusted.

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

10.2 GAAP Plus General Considerations

223. The following general considerations would be applicable to all Volunteer IAIGs regardless of the jurisdictional GAAP used for reporting:

[18] The U.S. SAP example includes adjustments for certain assets measured at amortized cost to enhance consistency with other jurisdictional GAAPs.

a) Recognition / Derecognition of insurance liabilities: A liability should be recognised and derecognized 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 as specified under applicable jurisdictional. GAAP rules or as outlined in specific GAAP examples below. In addition, for purposes of analysis in 2015 Field Testing, Volunteer IAIGs should provide GAAP Plus estimates substituting IAIS specified yield curves (section 6.3.14.1) and record the values in the *ICS.Liabilities reconciliation* worksheet. See further instructions under the Reconciliation from reported GAAP to GAAP Plus and Market-Adjusted section items (see section 11). The IAIS specified yield curves can be found in the Yield Curves Spreadsheet.

d) Liabilities expressed in different currencies: Discounting of liabilities needs to occur with a yield curve relevant to the particular currency. Please refer section 6.3.14. Conversion to the reporting currency from different currencies should be carried out according to jurisdictional GAAP. This will usually result in conversion at the currency conversion spot rate at the balance date, i.e. 31 December 2014.

e) Margin over current estimate (MOCE) – Methods to calculate a consistent and comparable MOCE will be evaluated during 2015 Field Testing (see section 12). The approaches to calculate a consistent and comparable MOCE for both GAAP Plus and Market-Adjusted should be the same however the result could be different based on the differences in balance sheet valuations.

f) Offsets to adjustments (also applies to the Market-Adjusted approach in the *ICS.Balance Sheet* worksheet): Some offsetting adjustments in the equity section of the balance sheet are necessary in order for it to balance. These pertain to the elimination of margins; the elimination of deferred acquisition costs, value of business acquired, and other deferred expense balances related to insurance; related deferred tax adjustments; and possibly other adjustments made by the Volunteer IAIG. Such amounts are to be included as indicated in the equity portion of the balance sheet.

g) 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 Market-Adjusted approach (section 6) including considerations for selecting data for the calculation, working with limited or unreliable data, and supplementing historical data with data from other sources.

h) 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 Market-Adjusted approach (see section 6.3.12).

10.3 GAAP Plus Examples

224. The following provides examples of adjustments for GAAP Plus based on the guidance outlined above and utilizing a number of jurisdictional GAAP examples. The expectation is that similar adjustments would be developed and applied in other GAAP jurisdictions where specific examples have not been provided.

10.3.1 U.S. GAAP Example of GAAP Plus

10.3.1.1 U.S. GAAP Example - Balance Sheet Adjustments

225. The following guidance pertains to volunteers who have U.S. GAAP audited financial statements.

226. Volunteer IAIGs currently filing U.S. GAAP reports should determine and apply adjustments so as to report balance sheet items on the basis indicated for each, below:

a) Financial instruments, invested assets: including derivatives and mortgages/ loans[19], are to be reported as determined under U.S. GAAP standards for reporting. It is expected that under U.S. GAAP the majority of financial instrument securities will be valued at fair value and the majority of loans will be valued at amortized cost net of allowance for loan loss. Items reported at amortized cost should be reported net of allowances for estimated uncollectible amounts and impairments.

b) Insurance liabilities and reinsurance recoverables: see section 10.3.1.2 below.

c) Deferred taxes (Assets/Liabilities): these items should be based on the Volunteer IAIG's U.S. GAAP valuations. However, deferred tax balances should be adjusted consistently with other

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

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. However, the allocation of any residual MOCE from the insurance liabilities to the capital resources should not generate any tax adjustment.

d) Investment accounting and shadow adjustments: Adjustments to reflect in certain balance sheet items 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.

e) All other balances should be based on the Volunteer IAIG's reported U.S. GAAP valuations and consistent with reporting under Market-Adjusted. In some cases (e.g., for goodwill), the balance will be subject to other adjustments, which would apply similarly to both GAAP Plus and Market-Adjusted as described in section 7.4 on ICS capital resources. Such other balances include: goodwill and other intangibles; property (own use and investment); pension assets/liabilities; other assets and other liabilities; on balance sheet value of market-related and non-market related off-balance sheet exposures; contingent liabilities; and financial liabilities.

10.3.1.2 U.S. GAAP Example - Insurance Liability Adjustments

227. Volunteer IAIGs currently filing U.S. GAAP reports should apply the following methods to calculate adjustments for reported insurance liabilities.

228. Under U.S. GAAP there are several accounting models used to estimate insurance contract liabilities based on the characteristics of the product. 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.

229. The calculation of the insurance liability estimates under GAAP Plus shall be based upon up-to-date and credible information and realistic assumptions.

230. GAAP Plus insurance liability assumptions and calculations would exclude any implicit or explicit margins in the calculations. In addition, no adjustments to take account the own credit standing of the insurance or reinsurance company should be made.

231. Reinsurance recoverables should be calculated consistent with the GAAP Plus estimates of insurance liabilities. Therefore the same assumptions and inputs should be used. Also, reinsurance recoverables are to be reported net of allowances for estimated uncollectible amounts.

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

232. 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 on the Volunteer IAIG's reported U.S. GAAP valuation, and discounted if the result is likely to be materially different from the non-discounted amount. Materiality should be assessed against the change in the capital resources that results from applying discounting, determined across all lines of business, and which should not exceed 5% of overall capital resources.

233. In cases where discounting of non-life insurance reserves is performed under U.S. GAAP, Volunteer IAIGs should follow the instructions provided below (i.e. section 10.3.1.2.2) for the valuation of life and other long-term insurance liabilities which would include adjustments for updating discount rates and assumptions. Where a Volunteer IAIG does not currently apply discounting (e.g. some non-life contracts) and therefore the Volunteer IAIG does not have relevant yield curves, it does not have to create them for this exercise; discounting should be applied according to the IAIS specified yield curves.

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

234. 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.

235. 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.

236. 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.

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

237. 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). 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. In general, options and guarantees should be valued using stochastic approaches.

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

238. 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. As compared to U.S. GAAP, the primary differences to SAP that are most germane to this field testing exercise are as follows:

a) SAP-based reporting is performed at the legal entity level only. Unlike for U.S. GAAP, there is no consolidated reporting framework for SAP.

b) There are differences in the classification and measurement for investments under SAP.

c) Investments in affiliates are not consolidated under SAP, whereas U.S. GAAP requires consolidation of affiliates that meet certain criteria that evidence control of the entity.

d) SAP excludes certain non-admitted assets whereas U.S. GAAP includes all assets on the balance sheet.

e) Insurance liability valuations for SAP are prescribed by state insurance regulators which can differ from U.S. GAAP.

f) Insurance liabilities are reported net of insurance recoverables under SAP and are recorded gross under U.S. GAAP

239. The general GAAP Plus guidance [section 10.1] is applicable to U.S. mutuals, as are the adjustments that all volunteers will follow pertaining to capital resources for both GAAP Plus and Market-Adjusted. However, as the items listed above illustrate, there are some balances that must be uniquely addressed by a U.S. mutual volunteer in this field test exercise.

240. The adjustments proposed for a "SAP Plus" approach applicable to a U.S. life mutual that do not prepare U.S. GAAP consolidated statements are as follows:

10.3.2.1 U.S. SAP Example - Consolidated Financials

241. 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 frequently prepared in accordance with U.S. GAAP in the case of subsidiaries and affiliates of a U.S.-based insurer or group).

242. 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) Identify subsidiaries 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[20]. Include any minority interest amounts if applicable.

c) Make appropriate intercompany eliminations.

243. 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 - Consolidated.*

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

244. The worksheet *BCR.Balance sheet* then requires that balances be split between insurance-related and non-insurance related activities in Columns [2] and [3].

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

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

246. Replication (synthetic) assets should be bifurcated and classified as debt securities and derivatives as per paragraph 245 above.

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

248. 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.

249. 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.

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

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

251. 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 on baseline cash flow testing, including policy loan cash flows. Apply yield curve consistent with U.S. GAAP Plus example (See section 10.3.1.2.2

b. For FAS 97 Investment Contracts, for retirement products use account value consistent with statutory accounting. For fixed and variable deferred annuities not included in AG43 and non-life contingent pay-outs 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 reversed through Retained Earnings/Surplus.

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

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

10.3.3 European IFRS (EU GAAP) Example of GAAP Plus

254. In the European Union (EU), insurers' financial statements are prepared using International Financial Reporting Standards (IFRS). However, 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. The following sub-sections detail the adjustments which should be implemented by European Volunteers for the purpose of reporting the GAAP Plus balance sheet in the 2015 IAIS Field Testing exercise.

10.3.3.1.1 EU GAAP Example – Invested Assets Adjustments

255. European 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, to ensure consistency with the valuation of insurance liabilities, invested assets should be reported at fair value. As a proxy, EU IAIG Volunteers can apply the same adjustments as per the Market-Adjusted valuation basis (Section 6.1).

256. Regarding Reinsurance Recoverables, these should be valued and reported in a manner consistent with the calculation of insurance liabilities (please refer to the next sub-section for additional details).

10.3.3.1.2 EU GAAP Example - Insurance Liability Adjustments

257. 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 which 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.

258. In order to value insurance liabilities on a consistent basis following the guidelines outlining GAAP Plus (section 10.1), EU IAIG Volunteers should use as a starting point for deriving their GAAP Plus figures their Solvency II regulatory valuation. The appropriateness of this approach will continue to be assessed in the future, taking into consideration the results of this exercise, as well as the future developments of the ICS

259. 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 technical provisions where technical provisions 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.

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

260. IAIG Volunteer's applying the Japanese GAAP example of GAAP Plus (hereinafter referred to as the "J-GAAP") should apply the following adjustments. The adjustments aim to economically revalue insurance liabilities under the J-GAAP utilizing the Japanese GAAP statutory cash flow test, which is the method required in the current regime pursuant to the Insurance Business Act in Japan.

10.3.4.1 J-GAAP Example – Invested Assets Adjustments

261. Japanese IAIG Volunteers should report Invested assets at fair value under GAAP Plus consistent with the Market-Adjusted approach. Any assets currently reported at amortized cost (e.g. loans, HTM securities) would require an adjustment.

10.3.4.2 J-GAAP Example – Insurance Liability Adjustments

262. Japanese IAIG volunteers should run the cash flow analysis under a full time horizon assumption and fully reflect the test result in their J-GAAP 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-in flows with cash-out flows) 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.

263. 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 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.

10.3.4.2.1 J-GAAP Example – Non-Life Insurance Liabilities

264. The non-life insurers 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. Recognized shortage or excess of insurance liabilities is 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 taken into consideration.

10.3.4.2.2 J-GAAP Example –Liabilities for Options and Guarantees

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

10.3.5 Canadian GAAP (C-GAAP) Example of GAAP Plus

10.3.5.1 C-GAAP Example – Invested Assets Adjustments

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

10.3.5.2 C-GAAP Example - Insurance Liability Adjustments

267. 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) would be used as the basis to adjust life insurance liabilities.

The C1 margin is 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 realized. The C1 margin added should cover all assets supporting the liability, including non-fixed income assets.

10.3.5.2.1 C-GAAP Example – Non-Life Insurance Liabilities

268. Similar to the approach used for life insurance liabilities, Canadian IAIG Volunteers would 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.

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

269. 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.

270. 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, IAIG Volunteers should run their GAAP valuation models using parameters that satisfy the calibration criteria promulgated by OSFI in 2010 for calculating regulatory capital.[21] 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

[21] 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.

parameters would be consistent with a confidence level that is appropriate for determining balance sheet liabilities in accordance with GAAP.

271. Hedged Portfolios: In an educational note promulgated more recently by the CIA[22], 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 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.

[22] Reflection of Hedging in Segregated Fund Valuation, May 2012.

11 Reconciliation from reported GAAP to GAAP Plus and to Market-Adjusted

Relevant Worksheets in Template:	*ICS.Balance Sheet* *ICS.Liabilities reconciliation*	*All due 14 August*

272. A worksheet labelled *ICS.Liabilities reconciliation* has been provided for volunteers to reconcile reported GAAP insurance liability amounts to both Market-Adjusted and GAAP Plus and collect other relevant data in support of the GAAP Plus approach.

273. For all insurance liabilities, report a breakdown of adjustment amounts by the product categories provided. Volunteers should provide a breakdown of adjustments 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, volunteers should make use of the column labelled 'Other' and should include detail in the Questionnaire to explain the purpose, method, significant judgments and any other information that may assist in understanding the nature of any adjustments. A description of the amount to be entered in each column is provided below:

a) [1 – GAAP Reported] – A calculated field sourced from the *ICS.Balance sheet* worksheet. Insurance liability balance by product reported on a jurisdictional GAAP basis (or as adjusted for SAP filers under the SAP Plus example of GAAP Plus [See section 10.3.2.1]).

b) [2 – Update from Net to Gross Premium Valuation] – Represents the amount to bring certain liabilities reported on a net premium basis for GAAP reporting to a gross premium basis. This column may not be applicable for all IAIG Volunteers.

c) [3 – Update to Current Assumptions and Rates] – Represents the amount related to updating any assumptions to current assumptions, for example updating locked in assumptions for life insurance or to apply any discounting for non-life reserves.

d) [4 - Less Risk Margin/Non-performance Risk] – Represents the amount related to removing any explicit risk margin, provision for adverse deviation or market consistent (exit value) adjustments.

e) [5 – 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.

f) [6 – GAAP Plus (GAAP rates)] – A calculated field sourced from the *ICS.Liabilities reconciliation* worksheet should equal the amount reported under column [8] for GAAP Plus insurance liabilities on the balance sheet.

g) [7 - Update to Current Yield Curve (ICS rate)] - Represents the amount related to updating GAAP Plus life and discounted long-term non-life liabilities to reflect the ICS prescribed curve as defined under the Market-Adjusted approach.

h) [8 – GAAP Plus (ICS rate)] – A calculated field, should equal column [6] + [7].

i) [9 - Contract Boundary Differences] – Represents the amount related to applying the definition of contract boundaries under Market-Adjusted versus the GAAP Plus definition.

j) [10 - Update to Market-Adjusted assumptions] – Represents the amount related to adjusting for any differences between GAAP Plus assumptions to Market-Adjusted consistent assumptions.

k) [11 – Other] – Any additional amounts required to adjust GAAP Plus liabilities to Market-Adjusted. A description and breakdown of any material amounts should be provided in the Questionnaire.

l) [12 – Market-Adjusted] – Calculated field sourced based on columns 8 to 11.

m) [13 – Code for level of accuracy] – Assign a code to represent the level of accuracy of the liability estimate for GAAP Plus using the following definitions:

A – High degree of accuracy; all material amounts /reconciling items are determinable and calculated pursuant to specifications.

