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## **PAPER FOR THE SOLVENCY SUBCOMMITTEE**

### **Considerations on the design of a future prudential supervisory system**

The purpose of the Solvency II project is to review the European framework for the prudential supervision of insurance companies.

In May 2001 it was decided that the project would be organised in two phases. The first phase would address each of the main issues involved before determining the general design of the solvency system. Once this general framework had been established, work could begin on the second phase, during which the details of the system would be spelt out.

The first phase of the project is now drawing to a close. As planned at the outset, the Solvency Subcommittee has discussed various topics prepared by the Commission departments. It has taken note of the findings of the study commissioned from KPMG and the reports of the working groups it established for life assurance and non-life insurance. To accompany this first phase, the Conference of European Insurance Supervisory Authorities set up a working group composed of supervisors and charged with drawing lessons from the problems encountered by insurance companies in the recent past. The group's report has been circulated to the members of the Subcommittee.

All parties interested in the project (insurance companies and trade associations, actuaries, consultants) have been sent copies of the various documents discussed by the Subcommittee for their comments and asked to submit their proposals for the project.<sup>1</sup> In turn, their comments and positions have been brought to the attention of the Subcommittee and widely circulated.

The purpose of this paper is to prepare the winding-up of the first phase of the project. After recapitulating the work carried out during this phase (Part One), it seeks to draw appropriate lessons (Part Two). Part Three sets out the main options to be considered in choosing a European prudential supervisory system.

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<sup>1</sup> In addition to this written consultation exercise, those working in the industry have been invited to put forward their views at a meeting scheduled for 17 December 2002.

## 1. RECAPITULATION OF WORK IN THE FIRST PHASE

1. The first phase of the Solvency II project began in May 2001 and was due to be completed at the end of 2002/beginning of 2003.<sup>2</sup> During this period, the Subcommittee held internal discussions on a number of topics and drew on studies and reports produced by other bodies.
2. It is worth briefly recalling the issues examined by the various participants in the project.

### 1.1. General studies (KPMG and Sharma reports)

3. Two general reports merit a mention here:
  - the report carried out on the Commission's behalf by the consultant KPMG;<sup>3</sup>
  - the report drawn up by a working group of the Conference of Insurance Supervisory Authorities of the Member States of the European Union.<sup>4</sup>

#### 1.1.1. KPMG report

4. The KPMG report looks at eight areas that were identified in the Commission's specifications: risks and risk models, technical liabilities (mainly in non-life insurance), asset valuation and investment risk, reinsurance, alternative risk transfer and risk-reduction techniques, the potential impact of changes to accounting rules, the role of rating agencies and comparative analysis of solvency margin systems.
5. The report's main conclusion is that a "three-pillar" approach, similar to the one adopted by the Basle Committee, would also suit Solvency II. A first pillar would contain rules on financial resources (and in particular those currently termed the "three pillars" of the system: prudential rules on provisions, assets and the solvency margin). The second pillar would comprise rules on internal controls, risk management and risk monitoring by prudential supervisors. The third pillar would be a set of rules (mainly on transparency) designed to encourage market discipline.

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<sup>2</sup> It was preceded by a preliminary phase, including in particular an "Open Day" held on 28 June 2000 with the aim of garnering proposals and ideas from as many interested parties as possible before launching the project.

<sup>3</sup> KPMG: *Study into the methodologies to assess the overall financial position of an insurance undertaking from the perspective of prudential supervision*, May 2002 (in English only).

A provisional report was presented to the Subcommittee on 23 January 2002. The final report was presented at a conference organised by KPMG on 24 and 25 June 2002.

<sup>4</sup> *Report on the prudential supervision of insurance undertakings*. At the time of writing, the report had been approved but not yet published. It is therefore impossible to give any more precise reference.

The Chairman of the working group presented a provisional report to the Subcommittee on 22 October 2002.

6. On the question of capital requirements, the report recommends adopting a calculation method that takes account of underwriting risk, market risk and credit risk. It is cautious about including in such a formula a capital requirement for operational risk or for asset-liability mismatch risk.

### ***1.1.2. Sharma report***

7. The second general report drawn up in connection with Solvency II is the report of the Conference of European Insurance Supervisory Authorities (also known as the "Sharma report" after the name of the working group's Chairman).<sup>5</sup> It sheds valuable light on the project from the standpoint of the main users of prudential rules, viz. the supervisory authorities.
8. The working group tasked with writing the report sought first and foremost to capitalise on the practical experience of its members. Each national supervisory authority possesses information and analytical data that is unlikely to be available in full to any other player in the industry. By pooling this special knowledge of the problems of insurance companies, the group had access to a wealth of raw material unique at European level.
9. The group based its analysis of insurance company risks on a detailed study of companies in serious difficulties (questionnaire on failures or near misses over the last six years, numerous detailed case studies). It then drew up an inventory of the regulatory tools available to supervisors and discussed their suitability for resolving the problems uncovered by its risk analysis.
10. The report's main conclusion is that the prudential system must include a whole series of regulatory tools that have a preventative or curative function and allow action to be taken at all stages where a problem might arise: from the earliest stage (the underlying cause), where, for example, poor company management is perceptible only in the attitude of managers or employees, up to the final stage, where a causal chain (external events, poor decision-making processes, mistakes, etc.) has already seriously undermined the financial position, causing harm to policyholders.
11. From this point of view, capital requirements are just one of the regulatory tools needed. An important tool, certainly, but not sufficient to constitute a system of prudential supervision by itself. Here the report recommends that triggers for intervention should be more clearly differentiated according to the company's financial circumstances, although it contains no detailed proposal for calculating the intervention trigger(s). However, the report does set out a set of practical recommendations for creating, developing or harmonising other regulatory tools.

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<sup>5</sup> The Conference also held two seminars on Solvency II: one at Bruges last spring and the other in Copenhagen in November.

## **1.2. The work of the Subcommittee (papers, pooling of experience)**

### **1.2.1. Discussion papers**

12. During the first phase, the Subcommittee itself debated the main issues relating to the design of the future solvency system on the basis of discussion papers drawn up by the Commission departments.
13. First, the Subcommittee took note of the broad lines of the Basle draft aimed at reforming the international prudential banking system. It then discussed how far this draft might serve as a source of inspiration for the Solvency II project on insurance.<sup>6</sup>
14. Second, the Subcommittee studied alternative ways of calculating the minimum capital requirement for insurance companies. Two papers were discussed: one on existing “Risk-Based Capital” systems in the United States, Canada and Australia<sup>7</sup> and the other on the internal risk models of insurance companies.<sup>8</sup>
15. There was also a special discussion on the links between accounting rules (which will probably be subject to changes) and prudential supervision rules and reports.<sup>9</sup>
16. At its last meeting, the Subcommittee took on board the work on solvency in progress at international level<sup>10</sup> (IAIS,<sup>11</sup> actuaries). It also took note of the new European regulatory mechanisms likely to be adopted for financial services (“Lamfalussy approach”<sup>12</sup>).

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<sup>6</sup> Discussion paper MARKT/2056/01 of 12 June 2001. The Subcommittee discussed these matters at its meeting on 19 December 2001.

<sup>7</sup> MARKT/2085/01 of 11 October 2001, discussed at the meeting on 19 December 2001.

<sup>8</sup> MARKT/2515/02 of 17 May 2002, discussed at the meeting on 28 June 2002.

<sup>9</sup> MARKT/2514/02 of 17 May 2002, discussed at the meeting on 28 June 2002.

<sup>10</sup> MARKT/2520/02 of 18 September 2002, discussed at the meeting on 22 October 2002.

<sup>11</sup> International Association of Insurance Supervisors.

<sup>12</sup> MARKT/2519/02 of 27 September 2002, discussed at the meeting of 22 October 2002.

### **1.2.2. Presentations by Member States**

17. The Subcommittee devoted one of its meetings to presentations by the Member States on aspects of their prudential systems or current reform plans.<sup>13</sup>
18. Finland presented the principles of its prudential supervision and the mechanisms in force for solvency requirements and equalisation provisions. France then outlined its vision of permanent supervision of insurance companies based on a tight combination of documentary checks and on-the-spot inspections; it also described its new monitoring tools (solvency report, asset-liability monitoring report). Germany outlined the three stages of its annual analysis of insurance company accounts and the associated early-warning system. It also referred to the main provisions of its law on the supervision and transparency of companies, which requires all listed companies to carry out proper internal monitoring of risks.<sup>14</sup>
19. A number of planned reforms were then presented. The principle underlying the reform in the United Kingdom is to transpose the "three pillars" of the Basle project to the insurance industry, with particular emphasis on monitoring management behaviour, public information and tests based on adverse scenarios (stress testing). The plan presented by the Netherlands is aimed at promoting better understanding of risks: for the assessment of capital adequacy, three different time-frames are to be introduced corresponding to three different levels of capital. In this context the use of internal risk models will probably be encouraged. Sweden's plan is part of the arrangements for establishing a system of supervision covering all financial sectors; it comprises quantitative and qualitative methods of assessing the financial soundness of the leading companies in the Swedish financial sector. Finally, Liechtenstein proposes a method for limiting insurance companies' exposure to risk.

### **1.3. Life and non-life working groups**

20. In parallel with these discussions, the Subcommittee set up two working groups consisting of experts from several Member States and one representative of the *Groupe Consultatif Actuariel Européen* and charged with the task of studying matters of a more technical nature, one in the field of non-life insurance and the other in life assurance.
21. The groups' deliberations covered the period from September 2001 to September 2002. Their reports were presented and discussed at the Subcommittee meeting on 22 October 2002.<sup>15</sup>

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<sup>13</sup> Meeting of 29 April 2002.

<sup>14</sup> This law does not apply only to the insurance industry.

<sup>15</sup> MARKT/2528/02 and MARKT/2529/02.

### ***1.3.1. Non-life working group***

22. This group concentrated on non-life technical provisions: provisions for outstanding claims and equalisation provisions. The question put to it was to what extent such provisions were consistent in Europe. The group focused strictly on this question since the other issues relating to non-life technical provisions, such as regulatory definitions, actuarial methods of calculation and discounting, etc., were already being addressed in other studies.<sup>16</sup>
23. As regards provisions for outstanding claims, the group found, in particular by studying statistical indicators, that there was a wide diversity of provisioning practices, not only between different European markets but also, on occasion, within a single domestic market. It feels that the European supervisors should encourage the convergence of such practices in order to arrive at a common level of prudence in provisions: to this end, they could define the principles of sound provisioning and adopt a common basis for effective monitoring of such provisions (in particular statistics). The group also examined with interest the Australian approach, which consists in setting a numerical benchmark for the level of prudence in provisions: however, practical implementation of such a rule raises a number of problems requiring further examination.
24. The lack of harmonisation is even more apparent in the field of equalisation provisions. The group stressed the value of equalisation mechanisms in insurance and proposed that their scope be extended to all lines of insurance that were particularly volatile. It also observed that equalisation provisions could be taken into account together with capital when calculating the solvency margin requirement; this solution would serve to harmonise further the constraints imposed by the solvency margin.

### ***1.3.2. Life working group***

25. This group examined issues specific to life assurance. It looked at the rules for calculating mathematical provisions as well as companies' asset-liability management techniques and their possible use for regulatory purposes. The group's study differed from that of the non-life group in that the questions addressed were more varied in scope and there was no recent consolidated study on which to build. The group therefore concentrated its efforts on comparing domestic markets and the prudential problems encountered as a prelude to assessing the regulatory requirements laid down by the Directives.

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<sup>16</sup> In particular, the report by the Conference of European Supervisory Authorities on technical provisions in non-life insurance, May 2002 ("the Manghetti report") and point 4 of the KPMG study.

26. The group identified five major issues currently receiving special attention from all supervisory authorities: guaranteed interest rates, risks relating to annuities, profit-sharing clauses, unit-linked products and options embedded in certain contracts. For each of these issues, the report proposes ways of improving European legislation, both as regards principles (essentially by supplementing existing provisions) and in the more technical field of quantification methods. It also recommends introducing minimum regulatory requirements for asset-liability management, which could form part of the basis for supervisory action (stress testing).
27. A number of the group's proposals will require further technical studies which could be carried out as part of the second phase of Solvency II.

#### **1.4. Proposals on the design of the system (Member States, industry)**

28. The working documents for Solvency II have been circulated widely. The various topics addressed have prompted numerous comments, which the Commission departments have taken on board in their work.
29. The Member States and the various market players have also been asked to put in writing their own vision of the general design of the future solvency system. The main contributions are summarised briefly below.
30. To round off this consultation process, the Commission departments are organising a special day when the various practitioners (representatives of insurance companies, actuaries, consultants) will be able to state their views on the Solvency project before the members of the Solvency Subcommittee (17 December 2002).

##### **1.4.1. Member States**

31. To date, three Member States have sent in discussion papers on the design of the future solvency system - the Netherlands, France and Italy. We shall not attempt to produce a precise summary of these very dense papers, but the broad outlines are described below.
32. For the Netherlands, a prudential system adapted to the risks encountered must treat identical risks in identical fashion (whether they are incurred by an insurance company or a bank). It must encourage the development of internal risk assessment models. It must not be complex to the point of being prohibitively expensive for insurance companies or be changed too frequently. Finally, at times of crisis it must not lead to behaviour that might destabilise the financial sectors even further (procyclical effects). The Dutch contribution also includes a set of individual suggestions which might be useful for subsequent phases of Solvency II.

