ASSOCIATION ACTUARIELLE INTERNATIONALE
INTERNATIONAL ACTUARIAL ASSOCIATION

28 March 2001

Mr. Craig Thorburn
Chair-Supervisory and Actuarial Issues
International Association of Insurance Supervisors
C/o Bank for International Settlements
CH-4002 Basel
Switzerland.

Dear Craig

On Solvency, Solvency Assessments and Actuarial Issues

On behalf of the International Actuarial Association (IAA), I am pleased to transmit the attached comments on your paper 'On Solvency, Solvency Assessments and Actuarial Issues', prepared in response to your request for comments. These comments are substantially the same as provided to your Committee by Nigel Masters on behalf of the Insurance Regulation Committee of the IAA in our letter of 22 March 2000, but the document has now completed our internal due process and therefore represents the formal policy of the IAA. Given the importance of the topics addressed by your paper, we felt it was useful to you to know that the direction of your paper has the formal support of the international actuarial profession.

As you know, the IAA is the organization representing professional actuarial associations internationally. We are not a trade association and we do not represent the interests of either clients or employers. As actuaries, we have developed significant experience and expertise in the assessment of the liabilities of insurers. Using this experience, actuaries hope, as a profession, to assist the IAIS in enhancing the standards of prudential regulation on an international level. We stand willing to provide assistance deemed appropriate in the furtherance of this objective.

Yours sincerely

Morris W Chambers
President, IAA

International Actuarial Association
Comments on the IAIS Issues Paper On Solvency, Solvency Assessment and Actuarial Issues

Thank you for sharing with us your excellent paper on Solvency. We very much welcome the direction of your paper and believe that it marks an important step in improving policyholder protection while encouraging a prosperous insurance industry.

Rather than comment in a paragraph by paragraph manner, we have picked up on a number of key themes which are set out below. A few specific comments follow at the end of our response.

The International Actuarial Association

The International Actuarial Association (the "IAA") represents the international actuarial profession. Our member actuarial associations exceed forty in number, and represent more than 95% of all actuaries practicing around the world. The IAA promotes high standards of actuarial professionalism across the globe and serves as the voice of the actuarial profession when dealing with other international bodies on matters falling within or likely to have an impact on the areas of expertise of actuaries.

The IAA's interest in the IAIS's Issues Paper On Solvency ("Issues Paper") is meant to assist the IAIS in developing a high quality standard on this very important topic and related standards. The IAA appreciates the opportunity to provide comments on this Issues Paper.

Due Process

A draft version of this statement, which was prepared by the Insurance Regulation Committee of the IAA, the members of which are listed below by name and association, has been circulated to the member associations of the IAA and has received their formal support. Accordingly, this statement represents the formal policy of the IAA in regard to your proposals for improving the prudential supervision of insurers. A list of the members of the IAA are listed below (in an Appendix to this statement).

Members of the IAA Insurance Regulation Committee

Nigel B Masters	Chairperson
David G Hartman	Vice Chairperson
Félix Arias Bergadá	Col. legi d'Actuaris de Catalunya
Morris W Chambers	Canadian Institute of Actuaries
John Feyter	New Zealand Society of Actuaries
Rainer Fürhaupter	Deutsche Aktuarvereinigung e.V.
Isao Hayashi	The Institute of Actuaries Japan
Tom Karp	Institute of Actuaries of Australia
Won How Lo	Actuarial Institute of the Republic of China
Helge Ivar Magnussen	Den Norske Aktuarforening
Thierry Poincelin	Institut des Actuaires Français
Richard Roth, Jr	Casualty Actuarial Society
Charles Thomson	Faculty of Actuaries
Robert Wilcox	Society of Actuaries
Gennaro Olivieri	Istituto Italiano degli Attuari

The Importance of solvency
The IAA is committed to the effective supervision of insurance and fully supports the work of the IAIS in raising standards in all aspects of solvency management. In particular, the IAA continues to promote the highest standards of actuarial practice in regard to insurance finances. It is doing this by developing common standards for examining technical competence, for professional conduct and for disciplinary procedures, based on best practice internationally.

The role of actuaries
We very much welcome the paper's endorsement of the actuarial profession's role in maintaining and enhancing the solvency regime of insurers. Our members take a central role within the prudential regime for insurers. We believe this involvement allows a flexibility of control which in turn promotes innovation without recklessness and provides regulators with a core of professionals on whom they can rely for competence and integrity. To this end, the IAA is promoting the development of internationally acknowledged standards for actuaries working for financial institutions operating under international accounting or regulatory regimes. The standards will cover both technical skills, including ongoing education, and professional conduct.