B – Moderate degree of accuracy; material amounts/reconciling items are determinable, but some required estimations which are nonetheless believed to be reasonable. Please identify amounts that are estimated in the Questionnaire and any key assumptions made in developing those estimates.

C – Lower degree of accuracy; some material amounts/reconciling items could not be calculated or reasonably estimated. Please identify amounts that are estimated in the Questionnaire and any key assumptions made in developing those estimates, as well as reconciling items for which amounts could not be determined.

n) [14 – Code for level of accuracy] – Assign a code to represent the level of accuracy of the liability estimate for Market-Adjusted using the same definitions as described for column 13 above

274. Report additional data in support of the GAAP Plus approach by product beginning with the column labelled [15] and ending with the column [18]. Amounts unable to be reported by product should be included in the row '*Memo items unable to be broken out by product*'.

a) [15 - AOCI on Debt Securities by Product] Total AOCI for all debt securities (within insurance related activities) broken out by each insurance product should be reported in the column.

b) [16 – Long-Term AOCI by relating to long-term insurance products] For purposes of field testing the GAAP Plus approach, there will be consideration given as to whether, and if so, how, to exclude the impact of gains/losses not expected to be realized through net income as reported in Accumulated Other Comprehensive Income (AOCI). In order to collect data to analyse for field testing, a definition has been developed to identify an amount of AOCI that may be excluded from Tier 1 capital in a future update of the ICS. Record the amount of AOCI on Available for Sale debt securities that meet ALL of the following criteria in the column [16]:

- The AOCI amount represents unrealized gains or losses on debt securities that have a remote possibility of sale or transfer and do not contain any options or provisions which could result in a sale or transfer[23]
- The portfolio of debt securities can be demonstrably tied to long-term insurance products where the business strategy is to hold the portfolio of assets for collection of principal and interest to support insurance benefit or claim payments

c) [17 – Credit portion of LT AOCI Adjustment] Portion of [16] representing unrealized losses due to changes in creditworthiness of the obligor (credit risk portion). The credit risk portion should be identified in a similar fashion to how it would be determined under the framework as described in ASC Sub Topic 320-10-35-34c *Debt Securities: Determination of the Amount of an Other-Than-Temporary Impairment Recognized in Earnings and Other Comprehensive Income*, to segregate unrealized losses by credit and non-credit components.

d) [18 – DAC by Product] – Total Deferred Acquisition Costs, Value of Business Acquired, Deferred Sales Inducement and other deferred expense amounts related to insurance contracts broken out by each insurance product should be reported in this column.

[23] Remote is defined with reference to US GAAP SFAS 5, the chance of the future event or events occurring is slight.

12 Consistent and comparable Margin Over Current Estimate

Relevant Worksheets in Template:	*ICS.Transfer-MOCE* *ICS.Prudence-MOCE*	*All due 14 August*

275. Consistently with ICP 14, the IAIS 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 under the Market-Adjusted Valuation.

276. For the purposes of the 2015 Field Testing exercise, the IAIS will test two alternative approaches, i.e.:

- The Cost of Capital MOCE (CoC- MOCE); and
- The Prudence MOCE (P-MOCE).

277. **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 the field test.**

12.1 A – Cost of Capital MOCE (CoC-MOCE)

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

$$MOCE = \ Cost\ of\ capital\ x \sum \frac{Expected\ capital\ required(t)}{(1 + discount\ rate)^{t+1}}$$

279. The MOCE should be calculated individually for each one of the identified ICS segments[24].

280. For the purpose of the 2015 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 6%[25].

281. 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

[24] For the purposes of 2015 Field Testing, CoC-MOCE is calculated with a granularity restricted to life versus non-life.

[25] The 6% cost of capital is set for the purpose of field testing and will be revisited for future exercises

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):

a. Insurance 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)[26]
b. Interest rate risk[27]
c. Credit risk related to reinsurance recoverables[28]
d. Operational risk.

282. For the purpose of 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, component of the market risk, counterparty risk and operational risk) between life and non-life business,
b. **Step 2:** projection of the capital required based on:
    a. the volunteer own run-off pattern for life insurance liabilities; and
    b. 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 (6%).

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

283. The ICS capital requirement will be used as a starting point for the determination of the future capital requirement[29]. Acknowledging the difference of durations and development between life and non-life insurance liabilities, the ICS capital requirement will be allocated between life and non-life insurance liabilities in the table 'CC MOCE – Cost of Capital Approach' rows 1-8:

a. Column C: the individual capital charges (pre-diversification) are retrieved from the ICS summary page;

[26] 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 the 2015 field testing.
[27] For the purpose of the 2015 field testing, interest rate risk is deemed the only non-hedgeable component of the market risks.
[28] For the purpose of the 2015 field testing, credit risk associated with the reinsurance recoverables is deemed the only non-hedgeable component of the credit risk component.
[29] The portfolio of assets currently held might not be the available portfolio that minimise the capital required to cover the insurance liabilities. So it could be possible, through a different asset allocation to minimise the capital required compared with the ICS capital requirement calculated for the actual asset holding. However, as a simplification for the 2015 field testing, the full ICS capital requirement will be used as a starting point for the projection of the future capital requirements.

b. Column D: the diversified ICS capital requirement is allocated to the listed components;
c. Columns E and F: the diversified capital requirement is allocated between life and non-life business. Volunteer IAIGs are to complete the blue cells under *'ICS allocation – to life'*.

Step 2: projection of the capital required

284. 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:

a. Row 25: for life insurance liabilities, the capital requirement related to the whole portfolio of liabilities will be projected based on the run-off pattern to be determine by the Volunteer IAIG. The run-off pattern should reflect the run-off of the risks associated with the holding of the insurance liabilities and the related assets. Volunteer IAIG is to provide the run-off pattern in the blue cells. In addition Volunteer IAIGs are also requested to complete the duration of the liabilities based on the cash out flows. For the determination of both the run-off pattern and the duration, only outgoing cash flows (i.e.: claims paid and associated expenses) should be taken into account.
b. Rows 28-31: for non-life insurance liabilities, the capital requirement is allocated further to the ICS segments based on non-life individual capital 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].

Step 3: Discounting

285. The projected capital requirements are discounted using the risk free rate for the relevant consolidated currency. The risk free rate and discount factors are provided in the 'Run off pattern' table. No input from Volunteer IAIG required.

Step 4: Application of the Cost of Capital

286. The 6% cost of capital is applied to the discounted future capital requirements in order to calculate the Coc-MOCE in cells F:25 and F28:31.

[30] As a trade-off between simplicity and risk sensitivity, three run-off patterns are tested. The three run-off patterns were developed and mapped to the ICS segments based on supervisory data.

12.2 B – Prudence MOCE (P-MOCE)

287. A MOCE is calculated based on the current estimate of insurance liabilities and a proxy for estimation uncertainty. The MOCE reflects the risks/uncertainty of the reserve and premium estimates of each Volunteer IAIG. It does not include operational risks.

288. For Non-Life, the approach is based on avoiding the recognition of future profits. 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.

289. For Life Insurance liabilities the proposed approach is to use the relevant aggregated stress results as 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 will be automated in the Template.

290. There are two categories of non-life liabilities on the balance sheet (MOCE in reserve liabilities and MOCE in premium liabilities (UEP)). The calculated MOCE below specifies different calculation details for each measure based on discounting.

For each Volunteer IAIG, calculated in the aggregate for all business lines:

Non-Life MOCE Reserves = Undiscounted Reserve Liability - Discounted Current Estimate (CE) of Reserve Liability.

Non-Life MOCE Unearned Premium ('MOCE UEP') = Expected Future Profits on Unearned Premium

Under GAAP Plus: 'MOCE UEP' = 'GAAP UEP'- DAC - 'CE of losses associated with the UEP'
Under MAV: 'MOCE UEP' = Expected Future Profits on Unearned Premium
[Note: for Volunteer IAIGs using IFRS, the difference between MAV UEP and IFRS UEP is equivalent to future profit]

291. For Life, 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:

--The CE (Proxy for 50%)

--The stressed CE (Proxy for 99.5%)

--Assumption of a loss distribution (initially assume to be normal)

292. The MOCE calculation utilises existing balance sheet information without any additional data requests.

293. Possible future refinements include computation of these MOCEs for life by the major divisions of Life insurance, immediate annuities, deferred annuities and disability insurance.

13 Example of ICS Standard Method using the Market-Adjusted approach

13.1 Overall structure of the Example of ICS Standard Method

294. The Market-Adjusted approach will be used as the initial basis to develop an example of the ICS standard method (referred to hereafter as the "standard method"). 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.

295. **The main purpose of testing the example of the ICS standard method in 2015 is to test its design with an interim calibration of risks and an interim aggregation/correlation of risks that will be subject to further refinement in subsequent field testing exercises.**

296. **To this end, the calibrations included in this field test are to be seen as initial calibrations, often involving supervisory judgement and therefore will be subject to change as more fundamental calibration work is undertaken over the course of the ICS development.**

[31] The presumption of a Normal Distribution and the initial percentage postulated of 66.7% are set aside for the purposes of field testing and will be revisited for future exercises.

297. Some of the risks are tested using a GAAP Plus approach as well to compare the outcomes between the Market-Adjusted approach and the GAAP Plus approach. Where the calculation of a risk charge using the GAAP Plus approach is used this will be indicated in these technical specifications.

13.2 Approach

298. 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.

299. The risks will be combined through a correlation matrix in the *ICS* worksheet to recognise risk diversification. This is automatically done in the Template; volunteers do not have to enter any data for the aggregation.

300. For the purpose of 2015 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 future discussions on the tax effects on ICS capital charges, further information is sought through the Questionnaire.

13.3 Calculations methods within the standard method

Table 3. Summary of risk measurement methods proposed in the standard method

Risk/Sub-risk / Potential Approach	Factor-based	Stress	Other
Insurance risks			
• Mortality		✓	
• Longevity		✓	

• Morbidity/disability		✓	
• Lapse		✓	
• Expense Risk		✓	
• Premium	✓		
• Claim reserve/revision	✓		
• Catastrophe			✓
Market risks			
• Interest rate		✓	
• Equity		✓	
• Real estate		✓	
• Currency/FX		✓	
• Asset concentration	✓		
Credit risk	✓		
Operational Risk	✓		

13.3.1 Look-through

301. 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.

302. 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.

303. Finally, when no look-through is possible, the full investment should be considered as an asset belonging to the asset class with the highest risk charge.

304. 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

[32] http://www.bis.org/publ/bcbs266.htm.

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 scenario(s), and to select the appropriate scenario that should apply on those assets, depending on their nature.

305. In the context of insurance risks, look-through to the underlying risk instead of applying the capital treatment for bonds could be applied, for instance, on single tranche mortality bonds, catastrophe bonds, etc. 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 if any). Such an approach could prevail where the Volunteer IAIG is an investor in such instruments.

13.3.2 Risk mitigation

306. Risk mitigation techniques could be recognised in the ICS capital requirement calculation as long as they meet the following principles:

a) 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 mitigation – taking into consideration reasonable basis risk effects due to changes in risk mitigation assumptions and relationships during a stress scenario - and an appropriate treatment of any corresponding risks embedded in the use of risk mitigation techniques (e.g. credit risk). These two effects should be separated.

b) 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.

c) The calculation should be made on the basis of assets and liabilities existing at the reference date of the ICS calculation.

d) There should be no double counting of mitigation effects.

e) Providers of risk mitigation should have an adequate credit quality to guarantee with appropriate certainty that the IAIG will receive the protection in the cases specified by the contracting parties.

f) Credit quality should be assessed consistently with the definition of credit categories provided in section 13.4.3.

307. 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.

308. The following principle also applies specifically to the recognition of financial risk mitigation techniques in the ICS:

a) The Volunteer IAIG should have a direct claim on the protection provider.

b) There should be an explicit reference to specific exposures or a pool of exposures,

c) The extent of cover is clearly defined and undisputable.

309. However, 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.

13.3.3 Geographical segmentation

310. For a number of risk charges, a geographical segmentation is used in field testing:

- EEA and Switzerland
- USA and Canada
- China
- Japan
- Other developed markets
- Emerging markets

311. The following table sets out the definitions of each region.

Table 4. 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

[33] including NAIC members outside of the 50 United States: American Samoa, Guam, Northern Mariana Island, Puerto Rico and US Virgin Islands

Other developed[34]	Australia, 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 2015[35]. For completeness, if a country is not listed in the regions above, it should be classified as 'emerging market'.

312. Please note that these are not the same regions used in the equity risk capital charge. The definition of emerging and developed markets used for Equity Risk in 2015 Field Testing is based on the MSCI definitions used for the MSCI ACWI index[36].

313. 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.

13.3.4 Management actions

314. For the purposes of the standard method in 2015 Field Testing, the definition of "management actions" is confined to reductions in liabilities for future bonuses or other discretionary benefits. 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.

315. The management actions should be realistic. They 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 Life insurer with a portfolio of savings contracts. Those savings contracts do not include any legally enforceable profit participation, however the insurer 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 insurer would be able to pass through to policyholders in case of adverse financial scenarios.

However, for reasons of competitiveness and avoiding mass lapses, the insurer is in practice not likely to pass through the maximum possible amount of loss to policyholders. For instance, while a

[34] 'Other developed' taken from IMF list of advanced economies minus countries mentioned in other regions as of April 2015.
[35] See http://www.imf.org/external/pubs/ft/weo/2015/01/ (accessed on 24 April 2015)
[36] See https://www.msci.com/market-cap-weighted-indexes (accessed on 24 April 2015)

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 insurer 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 summarized 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 insurer to annually revalue the guaranteed capital. Each year the insurer 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 raise of 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 global profitability, the insurer 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*

13.4 ICS Standard Method Calculation Structure

13.4.1 Insurance risk

316. As set out in the following sections, for the purposes of the ICS capital requirement, insurance risk encompasses a number of key risks. The Volunteer IAIG needs to consider whether its business is exposed to each of these risks and then apply the standard method, rather than classifying the business first and then applying only some of the calculations related to the risks set out below. The exceptions to this are “premium risk” and “claims reserve/revision risk,” which apply to non-life business only (because these two risks are adequately captured by the other risk components for life business).

