INTERNATIONAL ASSOCIATION OF INSURANCE SUPERVISORS

QUESTIONNAIRE

2015 FIELD TESTING QUANTITATIVE EXERCISE

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.

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Please provide your responses to your Insurance Supervisory Authority, as specified within the Technical Specifications, by 14 August 2015.

Introduction

This questionnaire focuses on supplementary information relating to data provided in 2015 Field Testing. General questions inviting feedback regarding the 2015 Field Testing process will be provided in a separate questionnaire following the 2015 Field Testing exercise.

Q1. Please provide the name of your Volunteer IAIG.

Scope of Application

Q2. For those Volunteer IAIGs that participated in the 2014 Field Testing, are there any differences in the scope of your group compared to last year's exercise? Please provide details of significant acquisitions and divestitures and their impact on the risk profile of the IAIG. Please provide any details of post-balance date acquisitions and divestitures that have been taken into account even though the reporting date is as at the end of your reporting period in 2014 (namely how were the figures consolidated and what checks and balances have the pro-forma figures been subject to).

Q3. Any other information/comments that you would like to provide on the scope of application?

Baseline Current Regulatory Reporting

Baseline

Q4. Please describe any simplifications or divergence from sectorial rules when calculating the sectorial capital requirements for regulated banking activities.

Q5. Please describe the non-regulated banking-like activities.

Q6. Please describe any simplifications or divergence from the rules of application when determining the leverage ratio and Basel III risk-weighted assets information for non-regulated banking-like activities.

Q7. Please describe any other financial activities, particularly securities businesses or asset management businesses, within the scope of the group consolidation not captured within insurance, banking or banking-like activities. Please describe the basis of any capital requirements for these businesses.

Q8. Please provide any other details about the baseline data you have provided that you believe would be relevant to the analysis of that data.

Market Adjusted Valuation ("Market-Adjusted") Approach

Q9. Please detail the methodology used to value Mortgages and Loans and assess how different the valuation produced is from fair value valuation, if applicable.

Q10. The approach taken for segmentation for the BCR has not changed from the 2014 Field Testing exercise. If the Volunteer IAIG participated in the 2014 Field Testing exercise, please indicate whether you have reported your business this year on exactly the same segmentation basis as in 2014. If not, please identify what reclassifications were made for the 2015 segementation reporting and the approximate dollar impact.

Q11. Please describe any material problem or uncertainty in the application of the field testing criteria on segmentation for the purposes of calculating current estimate including any assumptions you had to make to allocate your business lines to the segmentation used in 2015 Field Testing.

Q12. Should the Market-Adjusted definition of contract boundaries be modified? If yes, provide a detailed description of the alternative methodology, as well as an assessment of the potential impact in the valuation of insurance liabilities.

Q13. If the definition of contract boundaries was to be changed according to the suggestion included in the previous response, would there be a need to introduce changes to other components of the ICS framework (Capital Requirements and Capital Resources) to ensure the overall consistency? If yes, please describe what changes would be necessary from your perspective.

Q14. Please describe any uncertainty in how to apply the contract boundary as set out in the specifications. If applicable please describe the approach you have taken to address it.

Q15. Have you obtained negative current estimates? If this is your case, please describe the insurance products or contracts leading to these estimates.

Q16. Valuation of options and guarantees:

A. How material is the valuation of options and guarantees in the determination of the current estimates for the relevant lines of business?	Please provide a brief description
B. Which type of options and guarantees do your insurance and reinsurance obligations include?	Please provide a brief description
C. What methodology is used to calculate the time value[1] of options and guarantees?	a) Monte Carlo simulation approach; b) Closed form stochastic approach; c) Deterministic approach; or d) Other (please explain)
D. If a deterministic approach was used, please provide a brief description of how the time value of the options and guarantees were captured	Please provide a brief description
E. In case you encountered practical problems in the valuation of options and guarantees please list the relevant options and guarantees.	Please provide a brief description

F. Please describe to what extent you have taken into account policyholder behaviour when valuing your options and guarantees	Please provide a brief description

[1] Time value reflects the probability that the option will gain in intrinsic value over time

Q17. Future management actions: [also ask if any substantive changes since last year]

A. What management actions were assumed when calculating current estimate liabilities?	
B. Please estimate the extent to which the use of management actions have reduced the total current estimate that would otherwise be derived?	
C. Please estimate the extent to which the use of management actions have reduced the current estimate corresponding future discretionary benefits or options and guarantees that would otherwise be derived?	
D. Please briefly describe to what extent you have taken into account policyholder behaviour in response to management actions	

[2] Reductions in addition to normal reductions in bonuses following adverse experience, e.g. triggered by the solvency of the company and / or fund being seriously threatened

Q18. If applicable please explain why and how the methods applied to calculate the reinsurance recoverables differ from the methods applied to calculate the insurance liabilities, and if there are any substantive differences since last year.

Q19. If material contingent liabilities are not disclosed in the 2015 Field Testing balance sheet due to local accounting rules, please provide details of them below.

Q20. With regard to overhead administrative expenses, please indicate

- how much (both in currency and percentage terms) of the Volunteer IAIG's projected overhead administrative expenses have been taken into account in current estimates.

- the methodology used for the above allocation (i.e. the approach for allocating overhead expenses between administrative expenses included in current estimates and other expenses such as acquisition expenses.

Q21. If applicable, please briefly describe the source and valuation method of any defined benefit (DB) pension plan surplus asset.

Discounting

Bucketing approach concerning the Risk-Free Interest Rate Adjustments

The IAIS is considering possible refinements to the methodology used in the 2014 and 2015 Field Testing exercises to determine the adjustments to the risk-free interest rate curves used to discount insurance liabilities under the Market-Adjusted Valuation approach.

Granular adjustment

The first possible refinement could be the introduction of a more granular adjustment than used in 2015 Field Testing, allowing for a greater alignment between the portion of the market spread which is allowed for in the valuation of insurance liabilities and the predictable and illiquid nature of such liabilities. Similar to the methodology applied in the 2014 and 2015 Field Testing exercises, the market spread could be calculated using, for example, a reference portfolio or an alternative market index, but under this refinement the increased granularity can be achieved using one or multiple buckets.

