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Feedback on Solvency II Draft Directive

Chief Risk Officer Forum

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1 Executive Summary

The European Commission published its draft Solvency II directive on 10th July. The CRO Forum welcomed the publication of the directive as “an historic step” and as “sketching out the most advanced and modern solvency regime worldwide” The draft will now being considered by Council of European Union (EU) Ministers and the European Parliament.

The CRO Forum has been an active participant in the Solvency II discussions and has therefore formed a view about the direction of Solvency II. The CRO Forum sees the developing Solvency II Directive as a positive force in promoting an internal market and improving policyholder protection and would like to see the continued focus on the same

We have contrasted this target Solvency II with the proposed directive. We have therefore identified five ’wider issues’ and five ’specific issues’.

The five wider issues raised in the paper are:

1. **Proposed reflection of “the structural mismatch between assets and liabilities” in the standard SCR:** We are concerned that Article 104.5 could allow the treatment of equity risk (and indeed other asset risk) in the standard SCR in a manner that takes inappropriate account of the one year risk of equity investments by tagging equities with a liability-based holding period. This would represent a departure from the principle of market consistent valuations and the one year ’Value at Risk’ horizon of the solvency framework that we have been consistently defending.
2. **Treatment of occupational pensions:** We are concerned about a non-level playing field due to applying Solvency II principles only to insurers and seek the development of an appropriate framework to supervise occupational pensions while progressing with Solvency II project
3. **Treatment of surplus funds for participating business:** We are concerned about the implications of Article 89 and Article 76 as relating to Article 89 and seek the appropriate application of the market consistent approach to determining the technical provisions and the surplus.
4. **Non-EU supervisors and group proposals:** We believe that at the solo level, subsidiaries of EU groups not subject to group treatment and subsidiaries of non-EU groups receive similar treatment. On the basis of the principle of equivalence, EU supervisors should be allowed to act as Group supervisors for non-EU subsidiaries of EU groups and vice-versa.
5. **Compliance costs:** We note that the associated costs will depend to a large extent on the implementing measures that have not yet been developed. We recognise the need for open and transparent disclosure and harmonisation and are committed to developing with other stakeholders a high quality supervisory and solvency standard in a cost-effective manner.

The first three wider issues above could represent a departure from the market-consistent total-balance sheet approach that the CRO Forum has been consistently defending. We appreciate that certain departures from a market consistent approach may be proposed to support small and medium sized regional insurers and to ensure that insurance market retain some diversity. However, we would suggest that these departures are kept to a minimum and that they are left for implementing measures so that there is flexibility to remove them in the future and deliver a fully market consistent approach to Solvency II. This is in line with the recent affirmation by the International Association of Insurance Supervisors (IAIS) Solvency Sub-committee at its meeting of

18th September in Sydney of the principle of market consistent valuations underpinning the determination of capital adequacy.

We have also identified five more specific issues:

6. **Structure and calibration of the MCR:** We re-iterate our support for a compact approach; we believe that the industry proposals provide a robust approach as it is based on the last calculated SCR, which would have been reviewed and signed off; we also suggest expressing the resulting MCR as a margin over liabilities to facilitate updates through the year.
7. **Cost of capital approach:** We obviously welcome this development and wish to ensure that the approach in the directive is consistent with the stated intention of a market consistent approach.
8. **Group SCR:** We welcome the recognition of diversification benefits but we want to ensure that this also takes into account geographical diversification and that no arbitrary limits are applied.
9. **Groups dimension of own funds:** We have identified a number of issues, including the treatment of the instruments of group support at solo level and the recognition of the value of in-force for participating business as own funds at group level.
10. **'Prudent person' principle:** We also welcome the application of this concept in a Solvency II context; our comments are aimed at ensuring that this is applied appropriately and in line with our existing obligations.

2 Introduction

The CRO Forum is a professional risk management group focused on developing and promoting industry best practices in risk management.

We have been an active participant in the Solvency II discussions that have taken place before the publication of the Solvency II directive promoting a risk-based and economic approach. We have therefore published a number of own initiatives papers on issues covering the cost of capital approach to market value margin (MVM), diversification benefits, internal models and financial risk mitigation and has responded to CEIOPS consultation papers.[1]

The Commission's publication of the Solvency II draft directive on 10th July marks a milestone in this project. The draft directive will now be considered by the Council of European Ministers and the European Parliament. The CRO Forum has welcomed the publication in a press release issued on 11th July "as an historic step not only for the European insurance industry but also for policyholders and the European Union as a whole",[2] and in a letter to the Financial Times published on 1st August as "sketching out the most advanced and modern solvency regime worldwide".[3]

The CRO Forum sees the developing Solvency II Directive as a positive force in promoting a common market and improving policyholder protection and would like to see the continued focus on the same. In the letter to the Financial Times, the CRO Forum called on "all parties to focus on refining and improving the principles in the directive without diluting them". The CRO Forum said at that time that it hoped that the European Parliament and the Council would preserve the internal consistency and the spirit of the draft directive and that it would continue to comment on outstanding issues.

This paper reiterates our views about the desired features of an economic, risk-based solvency regime, sets out our understanding about the features and internal consistency of the draft directive and our comments on key outstanding issues. It is structured as follows:

- Section 3 sets out what we believe Solvency II should achieve, the CRO Forum 'Solvency II target'
- Section 4 summarises the key proposals of the draft directive
- Section 5 sets out the key open issues for the CRO Forum.