33. France identifies possible improvements to the prudential system: the solvency margin would take greater account of risks (asset risk, underwriting risk with the adoption of a ratio to be applied to non-life provisions, catastrophe risk and reinsurance programme); margins of prudence would be maintained in assets and liabilities but made more transparent; finally, the qualitative appraisal of risks would be reinforced and a "control level" established that would be higher than the margin requirement. France is against the idea of simply adopting an RBC-type system. It warns that the IASB's plans might not take sufficient account of prudential requirements to provide an acceptable accounting basis for insurance supervisors.
34. The Italian contribution states that the objective of the new prudential system must be to provide a complete and consistent supervisory tool kit that would ensure a level playing field. The aim of achieving convergence with other sectors or other jurisdictions should take second place behind the need to devise legislation that is tailored to insurance activities and satisfies first and foremost European supervisors. Italy approves the idea of taking over the three-pillar structure from the Basle project and suggests that the first pillar should contain prudential rules on technical provisions and asset coverage. It expresses similar reservations to France on the IASB project.

#### **1.4.2. Other players**

35. The other players are mainly national or European organisations representing insurance companies that have sent in general contributions on the design of the solvency system.
36. In August 2002 the CEA<sup>17</sup> set out its initial conclusions on the design the solvency system should take.<sup>18</sup> It favours a three-pillar structure in which the first pillar should contain rules on technical provisions, assets, reinsurance and the solvency margin. The IASB's publication requirements should suffice to constitute the third pillar. The CEA stresses that certain information intended for prudential supervision should remain confidential.
37. The CEA also argues in favour of maximum harmonisation of the solvency rules, leaving Member States with no options or as few as possible.
38. As regards technical rules, the CEA has yet to formulate an opinion on technical provisions but would like to restrict quantitative rules on investments to the minimum. It has outlined a system of margin requirements where exemptions from a "standard approach" would be allowed by using internal models.
39. Three national federations have sent in their proposals for Solvency II, underpinned in each case by rather different philosophies.

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<sup>17</sup> *Comité Européen des Assurances.*

<sup>18</sup> The CEA has since announced that other discussion papers will follow as work progresses in the working groups.

40. The GDV<sup>19</sup> mapped out a system that is very much inspired by the RBC-type systems used by Standard & Poors but tailored to the German market for life assurance and non-life insurance. It also enclosed a list of criteria for validating internal models.
41. By contrast, in its contribution, the FFSA<sup>20</sup> argues against RBC-type systems, highlighting what it sees as the bias inherent in such systems. Taking over the three-pillar pattern from the Basle draft, it spells out its position on the first-pillar rules. Technical provisions must take into account all measurable and foreseeable risks, must be tax-deductible and must be extensively harmonised. The rules on assets must be unified and quantitative restrictions kept to the bare minimum. Finally, there must be a simple method of calculating the margin requirement; in non-life insurance, this might incorporate a ratio applied to provisions. There should be scope for exemptions from margin requirements based on internal model calculations.
42. Finally, the FFSA refers to two capital thresholds defining three supervisory regimes: light-touch surveillance, close monitoring and intervention in management with scope for withdrawing authorisation.
43. In a fairly succinct contribution, the VVO<sup>21</sup> observes that technical provisions should be valued in the light of the risks — and in a uniform manner across Europe — and that the corresponding investments must be managed prudently.
44. The comments by the ACME<sup>22</sup> contain two key messages. First, the influence of banking rules should not lead us to overestimate the role of capital as a guarantee of the solvency of insurance companies; on the contrary, technical provisions must retain a central place in the prudential system. Second, the use of internal models must not be overestimated either: they are expensive and the ACME proposes that "standard models" be devised in the various markets under the auspices of the national supervisors.
45. The AISAM<sup>23</sup> draws attention to the special circumstances of mutual companies and the danger that excessive capital requirements modelled on those for limited companies might lead to demutualisation.
46. Finally, the CTIP<sup>24</sup> highlights the uncertainties relating to the IASB's reform plans and expresses concern over the repercussions these plans will have on the solvency rules.

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<sup>19</sup> *Gesamtverband der Deutschen Versicherungswirtschaft* (Germany).

<sup>20</sup> *Fédération française des sociétés d'assurance* (France).

<sup>21</sup> *Verband der Versicherungsunternehmen Österreichs* (Austria).

<sup>22</sup> Association of European Cooperative and Mutual Insurers.

<sup>23</sup> International Association of Mutual Insurance Companies.

<sup>24</sup> *Centre technique des institutions de prévoyance* (France).

## **2. LESSONS DRAWN FROM THE FIRST PHASE**

47. Before looking at specific proposals regarding the design of the solvency system, it would be useful to summarise the main contributions made by various studies and discussions from the first phase of the project since these might shed new light on the objectives initially assigned<sup>25</sup> to Solvency II. It should therefore be specified how these objectives are to be interpreted.
48. There are three main issues covering all of the objectives initially identified:
- What should the scope of Solvency II be?
  - What is a risk-adjusted prudential regime?
  - How is the need for harmonisation or convergence of standards at European and international level to be taken into account?

### **2.1. What should Solvency II cover? (What is a solvency system?)**

#### **2.1.1. *Different meanings of the term "solvency"***

49. The term "solvency" covers three different concepts which are more or less restrictive.
50. The first notion to which it directly relates is that of the "solvency margin" referred to in the European Directives: this is based on a set of rules for calculating a minimum capital requirement (minimum margin) and the capital which may count towards meeting that requirement (available margin). The Solvency I reform was concerned with these rules.
51. The second concept, more general in nature, relates to all of the rules intended to ensure that a given company is financially sound. Generally speaking, these rules relate to the calculation of technical provisions, the assets covering those provisions and the above-mentioned solvency margin requirement. These are currently the "three pillars" of the European prudential system and form the components of the "capital adequacy and solvency regime"<sup>26</sup> defined by the IAIS.

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<sup>25</sup> MARKT/2095/99.

<sup>26</sup> IAIS: Principles on capital adequacy and solvency, January 2002. Principle No 6.

52. The third concept, sometimes known as "overall solvency"<sup>27</sup> to distinguish it from the first two concepts, can no longer be summarised in a set of rules applicable at a given time to the insurer's balance sheet. It corresponds to the company's financial soundness, taking account of the conditions under which it operates (products and premiums, administrative organisation, quality of management, etc.) and the external environment (economic cycles, conditions of competition, quality of shareholders, etc.). Compared with the preceding concept, which it includes, overall solvency implies a more forward-looking view of a company's financial situation and requires factors to be taken into account which are not purely financial. In monitoring overall solvency, the supervisory authorities need to have a much more varied range of instruments at their disposal.

### **2.1.2. Current view of solvency systems**

53. The present Directives define the scope of prudential supervision in the following terms: "financial supervision shall include verification, with respect to the insurance undertaking's entire business, of its state of solvency, of the establishment of technical provisions and of the assets covering them in accordance with the rules laid down or practices followed in the home Member State under provisions adopted at Community level."<sup>28</sup>

54. In addition, "the competent authorities of the home Member State shall require every insurance undertaking to have sound administrative and accounting procedures and adequate internal control mechanisms".<sup>29</sup>

55. The Directives have not therefore limited the scope of prudential supervision to financial requirements applicable to the insurer's balance sheet, even though they have clearly given priority to that aspect.

56. The same approach can also be found in the principles adopted by the IAIS on capital adequacy and solvency. Principle No 13 ("solvency assessment") states that, when assessing a company's solvency, the supervisory authorities must consider not only the adequacy of provisions and assets and compliance with the required solvency margin, but also the quality of internal risk assessment processes and risk management systems. "If efficient control systems are not in place to monitor risk exposures, an insurer will not be able to adapt quickly enough to changing market situations."

57. Thus, in the existing definitions of solvency systems, although priority is given to the financial rules, mention is made in each case of an additional dimension for monitoring solvency. This dimension should be more clearly defined.

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<sup>27</sup> One might refer, for example, to the OECD report "Assessing the financial health of insurance undertakings: solvency rules".

<sup>28</sup> Article 13 of Directive 73/239/EEC, as amended by Article 9 of Directive 92/49/EEC. The text of the Life Directive is the same, except that it explicitly mentions mathematical provisions as forming part of technical provisions.

<sup>29</sup> Article 13 of Directive 73/239/EEC, as amended by Article 9 of Directive 92/49/EEC.

### *2.1.3. Contributions made by discussions in the context of Solvency II*

58. A significant contribution in this area has been made by the study on the proposed prudential reform in the banking sector (new Basle Accord). In this reform, the prudential system is no longer seen merely as an expression of regulatory financial ratios. It now includes two other "pillars" on top of these quantitative requirements: the "second pillar", which formalises the supervisory review process, and the "third pillar", which aims to strengthen market discipline through greater transparency. This new structure highlights, for the banking sector, the aspects of supervision of overall solvency, which are somewhat overlooked at present by the European Insurance Directives.
59. The KPMG report calls for such a structure, adapted to insurance, to be adopted. In the proposed approach,<sup>30</sup> the "first pillar" would bring together the prudential rules on provisions, assets and capital as well as any additional requirements at group level. The "second pillar" would contain the principles for the assessment of solvency by the supervisory authorities and would provide for the possibility of increasing the capital charge in individual cases. Lastly, the "third pillar" would encourage companies, and in some cases require them, to disclose information on their risks.
60. The new structure of the Basle project (comprising more than the detailed calculation of capital requirements in the banking sector) also aroused a great deal of interest on the part of the members of the Subcommittee at the meeting given over to this matter.
61. It thus reflects the concerns and ideas currently being expressed by the supervisory authorities. For example, the presentations made by the Member States have clearly shown the importance which the supervisory authorities attach to the supervisory review process: checking of documents (early-warning indicators), on-site checks, efforts to encourage firms to manage their risks better. In particular, they have revealed the efforts which the supervisory authorities are currently undertaking to make the supervision of solvency more forward-looking and to take better account of non-financial risk factors (quality of management, administrative organisation, etc.).
62. The Sharma report also stresses forcefully the importance of the supervisory review process, highlighting its many different aspects, and concludes<sup>31</sup> that the arsenal of rules and regulations at the supervisors' disposal must be wide-ranging and that "the whole review of prudential regulation and supervision needs to be similarly broad".

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<sup>30</sup> See table in paragraph 2.1.77 (executive summary).

<sup>31</sup> Executive summary, paragraph 1.4.1.: "Our need to tackle the full causal chain means that as well as considering solvency it is important that we have tools to focus on management and how they manage risk. Our toolkits will therefore need to be wide and include informal and subjective tools to deal with management, internal controls, etc, and our more detailed findings and recommendations cover solvency and many other areas. We believe that the whole review of prudential regulation and supervision needs to be similarly broad, although this does not necessarily mean that it all needs to be included in Directives."

63. The conclusions which the Commission departments draw from this first phase of Solvency II is that the scope of the exercise should be widened to encompass supervision of the "overall solvency" of insurance companies and should give greater recognition to the importance of the supervisory review process in the solvency system.<sup>32</sup> A structure modelled on the Basle project would seem to be a good basis for successfully completing this work.

## **2.2. What is a risk-adjusted prudential regime?**

64. One of the objectives of the Solvency II project is to design a solvency system which is better matched to the risks of each insurance company.<sup>33</sup> It is vital to examine what this objective means in the light of the discussions during the first phase.

### **2.2.1. Risks discernible from the insurer's balance sheet**

65. Often the question of risk adjustment has been dealt with solely in terms of the solvency margin requirement.<sup>34</sup> From that point of view, the European system leaves much to be desired, especially where non-life insurance is concerned: for example, the margin requirement does not in any way reflect the risk of disaster incurred by the insurer; it has also been criticised for not taking account of the asset risk. Conversely, risk-based capital systems have attracted attention because of the approach by risk type they propose for calculating the margin requirement. More recently, internal risk models have emerged as another option for determining a capital requirement.

66. Examining and discussing these matters have enabled some points to be clarified.

67. In the first place, a standard calculation formula for a margin requirement cannot replace rules for the prudent valuation of provisions. The main reason for this is that the valuation of an insurance company's provisions depends extensively on the nature of its policies and its loss record: it is the result of a complex process which is integrated with the rest of its activity and cannot be replaced by a standardised valuation process. This was the main conclusion of the specific study on risk-based capital systems,<sup>35</sup> in particular the Australian (non-life) project, which lays down a numerical benchmark for prudence in provisions. The working groups came to the same conclusion.

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<sup>32</sup> The original document MARKT/2095/99 acknowledges that the topics mentioned "focus on the financial aspects of prudential supervision" (provisions, assets, reinsurance, margin requirement, accounting system) and exclude other aspects of prudential supervision from Solvency II. This view should probably be qualified today.

<sup>33</sup> Pursuing this objective must be compatible with two other objectives mentioned in the document: maintaining a degree of regulatory simplicity and equal conditions of competition.

<sup>34</sup> Document MARKT/2095/99 puts it as follows: "Establish a solvency margin requirement that is better matched to the true risks".

<sup>35</sup> See MARKT/2085/01, paragraphs 87 to 97.

68. As regards non-life insurance, the working group discussed, for example, the possibility of establishing a margin requirement based on claim provisions run-offs: it took the view that this method would not be viable since a mechanical analysis of provisions development might result in incorrect conclusions if no other checks were made.<sup>36</sup> The working group considered, on the contrary, that the principle of prudent provisioning offered advantages and should result in a margin of prudence more closely tailored to the company's situation. Consequently, potential improvements to the Directives in this respect should give rise to a better definition and better supervision of prudence in provisions.
69. Likewise, although the working group on life assurance discussed whether the level of prudence in provisions should be defined on a overall basis or, as is currently the case, parameter by parameter (interest rate, mortality table, administration costs), the principle of prudent provisioning was not called into question.
70. In the case of provisions, adapting the solvency system more closely to risk cannot be achieved by laying down a more complex standard margin requirement. These considerations do not rule out the possibility of defining a margin requirement, over and above prudent provisions, that takes account of remaining provisioning uncertainties on a flat-rate basis.<sup>37</sup>
71. By the same token, and without developing this point further, it will be clear that a capital requirement cannot always ideally replace risk-reduction measures, such as appropriate investment diversification or a proper reinsurance programme.
72. A second lesson may be drawn from the first phase of Solvency II. As the overall risk models developed by the large insurance groups show, calculating an economic capital requirement which is consistent with a precise mathematical definition is an extremely complex process in which the choice of assumptions, company-specific parameters and aggregation methods has a decisive impact on the result.
73. If this search for ever more sophisticated modelling were felt to be justified, any attempt to quantify effectively an insurance company's overall financial risk using a standardised formula would be an uncertain exercise: approximations resulting from a standard formula will always give rise to errors which will be impossible to measure because they vary according to the characteristics of the company.