In the context of this response, we consider an actuary to be a fully qualified member of a full member organization of the IAA. As such, the individual is required to conduct himself or herself according to the code of conduct guidelines of the IAA and is subject to the disciplinary procedures of the member organization.

Against this background, we do have concerns about the suggestion in paragraph 5 of section 8 that mathematicians and economists with experience of insurance matters are a good substitute for a professional qualification. The presumption appears to be that the actuary is simply carrying out calculations under guidance laid down by the regulator. This is at odds with much of the rest of the paper which seeks that all those involved in the determination of provisions and solvency take a wider view of all the risks, business as well as technical, on behalf of the policyholder. For individuals to be able to balance commercial and ethical pressures, membership of a strong profession is extremely desirable if not essential. It is only the existence of a code of conduct backed by a disciplinary regime which can allow regulators to be comfortable to delegate day to day responsibility for policyholder interests to non-regulators, thereby achieving the beneficial gearing required for cost-effective regulation.

As noted below, a key theme of the paper is the importance of taking a broad view of solvency systems. We would echo this point, observing that to be most effective an actuary should not limit his attention to the narrow assessment of regulatory liabilities and solvency margins but should actively contribute to all aspects of the financial management. The involvement of actuaries in general business planning can provide a proper balance of shareholder and policyholder interests from the outset. This will support a prosperous and financially strong insurance industry, which is to the long term benefit of the insuring public, without compromising the position of current policyholders.

This is particularly true in the area of product design and pricing. The involvement of actuaries following a strong code of conduct can allow a regulator to have confidence that insurers are selling policies which are sound in the context of the insurer's overall financial strength. This allows regulators to dispense with the inefficient and potentially uncompetitive process of prior approval of premium rates.

In similar vein, we would agree with the last sentence in paragraph 5.3.4.45, which advocates the checking of disclosure by qualified independent professionals. We would welcome a clear statement from the IAIS that those disclosed elements, which fall within the expertise of the actuary should be independently checked by actuaries.

National and International Standards
We welcome the paper's recognition that a balance must be struck between national cultures and resources and the benefits of international harmonisation. The IAA would support a steady but practical progress towards greater harmonisation. This can be based on a shared understanding of the best concepts and practices. National regulations can be encouraged to converge towards this best practice. Your paper is most important in this regard as it builds that shared understanding.

A wider perspective on solvency
The paper lays emphasis on the importance of broader management controls to ensure solvency rather than relying solely on the level of financial resources. We agree with this approach and would propose that regulators promote the use of techniques such as resilience tests, dynamic solvency testing and dynamic financial analysis. These techniques are partly deterministic and partly stochastic. While we recognise the need to be pragmatic, we would suggest that wherever feasible regulators move towards stochastic methodologies because of their greater robustness, their ability to detect a wider range of threatening circumstances and the educational value that such analysis can have for financial management.

Reflecting this view, we would suggest that the emphasis in paragraph 6.3.17 is changed so that dynamic approaches are seen as the way forward and that while fixed ratio approaches are the most common methods now, this might be expected to change in the future.

Equally important is the need for scenario testing and the formulation of management plans to ameliorate or respond to extreme risks. These are risks that, at times, seem remote but are not inconceivable. Similarly, combinations of unlikely events, often referred to as “double whammies", and correlations between risks need to be considered. While an insurer would not usually provide in its accounts for such risks, an appreciation of such risks can lead to management action in advance of a problem that significantly limits the impact. Such testing is not widely promoted by regulators but would help to develop a more proactive management stance towards risk.

We note that the phrases "financial position", "financial condition", "dynamic solvency analysis" have different connotations in different countries and we suggest these be specifically defined in your Glossary.

Risk-based systems of solvency margins
We strongly endorse the paper's move towards systems which most directly reflect the risks to solvency. While such systems are more complicated and require greater resource than simple formulae-based systems, the greater effectiveness of targeting capital at the areas of high risk should lead to a stronger insurance industry and ultimately a lower cost of capital. Such savings should outweigh the additional expenditure required to establish and operate a more refined risk system.

In particular, we believe the paper should promote the ability of individual companies to use sophisticated solvency modelling, based on processes that are developed internally and that are accepted as reliable by the regulator, to determine their capital requirements. This would allow the most advanced companies to develop

robust techniques based on a coherent conceptual framework. This would help the understanding of these techniques and provide a reward to the companies that invest resources in better solvency management.

