



# AMERICAN ACADEMY *of* ACTUARIES

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July 26, 2006

Solvency Subcommittee  
Committee on Insurance Regulation  
International Actuarial Association  
Via email to: stuart.wason@sympatico.ca

RE: AAA comments on the IAIS Common Structure for the Assessment of Insurer Solvency

To Solvency Subcommittee,

The American Academy of Actuaries<sup>1</sup> Risk Management and Solvency Committee (RMSC) has completed a review of the May 31 draft of the IAIS Common Structure Paper for the Assessment of Insurer Solvency and prepared the attached comments. It is our hope that these comments will be considered for incorporation into the IAA's comment to the IAIS.

The RMSC's comments are presented separately from a life and non-life perspective. Although you will note that we have commented on paragraphs throughout the document, the bulk of our comments relate to Section 6: Regulatory Financial Requirements. In general, this section seemed overly detailed and prescriptive for the paper's purpose. It perhaps could be improved if it were more principle and objective oriented and the details moved to an educational white paper.

More specifically, our major concerns with the document are:

- From both a life and a non-life perspective, the implication that there is an observable secondary market for non-life insurance claim liabilities, mortality, lapsation or expenses, and that such market information should be the key input to a realistic economic valuation of technical provisions.
- The paper should provide greater emphasis on the role of the regulator, including that it is their responsibility to establish minimums such as minimum risk margins and minimum capital requirements (not the company's) and to require companies to take corrective actions where necessary;
- The paper seems to be very stock company oriented and should be reviewed for areas where different statements are required for mutual insurers.

The Risk Management and Solvency Committee members appreciate the opportunity to review this IAIS paper and provide comments to the IAA's Solvency Subcommittee. We hope our comments are helpful as you prepare a response on behalf of the actuarial profession. Should you have any questions

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<sup>1</sup> The American Academy of Actuaries is a national organization formed in 1965 to bring together, in a single entity, actuaries of all specializations within the United States. A major purpose of the Academy is to act as a public information organization for the profession. Academy committees, task forces and work groups regularly prepare testimony and provide information to Congress and senior federal policy-makers, comment on proposed federal and state regulations, and work closely with the National Association of Insurance Commissioners and state officials on issues related to insurance, pensions and other forms of risk financing. The Academy establishes qualification standards for the actuarial profession in the United States and supports two independent boards. The Actuarial Standards Board promulgates standards of practice for the profession, and the Actuarial Board for Counseling and Discipline helps to ensure high standards of professional conduct are met. The Academy also supports the Joint Committee for the Code of Professional Conduct, which develops standards of conduct for the U.S. actuarial profession.

or need further information on our comments, please feel free to contact us through Tina Getachew at [getachew@actuary.org](mailto:getachew@actuary.org) or at (202) 223-8196.

Sincerely,

A handwritten signature in black ink, appearing to read "James E. Rech". The signature is written in a cursive style with a large initial "J" and "R".

James E. Rech  
Chairperson, AAA RMSC

## Non-Life Perspective:

### Content related comments

#### From the AAA to the IAA on the 31 May 2006 IAIS Draft of *The IAIS Common Structure for the Assessment of Insurer Solvency*