13.4.1.1 Grouping of policies for life risks

317. A stress-based approach will be used for the 2015 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.

318. 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.

319. 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.

13.4.1.2 Mortality Risk

Relevant Worksheets in Template:	*ICS.Life type risk (Mortality Risk section)* *ICS.Mortality.G+*	*All due 14 August*

320. For mortality risk, a stress-based approach is applied in 2015 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.

321. 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.

322. Catastrophe mortality stress could also be included, but it is proposed that this would be addressed as part of catastrophe risk.

323. However, for the purposes of 2015 Field Testing, a simplified approach has been chosen. Under this approach Volunteer IAIGs should estimate the capital charge for mortality risk by stressing only the level of mortality. Further analysis will be done to determine whether the other components could be explicitly or implicitly allowed for.

324. The mortality risk calculation only applies to those policies that are subject to mortality risk.

Geographical Segmentation

325. Volunteer IAIGs should provide data by the following geographical groupings:

- EEA and Switzerland
- US and Canada
- China
- Japan
- Other developed markets
- Emerging markets

Input data required

326. Input data required are:

- The base net asset value, i.e. value of assets less insurance liabilities before applying the prescribed shock, net of outward reinsurance (column [1]);
- The net asset value after applying the prescribed shock, net of reinsurance (not including changes in the margin over current estimates) before management actions (column [2]);
- The change in net asset value (not including changes in the margin over current estimates) after applying prescribed shocks but before management actions (column [3]; automatically calculated);

- The change in net asset value, net of outward reinsurance (not including changes in the margin over current estimates) after management actions (including risk mitigation other than reinsurance) (column [4]);
- Effects of the management actions on net asset value after applying prescribed shocks (column [5] – automatically calculated).

Output data

327. The following output will be automatically calculated by the Template:

- $Mortality\ Risk\ Charge$= mortality risk charge before management actions
- $Mortality\ Risk\ Charge^{\ mgmt}$ = 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.

Calculation

328. The mortality risk charge is calculated as:

$$Mortality\ Risk\ Charge = \Delta NAV \mid shock$$

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.

$shock$ = 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 net asset value, i.e. $(1 + x\%) \times base\ mortality\ assumptions$, with x as follows:

Table 5. Mortality Shocks

	x%
EEA and Switzerland	15%
US and Canada	15%
China	15%
Japan	15%
Other developed markets	15%
Emerging market	15%

329. 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 technical provisions.

330. The Volunteer IAIG should then determine the change in net asset value, 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 $Mortality\ Risk\ Charge^{\ mgmt}$

331. **The initial calibration proposed for the 2015 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.**

332. For the purposes of 2015 Field Testing, no geographical diversification is assumed when calculating the mortality risk charge. Further investigations may be conducted to determine whether geographical diversification should be allowed.

333. The stresses set out in the mortality shocks table (0) should be applied simultaneously to avoid double counting of the risk mitigating impact of reinsurance arrangements covering more than one geographical area.

13.4.1.3 Longevity Risk

Relevant Worksheets in Template:	*ICS.Life type risk (Longevity Risk section)*	*Due 14 August*

334. Similar to mortality risk, for 2015 Field Testing a stress-based approach is applied to longevity risk.

335. 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.

336. For the purposes of 2015 Field Testing, a simplified approach has been chosen. Under this approach Volunteer IAIGs should estimate the capital charge for longevity risk by stressing only the level of longevity. Further analysis will be done to determine whether the other components could be explicitly or implicitly allowed for.

337. The longevity risk calculation applies only to those policies that are subject to longevity risk.

Geographical Segmentation

338. Volunteer IAIGS should provide data by the following geographical groupings::

- EEA and Switzerland
- US and Canada
- China
- Japan
- Other developed markets
- Emerging markets

Input data required

339. Input data required are:

- The base net asset value, i.e. the value of assets less insurance liabilities before applying the prescribed shock, net of outward reinsurance (column [1]);
- The net asset value after applying the prescribed shock, net of reinsurance (not including changes in the margin over current estimates) before management actions (column [2]);
- The change in net asset value (not including changes in the margin over current estimates) after applying prescribed shocks but before management actions (column [3]; automatically calculated);
- The change in net asset value, net of outward reinsurance (not including changes in the margin over current estimates) after management actions (including risk mitigation other than reinsurance) (column [4]);
- Effects of the management actions on net asset value after applying prescribed shocks (column [5] – automatically calculated).

Output data

340. The following output will be automatically calculated by the Template:

- $Longevity\ Risk\ Charge$= longevity risk charge before management actions
- $Longevity\ Risk\ Charge^{\ mgmt}$ = longevity risk charge after management actions

Calculation

341. 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

$shock$ = Decrease of x% in mortality rates at all ages for all policies where a decrease in mortality rates would lead to a decrease in the net asset value i.e. $(1 - x\%) \times base\ mortality\ assumptions$, with x as follows:

Table 6. Mortality shocks for Longevity Risk

	x%
EEA and Switzerland	20%
US and Canada	20%
China	20%
Japan	20%
Other developed markets	20%
Emerging market	20%

342. **The initial calibration proposed for the 2015 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.**

343. For the purposes of 2015 Field Testing, no geographical diversification is assumed when calculating the longevity risk charge. Further investigations may be conducted to determine whether geographical diversification should be allowed.

344. The stresses set out in the table above should be applied simultaneously to avoid double counting of the risk mitigating impact for reinsurance arrangements that cover more than one geographical area.

345. The longevity risk charge should be first calculated under the condition that the scenario does not change the value of future discretionary benefits in the technical provisions.

346. Volunteer IAIG should then determine the change in net asset value, taking into account realistic management actions, e.g. Volunteer IAIG is able to change its assumptions in future bonus rates in response to the scenario. This is the $\text{Longevity Risk Charge}^{\text{mgmt}}$.

13.4.1.4 Morbidity/Disability Risk

Relevant Worksheets in Template:	*ICS.Life type risk (Morbidity Risk sections)*	*Due 14 August*

347. 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.

348. 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).

349. The risk charge relating to the morbidity/disability risk is obtained by the application of a stress scenario, designed as a combination of stresses of all the risk factors identified below.

Definition of the scope of the application of morbidity/disability risk

Segmentation

350. 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.

351. The segmentation should reflect the nature of the underlying risk of contracts. Insurance obligations that are legally or contractually considered as non-life activities should be classified into life segments if and only if the calculations of the corresponding technical provisions are based on biometrical variables.

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.

Sub risks to be covered

352. Here 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)

Calculation of capital requirement

353. The risk charge for morbidity/disability is the combination of three simultaneous shocks:

i. Increase of the inception rate;
ii. Decrease of the recovery rate ;
iii. Increase of claim payments combined with an absolute increase of their inflation rate.

354. The level of the shocks will vary according to the geographical zone of the risk and will be applied to all products that are exposed to similar to life morbidity/disability risk :

i. For all regions, an increase of the inception rate of 30%;
ii. For all regions, a decrease of recovery rate of 20%
iii. For claim payments increase :

a. For EEA and Switzerland, US and Canada, Japan and Other developed countries, the increase in the amount of medical payments should be of 5% and the increase in the annual inflation should be 1%

b. For the emerging markets, the increase in the amount of medical payments should be of 5% and the increase in the annual inflation should be 3%.

13.4.1.5 Lapse Risk

Relevant Worksheets in Template:	*ICS.Life type risk (Lapse Risk sections)* *ICS.Supplementary Info.Lapse*	*All due 14 August*

355. Lapse risk is the risk of adverse change in the value of qualifying capital resources due to unexpected changes in level and trend of exercise rates of policyholder options. The risk charge takes into account all legal or contractual options which can change the value of future cash flows.

This includes options to partly 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.

Geographical Segmentation

356. Volunteer IAIGS should provide data by the following geographical groupings:

- EEA and Switzerland
- US and Canada
- China
- Japan
- Other developed markets
- Emerging market

Input data required

357. For the level and trend component :

- The base net asset value, i.e. the value of assets less insurance liabilities before applying the prescribed upward or downward shocks, net of reinsurance;
- The net asset value after applying prescribed upward or downward shocks, net of reinsurance (not including changes in the margin over current estimate) before management actions ("Post Shock NAV");
- Effects of the management actions on net asset value after applying the respective prescribed shocks, net of reinsurance.

358. For the mass lapse component :

- The base net asset value before applying prescribed mass lapse shock, net of reinsurance;
- The net asset value after applying shock, net of reinsurance (not including changes in the margin over current estimate) before management actions ("Post Shock NAV");
- Effects of the management actions on net asset value after applying prescribed shocks, net of reinsurance.

359. An additional worksheet on supplementary data should be completed for this module on the level and trend component and mass lapse component. Similar information on input data as detailed above is requested, but on a more granular level split by region and product category. 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.

360. As lapse risk is only applicable to life business, the Questionnaire also seeks feedback on the impact of termination of lapsable non-life business.

361. Margin over current estimates should be held constant when reporting the net asset values before and after applying the shocks.

Output data

362. The following output should be reported:

- $Lapse\ Risk\ Charge$ = lapse risk charge before management actions
- $Lapse\ Risk\ Charge^{mgmt}$ = 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.
- $Lapse\ Risk\ Charge_{level}^{mgmt}$ = lapse risk charge for level and trend component after management action
- $Lapse\ Risk\ Charge_{mass}^{mgmt}$ = lapse risk charge for mass lapse component after management action

Calculation

Level and Trend Component

363. 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:

$Lapse\ Risk\ Charge_{up}^{mgmt} = Lapse\ Risk\ Charge_{up}\ after\ management\ actions$

$Lapse\ Risk\ Charge_{down}^{mgmt} = Lapse\ Risk\ Charge_{down}\ after\ managment\ actions$

$Lapse\ Risk\ Charge_{up} = \Delta NAV\ |shock_{up}$

$Lapse\ Risk\ Charge_{down} = \Delta NAV\ |shock_{down}$

$\Delta NAV\ |\ shock$ = 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. 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 40% increase should be applied to the rate that applies if the option is not taken up. Resulting shocked lapse rate should not exceed 100%.

$shock_{down}$ = Decrease of 40% in the assumed option take-up rates in all future years for all homogeneous groups adversely affected by such risk. 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 40% 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%.

364. The Lapse risk charge for the level and trend component should first be determined at each homogenous risk group level. (Please refer to the example provided below.)

365. The $\text{Lapse Risk Charge}_{\text{up}}$ 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 technical provisions.

366. The Volunteer IAIG should then determine the change in net asset value (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 would 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 3 homogeneous groups for region A and all groups under "Protection – Life" product category

		Base NAV Net of Reins (a)	Post Shock NAV (Net of Reins)(1) (b)	Effect of management actions (c)	Post Shock NAV (Net of Reins)(2) (d) = (b) + (c)	Decrease in NAV (floored at zero) max[0,(a)-(d)]
Homogenous Group 1	Upward Shock	100	120	0	120	0
	Downward Shock	100	60	10	70	30
Homogenous Group 2	Upward Shock	150	80	30	110	40
	Downward Shock	120	200	0	200	0
Homogenous Group 3	Upward Shock	100	60	10	70	30
	Downward Shock	100	50	30	80	20

(1) Before management actions
(2) After management actions

The shock that produces larger decrease in NAV after management actions for each homogenous group, net of reinsurance is used in the calculation of lapse risk charge

		Base NAV Net of Reins	Post Shock NAV (Net of Reins)(1)	Effect of management actions	Post Shock NAV (Net of Reins)(2)	Decrease in NAV (floored at zero)
Homogenous Group 1	Downward Shock	100	60	10	70	30
Homogenous Group 2	Upward Shock	150	80	30	110	40
Homogenous Group 3	Upward Shock	100	60	10	70	30

(1) Before management actions
(2) After management actions

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		350	200	50	100	150

Reported in template ("ICS.Supplementary Info.Lapse") for Region A
Level and Trend component - For homogenuous groups where the Upward Shock produces a larger capital requirement

		Base NAV Net of Reins	Post Shock NAV (Net of Reins)(1)	Effect of management actions	Please provide a brief description of management actions taken
Region A	Protection - Life	250	140	40	20% immediate bonus cut for Product A

Level and Trend component - For homogenuous groups where the Downward Shock produces a larger capital requirement

		Base NAV Net of Reins	Post Shock NAV (Net of Reins)(1)	Effect of management actions	Please provide a brief description of management actions taken
Region A	Protection – Life	100	60	10	10% immediate bonus cut for Product B

Mass Lapse Component

367. The lapse risk charge for 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 with positive surrender strain, immediate surrender of 50% of non-retail policies with positive surrender strain, and zero surrender for all others

368. The $\text{Lapse Risk Charge}_{\text{mass}}$ should be first calculated under the condition that the scenario does not change the value of future discretionary benefits in the technical provisions

369. The Volunteer IAIG should then determine the change in net asset value (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 would give $\text{Lapse Risk Charge}_{\text{mass}}^{\text{mgmt}}$.

13.4.1.6 Expense Risk

Relevant Worksheets in Template:	*ICS.Life type risk (Expense Risk section)* *ICS.Supplementary Info.Expense*	*All due 14 August*

370. 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.

371. 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.

Geographical Segmentation

372. Volunteer IAIGS should provide data by the following geographical groupings:

- EEA and Switzerland
- US and Canada
- China
- Japan
- Other developed markets
- Emerging market

Input data required

- The base net asset value, i.e. the value of assets less insurance liabilities before applying the prescribed shock, net of reinsurance;
- The base net asset value after applying the prescribed shock, net of reinsurance (not including changes in the margin over current estimate) before management actions ("Post Shock NAV");
- Effects of the management actions on net asset value after applying prescribed shocks, net of reinsurance.