Such refined risk systems do not necessarily have to be stochastic provided that the selected deterministic approach estimates losses incurred in particular disadvantageous situations rather than seeking simple proxies for complex risks.

We note that risk-based capital has a number of definitions in different territories. The description in the paper is of a factor-based system, while in other usages it expresses the amount of capital required under stochastic models to ensure financial soundness and as such it is not tied to any specific factor. Clearly, the former is a practical interpretation of the latter but for future discussion it might be helpful to create a number of definitions to cover the various interpretations and include these in the Glossary.

Similarly, we note that in paragraph 4.2.7 (i), the paper refers to a "prudent evaluation of the technical provisions". In some territories, this can refer to an evaluation close to but not equal to 'best estimate'. In other territories, this can be interpreted as contriving very conservative margins. It is important for international consistency that this is clarified and the meaning set out in the Glossary.

The range of risks

The range of risks are clarified in Section 5. While these are all very properly identified, we believe that the level of overlap between categories may lead to confusion as to which risk or risks are being addressed.

We also have some concerns that the delineation between technical (or liability) risks and asset risks means that a proper focus on the interaction of assets and liabilities within the context of the insurance product as a whole is lost. This is particularly important for long term products where product design is fundamental to the integrated management of assets and liabilities.

Additionally, the special risks, described in paragraph 9, stray into the risk areas that we understand are being addressed as 'fit and proper' issues.

Further, there is little mention of the covariance of risks which is an important topic in risk assessment, particularly for general insurers.

The actuarial profession has carried out a number of studies of possible risk classifications and we would commend several papers including "Property-Casualty Risk-Based Capital Requirement - A Conceptual Framework prepared by the Actuarial Advisory Committee to the NAIC Property & Casualty Risk-Based Capital Working Group in February 1992" and "Society of Actuaries Committee on Actuarial Principles - Exposure Draft of Principles Regarding Provisions for Life Risks in November 1994". We would welcome detailed discussions on a generalised framework for risk classification which in turn can be integrated with the risk classifications for the banking industries and other financial institutions.

Also, as you know, we are seeking to develop a coherent risk framework which will support both the setting of the value of liabilities and the management of solvency. This is being developed in the draft IAA paper 'Insurance Liabilities and Capital Requirements' that is discussed below in the section on the IASC Insurance Accounting Issues Paper.

On the specific sections 5.2.1 and 5.2.2, regarding technical and investment risks, we recommend the explicit mention of concentration risk. Concentration risk is more than just catastrophe risk. Examples outside the "single storm" scenario include:

- loss of a single agent responsible for a large portion of total writings;
- problems from a large managing general agent;
- large financial exposure (e.g. stocks, bonds, mortgages, deductible recoverables) from a single company;
- many assets from a single industry sector (e.g. airlines);
- significant business in a single territory (incl. regulatory and judicial risk).

Trigger levels for regulatory action
We note with interest the possibility of developing multiple levels of regulatory intervention. We welcome the extra flexibility that this would give regulators to deal with emerging issues. However, we would suggest that regulatory intervention should not depend solely on the ratios of free assets to required solvency margins but instead should relate to emerging risk situations.

The IASC Insurance Accounting Issues Paper
As the paper notes, the IASC initiative to establish an international accounting standard for insurance is likely to have a significant impact on many aspects of insurance operations. While the deliberations of the IASC's Steering Committee are still at a tentative stage, there appears to be a consensus amongst practitioners that the liabilities under the new regime will move towards being best estimates of future liabilities. This contrasts with many current regimes under which liabilities are assessed very prudently with the expectation that the funds set aside would cover claims in almost all circumstances.

We understand that the IAIS see it as desirable to use the general financial statements as the base for prudential supervision as well as for the assessment of a company's ongoing prosperity. We agree that this is a desirable aim, partly because a single set of financial statements reduces the potential for investor confusion and partly because a realistic account of the ongoing prosperity, or otherwise, of an insurance enterprise is one of the best long-term indicators of its financial soundness.

If the use of a single set of accounts is to be achieved, an approach must be developed which identifies a much higher level of non-distributable solvency capital so that the total of the realistic provisions and the newly defined solvency capital achieves the same level of security as was reached by the current prudential reserves plus the current solvency margin.

One possibility, of course, is to ask insurers to calculate the total reserves and margins on the old basis, deduct the newly calculated realistic provisions and set the balance as the new solvency capital. However, this would result in much additional work.