Paragraph reference	Comment <sup>1</sup>
4 Also, 130	<p>Desire for “consistent ... methods for the valuation of ... liabilities”</p> <p>This paragraph states that the use of consistent methods for liability valuation is critical for solvency assessment. With regard to non-life claim liabilities, this contradicts generally accepted actuarial viewpoints when dealing with long-tail liabilities. In general, a variety of methods should be applied when estimating such liabilities and the methods should be potentially adjusted at each valuation to reflect recent facts &amp; circumstances. Forcing a single method to be used for the same product line for all insurers is more likely to result in inconsistent valuations than consistent valuations, as the facts &amp; circumstances (such as, data systems, books of business, market concentrations, etc.) are likely to be different for different insurers.</p> <p>Instead, the focus should be on consistent principles and measurement objectives, with sufficient controls over the estimation process.</p>
32 Also 41, last sentence	<p>“independence of ... actuarial professionals”</p> <p>The intent of this phrase is unclear. Of particular concern is the interpretation that a company would not be allowed to rely upon an employed actuary, and instead would have to hire consultants or other outside actuaries to evaluate its technical provisions. While external controls (such as the use of independent actuaries on external audit teams) are needed in a solvency regime, a prohibition on the use of company employees for the production of valuations and technical provision analysis would be a burden on the companies and profession alike, and would likely result in suboptimum results for the more complex companies (for which the complexity requires a degree of familiarity that can take months or years to achieve.)</p>
40, 78	<p>Focus on market valuations and financial market data</p> <p>Note that for many non-life claim liabilities, the comments in the 2<sup>nd</sup> and 4<sup>th</sup> bullet regarding “calibration to market valuations” and consistency with “general data on the financial markets” are generally not relevant.</p> <p>A similar issue arises in paragraph 78, where a “market-consistent evaluation of underwriting risk” is discussed. This may be possible for non-life unearned premium reserves, but is generally not possible or relevant for non-life claim liabilities. (This may be one weakness of the term “underwriting risk”, as the term inadequately stresses the importance of claim liability estimation risk for long tail non-life claim liabilities.)</p>
56, 55	<p>Paragraphs require public disclosure of assumptions and methodologies underlying technical provisions.</p> <p>The analysis of technical provisions for non-life insurers is entity and product specific. For each component of the total technical provision, the use of multiple methods and assumptions is common. The disclosure proposed in 56 would likely be voluminous,</p>

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	<p>technically involved and not very helpful.</p> <p>The reliability of a non-life claim liability estimate for a particular component of total technical provisions is not just a function of the methodologies and assumptions used, it is also a function of the judgments applied when selecting which particular methods, assumptions, data adjustments, data groupings, etc. to apply and which not to apply. This requires understanding the particular context in which the judgment was applied, which frequently would involve confidential and/or proprietary information. Even if this could be conveyed for one component in a public disclosure, it would have to be provided for all material components to be useful in evaluating the balance sheet strength. Hence it would be required for dozens if not hundreds of individual components. Such is akin to public disclosure of what is known in the U.S. as the “actuarial report” that supports the “loss reserve opinion”, which for the largest U.S. non-life companies is volumes long, and is a document intended for other actuaries and not financial analyst users of public disclosures.</p> <p>Instead of deciding on what exactly should be disclosed at this time, it may be advisable for the IAIS Structure paper to concentrate on the particular disclosure principles and objectives, leaving any further discussion as to the form of the disclosure to a later paper.</p> <p>(Note that this desire for public disclosure of methods and assumptions is also raised in paragraph 4, where the transparency of such methods is described as being “critical” to solvency assessment. As the above explains, such transparency of methods is neither critical nor desirable for non-life claim liabilities. Instead, the transparency focus should be on the measurement objective and the results of the various methods applied.)</p>
67	<p>Paragraph notes “management and supervision should be firmly rooted in realistic economic valuations.” The paragraph goes on to suggest that this implies the use of a valuation methodology, which makes optimal use of and is consistent with information provided by the financial markets.</p> <p>Non-life insurance obligations are generally not publicly traded. In the limited situations where prices are available, lack of transparency related to the unique risks/coverage characteristics makes this information of limited use in making “realistic economic valuations” of other insurance portfolios. For non-life claim liabilities, ‘optimal’ use of financial market information is often considered to be ‘non-use’, except as a last resort.</p> <p>Further clarification of the expectations for using market information for purposes of valuing non-life claim liabilities would be helpful.</p>
70 Also 75,76 and 78	<p>“A market consistent valuation is therefore conceptually based on transfer prices”</p> <p>This statement is generally incorrect with regard to non-life claim liabilities. In such a case, a market consistent valuation would generally be focused on settlement values, not transfer prices, as most liabilities are not transferred and are not traded.</p> <p>The focus on value in transfer (as opposed to value in settlement) is also found in paragraphs 75, 76 and 78. This focus implies that value in transfer is a valid option in most circumstances, and as such would appear to contradict arguments made by the IAIS before the IASB.</p>
73, 101	<p>Terminology regarding “replicating portfolios”</p> <p>The paper appears to use the term “replicating portfolios” in two different ways. Sometimes, the term is used to represent an asset portfolio that reproduces the estimated expected liability cash flows. Other times it is used to represent an asset portfolio that also reproduces the uncertainty of the liability cash flows. This is inherently confusing. Such confusion could be eliminated by using different terms for the different meanings, such as using the term “benchmark portfolios” when just the estimated expected cash flows are reproduced, and “replicating portfolios” when the uncertainty in the liability cash flows is also meant to be reproduced.</p>

