February 6, 2015

Mr. Yoshihiro Kawai
Secretary General
International Association of Insurance Supervisors
c/o Bank for International Settlements
CH-4002 Basel
Switzerland

RE: *Risk-based Global Insurance Capital Standard* Public Consultation Document (Dec. 17, 2014)

Dear Secretary General Kawai,

On behalf the American Academy of Actuaries'[1] Solvency Committee, I appreciate the opportunity to provide comments on the International Association of Insurance Supervisors' (IAIS) *Risk-based Global Insurance Capital Standard* public consultation document, dated Dec. 17, 2014.

The committee would like to provide responses to a number of the specific questions solicited in the consultation paper for chapters 2, 5, 6, 7, 9, and 10. Please find our responses below, organized by chapter and question number.

Chapter 2 – Insurance Capital Standard

Question 1. Are these principles appropriate as the foundation for a global consolidated insurance capital standard? Are any enhancements or modifications needed to the ICS principles?

The committee would suggest consideration of the following additional principles:

- Any metrics, information, or other output of a group solvency standard should be useful to all relevant parties, including regulators, management, shareholders, and rating agencies.

[1] The American Academy of Actuaries is an 18,000+ member professional association whose mission is to serve the public and the U.S. actuarial profession. The Academy assists public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.

- Methods should recognize and take into consideration the local jurisdictional environments under which members of an insurer group operates, including the local regulatory regime, product market, and economic, legal, political, and tax conditions.

- A group solvency standard should be compatible across accounting regimes, given the political uncertainties in achieving uniform standards.

- A group solvency standard should minimize pro-cyclical volatility so as to avoid unintended and harmful consequences on regulated insurance groups, insurance markets, and the broader financial markets.

- A group solvency standard should present a realistic view of an insurance group's financial position and exposures to risk over an agreed-upon time frame.

- All assumptions used in any capital or solvency model should be internally consistent.

- It is more important to focus on the total asset requirement than the level of required reserves or capital on a separate basis. The focus should be on holding adequate total assets to meet obligations as they come due. Whether a jurisdictional standard requires the allocation of these assets to liabilities versus capital/surplus should be irrelevant to the overall solvency regime.

- It must be demonstrated that the capital held is accessible, including in times of stress, to the entity facing the risk for which the capital is required.

In addition, the meaning of the statement in the insurance capital standards (ICS) Principle 1 that the standard should "incorporate consistent valuation principles for assets and liabilities" is unclear. If Principle 1 of the ICS is intended to require consistent valuation bases across jurisdictions, the committee has significant concerns. As indicated by the principles suggested above, we believe the ICS should aim to be compatible across varying jurisdictional accounting regimes. As evidenced by the fact that the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) have been unable to converge on accounting standards for insurance contracts, developing a common balance sheet across jurisdictions is fraught with significant challenges. The development of consistent valuation principles is likely to be very challenging and such principles are unnecessary to achieve a risk-based, globally comparable ICS. Please see the committee's response to Question 2 for further discussion of comparability.

Question 2. What does comparability mean for the ICS from your perspective?

Any comparison of risks among different products and different jurisdictions will be difficult. While we agree that it is important for regulators to be able to assess the risks faced by internationally active insurance groups (IAIG), it is unclear whether a single capital ratio or a single risk factor for a similarly labeled product can result in true comparability across national boundaries or different products. For example, the risk in auto insurance in a non-litigious country with national health care is different from the risk in auto insurance in a litigious country

without national health care. Instead, the ICS should be designed in a way that identifies the risks to which IAIGs are sensitive and ensures that all IAIGs can survive certain prescribed stress scenarios. A stress testing approach, for example, could help achieve this end.

Chapter 5 – Valuation

Question 4. Should the IAIS attempt to develop a consistent and comparable MOCE? Why or why not?

The Academy's Financial Reporting Committee supported the use of risk margins for the IASB's accounting projects; however, the Solvency Committee does not see any value in developing or calculating a margin over current estimate (MOCE) for purposes of the IAIS's ICS. The IASB and IAIS projects are fundamentally different: one focuses on accounting and the other on solvency. A group solvency standard, like the IAIS ICS, is intended to specify a total asset style requirement for regulated groups and, therefore, need not focus on the split between liabilities and surplus. Therefore, including a MOCE in the ICS would create more costs for the insurer with minimal value to the user. For solvency purposes, the MOCE would need to be included in the available capital, which makes the additional calculation redundant. Furthermore, it is unlikely that a consistent and comparable MOCE could be devised, given the challenges the IASB has encountered attempting to address a similar problem in its own projects.

In addition, applying a margin to claim liability calculations might mislead rather than clarify valuation for purposes of the ICS. Unlike the best estimate of claim liabilities, the margin could not be observed or validated, making it of little value to supervisors or regulators.

Question 5. If the IAIS were to develop a consistent and comparable MOCE should it fulfill one of the possible purposes listed in paragraph 49 above? If yes, please explain. If no, what should be the purpose of the MOCE? Please explain.

This question ties in with the previous question and the purpose of the ICS. Because the ICS is not designed as a complete accounting system, there is no need to develop a margin for conservatism or to replicate the transfer value. In the event that a company becomes impaired, there is adequate opportunity to calculate a transfer value at that time.

Question 6. If the IAIS were to develop a consistent and comparable MOCE, what principles should underlie its development?

While we do not support calculation of the MOCE for the purposes of the ICS, assuming such a decision is made, the principle should be that the liability is adequate in a determined probability, similar to but less than that used to determine minimum capital.