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<sup>36</sup> This is also the opinion of KPMG, which advocates the use of several statistical methods and on-the-spot checks for verifying provisions (2.1.23 and 2.1.25 of the executive summary).

<sup>37</sup> See point 114 of the report of the Non-life Working Group.

74. Thus, the few studies which exist bring to light the poor performance of RBC systems in predicting defaults, whereas this predictive power should be good if the margin ratio reflected a probability of ruin.<sup>38</sup> Early-warning systems for risks, with information provided by numerous financial ratios being cross-checked and the supervisory statement analysed, seem to be a more effective means of detecting such high-risk companies.
75. This prompts another question: are internal risk models an alternative? A number of comments are called for here. Firstly, overall risk models designed to calculate an economic capital requirement are currently few and far between. Even large groups are only on their first generation of overall models and therefore have only limited experience of them. Secondly, to verify such models, the supervisory authorities will need to commit resources that are out of all proportion to those required to verify a standardised formula. In particular, many commentators consider that an absolute minimum capital requirement must be maintained if companies are to be authorised to calculate their capital requirements on the basis of their internal models.
76. Nevertheless, most members of the Subcommittee have shown great interest in internal models and take the view that their wider use should be encouraged. This is because an internal risk model provides a natural structure for the risk analysis which an insurance company or group must carry out. It thus does more than merely quantify an overall capital requirement: it is also an excellent basis for dialogue between the company and the supervisory authorities.

### ***2.2.2. Risks underlying balance-sheet risks***

77. The above considerations show that (at least in a standard approach) the capital requirement cannot be the sole measure of a company's risk exposure and that, in order to be genuinely adapted to the risks of the insurance sector, a solvency system must include other rules for measuring and limiting the risks facing an insurer's balance sheet.

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<sup>38</sup> These studies are concerned with life and non-life RBC systems in the United States, which have been in place for a relatively long time. It is possible that more recent systems using approaches based more on risk theory would yield better results.

78. Nevertheless, even this more comprehensive approach is not enough. There are certain risky attitudes or sources of risk which such rules do not adequately reflect or, if they do, not early enough. A long-standing and empirically well-known example is the specific risk presented by rapidly growing companies: this risk is not easily captured by traditional rules because, as the Müller Report<sup>39</sup> has already stressed, it "does not materialise in an undertaking in isolation from the other risks. It rather causes or aggravates other (current) risks". When the NAIC established its RBC formula, it also acknowledged the importance of this risk and applied a flat-rate increase to its basic formula for rapidly growing companies. But the growth risk is not the only risk of this type, and it can be argued that limited competence on the part of management, which comes to light to a greater or lesser extent depending on the circumstances (pursuit of diversification, changes in economic conditions), is a source of risk which shapes all of the company's other risks.
79. The Sharma report sheds essential light on this matter. Risk analysis carried out by the London Group differs from classical RBC analysis in two major respects. Firstly, the risks identified are not the only ones which, if they materialise, can be detected in the insurer's balance sheet. Secondly, it is vital for the working group to analyse risks as part of a causal chain (whereby certain risks are triggered by others).
80. According to this approach, it is not possible to isolate quantifiable risks, which could be measured in quantitative terms and covered by a "risk-based" margin requirement, from non-quantifiable risks, which could be measured in qualitative terms (and would be grouped together in a "second pillar"): these different types of risk are, in fact, interdependent.
81. Consequently, following this analysis through, a risk-adjusted solvency system is primarily a system which encourages sound risk management because it is the company's management which is best placed to reduce risks by acting on the cause-and-effect relationship that gives rise to them.
82. It is also a system which provides the supervisory authority with a satisfactory range of tools, both preventative and curative: each of these tools, including the solvency margin, is of limited scope, but they complement each other and form part of a coherent process of prudential supervision.

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<sup>39</sup> The Müller report placed this risk in a separate category ("special risks").

### 2.2.3. *What function does the capital requirement perform in a solvency system?*

83. These considerations give rise to a further question: what should the function of the "capital requirement" tool be in a solvency system?
84. One criticism made of existing solvency systems is that they do not clearly express the objectives of the capital requirement.<sup>40</sup> Thus, while the recitals to the European Directives state that the required solvency margin (over and above sufficient provisions) is intended to "provide against business fluctuations", some supervisors consider the margin requirement to be the threshold for heavy intervention by them, while others view the actual margin/margin requirement ratio as performing an early-warning function.<sup>41</sup>
85. The various comments received during the first phase of Solvency II highlight three possible functions of the capital requirement.
86. Firstly, the capital requirement can serve as a binding minimum threshold for a company to remain in the market without any significant restriction on its freedom to do business. In this case, the margin threshold must be set at a sufficiently low level to ensure that companies which infringe it do, in fact, present a risk of default which is manifestly too high for the supervisory authority.<sup>42</sup>
87. While this threshold should be proportionate to insurance companies' main risk exposures, the formula for calculating the margin requirement does not have to be too sophisticated or too company-specific: the aim is not to measure insurance companies' risk of ruin but to set a threshold below which the supervisory authority is virtually certain that that risk is too high. However, the scale of intervention triggered by non-compliance with this minimum threshold acts as an incentive to choose the simplest and most objective calculation criteria possible so as to preserve a level playing field. Again because of the possible consequences of intervention, this threshold must be defined at company level.
88. This function is performed by the two existing thresholds of the European system (minimum guarantee fund and minimum solvency margin). The same applies to RBC levels in the United States, which enable or automatically require a company to be placed under the control of the supervisory authority ("authorised control level" and "mandatory control level" respectively).<sup>43</sup>

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<sup>40</sup> This criticism is voiced in the KPMG report concerning both the European and US RBC systems (cf. table in paragraph 10.5.4).

<sup>41</sup> Both of these views appear in the Sharma report (section 5.5 on the role of capital in a prudential system).

<sup>42</sup> If provisions are valued prudently, the consequences of such default might not be too damaging for policyholders (or any guarantee fund that may exist)

<sup>43</sup> See MARKT/2085/01.

89. The second function which can be assigned to a minimum margin requirement is that of a threshold designed to provide early warning of the difficulties facing a company. Falling below this threshold will not in itself be justification for strong and binding intervention by the supervisory authority but, rather, would give rise to more detailed checks on the company and the imposition of less stringent or more gradual corrective measures.
90. With such a function, in order to have an effective indicator, measures aimed at faithfully reflecting the company's overall risk profile may be more justified. Nevertheless, as the study of RBC systems has shown, however sophisticated a standard margin requirement formula may be, its effectiveness as an advance indicator of difficulties seems limited. An analysis of supervisory statements and a comparative analysis of a range of financial ratios<sup>44</sup> would seem to perform this function more effectively.
91. The solvency margin rule does not perform this function: however, this shortcoming is consistent with the more general lack of harmonisation in the existing Directives of supervisory tools and methods (and in particular other possible early-warning indicators).
92. The third possible approach would be to determine the capital required to "provide against business fluctuations", i.e. to maintain a very low, virtually zero, risk of default. Such capital is perhaps more a target than a minimum.<sup>45</sup> In any case, it is much higher than the threshold triggering automatic and binding intervention by the supervisory authorities. It is not inconceivable that a company's capital might temporarily fall below this level (in a "bad year") without intervention being necessary:<sup>46</sup> this risk of ruin would remain sufficiently low for it to be expected that positive results would make up for the temporary "inadequacy" of capital.
93. Unlike the ratios used by supervisors to trigger warnings, the necessary level of capital must have an impact on the management of the company, its risk-taking policy and its policy on dividends or discounts. It may also serve as a basis for discussions with the supervisory authority and for its assessment of the company's real financial health.

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<sup>44</sup> As advocated by Germany at the meeting on 29 April, or such as the FAST system used by NAIC.

<sup>45</sup> Document MARKT/2515/02 suggested this, referring in particular to the concept of "target area" in the Finnish system and to Principle No 3 of the second pillar of the Basle project .

<sup>46</sup> It is obviously necessary to verify whether it is a "bad year" (which is unlikely to be repeated).

94. From a methodological viewpoint, calculating the capital necessary to provide against business fluctuations should, as far as possible, take account of the company's specific risk profile. Failing this, the calculation might be disconnected from the company's risk management or, even more seriously, might lead to decisions inappropriate for the company (risk taking or investment decisions based on an external rule and not on an internal analysis). It might also be desirable for this calculation, performed as it is on the assumption of operational continuity, to include forward-looking components,<sup>47</sup> such as forecasts of new business.
95. Despite the Directive's recitals, the minimum solvency margin seems ill-matched to this third concept of target capital. The "first-generation" RBC requirements also seem too standardised to perform this function. Some supervisory authorities are developing "test" systems based on one or more scenarios which are more consistent with this third approach. Particular examples are the Canadian dynamic capital adequacy test and the Dutch project's concept of "continuity test". The internal risk models developed by some insurance groups are also a promising avenue for assessing this level of target capital.

### **2.3. How far should harmonisation go?**

#### **2.3.1. *Harmonisation and the European single market***

96. The Solvency II project should be an opportunity to enhance the harmonisation of prudential rules and practices and to improve integration in the European single market.
97. Several commentators have expressed a wish for greater harmonisation. In particular, various bodies representing insurance companies<sup>48</sup> have stressed the need for more homogeneous rules if distortions of competition are to be avoided. They identify two areas in which progress is necessary: technical provisions and the quantitative investment rules. In addition, they ask whether the rules applicable when the products sold are similar should not be harmonised between the banking and insurance sectors.<sup>49</sup>
98. Better harmonisation of European prudential systems will also strengthen the case for mutual recognition and cooperation between supervisory authorities. In the current context, it may be felt that the existing Directives are sufficient to ensure mutual recognition of inspections. Nevertheless, the forthcoming enlargement of the European Union taking in a further ten countries may alter the terms of the debate: in order to maintain the principle of mutual recognition over a much larger area with much greater variations so that cooperation between twenty-five authorities is possible, it seems vital to lay the foundations for a common culture of prudential supervision, something which is still at an embryonic stage.

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<sup>47</sup> It should not be concluded from this that the existing margin requirements do not already contain forward-looking components given that the provisioning rules are based on forward-looking concepts (forecasts of future payments).

<sup>48</sup> CEA: position of August 2002; FFSA: position of July 2002; ACME: position of September 2002.

<sup>49</sup> This question was also asked in the discussion paper presented by the Netherlands at the meeting on 22 October 2002.

99. Even within the current Union, the gradual creation of genuinely transnational groups has, since the Third-generation Directives, increased the need for harmonisation (extending, indeed, beyond the insurance sector). One of the symptoms of this phenomenon is the political determination recently voiced at European level to lighten the administrative burden on transnational groups imposed by the need to produce different accounting, regulatory or tax statements depending on the country concerned. As the report of Forum Group No 10 stated,<sup>50</sup> this objective cannot be achieved without greater coordination between regulatory and supervisory authorities in transposing and applying Community legislation.
100. The objectives of the Solvency II project themselves require greater attention to be paid to harmonisation issues. One of these objectives is to take greater account of the specific risk profile of each insurance company, something which requires a degree of flexibility: for example, quantitative rules tailored to companies (recognition of internal models) and the at times qualitative assessment of risks by supervisors ("second pillar"). In all of these cases, this new flexibility must be accompanied by guarantees concerning equality of treatment between companies. This question arises when companies are monitored by the same supervisory authority, but all the more so when different supervisory authorities are involved.
101. The best means of achieving a satisfactory degree of harmonisation will remain a subject for discussion in later stages of the project. Nevertheless, it would be useful at this stage to set out a number of preliminary ideas in order to get the debate off the ground.
102. Firstly, adoption of "Lamfalussy"-type rules would pave the way for ambitious objectives in terms of harmonisation. In particular, it would open up the possibility of convergence between supervisory practices through the "Level 3" Committee: common supervisory methods and rules, peer review,<sup>51</sup> comparisons of supervisory practices. In some cases, it would appear that the most efficient means of promoting harmonisation of European rules is not to adopt new, more detailed rules but to foster convergence of companies' practices by seeking a common interpretation of prudential rules.<sup>52</sup>
103. Secondly, Solvency II should be presented as a complete (if possible) set of principles and rules: these rules and principles will vary in terms of their flexibility, thereby justifying the use of different means for achieving the desired harmonisation.

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<sup>50</sup> Forum Group No 10 - Reporting requirements – Final synthesis report – 14 October 2002. This working group was made up of industry representatives (all financial sectors combined); it reported to the Economic and Financial Affairs Council (Ecofin).

<sup>51</sup> Footnote not applicable to EN text.

<sup>52</sup> See, for example, the conclusions of the Working Party on Non-Life Technical Provisions. Proposals to harmonise supervisory practices are also made in the report of the Life Working Party and the Sharma report.