73	<p>The document would benefit from a discussion of the relative importance of these 'techniques' for determining consistent market values of (non-life) insurance obligations.</p> <p>First bullet: See comments related to paragraph 67 which notes a lack of observable prices and/or transparency (related to the underlying risks) associated with transferred non-life obligations.</p> <p>Second and third bullet: These paragraphs discuss replication and imperfect replication of insurance cash flows. It does not discuss replication of just the expected cash flow estimates; hence the implication is that it is discussing replication of all the cash flow characteristics. As such, another bullet needs to be added for those insurance obligations that cannot be replicated at all by a portfolio of financial instruments, such as many non-life claim liabilities where the uncertainty is based on items such as:</p> <ul style="list-style-type: none"> <li>• future discovery of the facts &amp; circumstances underlying the event triggering the claim,</li> <li>• future court decisions regarding negligence</li> <li>• the extent of eventual medical recovery</li> <li>• negotiations, interpretations and court rulings regarding the meaning and application of various policy terms and conditions.</li> </ul>
75	<p>"The concept of market consistent valuation of insurance obligations does not require or imply a view that these obligations are frequently traded in deep liquid secondary markets. It rather assumes that information from public financial markets is used to arrive at a value for the obligation which is consistent with the market price of traded financial assets."</p> <p>Not clear what this statement requires in the context of valuing P&amp;C insurance obligations. To a large extent, P&amp;C underwriting portfolios are unique (reflecting different underwriting, policy forms and limits etc). For this reason, actuaries generally use company specific data where available and credible, and supplement that with industry data (adjusted where necessary) to value insurance obligations.</p>
76	<p>"Technical provisions should be based on the risk characteristics of the portfolio and not on the characteristics of the specific insurer holding the portfolio"</p> <p>For P&amp;C insurers, company specific claim practices can impact the discounted value of their insurance liabilities. It's unclear how the proposed Common Structure framework recognizes the impact (on financial condition) of these types of company specific differences.</p>
78	<p>Implication that reinsurance prices can be used to determine transfer value</p> <p>This paragraph, and the paragraphs before it, state a strong preference for defining exit value as value in transfer, and state that reinsurance prices are available in all jurisdictions (and implicitly for all products) as a source for a transfer value reference price. This is erroneous, and is counter to the arguments that the IAIS has presented to the IASB (where the IAIS has argued that many insurance liabilities can only be exited through settlement and not through transfer).</p> <p>For many insurance liabilities and for many non-life claim liabilities in particular, there is no robust secondary market that would allow a company to exit them via transfer. In fact, in many cases, law and/or regulation prevent such a transfer.</p> <p>With regard to reinsurance prices for such "transfer" being available in all jurisdictions (for all products?), this is incorrect. The prices may exist for certain products in certain jurisdictions, but it is clearly not a universal condition. For example, for U.S. claim liabilities, sales of existing non-life claim liability portfolios are rare, private, custom and very entity-specific deals, whereby neither the pricing nor the policy terms nor the underlying claim liability dynamics are publicly available. These deals also provide restrictions such that the full liabilities are generally not transferred, and in the vast majority of cases the ceding company is still in the chain of responsibility for the claims, hence it is not a complete exit</p>