373. An additional worksheet on the supplementary data should be completed for this module. The Volunteer IAIG is requested to provide the breakdown of the change in net asset value net of reinsurance but before management actions for both the unit expense component and expense inflation component, split by region. A brief description of the management actions taken, split by region, is also requested.

374. Margin over current estimates shall be held constant when reporting the net asset values before and after applying the shocks.

Output data

375. The following output should be reported:

- $Expense\ Risk\ Charge$= expense risk charge before management actions
- $Expense\ Risk\ Charge^{\ mgmt}$ = 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.

Calculation

376. 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 to applying the prescribed shock

$shock$ = Increase of x% in unit expense assumptions, i.e. $(1 + x\%) \times base\ unit\ expense\ assumptions$; and increase of y% per annum in expense inflation, with x and y as follows:

Table 7. Expense risk shocks

	x%	*y%*
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%

377. The shocks to the unit expense assumptions and expense inflation should be applied simultaneously.

378. 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 technical provisions

379. The Volunteer IAIG should then determine the change in net asset value, 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 the $\text{Expense Risk Charge}^{\text{mgmt}}$.

13.4.1.7 Premium Risk and Claim Reserve/Revision Risk

Relevant Worksheets in Template:	*ICS.Non-Life type risk* *ICS.Non life.G+*	*All due 14 August*

380. The Technical Specifications for Premium Risk and Claim Reserve/Revision Risk apply both to the worksheets *ICS.NL.MA* and *ICS.NL.G+* which are to be completed on a Market-Adjusted basis and a GAAP Plus basis, respectively. This section has been written from the perspective of the Market-Adjusted approach as there is only one significant difference for the GAAP Plus approach.

381. Premium risk and claim reserve/revision are proposed to be captured by a factor-based approach, with a factor applied to segments within defined regions.

382. For the purposes of 2015 Field Testing, the IAIS will collect information about morbidity/disability risk on the basis that this '*not similar to life*' business may no longer be included in the morbidity/disability risk charge.

383. For the purposes of 2015 Field Testing, the IAIS has combined together the premium and reserve risk components in one worksheet as aggregation of premium and claim reserve/revision risk is proposed to be undertaken first. Feedback is requested from Volunteer IAIG on this topic in the Questionnaire.

Geographical Segmentation

384. All data items in this worksheet will be aggregated into the following geographical segments:

- EEA and Switzerland
- US and Canada
- Japan
- China
- Other developed markets
- Emerging markets

385. See section 13.3.3 for further details on the definitions of these geographical segments.

Segments/lines of business

386. The worksheet 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.

387. 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.

388. For 'other developed', most countries are listed along with their lines of business based on statutory reporting. For countries not listed, use the mapping in paragraph 389.

389. For 'emerging markets', the lines of business need to be mapped to the following segments of business:

- Motor
- Property damage
- Accident, protection and health (APH)
- Non-proportional motor, property damage and APH
- Workers' compensation
- Public liability
- Product liability
- Professional indemnity
- Other liability

- Non-proportional motor liability
- Non-proportional public liability
- Non-proportional product liability
- Non-proportional professional indemnity
- Non-proportional other liability
- Marine, Air, Transport (MAT)
- Non-proportional MAT
- Catastrophe reinsurance
- Other short tail
- Other medium tail
- Other long tail
- Mortgage insurance
- Commercial credit insurance
- Other non-traditional

390. The IAIS has provided definition of lines of business at the end of this section.

391. For the purposes of field testing, each line of business has been assigned:

- an IAIS category for the purpose of aggregation – a high level grouping of the type of business: these are property-like, liability-like, other and non-traditional
- a risk factor bucket for the purposes of calculation of the risk charge – one of 8 categories that are used for the factors applied to calculate premium and reserve risk. These are 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.

Input data required

392. Volunteer IAIGS should report the following amounts for each relevant region and segment within that region.

PREMIUM RISK

1. Net Earned Premium – most recent financial year ("FY")
   - Report the net earned premium as defined under statutory reporting in that country/region for the financial year ending in 2014. The amount should be net of ceded reinsurance.
2. 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 2013). The amount should be after 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.
3. Net Premium to be earned ("FY +1")

- Report the expected premium to be earned in the next financial year (ending in 2015). This figure should be consistent with the business already written and must include expected new business.

393. 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 premium to be earned. Note that the risk factor is provided for 2015 Field Testing purposes only. The Questionnaire seeks feedback from Volunteers on these factors and other potential measures.

RESERVE RISK

4. Net Current Estimates (undiscounted) – ("FY(undisc)")
   - Report the most recent net current estimate on an undiscounted basis. For more information on the determination of Current Estimates, refer to section 6.3.
5. Net current estimates (discounted) – most recent financial year ("FY")
   - Report the net current estimate as at the end of the most recent financial year (ending in 2014). For more information on the determination of current estimates, refer to section 6.3.
6. 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 2013). 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 Volunteers to provide this data.

394. The 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 2015 Field Testing purposes only. The Questionnaire seeks feedback from Volunteers on these factors.

Aggregation

395. Aggregation is automated within the Template. Volunteer IAIGs do not have to enter any data with respect to the aggregation.

396. For the purposes of 2015 Field Testing, risk charges for each line of business or segment in each region are not added together, recognising that there is diversification across lines of business and regions.

397. The first step of aggregation is to combine each line of business' premium and reserve risk based on the IAIS category (with the exception of non-traditional mortgage and non-traditional credit as outlined in paragraph 398. The second step of aggregation is within region, where a correlation matrix is applied to the sum of each of the four IAIS categories.

398. The third step of aggregation is across regions, where a correlation matrix is applied to each region's total risk charge. Non-traditional mortgage business and non-traditional credit business are added across all regions and then aggregated with real estate risk and credit risk, respectively.

399. The Questionnaire seeks feedback from Volunteers on each of the correlation matrices.

400. As mentioned earlier, the IAIS is also exploring applying the aggregation across premium and reserve risk as the first step and has sought feedback on this topic in the Questionnaire.

Definition of lines of business

401. The definitions of lines of business are as follows:

Table 8. Definitions for Non-life Lines of Business Segmentation

EEA and Switzerland/Medical expense insurance	Insurance obligation that covers the provision or financial compensation for medical treatment or care including preventive or curative medical treatment or care due to illness, accident, disability or infirmity,
EEA and Switzerland/Income protection	Insurance obligation that covers the financial compensation arising from illness, accident, disability or infirmity (excluding medical expense insurance)
EEA and Switzerland/Workers' Compensation	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.
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 non-life insurance	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
EEA and Switzerland/Non-proportional health reinsurance	Reinsurance on a non-proportional basis of health insurance classes
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/Accident and Sickness	means insurance 1. against loss resulting from bodily injury to, or the death of, a person caused by an accident; 2. under which an insurer undertakes to pay a sum or sums of money in the event of bodily injury to, or the death of, a person caused by an accident; 3. against loss resulting from the sickness or disability of a person not caused by an accident, but excludes loss resulting from the death of the person as a consequence of sickness; 4. under which an insurer undertakes to pay a sum or sums of money in the event of the sickness or disability of a person not caused by an accident; or 5. under which an insurer undertakes to pay a sum of money in respect of the health care, including dental care and preventative care, of a person.
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	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.
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 accident and health.
US/Other non-traditional non-life insurance	Coverages not included elsewhere that are non-traditional

US/Reinsurance - nonproportional assumed financial lines	Nonproprotional 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/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.
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 Accident	A short term accident insurance, the object of insurance is the death or disability of insurant because of accident. The period of insurance is usually no more than one year.
China/Short-term Health	Health insurance that the period of insurance is no more than one year and without guaranteed renewable terms.

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.
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.
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.
Australia&NZ/Other type A	Other classes of business with similar characteristics to householders and motor
Australia&NZ/Travel	Insurance against losses associated with travel including loss of baggage and personal effects, losses on flight cancellations and overseas medical costs.
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
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).
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.
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

Australia&NZ/Other type B	Other classes of business with similar characteristics to Fire & ISR, marine, aviation, consumer credit and other accident
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.
Australia&NZ/CTP	Compulsory Third Party business
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
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.
Australia&NZ/Employers' Liability	Includes workers' compensation, seaman's compensation and domestic workers' compensation
Australia&NZ/Other type C	Other classes of business with similar characteristics to mortgage, CTP, and other liability
Australia&NZ/Householders - proportional reinsurance	Proportional reinsurance of householders business (refer definition)
Australia&NZ/Commercial Motor - proportional reinsurance	Proportional reinsurance of commercial motor (refer definition)
Australia&NZ/Domestic Motor - proportional reinsurance	Proportional reinsurance of domestic motor business (refer definition)
Australia&NZ/Other prop reins type A	Proportional reinsurance of other type A business (refer definition)
Australia&NZ/Travel - proportional reinsurance	Proportional reinsurance of travel business (refer definition)

Australia&NZ/Fire and ISR - proportional reinsurance	Proportional reinsurance of Fire & ISR business (refer definition)
Australia&NZ/Marine and Aviation - proportional reinsurance	Proportional reinsurance of marine and aviation business (refer definition)
Australia&NZ/Consumer Credit - proportional reinsurance	Proportional reinsurance of consumer credit business (refer definition)
Australia&NZ/Other Accident - proportional reinsurance	Proportional reinsurance of other accident business (refer definition)
Australia&NZ/Other prop reins type B	Proportional reinsurance of other type B business (refer definition)
Australia&NZ/Mortgage - proportional reinsurance	Proportional reinsurance of mortgage business (refer definition)
Australia&NZ/CTP - proportional reinsurance	Proportional reinsurance of CTP business (refer definition)
Australia&NZ/Public and Product Liability - proportional reinsurance	Proportional reinsurance of public and product liability business (refer definition)
Australia&NZ/Professional Indemnity - proportional reinsurance	Proportional reinsurance of professional indemnity business (refer definition)
Australia&NZ/Employers' Liability - proportional reinsurance	Proportional reinsurance of employers' liability business (refer definition)
Australia&NZ/Other prop reins type C	Proportional reinsurance of other type C business (refer definition)
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/Accident and health	Providing fixed pecuniary benefits or benefits in the nature of indemnity (or a combination of both) against risks of the persons insured 1. Sustaining injury or dying as a result of accident; or 2. Becoming incapacitated in consequence of disease; or 3. Sickness.

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/Personal injury	This includes injury, travel and others (excluding those for foreigners) 1) injury: insurance for an insured person's bodily injury caused by a sudden and unexpected accident 2) travel: insurance for injuries inflicted while travelling within the Republic of Korea (domestic travel), insurance for injuries inflicted while travelling abroad (overseas travel) and insurance for injuries inflicted on persons staying abroad for a long time, such as students studying abroad and personnel stationed abroad (long stay abroad). 3) others: injury insurance products not listed 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/Health	Refers to the insurance business of writing health 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 - short residence	Fire insurance for personal residence (short-term)
Chinese Taipei/Fire - long residence	Fire insurance for personal residence (long-term)
Chinese Taipei/Fire - short commercial	Fire insurance for commercial building (short-term)
Chinese Taipei/Fire - long commercial	Fire insurance for commercial building (long-term)
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/Accident	Accident insurance for personal injuries or death
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)
Chinese Taipei/Health	Health insurance
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.

13.4.1.8 Catastrophe Risk

Relevant Worksheets in Template:	*ICS.Catastrophe*	*Due 14 August*

402. Catastrophe risk covers risks associated with claims events that are yet to happen, associated with low frequency and typically high severity events. This includes individual major claim as well as the aggregation of multiple claims arising from a single event. Catastrophe risk affects both life and non-life business. It considers all losses arising as a consequence of events 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. It can also affect written business that is no longer in force. Specifically liability catastrophes such as asbestos, pollution and changes in legal practice could cause increases in claims provisions for prior underwriting years.

403. Allowance can 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 13.3.2 on risk mitigation). The catastrophe risk charge should be calculated assuming that the payments from mitigations 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

13.4.3 on Credit Risk). The calculation of the recoverable amount by rating category is described at the end of this section.

404. Catastrophe risk is segmented at the risk/peril level. "Peril" is being interpreted in its broader sense to cover both naturally occurring perils ("natural catastrophe") and man-made perils/scenarios ("other catastrophe") and their consequences.

Scope of calculation

405. When calculating the catastrophe risk charge, the Volunteer IAIG should consider all lines of business exposed to cat 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, cancellation and some life insurance lines of business. To avoid double counting with the other components of the ICS capital requirement, the following principles should be applied:

- Life insurance products should be included only for the pandemic and the terrorism scenario (see below). This does not exclude workers compensation and other non-life products that could be impacted by other catastrophe events.
- The impact on financial markets and the whole economy (market and credit risks) should not be included in the calculation.

406. 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 following earthquake, sprinkler leakage and demand surge or loss amplification should be associated with earthquake as appropriate.

407. Before performing a detailed calculation, Volunteer IAIGs could assess the materiality of the impact of catastrophe events based on their contractual exposure to the perils and scenarios listed. For the purpose of 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 Cat risk part of the Questionnaire.

408. Volunteer IAIGs are required to report losses gross as well as net of protection from qualifying risk mitigations 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 be calculated net of reinstatement premium received and paid (i.e. net of inward and outward reinstatement premium).

Input data required

409. Volunteer IAIGs are required to report the following perils:

1. Natural catastrophe:
    a. Tropical cyclone, hurricane, typhoon
    b. Extra-tropical windstorm / winter-storm
    c. Earthquake
    d. Other material natural perils such as:
        i. Flood
        ii. Tornado, hail, convective storms
        iii. Other risks
2. Other catastrophe scenarios
    a. Terrorist attack
    b. Liability catastrophe
    c. Pandemic
    d. Marine
    e. Aviation
    f. Credit and surety

1. Natural catastrophe

410. For the purpose of the 2015 Field Testing, Volunteer IAIG are required to report the total annual aggregate loss amounts for the perils, risk measures and confidence levels specified in the Template:

- Rows 20 to 32 for the losses gross of protections (e.g. gross of external reinsurance protections);
- Rows 38 to 50 for the losses net of protections (e.g. net of external reinsurance protections).

411. The loss amounts should be calculated considering:

- The impact of the natural catastrophe on all lines of business affected;
- An allowance for non-modelled exposures including expected new business over the target time horizon of 1 year that could be affected by the listed perils;

- 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.