104. For example, if it is accepted that certain minimum thresholds ("safety nets") have to be defined for the purpose of detecting manifestly abnormal situations,<sup>53</sup> failure to comply with those thresholds will give rise to strong intervention by the supervisory authorities (freezing of assets, exit from the market): in such cases, the thresholds and the type of action to be taken must be defined with a view to ensuring maximum harmonisation. By contrast, in the case of target levels (economic capital) or principles governing sound risk management (e.g. the "prudent man" principle), verification of the rules will be influenced by the specific characteristics of the company and will necessarily involve a dialogue with it: the harmonisation of rules can therefore be effectively guaranteed only through convergence of supervisory practices.
105. Among the means of fostering convergence, there is, in addition to common quantitative rules and a more qualitative comparison of supervisory practices, one important tool that should not be forgotten: the compilation of common statistical data.<sup>54</sup> This tool is still poorly developed. It will probably be necessary at a fairly early stage of the project (start of phase 2) to identify the areas in which common statistical monitoring will be required: this can serve as a means of checking whether there has been a genuine convergence of practices (e.g. provisioning practices<sup>55</sup>), monitoring certain major risks (mortality or survival risk for life assurance<sup>56</sup>) and possibly determining the parameters or "measures" of common risks. Conversely, it will clearly not be worth harmonising statistical data that are compiled solely on account of a particular characteristic of the domestic market.
106. On the same subject (risk monitoring), the Sharma report also proposes harmonising the main early-warning indicators.<sup>57</sup>

### **2.3.2. *International context and future developments***

107. During the first phase of Solvency II, particular attention was devoted to studying projects under way at national level, both in Europe and elsewhere,<sup>58</sup> and at international level.<sup>59</sup> These projects naturally influence the Solvency II exercise, which cannot be seen in isolation from the main international schools of thought; in turn, there are grounds for hoping that the Solvency II project may influence some of those projects.

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<sup>53</sup> Insufficient capitalisation, excessive concentration of investments with the same issuer, etc.

<sup>54</sup> This is one of the recommendations of the Sharma report (conclusion).

<sup>55</sup> Report of the Non-Life Working Party (MARKT/2529/02).

<sup>56</sup> Report of the Life Working Party (MARKT/2528/02).

<sup>57</sup> Footnote not applicable to EN text.

<sup>58</sup> A study has been carried out on the US, Canadian and Australian prudential systems. A day was given over to describing European systems and projects.

<sup>59</sup> One note dealt with the Basle project in the banking sector, another with the IASB project and a third with the IAIS and IAA projects.

### 2.3.2.1. Future international accounting standards (IAS)

108. The Solvency II project must be considered in a context of a radical development of accounting standards applicable to insurance. Much of the solvency system is and will continue to be based on the accounts of insurance companies. Until now, the accounts used by the supervisory authorities have not differed significantly from companies' annual accounts. Unlike the situation in the United States, for example, European legislation does not make a distinction between "prudential" accounts and financial accounts, and the Insurance Accounts Directive (91/674/EEC) is integrated into the prudential system, as is clearly shown by its recitals<sup>60</sup> and those of the Third Life and Non-life Directives.<sup>61</sup>
109. A recent Commission note<sup>62</sup> examined the links between financial accounts and prudential accounts as they are today and might be in the future. It also pointed out that the IAS international standards will, in principle, apply to listed companies in the European Union from 2005. It reviewed the work of the IASB in the area of insurance and indicated the regulatory authorities' needs regarding accounting information. This note served as a basis for a discussion by the Subcommittee on 28 June 2002.
110. That discussion highlighted the need to examine the problem over time.
111. In the long term, and despite the uncertainties still associated with the IAS project, the best solution would appear to be for the prudential system to be based on international standards applicable to all insurance companies in the EU. The statements required by supervisors would thus be the company's financial accounts plus any additional information or simple reworking.<sup>63</sup> In the unfavourable situation where the IAS standards contained assessment principles deemed incompatible with the objectives of prudential supervision, heavier reworking of some accounting items might be envisaged, albeit on a limited basis.<sup>64</sup> The solution of developing and updating an autonomous set of "prudential" accounting rules is not considered realistic.

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<sup>60</sup> Directive 91/674/EEC, 5<sup>th</sup>, 14<sup>th</sup> and 15<sup>th</sup> recitals (scope, life and non-life technical provisions).

<sup>61</sup> Directive 92/49/EEC, 4<sup>th</sup> and 12<sup>th</sup> recitals; Directive 92/96/EEC, 4<sup>th</sup> recital.

<sup>62</sup> MARKT/2514/02, May 2002.

<sup>63</sup> This is option 1.1. presented in document MARKT/2514/02.

<sup>64</sup> This is option 2.1. presented in document MARKT/2514/02.

112. Maintaining as far as possible a single set of accounts for both accounting and prudential supervisory purposes has certain advantages which have been stressed by several commentators. Firstly, fully harmonised accounting rules, if used as a basis for statements submitted for supervisory purposes, will be a very effective catalyst for the harmonisation of risk measurement and prudential supervision methods. The current burden on companies that have to produce the different national regulatory and accounting statements will be considerably lightened.<sup>65</sup> Secondly, the quality of the information submitted to the supervisory authorities will benefit from the process of auditing financial statements. Moreover, provided that they are well assimilated by the insurance sector, harmonised international rules will probably be one of the foundations for insurance companies' and groups' management and internal control systems; this would make it even more beneficial to use the same rules for prudential supervision.
113. Discussions on international accounting standards for insurance will take longer than initially thought. The IASB has split its project into two stages. The first, which aims to meet the 2005 deadline set by the Commission, will refer to national rules for many of the main accounting rules. The number of options will not therefore be significantly reduced. The second stage, planned for 2007 or 2008, should result in more harmonised rules.
114. At present, uncertainties remain as to the issues which will be dealt with in the first stage (definition of insurance contract, in particular) and the second stage (provisioning rules, for example). At European and international levels, the IASB project has been keenly debated by insurance companies and supervisory authorities alike. In this context, it is difficult to predict the final outcome of this project.
115. Assuming that the harmonised rules will enter into force in 2007 or 2008, they will apply only to listed companies, i.e. most of the time to the consolidated accounts of insurance groups, but not to all insurance companies on the various European markets.<sup>66</sup> It will therefore be necessary to revise the directives on company accounts, both in order to ensure that the same accounting treatment is applied to listed and unlisted companies and in order to establish a common prudential system.
116. A fairly long transitional period of at least two years will then be needed in which to apply the new IAS standard to insurance. Moreover, if strictly "prudential" rules (including quantitative rules, such as the capital requirement) are to be adopted, it is likely that a few more years will be needed to compile statistical data, to develop the most relevant risk indicators and to validate the new system on the basis of practical experience. It is important that the administrative disruptions for companies associated with these different transitional stages be reduced to a minimum.

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<sup>65</sup> This is one of the conclusions of the above-mentioned Forum group on reporting requirements.

<sup>66</sup> However, some Member States have already stated their intention to require all insurance companies to submit IAS-compatible accounts.

117. The delay in drawing up IAS standards is giving rise to difficulties in planning the Solvency II project. Various ways of overcoming these difficulties may be considered.
118. One possible option would be to wait until the international accounting rules for insurance are adopted in the EU for all insurance companies. This would mean that the Solvency II project would have to be limited at the present time to developing a European "supervisory review process" (comparable to the Basle "second pillar"). The quantitative rules (first pillar) would be frozen until such time as the new accounting framework were adopted.
119. According to the Commission departments, this first option is not the best. There would indeed be several advantages in continuing all of the Solvency II work, including that related to quantitative aspects:
- Development of the "supervisory review process" would be made easier if, at the same time, quantitative rules were discussed since these two "pillars" of the prudential system are complementary.
  - This work might include incentives for companies to improve the way in which they measure most of their "risks", i.e. the volatility of large balance-sheet items,<sup>67</sup> without waiting for new accounting standards.
  - They might provide inspiration for the ongoing international projects.
120. This approach of adopting a provisional solution pending the emergence of definitive international accounting standards has been adopted by several supervisory authorities<sup>68</sup> both inside and outside the European Union with a view to implementing prudential reforms.
121. The Commission departments have identified two ways of dealing with this transitional phase.
122. One solution would be to use the existing accounting basis and to focus only on those rules which are essential to the solvency system (technical provisions, valuation of assets) if there is to be closer harmonisation. The prudential system could be modified accordingly once the IASB solutions were known.
123. Another solution would be to attempt to align Solvency II on a real-time basis on progress with the IASB project. The purpose would be to implement accounting rules which reflected as closely as possible the final outcome of the IASB discussions. The advantage of this approach is that it would progress more in parallel with the IASB project. The drawback would be undue dependence on the aspects of that project that have not yet been settled.

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<sup>67</sup> For example, the question of the level of prudence in provisions.

<sup>68</sup> See MARKT/2514/02, which cites the Netherlands, the United Kingdom, Denmark and Australia. EU Member States are, of course, subject to an additional constraint imposed by the existing Insurance Accounts Directive.

### 2.3.2.2. International prudential and actuarial standards

124. Several projects involving prudential standards are under way at international level. A note<sup>69</sup> drafted by the Commission departments described in particular the work within the International Association of Insurance Supervisors (IAIS) and the International Actuarial Association (IAA).
125. With regard to solvency, the IAIS has drawn up an ambitious working programme with a view to drafting guidelines clarifying and reinforcing the existing solvency principles. Among the issues on which most progress has been made are technical provisions, the role of actuaries in the prudential system, solvency control levels and stress testing.<sup>70</sup> This programme is to be completed by the end of 2005.
126. As for the IAA, it has set up a risk-based capital solvency structure working party.<sup>71</sup> This working party has reviewed a large number of existing prudential systems. It should now examine the principles and methods to be used to quantify the total funds necessary for an insurer to be able to honour its commitments vis-à-vis policyholders with a given level of probability. Internal risk models and standard models are also part of its remit.
127. Clearly, the progress made by both projects will have to be taken into account in the next phases of the Solvency II project.
128. The long-term objective of convergence between international prudential standards presents many advantages which will not be dealt with here. It is likely that, in the short term, the standards laid down at international level will - even if they are automatically incorporated into European legislation - have to be substantially backed up by more detailed standards at European and national level. Nevertheless, work on Solvency II must not stand in the way of longer-term convergence. It will therefore have to be compatible in spirit with international developments.
129. This would appear to be the case at present. The topics to be examined in the first phase of Solvency II are also among those selected by the IAIS. Initial information regarding the IAA working party indicates that it has taken account of the same international context as Solvency II (development of the Basle project, review of RBC systems, internal models). Moreover, ideas are being exchanged in both directions, between international and European levels. The Member States have stressed that they are taking an active part in the work of the IAIS.

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<sup>69</sup> Note MARKT/2520/02, discussed by the Subcommittee on 22 October 2002.

<sup>70</sup> Footnote not applicable to EN text.

<sup>71</sup> Footnote not applicable to EN text.

130. At this stage, the Commission departments cannot therefore see any conflict in terms of perspectives which might delay work on the Solvency II project, and in particular the decision on the design of the solvency system.
131. On the contrary, they note that the international discussions in progress may very usefully enrich the technical work of the second phase of the project. For example, the research undertaken by the IAA working party into risk measurement will facilitate European work on target levels of capital.

### 3. IDEAS ON THE ARCHITECTURE OF THE SOLVENCY SYSTEM

132. The following part of the paper sets out the preliminary ideas of the Commission departments regarding the architecture of a future solvency system for the European Union.
133. The Commission departments based themselves on the following principles:
- The Basle project's three-pillar structure can be adapted to the insurance sector.
  - The future solvency system must be geared to the risks to which companies are exposed; it must encourage companies to measure and manage risk and must contain more detailed principles of prudential supervision.
  - Its structure must allow for subsequent adaptation to international prudential and accounting developments; it should also be designed to avoid a proliferation of reporting systems and regulatory arbitrage.
134. The Commission departments also conclude from the discussions in the first phase that **a new concept should be introduced into the solvency system, namely that of target capital (or desirable capital)**. This concept will, to some extent, replace the solvency margin concept.
135. Insurance companies should be encouraged to assess the capital they need in order to reduce their risk of ruin to an acceptably low level. Significant advances can be expected in the methods for assessing the level of such capital, as internal risk models are improved and as "standard models" are developed in actuarial circles and by the supervisory authorities.
136. This concept should be clearly differentiated from the level of capital acting as a "safeguard", which must be determined in a more immediate manner. Similarly, consideration must be given to employing "early-warning indicators" within a broader framework than the capital framework.
137. The issue of the allocation of prudence as between technical provisions and the capital requirement may seem to be of secondary importance<sup>72</sup> if care is taken to ensure that the same guarantees are imposed for the capital requirement as for provisions (non-distributable capital represented by high-quality assets). Nevertheless, the construction of a workable prudential system necessitates a common level of prudence in provisions, bearing in mind the volatility of loss estimates by the insurer concerned. On top of this level of provisions, the minimum level of "safeguard" capital, which will still allow heavy intervention by the supervisor, will continue to be specified. With a view to protecting policyholders' interests, a sufficiently prudent investment policy will also be needed for these provisions.

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<sup>72</sup> At least, that is, if tax considerations can be regarded as "secondary".

138. Later on in the project, we will need to look more closely at the overall level of prudence in the prudential system. For this, there will need to be full complementarity between the different components of the prudential system (provisions, assets and capital requirement), involving in particular consistency between the levels of prudence required for each of them.
139. Lastly, as the second part of this paper has shown, assessing an insurer's solvency is not simply a matter of fixing a capital requirement or even a set of more varied financial requirements. The best way of encouraging and verifying the quality of an insurer's risk management is to devise a reinforced supervisory review process that takes account of the risks associated with the company's organisation and management approach. Assessing a given target capital by focusing more on the company's risk profile will also necessitate redefining the supervisory process, especially if internal models are to be used. These changes will have a particular impact on the supervision of groups.
140. At a more detailed level, these few ideas may still result in quite different prudential regimes. This is why the Commission departments will discuss below several possible options that, in their view, are all compatible with the lessons drawn from the first phase of Solvency II. The discussion is designed to launch a more practical debate on the design of the solvency system.
141. Under no circumstances, however, can this list of options be regarded as exhaustive and commentators are asked to come up with any other solutions that they feel should be discussed.
142. For ease of presentation, the different ideas are, as far as possible, grouped together according to the "pillars"<sup>73</sup> to which they correspond.