The CRO Forum would be happy to discuss issues arising from this paper with the institutions involved in Solvency II.

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[1] See www.croforum.org under publications.

[2] CRO Forum press release dated 11 July, available from www.croforum.org under news.

[3] CRO Forum letter to Financial Times editor published on 1 August, available from www.croforum.org under news.

3 The CRO Forum 'Solvency II Target'

The CRO Forum's views about the aims of Solvency II are based on the evidence about how insurance markets operate and on the limits of the current EU approach to solvency, known as Solvency I[4]. There are four elements to this.

- Firstly, as noted in the CRO Forum paper on financial risk mitigation[5] current regulatory rules can pose a real hindrance to sound risk management in insurance by incentivising mismatches between assets and liabilities. This is usually the result of inconsistent valuations of assets and liabilities and also of restricted admissibility of risk mitigating instruments.
- Secondly, EU supervisors have considered the causes of failures (and near-failures) of a number of EU insurers as part of the preparatory work for Solvency II.[6] Their analysis shows that the causes were mostly associated with inappropriate risk decisions resulting from underlying internal problems – inadequate internal controls and decision making processes – rather than inadequate capitalisation per se. These conclusions are consistent with those derived by two academics that have been analysing the prudential regulation of insurance, who concluded that there is a corporate governance issue.[7]
- Thirdly, there is an increasing gap between measures of economic capital used for internal purposes and the Solvency I capital requirements. Furthermore, there are cases where firms are dealing with three different and inconsistent measures of capital - for supervision purposes, for internal purposes and, where relevant, for rating purposes. The purposes of these measures are obviously different and the CRO Forum expects the risk measures to be consistent and reconcilable.
- Finally, there is evidence of a limited level playing field in a number of areas associated with Solvency I because the current directives set out general requirements that Member States have implemented in different ways.

The CRO Forum has expressed in previous papers its views about what Solvency II should deliver. These are summarised below.[8]

- The three pillars (valuations and minimum capital requirements; supervisory review and disclosures) should be sufficiently harmonised so that it is the nature of the business of the risks that determine solvency requirement not the location of the company.
- It is desirable and efficient that the accounting and solvency definitions of liabilities are consistent and reconcilable. Nevertheless accounting considerations should not affect the definition used for solvency purposes.

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[4] To be clear, Solvency I has worked well over the years and has contributed to consumer protection but after 30 years it is widely recognised to be in need of an overhaul.

[5] CRO Forum, Financial risk mitigation in insurance – time for change, April 2006.

[6] Sharma, P., Prudential supervision of insurance undertakings, Conference of Insurance Supervisory Services of the Member States of the European Union, 2002.

[7] Plantin, G. and Rochet, J-C, When insurers go bust. An economic analysis of the role and design of prudential regulation, Princeton University Press, 2007.

[8] CEA and CRO Forum, Solutions to major issues for Solvency II, December 2005 and CEA and CRO Forum, Feedback on CEIOPS Consultation Paper 14, September 2006.

- Valuations and minimum capital requirements should be based on a total balance sheet, market-consistent value based approach. This is relevant both at group and solo level. It means that:
  - All assets and liabilities are valued based on a market value where one exists, and where not on projected best estimate cash flows valued using cash flows valued using market-consistent techniques;
  - Available solvency capital is defined as market value of the assets minus market value of the liabilities; and
  - Solvency Capital Requirement (SCR) is defined as the value at risk (VaR) over one year to a 1 in 200 confidence level, taking into account diversification across the risks and risk mitigation.
- The valuations of assets and liabilities and the SCR can be determined either by an approved internal model or by a standard approach. In either case the core principles above are the same but clearly the standard approach will be more approximate and therefore, in principle, should be more conservative.
- There should be no 'prudence' included on top of the market value of liabilities to cover the risk that the actual values vary over time from the current market value estimates. It is the purpose of the SCR to cover this risk. A mixed approach where some risks are considered within the valuation of assets or liabilities and some with the solvency requirement will inevitably lead to inconsistencies, double counting and ultimately additional costs for European consumers.
- There should be a Minimum Capital Requirement (MCR) that provides the basis for supervisory intervention in extreme situations. This should be calculated as a proportion of the last SCR however calculated. If the MCR is not sensitive to risk and diversification or does not give due credit to risk mitigation, it may create artificial constraints and disincentivise the use of internal models and good risk management.
- While the SCR should be based on a one-year VaR based approach, any risk not taken into account in Pillar 1 should be taken into account in Pillar 2.
- Supervision of groups for prudential purposes should be based on a consolidated approach that recognizes group diversification benefits so that there is one binding SCR for groups. The solo MCR and the valuation of insurance liabilities remains local and binding and a solo SCR will be used to set the level of parental support.
- A clear allocation of responsibilities between 'group lead' and 'solo' supervisors is needed. In particular, any potential application of Pillar 2 actions at the solo level should be a transparent process with safeguards and taken in the context of any applicable group supervision.
- Formalised capital arrangements within a group should be eligible to cover solo SCRs.
- A harmonised approach is required to deal with operations in third countries. Eligible capital and diversification benefits from third-countries operations should be recognised on the same basis as EU operations.

4 The Solvency II Draft Directive

The Solvency II directive published on the 10th July merges a large number of directives covering insurance and re-insurance,[9] which cover more than just prudential supervision of insurance. The directive also incorporates changes to upgrade prudential supervision of insurance.