Q22. Should the IAIS introduce a more granular approach to derive the adjustment to the risk-free discount yield curve?

Q23. If yes to the question above, should the driver for the application of different levels of adjustment be the predictability and illiquidity of insurance liabilities? Are there other drivers that should be considered for the application of different levels of adjustment?

Q24. If in the response to the above question you answered that the driver for the application of different levels of adjustment should be predictability and illiquidity of insurance liabilities, what criteria could be reliably used to assess such predictability and illiquidity in a consistent and transparent way?

Q25. If you answered above that other drivers should be used, what criteria could be reliably used to assess those drivers in a consistent and transparent way?

Q26. If you prefer a more granular approach to be explored, how granular should the approach to derive the adjustment be (possibly ranging from 1 bucket to multiple buckets to a continuous method)? Please provide specific suggestions.

Q27. If you **do not** prefer a more granular approach to be explored, should there be changes to the methodology used in 2015 Field Testing for determining the adjustment to the risk-free discount yield curve? Please provide specific details of suggested changes.

Top Bucket Approach

The second possible refinement which is being explored by the IAIS is the introduction of a top bucket approach, where:

- One (or several – see previous paragraphs) general bucket(s) would allow for the consideration of a portion of the market spreads in the valuation of insurance liabilities. In case multiple buckets are defined, the allocation of liabilities to the different buckets could be linked to additional considerations about the nature of such liabilities. The adjustment(s) would be calculated without any consideration for the specific assets in which each IAIG actually invested in (e.g. using a reference portfolio or an alternative market index). This is a similar approach to that adopted for determining the adjustment to the risk-free discount yield curve in 2014 and 2015 Field Testing[1];
- The top bucket would introduce a link between the asset and liability sides of the IAIG's balance sheet, allowing for the valuation of insurance liabilities using an adjustment based on the returns of the assets which are assigned to back those liabilities. This methodology introduces a deviation to the general Market-Adjusted approach[2], starting from the assumption that the IAIG would be in a position to hold the relevant assets to maturity and, therefore, would not be exposed to spread risk other than default risk throughout the lifetime of the insurance liabilities.

[1] Noting that for 2015 Field Testing the adjustment was applied to the liquid segment of the yield curve (i.e. the first segment as described in paragraph 125 of the Technical Specifications) with a phasing out of the adjustment after the last liquid point on the base yield curve [check technical specifications for consistency].
[2] By assigning different values to similar insurance liabilities, depending on the asset portfolios of the entities holding such liabilities.

Q28. Should an approach following the methodology and rationale detailed in the previous paragraph be introduced?

Q29. In case you would support an approach with a higher number of buckets (see above questions), should the top bucket be designed according to the methodology and rationale provided for the top bucket in the previous paragraph?

To illustrate the concept of a held to maturity approach, a set of possible criteria to determine inclusion in the top bucket is provided for discussion but does not represent an agreed IAIS position. Given the strong assumptions which justify the differentiated treatment specified in this case, such criteria are very restrictive:

a. There should be a clear link between the portfolios liabilities and assets (bonds and assets with similar cash-flow characteristics) which are being used to back them. That link should be maintained over the lifetime of the insurance liabilities;

b. The portfolio of assets identified cannot be used to cover losses generated by other parts of the insurance business;

c. The expected cash flows of the portfolio of assets should replicate the cash flows of the portfolio of insurance liabilities, without giving rise to any significant basis risk;

d. The portfolio of liabilities should not generate any future premiums;

e. The risks associated to the liabilities should be limited to longevity and expense risks;

f. The portfolio of insurance liabilities does not include any options to policyholders and any surrender should be limited to the value of the assets.

Q30. Regarding criterion (a) above, do you agree with having a restriction on eligible assets to only bonds and other assets with similar cash flow characteristics? Should other types of assets be considered? If so, which asset classes and why?

Q31. Still concerning (a) above, do you agree with having the link between assets and liabilities be kept throughout the entire lifetime of the insurance liabilities? In particular, in the case of jurisdictions where the financial markets do not provide investment opportunities for very long maturities, would this criterion raise significant problems to the implementation of this approach? If yes, how could those problems be overcome, without compromising the overall rationale underlying the definition of the top bucket?

Q32. Regarding criterion (b), should the requirement be extended to require explicit identification and management of the portfolios of assets (e.g. ring-fencing)?

Q33. Regarding criterion (c), should the replication of the actual timing and amount of each individual liability cash flow be required, in order to minimize basis risk and avoid the need for forced sales of assets before maturity, or would the replication of the average of the cash flows year after year be sufficient?

Q34. Regarding criteria (d), (e) and (f), are such restrictions necessary to ensure a sufficient degree of predictability and illiquidity of insurance liabilities for inclusion in the top bucket? Why or why not?

Q35. Assuming all the criteria would be applied as described, please fill in the table below:

	% of CE liabilities included in the top bucket	**Estimate of impact in the value of CE liabilities (as % of the total reported in 2015 FT)**
Life	% between 0 and 100	% [Positive = increase; Negative = decrease]
Non-Life	% between 0 and 100	% [Positive = increase; Negative = decrease]

Q36. What changes to the foregoing criteria or other criteria should be considered to make the top bucket approach more suitable for your group given the products offered by your group?

Q37. Assuming the changes to the foregoing criteria or other criteria as you suggest, please fill in the table below:

	% of CE liabilities included in the top bucket	**Estimate of impact in the value of CE liabilities (as % of the total reported in 2015 FT)**
Life	% between 0 and 100	% [Positive = increase; Negative = decrease]
Non-Life	% between 0 and 100	% [Positive = increase; Negative =

		decrease]

General comments

Q38. Are there any other approaches than those described in this section that the IAIS should consider to determine the adjustments to the risk-free discount yield curves under the market-adjusted valuation approach?

Q39. Do you have any other comments on this topic not covered by the previous questions?

Qualifying Capital Resources

Q40. If the financial instrument included within qualifying capital resources has a write-down or conversion feature, please explain how it works. Does the write-down/conversion occur only at a trigger point and if so, what is the trigger?