	<p>even if the valuation was observable.</p> <p>As such, it is recommended that this section be rewritten so as not to state a clear preference for exit value via transfer, and so as to avoid (incorrectly) implying that exit value via transfer is readily determinable. This would also bring the Structure paper in line with IAIS statements before the IASB.</p>
80	The paragraph should explicitly mention loss/claim data
93,94,102	<p>Paragraph 93 indicates that "unnecessary lack of diversification" should be ignored when evaluating insurance obligations. Similarly, Para 94 indicates that only "remaining systemic uncertainty" should be considered in technical provisions. Para 102 summarizes and indicates that "volatility" and "hedge able (mismatch)" risk should be captured in capital.</p> <p>Methods for determining market values of insurance obligations are evolving. Currently some methods incorporate process risk while others do not. Some methods may incorporate both process and parameter risk but do not distinguish between them. Moreover, the market may demand a reward for some types of risks that while theoretically diversifiable are not practically/efficiently diversifiable, e.g., property catastrophe risk.</p>
96	<p>"Technical provisions set at this 'overall safety' would imply a risk-return position that would be over-attractive to an insurer"</p> <p>This statement may need clarification as it could be argued that the exact opposite is true.</p> <p>For a multi-line company, if the liabilities would have to be set for each line that would equate with the monoline capital requirement, the result would be an increase in the economic risk capital needed to run the business. This is because an evaluation of liabilities generally looks only at the liability need for the individual line, reflecting no cross-line diversification benefits, while capital requirements can more fully reflect any such diversification benefits. Hence, an "overall safety" approach to setting liabilities would eliminate any benefit from being a multi-line company.</p>
121	2 main conceptual approaches for the determination of technical provisions being considered. It's unclear whether these 2 approaches are broad enough to encompass a full range of methodologies (e.g., CAS White Paper on Fair Valuing P&C Insurance Liabilities presents approximately 10 methodologies for determining fair values).
137	<p>Requirement for a long term business plan</p> <p>The usefulness and the desired features of a long-term business plan will vary based on the product and market. For an insurer who writes short-term policies in a changing environment, a long-term business plan that is qualitative in nature is probably more valuable than one that is quantitative in nature. The reverse may be true for a writer of long duration policies in a stable environment. The IAIS should probably avoid dictating a single approach for long term business plans to all insurers, given the potential variation in markets and products.</p>

**Non-Life Perspective:  
Editorial Comments**

**From the AAA to the IAA on the 31 May 2006 IAIS Draft of  
*The IAIS Common Structure for the Assessment of Insurer Solvency***

Paragraph reference	Comment <sup>2</sup>
Executive Summary, last sentence page 3. Also 21 and 81	<p>“fairly readily quantifiable”</p> <p>The statement that underwriting risk, credit risk and market risk “may generally be considered to be fairly readily quantifiable” is an overstatement for many contexts, and can be avoided by replacing the word “fairly” with “more”. The sentence would then state that these risks are “more readily quantifiable” than operational and liquidity risk, which is a more universally correct statement. (Note that claim liability estimation uncertainty can be rather difficult to quantify for many long-tail product lines, such that even if it is found to be reliably quantifiable for some lines, it is an overstatement to say that it is readily quantifiable.)</p>
Executive Summary last bullet (page 5). Also 125	<p>“ensure that any inadequacies ... are resolved by the insurer, by fully addressing any deficiencies in its policies”</p> <p>This may be interpreted as requiring perfection from an insurer. Suggest rewording as follows:  “Supervision should aim to have <i>material</i> inadequacies in the operation of an insurer be resolved by the insurer, by addressing any <i>such</i> deficiencies ...”</p>
21,22,119	<p>The focus of accounting is generally on “reliable” quantification for decision-making, not “robust” quantification with regard to statistical measures. As such, the replacement of the term “robust” with “reliable” may be indicated. Alternatively, the term “sufficiently precise” used in paragraph 26 may be used as a replacement for “robust”.</p>
73,74	<p>It may be useful to introduce these paragraphs earlier in this section.</p>
81-90	<p>Considerable use of ‘jargon’ in these paragraphs. For example, “uncertainty /parameter /non-diversifiable / systemic risk” and, “volatility / diversifiable risk hedge able”, “which may be voluntary or inherent underwriting risk”, “which may be non behavioural and behavioural”.</p> <p>Not clear why the term ‘process risk’ was avoided. Text is not always clear as to why these distinctions are important for the proposed solvency structure.</p>
85	<p>“may be reduced through hedging”</p> <p>The term “may” in this phrase could be misinterpreted as implying an option that always exists, rather than an occasional option that will not always exist. This can be addressed by changing it to read “may sometimes be reduced through hedging.”</p>
93	<p>“another insurer to whom the portfolio may be transferred”</p> <p>Portfolio transfers of non-life claim liabilities are generally the exception, while reinsurance (which is an incomplete transfer) is more likely an option. Hence suggest changing “transferred” to “reinsured”</p>
98	<p>“these requirements need to be calibrated to the various subcomponents of the risk exposure”</p>