The CRO Forum shares the general objectives of the Solvency II project that the Commission has agreed:[10]

- Deepen the integration of the EU insurance market;
- Enhance the protection of policyholders and beneficiaries;
- Improve the international competitiveness of EU insurers and reinsurers;
- Promote better regulation.

This is a 'Lamfalussy directive', that is the European legislative process is split between the directive just published setting out principles (and where further 'implementing measures' are needed) and the implementing measures. The Commission has published recently a timetable with a tentative road-map for the remainder of the project which includes the Commission's adoption of implementing measures in the second half of 2010.

Key aspects of the directive are listed below:

- Market consistent valuations of assets and liabilities. For assets, it means an exchange value. For hedgeable risks, the liabilities are valued by reference to market values. For non-hedgeable risks, the liabilities are valued as the sum of a best-estimate and MVM based on the cost of capital approach.
- A SCR based on VaR at 99.5% confidence level over a one year horizon. It will take into account diversification effects and risk mitigation techniques.
- The SCR may be calculated using a standard approach. Alternatively, the SCR may be calculated using an internal model subject to supervisory approval based on various tests covering the calibration of the results, the quality of the calculation and the model's internal use.
- A Minimum Capital Requirement (MCR) represents a threshold below which policyholders are exposed to an unacceptable degree of risk. The directive only sets out broad principles for its calculation, notably that it should be consistent with a calibration of, say, 80% VaR confidence level over a one year horizon.
- The directive introduces a set of qualitative requirements to control investment management ('prudent person').
- A supervisory review process and a firm's own assessment of their solvency (part of the firm's risk management system) provide evidence of the firm's risk management and compliance with the directive.

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9 The list of the directives is in the Commission's explanatory memorandum that accompanies the draft directive.

10 European Commission, Solvency II impact assessment report, July 2007.

- A high-level framework for quantitative and qualitative disclosures is provided. Insurance firms will need to disclose capital add-ons but Member States can waive this requirement for first five years. Supervisors will also need to disclose aggregate data about capital add-ons.
- Own funds are classified based on accounting definitions and are therefore separated between those on balance sheet (basic own funds) and those off balance sheet (ancillary funds). They are further separated into tiers (Tier 1, 2 and 3) reflecting their ability to absorb losses. The MCR will be covered with Tier 1 and Tier 2 capital. There are also limits that apply to capital available to meet the SCR, e.g. Tier 1 available is at least 50% of Tier 2 and 3. It is important that the overall approach to own funds remains consistent with the economic balance sheet approach that the CRO Forum has advocated and the Commission intended to deliver.
- There will be a solvency test at group level. There are two approaches for the assessment. There is an approach based the current supplementary supervision approach in the Insurance Groups Directive (IGD). There is also an approach for the group SCR based on consolidated data that would allow group diversification benefits. Model approval, where relevant, will be coordinated by group supervisor. Firms using consolidated data can apply for 'group treatment' that should allow a degree of capital mobility within the group. Pillar 2 and 3 will also apply to groups.

The CRO Forum has welcomed the directive and generally supports these principles. In the next section, we identify a number of key outstanding issues associated with the delivery of a truly market-consistent approach.

5 Open issues for the CRO Forum

The CRO Forum has identified a number of issues associated with delivering the aims of Solvency II set out at the beginning of section 4.

5.1 Wider issues

5.1.1 Proposed reflection of "the structural mismatch between assets and liabilities" in the standard SCR

We note the reference to duration mismatch in one of the articles in the directive setting out the calculation of the standard SCR. Article 104.5 includes the following:

> "It shall properly reflect the structural mismatch between assets and liabilities, in particular with respect to the duration thereof."

The CRO Forum is committed to the principle of market consistent valuation of assets and liabilities. In the context of risk measurement, we obviously agree that Solvency II should take account of the possibly long-term nature of the liabilities as well as the structural mismatch of assets and liabilities. There should be no compromises where there is a risk to Solvency II sound risk measurement principles. We also believe that it is desirable that the design and calibration of the equity risk component of the standard SCR should avoid leading to situations of forced selling of equities at times of market distress.

The CRO Forum is, however, concerned that this text could allow the treatment of equity risk (and indeed other asset risk) in the standard SCR in a manner that takes inappropriate account of the one year risk of equity investments by tagging equities with a liability-based holding period. This would represent a departure from the principle of market consistent valuations and the one year VaR horizon of the solvency framework that the CRO Forum has been consistently defending. This potential departure would mean that the one year solvency test would include elements that extend beyond the one year horizon and would additionally, complicate the recognition of the risk mitigation built into participating insurance contracts. This could also have wider implications as it may create an incentive for firms to potentially underwrite, under-capitalize and, therefore, under-price long term casualty, pension or other business.

We also believe that the results for the 'default' approach to the equity component of the standard SCR in QIS3 studies (i.e. not taking into account the duration of equity investments) are broadly consistent with the majority of results from internal models of CRO Forum members. The QIS3 also included as an option an approach to the standard SCR that took account of the duration of the equity investments covering liabilities. Where these optional calculations have been made, a comparison with the results generated by internal models suggests that the capital requirements would be underestimated if durations are taken into account.