Question 7. Depending on your answers to the above three questions, what calculation methodology should be applied for the MOCE?

While we do not support calculation of the MOCE for purposes of the ICS, assuming such a decision is made, we strongly urge keeping the calculation as simple as possible.

Question 8. Should the IAIS develop an alternative definition of contract boundaries? If so, please provide such a definition with rationale for that alternative definition.

The boundaries used for solvency purposes should be consistent with the general purpose accounting methodology the IAIG uses for external reporting to shareholders or, for mutual companies, to policyholders. In this way, the IAIG would not need to keep multiple sets of books for a limited purpose.

Question 9. If such alternative definition is adopted what would be the impact on the definitions of ICS capital requirement and qualifying capital resources?

The impact is unlikely to be a material one. However, if the definition of contract boundaries is inconsistent with the methodology the IAIG uses for external reporting to shareholders or, for mutual companies, to policyholders, one potential effect is the additional expense to maintain books on two bases.

Question 10. Are there any other aspects of the market-adjusted approach that would benefit from further enhancement or greater specificity or other changes in any way?

We do not believe that there is any value added from requiring discounting on short-term claim liabilities. Comparisons between companies and the evaluation of estimates would be enhanced if the values were not discounted.

The biggest valuation issue for property and casualty (P&C) insurers is the different level of estimate reliability by insurers for the unpaid claim liability estimate. They may be addressed by adjusting the risk factors for how well an insurer's previous estimates for claim liabilities run off, vis-à-vis the industry average. This can and should be done with some level of granularity, such as using the same segmentation as used in the claim liabilities. This adjustment would be more easily determined and meaningful if applied to undiscounted claim liabilities.

Question 11. What refinements, if any, should be made to the market-adjusted approach as currently formulated in regards to the treatment of long-term business?

It is important to recognize that future cash flows on several types of life insurance products—including, for example, participating policies, universal life policies, and deferred annuities—are highly dependent on the assumed interest rates to be earned. For this reason, the IAIS needs to provide the mandated yield curves in advance of the best estimate cash flows being calculated. Otherwise, the cash flows will not be consistent with the discount rates being used.

This also applies to benefits that reflect inflation in their future costs—for example, long-term care benefits and certain other health benefits.

Question 12. What enhancements could be made to the IAIS prescribed yield curve used to discount insurance liabilities? In particular, what enhancement could be made to further consider procyclicality with reference to ICS Principle 7?

Any valuation approach that inconsistently adjusts assets and liabilities for changes in credit spreads, to the extent that the cash flows offset, must be avoided. Otherwise, the valuation would create artificial changes in calculated capital resources that are not accurate and may distort and/or hide the real risks that the IAIG may face.

For this reason, the 40 percent factor used to calculate the interest rate adjustment will cause non-economic volatility and procyclicality. If interest spreads increase, as they did in 2008, assets will reflect the entire change, while liabilities will reflect only 40 percent of the change. We strongly recommend that the 40 percent be brought closer to 100 percent, with a reduction for potential defaults based on historic experience.

The discount rate also should grade to a long-term assumption beyond the point at which observable rates are available in deep, liquid markets (e.g., 30 years in the United States, 10 years in Korea). This will avoid spurious volatility from changes in the last observable point on the yield curve being extrapolated to all cash flows beyond that for which observable information is available.

Question 13. Is the methodology for determining the IAIS yield curve under the market-adjusted approach appropriate for and consistent with the business models of insurers that write long-term business? If not, how should it be adjusted? Please explain.

The business models for U.S. companies writing long-term business often do not rely on a market-adjusted approach. If such an approach is used, however, we strongly suggest applying the adjustment changes recommended in the response to Question 12.

Chapter 6 – Capital Resources

Question 18. Are there other key principles not included above that should be considered when assessing the quality of financial instruments for regulatory capital purposes? If so, please suggest other principles and the rationale for including them.

The consultation draft identifies the availability of an asset as one of the key principles necessary to assess the quality of a financial instrument. We agree with the inclusion of availability as a key principle and view availability as the most crucial factor to consider in assessing the quality of capital resources. However, we would suggest articulating a more detailed definition of availability.

Specifically, in order to assess an asset's quality, it is important to evaluate whether the asset will be available in a stressed situation, recognizing the ability of regulators to prevent funds from leaving a given jurisdiction (i.e., state or country) and any lags associated with regulatory/supervisory action. The concept of a lag associated with regulatory/supervisory action may be implicit in the availability principle, but it needs to be explicitly stated if it is intended to be included in that principle.

A related item that should be articulated clearly is the need to locate the capital with the risk. If the capital is held where the risk resides, then geographic fungibility will not be an issue.[2] In contrast, if the capital is in a different location, then it may not be of use for addressing the stressed situation. This can include funds subject to currency restrictions and funds held in one jurisdiction where the regulator in that jurisdiction is not willing to allow funds to be used in other jurisdictions unless full payment to policyholders or creditors in their jurisdiction is assured. This feature may result in different group capital assessments by different jurisdictions for the same group.

In addition to improvements to the availability principle suggested above, the principles also should recognize and identify the stakeholders that specific capital is meant to protect. Currently, only policyholders are specifically identified in the consultation draft. Beyond that group, there is only a vague reference to "financial stability." If bondholders, governmental authorities, miscellaneous counterparties, stockholders, etc. are included within the scope of "financial stability," they should be specifically identified.

