

# **INTERNATIONAL ASSOCIATION OF INSURANCE SUPERVISORS**



## **ROADMAP FOR A COMMON STRUCTURE AND COMMON STANDARDS FOR THE ASSESSMENT OF INSURER SOLVENCY**

**16 February 2006**

[This document was prepared by the Solvency and Actuarial Issues Subcommittee in consultation with members and observers.]

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## Roadmap for a Common Structure and Common Standards for the Assessment of Insurer Solvency

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### 1. Introduction

1. In October 2005, the IAIS approved a policy paper entitled: *A new framework for insurance supervision: Towards a common structure and common standards for the assessment of insurer solvency* (Framework paper). This Framework paper describes the rationale and the contents of a framework for insurance supervision. The IAIS approved at the same time the further paper *Towards a common structure and common standards for the assessment of insurer solvency: Cornerstones for the formulation of regulatory financial requirements* (Cornerstones paper). The Cornerstones paper sketches the contours of the common structure and standards, highlighting some of the critical cornerstones for the formulation of regulatory financial requirements. These cornerstones are intended to form together the basis for the standards for the assessment of insurer solvency that are to be developed.

2. The IAIS gives high priority to the elaboration of a common structure and common standards for the assessment of insurer solvency, as they will support transparency and convergence and enhance the comparability of insurers worldwide. This will greatly assist the supervision of the insurance industry, to the benefit of consumers, the industry, investors and other interested parties. A first step is to improve substantially the transparency of the existing solvency regimes and of the financial condition of individual insurers. A next step is to work towards convergence of the solvency regimes. It may be expected that improved transparency and disclosure itself will provide impetus and act as a catalyst for convergence

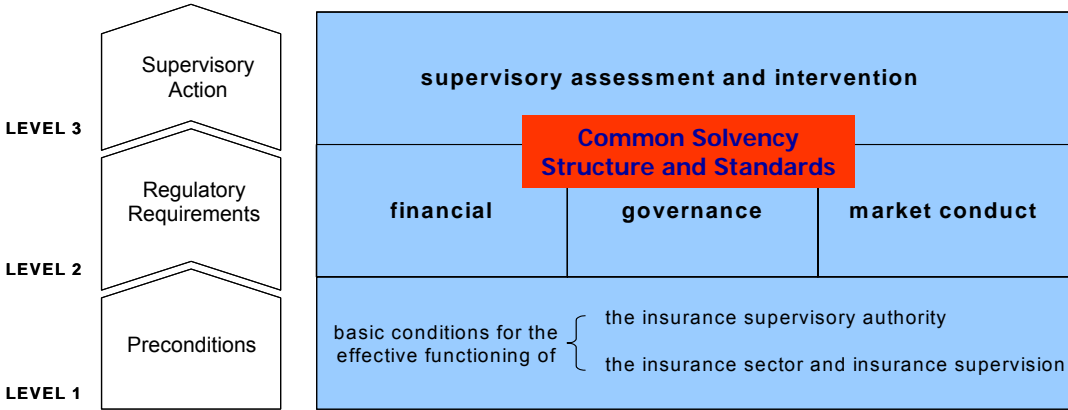
of regulatory regimes and supervisory assessment. A common approach will, furthermore, support a level playing field for industry, and may be expected to provide efficiency gains in their business management. Transparent, comparable standards may also catalyse greater supervisory co-operation underpinned by an enhanced understanding of the prudential strength of institutions in other jurisdictions.

3. This paper (Roadmap paper) sets out the work plan for this project. The IAIS realises that this major project will necessarily extend over a number of years. The scale and nature of this project, in a dynamic environment, are such that this roadmap will need to evolve over time. Even so, it is important to chart the course of the proposed work towards well defined aims, even if these aims may only be attained in a more distant future.

4. The roadmap thus firstly sketches the final deliverables of this project: the envisaged form of the common structure, standards and further guidelines for the assessment of insurer solvency. Secondly, it identifies the main areas of work to be undertaken in the next two years, based on an analysis of the requirements and of the material already available, and sets the order of priority for this further work. Thirdly, it proposes a process for this work to be undertaken, including a timetable until the end of 2006, with some overflow into 2007.

5. The common structure and common standards for the assessment of insurer solvency will be embedded in, and be part of, the overarching Framework for insurance supervision, as outlined in the papers mentioned, and illustrated in Figure 1 below:

Figure 1: The common solvency structure and standards within the Framework for insurance supervision



6. The Framework covers the range of aspects that are relevant to insurance supervision, and the IAIS has already developed standards and discussion papers in some of these areas. This Roadmap paper focuses on the IAIS priority for substantial further work on solvency assessment and deliberately does not address the other more general aspects of insurance supervision. The IAIS will continue to review and extend the structure and content of the full IAIS body of work that is needed to underpin the Framework. However, that falls outside the scope of this paper.

7. The common solvency structure and standards thus encompass three blocks of topics: the financial block, the governance block and the market conduct block, and addresses the upper two levels of the Framework: regulatory requirements and supervisory assessment and intervention. This Roadmap paper addresses the elaboration of each of these elements to the extent that they need to be taken into account in insurer solvency assessment, underlining the need for coherence of approach.

8. The IAIS emphasises that in developing a common structure and common standards for the assessment of insurer solvency the IAIS has taken note, and will continue to take note, of relevant work on insurer solvency undertaken elsewhere. The IAIS will also closely follow and carefully consider developments within other global fora.