The IAA sees, as an alternative, that the IASC initiative can be viewed as an opportunity to promote a new solvency capital regime which is integrated with the new accounting regime, which is calculated directly and which achieves the same or better effectiveness than the old system by targeting risks more directly. We see this objective as being implicit in the paper and we endorse such an aim. Work is underway within the actuarial profession to suggest ways to take this objective forward and we look forward to the opportunity to

share this work with you. Such an approach is already introduced in a number of the territories, that have already moved to more realistic accounting regimes and we are seeking to build on this experience.

Market Conduct

The paper evolves four pillars on which the solvency of insurers is founded. These are described in the Summary section of your paper. While we would strongly endorse these key areas, we note they focus on the contractual issues of existing policyholders. We would argue that for financial health, an insurer should also be meeting its wider obligations to policyholders, both to sell ethically and to operate any contractual discretion equitably. This is expressed sometimes as "meeting policyholders' reasonable expectations" or "good market conduct". It is beneficial that insurers retain a level of discretion over certain aspects of a policy's terms and conditions so that they can respond to external events as they emerge. The proper balance to this flexibility is that insurers do not abuse this discretion either wilfully or through mis-management. We would argue that the proper exercise of that discretion is important to the ongoing financial operations of the insurer.

Equally, companies that are not fully open with policyholders at the time of sale, either inadvertently or deliberately, are storing up potentially material liabilities as can be seen in certain recent legal actions in the UK and the US.

These areas do not fit naturally into the four pillars as defined and therefore we would suggest that a fifth pillar is added, perhaps described as market conduct.

If this suggestion is accepted, we would welcome a discussion on how this area can be integrated in to a wider prudential regime. Actuaries in many territories take responsibility for the proper exercise of insurers' discretion for existing policies and it would be feasible for this role to be extended into aspects such as the equity of product structures and the propriety of marketing material.

The development of IAIS prudential standards

We very much welcome this opportunity to submit our comments on your paper and to be able to support so many of the principles proposed. We note, however, that many of the essential matters in solvency, notably investment matching and general management risk are outside the scope of the current paper. We believe that these aspects of the prudential regime are central to solvency management. Accordingly, we would welcome an opportunity to comment also on these papers in due course. We would also note that, in due course, it is important that these aspects of the prudential regime are brought together into a single document so that the breadth of the proposals are to be appreciated.

We now turn to some more specific topics.

Equalisation provisions

Section 5.3.1, paragraph 20, suggests the possible use of equalisation provisions. In our view such provisions are only appropriate of an office holds a static market share, such as via a monopoly or a stable oligopoly, where there is no true competition. The concept breaks down if there is ease of entry, exit, shrinking or growing. As such we suggest that the last sentence should explain that such provisions are appropriate where risks are volatile and market shares are predictable and reliably static.

Catastrophe Reinsurance
In section 5.3.1, at paragraph 21, the last two sentences state "… catastrophe or major losses risk is not generally avoidable. The most important means of risk prevention or risk mitigation in these cases is a quantitative limitation by taking out adequate reinsurance". In practice, other approaches to this problem are frequently utilised. For example, insurers will put limits on the maximum property exposure they will underwrite in a given area. In general, unless there are legal requirements on insurers, our view is that individual insurers can avoid catastrophe risks, although in practice this may be difficult to achieve for business reasons or because of the expectations of policyholders. Of course, the insurance industry as a whole would find such risks unavoidable. In a similar vein, in section 5.3.3, paragraph 37, the statement that reinsurance is the "inevitable tool for the insurer" somewhat overstates the situation in practice.

More detailed comments
We believe the word "maximum" should be replaced by the word "minimum" both times it appears in the footnote to paragraph 8 in section 9.2.2.

In section 9.3.2, paragraph 33, we note that credit risk is also reflected in the life formula with respect to unrecoverable reinsurance balances. In the same paragraph, footnote 4 says that the common stock receives a 30% factor. This is true only for the Life RBC formula, not the P&C formula. Perhaps the phrase could be adjusted to read "up to 30%".

In section 9.3.2, paragraph 34, the paper says that the RBC components are summed directly for the US Life RBC formula, but have a covariance impact on the P&C side. This is not correct. While the covariance effect may be greater for P&C, there is still some for life. Rather than adding the risks, the life formula treats the sum of asset and interest rate risk as independent from insurance risk, significantly reducing the impact of insurance risk for most life companies.

In section 9.3.3, paragraph 35, we would mention that there is no adjustment for dividend commitments for P&C companies. The dividend commitment adjustment to TAC is made only for life companies.