Another item that merits consideration is the desire to provide incentives and/or disincentives for certain behaviors or actions for policy/regulatory reasons. For example, it may be beneficial for regulators not to discourage insurers from upgrading software capabilities, particularly when such changes require material up-front investment and making such an investment could hurt insurers' capital ratios. In such a case, it may be desirable for a supervisor to allow a portion of such an investment to be treated as capital even though the investment may not be available to the supervisor in a stressed situation. Possible restrictions to such a capital allowance are addressed in the responses to Questions 33 and 34.

Question 19. Should qualifying capital resources be classified in more than one or more than two tiers of capital? How many? And, if different from above, what key criteria should be used to determine tiering?

Classifying qualified capital resources into multiple tiers should not be done without a clear purpose. The document does not explain the supervisory/regulatory differences and impacts of implementing a single tier versus multiple tiers.

Possible reasons for having separate categories of capital may include:

- Identifying actions needed by regulators in a stressed situation to safeguard capital and avoid leakage of funds, such as restricting payments to certain creditors. A specific example would be issued debt. If the purpose of the ICS is to protect policyholders but not debt-holders, then debt payments that could be stopped in time (for a stressed situation) would be an example of capital that would require timely regulatory action for the funds to be available.

[2] Note that this requires "location" to be defined in terms of regulatory authority, which may include both geographic and sector components.

- Policy/regulatory exceptions to the overall principle (i.e., amounts that may not be readily available in times of stress but which are recognized so as to further a policy or regulatory objective). These would probably be subject to a certain limit. Please see the responses to Questions 33 and 34 for additional detail.

Question 20. If qualifying capital resources are classified in two or more categories of capital, should the ICS capital adequacy be expressed using only one, two or more ratios? Why?

It is not clear how any of these ratios would have a significant impact or what purpose would be served by having two ratios. Absent a clear purpose for two ratios, we would recommend only one ratio.

Question 21. Should any amount of non-paid-up items be included in qualifying capital resources? Why? If yes, how should these be classified and should there be limits? Should there be an additional limit on non-paid-up elements that give rise to paid-up Tier 2 elements as opposed to those that give rise to paid-up Tier 1 elements? Please give reasons for your answer.

The focus should be whether a non-paid-up item would be available in a stressed situation with sufficient certainty after acknowledging regulatory lags. No set of rules can encompass all situations, and establishing detailed and lengthy lists of rules typically leads to diversity in application without the fulfillment of objectives. We recommend stressing the overall principles rather than establishing limited rules for this situation.

Question 23. Should the residual amount of GAAP insurance liabilities in excess of current estimate plus consistent MOCE (as referred to in paragraphs 53 and 89) continue to be considered as part of Tier 1 capital resources? If so, should it be all in Tier 1 for which there is no limit, or at least partially recognised in Tier 1 for which there is a limit? If it is not all recognised in Tier 1, should it be recognised in Tier 2, and if so, which part of Tier 2? Should any part of the residual amount of GAAP insurance liabilities not be recognised at all in qualifying capital resources, and therefore effectively be deducted from qualifying capital resources?

This question cannot be answered in isolation from the calculation of the ICS requirement. If the MOCE or "excess" MOCE is included in held capital, then the risk charge associated with the insurance liabilities will be higher. Likewise, if the MOCE or "excess" MOCE is included in the insurance liability, then the risk charge for such liabilities should be lower.

The decision to include such amounts in capital or liabilities depends on the extent to which such values will or can be compared across entities. If there are issues with comparability, then such items should be included in capital rather than liabilities so as to obtain the most comparable results across entities.

Question 24. Should reserves that are set up under regulatory requirements to cover specific types of risks, and that can be unappropriated under supervisory approval, be considered unrestricted and therefore be included in Tier 1 capital?

Yes, they should be included in capital to the extent a regulator/supervisor has access to such funds in a stressed situation. This would follow the general principle proposed in our response to Question 18. Note that regulator access may vary significantly by jurisdiction, including sector jurisdiction within the same geographic jurisdiction.

Question 25. Should Tier 1 instruments for which there is a limit be required to include a principal loss absorbency mechanism that absorbs losses on a going-concern basis by means of the principal amount in addition to actions with respect to distributions (e.g. coupon cancellation)? If so, how would such a mechanism operate in practice and at what point should such a mechanism be triggered?

In general, an insurance supervisor should have the authority to place all investor obligations in stasis during a stressed situation, preserving the maximum amount of assets/funds for the priority stakeholders (e.g., policyholders, insurance claimants, and others such as employee salaries and payroll taxes). This authority should include the ability to restrict both interest and principal payments to debt holders and counterparties with flexibility to allow for partial payments in cases in which doing so benefits the public good, in line with the supervisor's fiduciary responsibility.

In addition, we disagree with the use of a fixed five-year timeframe for treating issued debt as capital (as specified in paragraph 91 section d). We believe the capital treatment is appropriate if, during a stressed scenario, funds would be available for the support of policyholder obligations. The determining factor, given that criteria, with regard to issued debt is whether the supervisor could halt interest and principal payments on that debt fast enough so as to preserve capital for policyholder obligations. Five years is an excessive cutoff timeframe for such a determination. If a supervisor has any authority at all to halt issued debt payments, it would have the authority to so act in a matter of months or quarters, not years. As such, for debt (that the supervisor is able to prevent interest and principal payments on during times of stress), anything over a one-year future maturity as the cutoff for treating the debt as capital is excessive.