412. For the purpose of the 2015 Field Testing, Volunteer IAIGs are allowed to use stochastic catastrophe models (vendor or proprietary) to calculate the loss amounts resulting from natural catastrophe events.

413. The calculation should include the secondary perils/effects associated to the primary peril modelled such as, but not limited to, fire following earthquake, storm surge and including demand surge and loss amplification if relevant.

2. Other catastrophe scenarios

414. 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 405.

415. For each scenario below, the loss amounts gross and net of external protections should reported as per the split requested in the other catastrophe table (rows 54 to 82).

a. Terrorist attack

416. 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 loss to life insurance contracts, health coverage and workers compensation.

417. 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.

418. For property damage and related covers (e.g. business interruption), a 50% damage ratio within a circular zone of 100m radius, and a 20% damage ratio beyond 100m up to 200m should be assumed. For fatalities, a 10% fatality rate within a circular zone of 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 100m radius, and a 5% disability rate beyond 100m up to 200m should be assumed.

b. Liability catastrophe

419. The scenario is a liability catastrophe in the form of a generic event during the time horizon that causes the expectation of future new claims on liability business in force as well as from prior years at the end of the time horizon. It is assumed that the ultimate loss is not yet known at the end of the time horizon, but estimated at the current estimate.

420. The gross loss to the IAIG from the scenario is calculated by applying factors to Volunteer IAIGs' "gross premiums to be earned" for the following lines of business: workers' compensation, public liability, product liability, professional Indemnity and other affected lines, and including the corresponding non-proportional business.

421. Based on the segmentations reported for the non-life insurance risks (section 13.4.1.7), for the "Other developed markets" and "Other emerging markets", as a first example, the lines of business to be aggregated are: "Workers' compensation", "Public liability", "Product liability", "Professional Indemnity", "Other liability" and "Other long-tail" including the corresponding non-proportional business. For the US, as a second example, the lines of business to be aggregated are: "Workers compensation", "Commercial multi-peril (liability)", "Medical professional liability (occurrence + claims made)", "Other liability – occurrence", "Other liability – claims made" and "Products liability", also including the corresponding non-proportional lines of business.

422. The factors distinguish

- the regions "EEA and Switzerland", "USA and Canada", "Japan", "China", "Other developed markets" and "Emerging markets"; and
- proportional vs non-proportional business.

Table 9. Liability Catastrophe Factors

Regions	**Factor for <u>not</u> non-proportional**	**Factor for non-proportional**
EEA and Switzerland	65%	125%
USA and Canada	100%	210%
Japan	50%	100%
China	50%	100%
Other developed markets	50%	100%
Emerging markets	25%	50%

423. The net loss to the Volunteer IAIG from the scenario is calculated by applying the qualifying risk mitigation arrangements.

c. Pandemic

424. The scenario is defined as the increase in the number of deaths following a global pandemic.

425. The scenario should be calculated as the total loss amount to all individual and group life 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.

d. Marine

426. 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).

427. The scenario should be calculated for the largest risk concentration resulting from the above specified scenario.

e. Aviation

428. 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.

429. The scenario should be calculated for the largest loss amount resulting from the above specified scenario.

f. Credit and surety

430. The Capital charge for this scenario is the sum of the losses calculated for the three components detailed below:

- Mortgage insurance
- Trade credit
- Surety

Mortgage insurance

431. The credit stress scenario for mortgage insurance is defined as a decline in home prices which includes 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 will persist for the entire 1-year time period. The total loss amount should include the impact of both an increase in frequency of delinquency and default; and increased loss severity that result from the decline in home prices.

432. In implementing the stress scenario and to account for differences in risk profiles across various exposures and activities, companies 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 should be used that the IAIG already uses to calculate stress losses, premium deficiency reserves or other loss measures.

Table 10. 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%

433. The scenario should be calculated as an aggregate loss amount resulting from an increase in frequency and severity due to the specified home price path above.

Trade Credit

434. The credit stress scenario for Trade Credit is defined as 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.

435. 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 will be applied to the net premium earned without further adjustment for reinsurance protection (e.g. non-proportional reinsurance).

Table 11. Credit Stresses for Trade Credit

Rating category	Factor
Investment Grade	80%
Non-Investment Grade	200%

436. 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.

437. 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.

438. The total loss amount should be adjusted for any existing loss mitigation, including reimbursements from insured, retention etc.

Surety

439. The credit stress scenario for surety is defined as the total net potential loss amount based on the penal sum of the surety bond. 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.

440. The net potential loss amount for a principal is calculated using the gross exposure of the principal (after any contractual amortization 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 as loss severity model 95% PML worst gross loss 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 IAIG) and any reinsurance arrangements. Please use the example below as a guide.

Table 12. 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

441. 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.

Aggregation of catastrophe risks

442. For the purpose of calculating the ICS capital 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:

$$ICS_{Cat} = \sqrt{ICS_{NatCat}^2 + ICS_{NaTerror}^2 + ICS_{Liab}^2 + ICS_{Pand}^2 + ICS_{Marine}^2 + ICS_{Aviation}^2 + ICS_{Credit}^2}$$

Calculation of the recoverable amount to be used for the calculation of the contingent credit risk

443. For the purpose of the ICS capital requirement calculation, the following simplification will be applied: The recoverable amount should be calculated as the difference between the capital charge for catastrophe risk calculated as if the risk mitigation arrangements did not exist and the capital charge for catastrophe risk calculated taking into account qualifying risk mitigation arrangements.

444. 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, which 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 with the ratio between the sum over all scenarios of the recoveries in that rating class divided by the sum over all scenarios of the recoveries for all rating classes.

445. 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.

		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

446. The recoverable amounts by rating categories have to be reported in the column F ("Reduction in ICS capital requirements") of the credit risk worksheet and be subject to the 1-2 years maturity charge.

13.4.2 Market risk

447. When considering market risk, 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.

13.4.2.1 Interest Rate risk

Relevant Worksheets in Template:	*ICS.Market.Interest rate* *ICS.Market.Interest rate.G+*	*Due 14 August*

448. These Technical Specifications for Interest Rate Risk apply to both the worksheets *ICS.Market.Interest rate* and *ICS.Market.Interest rate.G+* for the Market-Adjusted approach and GAAP Plus approach respectively.

449. For the Market-Adjusted 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 in section 6.3.14.

450. For the GAAP Plus approach, where yield curves are not used but a single discount rate is used instead the formulas given below are to be applied to the single discount rates used in the GAAP Plus approach. Volunteer IAIG should select the stress to apply to the single discount rate that corresponds to the average duration of the liabilities.

451. Under the scenario approach being used for 2015 Field Testing, the changes in the values of assets and liabilities are calculated by balance sheet segment for each of the interest rate curves scenario (for assets segments please refer to Table 15; for Non-Life, no segmentation is required – please report one figure for total Non-Life). The interest rate risk charge (automatically calculated in the Template) is the largest decrease in capital resources (i.e. the change in the difference between assets and liabilities) under any of the scenarios.

452. The scenario 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 13.3.1 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 scenarios. Non-discounted liabilities are included in the calculation, but should not show any movement under the interest rate scenarios. The Volunteer IAIG should report (line 7 under the 'Assets' table) the changes in value of all financial instruments used for hedging interest rate risk that are in place at the measurement date.

Scenario 1 (interest rate up):

453. The risk-free interest rate (excluding all spreads) r_i at each duration i moves up according to the formula:

$$r_i' = r_i + a_i\sqrt{\max(r_i, 0.5\%)} + b_i$$

where a_i and b_i are as specified in Table 13. For fractional durations, use the formula for the next highest integer duration. Assets are revalued by increasing the asset valuation discount rates used by the amounts specified. Liabilities are revalued by increasing the discount rates used by the same amounts. The revaluation of liabilities should take into account all changes in cash flows resulting from the interest rate stress. These include cash flow changes resulting from crediting floors,

participating/profit sharing features, different lapse rates under the stress, and different rates of exercise of other policyholder options.

454. The cash surrender value of an insurance policy must be taken into account in the liability revaluation as follows: If an insurance policy has a contractually fixed cash surrender value that is above the liability for the policy, the liability for the policy may not be assumed to decrease under the stress scenario. If the cash surrender value is below the liability, the liability for the policy under the stress scenario may not be assumed to fall below the cash surrender value.

Scenario 2 (interest rate down):

455. The risk-free interest rate excluding all spreads r_i at each duration i moves down according to the formula:

$$r_i' = r_i - a_i\sqrt{\max(r_i, 0.5\%)} + b_i$$

where a_i and b_i are as specified in Table 13. If an interest rate r_i' is negative, it should *not* be floored at zero or otherwise adjusted. Assets and liabilities should be revalued according to the same principles as in scenario 1.

Scenario 3 (interest rate flattening):

456. The interest rate curve flattens, with interest rates at shorter durations increasing and interest rates at longer durations decreasing. The risk-free interest rate at each duration moves according to the formula:

$$r_i' = r_i + c_i\sqrt{\max(r_i, 0.5\%)} + d_i$$

where c_i and d_i are as specified in Table 14. Assets and liabilities should be revalued according to the same principles as in the first two scenarios.

Table 13. Interest rate parameters for scenarios 1 and 2

Year i	a_i	b_i	Year i	a_i	b_i	Year i	a_i	b_i
1	0.2000	0.0100	21	0.1260	0.0040	41	0.0794	0.0016
2	0.1954	0.0095	22	0.1231	0.0038	42	0.0776	0.0015
3	0.1910	0.0091	23	0.1203	0.0036	43	0.0758	0.0014
4	0.1866	0.0087	24	0.1176	0.0035	44	0.0741	0.0014
5	0.1823	0.0083	25	0.1149	0.0033	45	0.0724	0.0013
6	0.1782	0.0079	26	0.1122	0.0031	46	0.0707	0.0012
7	0.1741	0.0076	27	0.1097	0.0030	47	0.0691	0.0012

8	0.1701	0.0072	28	0.1072	0.0029	48	0.0675	0.0011
9	0.1662	0.0069	29	0.1047	0.0027	49	0.0660	0.0011
10	0.1625	0.0066	30	0.1023	0.0026	50	0.0645	0.0010
11	0.1587	0.0063	31	0.1000	0.0025	51	0.0630	0.0010
12	0.1551	0.0060	32	0.0977	0.0024	52	0.0616	0.0009
13	0.1516	0.0057	33	0.0955	0.0023	53	0.0602	0.0009
14	0.1481	0.0055	34	0.0933	0.0022	54	0.0588	0.0009
15	0.1447	0.0052	35	0.0912	0.0021	55	0.0574	0.0008
16	0.1414	0.0050	36	0.0891	0.0020	56	0.0561	0.0008
17	0.1382	0.0048	37	0.0871	0.0019	57	0.0548	0.0008
18	0.1350	0.0046	38	0.0851	0.0018	58	0.0536	0.0007
19	0.1320	0.0044	39	0.0831	0.0017	59	0.0524	0.0007
20	0.1289	0.0042	40	0.0812	0.0016	60+	0.0512	0.0007

Table 14. Interest rate parameters for scenario 3

Year i	c_i	d_i	Year i	c_i	d_i	Year i	c_i	d_i
1	0.1400	0.0070	21	-0.0294	0.0003	41	-0.0556	0.0011
2	0.1277	0.0058	22	-0.0345	0.0004	42	-0.0543	0.0011
3	0.1159	0.0048	23	-0.0393	0.0006	43	-0.0531	0.0010
4	0.1045	0.0039	24	-0.0439	0.0007	44	-0.0518	0.0010
5	0.0936	0.0031	25	-0.0482	0.0008	45	-0.0507	0.0009
6	0.0832	0.0025	26	-0.0524	0.0010	46	-0.0495	0.0009
7	0.0731	0.0019	27	-0.0563	0.0011	47	-0.0484	0.0008
8	0.0635	0.0014	28	-0.0600	0.0013	48	-0.0473	0.0008
9	0.0543	0.0011	29	-0.0635	0.0014	49	-0.0462	0.0008
10	0.0455	0.0007	30	-0.0669	0.0016	50	-0.0451	0.0007
11	0.0370	0.0005	31	-0.0700	0.0017	51	-0.0441	0.0007
12	0.0290	0.0003	32	-0.0684	0.0017	52	-0.0431	0.0007
13	0.0212	0.0002	33	-0.0668	0.0016	53	-0.0421	0.0006
14	0.0138	0.0001	34	-0.0653	0.0015	54	-0.0411	0.0006
15	0.0068	0.0000	35	-0.0638	0.0015	55	-0.0402	0.0006

16	0.0000	0.0000	36	-0.0624	0.0014	56	-0.0393	0.0006
17	-0.0064	0.0000	37	-0.0609	0.0013	57	-0.0384	0.0005
18	-0.0126	0.0001	38	-0.0595	0.0013	58	-0.0375	0.0005
19	-0.0185	0.0001	39	-0.0582	0.0012	59	-0.0367	0.0005
20	-0.0241	0.0002	40	-0.0569	0.0012	60+	-0.0358	0.0005

Table 15. 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
Non-investment assets	Reinsurance recoverables
	Other reinsurance assets
	Other non-investment assets
Assets related to Non-traditional activities	Assets related to Non-traditional activities
Fair values of financial instruments used for hedging	Notional values of interest rate derivatives used for hedging

13.4.2.2 Equity risk

Relevant Worksheets in Template:	*ICS.Market.Equity* *ICS.Market.Equity.G+*	*All due 14 August*

Definition of equity risk

457. These Technical Specifications for Equity Risk apply to both the worksheets 15.ICS.Mkt.Equity.MA and 15.ICS.Mkt.Equity.G+. In the context of the standard method for the ICS capital requirement in 2015 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 whose value is sensitive to changes in the level or volatility of market prices for equities.

458. The indirect impacts are linked to products held by the Volunteer IAIG which 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 13.3.1 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

Segmentation

459. For the calculation of the capital requirement for equity risk, the following segments of assets is used in the Template:

a) Listed equity in developed markets
b) Listed equity in emerging markets
c) Preference shares / hybrid debt
d) Other equity

460. The segment "other equities" shall comprise equities which are not listed, hedge funds, limited partnerships, commodities, infrastructure and other alternative investments.