Q41. Where a Volunteer IAIG believes a capital instrument should be classified as Tier 1 or Tier 2 capital and the Financial Instruments worksheet does not allow for relevant information to be captured, this information should be provided below and the relevant capital instrument should be clearly identified.

Q42. In the Financial Instruments worksheet, for all qualifying Tier 2 (or Additional) 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 below.

Q43. With respect to the deduction for secured (encumbered) assets, please indicate the approximate value of secured (encumbered) assets attributable to:

Initial margins (i.e. upfront posting of collateral)	
Regulatory requirements in foreign jurisdictions	
Real estate in jurisdictions where the excess of the real estate fair value over the mortgage loan must be returned to the insurer (i.e. the collateral is not forfeited in full if there is a default on the mortgage loan)	
Restrictions on assets for use only in respect of certain policyholders/ risks/ losses, arising by contract or regulation	
Other – please specify	

Q44. Please explain if, and why, you believe that a pension plan surplus asset is readily available and accessible and should be considered as capital resources

Q45. If applicable, please briefly describe the source of Deferred Tax Assets (DTAs) not excluded from Tier 1 (or Core) capital and explain its capacity to absorb losses without reliance on future profitability. Please explain the methodology used to categorize DTAs that rely on future probability and the valuation approach used to determine their realisable values.

Q46. If applicable, please briefly describe the valuation approach for computer software intangibles and their realisable values.

Q47. Please provide some feedback on the loss absorbing nature of the following capital elements as recorded in capital resources.

Capital Element	**nature/purpose, including legal or regulatory requirement**	**Appropriated or unappropriated**	**Circumstances under which it may be utilized or released**	**Level of Volatility in the element (how often and how much)**
GAAP-MOCE				

Residual MOCE after taking into account CC-MOCE				
Restricted Reserves				
Unrestricted Reserves				
Regulatory specific reserves				

Q48. Please provide details on any capital resources reported as "Other" as well as any additional relevant information related to capital resources.

Q49. Are there any other information/comments that you would like to provide?

BCR Related Data

Q50. Please provide any additional relevant comment related to non-balance sheet data required for BCR purposes.

Q51. Any other information/comments that you would like to provide?

GAAP with Adjustments ("GAAP Plus") Valuation Approach

Reconciliation

Refer to worksheet ICS.Liabilities reconciliation

Q52. Please identify the basis of reporting in your general purpose audited financial statements (e.g., U.S. GAAP, IFRS, Japanese GAAP, etc.).

Q53. If all material insurance liabilities included in those financial statements are not adjusted for consolidation purposes to that same basis of reporting (i.e., some material

amounts are based on other jurisdictional GAAPs and aggregated), please identify those other GAAPs and, on a best efforts basis, the relative portion(s) of insurance liabilities included under each and whether life or non-life.

(List in descending order of magnitude)

Jurisdictional GAAP	% of Consolidated Insurance Liabilities	
	Life	Non-Life
GAAP 1 (describe):		
GAAP 2 (describe):		
GAAP 3 (describe):		
GAAP 4 (describe):		
GAAP 5 (describe):		

(Add additional rows as necessary)

Q54. Concerning the Update from Net to Gross Premium Valuation quantified under [Column 2], please describe the guidance and methodology employed, for example, whether for U.S. GAAP is from the guidance included in loss recognition testing, or some other construct if under a different jurisdictional GAAP.

Q55. Concerning the impact of differences in assumptions quantified under [Column 3], please identify the main drivers of such differences and provide an estimate of the individual impact.

Biometric Assumptions (e.g. mortality) Description:	Estimated impact:
Economic Assumptions (e.g. inflation) Description:	Estimated impact:
Other: Description:	Estimated impact:
Other: Description:	Estimated impact:

(please add additional rows as necessary)

Q56. Concerning the impact of Risk Margins/Non-Performance Risk quantified under [Column 4], please describe the purpose for which the margin was determined. Examples of purposes include, among others, 'Margin for Adverse Deviation in Reserve Estimates' and 'Cost of Capital for Reserve Transfer'.

Q57. Using the purpose and impact from above, complete the following table for the three largest segments for life and the three largest segments for non-life (as measured by GAAP insurance liability) that have a margin quantified under [Column 4]. For example, if the listed purpose is 'Margin for Adverse Deviation in Reserve Estimates', explain how you articulate your target margin and the method used to determine it. Examples of methods that are used include, but are not limited to, explicit assumption methods, quantile methods, cost-of-capital methods and discount rate methods.

Segment	**Purpose**	**Impact**	**Target**	**Method**
Life				
Non-Life				

Q58. Identify non-life products (if any), where a material proportion of premiums are not earned pro-rata over time. Briefly describe the method by which premiums are earned instead and the proportion of the unearned premium provision that they constitute.

Q59. If, for reasons of materiality, a discount was not calculated for non-life business, please describe the materiality criteria used.

Q60. Concerning the impact of differences in Discount Curves quantified under [Column 7], please describe the main technical differences between the curves used under the Reported GAAP basis and the IAIS Yield Curves. In particular, please describe briefly the differences for illiquid products e.g. products with very long maturities.

Q61. In case you reported any amount under Other [Column 5], please describe what are the main elements determining the need for this adjustment, and provide an estimate of their individual impact.

Description:	Estimated impact:
Description:	Estimated impact:
Description:	Estimated impact:

(Please add additional rows as necessary)

Q62. Concerning the impact of differences in the definition of Contract Boundaries quantified under [Column 9], please describe those differences and provide examples of products/lines of business where the impact may be more significant.

Q63. Concerning the impact of updates to Market-Adjusted assumptions quantified under [Column 10], please describe the main methodological differences and identify the most affected products/lines of business.

Q64. In case you reported any amount under Other ([Column 11]), please describe what are the main elements determining the need for this adjustment, and provide an estimate of their individual impact.

Description:	Estimated impact:

Description:	Estimated impact:
Description:	Estimated impact:

(please add additional rows as necessary)

Q65. Level of Accuracy – GAAP Plus: A code has been provided for use in the template to indicate the overall level of accuracy of amounts reported for GAAP Plus [Column 13]. Please provide any supplemental information as appropriate to convey a more complete understanding of the accuracy of amounts shown in the reconciliation. For example, some reconciling items might be precisely calculable; some only estimatable and with varying degrees of confidence, some only inferred, etc.