9. More particularly, the IAIS recognises the role of the International Accounting Standards Board (IASB) in formulating standards for public financial reporting, specifically on the valuation of assets and the determination of insurance liabilities and technical provisions. Moreover, the work of the IASB extends to the public financial reporting of capital elements. Notwithstanding the important role of the IASB, the IAIS has a specific responsibility for the setting of prudential standards for insurance supervision. The aims of insurance regulation in jurisdictions worldwide, echoed in the *IAIS Insurance core principles and methodology (2003)* (Insurance Core Principles) and underlying all IAIS work, tend to result in a difference in emphasis between the work of the IAIS and IASB. Even so, the IAIS believes that it would be most preferable if the methodologies for calculating items in public, financial reports are able to be used for, or are substantially consistent with, the methodologies used for regulatory reporting purposes, with as few changes as possible to satisfy prudential reporting requirements, and is therefore making an active contribution to Phase II of the IASB's Insurance Contracts Project. The IAIS underlines that the work programme outlined in this Roadmap paper will also contribute to the formulation of timely and structured input into the foreseen work of the IASB<sup>1</sup>.

10. Moreover, the IAIS wishes to make full use of and build upon the wealth of knowledge and insight available in the supervisory community, industry and elsewhere. The IAIS envisages in particular obtaining advice from the actuarial profession, and gratefully acknowledges the support of the International Actuarial Association (IAA). The IAIS will in the undertaking of this project follow an evolutionary iterative process that is open, transparent and structured, including an ongoing dialogue with the IAIS observers. This will include inviting industry to participate in the relevant IAIS meetings, and wide circulation of draft documents for consultation.

11. As indicated above, the scale and complexity of this major project, undertaken at a time when a range of initiatives is in place in the field of insurance solvency assessment and public financial reporting, calls for a steadfast yet flexible approach to steer the dynamics of the process. This Roadmap paper will be updated from time to time to incorporate further insights and developments. Any such amendments to the Roadmap paper will be duly communicated.

## **2. Overview of IAIS work to date and priorities for further work**

12. Since its inception, the IAIS has developed a range of Principles, Standards and Guidance Papers in pursuit of its objectives. The IAIS Insurance Core Principles address a wide range of issues of relevance to insurance and insurance supervision. A substantial number of the issues distinguished in the IAIS Insurance Core Principles have already been elaborated in further Principles papers, Standards, Guidance papers or Issues papers. Annex I provides a summary overview of the body of IAIS papers to date, categorised according to the three main aspects distinguished: the financial block, the governance block and the market conduct block. No distinction is made in this overview according to the upper two levels of the Framework, regulatory requirements and supervisory assessment and intervention, as many of the IAIS papers contain both aspects.

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<sup>1</sup> The IAIS wishes to refer also to the IAIS comment paper to the IASB, *Issues arising as a result of the IASB's Insurance Contracts Project – Phase II, Initial IAIS Observations* (June 2005) (Liabilities paper).

13. A broad comparison between on the one hand, the structure and elements of the envisaged approach to solvency assessment, as illustrated in Figure 1, and on the other hand the present set of IAIS papers, would suggest that the priorities for further work in the area of solvency assessment include the following:

- an elaboration and elucidation of the coherence and interdependence of the various identified elements of the approach and their role within a stable regime
- an elaboration of the interdependence of the four main elements of the financial requirements for the assessment of insurer solvency: technical provisions, capital requirements, suitability and valuation of assets, and recognition and valuation of forms of capital. This work should include addressing the identification of risk factors, quantification of risks and the way in which they may be reflected in technical provision and capital requirements, within a total balance sheet approach.
- subsequent to a coherent treatise on these common issues and the relationships between them in a single paper, separate standards should be developed
- it is foreseen that standards will be developed for each of the four 'financial' elements mentioned above. The work of the IASB is of obvious relevance here. IAIS work to date and consultation on suitable forms of capital will also provide useful input.
- further standards will elaborate on the overall IAIS view on governance, including risk management. IAIS material is already available on investment management issues. In addition thereto, drafting of a governance standard on asset-liability management is already at an advanced stage.
- the IAIS also foresees the need for the formulation and elaboration in a separate standard of market conduct issues in a solvency context
- the IAIS considers public disclosure critical to achieving transparency and comparability. Two standards on public disclosure have already been adopted by the IAIS, and further work is in hand. As work on solvency issues progresses, it will become clear whether there is any need for a separate standard on public disclosure within a solvency context.

### **3. Final Deliverables: Structure, Standards and Guidance papers**

14. As noted earlier, Figure 1 above provides a useful starting point for the analysis of essential elements of a regulatory regime, and more particularly the solvency regime. Figure 1 may of course also be seen as a graphic representation of the elements distinguished in the IAIS Insurance Core Principles. A substantial number of these issues have already been elaborated in further Principles papers, Standards, Guidance papers or Issues papers. The Framework and Cornerstones papers, however, clearly set out the need for the formulation of a range of more precise papers on the assessment of insurer solvency.

15. Further to the Framework and Cornerstones papers, the IAIS will develop a comprehensive common structure for the assessment of insurer solvency, which will form the basis for the further standards and guidance papers. The work will, correspondingly, be carried out in two main phases. The first phase will focus on the elucidation of the interdependence of the elements within a solvency system. More detailed work on a number of individual standards will mainly take place in a second phase, so as to ascertain their coherence. Some work on individual standards, however, may already be usefully commenced in the first phase.

16. Firstly, a main overarching paper, *The IAIS common structure for the assessment of insurer solvency* (Structure paper), will outline in more detail the overall IAIS philosophy on the assessment of insurer solvency. It will also, building and expanding on the Cornerstones

paper, provide a coherent and systematic analysis of the main aspects and elements of the regulatory financial requirements, notably the possible respective roles of technical provisions and capital within a risk sensitive solvency system. The work on the Structure paper is also expected to indicate any need for further standards and possibly guidance papers. It will also, in due course, outline how this set of papers on insurer solvency assessment is embodied within the wider IAIS approach to insurance supervision. The IAIS envisages completing the Structure paper in 2006, although updates may be necessary as work continues.