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<sup>73</sup> As defined in the Basle project.

### **3.1. First pillar**

143. The first pillar of the prudential system will contain the system's "quantitative" financial requirements. For insurance, it must contain at least the rules on provisions, investments made by the insurer and the latter's capital. This conclusion is based on all the studies and contributions received in the first phase of Solvency II. This chapter thus examines each of these topics.
144. Other topics should also be addressed, and in particular the competition between banking standards and insurance standards in cases where the products sold in these two sectors are comparable or even identical.

#### **3.1.1. *Technical provisions***

145. The first solvency principle laid down by the IAIS relates to technical provisions, which must "be adequate, reliable, objective and allow comparison across insurers".<sup>74</sup>
146. In the light of these criteria, the main weakness of the present European system is probably that it does not allow sufficient comparison across insurers.

##### 3.1.1.1. Non-life provisions for outstanding claims

147. It would seem that the principle of prudence in provisions for outstanding claims does not need to be challenged. However, as the report by the working group on non-life technical provisions shows, this principle nowadays covers unduly disparate practices that give rise to divergent levels of prudence in Europe and even, in some cases, on the same domestic market.
148. The Commission departments will now turn to the two options identified by the working group.
149. The first consists in strengthening the prudence principle in the Directives by way of guidelines on claims management and provisioning. The compilation of common (or, at least, comparable) statistics would also make for better monitoring of provisioning levels in the European Union. These measures fall under the "second pillar", to use the terminology of the Basle project.
150. The second option consists in setting a quantitative benchmark for the level of prudence in provisions for outstanding claims by drawing, for example, on the solution adopted by APRA, the Australian supervisor. The second pillar-type rules referred to above would be introduced in parallel.

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<sup>74</sup> Footnote not applicable to EN text.

151. The Commission departments are aware of the methodological difficulties to which this option gives rise (and which are referred to in the report<sup>75</sup>): however, they take the view that this option would have the advantage of sending a clearer signal to the market. In their opinion, it would, as things stand, be more effective in bringing about the desired degree of harmonisation. It is also quite possible that it would facilitate the changeover to new accounting standards.

#### 3.1.1.2. Equalisation provisions

152. There has been very little harmonisation of equalisation provisions, which are perhaps the accounting item that most "distorts" the comparison of solvency margin levels in the European Union. The Commission departments have identified three possible solutions to this problem.

153. The first consists in adopting a uniform approach in Europe by abolishing equalisation provisions (or reclassifying them as capital). This approach would be in line with the IASB's current projects. Nevertheless, it could have adverse tax repercussions for certain markets. From the viewpoint of business continuity, it seems perfectly justified to allow insurance companies to set aside free of tax profits earned in years with low claims in order to offset bad years: pooling of volatile risks can sometimes be done only over time.

154. The second solution would be to preserve the diversity of local rules but to neutralise their adverse effects on the comparison of solvency levels. This could be done simply by taking capital and equalisation provisions into account in the solvency margin requirement. At the same time, the capital requirement could more closely reflect the catastrophe risks and the risks associated with volatile activities (see below).

155. The third solution would be to harmonise matters by extending the scope of the equalisation provision to all activities regarded as being volatile (major risks, climate risks, existence of a catastrophe risk, etc.). At a technical level, an equalisation mechanism would be needed that took sufficient account of the volatility of the activity concerned.<sup>76</sup> Such a solution would have the advantage of bringing home to companies the volatility of their activities. The drawback would be that, in the longer term, this system would necessitate a fairly major redrawing of the accounts produced in accordance with IAS standards.

156. At any event, it would still doubtless be necessary in this third scenario to combine capital and equalisation provisions when calculating the margin requirement. A comparison of the equalisation provisions of two insurance companies is of little significance since the provisions are the result of each company's particular history. By contrast, if combined with the company's capital, they provide a good idea of the total safety cushion available to cope with any adverse development.

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<sup>75</sup> Notably, the issue of the relevant level of aggregation to which this rule is to be applied.

<sup>76</sup> Such mechanisms exist in Germany and Finland and could serve as a starting point.

### 3.1.1.3. Other non-life technical provisions

157. The Commission departments see no need at present for changes in the definitions or principles regarding the other non-life technical provisions. There are indeed some specific practices<sup>77</sup> that need harmonising but these can be dealt with by the "Level 3" Committee (as defined in the "Lamfalussy" regulatory approach).

### 3.1.1.4. Mathematical provisions (life assurance)

158. The general principles enshrined in the Third-generation Directives still seem to be valid:<sup>78</sup> principle of a sufficiently prudent prospective valuation, taking account of all future guaranteed benefits (including guaranteed surrender values), bonuses, future management expenses and any options under the terms of the contract; principle of prudence in the choice of the technical interest rate; principle of prudence in statistical valuations; principle of continuity in the method applied, etc. Above all, the principle of prudence in the choice of mortality tables should be more forcefully restated.

159. However, these principles are not sufficiently precise to ensure effective harmonisation of mathematical provisions in Europe. The choice of the numerous actuarial parameters determines the overall prudence level of provisions. The main one is undoubtedly the discount rate chosen. Another important parameter for certain contracts is the choice of mortality table.

160. For the technical interest rate, the Directive provides for two calculation options that, as regards principle, differ enormously; in any event, the two options do not cover all contracts.

161. The harmonisation of technical interest rates needs to be viewed against the backdrop of foreseeable developments in accounting standards. It would seem counterproductive for the Solvency II project to embark on full harmonisation of the methods for calculating life-assurance provisions at a time when a fundamental review of these rules may be necessary a few years later on account of new IAS standards. Dispensing with one of the two options in the Directive<sup>79</sup> is not, therefore, a medium-term priority.

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<sup>77</sup> Take, for example, provisions for outstanding claims.

<sup>78</sup> This is the conclusion reached by the expert working group set up by the Commission in 2002 to study the matters relating to life assurance (MARKT/2528/02).

<sup>79</sup> Neither of the options is in line with the current IASB projects. Under the second option, the discount rates depend on the yield on company assets, whereas the IASB will, in all probability, refer to market rates. The first option refers to market rates but the analogy stops there (in particular, because of the reduction carried out under the European rules governing the market rate in order to obtain the technical rate). Certain concepts, such as the allowance made by the insurer for its own default risk, are clearly out of place in the Directives, which were drawn up with prudential needs in mind.

162. This does not mean that no attempt at harmonisation is possible or desirable during the transitional phase, when the "Solvency II" prudential regime will have to apply even though the IAS accounting rules will not yet have been stabilised.
163. In particular, the wording of the first option in the Directive,<sup>80</sup> which is the one most used in the European Union, is somewhat ambiguous. It is not specified whether the technical interest rate can be fixed at the commencement of the contract (and may not vary for its entire term) or whether, on the contrary, it has to be revised periodically for all contracts in the light of changes in state borrowing rates. The first interpretation, which is frequently applied, does though pose prudential problems in a context of falling rates.
164. Following the report by the life-assurance working group, the Commission departments have identified several approaches that could make for an improvement on the current situation.
165. The first approach would involve stipulating that the technical interest rate must be periodically revised in the light of interest-rate movements. It would have the advantage of maintaining a high and constant level of prudence in the technical interest rate.
166. A second approach would be to dissociate the level of prudence in the interest rate on signing the contract (currently 40% lower than the rate on state bond issues) from the minimum level of prudence in the interest rate during the term of the contract (this level of prudence could be lower).
167. A third approach would be to introduce a resilience provision as in a number of countries that apply Option 2 in the Directive. In this case, if the future yield on the insurer's assets, calculated on the basis of a given adverse scenario, turned out to be lower than the technical interest rate used, the insurer would be obliged to set aside a supplementary provision.<sup>81</sup> This approach would have several advantages: it would promote the use of methods of projection that would also be useful for companies' asset-liability management; it would make for convergence between the two options in the Directive by laying down a minimum level of prudence based on harmonised or coordinated stress tests; and, lastly, it could perhaps be retained over the longer term in order to ensure a minimum level of prudence over and above provisions valued in accordance with the IAS standards.

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<sup>80</sup> The technical interest rate may not exceed 60% of the rate on state bond issues,

<sup>81</sup> The difference with the present wording of the Third Directive (Article 18 amending Article 17(B)(d)) would be the fact that the yield on assets would be valued according to a given adverse scenario, something not currently stipulated.

168. Leaving aside these methodological issues, another measure could usefully be taken to harmonise the maximum technical interest rate prescribed<sup>82</sup> in the first option in the Directive. On a securities market that is much more closely integrated than ten years ago and with the introduction of the euro, the technical rate could and should be set at European level. The conditions of competition would thus be improved. Within the regulatory framework envisaged ("Lamfalussy"), this rate could be fixed for the entire euro area and updated by the Insurance Committee applying a calculation method determined by it.
169. As stated above, for certain contracts (typically annuities), the choice of the mortality table also influences the prudence of provisions significantly. In this field, however, the Commission departments take the view that a second pillar-type approach coordinated at European level could promote convergence of practices without it being necessary to lay down quantitative first pillar-type rules. The same goes for the other parameters included in the calculation of mathematical provisions.
170. In its report, the working group on life technical provisions raised two other technical questions: How are guarantees given in euros alongside unit-linked guarantees to be valued? Which methods are to be applied for the different contract options?
171. The Commission departments agree with the working group that the general principles set out in the European rules do not need to be amended or supplemented for these issues to be resolved. In future, such issues should be addressed in technical studies and recommendations by the "Level 3" Committee (to use the terminology of the Lamfalussy report). These recommendations would be based on state-of-the-art actuarial techniques.

### **3.1.2. Investment rules**

172. Article 20 of the Third Life and Non-life Directives reads as follows: "The assets covering the technical provisions shall take account of the type of business carried on by an undertaking in such a way as to secure the safety, yield and marketability of its investments, which the undertaking shall ensure are diversified and adequately spread."
173. This Article lays down the principle of prudent financial management ("prudent man" principle). Investments must be tailored to the insurance business. The requirement of sound asset-liability management is thus present in the Directives and could be further clarified. Investments must be safe, marketable and profitable as well as sufficiently diversified and spread: this second part of the Article is, on the contrary, very extensively elaborated upon in Articles 21 and 22 of the Directives. Article 21 lists the assets acceptable as cover for provisions and spells out the principles for interpreting the list, while Article 22 lays down quantitative ceilings for asset categories (paragraph 1) and qualitative principles permitting more precise interpretation of the concepts of diversification and adequate spread (paragraphs 2, 3, 5 and 6).

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<sup>82</sup> 60% of state bond issues, irrespective of whether this maximum rate, calculated on a given date, is applied only to new contracts or contracts already held.

174. It will be noted that the principles in Article 20 do not apply to assets covering provisions for unit-linked (or indexed) contracts.
175. Nor does this Article apply to assets other than those covering technical provisions. The Directives, on the contrary, explicitly prohibit any attempt to regulate such assets. In this respect, the rules in the Directives differ from the IAIS principles relating to assets (Principles Nos 3 and 4): the IAIS principles apply to a company's entire assets.
176. The discussion below addresses three topics: the quantitative rules on diversification and spread, asset-liability management and possible extension of the rules on coverage to liabilities-side items other than technical provisions.

#### 3.1.2.1. Principles of diversification and spread

177. Under the current rules, the principles of diversification and spread are buttressed by a number of quantitative rules. Close reading of the Directive reveals that these rules in no way constitute criteria for sound financial management; rather, they are limits which, if overstepped, indicate in all likelihood that the insurance company has lost sight of the need for prudent financial management. The supervisory authority must then intervene:<sup>83</sup> its assessment of the situation will possibly justify the granting of a derogation from the quantitative rules.
178. The current system acts as a "safety net" or "safeguard": the constraint it imposes is sufficiently weak for it to bring to light only manifestly imprudent behaviour (except in exceptional circumstances); it is not sufficient on its own to ensure prudent asset management. It is with this in mind that the Directive stipulates that the Member States must lay down more detailed rules (but it does not specify whether these must be quantitative or qualitative rules).
179. The Commission departments consider that, in addition to this safety net, there should be a common approach towards interpreting the "prudent man" principle. However, the search for such convergence falls more within the second pillar (common interpretations and comparison of supervisory practices) than the first pillar (quantitative rules).
180. The Commission departments have also identified at this stage a number of possible options for a reform of the current rules on coverage (and, in particular, of the quantitative limits).

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<sup>83</sup> Although not explicitly linked to a given level of capital, the quantitative rules on spread and diversification are one of the "intervention levels" for supervisors in the present European system.

181. One reform option would be to abolish the quantitative rules or, rather, incorporate them into the calculation of the minimum capital requirement, as is the case with some RBC systems (Australia<sup>84</sup>). Indeed, not accepting an asset as cover for provisions and assigning a 100% weighting to an asset when calculating a margin requirement are two very similar rules.
182. It will be noted that the first approach does not dovetail perfectly with the concept of "safeguard" expounded above. In a formula for calculating an "integrated" margin requirement, the "safeguard", which is designed to forestall an unduly risky investment policy, is no longer identified as such. Its effect may be neutralised by the formula's other components.<sup>85</sup> For example, if the intention is that the "RBC" minimum should itself act simply as a "safeguard", i.e. that it should be low enough for only a small number of companies to fall below it, there is a very good chance that the "safeguards" which the formula contains for each risk component (concentration risk, provisioning risk, etc.) will be set so low that they will almost never be triggered.
183. A second approach would be to maintain in force the rules on assets covering technical provisions and the possibility for Member States to adopt additional quantitative rules. The rules on coverage could be revised to a greater or lesser extent.
184. A light revision could focus simply on the existing thresholds and the introduction of a number of new thresholds designed to avert:
- excessive concentration on a single reinsurer of claims against reinsurers (especially provisions borne by reinsurers),<sup>86</sup>
  - unduly large intra-group investments;<sup>87</sup>
  - an accumulation of non-liquid investments attributable to unit-linked business for life assurers.<sup>88</sup>

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<sup>84</sup> As already pointed out in MARKT/2085/01 on RBC systems, the RBC system in the United States includes not only an "asset risk" calculation but also quantitative limits per issuer (point 86).