Q66. Level of Accuracy – Market Adjusted Valuation: Please provide corresponding information for Market-Adjusted [Column 14] as was requested in the prior question for GAAP Plus.

Consistent and Comparable Margin Over Current Estimate

Transfer Value MOCE

Q67. Please explain, if any, the difficulty you faced in calculating the cost of capital method for the Transfer Value MOCE

Q68. Non-life liabilities - Are the three run-off patterns appropriate to project the capital required for non-life lines of business for the purpose of the MOCE calculation? If no, please provide suggestions and relevant justifications to amend the calculation.

Q69. Life liabilities – Is the approach proposed for the projection of capital required appropriate for the life liabilities for the purpose of the MOCE calculation? If no, please provide suggestions and relevant justifications to amend the calculation.

Q70. The proposed approach excludes hedgeable risks from the capital requirement to be projected.

a) Please provide your opinion if and why this is appropriate, or why it is not appropriate.

b) If appropriate, please explain what improvement, if any, should be made to the treatment of market risks and credit risk respectively.

c) If not appropriate, please explain how the capital requirement to be projected should be determined and why.

Q71. The proposed approach includes an adjustment to the premium risk in determining the capital requirement to be projected in order to reflect that post transfer the policies expiring during the one-year time horizon will not be renewed.

a) Please provide your opinion if and why this is appropriate, or why it is not appropriate.

b) If appropriate, please explain what improvement, if any, should be made to the way the diversification adjustment is made in the 2015 Field Testing template (i.e. the non-life capital charge is reduced by the ratio of the sum, pre-diversification, of the capital charge minus 50% of the premium capital charge divided by the sum, pre-diversification, of the capital charge).

c) If not appropriate, please explain how the capital requirement to be projected should be adjusted with regards to premium risk, if at all, and why.

Q72. Please provide any additional suggestion to improve the cost of capital approach.

Prudence MOCE

Q73. For Life liabilities, the underlying distribution used for the various risks has been assumed to be best represented as normal, using the current estimate as the mean and the required capital as the implied 99.5th percentile.

a) If the normal approximation is appropriate, does two thirds of one standard deviation represent an appropriate risk margin or do you believe based on your internal studies that another margin (such as one standard deviation) may represent a more appropriate interval?

b) For which lines of business or segments is this distribution likely to be inappropriate and if so, what distribution should be employed?

c) If the log normal distribution is deemed superior for certain areas, should a percentile methodology be used in preference to the standard deviation and if so what percentile(s) should be employed?

d) In the transfer value approach to Consistent and Comparable MOCE, non- hedgeable [market and credit] risks were included and hedgeable risks excluded in the the capital requirement to be projected. Should a similar approach be taken also for Prudence MOCE?

Q74. If appropriate, please explain what improvement, if any, should be made to the way the diversification adjustment is done for the life liabilities in the 2015 Field Testing template?

Q75. For non-life liabilities, the approach used is based on avoiding the recognition of future profits.

a) Is there an alternate approach you can recommend that would better approximate the expected amount of future profit in claims reserves and/or unearned premiums?

b) Were there any difficulties in providing reserves on an undiscounted basis?

Q76. Please provide suggestions to improve the simplified approach taken for the calculation of the Prudence MOCE.

Example of ICS Standard Method using Market-Adjusted

Overall structure

Q77. At an overall capital requirement level, are you able to use existing models and have you used them within your company to calculate a capital requirement on a TVaR basis?

a) If yes, what confidence level and time horizon do you use?

b) What would the total capital requirement be at a TVaR(90) for your time horizon? How does this compare with any VaR measurements you may have conducted? Please provide any numbers that you have computed as that will help us understand the differences between the two approaches.

Q78. 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 order to inform future discussions on the tax effects on ICS capital charges:

a) Please provide an estimation of the impacts if the approach was to use segmented and varying effective tax rates at the risk / sub-risk level ?

b) Under the approach indicated in a) above, how might the tax effects be modeled in order to avoid or minimize 'double counting' issues?

Life insurance

Q79. For each of the Life risks (mortality, longevity, lapse, etc.), are you using trend assumptions in the calculation of the current estimate? Please provide any detail you think is relevant (rationale for using a trend or not, type of trend, basis for using this assumption such as national or company actuarial/experience studies etc.).

Q80. For each of the Life risks (mortality, longevity, lapse, etc.), please advise whether you are using dynamic stresses and how the stresses are linked to policyholder behavior?

Q81. Do you consider pandemic (CAT) risk in your life valuation?

Q82. Do you think the geographical segmentation provided for Life risks is relevant? If not why?

Q83. Please describe how the grouping of policies or products used by the Volunteer IAIG have met the homogeneous criteria as specified in the Technical Specifications.

Q84. For application of stresses where geographical segments are used, please explain the effective tax rates used for each geographical segment. For instance did you assume that your consolidated effective tax rate should be used or an effective tax rate based on the segments tax rates? What approach to this issue do you believe the IAIS should take forward in future field testing exercises?

Mortality Risk

Q85. Please describe the material assumptions and simplifications used when applying the mortality stress.

Q86. From the experience of your business, do you think that the specified stresses are appropriate given the target calibration used in 2015 Field Testing? If not, please specify the stresses which you think would be more appropriate, and the rationale/quantitative evidence supporting the alternative calibration you propose.

Q87. Is the methodology for determining the Mortality risk charge as specified in the Technical Specifications appropriate? If not, how do you suggest it could be improved?

Q88. Do you have any other comments on this section?

Longevity Risk

Q89. From the experience of your business, do you think that the specified stresses are appropriate given the target calibration used in 2015 Field Testing? If not, please specify the stresses which you think would be more appropriate, and the rationale/quantitative evidence supporting the alternative calibration you propose.

Q90. The specifications for longevity risk asked for Volunteer IAIGs to provide data for the standard method using the Market-Adjusted valuation; corresponding information using the GAAP Plus valuation was not requested. Nonetheless, if you have insights as to whether a corresponding stress applied using a GAAP Plus valuation basis would differ from that under Market-Adjusted valuation, please explain why, and the kind of difference you would expect in quantitative terms.