Question 26. Should any value with respect to DTA, computer software intangibles and defined benefit pension plan assets be included in Tier 2 capital resources? Why?

Following the general principle proposed in our response to Question 18, if the amounts do not provide needed funds during times of stress (i.e., they cannot be realized in a form that can satisfy/extinguish an obligation), then they should not be counted as capital. For deferred tax assets (DTA), this suggests limiting such DTAs for capital calculation purposes to those amounts that can be converted to cash via tax carrybacks (i.e., recovery of amounts previously paid as taxes). That said, as suggested in our response to Question 18, there may be policy/regulatory reasons to allow some additional portion of such items to be treated as capital.

Question 27. Is it appropriate to include in Tier 2 add-backs from items that are deducted from Tier 1 capital resources (i.e. DTAs, computer software intangibles, defined benefit pension plan assets)? What methodology could the IAIS use to determine an objective realisable value in a stress scenario for these items or should the IAIS adopt a more arbitrary approach such as permitting a percentage of the amount deducted from Tier 1 capital resources to be included in Tier 2 capital resources? If Tier 2 add-backs are included, how would the ICS capital requirement work in relation to the amounts added back?

As stated in our response to Question 19, the only reason we see for including intangibles and other amounts that may not be readily available in times of stress as part of capital resources is to further policy/regulatory objectives. These exceptions from the general principles (for classification as capital resources) should be limited to amounts within the precision of the required capital calculation. Public policy allowances should not be so prevalent that they become a cause of insurer insolvency or insolvent insurers being labeled solvent. For example, if the required capital is only accurate to within 10 percent, then allowing amounts to be included in capital for policy/regulatory reasons up to 10 percent of the total should not result in insolvent insurers being labeled solvent.

Question 28. What objective methodology could the IAIS use to determine the amount of a non-controlling interest that is not available to the group for the protection of policyholders of the IAIG?

We recommend reviewing the principle proposed in the Question 18 response—whether the funds are available in a stressed situation. In general, we recommend focusing on this principle rather than trying to convert it into rules that could be manipulated or circumvented.

Question 29. Should other items be deducted or should some of the above items not be deducted? Please provide details and explain your answer.

Again, we recommend reviewing the principle proposed in the Question 18 response—whether the funds are available in a stressed situation. It appears that the items in paragraph 99 sections a-g follow that principle, while paragraph 99 section h requires a determination as to whether the "excess" described would or would not meet that principle (i.e., would it be available in times of stress after the consideration of regulatory lags).

Question 30. Instead of treating the above elements as deductions to Tier 1 capital resources, should some or all of these elements be included in the ICS capital requirement? Please provide details and explain your answer.

We recommend treating the items in paragraph 99 sections a-g and, possibly, paragraph 99 section h as reductions in capital, not as items subject to a capital charge.

Question 31. Instead of treating the above elements as deductions to Tier 2 qualifying capital resources, should some or all of these elements be included in the ICS capital requirement? Please provide details and explain your answer.

As noted in our response to Questions 19 and 20, we do not support the Tier 1 versus Tier 2 concept without further explanation as to how this would affect regulator/supervisor actions.

Question 32. Should the ICS contain capital composition limits? Why?

Again, we recommend reviewing the principle proposed in the Question 18 response—whether the funds are available in a stressed situation.

Question 33. If it were to contain limits, what would be an appropriate limit for Tier 1 capital instruments that satisfy the criteria set out in Section 6.3.3 (i.e. Tier 1 capital resources for which there is a limit)? How should this be expressed? If it were expressed as a percentage of Tier 1 capital resources, net of regulatory adjustments and deductions, what would an appropriate limit be?

As noted in our response to Question 27 (and consistent with our response to Question 19), to the extent that items are included in capital for policy/regulatory reasons, such amounts should be limited so that they do not result in a clearly insolvent company being labeled as solvent. This implies that the total of such amounts should be capped at an amount within the precision or error range of the otherwise calculated capital charges. For example, if the otherwise calculated capital charges were only accurate to within plus or minus 10 percent, then these amounts related to policy/regulatory reasons should be no more than 10 percent of total capital. This is the maximum they should be allowed to be and some lower percentage might be preferred (or not) by the insurance supervisory community.

Question 34. If the ICS were to include a capital composition limit on Tier 2 capital resources, how should it be determined? If it were set as a percentage of the ICS capital requirement, what should the limit be? Please include reasons for your answer.

As noted in our responses to Questions 19 and 20, we do not support the Tier 1 versus Tier 2 concept without further explanation as to how this would affect regulator/supervisor actions.

Question 36. Should the IAIS consider transitional arrangements for financial instruments that do not meet the ICS qualifying criteria? If so, what transitional arrangements would be appropriate?

We believe that transitional arrangements are generally necessary and advisable for any material change to regulatory rules or requirements.

Chapter 7 – ICS Capital Requirement

Question 37. Should the ICS capital requirement be developed so that it can be implemented as a PCR? If not, why not?

The ICS should be a minimum threshold for intervention. We recommend designing the ICS as a system of one or more thresholds for regulatory intervention in the affairs of a troubled insurance group. Comparability of outcomes across insurers and jurisdictions is an important goal of the ICS. A design that establishes thresholds for regulatory intervention offers the most effective means to achieve this goal.