<sup>85</sup> The difficulties in interpreting RBC formulas, and in particular the effects of the various "risks" on the final formula, were discussed in MARKT/2085/01.

<sup>86</sup> At present, the manner in which provisions borne by reinsurers are admissible as cover for gross reinsurance provisions varies between Member States. One of the objectives of the reinsurance project is to remove the collateral requirement for such claims in cases where the reinsurer is authorised in the European Union. Authorisation will not, however, relieve direct insurers of the need to conduct an analysis of the quality of its reinsurers and of the spread of its claims against them. A numerical "safeguard" could be introduced here to avert excessive concentration of claims on a single reinsurer.

<sup>87</sup> The Sharma report recommends, for instance, that assets held with related parties on a non-commercial basis should be inadmissible (paragraph 6.3.2).

<sup>88</sup> The working group on life assurance advocates laying down a diversification principle for non-liquid assets covering unit-linked products. This principle could be accompanied by a numerical "safeguard".

185. A heavier revision of the rules on coverage would involve stipulating the value to be applied in determining the admissibility of investments: current practices diverge. Some countries use the market value while others apply the accounting value (which itself is defined differently between countries). The market value could quite simply be used for the rules on coverage except in the life assurance field, where in many countries the realisation of hidden capital gains determines the amount of insurance liabilities. The market value admissible as cover could possibly be reduced so as to reflect the volatility of the asset category (shares, bonds, property, etc.), bringing the rules on coverage more closely into line with the RBC capital requirements.
186. The third possibility would be to standardise the rules on coverage<sup>89</sup> and to prohibit Member States from adopting stricter quantitative limits. This solution would pave the way for closer harmonisation and hence fairer conditions of competition in the European Union.<sup>90</sup> Adopting such an approach would provide confirmation that the quantitative rules were in the nature of a "safeguard"; the supervisory authorities would not be able to base their monitoring of insurers' investment policies solely on compliance with identical quantitative criteria for the entire sector.
187. It has to be assumed that, under this third option, more restrictive and more precise thresholds would still be laid down by the supervisory authorities to serve as early-warning signals, but these thresholds would no longer act as an automatic constraint on insurance companies. On a case-by-case basis, following an assessment of the insurer's investment policy, the supervisor would though retain the right to impose stricter limits regarding the acceptance as cover of a given investment category or a given investment ("second-pillar" powers).

#### 3.1.2.2. Asset-liability management

188. At this stage in the project, the planned rules for ensuring that an insurer's assets match its liabilities come, if anything, under a second regulatory pillar. There is no intention, for example, of linking part of the capital requirement automatically to the results of standardised tests in the asset-liability models.<sup>91</sup>

#### 3.1.2.3. Assets covering the solvency margin

189. A criticism sometimes levelled at the European system is that the rules on coverage apply only to technical provisions. In particular, whereas a minimum level of capital is required under the Directives to protect policyholders' interests, there is no rule as to how this minimum level is to be invested.

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<sup>89</sup> Both the quantitative limits and the valuation rules for admissible investments would be standardised in the European Union.

<sup>90</sup> This solution is similar to the positions taken by the representatives of the profession. As for the Member States, while several of them have expressed their support for the "three-pillar structure" of the current prudential regime, none has yet made its position sufficiently clear for it to be possible to tell whether the second or third solution is the preferred option.

<sup>91</sup> Leaving aside the "resilience provision" mentioned in connection with life assurance and which could be regarded as a capital requirement rather than a provision.

190. The idea of extending the rules on coverage to the minimum margin requirement was mooted once again during the first phase of Solvency II. It looms larger in the context of changing accounting standards. A number of items hitherto classed with liabilities could in the end be shown as capital. The overall level of safety in the solvency system should not be reduced: admittedly, the capital requirement could be raised accordingly, but an identical level of safety would also mean that this "new capital" would need to be invested prudently.
191. For the same reasons, one delegation<sup>92</sup> suggested that the Directives should stipulate explicitly that the minimum margin required may not be distributed to shareholders.
192. These two measures could usefully form part of the "Solvency II" reform. They would subsequently facilitate adaptation of the prudential system to changes in the accounting rules.

### **3.1.3. Capital rules**

#### **3.1.3.1. Intervention thresholds**

193. The function of capital in a prudential system has been discussed above. A capital requirement can be viewed as:
- a target (or desirable) level of capital for maintaining an acceptable probability of default;
  - to a greater or lesser extent, an early-warning threshold;
  - an absolute minimum below which the company is considered to be operating at manifestly too great a risk ("safeguard").
194. These different concepts can give rise to different margin requirements and different kinds of intervention by the supervisory authorities. A number of questions arise, in particular: what kind of intervention should correspond to each of these margin requirements and should a direct link be established between them?
195. The following discussion will focus on the concepts of absolute minimum margin and target capital threshold.
196. It seems logical to associate the concept of absolute minimum margin with automatic intervention by the supervisory authorities and an obligation on the company rapidly to restore its financial situation. With this in mind, the Directive's provisions on the "plan for the restoration of a sound financial position" could be fleshed out and strengthened.

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<sup>92</sup> Memo from the Netherlands: "The new solvency system: some issues for discussion". Subcommittee meeting on 22 October 2002.

197. The target capital threshold could be associated with an obligation on the supervisor to carry out (by a given deadline) a more detailed assessment of the company's situation (for example, by way of on-site checks or additional requests for information). The supervisor would also initiate a dialogue with the company on the planned measures and timetable for restoring the target level of capital. A report on this dialogue could be sent to any supervisory authorities which so requested, thereby helping to promote mutual recognition of supervision and to spell out more tangibly the level of supervision associated with the target level of capital.
198. Before elaborating on the type of intervention associated with the target level of capital, a more in-depth discussion of the "supervisory review process" (second pillar) would seem to be needed.
199. The second question concerns the link to be established between the two thresholds: the absolute minimum and the target capital threshold. For example, should we adopt the US or Canadian RBC approach, which defines the different intervention thresholds as multiples of a single margin requirement? The answer to this question must take account of the theoretical and practical aspects involved.
200. From a theoretical point of view, there is no justification for using multiples to determine intervention thresholds. Assuming that an exact description of the risk profile of each company were possible, there is no reason why the thresholds corresponding, for example, to a default risk of 5% and a default risk of 1/1000 should follow a given proportionality rule. Depending on the distribution of the insurance company's loss probability, these thresholds will be closer to or further from one another.
201. From a practical point of view, establishing thresholds as multiples of one another may be attractive in its simplicity. However, the different objectives of the thresholds under consideration here must be borne in mind.
202. The absolute minimum margin is above all a "safeguard": it is set at a level low enough for failure to meet it to constitute a very strong indication of undercapitalisation. For this reason, it may also constitute an absolute minimum for internal models. Above all, it must be objective and simple so as to ensure a level playing field and a rapid response by the supervisory authorities. On the other hand, the target level of capital, which will normally be higher, must take account as far as possible of the specific characteristics of each company. The trade-off between sophistication and simplicity is thus not the same in each case.
203. It is therefore not necessarily desirable to seek to calculate the absolute minimum margin and the target capital level as multiples of a single mathematical formula: to do so would run the risk of adopting a formula that was too complex, or insufficiently objective, for the minimum margin or, conversely, too crude for the target level of capital. None the less, at this stage of the project, this paper does not rule out this solution from among the alternatives to be discussed (see below).

### 3.1.3.2. Target level of capital

204. This concept was outlined above. Introducing it into the new European prudential system would have two objectives:
- to provide companies with an incentive to measure their true risks;
  - to contribute to the convergence of prudential supervisory practices by establishing, over and above the existing "safeguards", a real criterion for assessing company capitalisation.
205. There are several possible ways of introducing this threshold.
206. The first would be to define the target capital threshold as a multiple of the absolute minimum margin, as mentioned above.
207. The second would be to develop a "standard" risk model that could be applied to all companies in the European Union. Derogations would be possible for companies whose internal models were more precise than this standard model (or better suited to the company's situation). The advantage of this option would be to give all companies, including the smallest, a framework for their risk analysis and for developing more sophisticated models.<sup>93</sup> The danger would be that it might limit the development of internal models by promoting a single type of modelling.<sup>94</sup>
208. In practical terms, devising a "standard" risk model that would be sufficiently sophisticated to take account of the concept of target capital is a difficult task for two reasons: an appropriate theoretical description of the risk of ruin (and one suited to European markets) must first be developed; a suitable methodology and suitable data would then be needed to quantify the various parameters of the model.
209. The European Union has two possible starting points for such a model: the Finnish model,<sup>95</sup> which has been in existence for some time, or, in the longer term, the model developed by the International Actuarial Association. The latter could have the advantage of creating the right conditions for convergence of international prudential standards.
210. The third alternative would be to require insurance companies to calculate a target capital threshold without imposing a particular model on them. The internal model would thus become the system under ordinary law. By default, companies which were not capable of developing such a model could use a standard model established by the domestic market (or by the supervisory authorities).

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<sup>93</sup> These advantages were mentioned at the Conference of Supervisory Authorities seminar in Bruges (McKinsey presentation).

<sup>94</sup> The note MARKT/2515/02 shows that there is at present enormous diversity in the modelling used by large groups that have developed aggregate risk models.

<sup>95</sup> "Solvency requirements for non-life insurance companies in Finland", April 2002. Ministry for Social Affairs and Health, Insurance Department.

211. This option would have a number of advantages over the previous one. It would relieve supervisors of the task of devising a standard model (obviously not their main responsibility). It would more clearly highlight the basic obligation on companies to analyse their risks (and not merely to apply a particular formula) and would thus be more in line with the spirit of the Basle project. Lastly, it would not restrict market developments<sup>96</sup> but, on the contrary, would make it possible to adapt to them rapidly.
212. However, this solution could lead to a poorly harmonised intervention threshold. Supervisors would doubtless have to make a major effort to coordinate the approval of models in order to address this problem.

#### 3.1.3.3. Absolute minimum margin

213. At present, the two concepts of guarantee fund and minimum margin correspond to the concept of "absolute minimum margin" as developed in this paper. The Commission departments do not consider reform of the guarantee fund necessary (it was already reviewed in Solvency I). As regards the current minimum margin, they have identified the following points for consideration.
214. For non-life insurance, the discussions in the first phase suggest that the current minimum margin is sufficiently low to act as the benchmark for an absolute minimum margin. The following alternatives have thus been identified:
215. First option: no change to the rules for calculating the minimum margin. Solvency I has only just reformed these rules. The Solvency II project could focus on creating or reforming the rest of the prudential system (provisions, assets, target capital threshold, supervisory review process) without touching the calculation rules, which everyone knows and has mastered.
216. Second option: take the current minimum margin as the basis for discussion and reform it so that it can be calculated more easily and in an empirically more effective manner. A number of changes are possible: a raft of suggestions was made along these lines in the first phase of Solvency II or previously during the Solvency I project. So as not to complicate matters unnecessarily, we will not provide details at this stage.
217. Third option: devise a formula that sufficiently reflects the risk profile of the company for it to be used as a basis for defining both the absolute minimum margin and the target capital threshold (for example, by a system of multiples). The problems with this option were mentioned above.
218. For life assurance, the three main alternatives are comparable to those for non-life insurance. Two specific aspects should none the less be mentioned.
219. First, it is less obvious than for non-life insurance that the current minimum margin is sufficiently low<sup>97</sup> to constitute an absolute minimum margin.

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<sup>96</sup> Such a solution would also be more compatible with certain existing (Finland) or planned (Netherlands) regulatory situations.

<sup>97</sup> Or, for certain unit-linked products, sufficiently high.

220. Second, in the case of a "simple" reform of the minimum margin (second option), there are fewer possible changes than in the case of non-life insurance. During the first phase, the idea was mooted of differentiating investment risk more according to the assets held. At present, investment risk is taken into account by applying a standard additional margin requirement of 3% of investments.

#### **3.1.4. Consistency of rules between sectors**

221. Convergence of structures in the prudential systems for banking and insurance does not in itself resolve possible problems of "competition" between quantitative standards in the two sectors. It is moreover legitimate to seek to define the quantitative requirements applicable to insurance primarily as a function of the most common characteristics of insurance business — characteristics which are not necessarily shared by the banking sector.

222. However, in the new prudential system, regulatory arbitrage must be avoided. The introduction of a target capital threshold will no doubt help to achieve this goal since supervisors will be able to verify that the methods used to measure risks are compatible with those used in banking.

223. More specifically, in the next stage of the Solvency II project, a working method will have to be defined for:

- identifying the activities where banks and insurance companies are likely to compete;
- comparing for these activities the practices of banks and insurance companies, the accounting rules applicable and the solvency issues;
- where appropriate, defining slightly different quantitative rules or a slightly different prudential supervisory process for these activities.

## **3.2. Second pillar**

### **3.2.1. Preliminary remarks**

224. The principles of the "supervisory review process" (or "second pillar") set out in the draft New Basle Accord may be summarised as follows:

- Banks must develop capital assessment procedures commensurate with their risk profile; they must also have a strategy for maintaining adequate capital.
- Supervisors must evaluate the quality of banks' internal capital assessment procedures and the strategies they implement (as well as their ability to comply with the minimum regulatory ratios).
- Supervisors must be able to impose a capital requirement in excess of the Accord's minimum requirements (whether for a particular institution or for the entire domestic market).
- Supervisors must endeavour to intervene at an early stage to prevent capital from falling below its regulatory level; and, if capital is not maintained or restored to a level higher than the regulatory requirement, they must require prompt adoption of remedial measures.