Finally, we are concerned that the treatment of equities be consistent over time and promote sound risk management. More specifically, we are concerned that 'tagging' equities with a longer term horizon against liabilities may make some firms reluctant to change their positions following a crash (which many firms did following 2001 market correction) and it is not clear whether it is in the regulators' best interest to recognize equity duration 'tagging' if they may likely have to be reclassified following a crash.

At the same time, and as noted earlier, we appreciate the importance of structuring Solvency II to avoid forced selling of equities. We believe that this can be adequately addressed within the current framework via other means such as the ladder of intervention (including the design and calibration of the MCR) or other Pillar II measures such as limiting policyholders' right to surrender or by reducing all surrender values in a fair manner, etc. Such possibilities exist in some Member States and can effectively limit liquidity crises involving insurers in times of financial distress. Longer term solutions involve of course the design of new policies which either limit financial guarantees and options, or have policyholders carry (some of) the investment risk. However, in order to ensure a level playing field, there should be a harmonised, transparent approach that all Member States would be required to follow. Relying on these alternatives means that all insurance companies will be held to the same quantitative standards in an ongoing market situation, but those holding equities against long term liabilities are not necessarily forced to action every time there is a marked fluctuation in share values.

We also acknowledge that this issue cannot be seen in isolation as a purely technical issue. There are profound questions here about funding life insurance and pensions products for the next generation of retirees that relate to the overall risk-return combination offered and about the role of insurers as equity investors and providers of capital in European equity markets. It would be useful to have more clarity on these wider issues from the Commission, European Parliament and Council.

5.1.2 Treatment of occupational pensions

Occupational pensions form part of workplace remuneration. Providers of occupational pensions may be employers through a vehicle that does not have legal personality, employers using a "book reserve scheme", "institutions managing social-security schemes", and insurers. The directive for Institutions for Occupational Retirement Provision (IORP) provides a supervisory framework for the first category of providers.

We understand that in some Member States IORP providers compete with products originated by insurers and that there are concerns about an emerging non-level playing field as a result of the application of Solvency II to insurers. For example, the IORP allows Member States to apply the provisions in the IORP directive to the occupational pensions business of life insurers (Article 4 of the IORP).

The arrangements for occupational pensions vary between countries but a key difference in the IORP directive is between 'stand alone' IORP schemes that assume the risk of covering biometric risk or provide guaranteed levels of performance and those schemes that can rely on the support of the employer. Stand alone occupational pensions are similar to life insurers and the IORP directive (Article 17) already makes provision to apply Solvency I requirements for the required margin and available capital (Articles 27 and 28 of the consolidated life directive). The Commission's Framework for Consultation refers to this link but at this stage, it is not clear if the Commission intends to maintain the link with current Solvency I or apply the relevant Solvency II provisions to this class of occupational pension schemes.

The Commission also announced in its Explanatory Memorandum published together with the Solvency II draft directive that there will be a review of the IORP directive during 2008. This will "examine whether and how suitable solvency requirements can or should be developed for pensions funds".[11] This should allow the Commission to undertake a careful consideration of concerns about non-level playing field and to put in place an appropriate framework to supervise occupational pensions while progressing with Solvency II project.

It is also worth noting that, as employers, EU insurers may also offer these pension funds to their employees. The arrangements would vary across Member States and may involve financial commitments that could affect the insurer's overall financial position. It is anomalous to allow pension fund commitments to be excluded from a market-consistent total balance sheet. Solvency II should take account of the underlying risks in a harmonised way based, for example, on disclosures.

5.1.3 Treatment of surplus funds for participating business

The CRO Forum is committed to the market consistent approaches and economic based methods for the valuation of assets, liabilities and capital requirements.

The application of these principles to participating business is crucial to ensure that there is a proportionate approach to life business. This requires the appropriate application of the market consistent approach to valuations and determination of the surplus.

We are therefore concerned about the implications of Article 89 on surplus funds and about the provision in Article 76 for the exclusion of payments falling under Article 89 from the calculation of technical provisions.

As the Solvency II project aims for a maximum of harmonisation we think that there should not be any national options within the directive. Therefore we think that the proposed treatment of the surplus funds should only be taken into account when the product specifics are demonstrated to exist. In general, a proper modelling approach should allow the SCR to decrease in recognition of the loss absorbing nature of the liabilities.

It is indeed important that the actual economics of the business is reflected, in particular:

- Technical provisions should take into account all future expected cashflows, as opposed to any minimum requirement to date. These future expected cashflows include future bonuses to policyholders based on legal obligations, policyholders' reasonable expectations and historical experience. The impact of management actions should also be reflected.
- The extent to which this will reduce capital requirement (SCR) will depend on the actual definition and economics of the contract with the policyholder, the loss absorption capability of the liabilities and the fungibility of these surplus funds across funds and related companies.

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[11] See page 6 of the Commission's Explanatory Memorandum. This is in the same document as the draft of the Solvency II directive and is available from the Commission's Insurance and Pensions Unit web site as "Proposal COM (2007) 361".

5.1.4 Non-EU supervisors and group proposals

The Commission's proposals make improvements in the treatment of groups by striking the appropriate balance between the solo supervisors and group supervisor. This is a step in the right direction to align supervisory practices with the management of groups as integrated entities.

However, although EU-based insurance groups will benefit from avoiding the inefficiencies associated with the current treatment of groups, it is important to note that EU-based insurance groups are also active outside the EU, where other groups are not treated similarly.