Functionally, a minimum threshold for intervention identifies groups that are financially troubled versus those that are financially sound. By definition, the minimum threshold for intervention will be a smaller amount of capital than any additional amount above the threshold that is needed to ensure that a company's capital is "prudent" or "strong." Implementing "target" capital levels above the minimum threshold will make comparisons between insurers and jurisdictions more difficult—particularly considering the differences among insurance markets, products, and lines of business globally—which works against the overarching goal of comparability.

While we believe that the ICS should function as a minimum, it does not need to serve as the sole capital requirement in every jurisdiction. Some jurisdictions may impose more stringent group capital requirements and others also may impose capital requirements on a legal entity basis. If it is designed appropriately as a regulatory minimum, the ICS need not override these other requirements. Instead, the ICS can serve as a group-level, globally comparable floor on capital and local requirements that are more sensitive to the particular features of each jurisdiction can define the amount of any capital that should be held above the floor.

Question 40. Are these specified risks and their definitions appropriate for the ICS capital requirement? If not, why not?

We offer the following comments on the risks and definitions set forth in Table 2:

- Insurance Risk – Premium risk (non-life) – We believe that the definition of "premium risk" should be enhanced, as it does not look at the source of the risk, just the outcome. We would suggest considering the following items in premium risk:
    - Underwriting risk – The risk that the insured risks for the given products and pricing plans were not those anticipated by the insurer.
    - Pricing risk – The risk that the pricing calculation did not produce a sufficiently accurate estimate of expected costs for the product or insureds for which the pricing was designed/estimated.
    - Event risk – The risk that actual events are not in line with the average expectation. This can be due to process risks, paradigm shifts, or black swans. Generally, catastrophe risks (where material to the product) are treated as a separate item but

they may not be treated separately if they do not represent a material risk for that product/market.

- In addition, we would suggest deleting the parenthetical from this definition since the data used for estimating premium risk is generally not conducive to separating out morbidity/disability risk.

- Insurance Risk – Claim reserve/revision risk (non-life) – We would include unexpected changes in severity inflation rates, the judicial environment, and medical inflation to this description and delete the parenthetical. We also note that there is a large difference between shorter tail lines and longer tail lines of insurance with regard to reserve risk.

- Insurance Risk – Catastrophe risk – The definition of catastrophe risk in paragraph 110 is not an appropriate definition for solvency purposes. We suggest defining catastrophe risk as the risk of extreme losses due to low frequency, high severity events. It usually only arises from events that trigger a high number of claims from multiple policies all at the same time, such as a hurricane, earthquake, or other natural disaster or terrorist event that impacts hundreds or thousands of insureds simultaneously. The risk exists even if the pricing and quantification of the risk is theoretically perfect but it can be exacerbated if an insurer attempts to manage the risk using an imperfect quantification of the risk. It increases as the concentration of the insurer's book increases in areas prone to catastrophes and decreases as the insurer's book becomes diversified across areas not susceptible to loss from the same event.

- Insurance Risk – Concentration risk – Concentration risk is listed only for assets. We recommend consideration of whether there should there be comparable components for insurance risk.

- Market Risk – Interest rate risk – We would suggest explicitly specifying that this encompasses Asset Liability Management (ALM) risk.

- Market Risk – Spread risk – We note that, unlike the other components of Market Risk, Spread Risk is not further considered in Table 4, Section 9.2, page 55. We believe it should be included in Table 4.

- Operational Risk – We note that comparability between entities will be elusive as many types of operational risk exist and a multitude of methods exist for attempting to quantify dollar exposure. Further, operational risk is best mitigated by process enhancements rather than additional capital requirements.

Further comments on these risks are detailed in later responses.

Question 42. Which risk measure – VaR, Tail-VaR or another – is most appropriate for ICS capital requirement purposes? Why?

As a general matter, whether one measure is better than another depends on the particular confidence level chosen. However, we note that neither the value at risk (VaR) nor Tail-VaR

methodologies that are discussed in this consultation document appear to consider the full risk that exists during the runoff of existing insurance liabilities. It is critical to consider the risk faced by the insurer over the life of its liabilities, particularly for insurers writing long duration liabilities. These risks are not well captured by balance sheet metrics. Please see our response to Question 44 for more information.

Moreover, it is not easy to reliably estimate the proposed targets for certain risks. For example, consider a major earthquake hazard that comes from the New Madrid earthquake zone in the central United States. Since there is no clear scientific consensus on the return period for this earthquake zone, any 1-in-200 risk metric is not subject to reliable quantification.

Many of the risks being evaluated can vary materially over time; hence, metrics that rely on estimates of 1-in-100 year events (or even 1-in-50 year events) will never be subject to verification or calibration based on actual data. For example, the estimate of 1-in-200 year pandemic risks theoretically would require much more than 200 years of data for reliably empirical parameterization; yet, that risk is affected by the status of medical science, health care infrastructures, population densities, transportation systems, etc., none of which have remained static for even the last decade. Therefore, risk measures that rely on tail estimates beyond 1-in-20 or 1-in-50 year estimates could be highly subjective and may be based largely on judgment rather than verifiable data.

As a result, one approach that could be considered would be to use a risk metric and risk level subject to generally reliably estimation, and then apply a conservatism factor to address tail risk.[3]

Question 44. Is the prescription of a one-year time horizon appropriate? If not, what are the alternatives and why?

We strongly believe that the prescription of a one-year time horizon is inappropriate for insurers with long-term liabilities. Instead, the time horizon used should correspond to the horizon of the insurer's underlying liabilities.