17. Secondly, further standards and possibly guidance papers will be developed to provide qualitative and quantitative benchmarks for the regulatory requirements and the supervisory assessment and intervention in a jurisdiction, corresponding to the second and third 'level' in the Framework for insurance supervision respectively. Any such guidance papers would not 'mirror' the contents of each of the standards, but rather provide guidance on some specific elements, to assist in developing regulatory requirements or support the supervisory review process. Clearly, the elaboration of more detailed standards would reduce the need for guidance papers. Generally, as work progresses on the development of standards, issues on which further guidance papers are required will become evident. The IAIS envisages to start the drafting of these papers in 2006, with finalisation expected in stages in 2007 and thereafter.

18. The common Structure, Standards and Guidance papers will in due course form a coherent set of documents, or handbook, as is illustrated schematically in Figure 2 below. Figure 2 is intended to illustrate the interrelationship between the various topics and type of papers, and has an indicative purpose. The papers on solvency are, as indicated in Figure 1, embedded in the overall work of the IAIS, and it is conceivable that the issues in some of the 'cells' in the schematic overview may be addressed through more general IAIS papers.

Figure 2: The common Structure, Standards and Guidance papers for the assessment of insurer solvency

Supervisory assessment and intervention	<b>Financial</b>  Standards and Guidance papers	<b>Governance</b>  Standards and Guidance papers	<b>Market conduct</b>  Standards and Guidance papers
	Standards and Guidance papers	Standards and Guidance papers	Standards and Guidance papers
Regulatory requirements	Standards and Guidance papers	Standards and Guidance papers	Standards and Guidance papers
The IAIS common structure for the assessment of insurer solvency ('Structure paper')			

19. The IAIS wishes to emphasise that the papers will not prescribe a specific solvency regime, to be applied compulsorily by the jurisdictions of the IAIS members. The set of papers is intended, however, to form the major benchmark for jurisdictions in developing and updating their own solvency regimes and supervision. The diversity of markets and the wish to stimulate an ongoing improvement of risk management practices require the common

structure and standards for solvency assessment to be principles-based. Even so, the desired comparability and convergence could be encouraged and demonstrated within a framework of not only qualitative but also quantitative benchmarks.

20. The IAIS aims to express in the papers a high, yet realistic level of ambition. The IAIS is aware of the range of initiatives undertaken or currently underway to upgrade the thinking on and practice of solvency assessment, and the various techniques being developed and improved for those purposes. The IAIS expects that the IAIS papers will support and provide guidance to this dynamic process, leading to an enhancement, improved transparency and comparability, and convergence of the assessment of insurer solvency worldwide. The IAIS recognises that many current solvency regimes will not comply fully with the benchmark set by these papers, but envisages that the solvency regime that applies in a jurisdiction will over time be developed towards conformity with the IAIS papers.

#### **4. Areas for further work: The IAIS common structure for the assessment of insurer solvency**

21. The Framework paper emphasises that the determination and assessment of insurer solvency has both quantitative and qualitative aspects, and stresses their interdependence. To keep the Framework stable and effective, less stringent requirements in one element imply a need for stronger measures in the others. However, a minimum level of coverage of each Framework element needs to be determined at a sufficiently exacting and granular level and agreed as an internationally acceptable standard.

22. In the Cornerstones paper, the IAIS formalises a more precise view on a number of key elements or 'cornerstones', intended to act as conceptual 'guide rails' for the further work of the IAIS on the formulation of regulatory requirements of a financial nature. The IAIS stresses in the Cornerstones paper that this work is embedded in a wider approach.

23. The Structure paper will take this work forward, serving a number of purposes, as outlined in the following paragraphs. Annex II provides an indicative outline of the Structure paper. The IAIS wishes to emphasise that the Structure paper will be concise in nature, clarifying the main elements and their interdependencies within a solvency regime and offering a common perspective. It is not intended to diminish the need for further standards on each of these main elements.

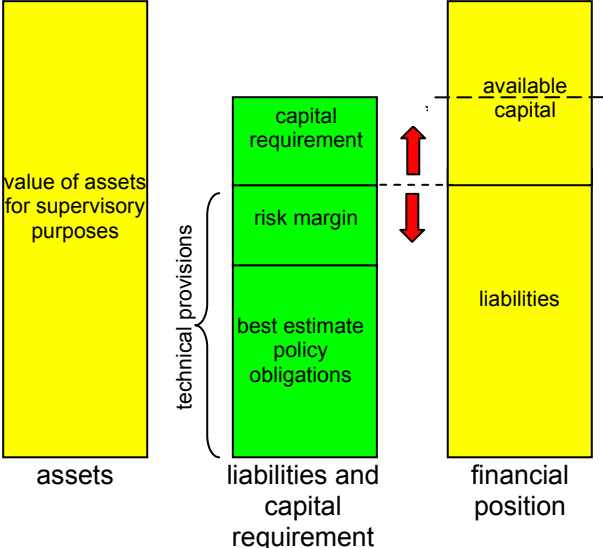
24. The Structure paper will address all three main aspects of insurer solvency: the financial block, the governance block and the market conduct block. It will elaborate on the interrelationship between the various elements of a solvency regime, as outlined in Figure 1, expressing the coherence of the approach. It will provide further precision to the qualitative elements, such as the crucial roles of sound governance, market conduct and public disclosure requirements, and more particularly address how quantitative and qualitative requirements interrelate and are mutually reinforcing in a well-balanced regime. The Structure paper will thus assist in providing a coherent and balanced approach to the elements of a solvency regime.

25. The Structure paper will also discuss the interrelationship between technical provisions and capital requirements within a total balance sheet approach, and the extent to which risk factors identified may be reflected in technical provisions and/or capital requirements. As already indicated in the Cornerstones paper, the determination and assessment of the financial position of an insurer, and the robustness thereof, requires a coherent view of the total balance sheet of the insurer, the risk factors to which an insurer is exposed and any consequences of such risks materialising. This coherence is expressed graphically in Figure



3 below, emphasising the interrelationship between the determination of the technical provisions and of the capital requirements. The level of 'safety' in a particular solvency regime is determined by the combination of those elements, and the way in which they have been tailored to reflect the risk position of an insurer.