A successful application of the Solvency II approach to groups will require the cooperation and understanding of non-EU supervisors. The cooperation with non-EU supervisors should be based on the equivalence concept. The Commission and CEIOPS should actively promote the principles of group supervision in Solvency II in their discussions with international supervisors. They should also ensure that at the solo level, subsidiaries of EU groups not subject to group treatment and subsidiaries of non-EU groups receive similar treatment. On the basis of the principle of equivalence, EU supervisors should be allowed to act as Group supervisors for non-EU subsidiaries of EU groups and vice-versa.

5.1.5 Compliance costs

Controlling the compliance costs from the Solvency II project is an important aspect of better regulation and the Commission has made a serious effort to develop estimates of the compliance costs. However, the costs will depend to a large extent on the implementing measures that have not yet been developed. There are numerous references in the draft directive to procedures, reports and the need to demonstrate compliance with specific principles. Many of these references will be developed further through implementing measures.

The CRO Forum strongly recognises the need for open and transparent disclosure and harmonisation and is committed to working with all stakeholders, including the International Accounting Standards Board (IASB), to ensure a high quality supervisory and solvency standard in a cost-effective manner.

The CRO Forum welcomes the Commission's commitment to the application of impact assessment to the implementing measures. CEIOPS, as technical advisors to the Commission, will play a vital role. The CRO Forum welcomes CEIOPS response to the Commission on this issue. We believe that formalising this aspect of its advice will enhance further the quality of the advice provided.[12]

5.2 Specific issues related to the Solvency II draft directive

5.2.1 Structure and calibration of the MCR

The CRO Forum agrees with the principle of a ladder of supervisory intervention based on two thresholds – the SCR and the MCR. We also agree with the principle that the MCR represents the level of capital below which there is an unacceptable risk for policyholders that leads to the loss of

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[12] Letter from the DG MARKT to CEIOPS Chairman of 19 July and response from CEIOPS of 27 July (www.ceiops.org).

authorisation (Article 141(1)(c)). We note, however, that the draft directive (Articles 125 to 128) does not suggest a particular approach for the MCR.

Supervisors have advised and tested two different modular approaches to the MCR – in QIS2 and QIS3. We understand that one of the underlying motivations for a modular approach is the uneasiness of some supervisors with the move towards an economic risk-based supervisory framework, which is seen as mitigated by designing the MCR as a calculation independent of the SCR. We question whether such perceptions are appropriate given the robust three pillar structure that the directive intends to create. We also question whether a single instrument (the MCR) would be able to fulfil satisfactorily this implicit role as well as the role that the Solvency II directive assigns to it (Article 141(1)(c)).

More generally, our concerns with a modular approaches are as follows. Firstly, there are no guarantees that the result will be well below the SCR calculation, as suggested by QIS2 results. This will impair the ability of the SCR to remain the key solvency ratio.

Secondly, it is also important to note that the ladder of supervisory intervention will only work if the rungs of such ladder are well defined. In practice, this means that a breach of the SCR does not easily escalate to a breach of the MCR. It is difficult to be confident about that with a separate calculation. Furthermore, it is difficult to rely on a single point estimate of a factor based approach – the result of a QIS – as evidence that the MCR structure and calibration are adequate.

Finally, the sum of the solo MCRs will also serve as lower bound for the group SCR calculated using an internal model (Article 237(2)(a)). The CRO Forum has accepted this principle.[13] However, if the calibration of the MCR is inadequate, it will limit the extent of group diversification benefits that can be taken into account. Given the resources likely to be needed to gain model approval, the directive should provide comfort that these investments in risk management will be worth the money and effort by defining an MCR that is adequately designed and calibrated.

As a result, the CEA has suggested that the solo MCR is calculated as a percentage of the last SCR approved by the supervisor, whether calculated using an internal model or the standardised approach. The CRO Forum has endorsed this approach.[14] We also note that the CEA has suggested that once the MCR at year end is calculated, it is expressed as a percentage of the technical provisions. See example in Box 1.

Box 1: calculating the MCR

For a particular company, assume that at year end the MCR calculated as a percentage of the SCR is €30 million and technical provisions for life equals €1,000 million at year end. The MCR is re-expressed as 3% of technical provisions, i.e. 30 / 1,000. Assuming that at end of the next quarter, the technical provisions are €1,100 million, the MCR would be €33 million, i.e. 3% of €1,100 million. The 3% would apply until the next re-calculation of the SCR.

Source: CEA, *MCR and proposed ladder of the intervention*, October 2006

[13] CEA and CRO Forum, Feedback on CEIOPS Consultation Paper 14, September 2006.

[14] CRO Forum, Comment on consultation paper no. 20, January 2007.

The approach supported by industry is consistent with supervisors' renewed interest on the design of the MCR as a percentage of technical provisions. We believe that a percentage of the SCR would avoid some of the subjective judgements associated with the choice of specific percentages of technical provisions for different lines of business. However, annually expressing the MCR as a percentage of the technical provisions as suggested in Box 1 has the additional benefit of facilitating the quarterly recalculation of the MCR required in the directive (Article 126(2)). We therefore suggest that the directive is amended to introduce the industry's suggested approach to the MCR.

We believe that the calibration of the MCR – the proportion of the SCR – should also be included in the directive. Given the consequences of non-compliance with the MCR, we believe that a key guiding principle for calibrating the MCR should be avoiding a situation where a market-wide event leads to generalised non-compliance with the MCR. We believe that any calibration of the MCR should be tested to ensure that the likelihood of generalised non-compliance is limited.