Experience shows that significant risks frequently develop over an extended period of time. For example, developments extending for the length of a multi-year economic cycle might have a decisive impact on an insurer's financial strength. Life insurers sell products that are often illiquid and may not generate a claim for more than 30 or 40 years. Similarly, in some cases, P&C exposures can take many years to develop. Asbestos liability in the United States provides a good example.

[3] This approach was suggested by Riccardo Rebonato, a well-known investment executive and academic, in his book "The Plight of the Fortune Tellers." Riccardo Rebonato, "The Plight of the Fortune Tellers" Princeton, NJ: Princeton University Press, 2010.

Question 45. Should the ICS capital requirement include an assumption that the IAIG will carry on existing business for the one-year time period as a going concern? Should the ICS capital requirement only apply to risks at the existing measurement date? Why?

For non-life insurers, there needs to be some assumption of continuing business. Premium risk is caused by the risk of events in the future after the balance sheet date. This risk comes from both the runoff of existing contracts at the balance sheet date and new contracts after that date (from both new customers and renewal customers). Including new customers in these assumptions is critical, as new customers tend to bring proportionately more risk to the non-life insurer than renewal customers. The use of a one-year time period is a common assumption in non-life capital models; it reflects roughly the amount of time after the filing of a balance sheet that it takes a supervisor to shut down the premium writing operations of a company in trouble.

For life insurers, this approach is not suitable. A life insurer's risk profile would not be expected to be as sensitive to new business except for the surplus strain, particularly if the insurer is subject to regulatory supervision or control. Therefore, a run-off approach would be appropriate from a solvency standpoint. In addition, including new business in the analysis would increase complexity. For example, it would be a challenge to appropriately reflect current expenses (which support new products, cover full administration, etc.) if it is assumed that the insurer would enter run-off after one year.

Question 49. Do the proposed principles adequately address the concept of risk mitigation? If not, which principles should be changed and why? What additional principles should the IAIS consider and why? What unintended consequences do the proposed principles create?

We believe that a group solvency regime should promote responsible risk management in the regulated group and encourage risk-based regulation. For example, a solvency regime should recognize risk-mitigation activities, such as asset/liability matching, hedging, and reinsurance. Actuarial functions are critical in the risk management process.

More specifically, we support the general principles for risk mitigation that are outlined in the consultation document, but believe that paragraph 134 section c should be revised to explicitly refer to the potential renewal of risk mitigation arrangements described in paragraph 135 of the consultation.

Question 55. As a starting point for determining the value of the credit [for participating products], does the approach described above represent any challenges? What other options or methodologies should be considered and why?

We agree that the ICS capital requirements should reflect the risk mitigation features inherent in participating products. Traditional participating life insurance makes up a significant portion of the U.S. permanent life insurance market. By design, participating products in the United States share experience and risk with the policyholders. For example, a typical participating whole life insurance policy in the United States pays dividends based on actual mortality, interest, and expense experience as compared with expected experience. For these products, the insurer has absolute discretion over the decision to pay dividends, and the dividend is not guaranteed in any way. If the insurer believes that conditions warrant, it may reduce or eliminate the dividend. As a

result, these participating products pose less risk to the issuing insurer than similar non-participating products.

This reduced level of risk should be reflected in the ICS capital requirements. Either an overall (last step) adjustment to the capital requirements or integration of the reduced risk characteristics into the underlying analysis of the relevant risk components could accomplish this result. However, regardless of the approach used, it is critical to reflect the risk mitigation characteristics of a given product. For example, because of the dividend mechanism, traditional participating whole life insurance generally should generate a lower capital requirement than an otherwise similar non-participating product with more limited non-guaranteed elements.

In addition, we note that certain other types of life insurance products commonly written in the United States, including universal life insurance and deferred annuities, have participating elements. Similar considerations apply with respect to such products.

Chapter 9 – ICS Capital Requirement: an example of the standard method using the market-adjusted valuation basis

Question 80. Should the mass lapse risk charge depend on the type of products? If yes, how should the mass lapse risk charge be considered by product?

Insurers generally do not face the same type of "run-on-the-bank" liquidity risk faced by depository institutions. Many insurance products exhibit little or no liquidity risk. Therefore, any "mass lapse" charge should vary by the liquidity features of the product and, for many insurance products, should not be included at all.

Question 81. Is the above [mass lapse] methodology appropriate? If not, please provide comments on how the methodology can be refined.

We do not believe that the above methodology is appropriate. If there is a mass lapse event, it likely will impact all policies of the insurer that have lapse risk, not just those in a specific line. Moreover, because of surrender charges, the financial impact of additional losses varies by product and by where the policy is in its duration. Therefore, it is not accurate to look at only the negative effects of a mass lapse event. If there is a mass lapse shock test, there should be no artificial constraints imposed when evaluating the impact.

Question 82. Is lapse risk also relevant for non-life business, and if so, to what extent would the methodology described for measuring lapse risk for life business be appropriate for non-life business?

Lapse risk has not been a material solvency risk for non-life business in the United States. This is partially due to the business model of non-life insurance, where every renewal is a new contract (generally subject to new pricing and contract terms) and where non-renewal rates of 20 percent or higher each year are fairly typical. In addition, the largest expense for most insurers is variable (i.e., commissions), such that it responds immediately to lower volumes, and local laws and regulations in the United States allow termination of excess workforce (if the business volume drops).

Question 84. Is the above [Expense Methodology] methodology appropriate? If not, please provide comments on how the methodology can be refined.