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	<p>Where synergies exist or where some risk components are minor, there may not be a need to calibrate to the various risk subcomponents. As such, the referenced phrase may be improved by adding the word “may”, so that it reads “these requirements may need ...”</p>
104	<p>“commonly termed ‘de-risking”</p> <p>Recommend deleting the word “commonly”, as the term may be new for many jurisdictions.</p>
114	<p>“The scenarios should make full use of historic data ...”</p> <p>Recommend deleting or qualifying the term “full”, as it creates a standard that is impossible to fully meet.</p>
137	<p>“policy holder” should read “policyholder”</p>

## Life Perspective:

### Content related comments

#### From the AAA to the IAA on the 31 May 2006 IAIS Draft of *The IAIS Common Structure for the Assessment of Insurer Solvency*

Paragraph reference	Comment <sup>3</sup>
1	Early sections of this paper, that is those prior to section 6, need more work as has been noted, including adding a glossary of two defined terms, including replicating portfolios.
2	Transparency does not create equivalent results if equivalent means equal. In fact, the results are likely to vary significantly even if the same actuary does the work unless the regulator establishes additional requirements. See more detailed comments on paragraph 7.
4	The differences in assets and liabilities may be comparable but not identical between and within jurisdictions since, for example, taxes will vary among jurisdictions. The pre-tax result may not be comparable either, as tax decisions may influence a pre-tax result.
8	Regulators must establish the margins
13	There are fundamental differences in regulatory and earnings financial statements. We agree they should be constructed as consistent as possible but question whether one can effectively follow the guidelines from both statements.
25	Fixed ratios may also be used to identify potentially weakly capitalized companies thereby avoiding unnecessary use of resources for regular (annual?) modelling by well-capitalized companies.
26	Liquidity risks are measured differently than solvency risks- in other words, more required capital does not address liquidity risks.
40	Are the responsibilities of management to be audited for compliance?
47-48	These two paragraphs are two of the only places where participating contract issues are addressed in the document. The concept of policyholder expectations should not be the basis on which liabilities are established. As with other benefits, the liability should be based on management's best estimate of future payments, based on the other assumptions inherent in the model. This concept may need to be stated explicitly elsewhere in the document as well.
50-58	There may need to be a distinction between those items disclosed to the general public and those a regulator might require with confidentiality assured.
63	Risk margins and minimum capital requirements are to be determined by the regulators.
64	Is this a general requirement or is it limited to that of stock companies or stock company structure? Similar comments can be made about many other paragraphs that only seem to