Figure 3: The supervisory assessment of the financial position of an insurer



\* Risk factors may lead to a financial charge in technical provisions and/or in capital. The arrows do not imply that such charges are necessarily substitutable on a one-for-one basis. The IAIS will explore this issue in further work.

26. The IAIS envisages that the elaboration in the Structure paper of a more precise and coherent view on all such elements, including the regulatory financial requirements, will prove to be a very productive and efficient intermediate step in the formulation of further standards and guidance papers, ensuring consistency of approach. It will also provide for an easier understanding of the further standards and guidance papers and their interrelationship.

27. The IAIS, furthermore, expects that the Structure paper will serve to provide useful input into other ongoing work in the area of insurer solvency and solvency assessment. It will also and in particular assist the IAIS in providing input into Phase II of the IASB's Insurance Contracts Project, by offering a coherent analytical methodology and model for valuation and insurer solvency assessment.

**5. Areas for further work: Standards on regulatory requirements**

28. The IAIS envisages that, further to the Structure paper, a limited number of standards on solvency issues will be drafted, encompassing a fairly broad range of related topics. The standards will apply to all types of insurance and reinsurance business, with some differentiation where appropriate. It is foreseen that specific more technical items may best be discussed in guidance papers, which may be tailored more precisely to the various types of business.

29. The list of items that would warrant a separate standard presented below is indicative and reflects current IAIS thinking. As work progresses adjustments and additions may prove

desirable, e.g. a separate standard addressing group issues may need to be developed once the issues at the individual insurer level have been addressed.

## **Financial Standards**

30. The IAIS expects there to be a need for Financial standards addressing the following four main areas of insurer solvency assessment:

- the determination of insurance liabilities and technical provisions
- the determination of capital requirements
- the suitability and valuation of assets for insurers
- recognition and valuation of forms of capital.

31. The Structure paper will already outline the close interrelationship between the topics addressed in these proposed standards. The IAIS expects that a complementary set of four more detailed standards will prove more insightful and practical than a single, comprehensive standard covering all topics. The IAIS wishes to reiterate at this point the desire to attain optimal correspondence of the work of the IAIS and the IASB. The presently envisaged Financial standards are:

- a standard on the determination of insurance liabilities and technical provisions will identify concepts, principles and approaches applicable to the valuation of the obligations of the insurance portfolio.. This standard will centre on the determination of the triptych of: technical provisions, best estimate of the costs of meeting the insurance obligations and the risk margin in excess of the best estimate
- a standard on the determination of capital requirements will reflect how risks should be translated into capital requirements
- a standard on the suitability and valuation of assets for insurers will address which assets are appropriate to cover the technical provisions and capital requirements, and outline approaches to and principles for valuing assets for solvency purposes
- a standard on recognition and valuation of forms of capital will set criteria for the forms of capital that may be allowed within a solvency regime. It will furthermore address the valuation of capital elements for solvency purposes, consistent with the overall valuation methodology, and its interaction with capital requirements.

## **Governance Standards**

32. The IAIS sees a need for three Governance standards that are specifically relevant to insurer solvency assessment, addressing:

- governance and risk management, including internal control, by insurance companies
- asset-liability management by insurers
- use and validation of internal models.

Work on a standard on asset-liability management is already progressing well. A standard on governance and risk management by insurance companies will address the much wider issue of enterprise risk management, including the arrangement of governance structures.

33. The IAIS philosophy, as also embedded in the Cornerstones paper, seeks to encourage sound risk management by insurance companies, including the allowance of the determination of financial requirements by means of internal models. The IAIS thus proposes drafting a standard on the validation and preconditions for the use of internal models, as it is already clear that there is a need for such a paper. Such a discussion on internal models is

of course inextricably linked to the setting and assessment of regulatory financial requirements.

### **Market Conduct Standards**

34. The IAIS foresees a need for a standard on market conduct in relation to the assessment of insurer solvency, to include, for example, issues such as treating customers fairly, reasonable expectations, constructive liabilities and misselling. This will give due emphasis to these important aspects of managing the obligations to policyholders which the liability values reflect. Operational risk in this area means that cross-reference to the papers on financial requirements will be made. Work on this standard will indicate the need for supervisory review to complement qualitative and financial requirements to ensure that all risks are covered and the regime is risk-responsive.

35. The Structure paper will outline the critical role of public disclosure within an overall approach to insurer solvency assessment. It is at the moment envisaged that where relevant, the standards will include requirements for supervisory reporting and public disclosure. The work on the Structure paper will clarify any need for a further separate standard on public disclosure.

## **6. Areas for further work: Standards on supervisory assessment and intervention**

36. The foreseen work on the Structure paper and the standards on regulatory requirements will provide clarity on the need for standards on supervisory assessment and intervention. Also here, a more precise specification will be forthcoming in an update of this Roadmap paper.

## **7. Work plan for 2005 - 2007**

37. The priority of the IAIS in the area of solvency assessment is the development of the Structure paper. The development of the Structure paper should not only be based on a clear and coherent analysis of the issues at hand, but also on the extensive experience of practitioners, including insurers, actuarial and auditing firms and the supervisory community. The IAIS aims to issue a draft of the Structure paper for consultation by the end of the first quarter of 2006.