The CRO Forum understands that a similar strategy was adopted in Switzerland as part of the Swiss Solvency Test (SST) to calibrate a level of intervention between the MCR and SCR equivalents. The approach there was as follows: the supervisor characterised a number of historical scenarios (e.g. stock market crash 2000/01, US interest rate crisis in 1994, terrorism, pandemic) and firms computed how much capital would be absorbed as a result.[15] The results suggest that on average about 40% of the SST SCR would be consumed if any of these scenarios materialised. So the intermediate level was set at 60% of the SST SCR so that, on average, none of the scenarios pushed insurers beyond the second threshold.

We believe that this approach could be applied in Solvency II to provide evidence to calibrate the MCR. CEIOPS should set out a number of relevant historical scenarios and undertake its own calibration study with the goal of setting the intervention level based on the evidence generated. Suppose that on average x% of the SCR is consumed if any of the scenarios materialised. If the MCR equals x% of the SCR one would expect about 50% of the industry to breach the MCR as a result of any of these events. CEIOPS and the Commission could equally test how many insurers would be in breach of the MCR for different values of x% and choose a value that avoids generalised non-compliance with the MCR.

5.2.2 Cost of Capital approach

We welcome the Commission's adoption of the cost of capital approach to the MVM. Insurers need to hold capital to support risks that cannot be hedged. Holding this capital has a cost to the shareholder and a margin for the costs associated with the future capital requirements needs to be included in the market-consistent value of the liabilities so that the balance sheet of the insurer reflects this expected cost; this is the cost of capital approach. For the reader not familiar with this approach, the CRO Forum has published a short paper that provides an introduction.[16]

There are two specific issues where we feel that further clarity is needed: the quantum of capital used and the rate of the cost of capital.

There are limited details in the draft directive about the calculation of the quantum of capital associated with the cost of capital approach. The CRO Forum has defined it in the past as "fully

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[15] Gentile, G. "The Swiss Solvency Test and Solvency II", Life and Pensions Summit, 2 – 3 July 2007.

[16] CRO Forum, A market cost of capital approach to market value margin, March 2006.

diversified capital held to cover non-hedgeable risks only".[17] The experience of QIS3 suggests that there are issues with the implementation of the cost of capital approach that are likely to result in the results being excessively high. We have identified three key issues:

- **Basis for the calculation:** There is a difference of approaches between the technical provisions calculated at an entity level (Article 74(1)) based on homogenous risk groups (Article 78), and the calculation of the SCR at entity level (Article 100(3)). We believe that the calculation of the cost of capital should not alter the fundamental aspects of the SCR by requiring, for example, a new SCR calculated at the level of homogenous risk groups as required in the QIS3 specification (paragraphs I.1.50 and I.1.51).
- **Diversification benefits:** This is a feature of the SCR (e.g. Article 103 (3) and (4)) and this should not be altered when the cost of capital is calculated as suggested in QIS3 specification (paragraph I.1.59).
- **Non-hedgeable risks:** We note that QIS3 approach assumes that all financial risks are not hedgeable in year 1 and thereafter only the counterparty credit risk associated with re-insurance is not hedgeable (paragraphs I.1.43 and I.1.44); the CRO Forum has considered this issue in the past[18] and observed that currently most insurance risks and also certain financial risks affecting the liability cash flow, e.g. long term financial risks, may not be hedgeable.

These issues will be discussed in the context of implementing measures. However, we believe that it would be appropriate to provide an adequate steer on some of these issues in Article 75(5) of the draft directive. Below is a suggestion (additions are underlined):

> 5. Where insurance and reinsurance undertakings value the best estimate and the risk margin separately, the risk margin shall be calculated by determining the cost of providing an amount of eligible own funds equal to the Solvency Capital Requirement necessary in respect of those risks where the future cash flows associated with insurance or reinsurance obligations over the lifetime thereof cannot be replicated using financial instruments for which a market value is directly observable.
>
> The Solvency Capital Requirement of those risks shall be calculated according to the principles in Section 4 of this title.

Given the calculation of the quantum of capital for non-hedgeable risks, the rate of the 'cost of capital' is a crucial parameter. The CRO Forum agrees that the rate of the cost of capital does not need to be enshrined in the directive. We are committed to working with CEIOPS and the Commission in developing a cost of capital methodology that is harmonised for all companies but properly reflects the differing costs of risks in different Member States. The CRO Forum will develop its own thinking on this issue in a discussion document.

The draft directive defines the relevant rate of the cost of capital used to calculate the MVM as "the additional rate, above the relevant risk-free interest rate, that an insurance or reinsurance undertaking, holding an amount of eligible own funds, as set out in Section 3, equal to the Solvency Capital Requirement would incur to hold those funds" (3rd sub-paragraph in Article 75(5)).

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[17] See page 17 in CRO Forum (2006).

[18] See page 15 in CRO Forum (2006).