461. "Listed equity in developed markets" includes equities listed on the securities exchanges of countries used in the calculation of the MSCI ACWI Developed Market index[37]: Austria, Australia,

[37] See https://www.msci.com/market-cap-weighted-indexes (accessed on 24 April 2015)

Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, UK, and USA.

462. While the MSCI ACWI Emerging Markets index is based on only 23 countries, for the purposes of 2015 Field Testing, any country not included in the MSCI ACWI Developed Market index is to be considered an 'emerging market'.

463. All subordinated debt and subordinated loans should be included in the segment "preference shares / hybrid debt." Consequently, they should not bear any credit risk charge.

464. 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 458) and derivatives.

465. 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 3).

466. The impact to liabilities other than insurance liabilities should also be reported in the Template.

Calculation of the equity risk charge

467. The risk charge for equity risk is calculated as the greater decrease in capital resources of the Volunteer IAIG following the occurrence of two scenarios described below (scenario 1 and scenario 2), taking into account all the Volunteer IAIG's individual direct and indirect exposures to equity risk as defined above.

468. Both scenarios are to be calculated before and after management actions. The greater decrease referred to in the paragraph above will be automatically identified in the Template based on the impact after management actions: the scenario finally selected for the calculation of the risk charge both before and after management actions will be the one leading to the bigger impact after management actions.

469. The standard method equity risk charge used for the aggregation of the global capital risk charge will be calculated after management actions.

Scenario 1 (prices down, volatility up):

470. A shock consisting in a simultaneous:

a) Instantaneous relative decrease by 38% of the market prices of all listed shares in developed markets
b) Instantaneous relative decrease by 46% 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 210% of the volatilities of all the asset classes listed above for all maturities
e) Instantaneous relative decrease of the market prices of hybrid debt / preference shares by :

Table 16.

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
38%	when the item rated b or below

Scenario 2 (prices down, volatility down):

471. A shock consisting in a simultaneous:

a) Instantaneous relative decrease by 38% of the market prices of all listed shares in developed markets
b) Instantaneous relative decrease by 46% 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 decrease by 80% of the volatilities of all the asset classes listed above for all maturities
e) Instantaneous relative decrease of the market prices of hybrid debt / preference shares by:

Table 17.

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
38%	when the item rated b or below

472. Information on “prices down” only scenarios should be provided by volunteer IAIGs in order to give information on the incremental effect of the volatility shock.

473. Volunteer IAIGs should provide information on “prices up” scenarios, in particular when the “prices up” scenarios possibly lead to a risk charge for equity risk greater than the one calculated with the two “prices down” scenarios; for that purpose, IAIGs should base their assessments on the two scenarios described below (scenarios 3 and 4). Where providing quantitative information about the

scenarios is too burdensome, the Volunteer IAIG should simply provide qualitative information about the type and degree of impact of such scenarios on their net financial position in the Questionnaire.

Scenario 3 (prices up, volatility up):

474. A shock consisting in a simultaneous:

a) Instantaneous relative increase by 63% of the market prices of all listed shares in developed markets
b) Instantaneous relative increase by 110% of the market prices of all listed shares in emerging markets
c) Instantaneous relative increase by 121% of the market prices of all other types of assets
d) Instantaneous relative increase by 210% of the volatilities of all the asset classes listed above for all maturities
e) No change in the market prices of hybrid debt / preference shares.

Scenario 4 (prices up, volatility down):

475. A shock consisting in a simultaneous:

a) Instantaneous relative increase by 63% of the market prices of all listed shares in developed markets
b) Instantaneous relative increase by 110% of the market prices of all listed shares in emerging markets
c) Instantaneous relative increase by 121% of the market prices of all other types of assets
d) Instantaneous relative decrease by 80% of the volatilities of all the asset classes listed above for all maturities
e) No change in the market prices of hybrid debt / preference shares.

13.4.2.3 Real Estate risk

Relevant Worksheets in Template:	*ICS.Market.Real estate*	*Due 14 August*

476. 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.

477. Taking into account the feedback received on the ICS Consultation Document[38] , a simplified approach has been retained for real estate risk for the standard method tested as part of 2015 Field Testing with only a change in the level of real estate prices.

478. 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.

479. Real estate exposures subject to this risk include both direct and indirect exposures to real estate (see sections 4.3 and 13.3.1 on look through).

480. 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.

481. Mortgage values of assets secured by mortgages are not included in the Real estate risk (see section 13.4.3 on Credit risk).

482. 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 2015 Field Testing.

Results (Real Estate risk summary)

483. After Management Actions – The real estate risk charge within the standard method is defined as the change in net asset value after applying the prescribed stress and after management actions and is calculated automatically within the Template based on input data.

484. Before Management Actions – The change in net asset value before management actions is also required (see section 13.3.4 for definition of 'management actions') and is calculated automatically within the Template based on input data.

Input data

485. Input data required for this risk charge:

- Value Pre-Shock – The pre-shock value of assets and liabilities sensitive to real estate price, including direct and indirect exposure, for
  - Commercial investment, according to:
    - Direct ownership
    - Look-through
  - Residential investment
    - Direct ownership
    - Look-through

[38] http://iaisweb.org/index.cfm?event=getPage&nodeId=25229

- Real Estate for own use
- Other assets
- Liabilities – this includes insurance liabilities and other liabilities

- 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);
- Effect of management actions – Effects of the management actions and risk mitigation on net asset value after applying prescribed shocks. This should be entered as a positive number.

Calculation

486. 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 value of all property exposures.

487. The initial base calibration shock level for commercial real estate has been determined by examining the range of real estate risk calibrations used by various jurisdictions.

488. 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.

489. **This initial calibration tested in 2015 Field Testing is subject to change based on further analysis and evidence. Further analysis will be done to consider whether the shocks presented above could vary by geographical grouping.**

13.4.2.4 Currency risk

Relevant Worksheets in Template:	*ICS.Market.Currency*	*Due 14 August*

490. The look-through approach set out in section 13.3.1 should be applied on a best efforts basis for the purposes of 2015 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.

491. Currency risk exposures consist of 35 predefined currencies and the 10 largest currencies (by insurance liabilities) not included in this predefined list. In choosing the currencies to report in this worksheet, the general principles of best efforts and proportionality should be taken into account (see section 4.2).

492. 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 summing:

- the net spot position, defined as all asset items less all liability items denominated in the currency under consideration, including accrued interest and accrued expenses
- the net forward position, defined as all net amounts under forward foreign exchange transactions, including currency futures and the principal on currency swaps
- the delta equivalent amounts of currency options
- guarantees and similar instruments that are certain to be called and are likely to be irrevocable
- at the discretion of the volunteer, net future income and expenses not yet accrued but already fully hedged
- any other item representing a profit or loss in the foreign currency

493. The net open currency position should exclude assets that are fully deducted from capital resources (e.g. goodwill), and liability items that qualify to be included in consolidated capital resources (e.g. subordinated debt).

494. 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.

495. The local capital requirement reported for each currency should be the total of the prescribed capital requirements for all business reported in that currency to the local supervisor(s). This additional data will be used to consider possible refinements to the currency stress.

496. Forward currency positions should be valued at current spot market exchange rates. Insurers should not use forward exchange rates, as these rates reflect current interest rate differentials.

497. An insurer's net capital investment in a foreign subsidiary includes all positions arising from instruments issued by the subsidiary to the insurer 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.

498. Report the new value of each net open currency position under the following stress scenarios:

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 30% if both the reporting and foreign currencies are in developed markets, and 60% for all other foreign currencies.

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 30% if both the reporting and foreign currencies are in developed markets, and 60% for all other foreign currencies.

499. 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.

500. For the purposes of these scenarios, 'developed markets' are defined as Australia, Austria, Belgium, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong SAR, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Malta, Netherlands,

New Zealand, Norway, Portugal, San Marino, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Taiwan Province of China, United Kingdom and United States[39].

[39] Taken from the IMF list of Advanced Economies (http://www.imf.org/external/pubs/ft/weo/2015/01/weodata/groups.htm), accessed 28 May 2015

13.4.2.5 Asset Concentration risk

Relevant Worksheets in Template:	*ICS.Market.Asset Concentration*	*Due 14 August*

501. In the table for calculating the asset concentration risk threshold, the thresholds are automatically calculated using the ICS qualifying capital resources (as determined from section 7) and total assets (***for insurance business***, excluding assets in separate accounts or where the investment risks fully flow-through[40] to policyholders)based upon the Market-Adjusted approach.

502. The table for calculating the asset concentration risk charge only applies to amounts of net exposures ***in excess*** of the asset concentration risk thresholds.

503. 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 2015 Field Testing, the BCBS definition[41] 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.

504. 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, on the same block), including exposures from both direct and indirect (such as funds of properties and mortgage) holdings.

505. 2015 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.

[40] Not considering any guarantee to policyholders that may exist on the value of the overall investment fund(s) such as on variable annuity products

[41] 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.

506. 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 the ICS capital charge framework;

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 example standard method should also apply here. Where the a look-through approach in other modules allow for practical exceptions, the investment fund, structured product etc. should be assessed as a separate counterparty for asset concentration risk purposes.

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 Market-Adjusted values, except where otherwise specified (such as use of 'credit-equivalent' amounts).

507. 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 with the ICS credit risk section may be used, if favourable, for the portion of exposure

that is covered by the collateral and guarantees – and 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 aggregated 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 ICS concentration risk charges within the 2015 Field Testing.

508. Aggregate amount exceeding threshold – This figure is the total of:

- Exposures to each single non-affiliated (to the volunteer IAIG) or group of connected counterparties exceeding the relevant threshold
- Exposures to each single real estate property exceeding the relevant threshold
- Exposures to each group of very close proximity properties (see paragraph 504) exceeding the relevant threshold

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.

509. 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.

510. The incremental risk charge factors are for 2015 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 the final ICS.

511. The worksheet includes a separate section for the supplementary reporting of certain information:

- **For G-SII designated groups**, the aggregated net exposures to a single counterparty/ group of connected counterparties identified as G-SIFIs, and whose net exposures exceed the specified lower applicable threshold.
- Information on 'own-use' property, as a subset of the property exposures exceeding the applicable thresholds.

13.4.3 Credit risk

Relevant Worksheets in Template:	*ICS.Credit Risk*	*Due 14 August*

512. 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.

513. The look-through approach set out in section 13.3.1 should be applied on a best efforts basis for the purposes of 2015 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.

514. The Market-Adjusted values of on-balance sheet assets should be entered in column [1] of the credit risk worksheet, 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 capital requirement is determined by applying specified factors based on exposure class, rating category and maturity to the net exposure amounts 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.

Exposure classes

515. The credit risk requirement 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 requirement, and are instead subject to the equity risk requirements for hybrid securities described in section 13.4.2.2.

516. 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. 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.

517. 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.

518. The class of securitization exposures reported in the Securitizations 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 securitization exposure is itself a securitization, then the exposure must be reported as a re-securitization in the Re-securitizations table.

519. Report residential mortgages and commercial mortgages 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.

520. Assets that are held in separate accounts and for which all credit risk fully flows through to policyholders may be excluded from the credit risk requirement and may be excluded from this worksheet entirely.

Definition of rating categories

521. Insurers may recognize the agency and NAIC rating categories listed in the table below for the purpose of determining the ICS credit risk rating category of an externally rated issuer or obligation. 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 18. Mapping of Ratings to ICS Rating Category

ICS Rating Category	S&P	Moody's	Fitch	NAIC	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	1	A / J-2	A / a-2	A / R-2
4	BBB / A-3	Baa / P-3	BBB / F3	2	BBB / J-3	BBB / a-3	BBB / R-3
5	BB	Ba	BB	3	BB	BB	BB
6	B / B	B / NP	B / B	4	B / NJ	B / b	B / R-4
7	CCC / C and lower	Caa and lower	CCC / C and lower	5	CCC and lower	CCC / c and lower	CCC / R-5 and lower

522. Additionally, insurers may recognize any rating agency that the banking regulator in its jurisdiction has recognized as an 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 Table 18 should be considered as investment grade.

523. If an insurer wishes to recognize ratings produced by any other rating agency, the agency must be regulated or recognized by a suitable government authority in all of the jurisdictions in which the agency issues ratings that the insurer wishes to recognize. 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:

> 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.

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.

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.

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.

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.

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.

524. 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:

Table 19. 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%

525. If an insurer 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:

- The name of the rating agency
- The name of the national authority that regulates or has recognized the rating agency, along with a summary of how the authority regulates, or the criteria that the authority uses for recognizing rating agencies
- The rating agency's definition of default, including a link to where the definition is posted
- 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
- Which agency ratings the insurer has mapped to which ICS rating categories.

Instructions around the use of ratings

526. An insurer must choose the rating agencies it intends to rely on and then use their ratings consistently for each type of claim. Insurers may not cherry pick the assessments provided by different rating agencies.

527. 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.

528. If an insurer 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 an insurer and these assessments differ, the insurer 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 an insurer's chosen rating agencies, the insurer 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 insurer should use the second-highest rating from those available, allowing for multiple occurrences of the highest rating).

529. Where an insurer 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 an insurer's claim is not an investment in a specifically rated security, the following principles apply:

- In circumstances where the borrower has a specific rating for an issued debt security, but the insurer'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 insurer'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 insurer's claim must be treated as an unrated obligation.
- 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.
- 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 generalized 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.
- 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.

530. The following additional conditions apply to the use of ratings:

- 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.
- No rating may be inferred for an unrated entity based on assets that the entity possesses.
- In order to avoid the double counting of credit enhancement factors, insurers may not recognize collateral or guarantees if these credit enhancements have already been reflected in the issue-specific rating.

- An insurer may not recognize a rating if the rating is at least partly based on unfunded support (e.g. guarantees, credit enhancement or liquidity facilities) provided by the insurer itself or one of its affiliates.
- 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 an insurer 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.

Exposures in default

531. Any asset that is contractually more than 90 days in arrears, or for which there is otherwise 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.

532. 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.

Redistribution of exposures for credit risk mitigation

533. Eligible credit risk mitigation (i.e. collateral and guarantees) is recognized 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 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.

Distribution of exposures by maturity

534. Insurers 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 sum of the exposures distributed by maturity in columns [5] to [15] must equal the sum of the exposures in columns [1] to [4]. The effective maturity should be calculated by exposure (e.g. for each asset or each counterparty exposure), not by cash flows. Insurers 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.