38. The IAIS also wishes a study to be undertaken, in parallel to and in support of the work on the Structure paper, into the best practice for the determination of the technical provisions and capital requirements and the assessment of the adequacy, relevance and reliability thereof. This study aims to provide detailed insight, to all involved in this project, of relevant aspects of current practice and challenges that provide a basis for the development of solutions that are consistent with the IAIS philosophy, as embedded in the Framework and Cornerstones paper and the envisaged Structure paper. The IAIS will consult with the International Actuarial Association (IAA) in this regard, to undertake this study in the first instance for a limited number of key common products, in a number of major insurance markets. It is foreseen that the IAA will be able to submit its findings to the IAIS by the end of the second quarter of 2006. The IAA study is intended to be of a factual and descriptive nature. Annex III contains a detailed proposed terms of reference for this IAA project. The Structure paper and the study by the IAA are expected to provide excellent support to the drafting, by the IAIS, of the further papers mentioned.

39. The work plan foresees that drafting of the 'financial' standards will commence on finalisation of the Structure paper. Other IAIS work on solvency assessment is already in hand or may usefully be commenced simultaneous to the finalisation of the Structure paper. Any papers will need to be fully consistent with and be based on the common ground as addressed in the Structure paper. Notably:

- the IAIS is currently making good progress with the drafting of a governance standard on asset-liability management by insurance companies
- the IAIS plans, as indicated, to draft standards on governance and risk management, including internal control, and on the use and validation of internal models. The writing of both standards may usefully be taken to hand in the first half of 2006, parallel to the finalisation of the Structure paper.
- as indicated, the IAIS furthermore sees a need for a specific market conduct standard in relation to the assessment of insurer solvency. It is envisaged that this work may also commence in the first half of 2006.
- work on a standard on recognition and valuation of forms of capital (following on from the work to date on suitable forms of capital) will be temporarily postponed, awaiting progress of the Structure paper, to ensure consistency of approach.

40. Annex IV contains a more precise timetable for the proposed work until the end of 2006, with some overflow into 2007, indicating the various strands of work and illustrating their interdependence over time. The annex also foresees an update of this Roadmap paper towards the middle of 2006. This update will include a more precise specification of further papers, including guidance papers, to be developed, and the associated time path.

## **8. Resources**

41. The IAIS expects to provide the majority of the resources for this project through the work of supervisor-members working through internal IAIS Subcommittees. The IAIS further gratefully takes up the offer of support of the IAA, as indicated above. The IAIS fully acknowledges the contribution that industry makes to the IAIS, and envisages that industry may be asked from time to time to provide specific support. The IAIS will further continue inviting industry to participate in the relevant IAIS meetings, and regularly circulate draft documents for consultation to all members and observers, as part of an open and transparent process.

## **Annex I – Summary overview of the IAIS papers to date**

### **IAIS Principles, Standards, Guidance and Issues papers**

This Annex presents a listing of the IAIS papers to date, categorised according to the three main aspects distinguished: the financial block, the governance block and the market conduct block. No distinction is made according to the upper two levels of the Framework, regulatory requirements and supervisory assessment and intervention, as many of the IAIS papers address both aspects. Some of the papers also allude to elements of the first level of the Framework. Please note that the allocation of the papers in a particular category is based on the main 'flavour' of the paper; most papers contain elements of more than one block. The Insurance Core Principles & Methodology (Oct 2003) are included under each of the headings.

#### **Financial Block**

*Insurance Core Principles & Methodology* (Oct 2003)  
*Quantifying & Assessing Insurance Liabilities Discussion Paper* (Oct 2003)  
*Standard on Asset Management by Insurance Companies* (Dec 1999)  
*Standard on Derivatives* (Oct 1998)  
*Principles on Capital Adequacy and Solvency* (Jan 2002)  
*Solvency Control Levels Guidance Paper* (Oct 03)  
*Stress testing by Insurers Guidance paper* (Oct 2003)  
*Issues Paper on Solvency, Solvency Assessments and Actuarial Issues* (Mar 2000)  
*Guidance Paper on Investment Risk Management* (Oct 2004)  
*Guidance Paper on Insurance Regulation and Supervision for Emerging Market Economies* (Sept 1997)  
*Guidance Paper on Risk Transfer, Disclosure and Analysis of Finite Reinsurance* (Oct 2005)

#### **Governance Block**

*Insurance Core Principles & Methodology* (Oct 2003)  
*Compilation of IAIS Core Principles on Corporate Governance* (Jan 2004)  
*Guidance Paper on Investment Risk Management* (Oct 2004)  
*Issues Paper on Life Insurance Securitization* (Oct 2003)  
*Issues Paper on Non-Life Insurance Securitization* (Oct 2003)  
*Paper on Credit Risk Transfer Between Insurance, Banking and Other Financial Sectors* (Mar 2003)  
*Issues Paper on Risks to Insurers Posed by Electronic Commerce* (July 2003)  
*Supervisory Standard on Derivatives* (Oct 1998)  
*Standard on Asset Management by Insurance Companies* (Dec 1999)  
*Standard on the Evaluation of the Reinsurance Cover* (Jan 2002)  
*Standard on Supervision of Reinsurers* (Oct 2003)  
*Guidance Paper on Insurance Regulation and Supervision for Emerging Market Economies* (Sept 1997)  
*Guidance Paper A Model Memorandum of Understanding (to facilitate the exchange of information between financial supervisors)* (Sept 1997)  
*Standard on Licensing* (Oct 1998)

*Guidance Paper for Fit And Proper Principles and their Application (Oct 2000) [to be replaced by Standard on Fit and Proper Requirements and Assessment for Insurers (Oct 2005)]*

*Standard on Group Coordination (Oct 2000)*

*Principles on Supervision of International Insurers and Insurance Groups and Their Cross-Border Business Operations (Dec 1999)*

*Principles on Minimum Requirements for Supervision of Reinsurers (Oct 2002)*

*Issues Paper on Assessing the IAIS's Requirements on Cross-border and Cross-sector Cooperation and Information Exchange (Oct 2005)*

### **Market Conduct Block**

*Insurance Core Principles & Methodology (Oct 2004)*

*Principles for the Conduct of Insurance Business (Dec 1999)*

*Guidance Paper on Anti-Money Laundering and Combating the Financing of Terrorism (Oct 2004)*