We do not believe that this methodology should be applied to non-life businesses. Our understanding is that the initial proposal is to apply this risk to the claim handling costs associated with unpaid claim liabilities. Those costs are a relatively minor part of the total unpaid claim liability estimation risk and are not a source of material solvency risk (with regard to inflation shocks, etc.). Instead, unpaid claim liability estimation risk should be analyzed in total and not split out into morbidity/disability, expense, and other risk.

Question 86. [Premium Risk] Will there be any issues with separating non-life business in the way outlined above? Why or why not?

There are problems with separating non-life business into morbidity/disability versus all other risks. The data used for estimating premium risk generally is not conducive to separating out morbidity/disability risk. For many lines, morbidity/disability is not a risk factor and when it might be a cause of loss it may be one of many causes. The analysis of premium risk for non-life insurance is generally done on a line-by-line basis considering aggregate data with only catastrophe risks typically separated out. Hence, the proposal to separate morbidity/disability from other non-life premium risks is not feasible.

Question 87. Will there be any difficulties in separating premium and catastrophe risk? If yes, how else can these two risks be treated? If no, where should the threshold between premium risk and catastrophe events be set? Why is this appropriate?

There will be some difficulty but it can be achieved. Please note that catastrophe risk is only worth quantifying for some product lines. With regard to how these risks can be separated, we recommend analyzing the process being tested for catastrophe risk in the National Association of Insurance Commissioners' (NAIC) P&C risk-based capital (RBC) formula.

Question 88. Is it appropriate to use a factor-based approach to calculate premium risk? If not, what other alternative approaches in Section 8 could be used? How would it/they work? If yes, which type of factors should be included in the ICS capital requirement, set factors or shocks to loss ratios? Is it necessary to address idiosyncratic risks?

We recommend an approach that shocks a loss ratio. As noted in the response to Question 10, we also recommend some reflection of company experience in adjusting factors based on industry experience.

Question 89. Which exposure amount – premium charged or unearned premium – would be most appropriate to use for most classes of business and why? Which classes of business should not use this as an exposure measure? If possible, provide alternatives including reasons for those alternatives.

Unearned premium is an unsuitable exposure measure. The premium risk charge is generally meant to reflect the risks from additional premium recognized by the insurer before the supervisor/regulator can shut down the acceptance of new (or renewal) obligations. Hence, the

written premium is the preferred exposure base. The use of unearned premium instead would underestimate this risk, particularly when considering the examples of an insurer that writes 6-month policies versus one that writes 12-month policies. Note also that U.S. laws allow the insurance regulator to cancel any in-force policy of a P&C insurer that is undergoing liquidation. Therefore, unearned premium at the time of liquidation is not a source of risk for U.S. P&C insurers.

As referenced in paragraph 242, the insurance risk (both premium and claim risks) for mortgage insurance (MI) will be most appropriately evaluated using the alternative exposure measure of risk in force (RIF). Most national regulators (e.g., the Australian Prudential Regulation Authority, Canada's Office of the Superintendent of Financial Institutions, England's Prudential Regulation Authority, and NAIC and Federal Housing Finance Administration in the United States) use deterministic stress factor approaches, similar to what has been described in section 8.3, applied to the RIF. The RIF should be segmented into key risk cohorts such as country, product type, loan-to-value, age of loan, and credit-worthiness of mortgage holders. The optimal global ICS for MI would include factors for correlations between key risk cohorts. This complex approach is necessary to estimate the financial impacts on multi-year MI policy terms (i.e., many are effective for the full duration of the mortgage) from multi-year stressed economic events.

Question 90. How should the risk charge for premium risk capture these additional risks? Why is this appropriate?

As noted above, U.S. laws allow the insurance regulator to cancel any in-force policy of a P&C insurer that is undergoing liquidation. Therefore, unearned premium or guarantees of future coverage at the time of liquidation is not a source of risk for U.S. P&C insurers.

Question 92. Is the proposed grouping by geographical region appropriate for premium risk? If not, what should be the appropriate geographical grouping?

We recommend leveraging off of the individual line of business segmentation, as specified by the regulatory reporting requirements of each national jurisdiction, as P&C risks can vary significantly by country. This reflects geographic, legal, and cultural differences by jurisdiction. For example, countries that have a common border can expose insurers to significantly different risks from the same event due to different contract terms and legal rules in place (e.g., the same event could cause a flood in both the United States and Canada but the event would not be covered by most private insurance in the United States).

Question 94. Will there be any issues with separating non-life business in the way outlined above? Why or why not?

We do not believe that claim liability estimation risk should be split between morbidity/disability risk and all other risk. The data used for estimating unpaid claim liability estimation risk is generally not conducive to separating out morbidity/disability risk. For many lines, morbidity/disability is not a risk factor and, when it might result in losses, it may be one of many causes. The analysis of unpaid claim liability estimation risk for P&C business is generally done on a line-by-line basis considering aggregate data with only catastrophe risks typically separated

out. To that end, the proposal to separate morbidity/disability from other non-life unpaid claim liability estimation risks is not feasible.

Question 97. What segmentation of business lines would be appropriate for claims reserve/revision risk? Should the segmentation be the same for premium risk? Why or why not?

We believe that the same segmentation should apply for premium and unpaid claim liability estimation risk. Data sources that collect premium and claim information generally use the same segmentation for both. Hence, it would be difficult to obtain the data needed to apply a different segmentation for premium versus unpaid claim liability estimation risk. Please see the response to Question 92 for additional considerations.