The CRO Forum understands that this could mean using the concept of an equity risk premium as the basis for the rate of the cost of capital. We believe that it is inadequate to apply an equity risk premium to the quantum of capital that represents non-hedgeable risks. We believe that the appropriate rate should represent the cost of the non-hedgeable risks that the MVM represents. We believe that this outcome could be achieved with the following modification of the definition:

> The Cost-of-Capital rate used shall be equal to the additional rate, above the relevant risk-free interest rate, that an insurance or reinsurance undertaking, holding an amount of eligible own funds, as set out in Section 3, equal to the Solvency Capital Requirement would incur in respect of those risks where the future cash flows associated with insurance or reinsurance obligations cannot be replicated using financial instruments for which a market value is directly observable.

5.2.3 Group SCR - geographical diversification benefits and arbitrary restrictions

The standardised approach for the solo SCR is a crucial part of Solvency II that must strike a particular balance between the accuracy and sophistication of the modelling. The CRO Forum is conducting a benchmarking study of the members' SCR results with the support of an academic and a firm of consultants, which will inform our thinking on these issues.

The Solvency II draft directive will also require a group solvency assessment (Article 220). The CRO Forum endorses this principle and has identified two key issues where further work is needed.

Firstly, the extent of group diversification benefits available in Solvency II may be limited. The directive requires the calculation of the group SCR "on the basis of consolidated data" (Article 237(1)(b)) and this applies regardless of whether the group SCR is calculated using the standard approach or an internal model (Article 237(2)).

We are concerned because this could result in diversification benefits being related to legal entities and not to risks and their inter-dependencies. We have seen this approach implemented in the QIS3 specification by requiring, for example, that for life business the relevant sub-components of the SCR are added (paragraphs I.6.37 to I.6.68 of the QIS3 specification) and diversification between risks is then taken into account. This means that diversification benefits arising from limited correlation of events / shocks in different geographies are not taken into account. The UK's FSA has acknowledged this in the Q&A that it has produced to answer UK industry's comments as part of QIS3.[19] Box 2 illustrates this with a simple example.

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[19] "Q: Does the group standard formula take into account geographical factors in assessing diversification benefits? A: The group standard formula differentiates between risk modules in the way it treats diversification benefits between group entities. The general rule is that risk modules apply to the group as if it were a single entity. This means diversification benefits between group entities are recognised but that geographical factors are not taken into account. However in some modules group entities are treated separately so that diversification benefits are not automatically recognised but certain adjustments are made such as, for example, Non-Life premium risk in individual entities is aggregated using different correlation coefficients for entities located in the same country compared with those located in different countries. Thus geographical factors are taken into account to a certain extent. Participants should feel free to comment on those areas where they consider geographical factors are not taken sufficiently into account both in the group and solo specifications." See page 13 in http://www.fsa.gov.uk/pubs/international/qis3_faqs.pdf.

Box 2: an example of group diversification benefits

The draft Solvency II directive allows for diversification between risks at group level by applying the correlation between risks at group level. This is illustrated below assuming that there are four risks and that the linear correlation between any pair of risks is 50% - at solo and at group level.

SCR components	Sub A	Sub B	Sum of subs
Risk driver 1	117	60	177
Risk driver 2	10	40	50
Risk driver 3	0	20	20
Risk driver 4	41	30	71
SCR	148	120	265

The limited extent of group diversification benefits in this example can be gleaned from a simple comparison of the resulting SCR, 265, with the sum of the SCRs for subsidiary A (148) and B (120), 268. The group SCR derived here can also be replicated assuming that there is perfect linear correlation between the risks in the two subsidiaries.

Suppose that we assume that the two subsidiaries are located in two different jurisdictions, which are not perfectly correlated. We have assumed that for each risk driver, the correlation between the two countries is 50%. The column 'group' adds the subsidiaries requirements taking into account the correlation between geographies:

SCR components	Sub A	Sub B	Group
Risk driver 1	117	60	156
Risk driver 2	10	40	46
Risk driver 3	0	20	20
Risk driver 4	41	30	62
SCR	148	120	236

The group diversification benefits (the difference between the sum of the SCR for subsidiary A and B, 268 and the group SCR, 236) is 32, which is almost 10 times the diversification benefits arising from pooling risks at group level.

We appreciate that there are a range of techniques for consolidation. We believe that ruling out geographical diversification benefits would be an arbitrary restriction of group diversification benefit that should not be present in Solvency II. We believe that this issue should be clarified by amending Article 237(2) as follows:

> 2. The Solvency Capital Requirement at group level based on consolidated data (consolidated group Solvency Capital Requirement) shall be calculated on the basis of either the standard formula or an approved internal model, in a manner consistent with the general principles contained in Title I, Chapter VI, Section 4, Subsections 1 and 2 and Title

I, Chapter VI, Section 4, Subsections 1 and 3 and taking into account geographical correlations.

It is also worth noting that a similar issue arises in the solo SCR where there are operations in different geographies through branches.

The CRO Forum has been consistently supporting an economic based approach for group supervision, which takes full account of diversification benefits across risks in a group as explained, for example, in the CRO Forum paper on diversification benefits. This is consistent with what an internal model would do. Hence diversification should not be restricted by the fact that these risks are in different entities as diversification results from combining risks regardless of whether these are hold in different entities.

We also appreciate that there are issues of transferability of capital that need to be taken into account to allow for diversification benefits with non-EU countries. We are, however, concerned about the possibility of arbitrary restrictions that limit diversification benefits between EU and non-EU entities in a group as suggested, for example, in the QIS3 specification (paragraph I.6.26) being adopted as part of either the framework directive or the associated implementing measures.