*Principles on the Supervision of Insurance Activities on the Internet (Oct 2004)*

*Guidance Paper on Public Disclosure by Insurers (Jan 2002)*

*Standard on Disclosures Concerning Technical Performance and Other Risks of Non-Life Insurers and Reinsurers (Oct 04)*

*Global Reinsurance Market Report 2003 (Dec 04)*

*Standard on Disclosures Concerning Investment Risks and Performance for Insurers and Reinsurers (Oct 2005)*

*Guidance Paper on Combating the Misuse of Insurers for Illicit Purposes (Oct 2005)*

## **Annex II – The IAIS common structure for the assessment of insurer solvency**

### **Draft Outline of Contents**

This Annex II presents a broad outline of the envisaged Structure paper. The order of the chapters and the summary in bullet point form of the issues to be addressed in each chapter are indicative and may change as work progresses. It is expected, nevertheless, that this draft outline will serve to clarify the role of the Structure paper in the IAIS work on the assessment of insurer solvency.

The Structure paper will be concise in nature, clarifying the main elements and their interdependencies within a solvency regime, offering a common perspective. The envisaged chapter 2 will outline the need for a balanced overall approach to solvency assessment. The main focus of the paper will, however, be on the financial requirements, discussed in chapter 3. The emphasis will be on outlining general concepts, applicable in principle to all types of insurance and reinsurance business, in a stand alone or group context. The paper will not diminish the need for further standards on each of the main elements, including group issues.

#### **1. Introduction**

Purpose of the Structure paper:

- brief description/reference to existing IAIS work, including the Insurance Core Principles and Methodology, and the Framework and Cornerstones papers, and the overall aims of the IAIS in developing a common structure and common standards for insurer solvency assessment
- transparency, comparability and similarity of conceptual features and the need for explicit articulation of key elements of a regime, including measures to indicate strength (qualitative and quantitative).

#### **2. Key considerations in establishing or revising a solvency assessment regime**

Risk in insurance, general principles:

- assumption and spreading of risk as *raison d'être* of insurance
- discussion of time horizon of risks.

Purpose of insurance supervision and solvency assessment in the jurisdiction:

- protection of policyholders as *raison d'être* of insurance supervision
- nature of environment/preconditions providing context for and influencing the regime in a jurisdiction
- responsibility of insurer to manage risks; responsibility of regime/supervisor to ensure that responsibilities are being met.

Need for a balanced regime, with quantitative and qualitative controls:

- possible role of qualitative and quantitative limits to mitigate/manage/prevent risks; relationship to quantifying and pricing of risk (i.e. charging a financial requirement); relationship between risk charges and behavioural incentives
- outline of considerations on the overall strength of the regime and interaction/balance in establishing/defining the requirements in the three blocks of the solvency regime (financial/governance/market conduct), and role of public disclosure. Balance between the regulatory requirements and supervision. Need for a minimum level of coverage for each block.
- discussion of which risks can/should be addressed by requirements in each of the financial/governance/market conduct blocks of the regime; areas where flexibility/options may be appropriate because appropriate/optimal treatment of risk is less clear/can vary.

Governance and market conduct requirements in a solvency context:

- discussion of elements of governance – independence, internal controls, risk management policies and procedures, internal reporting etc.
- processes/controls of insurer for managing its solvency levels to anticipate and adjust to changes and shocks – monitoring and measures used/required
- role of internal and external parties in governance. Role of actuaries/auditors – independence and accountability; extent to which supervisor is able to rely on third parties.
- discussion of market conduct issues/risk requirements to be addressed/considered in solvency assessment regime e.g. customer expectations/obligations.

Roles of supervisory reporting and public disclosure:

- reporting to supervisor
- public disclosure.

### **3. Financial requirements**

Articulation of risk and financial requirements within a total balance sheet approach:

- discussion of total balance sheet approach, also with reference to consistent valuation methodology
- identification and classification of main types of risks to be addressed by a solvency regime. Discussion of time horizon inherent to the nature of specific risks.
- discussion on how risk characteristics should be translated into solvency control levels
- role of probability in evaluation and identification of different risks.

Market consistent technical provisions (consisting of best estimate and risk margin), capital requirement, assets, and forms of capital:

- components of total balance sheet – technical provisions; capital requirement; assets. Interrelationships among components and the need to avoid double counting.
- role/purpose of technical provisions and required capital and the risks that can/should be addressed in each. Need to determine and articulate quantitative levels/benchmarks for the split between technical provisions (i.e. best estimate plus risk margin) and capital requirements.



- conceptual approaches for determining a risk margin (e.g. probability based, market value/economic based, considerations of cost of capital, run-off margin, compensation for risk, shock absorber) and calibration.
- suitability and valuation of assets.
- recognition and valuation of forms of capital.

Considerations for calibration of financial requirements:

- how robust should an insurer be – the regime should articulate appropriate indicators for measuring the financial position (e.g. in the definition of risk-bearing capital) and the risk measure (e.g. Value at risk (VaR), TailVaR/Expected shortfall (ES)) for assessing the probability and the consequences of failure. This includes the measurement period and position required at the end of the period. Required level of safety compared with 'internal' economic capital. Risk characteristics and solvency control levels.
- methods for calibration etc. – factor based, scenario analysis, stress testing, internal models
- risk aggregation and diversification issues: concepts, methodologies for measuring risk correlation (covariance, copulas) and any credit given for risk diversification
- risk transfer – e.g. through reinsurance, securitisation, use of derivatives etc.

#### **4. Interaction between requirements for the assessment of insurer solvency and public financial reporting**

Reference to International Financial Reporting Standards (IFRS) related issues:

- concepts in previous chapter(s) to develop options for public financial reporting and identification of areas where prudential adjustments may (or are likely to) be required. A number of these areas already have an IAIS position based on the first IAIS Liabilities Paper.