Question 102. Which perils should be included in the ICS standard method? Is the list above appropriate? Should it include additional perils or exclude some of the listed perils? Please provide comments with reasons. Please provide comments about possible criteria for perils to be included in the list of perils.

The perils that should be modeled are those that are solvency risks and can be modeled reliably. It is not clear that windstorm/hail losses from non-tropical storms can be a solvency risk for an IAIG (although it may be an earnings risk). It is also unclear as to whether terrorism risk can be modeled reliably in some jurisdictions.

Question 104. For the purpose of field testing, the IAIS is considering collecting data for various confidence levels from full empirical distributions, in order to consider the shape of the distribution and the most appropriate aggregation method. Is that likely to be a challenge for IAIGs? Please explain.

This will be a challenge. Distribution models tend to be assumption dependent. Historical losses are facts and circumstances dependent and not necessarily indicative of current or future risk. In addition, as noted in the response to Question 42, it is unlikely that a full empirical distribution would be possible in a dynamic world for a tail risk. Environments are unlikely to be stable enough for a full distribution of events at the 1-in-100 year level or even at the 1-in-50 year level. Looking at the history of past events is informative but not determinant.

Question 105. Are the defined scenario method and the use of partial models appropriate for the purpose of the ICS standard method? If yes, please explain why. If not, please provide alternative methods and explain why they would be more appropriate.

Defined scenarios will not work for IAIG P&C insurers, as the risks are too unique both in terms of markets in which the business is written and policy terms and reinsurance for those market exposures. The only way to address catastrophe risk for P&C insurers in a credible way is the use of partial (i.e., catastrophe) models (option 4 in paragraph 267).

Any attempt to prescribe a catastrophe scenario also may cause market disruptions, as it could cause those subject to the ICS to avoid issuing insurance contracts exposed to that prescribed scenario.

Question 111. Are the approaches outlined above appropriate for the calculation of the interest rate risk charge? Should any other approaches be considered, and if so, what are they and why?

We note that an interest rate shock does not have to occur at a single point in time. It is critical to consider long-term stress scenarios as well. For example, a scenario of prolonged low interest rates should be considered.

In addition, for P&C insurers with both liabilities and fixed income assets of only a few years (e.g., less than five years), the approach should be kept relatively simple. Interest rate risk for such insurers may not even be a material solvency risk.

Question 135. Is the identification of the reference currency for the purpose of assessing the currency risk appropriate? If not, please explain why, suggest an alternative approach and explain why this will be more appropriate.

It is unclear how the prescribed method of using a reference currency is intended to work for a contract for which premiums are collected in one currency, investments are made in another, and benefits may be paid in a third. Any risk assessment should reflect any relevant currency risk.

Chapter 10 – Other methods of calculating the ICS capital requirement

Question 157. Should any variation to the standard method be allowed? If so, should IAIG-specific variations to the standard method be allowed? If yes, for which risks should IAIG specific parameters be allowed?

Whether it is considered a variation to the standard method or a part of the standard method, the ICS for P&C insurers should reflect, to some extent, the variation of insurer experience from the industry average in which the risk factor is based on industry experience. This is due to the significant variation of premium risk and claim liability estimation risk from insurer to insurer, both due to product/market differences and differences in insurer practices. In the NAIC RBC formula, this is addressed via company experience adjustments that formulaically adjust the risk factors for the difference in company versus industry experience.

Question 159. Should the IAIS permit the use of partial internal models for calculating elements of the ICS capital requirement? If so, for which elements of the ICS capital requirement should partial models be allowed? What are the advantages and disadvantages?

Models should be allowed, if not encouraged, in connection with the ICS capital requirement. Given the complexity of insurance products and the diversity of fundamentals underlying investments and hedges used by insurers, models can help assess an insurer's risks and capital needs in many instances. In addition, the stress/scenario approach proposed in the consultation draft relies on a modeling (as opposed to a factor-based) methodology. Moreover, for certain types of risk, including catastrophe risk, modeling methodologies offer the only viable approach to assess risk.

If models are permitted, standardization of certain assumptions—including standard yield curves and interest rate scenarios—will be critical to achieving consistency and comparability of outcomes. This will need to be done at the jurisdictional level since there are significant differences in risks across the globe.

Standardization will make particular sense for assumptions regarding macroeconomic risks that tend to affect all insurers in a jurisdiction on a relatively uniform basis (e.g., interest rates). In contrast, there will be certain assumptions, including those related to unique catastrophe risks, which will vary by product and, therefore, cannot be usefully standardized. We note, however, that any comparability concerns associated with the use of models would be mitigated to the extent that the ICS is designed as a minimum threshold for intervention, as suggested in our response to Question 37. Should the IAIS decide to allow the use of internal capital models, it should work with actuarial professional organizations to establish actuarial guidelines and standards to facilitate uniform application and review.

Question 165. Should the use of external models be allowed? Should it be restricted to certain risks? If yes, which risks should be better assessed using external models?

The distinction between "internal" and "external" models is becoming less meaningful due to the increasing tendency for custom adjustments to external models. Regardless of whether "internal" or "external" models are used, it is incumbent on the insurer to assume responsibility for the appropriateness of the models being used. We believe that the distinction between "internal" and "external" models in this consultation document is unnecessary.

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Thank you for the opportunity to provide feedback to the IAIS on its global ICS consultation document. If you have any questions or would like to discuss these issues in more detail, please contact Lauren Sarper, the Academy's senior policy analyst for risk management and financial reporting, at 202.223.8196 or sarper@actuary.org.

Sincerely,

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