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	structure? Similar comments can be made about many other paragraphs that only seem to apply to stock companies.
65	Add to comment, capital requirements must be met continuously – not just at the end of the period.
66	“...Satisfactory reward for holding and running off an existing block of existence...”- applies only to stock companies.
70	Transfer prices for insurance generally exist in two cases. First, a purchase price for the insurance contract exists and is the price for transferring the risk from the insured to the insurer. Then, This market price for an insurance risk is observable and based on a deep market. Second actuarial appraisal/valuation models attempt to measure a transfer value but they are subject to considerable subjectivity and the prices generated for the same liabilities by two different parties may be substantially different.
72	Does the “risk” margin described include profit margin?
73	There is no instrument that follows mortality or morbidity risk so a replicating portfolio does not exist for insurance.
75	If most claims are settled, why the preference for transfer prices?
76	Administrative expenses can vary significantly among carriers. The focus here should be on minimum prudent requirements.
77	Maintenance expenses are significantly different for a run-off or for a going concern basis; therefore the liabilities will also be different. Delete paragraph.
78	Reinsurance and sales are highly customized, actual cost may not be available to the public and results can vary widely.
78	The last sentence of this paragraph is ambiguous, possibly incorrect, and therefore should be deleted
79	This is inappropriate for participating business and adjustable priced life insurance.  For many life policies (UL, unit linked, traditional participating) the benefits depend on the interest rate so the discount rate needs to reflect the future returns on the portfolio.  A single interest rate could be used to approximate the effect of an entire yield curve.  It is also important to note that in many jurisdictions the government bond is not risk free (e.g., Argentina) and that a definition of a risk free rate is needed. To discuss a zero coupon bond in such circumstances is meaningless because it would not exist. In fact, in many countries the discount rate could therefore not be based on observable market data at all but would need to be derived by management.
80	Why was a current year data selected over an average of a selected number of years for the assumptions? Do current assumptions provide false precision of the modelled approach and add unnecessarily, volatility to period-to-period results?
81-89	We understand the work underlying these comments is not done yet. Therefore, they need to be redone when they are finalized.
86	Hedging seems more appropriate for fully guaranteed elements. However non-participating life insurance coverages no longer represent a large share of the U.S. market (it is either adjustable priced or participating) hence hedging is likely inappropriate except for extreme risk.

91-108	The major task of the solvency paper is in our opinion to define how the total capital requirement should be stated not the allocation between provisions and required capital. The value of the stress testing identifies the key (to?) risk the company (that) should also be emphasized.
92	Explain the logic for only providing for investment risks in capital. Does this consider or is it appropriate for participating business?
111	We have been told that the preference for a one-year period as a possibility is tied to the period needed to take over the company that may be possible with a clearly defined minimum. We feel one year is generally not enough time to dispose of a liability in all but the simplest situations. However, we believe this period is too short for measuring life insurance risk and would prefer all risk measures must anticipate a series of consecutive adverse effects over two, three or more years.
137	We believe that this also should include the risk needs created by writing future new business with no credit for assumed risk reduction. See paragraph 61.

## Life Perspective:

### Editorial related comments

#### From the AAA to the IAA on the 31 May 2006 IAIS Draft of *The IAIS Common Structure for the Assessment of Insurer Solvency*

Paragraph reference	Comment <sup>4</sup>
Executive Summary, Paragraph 1, 4 <sup>th</sup> Sentence	“coherent (risk-based) methodology for the setting of [minimum required capital to avoid intervention] required [financial] regulatory capital to avoid intervention”
Executive summary, 1 <sup>st</sup> bullet, Last sentence	“Should exceed [minimum regulatory] required capital.”
Executive summary, 4 <sup>th</sup> bullet	“Regulatory [minimum] financial required needs...”
Executive summary, 10 <sup>th</sup> bullet, Last sentence	“stress scenarios <del>over that</del> [throughout] the defined time horizons. To make it clear that this document is continuous.”
Executive summary, last bullet	Add at the end of the last sentence [as well as imposing other corrective actions such as reducing amounts of riskier assets or ceasing to write some benefits]
28	We strongly agree that the regulatory and supervisory regime should focus its efforts on the <u>minimum</u> capital required for the risks assumed by the company.
62	The definition of available capital assumes that there is no excess margin in the technical provisions. The great majority of the worldwide insurance industry endorses a system in which the margin over the best estimate is generally greater than the technical risk margin.
72	Must viatical settlement offerings to policyholders, such as are available from companies in the U.S. and elsewhere, be considered in determining market consistent values?

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