#### **5. Further IAIS work**

## **Annex III – Request to the International Actuarial Association**

### **Approaches to the determination of liability values and quantitative benchmarks for regulatory solvency reporting**

#### **Background**

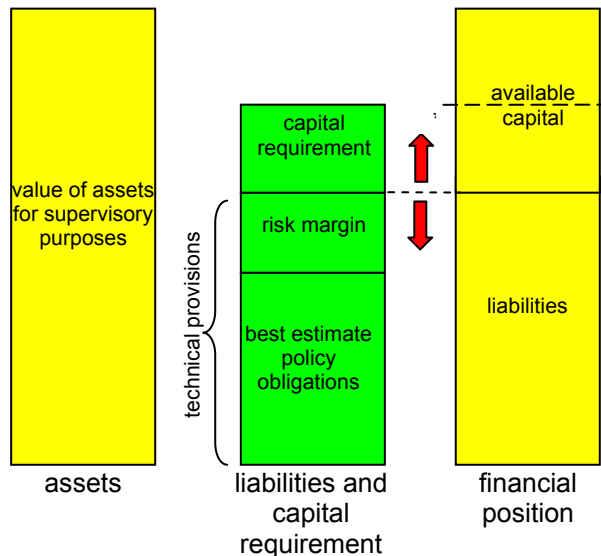
1. The IAIS approved at its Annual General Meeting in October 2005 a paper entitled *A new framework for insurance supervision: Towards a common structure and common standards for the assessment of insurer solvency* (Framework paper) which outlines a Framework for insurance supervision. It also approved at the same time a further paper entitled *Towards a common structure and common standards for the assessment of insurer solvency: Cornerstones for the formulation of regulatory financial requirements* (Cornerstones paper).
2. The Cornerstones paper outlines the key principles towards which the IAIS aims for capital adequacy and solvency assessments to converge internationally in order to achieve enhanced comparability and transparency across and within jurisdictions. The paper therefore contains a number of high-level concepts which will be developed into a series of more detailed standards and technical guidance papers as part of the development of the common structure and common standards for insurer solvency assessment. These standards and guidance papers will be produced according to the timetable that is outlined in the Roadmap paper that has also been developed and released for comment in October 2005.
3. The overall project aims at developing a consistent, reliable and transparent solvency framework that will be the foundation for international best practice for insurer solvency assessment. Critical elements of such a framework are consistent, reliable, explicit and transparent methods for the valuation of assets and liabilities, so that the excess of assets over liabilities can be meaningfully compared to one or more risk-based regulatory minimum requirements. The basis of determination of the values of assets and liabilities must be explicit and appropriately reported or disclosed on a consistent basis to enable transparency and comparability between and within jurisdictions.

#### **Supervisory assessment of the financial position**

4. The Roadmap paper indicates that a Structure paper will be developed to discuss, inter alia, the interrelationship between technical provisions and capital requirements within a total balance sheet approach, and the extent to which risk factors identified may be reflected in technical provisions and/or capital requirements. As already indicated in the Cornerstones paper, the determination and assessment of the financial position of an insurer, and the robustness thereof, requires a coherent view of the total balance sheet of the insurer, the risk factors to which an insurer is exposed and any consequences of such risks materialising. This coherence is expressed graphically in Figure 1 below, derived from the Cornerstones paper, emphasising the interrelationship between the determination of the technical provisions and of the capital requirements. The level of 'safety' of the regulatory financial requirements in a particular solvency regime is determined by the combination of those

elements, and the way in which they have been tailored to reflect the risk position of an insurer.

Figure 1: The supervisory assessment of the financial position of an insurer



\* Risk factors may lead to a financial charge in technical provisions and/or in capital. The arrows do not imply that such charges are necessarily substitutable on a one-for-one basis. The IAIS will explore this issue in further work.

5. As part of this project the IAIS proposes, further to the Structure paper, to develop standards on the determination of insurance liabilities and technical provisions and capital requirements. The standard on insurance liabilities and technical provisions will address how the obligations of the insurance portfolio held should be translated into meaningful concepts and approaches to and principles for valuations of those obligations on the liability side of the balance sheet of the insurer. This standard will centre on the determination of a best estimate of the costs of meeting the insurance obligations and the explicit determination of technical provisions and the risk margins contained therein. Cornerstones V and VI of the Cornerstones paper are particularly relevant in this context. The standard on the determination of capital requirements will reflect how risks should be translated into capital requirements in addition to technical provisions (please also refer to Cornerstones II, III and VII).

6. To assist in the development of these standards the IAIS is seeking input from the IAA on issues related to the determination of best estimate policy obligations and technical provisions, and assessing the adequacy thereof, in the context of an insurer's total balance sheet.

7. The objective of the input requested from the IAA is to provide detailed insight into current practice, challenges and solutions in relation to how insurers and their actuaries determine best estimate policy obligations and technical provisions in a number of major insurance markets, approaches to determining their adequacy, the reliability and robustness of the different methods used and quantitative benchmarks to enable appropriate comparisons across insurers and jurisdictions. The IAIS expects that the reporting of the IAA on these issues will contribute significantly to the finalisation of the Structure paper and the drafting of the further IAIS standards as mentioned.

## **Robust and reliable techniques for the determination of the best estimate policy obligations, technical provisions and risk margins**

8. Transparency and comparability of solvency assessment across solvency regimes and insurers requires convergence internationally in the principles applied to and the methods and approaches used for, the determination and valuation of insurance obligations for these purposes. At present, the terminology for and definition of best estimate policy obligations, technical provisions, risk margins and capital requirements and the methods and approaches used to determine them, vary across and within jurisdictions. Furthermore, there are different views regarding the reliability and robustness of the methods used and amounts determined using currently available approaches, techniques and data.