225. It became clear from discussions during the first phase of Solvency II that establishing a supervisory review process was, for insurance too, one of the main routes for improving the prudential system. Clearly, the principles have to be adapted to the realities of supervision in the insurance sector. In particular, the banking principles strongly emphasise the need to assess the capital requirement: a supervisory review process in the insurance sector will also have to include rules on the valuation of provisions and the management of investments.

226. The existing Community Insurance Directives already sketch out a supervisory review process.<sup>98</sup> They require companies to have sound administrative and accounting procedures and adequate internal control mechanisms; they lay down – very succinctly – the principles of the "financial supervision" exercised by the supervisory authorities; they specify companies' reporting obligations with regard to the supervisory authorities (supervisory returns) and confer minimum investigative powers on the latter (powers to demand additional information, powers to carry out on-the-spot investigations); and they stipulate the measures that can be taken by the supervisory authorities in the event of non-compliance (safeguard measures, suspension of or sanctions against directors, freezing of assets, withdrawal of authorisation) and the thresholds triggering such measures. The new "Solvency I" Directives have strengthened these "second-pillar" provisions by stipulating that the supervisory authorities may, in certain cases, increase the capital charge or reduce the items constituting the solvency margin.
227. Nevertheless, the existing provisions remain extremely general. The remarks made earlier in this paper demonstrate the need for this aspect of the Community legislation to be further developed:
- If it is to be appropriate to the risks, a prudential system must promote sound risk management in companies and monitoring of the latter by the supervisors so as to take the quality of such management into account.
  - As already shown by the discussion of "first-pillar" measures, a satisfactory degree of harmonisation of Member States' rules cannot be achieved without some convergence of the supervisory authorities' interpretations and practices.
228. In particular, introduction of the concept of "target capital" should be backed up by more precise rules on the risk assessment methodologies to be applied by supervisors and by a definition of the powers of intervention associated with that target level. Nor can the use of internal models be contemplated without substantially developing common lines of interpretation; otherwise, the mutual recognition of supervisory checks would be jeopardised.<sup>99</sup>
229. The aim of the following two sections is to sketch out what a "second pillar" could entail for Community legislation on the basis of the ideas already put forward during the first phase of the Solvency II project.

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<sup>98</sup> See in particular (for non-life insurance) the following provisions: Article 13 of Directive 73/239/EEC, as amended by Article 9 of Directive 92/49/EEC; Article 19 of Directive 73/239/EEC, as amended by Article 11 of Directive 92/49/EEC; Article 20 of Directive 73/239/EEC, as amended by Article 13 of Directive 92/49/EEC; and Article 22 of Directive 73/239/EEC, as amended by Article 14 of Directive 92/49/EEC. Similar provisions exist for life assurance.

<sup>99</sup> Particularly if the intention were to entrust to a single supervisory authority validation of the model of a transnational group applying to subsidiaries in different countries.

230. The Sharma report in particular contains a large number of useful suggestions for devising a second pillar, both in terms of the sound management requirements that could be applied to insurers and with regard to the common supervisory tools that could be used by supervisors. The reports of the working groups on life and non-life insurance also contain some ideas that are reproduced below.
231. Lastly, the ongoing discussion aimed at integrating the principles of the draft New Basle Accord into the Community legislation<sup>100</sup> is taken into account.
232. The nature of the second pillar lends itself particularly well to multi-level regulation as described in the Lamfalussy report: general principles, guidelines and joint interpretations, comparison of actual practices. The "Level-3" Committee will in particular have a key role to play in the detailed definition of this pillar of the prudential rules.

### ***3.2.2. Spelling out the principles of internal control and sound risk management***

233. Taking the draft proposal for the banking sector, a second pillar contains first of all a number of principles of sound administrative organisation, internal control and risk management in a company. It is a sort of statement of good practice which the supervisory authorities would like to see all companies follow, and it forms the basis for the supervisory review process.

#### **3.2.2.1. Internal control and administrative organisation**

234. As mentioned above, the existing Directives require companies to have "sound administrative and accounting procedures and adequate internal control mechanisms". There appears to be a need to develop this principle, both in the Directives and by means of more detailed interpretative guidelines.
235. By way of example, the draft proposal for a directive for the banking sector contains an article on "the institutions' control environment". This provision sets out in some detail the requirements relating to sound administrative organisation and internal control:
- The institution's strategic objectives and corporate values must be clearly stated and known to its employees.
  - The lines of responsibility and accountability structures must be clearly defined.
  - The governing bodies are responsible for setting in place an effective internal control environment and they must exercise appropriate oversight of the institution's activities.

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<sup>100</sup> A working document that could pave the way for a proposal for a directive on capital adequacy for banks was published by the Commission on 18 November 2002 and is available on the Internet: [http://europa.eu.int/comm/internal\\_market/en/finances/capitaladequacy/index.htm](http://europa.eu.int/comm/internal_market/en/finances/capitaladequacy/index.htm).

236. Mention should also be made of the Madrid Working Group, set up by the EU Insurance Supervisors Conference. The task of this group is to establish internal control principles for insurance companies. Its work should make it possible to define more precisely both the general principles that need to be laid down in a directive and the more detailed principles or rules that would be adopted by "Level 3" in the regulatory process (to use the vocabulary of the Lamfalussy report).

#### 3.2.2.2. Risk management

237. The principles of sound administrative organisation and internal control must be bolstered by risk management principles tailored to the insurance business.

238. The Sharma report already outlines the necessary principles in this area.<sup>101</sup> According to the report, proper risk management takes on a variety of forms. At a very general level, risk management must be encouraged by an appropriate corporate culture. It must then be reflected in the company's strategy and decision-making processes. It must be backed up by an effective system for monitoring risks and disseminating information. Lastly, a company can properly manage its risks only if it is able to take prompt corrective action should a problem arise. For each type of risk, the Sharma report sets out the risk management principles applicable to four levels: organisation and governance, strategy and decision making, monitoring and information, and investigation and corrective action.

239. Formulated somewhat differently, these levels are to be found in the draft proposal for a directive currently under discussion for the banking sector. The article on risk management and reporting requires institutions' governing bodies to determine their risk management policies and to establish procedures for identifying, measuring, monitoring and controlling all the risks to which the institution is exposed. The wording of the article makes it clear that these requirements relate to the institution's corporate culture, establishment of its strategy, and its monitoring and information systems. Only the need to have effective corrective mechanisms is not expressly mentioned.

240. In order to look in greater detail into the necessary risk management principles for the insurance sector, some of the ideas raised in the different working groups for the Solvency II project are reproduced below.

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<sup>101</sup> Part 5.2 of the report contains a set of tables entitled 'Toolkits'. The first column of these tables sets out the risk management principles ("What we expect of firms").

241. Underwriting business: The following principles were mentioned:

- Companies should sell products of which they master all the characteristics. In life assurance, the working group proposed that companies be required to perform a profitability test to ensure that they have properly identified and costed all the guarantees they offer, including for adverse scenarios.<sup>102</sup>
- Companies should formalise their underwriting strategy and check that actual underwriting adheres to that strategy.
- They should limit their underwriting to risks for which they have adequate reinsurance cover.
- They should have corrective mechanisms for adjusting their underwriting policy and premiums in the light of retrospective observations.

242. These principles could also require companies to identify and specifically monitor their volatile risks (low frequency of occurrence, high intensity of claims). Such monitoring should, of course, take reinsurance into account and should be linked to assessment of the target capital or of the equalisation provisions, according to the different cases envisaged in the part of this paper devoted to the first pillar of the system.

243. Management of policies, claims and provisions: As far as provisions are concerned, the general principle is that companies must use appropriate methods for evaluating their provisions and must have corrective mechanisms for adjusting their valuations as soon as a new factor emerges which justifies it. This principle can then be fleshed out by laying down principles for the management of claims or policies according to individual cases.

244. For non-life insurance, for example, the working group recommended that claims management and provisioning principles be adopted. Such principles would focus on:

- the definition of responsibilities, and in particular the obligation to keep claims management and underwriting activities separate;
- the existence of claims registration rules ensuring that claims are registered promptly and correctly and that the information is regularly updated;
- appropriate classification of data, the use of qualified staff for assessing claims and ex post checks on the validity of the assessment methods used;
- documented procedures, internal monitoring of these procedures and adequate reporting.

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<sup>102</sup> The working group also pointed out that the second paragraph of Article 19 of the Third Directive (requirement to take into account "all aspects of the financial situation" of the insurer in order to assess whether premiums are sufficient) needed to be clarified. The Commission does not wish to introduce rules that might impede price competition on the insurance market.

245. For life assurance, the Directives set out the provisioning principles to which sound risk management principles could easily correspond.
246. The prudence principle in technical interest rate assumptions and the principle of matching assets to liabilities could take the form of an obligation to monitor the risk of mismatch between assets and liabilities (see below the paragraph on asset-liability management). The principle of monitoring the company's specific mortality or survival risk corresponds to the prudence principle in the use of mortality tables.<sup>103</sup>
247. A few principles or guidelines on the management of policies could also strengthen the regulatory framework. The working group identified two areas in particular that could be addressed:
- requiring a profit-sharing policy to be drawn up (so that it can be consistently taken into account in the company's asset-liability management);
  - developing principles for unit-linked products, given the specific management risks they entail.
248. Assets and financial management: In this area, the Insurance Directives lay down the principle of prudent financial management (see above the comments on coverage rules).
249. Following the recommendations of the Sharma report, this principle could be spelt out by requiring insurance companies formally to draw up an investment policy covering:
- their investment strategy (level of risk allowed, target portfolio mix);
  - the allocation limits they set (limits by issuer, industry sector, geographical area, type of asset, currency);
  - the use of derivatives;
  - the liquidity of their assets;
  - investments in affiliated companies;
  - the correlation with the risk profile of their liabilities.

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<sup>103</sup> The reader is referred to the ideas put forward by the working group on life assurance in its report MARKT/2528/02.

250. Companies should, of course, implement this policy by adopting appropriate procedures. They should also have effective tools for monitoring their exposure to asset risks and use objective, reliable methods for valuing their assets (particularly where the assets are not traded on sufficiently deep markets). The possibility of requiring companies to draw up a contingency plan describing the measures to be taken in the event of a pronounced fall in market values could be considered.<sup>104</sup>
251. Special importance could be attached, when drafting these financial management principles, to the matching of assets to liabilities. The working group on life assurance thus recommended that minimum criteria be laid down for the asset-liability management tools used by companies.<sup>105</sup>
252. ALM models should be integrated into the company's overall risk management process; they should be used in framing and monitoring the investment policy.
253. Reinsurance: In this area too, general principles were set out in the Sharma report. They are summarised here:
- Insurance companies must devise a reinsurance programme tailored to their underwriting policy; under no circumstances should they use reinsurance in order to mislead third parties.
  - They must have reinsurance cover placed with reinsurers that are sufficiently solvent and must constantly monitor the quality and liquidity of their claims against reinsurers (monitoring of the counterparty risk represented by reinsurers).
254. Other risks: In addition to the risks mentioned above (underwriting risks, asset risks and reinsurance risk), the Sharma report identifies other types of risk which can have a direct impact on the accounting results or can constitute underlying risks. These can be classed as operational risks, legal risks, commercial risks, etc.
255. Sound administrative organisation and adequate internal control should enable these risks to be effectively limited. Some other risk management principles relating to these other risks<sup>106</sup> were mentioned in the Sharma report or the reports of the other working groups; the two main ones are outlined below.

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<sup>104</sup> According to the Sharma report, such plans would have avoided certain waves of panic selling observed in the past.

<sup>105</sup> The working group suggested, for example, the following principles: ALM models should be comprehensive and appropriately describe assets and liabilities; parameters and assumptions should be validated against past practical experience; sensitivity analyses should be performed on projections; procedures should be documented; and ALM should be integrated into the overall risk management process.

<sup>106</sup> Occasionally, the same principle can relate to several of the categories identified in the Sharma report.

256. An initial principle proposed by the Sharma report is that insurers should have a "fair attitude"<sup>107</sup> towards policyholders. This idea is also present in the report on life assurance, which mentions, for example, the need for policyholders to be well aware of the investment risks they bear in the case of unit-linked contracts. Another idea discussed by the group was the principle of fair sharing of profits. One or more principles relating to the fair treatment of policyholders could usefully be reinforced by "third-pillar" disclosure obligations.
257. A second principle is that an insurer's risk management system must enable it to understand its exposure to risks linked to the external environment: the economic cycle, emerging risks, catastrophic events. The Sharma report suggests, for example, that insurers should be required to test their business plan under several adverse economic scenarios and to monitor these external risks.

### ***3.2.3. Devising principles and common tools for prudential supervision***

258. The principles of sound administrative organisation, internal control and risk management are, of course, not sufficient in themselves to create a second pillar of prudential regulation: their application must be verified by the supervisory authorities, where possible on the basis of a common interpretation.
259. Common principles and supervisory tools are also necessary in order to ensure that measures taken by supervisors, whether prompted by breaches of the "first-pillar" quantitative rules or by problems detected by other means, do not diverge excessively across the European Union.
260. This section lists the topics relating to the "supervisory review process": first the supervisory process proper, then the powers of intervention conferred on the supervisory authorities and lastly the measures necessary for ensuring that the authorities act in a transparent and accountable manner. A final part deals with the issues to do with the supervision of insurance groups.
261. Before embarking on this brief overview, it should be pointed out that the raft of measures under consideration is likely to have a significant impact on the organisation and resource requirements of the supervisory authorities. This issue appears to be raised in all existing plans for prudential reform in the financial sectors. A recent report by the European Parliament<sup>108</sup> "underlines the fact that the resource issue is a strategic priority which would enable supervisors to carry out their tasks adequately; notes that a single financial market needs skilled regulatory and supervisory authorities in all the EU countries, in order to ensure a level playing field and avoid regulatory and supervisory arbitrage".
262. At this stage in the Solvency II project it would be premature to discuss the impact of the reform on the organisation and needs of the supervisory authorities. The question will have to be tackled at a later date, but it seemed sufficiently important to be briefly mentioned at this point.