In paragraph 70 in section 9.5, the paper does not note that a Canadian Appointed Actuary has a day-to-day responsibility:

a) to report in writing to senior management any situation that has developed, or decision that has been taken, which, in the opinion of the Actuary, has material adverse effects on the financial condition of the company;
b) to require that steps are taken to rectify the situation; and
c) to provide a copy of such report to the Board of Directors.

If suitable action is not taken in a reasonable period, the Appointed Actuary is required to send a copy of the report to the Superintendent of Financial Institutions and to inform the Board of Directors that he has done so.

This is considered one of the most important aspects of Canadian legislation.

Conclusion

Once again we thank you and your colleagues for allowing us the opportunity to comment on this important and well-written paper. We hope our support and observations are helpful to you. If you require any further clarification or assistance, please do not hesitate to contact myself or the members of the Insurance Regulation Committee.

Appendix

IAA MEMBER ASSOCIATIONS

Full Members

Comisión de Actuación Profesional – Actuarios —
Consejo Profesional de Ciencias Económicas de la Capital Federal (Argentina)
Institute of Actuaries of Australia (Australia)
Aktuarvereinigung Österreichs (AVÖ) (Austria)
Association Royale des Actuaires Belges (Belgium)
Instituto Brasileiro de Atuária (IBA) (Brazil)
Canadian Institute of Actuaries (Canada)
Cyprus Association of Actuaries (Cyprus)
Ceská Spolecnost Aktuárù (Czech Republic)
Den Danske Aktuarforening (Denmark)
Egyptian Society of Actuaries (Egypt)
The Actuarial Society of Finland (Finland)
Association des Actuaires de Bretagne (France)
Association des Actuaires Diplômés de l'I.S.F.A. (France)
Institut des Actuaires Français (France)
Deutsche Aktuarvereinigung e. V. (DAV) (Germany)
Hellenic Actuarial Society (Greece)
Actuarial Society of Hong Kong (Hong Kong)
Félag Islenskra Tryggingastærdfrædinga (Iceland)
Actuarial Society of India (India)
Society of Actuaries in Ireland (Ireland)
The Israel Association of Actuaries (Israel)
Istituto Italiano degli Attuari (Italy)
Institute of Actuaries of Japan (Japan)
Japanese Society of Certified Pension Actuaries (Japan)
Colegio Nacional de Actuarios A. C. (Mexico)
Het Actuarieel Genootschap (Netherlands)
New Zealand Society of Actuaries (New Zealand)
Den Norske Aktuarforening (Norway)
Actuarial Society of the Philippines (Philippines)
Instituto dos Actuários Portugueses (Portugal)
Actuarial Society of South Africa (South Africa)
Col.legi d'Actuaris de Catalunya (Spain)
Instituto de Actuarios Españoles (Spain)
Svenska Aktuarieföreningen (Sweden)
Association Suisse des Actuaires (Switzerland)
The Actuarial Institute of the Republic of China (Taiwan, Republic of China)
Faculty of Actuaries (United Kingdom)
Institute of Actuaries (United Kingdom)

American Academy of Actuaries (United States of America)
American Society of Pension Actuaries (United States of America)
Casualty Actuarial Society (United States of America)
Conference of Consulting Actuaries (United States of America)
Society of Actuaries (United States of America)

Observer Members

Instituto Actuarial Argentino (Argentina)
Carribean Actuarial Association (Caribbean)
Asociación Colombiana de Actuarios (Colombia)
Croatian Actuarial Association (Croatia)
Union Strasbourgeoise des Actuaires (France)
Actuarial Society of Ghana (Ghana)
Hungarian Actuarial Society (Hungary)
Persatuan Aktuaris Indonesia (Indonesia)
Korean Actuarial Association (Korea)
Latvian Actuarial Association (Latvia)
Association Luxembourgeoise des Actuaires (Luxembourg)
Persatuan Aktuari Malaysia (Malaysia)
Asociacion Mexicana de Actuarios A.C. (Mexico)
Nigeria Actuarial Society (Nigeria)
Pakistan Society of Actuaries (Pakistan)
Polskie Stowarzyszenie Aktuariuszy (Poland)
Association of Actuaries and Financial Analysts (Republic of Georgia)
Singapore Actuarial Society (Singapore)
Slovak Society of Actuaries (Slovakia)
Slovenian Association of Actuaries (Slovenia)
Türkiye Aktüerler Dernegi (Turkey)
Actuarial Society of Zimbabwe (Zimbabwe)