9. To enable the development of standards for the determination of insurance liabilities, technical provisions and capital requirements it is critical that there is a common understanding of the available methods and approaches used, their reliability and application and hence the underpinning principles and requirements for a solvency regime. Hence detailed input is requested from the IAA, in the context of insurer solvency assessment for supervision purposes, on:

- elements/risks that are allowed for in the quantitative determination and valuation of best estimate policy obligations, technical provisions, risk margins and capital requirements
- principles, methods and assumptions that are available for determining these values
- specific issues or considerations in relation to any particular products or classes of business
- data and other requirements needed to enable the determination and demonstration of reliable and robust values for supervision purposes.

### **Quantitative Benchmarks**

10. The present lack of quantitative benchmarks in relation to technical provisions, risk margins and capital requirements impairs convergence towards comparable and transparent standards for insurer solvency assessment. The current IAIS standards are confined to general qualitative principles such as those set out in Insurance Core Principle 20. The explanatory note to this principle alludes to the adequacy of technical provisions, without providing a comparator: "The [supervisory authority's] standards should ensure that technical provisions are sufficient to cover all expected and some unexpected claims and expenses, make use of reliable and objective methods, and allow a comparison across insurers."

11. Quantitative benchmarks for the valuation of technical provisions, risk margins and capital requirements should provide a means of monitoring convergence towards the application of more effective solvency standards and improve financial stability.

### **Interaction with the work of the IAIS Insurance Contracts Subcommittee**

12. There are a number of issues being considered by the IAIS Insurance Contracts Subcommittee that overlap with those being addressed by the IAIS Solvency Subcommittee. This is evident in the IAIS Liabilities Paper submitted to the IASB, in June 2005, and the areas of further work identified and now being addressed by the IAIS Insurance Contracts Subcommittee. The IAIS has acknowledged the desirability of having optimal correspondence between public financial reporting and the requirements for solvency assessment and reporting for prudential supervision purposes. Hence there is a need for

both the IAIS and the IAA to coordinate the work undertaken and input provided on issues that are relevant to both, to the extent possible.

### **Requirements for and anticipated outcomes from the input to be provided by the IAA**

13. The aim of the input that is being sought from the IAA is to assist the IAIS in defining:

- i. the role and purpose of best estimate policy obligations, risk margins, technical provisions and capital requirements in the context of both solvency assessment and public financial reporting, and the likely areas of difference between these two contexts
- ii. principles and approaches that are appropriate for the determination of best estimate policy obligations, risk margins, technical provisions and capital requirements
- iii. measurable standards for assessing the sufficiency of best estimate policy obligations, risk margins, technical provisions and capital requirements.

in a manner that will allow supervisors to:

- iv. readily assess the prudential risk margin above the value of best estimate policy obligations that is included in the technical provisions of insurers and the reliability of an insurer's history in making appropriate assumptions in determining its risk margins
- v. determine differences in the sufficiency of technical provisions and capital requirements between insurers and enable comparison across jurisdictions
- vi. monitor the movement of prudential risk margins against changing market conditions, ensuring that, if pro-cyclical behaviour exists, it can be arrested before insurers become vulnerable to failure.

14. The outcome of the IAA's work should support a supervisory reporting regime for technical provisions that will enable, for example:

- i. reporting of technical provisions analysed between best estimate policy obligation and prudential risk margin by line of business, covering life and non-life sectors
- ii. reporting of these components for a sufficient period (such as the previous five years) in order that triangulations in both components can be derived and thus assumptions validated
- iii. further analysis as appropriate by geographic location and, for reinsurance, by type of contract.

15. The request for input from the IAA is therefore for an analysis of relevant technical considerations involved in the development of supervisory requirements for solvency assessment that meet the requirements outlined in paragraphs 13 and 14 above. This analysis should address the issues raised in paragraphs 8-9 above in relation to the reliability and robustness of available techniques for the determination of the best estimate policy obligations, technical provisions, risk margins and capital requirements. It should also include quantitative illustrations and address the development of appropriate quantitative benchmarks.

16. The IAIS would anticipate that relevant considerations for this analysis would include, but not be limited to:

- risks for which quantification/valuation is appropriate and reliable

- techniques, methods and models used and their calibration, reliability and robustness
- allowance for aggregation, correlation and risk interdependency
- detailed line of business discussion of issues and assumptions involved in determining and reporting both best estimate policy obligations and prudential risk margins (including reliability, volatility and availability of data)
- allowance for guarantees, bonuses
- allowance for embedded options, notably behavioural elements such as lapse, surrender and renewal
- effects of changes to reinsurance buying patterns (gross and net valuation and reporting)
- discount rates
- claim rates, amounts and settlement expenses
- materiality considerations.

### **Breadth of input and time frame**

17. Given the potential breadth of the input and the consequent resource requirements and time path to address the issues indicated, the IAIS would ask the IAA to provide its input in stages, focusing in each stage on particular aspects, jurisdictions, classes of insurance or other appropriate segments of the input requested. The IAIS would request the IAA in the first instance to identify and focus its analysis on a small number of key and reasonably standard products common to all or at least many jurisdictions, to establish and elucidate the common principles rather than the exceptions. It would also be helpful for the IAA to provide early input on aspects related to the determination of risk margins for solvency assessment purposes and perhaps also to select initially just two or three products from both the life and the general business. The IAIS envisages, in addition, that a collaborative approach will be taken, involving regular liaison, updates and discussion between the IAIS and the IAA.

18. The IAIS would like to receive as soon as possible an initial indication from the IAA of the proposed approach, scope and timing for the work to be undertaken. It would also be desirable for the IAIS to receive from the IAA regular written notes or issues papers as the work progresses throughout the remainder of 2005 and during 2006, culminating in a final report later in 2006 if appropriate.

# Annex IV – Work plan 2005-2007 for the IAIS Common structure and common standards for the assessment of insurer solvency