Q91. Is the methodology for determining the Longevity risk charge as specified in the Technical Specifications appropriate? If not, how do you suggest it could be improved?

Q92. Should a trend component be included for longevity risk? If yes, how can the methodology for calculating longevity risk be refined to include the trend component? If not, what is the rationale for not including the trend component?

Q93. Do you have any other comments on this section?

Morbidity/disability Risk

Q94. Please describe the material assumptions and simplifications used when applying the morbidity/disability stress.

Q95. The specifications for morbidity/disability risk asked for Volunteer IAIGs to provide data for the standard method using the Market-Adjusted valuation; corresponding information using the GAAP Plus valuation was not requested. Nonetheless, if you have insights as to whether a corresponding stress applied using a GAAP Plus valuation basis would differ from that under Market-Adjusted valuation, please explain why, and the kind of difference you would expect in quantitative terms.

Q96. From the experience of your business, do you think that the specified stresses are appropriate given the target calibration used in 2015 Field Testing? If not, please specify the stresses which you think would be more appropriate, and the rationale/quantitative evidence supporting the alternative calibration you propose.

Q97. Is the methodology for determining the morbidity/disability risk charge as specified in the Technical Specifications appropriate? If not, how do you suggest it could be improved?

Q98. Should a trend component be included for morbidity/disability risk? If yes, how can the methodology for calculating morbidity/disability risk be refined to include the trend component? If not, what is the rationale for not including the trend component?

Q99. Do you have any other comments on this section?

Life Lapse Risk

Q100. Please describe the material assumptions and simplifications used when applying the Life Lapse stress.

Q101. From the experience of your business, do you think that the specified stresses are appropriate given the target calibration used in 2015 Field Testing? If not, please specify the stresses which you think would be more appropriate, and the rationale/quantitative evidence supporting the alternative calibration you propose.

Q102. The specifications for life lapse risk asked for Volunteer IAIGs to provide data for the standard method using the Market-Adjusted valuation; corresponding information using the GAAP Plus valuation was not requested. Nonetheless, if you have insights as to whether a corresponding stress applied using a GAAP Plus valuation basis would differ from that under Market-Adjusted valuation, why, and if so how much (relatively speaking), please provide that here.

Q103. Is the methodology for determining the lapse risk charge as specified in the Technical Specifications appropriate? If not, how do you suggest it could be improved?

Q104. Please describe the practical difficulties encountered in applying the methodology as specified within the technical specifications, including whether there are difficulties in separating lapse sensitive and lapse supported products into homogeneous groups.

Q105. The technical specifications currently specify a zero surrender for policies with negative surrender strain. Do you think it is appropriate for the mass lapse requirement to include a zero surrender? Please provide the rationale to support your answer.

Q106. Are you able to use existing models to calculate the TVaR for lapse risk?

a) If yes, what confidence level and time horizon do you use?

b) What would the lapse risk charge be at a TVaR(90) for your time horizon?

c) What would the equivalent stress / factor be to obtain a TVaR(90) result?

Q107. Do you have any other comments on this section?

Life Expense Risk

Q108. Please describe the material assumptions and simplifications used when applying the Life Expense stress.

Q109. From the experience of your business, do you think that the specified stresses are appropriate given the target calibration used in 2015 Field Testing? If not, please specify the stresses which you think would be more appropriate, and the rationale/quantitative evidence supporting the alternative calibration you propose.

Q110. The specifications for life expense risk asked for Volunteer IAIGs to provide data for the standard method using the Market-Adjusted valuation; corresponding information using the GAAP Plus valuation was not requested. Nonetheless, if you have insights as to whether a corresponding stress applied using a GAAP Plus valuation basis would differ from that under Market-Adjusted valuation, why, and if so how much (relatively speaking), please provide that here.

Q111. Is the methodology for determining the expense risk charge as specified in the Technical Specifications appropriate? If not, how do you suggest it could be improved?

Q112. Do you have any other comments on this section?

Non-Life - Premium and Reserve Risks

Q113. What would be the impact to the balance sheet arising from 100% termination of lapsable non-life business?

Q114. The 2015 Field Testing proposes to calculate the non-life premium and non-life reserve risk charges based on the lines of business in the main jurisdictions in the various regions. Do you have any feedback on

- the use of the main jurisdictions lines of business to report based on the risk location
- the lines of business within each region
- the definitions provided in the Technical Specifications?

Q115. Please describe the simplifications, if any, applied in allocating your business across the geographical segmentation and lines of business.

Q116. For the premium risk exposure measure, the IAIS proposes in 2015 Field Testing to use the greater of:

- Net earned premium for the last financial year
- Premium expected to be earned in the next financial year.

Is this exposure measure appropriate? If no, what other exposure measure should the IAIS use?

Q117. For premium risk, each of those lines of business are assigned to one of eight buckets, based on the level of unexpected losses at 99.5% VaR. Do you have any feedback on

- the number of buckets,
- the factors applied to the buckets and whether their levels are appropriate,
- the mapping of each line of business to the premium risk bucket?

Q118. For the reserve risk exposure measure, the IAIS proposes to use net, discounted current estimates for most, if not all, lines of business. Is this exposure method generally appropriate? If no, what other exposure measure should the IAIS pursue for reserve risk? (See also next question on specific lines of business)

Q119. The IAIS is considering whether other exposure measures (besides net current estimates) should be used for specific lines of business, most notably the non-traditional business, such as mortgage insurance. This would also impact the factors applied to the exposure measure. Should the IAIS explore options for other exposure measures for specific lines of business such as non-traditional business? If yes, which options and why are they appropriate?

Q120. For reserve risk, each of those lines of business are assigned to one of eight buckets, based on the level of unexpected losses at 99.5% VaR. Do you have any feedback on

- the number of buckets,
- the factors applied to the buckets and whether their levels are appropriate,
- the mapping of each line of business to the reserve risk bucket?