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<sup>107</sup> Footnote not applicable to EN text.

<sup>108</sup> Report on prudential supervision rules in the European Union (2002/2061(INI)). Committee on Economic and Monetary Affairs, rapporteur: Ieke van den Burg.

### 3.2.3.1. Supervisory process

263. The future directive will have to lay down in broad terms the prudential authorities' obligation to monitor the insurance companies under their supervision. The definition of "financial supervision" in the existing Directives can serve as a starting point for such a provision.<sup>109</sup> The aspects to do with evaluation of the company's sound administrative organisation and its internal control and risk management systems would nevertheless deserve to be mentioned explicitly.
264. As the aim of the second pillar of the Solvency II project is to enable insurance supervision to be tailored more closely to the specific features of companies, it does not appear desirable to specify the frequency or nature of the checks which the supervisory authorities have to carry out. Along the lines of the Commission working document currently under discussion for the banking sector,<sup>110</sup> a general provision can nevertheless be envisaged stipulating that the evaluation process must apply to all insurance companies and must be carried out periodically.
265. Over and above these very general provisions, several aspects of the supervisory process should be at least partly formalised at European level. The few topics examined below appear to be the main ones identified during the first phase of the Solvency II project. Since they relate chiefly to supervisory practices, the bulk of the rules and the guidelines in this area will probably have to be drawn up by the "Level 3" Committee (and endorsed by the "Level 2" Committee).<sup>111</sup>
266. The first thing that European supervisory authorities need is a common framework for assessing corporate governance. This is one of the findings of the Sharma report, which stresses the highly subjective nature of such assessments. Guidelines on the methods to be used and the form which the assessment should take must be developed if greater importance is to be attached to this aspect of prudential supervision.

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<sup>109</sup> See the comments made on the definition of "financial supervision" given in the existing Directives (part 2.1.2 of the paper).

<sup>110</sup> The full text of the provision in question is as follows: "Competent authorities shall apply the evaluation process to all institutions on a systematic and consistent basis and the results of the process shall be reviewed periodically. Competent authorities shall determine for each institution the frequency, intensity and scope of the process and review having regard to factors such as institutions' systemic importance, nature and scale of business, organisational complexity and elements which might impact on the institutions' risk profile."

<sup>111</sup> It is not the aim of this paper to specify which level of regulation would be most appropriate for each measure. That issue will be examined at a later date.

267. The supervisory authorities also have the task of monitoring risks at market level in order to be able to see where a given company stands in relation to its competitors and to identify any undesirable market developments. The first phase of Solvency II demonstrated that a number of risks and market practices needed to be systematically monitored by all supervisory authorities. To that end and to facilitate information exchange between supervisors, the compilation of common statistics could be developed.<sup>112</sup> Such an initiative would also help to reduce the problem of multiple reports referred to earlier in this paper.
268. In concrete terms, the report on non-life technical provisions proposed introducing common statistics on provisions run-offs. The working group on life assurance, for its part, put forward the idea of monitoring mortality trends on the basis of common statistics or indicators. Other key risks could be identified in the course of future work.
269. Another area where progress could be made would be to harmonise the main early-warning indicators commonly used by the supervisory authorities to detect companies whose risk profile has become too high or unusual. The advantage of such harmonisation would be that it would more extensively formalise the types of action the supervisory authorities could take and thus harmonise the conditions in which European insurance companies do business. These early-warning indicators could also serve as triggers for the automatic exchange of information between supervisors in different Member States.<sup>113</sup>
270. Similarly, where assessment of a company's risk management requires adverse scenarios to be defined, the European supervisory authorities could devise reference scenarios that would apply throughout the EU: this could be the case in particular for the scenarios for testing the asset-liability management of life insurers,<sup>114</sup> but the concept could be extended to other types of scenario (e.g. catastrophes).
271. On-site inspection is also one of the major components of the supervisory review process. On-site inspections are mentioned in the Sharma report, together with advanced risk indicators, as the prudential tool enabling an insurance company's full risk exposure to be assessed.<sup>115</sup> The KPMG report stresses the importance of on-site inspections, particularly for monitoring technical provisions.<sup>116</sup> On-site inspection is very likely to become a mandatory stage in the validation of an internal risk model.

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<sup>112</sup> This is also one of the recommendations of the Sharma report (point 6.6.3).

<sup>113</sup> Sharma report, point 6.6.3.

<sup>114</sup> This is one of the recommendations of the report on life assurance.

<sup>115</sup> Sharma report, section 5.3 ("General tools").

<sup>116</sup> KPMG report, points 2.1.25 and 4.2.3.

272. It is in fact noticeable that on-site inspections are becoming increasingly important as prudential systems evolve in the direction of a sharper assessment of companies' risk profiles: the draft New Basle Accord stresses this aspect of the supervisory review process, and the European Parliament report on prudential supervision rules in the European Union confirms this trend.<sup>117</sup>
273. Despite the importance of the concept of on-site inspection, however, it is by no means certain that a generally accepted understanding currently exists between European supervisory authorities of what it entails. Comparison of practices might make it possible to arrive at principles and guidelines ensuring that practice was consistent across the Union. Indications could at the same time be given of which checks could be delegated to independent experts and which should remain the direct responsibility of the supervisory authorities.
274. With special reference to internal risk models (irrespective of how they are introduced in the Solvency II reform), it will be necessary to establish a common validation framework for all supervisory authorities. Experience acquired by supervisory authorities in Europe and the rest of the world<sup>118</sup> could provide a starting point here.
275. Lastly, closer cooperation between European supervisory authorities calls for machinery to be devised for sharing information and coordinating action in a crisis.<sup>119</sup>

#### 3.2.3.2. Prudential powers and measures

276. The aim of strengthening the supervisory review process is to make the prudential system more sensitive to insurance companies' individual risk profiles. It is therefore legitimate that the supervisory authorities should have powers to impose, at the end of the process, requirements (relating to provisions, assets, the reinsurance programme, the capital charge or, more generally, management of the company) that spell out in greater detail or go beyond the standard requirements of the prudential regime.
277. The Solvency II reform should therefore, in line with Solvency I but also with the current draft rules for the banking sector, reaffirm and strengthen these powers to set requirements over and above the minimum rules.

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<sup>117</sup> The report "considers that checks of periodic forms, however detailed they are, may not be sufficient to gauge the soundness of a given financial institution; notes that such quantitative checks may be complemented by on-site inspections carried out by skilled and experienced personnel, especially if credit institutions develop their own internal rating systems for calculating their capital adequacy under the draft Basle II Accord".

<sup>118</sup> The note on internal risk models (MARKT/2515/02) referred in particular to the rules developed by the Australian supervisory authority (APRA).

<sup>119</sup> Sharma report, point 6.6.3.

278. Nevertheless, conditions for or limits on the exercise of these powers could also be discussed. For example, if an insurance company or group had an approved internal model for calculating its target capital, a decision requiring it to have more than the target capital could not be justified unless the quality of the internal model were specifically called into question.

#### 3.2.3.3. Transparency and accountability of the supervisory authorities

279. This aspect of the second pillar has not so far been extensively discussed. The following principles can be derived from the prudential reform proposals tabled for the banking sector:

- The general criteria and evaluation methodologies used by the supervisory authorities must be publicly available.
- The results of the evaluation process must be communicated to companies which are the subject of binding measures.
- By contrast, any requirements which the supervisory authorities may impose over and above the regulatory minima must not be published.

#### 3.2.3.4. Supervision of insurance groups

280. According to the approach decided on for the first and second pillars of the prudential system, it will probably be necessary to study specifically the arrangements for supervising insurance groups.

281. In particular, if the future prudential system assigns a role to internal risk models, their validation will put the question of the supervision of insurance groups in a new perspective.

282. It would appear quite natural to envisage a validation process conducted or coordinated by a single supervisory authority, namely the one responsible for evaluating the company heading the group. In doing so, that coordinating authority would possess a large amount of data enabling it to assess the corporate culture, internal control and risk management of the group as a whole. Evaluation of the entire group by that authority would perhaps be more effective than piecemeal evaluation by different supervisory authorities. Other more technical aspects could possibly also be assessed more effectively at group level (centralised provisioning policy, reinsurance programme, asset management, etc.).

283. This will mean that the allocation of tasks between supervisory authorities will have to be discussed.

284. If the coordinating or lead supervisory authority is to play a key role in the supervisory review process and in calculating the target capital and its breakdown between the various subsidiaries, it should be subject to clearly defined obligations as regards the information to be passed on to the other supervisory authorities in charge of the group's subsidiaries. Specific systems will have to be devised (for example, a counter-reporting system in which a second supervisory authority would play an active part in monitoring the supervisory process and could therefore discuss with the coordinating supervisory authority the information to be communicated to the national authorities).
285. Nor would the central role played by the coordinating or lead supervisory authority do away with the need for "solo" supervision to check that the interests of policyholders are properly taken into account and protected in each of the entities that make up the group. For example, it would be hard to imagine that the lead authority would carry out all the on-site inspections on subsidiaries.
286. The demarcation of responsibilities could be based on the distinction between "safety nets" (minimum solvency margin, asset concentration limits) and "target" levels (target capital, investment policy of the group): the supervisors of the subsidiaries could remain in charge of checking the "safety nets" (and taking measures associated with them) while the coordinating supervisor could take the lead in checking the target levels and identifying or coordinating the measures to be taken by the supervisory authorities within this framework.
287. This division of responsibilities could vary according to the degree of solidarity displayed by the group towards its subsidiaries.
288. In any event, however clearly the tasks are allocated, the supervision of groups will require closer cooperation and coordination between European supervisory authorities.
289. Another, more radical alternative deserves to be discussed: it would entail entrusting all the tasks involved in the prudential supervision of the different entities of an insurance group to the one authority responsible for supervising the company heading the group.

### 3.3. Third pillar

290. During the Solvency Subcommittee's first discussion of the topic, it emerged that the concept of the third pillar in the proposals for the banking sector would have to be adapted to take account of the specific features of insurance business. In particular, one of the mechanisms underpinning market discipline in the banking sector – the interdependence of banks – is practically absent from the insurance market.
291. Generally speaking, the main factors contributing to market discipline in the insurance sector are the financial markets and rating agencies (for listed companies) and a general trend towards greater transparency and harmonisation of accounting rules. The characteristics of certain classes of insurance business also play a part.
292. The pitfalls to be avoided in establishing a third pillar for the insurance sector are, on the other hand, the same as those identified by the Basle Committee, namely:
- the information available to institutions (risk management, customer characteristics) may be a factor promoting competitiveness; the requirement to disclose certain information may significantly weaken the attraction of investing in order to obtain such information;
  - the obligation to disclose certain information may aggravate the situation of companies already experiencing difficulties (risk of massive withdrawals in the case of banks, a risk that may also exist for life assurance business);
  - the requirement to compile information not yet available may be very costly;
  - the public disclosure requirements of the prudential regime need to be coordinated with the disclosure requirements imposed by the accounting authorities in order to achieve consistency between the different sets of financial information.
293. During its discussions, the Subcommittee identified two different aspects of market discipline in the insurance sector.
294. The first relates to published financial information. This is intended above all for investors and analysts; it may also be used by competitors or brokers. The IASB draft accounting rules contain a substantial raft of financial information obligations: these different economic operators should benefit from such transparency. It is therefore not certain that the prudential system could bring much added value to the efforts already undertaken by the IASB. On the contrary, it would risk unnecessarily adding to the burden of compiling and publishing information imposed on companies. The dialogue already under way between the supervisory authorities and the IASB takes on special importance here.

295. The second aspect of transparency in the insurance sector concerns the information given to policyholders. Here the supervisory authorities, with their duty to protect policyholders, are again in a central position. The principle that insurers must display a fair attitude towards policyholders, which would form part of the second pillar of the prudential system, could effectively be underpinned by principles and rules governing the provision of information to policyholders. The working group on life assurance voiced the need for rules of this type on several occasions (unit-linked products, profit-sharing mechanisms).
296. Discussion of a third pillar raises the question of what elements of the supervisory returns should be disclosed. The IASB is, for its part, discussing the inclusion of information on companies' regulatory solvency margins in their annual accounts. These issues will have to be more widely discussed during the second phase of the Solvency II project, as they will be in other forums (Basle Committee, IAIS, IASB).
297. In concrete terms, the proposed approach for future work on the project is to link the definition and discussion of "third-pillar" measures closely to the corresponding first- or second-pillar requirements. This approach would have the advantage of ensuring that such measures were genuinely necessary and dovetailed with the rest of the system.
298. Where these measures led to financial information disclosure requirements, care would also have to be taken to ensure that they did not duplicate those envisaged by the IASB.

#### **4. NEXT STEPS IN THE PROJECT**

299. The aim of this paper is to provide a basis for discussion within the Solvency Subcommittee of the Insurance Committee. The delegations will be invited to comment on the overall approach of the project and the different options proposed. They will also be encouraged to put forward proposals as to the working methods to be adopted, with special reference to the points where the paper highlights the need for those methods to be spelled out more clearly.
300. The outcome of that first meeting of the Subcommittee and the discussions which will take place with the industry on 17 December should enable the Commission departments to put together a more concise proposal for future work.
301. That second paper would then be discussed at a second meeting of the Subcommittee scheduled for March 2003; the organisation of work during the second phase of the project could also be discussed at that meeting.
302. Following those meetings, an initial policy debate could be held at the spring session of the Insurance Committee. If there is consensus within the Insurance Committee, the Commission departments will then start organising the second phase of the Solvency II project.

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