535. Effective maturity is calculated as follows:

- 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.

- If an insurer 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.
- 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.

Reinsurance exposures

536. Reinsurance exposures include all on-balance sheet reinsurance assets and receivables, which should be reported in column [1]. 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]. When a Volunteer IAIG reduces its ICS capital requirements on account of reinsurance, the credit risk charge is applied on the capital reduction.

537. 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 which 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).

538. Modified coinsurance and funds withheld arrangements are subject to a capital requirement even if there is no on-balance sheet reinsurance asset or the reinsurance asset is fully offset by payables.

539. 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:

- 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.

- 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.

    - 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.

    - A legal opinion must be generally recognized 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.

- 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.

Securities financing transactions

540. Report 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.

Credit risk factors

541. The following tables contain the ICS credit risk factors for the exposure classes by ICS rating category and maturity[42]:

Table 20. Credit Risk 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%
In Default	38%	38%	38%	38%	38%	38%	38%	38%	38%	38%	38%

[42] These factors were generated 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.

Table 21. Credit Risk 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 22. Credit Risk Factors for Securitizations:

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 23. Credit Risk Factors for Re-securitizations:

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%

542. The credit risk factors for performing residential and commercial mortgages are 3.6% and 8% respectively. The factor for mortgages in default is 38%.

543. The credit risk factor for policy loans is 0%. The factor for deposits and other short-term obligations of regulated banks is 0.4%. All other assets receive a factor of 8%.

Criteria for recognition of collateral

544. A collateralised transaction is one in which:

- a Volunteer IAIG has a credit exposure or potential credit exposure; and
- 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.

545. The following standards must be met before relief will be granted in respect of any form of collateral:

- The effects of collateral may not be double counted. Therefore, Volunteer IAIGs may not recognize 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.

546. All documentation used in collateralized 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.

- 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 IAIG's 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.

- 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.
- 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.
- 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.

547. Only the following collateral instruments are eligible to be recognised:

- Rated debt securities where these securities are:
  - rated category 5 or better and issued by a sovereign; or
  - rated category 4 or better and issued by other entities (including banks, insurance companies, and securities firms)
- Gold.
- Mutual funds where:
  - a price for the units is publicly quoted daily; and
  - the mutual fund is limited to investing in the eligible instruments listed above.

548. For collateral to be recognized, 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 collateralized 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.

Criteria for recognition of guarantees and credit derivatives

549. 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 capital requirements. A range of guarantors and protection providers is recognized.

Operational requirements

550. 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.

551. 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 a 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.

552. 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.

553. The following conditions must be satisfied in order for a guarantee to be recognized:

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.

554. In addition to the conditions above, the following conditions must be satisfied in order for a credit derivative contract to be recognized:

a) The credit events specified by the contracting parties must at a minimum cover:
   - 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);
   - 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
   - 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 recognized 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.

555. 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 recognized 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.

556. 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 recognized.

557. Other types of credit derivatives are not eligible for recognition.

Eligible guarantors

558. Volunteer IAIGs may recognize credit protection given by the following entities:

- sovereigns;
- externally rated public sector entities, banks and securities firms with a higher rating category than that of the counterparty; and
- 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.

559. However, a Volunteer IAIG may not recognize 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.

Capital treatment

560. 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.

561. 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 securitization exposures based on the ratings of the guarantors. If a tranche does not carry a rating, it must be reported as an unrated securitization exposure even if the underlying exposure is rated.

562. 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 securitization exposures.

Currency mismatches

563. 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.

Maturity mismatches

564. 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 lower than one year, the protection may not be recognized. As a result, the maturity of protection for exposures with original maturities less than one year must be matched to be recognized. Additionally, credit protection with a residual maturity of three months or less may not be recognized if there is a maturity mismatch. Credit protection will be partially recognized in other cases where there is a maturity mismatch.

565. The maturity of the underlying exposure and the maturity of the credit protection should both be measured conservatively. The effective maturity of the underlying 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.

566. 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

Sovereign counter-guarantees

567. 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:

- the sovereign counter-guarantee covers all credit risk elements of the claim;
- 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
- 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.

Other items

568. 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.

Credit equivalent amount for OTC derivatives

569. 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:

- The total replacement cost (obtained by "marking to market") of all its contracts with positive value; and
- 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 24. 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.

570. 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.

571. Volunteer IAIGs that wish to net transactions under either novation or another form of bilateral netting must satisfy the following conditions:

- 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.
- 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.
    - 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.
    - A legal opinion must be generally recognized as such by the legal community in the firm’s home country or by a memorandum of law that addresses all relevant issues in a reasoned manner.
- 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.

- 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.
- The Volunteer IAIG maintains all required documentation in its files.

572. Any contract containing a walkaway clause will not be eligible to qualify for netting for the purpose of calculating capital requirements. 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.

573. 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.

574. 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.

575. 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.

576. 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.

577. 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.

Credit equivalent amount for other off-balance sheet exposures

578. 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:

- 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.
- 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%.
- Sale and repurchase agreements and asset sales with recourse, where the credit risk remains with the Volunteer IAIG, receive a CCF of 100%.
- Forward asset purchases, forward deposits and partly-paid shares and securities, which represent commitments with certain drawdown will receive a CCF of 100%.
- 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%.
- Note issuance facilities (NIFs) and revolving underwriting facilities (RUFs) receive a CCF of 50%.
- 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.
- 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.
- All off-balance sheet securitization exposures receive a CCF of 100%.

13.4.4 Operational risk

Relevant Worksheets in Template:	*ICS.Operational risk*	*Due 14 August*

Geographical Segmentation

579. All data items in this worksheet should be split into the proposed geographical segments:

- EEA and Switzerland

- US and Canada
- China
- Japan
- Other developed
- Emerging market

See section 13.3.3 for further details on the definitions of these geographical segments.

580. All data items in this worksheet should be split into the following business segments:

- Non-life – insurance products that do not relate to life or long-term health. Often referred to property and casualty or general insurance. Products would include auto/motor, property, workers' compensation/employers' liability, other liability, personal accident, short-term health and credit/surety/pecuniary.
- Life (risk) – risk insurance products that relate to life or long-term health. Products would include individual life, group life, individual health protection, group pension and annuities (with a life aspect).
- Life (non-risk) (for items 3.1, 3.2 and 4.1 only) – products where the policyholder bears the investment risk. It will include segmented funds and accumulation annuities.

581. In addition, non-life and life (risk) should be split into:

- Direct – insurance written directly to the policyholder
- Assumed – insurance written of another insurance company not included in the scope of the group

Input data required

582. **The initial design and calibration proposed for the 2015 Field Testing is subject to refinements based on further analysis and evidence. As such, additional information is collected in this worksheet for supplementary testing.** 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.

1.1 Gross written premium - most recent financial year

583. 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.

584. For example, for a Volunteer IAIG that balances on 31 December, item 1.1 is the year from 1 January 2014 to 31 December 2014.

585. The operational risk factors are applied to the direct and assumed business to determine the potential operational risk charge. The factors have not been finalised and are for the purposes of field testing only.

1.2 Gross written premium - financial year minus 1

586. 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.

587. This would be the previous year to the figure reported in item 1.1.

588. For example, for a Volunteer IAIG that balances on 31 December, item 1.2 is the year from 1 January 2013 to 31 December 2013.

1.3 Gross written premium - financial year minus 2

589. 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.

590. This would be two years previous to the figure reported in item 1.1 and the previous year to item 1.2.

591. For example, for a Volunteer IAIG that balances on 31 December, item 1.3 is the year from 1 January 2012 to 31 December 2012.

1.4 Gross written premium – growth in premium above threshold

592. This section calculates the growth in gross written premium above a set threshold. Falls in gross written premium are recorded as a zero. The threshold has not been finalised and is set to 20 per cent for the purposes of field testing only. The threshold is applied at the direct and

assumed level and at this stage does not consider growth at a regional level. This level of granularity for operational risk charge for growth has not been finalised and is for the purposes of field testing only.

1.5 Net written premium - most recent financial year

593. 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.

594. For example, for a Volunteer IAIG that balances on 31 December, item 1.5 is the year from 1 January 2014 to 31 December 2014.

2.1 Gross earned premium - most recent financial year

595. 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.

596. For example, for a Volunteer IAIG that balances on 31 December, item 2.1 is the year from 1 January 2014 to 31 December 2014.

2.2 Gross earned premium - financial year minus 1

597. 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.

598. This would be the previous year to the figure reported in item 2.1.

599. For example, for a Volunteer IAIG that balances on 31 December, item 2.2 is the year from 1 January 2013 to 31 December 2013.

2.3 Gross earned premium - financial year minus 2

600. 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.

601. This would be two years previous to the figure reported in item 2.1 and the previous year to item 2.2.

602. For example, for a Volunteer IAIG that balances on 31 December, item 2.3 is the year from 1 January 2012 to 31 December 2012.

2.4 Net earned premium - most recent financial year

603. 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.

604. For example, for a Volunteer IAIG that balances on 31 December, item 2.1 is the year from 1 January 2014 to 31 December 2014.

3.1 Gross current estimate of insurance liabilities

605. Report the gross current estimate of insurance liabilities 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.

606. The operational risk factors are applied to the direct and assumed business to determine the potential operational risk charge. The factors have not been finalised and are for the purposes of field testing only.

3.2 Net current estimate of insurance liabilities

607. Report the net current estimate of insurance liabilities 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.

4.1 Operational risk charge

608. The operational risk charge is calculated as follows:

Op risk =
max (non-life op risk (premium), non-life op risk (liabilities)) + non-life op risk (growth) +
max (life(risk) op risk (premium), life (risk) op risk (liabilities)) + life op risk (growth) +
life (non-risk) op risk (liabilities)

5.1 Economic capital held for operational risk – IAIS segmentation

609. Report the amount of operational risk capital which is calculated using the Volunteer IAIG's own economic capital models. This should be provided in the segmentation as specified for the rest of this worksheet. If the Volunteer IAIG's own economic capital model does not use the same segmentation and it is difficult to re-classify the Volunteer IAIG may instead complete item 4.2.

5.2 Economic capital held for operational risk – IAIG segmentation

610. Report the amount of operational risk capital which is calculated using the Volunteer IAIG's own economic capital models. This should be provided in the business segmentation that the Volunteer IAIG uses to manage its business. The Volunteer IAIG should only provide a total as it is unlikely that the geographical segments will be the same as those specified by the IAIS.

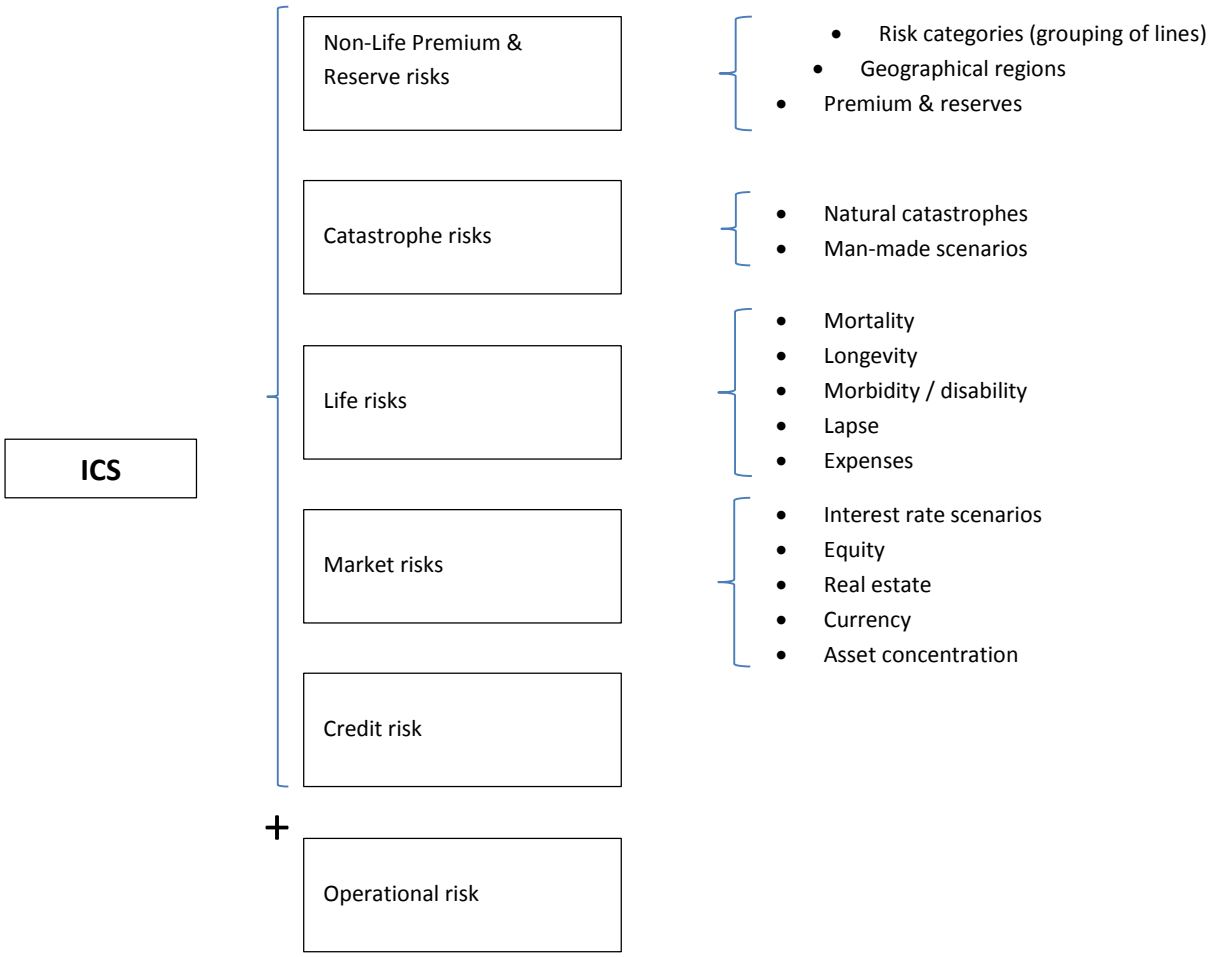
13.4.5 Aggregation/Diversification

611. 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 1 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.

612. 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.