Q121. The approach being tested in 2015 Field Testing is to aggregate in three steps:

a. premium and reserve risk first within a line of business, with the correlation depending on the type of business;
b. lines of business within a geographical area based on the segment categories (property-like, liability-like, Other, NT Other);
c. across geographical areas.

Do you agree with this approach? If no, what alternatives should the IAIS pursue and why?

Q122. The approach being tested in 2015 Field Testing is to aggregate the risk charges across lines of business within a geographical area using correlations assigned to property-like, liability-like, other, non-traditional credit, non-traditional mortgage and other non-traditional. Do you have any feedback on the approach or the factors used?

Q123. The approach being tested in 2015 Field Testing aggregates non-traditional credit within the credit risk module (rather than aggregating within the non-life risk charge). Do you agree or disagree with this approach? Why?

Q124. The approach being tested in 2015 Field Testing aggregates non-traditional mortgage risk within the real estate risk module (rather than aggregating within the non-life risk charge). Do you agree or disagree with this approach? Why?

Q125. The approach being tested in 2015 Field Testing aggregates the risk charges across regions using a correlation matrix, with each region with a factor of 25 per cent. Do you have any feedback on the approach or the factors used? Should the factors vary across the regions or should it be consistent? Why?

Q126. The approach being tested for catastrophe risk in 2015 Field Testing includes a number of scenarios, such as natural catastrophe, trade credit, mortgage and liability. There is potential for overlap of these scenarios with the risks already captured in premium risk and, at least in case of the liability scenario, claims reserve risk. Is this double-counting material? If yes, how should the IAIS deal with this double-count? Should this be dealt with the exposure measure or the factors? Why?

Q127. Please explain the basis or bases of any mortgage underwriting (full loan value or excess value).

Q128. Please explain the split (if any) between mortgage insurance covering recourse and non-recourse loans.

Q129. Do you have any other comments on this section?

Catastrophe Risk

Q130. The specifications for the catastrophe risk proposed a geographical segmentation: is this segmentation relevant for your portfolio? Should the geographical granularity be increased? Reduced? Why?

Q131. Please provide the following information about the natural catastrophe model used to produce the data provided in the template related to natural catastrophe.

	Tropical cyclone	Other windstorm	Earthquake	Other
Model description				
Type of model: vendor / proprietary				
Vendor name(s) (if relevant)				
Vendor model name(s) (if relevant)				
Vendor model version(s) (if relevant)				
If not a vendor model: 1st year when the model was developed and used				
If not a vendor model: year of the last major update of the model				
Modelling specification				
Event set selected				
Frequency selected				
Attenuation function selected (if relevant)				
Secondary uncertainty (Y/N)				

Secondary perils included (primary peril for the 'other' category)				
Demand surge / Loss amplification (Y/N)				
Model run: in house / by third party				
Exposures description				
Main territories of exposures				
Main lines of business covered				
Main geocoding level and estimated % of total exposures				
Estimated insurance / direct business (% of total exposures)				
Estimated non-proportional reinsurance business (% of total exposures)				
Modelling adjustment				
Please briefly describe the perils, sub-perils or territories not modelled to which you are materially exposed				
What additional charge did you include for non-modelled risks or non-modelled exposures or other (e.g. adjustments for exposure data quality, adjustments for exposure growth, model deficiencies – severity or frequency, other factors for prudence)? (%)				
Please briefly describe the method used to calculate the				

adjustment				
If you use multiple models, please explained how results from different models are aggregated/ blended				

Q132. Please describe how the impact of the risk mitigation arrangements was calculated to determine the losses net of protection. In particular if some simplifications were applied please describe briefly these simplifications.

Q133. Please describe why the perils or territories not modelled are not modelled using catastrophe models (e.g. no model available for these perils or territories, concerns on the reliability of available models, exposure data collected does not allow the use of models, etc.) and the materiality of these perils or territories.

Q134. Please describe any amendements to the terrorist attack scenario you consider necessary to make it more suitable for the ICS standard method (regarding both the design and the calibration)?

Q135. Please describe any amendements to the liability catastrophe scenario you consider necessary to make it more suitable for the ICS standard method (regarding both the design and the calibration)?

Q136. Please describe any amendements to the pandemic scenario you consider necessary to make it more suitable for the ICS standard method (regarding both the design and the calibration)?

Q137. Please describe any amendements to the marine scenario you consider necessary to make it more suitable for the ICS standard method (regarding both the design and the calibration)?

Q138. Please describe any amendements to the aviation scenario you consider necessary to make it more suitable for the ICS standard method (regarding both the design and the calibration)?

Q139. Please describe which amendement to the credit and surety scenario is necessary to make it more suitable for the ICS standard method (regarding both the design and the calibration)?

Q140. Please describe any material exposures other than natural catastrophe that are not captured by the other catastrophe scenarios and that you believe should be captured by the ICS standard method (e.g. Cyber risk).

Q141. How does the IAIG identify and quantify cyber risk (for example, in its Own Risk and Solvency Assessment or ORSA[3])?

Q142. The calculation of the contingent credit risk proposed for 2015 Field Testing is a simplified approach. A more accurate calculation would consider separately exposures to individual reinsurers. Please suggest how the IAIS could revise this aspect of the ICS so that a more accurate allocation of credit risk to individual reinsurers could be achieved, and please provide an indication of whether such a change would have a material impact on the overall ICS capital requirement.

Q143. Please provide any additional suggestion to improve the design or calibration of the catastrophe component of the ICS standard method.

[3] As described in ICP 16

Q144. Do you have any other comments on this section?

Market Risk

Q145. Please describe any practical difficulties in applying the look-through approach as set out in section 13.3.1 of the Technical Specifications. Please also describe any assumptions or simplifications used in applying the approach set out in the Technical Specifications.

Interest Rate Risk

Q146. Please describe how the look-through is applied for the most material collective investment funds or indirect exposures when applying the interest rate stress. Refer, if relevant, to the specific valuation basis.

Q147. Please describe the material assumptions and simplifications used when applying the interest rate stress.

Q148. Did you vary lapse rates in response to the interest rate scenarios? If so, what were the major product groups for which you assumed that lapses vary with interest rates, and how much did the lapse rates change under scenarios 1, 2 and 3?

Q149. How do you value interest rate guarantees? Is the method based on estimated cash flows only, or do you use financial valuation techniques that may produce a non-zero value even if a guarantee is not triggered?

Q150. Which product groups have interest rate guarantees that are triggered under scenarios 1, 2 and 3?

Q151. Which are the principal types of liability cash flows that change under the scenario interest rate shocks? For each type of liability cash flow, please describe how it changed under each scenario (e.g. whether it increased or decreased, whether it moved into a different maturity bucket, etc.)

Q152. Please provide views on the calibration levels of the interest rate stress scenarios. In particular please provide views on the stressed yield curves for the 35 currencies specified by the IAIS, and others materially relevant for you.

Q153. Is the methodology for determining the Interest rate risk charge as specified in the Technical Specifications appropriate? If not, how do you suggest it could be improved?

Q154. Do you have any other comments on this section?

Equity Risk

Q155. Please describe how the look-through is applied for the most material collective investment funds or indirect exposures when applying the equity stress. Refer, if relevant, to the specific valuation basis.

Q156. Please describe the material assumptions and simplifications used when applying the equity stress.

Q157. Please describe what type of business / investment makes your balance sheet sensitive to the upward / downward changes in volatility.

Q158. Please describe the different types and sectors of the infrastructure projects you are currently invested in.

Q159. Please describe the different types and sectors of the infrastructure projects you are likely to invest in in the future.

Q160. For the infrastructure projects you are currently invested in, please describe the investment vehicle:

- direct investment in the project through equity
- direct investment through debt
- investment through a SPV
- investment in equity in a firm undertaking investment projects
- other, please describe

Q161. Using the classifications from the question above, please provide the volumes of investment in those different categories.

Q162. Following the lines of the classifications from the question above, through what investment vehicles would you be most likely to invest in infrastructure in the future, and to what extent in terms of volume?

Q163. Please describe the types of instruments that you classified under the “hybrid debt and preference shares” bucket, as well as the volumes of investment in those different categories in your balance sheet.

Q164. Please provide information on the potential impact of "prices up" scenarios; for that purpose, you can base your assessment on the scenarios 3 and 4 described in the Technical Specifications. Where providing quantitative information about the scenarios is too burdensome, please simply provide qualitative information about the direction and extent of impact of such scenarios on your net financial position.

Q165. Please provide information on the correlations you would expect between the assets of the four different equity buckets, under a highly adverse scenario. If possible, please provide evidence whether the behaviour across/within the different buckets is relatively homogeneous (high correlation), or whether there is some heterogeneity (low correlation) across/within the current buckets proposed.

Q166. Do you believe that the segmentation used for equity risk is appropriate including the geographical segmentation of emerging markets and developed markets? If you believe it should be changed, please provide a specific proposal for segmentation of equity risk.

Q167. If you believe that a different segmentation should be applied as set out in the previous question, please indicate how that would change the calibration of the stresses? That is, based on empirical evidence, what level of stresses should be applied to the segments that you have identified. Please compare to how similar risks were treated in 2015 Field Testing.

Q168. From the experience of your business, do you think that the specified stresses are appropriate given the target calibration used in 2015 Field Testing? If not, please specify the stresses which you think would be more appropriate, and the rationale/quantitative evidence supporting the alternative calibration you propose.

Q169. Are you able to use existing models to calculate the TVaR for equity risk? If yes,

a) What confidence level and time horizon do you use?

b) What would the equity risk charge be at a TVaR(90) for your time horizon?

c) What would the equivalent stress/factor be to obtain a TVaR(90) result?

Q170. Is the methodology for determining the Equity risk charge as specified in the Technical Specifications appropriate? If not, how do you suggest it could be improved?

Q171. Do you have any other comments on this section?

Real Estate Risk

Q172. Please describe the material assumptions and simplifications used when applying the Real Estate stress.

Q173. The specifications for real estate risk asked for Volunteer IAIGs to provide data for the standard method using the Market-Adjusted valuation; corresponding information using the GAAP Plus valuation was not requested. Nonetheless, if you have insights as to whether a corresponding stress applied using a GAAP Plus valuation basis would differ from that under Market-Adjusted valuation, why, and if so how much (relatively speaking), please provide that here.

Q174. Please indicate the methodology you used to revalue own-use real estate for the purposes of the real estate risk charge. In that description, please indicate any assumptions used (e.g. market rental yields) and any simplifications used in the valuation. Please indicate practical difficulties in undertaking this revaluation of own-used real estate.

Q175. Please provide feedback on the calibration of the real estate stresses particularly whether it is appropriate to apply the same stress to residential and commercial real estate in the markets in which the Volunteer IAIG operates. Should calibration of the real estate

stresses be differentiated on a regional segmentation? Please indicate any sources of empirical evidence about real estate prices in the markets in which the Volunteer IAIG operates.

Q176. Is the methodology for determining the Real Estate risk charge as specified in the Technical Specifications appropriate? If not, how do you suggest it could be improved?

Q177. Do you have any other comments on this section?

Currency Risk

Q178. Please describe the material assumptions and simplifications used when providing information on Currency Risk.

Q179. Please describe how the look-through is applied for the most material collective investment funds or indirect exposures when reporting information on Currency Risk. Refer if relevant to the specific valuation basis.

Q180. Calculation of the net open position - For the purposes of 2015 Field Testing , the net spot position is defined as all assets less all liabilities items denominated in the currency under consideration, including accrued interest and accrued expenses. Alternatively, should the IAIS consider exempting a portion of current exposures in a foreign currency (e.g. to account for mistmatches under stress cisrcunstances)? If yes, please explain how such exemption should be calculated and why this will be appropriate. Please also provide an estimate of the impact of such change on your net spot position.

Q181. From the experience of your business, do you think that the specified stresses are appropriate given the target calibration used in 2015 Field Testing? If not, please specify the stresses which you think would be more appropriate, and the rationale/quantitative evidence supporting the alternative calibration you propose.

Q182. The specifications for currency risk asked for Volunteer IAIGs to provide data for the standard method using the Market-Adjusted valuation; corresponding information using the GAAP Plus valuation was not requested. Nonetheless, if you have insights as to whether a corresponding stress applied using a GAAP Plus valuation basis would differ from that under Market-Adjusted valuation, please explain why, and the kind of difference you would expect in quantitative terms.