613. Considering the feedback received during the ICS consultation, a multiple steps approach is adopted for the 2015 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.

614. The resulting aggregation steps are illustrated as follows:



14 Supplementary Data Collection (Net Insurance Liabilities and Sovereign Exposures)

Relevant Worksheets in Template:	*FT2015.Sovereign*	*Due 14 August*

615. Exposures are to be based on the Market-Adjusted 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).

616. The intent of the tables is to collect jurisdictional data on net insurance liabilities and on sovereign exposures (by issued sovereign currency 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, or is part of an agreement with other jurisdictions to use and manage a common currency. Some jurisdictions issue debt instruments denominated in currencies other than their sovereign currency, particularly some emerging markets issue debt instruments in US dollars. In the Template, please record all exposures in the sovereign currency of the jurisdiction issuing the debt in the column 'Sovereign Exposures in Sovereign Currency'. In the Template, please record all exposures in another currency other than the sovereign currency of the jurisdiction issuing the debt in the column 'Sovereign Exposures in Different Currency'.

617. 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.

618. The determination of the sovereign exposures should include both on- and off-balance sheet positions, and should consider the following:

a) Sovereign debt investments held;

b) Exposures to sovereigns through derivatives activities, such as by sovereigns being counterparties in OTC derivatives transactions or the sovereign exposure being underlying within the derivatives contract, such as a credit default swap on a sovereign debt.

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 sovereign exposures based:

- Upon a 'look-through' for investment funds, structured products etc. where it is not overly burdensome to do so;
- On application of the 'substitution approach' in the credit risk section, if sovereign guarantees and collateral instruments are being used to lower ICS standardized credit risk capital charges; and
- On any other readily identifiable sovereign exposure not captured above.

Annex 1: Insurance Line of Business Segmentation Definitions

Introduction

At a very high level insurance may be classified into three groups: insurance of the person, insurance of property and pecuniary interests, and insurance of liability. Life insurance traditionally has addressed matters relating to insurance of the person. This has historically and, perhaps with increasing focus in recent times, extended to include savings, particularly in the context of retirement and old age. Non-life (or General or Property/Casualty) insurance normally focusses on the last two groups, property and pecuniary interests, and liability.

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, even if on and approximate basis, should be carried out.
- Unless specifically stated to the contrary, assumed reinsurance is included in the same segments as directly written business. However, 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 no their names (as specific terms having varying meanings across jurisdictions). To support comparability of data collected, please use the definitions/descriptions provided for terms which may be in common use.
- In all cases values reported are those of the liabilities held

In some instances it may be that products considered to have different risk characteristic (hence justify different levels of capital of be held for them per unit of exposure) may be grouped together in the same segment. It may also be that some segments are large relative to others. These are not desirable outcomes.

Codes have been assigned to the segments to use as a quick reference for cross referencing.

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 Focus is on the dominant insurance risk insured against is mortality risk. 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 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: 1 Focus is on the dominant insurance risks insured against are morbidity or accident 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.

Label	Segment	Definition
		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 accident 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 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.

Label	Segment	Definition
		• 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 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 product are included:

Label	Segment	Definition
		• 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. 5 Annuity products which are structured as 'participating' products but are substantively intended to provide annuity benefits, are 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.

Label	Segment	Definition
		• 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.
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 (under Questionnaire Question 19) of products included in this segment is to be provided, including a summary of their relative contribution to the insurance data reported.
Life insurance - Non-Traditional (NT) (L_NT) (See also Appendix 1)		
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).

Label	Segment	Definition
		• 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 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:

Label	Segment	Definition
		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.
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 (under Questionnaire Question 19) of products included in this segment is to be provided, including a summary of their relative contribution to the insurance data reported.
Non-Life Insurance – Traditional (NL_T)		
NL_T01	Motor	This includes:

Label	Segment	Definition
		• 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 • 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. • Other commercial accident: Commercial property insurance other than Fire and Industrial risk and MAT, and other than commercial long-term liability

Label	Segment	Definition
		• 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. o 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 o 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.

Label	Segment	Definition
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.
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.

Label	Segment	Definition
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 (under Questionnaire Question 19) of products included in this segment is to be provided, 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. Notes: 1 A brief description (under Questionnaire Question 19) of products included in this segment is to be provided, 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 (under Questionnaire Question 19) of products included in this segment is to be provided, 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

Label	Segment	Definition
Non-life Insurance - Non-Traditional (NL_NT) (See also policy measures description of Non-Traditional and/or Non-Insurance business)		
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
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 (under Questionnaire Question 19) of products included in this segment is to be provided, 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

G-SII policy measures description of Non-Traditional and/or Non-Insurance business

The following is reproduced for information from the IAIS publication, '*Global Systemically Important Insurers: Policy Measures*', dated 18 July 2013. This document is available from the public IAIS website.

5.2 Definition of Traditional Insurance, Non-Traditional Insurance and financial Non-insurance (NTNI) activities

(10) The application of the above mentioned measures may rely to a large extent upon the clear differentiation between traditional and NTNI activities.

(11) The classification of activities as traditional, non-traditional and non-insurance relies on the following considerations. First, the NTNI principles set forth below should guide the determination of whether activities are classified as traditional or non-traditional/ non-insurance. Second, Table 1 (below) is provided to further help in this effort by delineating the classifications of specific exemplary products and business activities. Third, as insurance products may vary significantly in their specific features (and across jurisdictions), the application of the guiding principles to products that deviate from the exemplary products described in this paper are left to the judgement of the group-wide supervisor, subject to a peer review for the purpose of IAIS' objectives for the harmonisation of insurance standards.

(12) This document further develops the work begun in the IAIS report Insurance and Financial Stability (IFS)[58] by expanding on the guiding principles for the allocation of products to the traditional or non-traditional categories. This approach is based on the predominance of risk characteristics used to determine whether an insurance product or financial activity is considered either traditional (T) or non-traditional (NT). Therefore, products classified as semi traditional in the IFS paper have mainly been allocated to the non-traditional classification[59.] As stated above, these products tend to vary significantly in their specific features (and across jurisdictions), and group-wide supervisors will need to consider the extent of systemic risk posed by specific products.

3.2.1 Traditional insurance activities

(13) The IFS report defines traditional insurance business primarily by building on the concept of the insurability of risks, in particular the insured events' accidental nature, random occurrence and the applicability of the law of large numbers[60]. The law of large numbers helps an insurer to manage and price risks in an efficient manner. The ex-ante payment of insurance premiums and the time to the occurrence of claims, known as an

[58] Insurance and Financial Stability, IAIS

[59] The IAIS scoring methodology will need to reflect in its future data analysis and designation work this approach and its categorisation of insurance activities as traditional and NTNI.

[60] Insurance and Financial Stability, IAIS, p. 13

inverted product cycle, usually further benefit the liquidity and investment management of an insurance company. In these instances, asset and liability management (ALM) activities aim to closely match the nature of liabilities and assets.

3.2.2 Non-traditional, non-insurance activities

General description

(14) Non-traditional and non-insurance activities involve financial features such as leverage, liquidity or maturity transformation, imperfect transfer of credit risks, (i.e. "shadow banking"), credit guarantees or minimum financial guarantees. They also often involve products that are more financially complex than traditional insurance products in the shifting of financial market risk to insurers. Other products of concern include those where the liabilities are significantly correlated with financial market outcomes, such as stock prices, and the economic business cycle.

(15) Financial activities conducted outside of a licensed insurance entity are categorised as non-insurance.

NTNI Principles

(16) **Principle 1:** Products that provide credit guarantees to financial products such as securities, mortgages and other traded or non-traded instruments - whether principal or interest - can be considered NTNI.

Explanation: Even though the idiosyncratic parts of the credit risk may be readily diversifiable, insurers providing such coverage are nonetheless vulnerable to systematic[61] risk and therefore vulnerable to shocks that affect the entire economy or that otherwise tighten correlations. The guaranteed debt is often dispersed throughout the economy, and the impairment of the value of the guarantee of the debt instrument due to the distress or failure of the insurer could result in a severe impact on the economy. When credit guarantee or coverage is short-term in nature then the exposure to systematic events is limited. Such products could be considered traditional.

(17) **Principle 2:** Policies or products that expose the insurer to substantial market and liquidity risk and require a more complex risk management practice by the insurer in order to hedge those risks and may require substantial, complex, and dynamic use of derivatives, can be considered NTNI.

[61] As distinct from 'systemic'.

Explanation: The complexity of the risk management necessary to handle such risky products exposes insurers to sizeable market and liquidity risk, increases the potential for modelling errors, makes them more reliant on over-the-counter derivatives markets and increases their interconnectivity through the greater volume of transactions. This creates the potential for fire sales or procyclical hedging strategies. The decision to hedge complex risks, while desirable from a microprudential perspective, in turn increases the interconnectedness of the respective insurer, thus making it more dependent on functioning derivatives markets.

Examples:

a) Products that give the customer or 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, essentially creates a put option for the policyholder. This requires complex modelling and forecasting of policyholders' behaviour and management of complex financial market risks. In contrast, a minimum guarantee on general account performance does not place the insurer in as difficult a situation.

b) 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 market securities.

(18) **Principle 3:** Investment and funding or other capital market activities that result in maturity or liquidity transformation, leverage or imperfect transfer of credit risk, such as repo and securities lending, beyond that justified by the scope and scale of conducting traditional insurance activities, can be considered NTNI.

Explanation: The categories of traditional, non-traditional and non-insurance also apply to investment activities, whether on balance sheet or off. The degree to which investment activities involve the points of concern mentioned in this principle and the extent to which they support traditional insurance business will determine their classification as NTNI.

This principle addresses concerns identified by the FSB's analysis of shadow banking. It aims to capture those activities that can increase leverage, increase risks from proprietary speculation, reduce transparency from investments in private pools of capital, and make the insurer more reliant on the trading and funding liquidity of capital markets.

Examples:

a) If the cash collateral from the repurchase agreement or securities lending transaction is reinvested in liquid, high credit quality assets, and if the security lent or put out on a repo is liquid, then the activity is traditional. However if the reinvestment is in long-term, or low credit quality or illiquid securities then the risks are sufficient for the activities to be deemed NTNI. Moreover if low credit quality or illiquid assets are used for securities lending or in repurchase agreements, then the risks are sufficient to be deemed NTNI.

b) If in the course of supporting normal investment management a short credit default swap (sold credit protection) is combined with a government security in order to synthetically replicate an investment in a conventional fixed income security, which might be a better investment due to better pricing or liquidity, then it is traditional. Similar investing in foreign currency corporate bonds and using a foreign currency swap to convert the interest and principal of these securities into the local currency in which insurance liabilities are denominated would be traditional. Essentially, if synthetic replication creates similar risks as investing in the conventional security, then it is traditional. If it adds leverage or reduces liquidity, then it is NTNI. If comparable credit default swaps are bought and sold in order to profit from changes in credit spreads or the term structure of credit spreads, then it is a non-traditional or non-insurance activity. The group-wide supervisor should be careful to discern other investment strategies involving the combination of derivatives and securities that might appear similar but whose motivation is speculation, arbitrage or other opportunistic views on the market.

(19) The systemic risk of some variable annuities products (marked with a star in Table A below) is associated with the nature and scope of the guarantees and not the product more generally. Where partial guarantees are provided that are comparable to the guarantees of traditional products, it may be necessary for the group-wide supervisor to consult with involved supervisors and classify the products as traditional, if appropriate.

(20) Classification of some typical insurance activities and products (illustrative and still under active discussion) is shown below:

Table A. Classification of typical insurance activities

Traditional	**Non-Traditional**
Non-Life (P&C plus Heath, Disability)	Annuity: Variable Annuity - GMIB (Fixed accumulation returns) (*)
Non-Life: Long-tail (they involve some interest rate risk, but are still predominantly non-financial)	Guaranteed minimum death benefit (GMDB) or Guaranteed minimum annuitisation rate (*)
Life - Term - Fixed Death Benefits, Fixed Premium	Guaranteed Minimum Withdrawal Benefit (GMWB) (*)
Life - Term - Variable Benefit, Variable Premium (investment return risk borne by policyholder)	Contingent Deferred Annuity (some longevity risk, mostly market return risk) (*)
Life - Whole life with fixed death benefits (implicit fixed accumulation rate)	Unit-linked accounts with guaranteed account value or non-negative returns (some longevity risk, mostly a financial guarantee) (*)

Life - Whole Life with variable account value (includes risk of investment returns)	Guaranteed Investment Contracts (GICs)
Life - Whole Life with some minimum accumulation rate or minimum death benefit	Synthetic GIC (insurer bears market value/return risk
Annuity with Fixed Rate of Return	Mortgage Insurance (credit guarantee)
Annuity with Variable rate of return (insurer bears longevity risk, policy holder the investment returns)	Credit Guarantees - municipal debt, structured credit products, (pure credit guarantee)
Variable Accumulation, Fixed Payout	
Insurance-linked securities (ILS), e.g. Cat Bonds and other forms.	Financing or monetizing ILS, e.g. Embedded Value/Present Value of Future Profit securitisations, ILS with financial risk as material trigger condition.
Short-term trade credit insurance	

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.

Canada

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 that are not adjustable			Adjustable Products	Products with adjustable premiums

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

United States

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 OR (for par) L_T06L_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.

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 - Medicare Supplement		Private form of medical insurance for Medicare beneficiaries. Benefits help cover gaps left my Medicare such as deductibles, co-pays and co-insurance.
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		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.

guarantees or living benefits				
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		Funds to pay benefits to participants are accumulated in an unallocated Pension Reserve Account that then pays benefits to group annuitants.

		Participation Guarantee		
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 Universal Life policy that pays dividends. Includes maximum loan products Universal Life policy that pays dividends.

				Includes maximum loan products 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 initial list reflects definitions clarified via the FAQ process during 2014 Quantitative Field Testing, as well as during 2015 Quantitative Field Testing up till 29 May 2015.

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
Unrestricted Reserves	A description of the nature of any other 'restricted reserves' (e.g. appropriated surplus) included in equity including the legal or regulatory requirement that gives rise to the restriction on the reserves. Include details of the risks that the reserve is available to cover (and the risks that the reserve is not available to cover, if specified).
UPP	Uneared Premium Provisions (also referred to as pre-claims liabilities)