Q183. Is the methodology for determining the Currency risk charge as specified in the Technical Specifications appropriate? If not, how do you suggest it could be improved?

Q184. Do you have any other comments on this section?

Asset Concentration Risk

Q185. Please describe the material assumptions and simplifications used when providing information on Asset Concentration Risk.

Q186. Please describe how the look-through is applied for the most material collective investment funds or indirect exposures when reporting information on Asset Concentration Risk. Refer if relevant to the specific valuation basis.

Q187. Please identify any significant practical or methodological concerns you have with the criteria (control relationship and/or economic independence) used for establishing a 'connected group of counterparties'.

Q188. Please identify any significant practical or methodological concerns you have with the criteria of 'very close proximity' for assessing property concentration exposures.

Q189. Should own-use property be treated differently from other property exposures and charges; if so, how?

Q190. Please identify any significant practical or methodological concerns you have with the weighted-average credit rating buckets being used for 2015 Field Testing, and the specified approach for establishing the applicable bucket for the specific single or group of connected counterparties.

Q191. Please identify any significant practical or methodological concerns you have with the particular drivers (total assets and qualifying capital resources definitions) and specific threshold levels used for 2015 Field Testing purposes, including the use of lower thresholds for the lower weighted-average credit rating buckets.

Q192. In terms of the incremental risk charges used for 2015 Field Testing purposes, please identify any concerns you have with them, and why.

Q193. Please indicate and explain if you think the IAIS should explore the development of other approaches for developing asset concentrations risk charges, such as:

- an approach that considers the maturities or durations of the underlying exposures; or
- a stress based approach

Q194. In terms of the overall design, please indicate what, if any, additional risk elements (sector exposures, sovereign risks, etc.) should be included within the scope of the standard approach for asset concentration risk. Please explain why.

Q195. Where you have applied deviations from the BCBS definition of connected counterparties, please provide details along with an estimate of the impact of those variation.

Q196. Are there any other comments you would like to provide on this section?

For G-SIIs

Q197. Please identify any significant concerns you have with the separate table reporting for net exposures, exceeding applicable thresholds, for single or group of connected counterparties that are designated as G-SIIs.

Credit Risk

Q198. Please describe the material assumptions and simplifications used when applying the Credit Risk charge.

Q199. Please describe how the look-through is applied for the most material collective investment funds or indirect exposures when reporting information on Credit Risk. Refer if relevant to the specific valuation basis.

Q200. Have you relied on a rating agency that is not listed in table 18 of the specifications, but that qualifies as an ECAI under the Basel II Framework in your jurisdiction? If yes, please provide the name of the rating agency or agencies.

Q201. Have you relied on a rating agency that is not listed in table 18 of the specifications and does not qualify as an ECAI in your jurisdiction? If yes, for each agency please provide:

- 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 cumulative default rates by rating, 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.
- The ICS rating categories to which you have mapped the agency's ratings.

Q202. Do you have any feedback on the factors applied to the buckets and whether their levels are appropriate?

Q203. The specifications for credit risk asked for Volunteer IAIGs to provide data for the standard method using the Market-Adjusted valuation; corresponding information using the GAAP Plus valuation was not requested. Nonetheless, if you have insights as to whether a corresponding stress applied using a GAAP Plus valuation basis would differ from that under Market-Adjusted valuation, why, and if so how much (relatively speaking), please provide that here.

Q204. Is the methodology for determining the Credit risk charge as specified in the Technical Specifications appropriate? If not, how do you suggest it could be improved?

Q205. Do you have any other comments on this section?

Operational Risk

Q206. Please describe the material assumptions and simplifications used when applying the Operational Risk charge.

Q207. What is your view of the factors proposed in the template?

Q208. What is the IAIG's view of the application of the additional growth charge being applied at the total direct and total assumed level (rather than, say, by geography)?

Q209. Does the proposed methodology by the IAIS adequately address any double count between insurance risk and operational risk? If no, what other methods could the IAIS explore to remove the double count?

Q210. Does the IAIG currently capture data on operational risk? If yes, what type of data do you currently capture and why? How does your IAIG use the collected data? Do you have plans to alter or amend the data you collect? If yes, in what manner?

Q211. Does the IAIG capture data on external operational risk events? If yes, what type of data do you collect or have access to, and what do you do with this data?

Q212. Does the IAIG currently calculate economic capital for operational risk? If yes, please explain the methodology and data used for calculating the economic capital.

Q213. How does the Volunteer IAIG mitigate operational risk via internal measures (e.g. internal controls) or via external measures (e.g. - cyber insurance, E and O insurance) or other measures?

Q214. Does the IAIG currently undertake a scenario based approach to operational risk capital? If yes, please explain the methodology.

Q215. Does your current group-wide supervisor or any host supervisor currently require you to hold capital for operational risk? If yes, is this based on their standard method for capital or other methodology? Please provide as much detail as possible on the methodology used.

Q216. One suggested alternative to the proposal in 2015 Field Testing for the calculation of the operational risk charge is an assessment by the group-wide supervisor. If the IAIS was to pursue this option, what criteria should be applied and how would the process work?

Q217. Are there any other methods of calculating the operational risk charge that the IAIS should pursue (besides the proposed method, a percentage of the remaining parts of the ICS and the assessment by group-wide supervisor)?

Q218. Do you have any other comments on this section?

Aggregation

Q219. Please describe any amendments to the design and calibration of the aggregation approach used for 2015 Field Testing you consider necessary to make it more suitable for the ICS standard method.

Supplementary Data Collection (Net Insurance Liabilities and Sovereign Exposures)

Q220. If you are using an economic capital model, are you measuring sovereign risk?

Q221. Does the Volunteer IAIG have limits applicable to sovereign exposures and how are they determined?

Q222. Where a jurisdiction's sovereign currency is determined on the basis that it is part of an agreement with other jurisdictions to use and manage a common currency (for example, the Euro zone), do you believe it is appropriate to assess the risk of sovereign default of each of the jurisdictions under the agreement as being the same? Why or why not?