Box 3 illustrates the potential consequences of requiring Solvency II valuations across an insurance group while limiting arbitrarily group diversification benefits.

Box 3: combining EU and non-EU operations

This illustrative example explores the various possibilities of combining EU and non-EU operation in the context of Solvency II. Panel (a) illustrates the economic based approach that takes account diversification benefits across all operations in the group that the CRO Forum has been advocating. For simplicity we have assumed that the group diversification benefits reduces the group SCR compared to the sum of the solo requirements by 40%, broadly in line with the CRO Forum paper on diversification benefits.[20]

Panel (b) shows an alternative where Solvency II applies to all legal entities but there are restrictions to diversification benefits with non-EU entities. Thus EU subsidiaries are consolidated taking account of diversification benefits and the position of non-EU entities is then added. This reduces the surplus compared to scenario (a).

Panel (c) shows then an alternative approach that applied an economic approach to group supervision to EU entities only. So there are no diversification benefits between EU and non-EU entities and local valuations for non-EU entities are used (this example for illustration purposes assumes that local valuations are weaker than EU valuations, which may not be the case).

	EU sub 1	EU sub 2	Non-EU sub 1	Non-EU sub 1	Group
a. Economic based approach to group supervision - incl. diversification benefits					
Assets	95	38	26	9	168
Liabilities	84	32	21	7	144
Capital requirement	9	4	4	1.5	11.1
Surplus	2	2	1	0.5	12.9
b. Economic based approach for EU-sub group and Solvency II valuations for non-EU entities					
Assets	95	38	26	9	168
Liabilities	84	32	21	7	144
Capital requirement	9	4	4	1.5	13.3
Surplus	2	2	1	0.5	10.7
c. Non-EU entities valued using local standards					
Assets	95	38	24	7	164
Liabilities	84	32	20	5	141
Capital requirement	9	4	1	1	9.8
Surplus	2	2	3	1	13.2

5.2.4 Groups dimension of own funds

The groups dimension is also relevant to the treatment of own funds at the level of solo entities that are part of a group and at the level of the parent. The CRO Forum has identified a number of issues where further work is needed.

Firstly, the Solvency II draft directive introduces the possibility of using explicit instruments of group support to fund the solo SCR if certain conditions are met regarding the insurer, for example, that

[20] CRO Forum, Incorporating diversification benefits in the solvency assessment of insurers, June 2005.

the group's risk management processes cover the subsidiaries (Article 243) and regarding the instruments (Article 246(3)).

A successful application for group support, Article 246(1), results in the derogation of the requirement that the solo SCR is covered by the sum of own funds (Article 97(4)). The logical consequence is to disapply the requirements about the quality of capital available to cover the solo SCR (Article 97(1)). We believe that this is an appropriate reading of the draft directive because the requirement about the quality of capital available to cover the SCR applies to the group as whole (second subparagraph, Article 242). We therefore think it unnecessary and potentially confusing to classify group support as ancillary own funds. At solo level, the MCR requirements remain, including that it is covered with basic own funds (Article 97(5)).

Secondly, the IGD contains provisions limiting transferability of capital within a group where the supervisor considers that capital cannot be made available to cover losses elsewhere in the group (Annex I, paragraph 1.C.3).

This is an important issue for all participating business. We believe that the application of the Solvency II economic-based approach would require treating as own funds at group level the value of the in-force business from the participating fund (i.e. the shareholder transfer associated with asset shares, and the shareholders' share of the estate adjusted for the impact of capital stresses). The logic of this approach is that the in-force business supplies future positive cash flows that can be used to meet future cash outflows from other liabilities and is consistent with the approach to the other elements of the Solvency II framework. This is also consistent with insurers' supplementary reporting of market-consistent embedded value ('MCEV') of the participating fund.

The draft Solvency II directive (Article 229(3)) simply takes the IGD approach on this issue. We believe that the IGD approach is unlikely to contribute to a level playing field and that Solvency II should provide a harmonised and economic-based framework for transferability. We believe that it would be appropriate to make some minor changes to clarify that this would not be a supervisory discretion (delete "if the supervisory authorities consider that certain") and to add a new paragraph after 229(5) opening the possibility of implementing measures to address the more technical aspects of this issue. This is consistent with CEIOPS advice that the directive should only state the principle of transferability.[21]

Thirdly, we believe that in market consistent valuations, limiting the transferability of shareholder "profit reserves" and "future profits", Article 229(2)(a), is simply unnecessary. The restriction is taken from the current IGD – Annex I.1.C.2. Further we believe that "profit reserves" are unnecessary if truly market-consistent valuations of assets and liabilities are applied and that "future profits" are those that are being phased out under Solvency I and are defined as the estimated annual profit times a factor not exceeding six.[22]

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[21] Paragraph 19.155 in CEIOPS, Answers to the European Commission on the third wave of calls for advice in the framework of the solvency II project, May 2006.

[22] Article 27 of the Consolidated Life Directive states: "4. Upon application, with supporting evidence, by the undertaking to the competent authority of the home Member State and with the agreement of that competent authority, the available solvency margin may also consist of: (a) until 31 December 2009 an amount equal to 50 % of the undertaking's future profits, but not exceeding 25 % of the lesser of the available solvency margin and the required solvency margin. The amount of the future profits shall be obtained by multiplying the estimated annual profit by a factor which represents the average period left to run on policies. The factor used may not exceed six. The estimated annual profit shall not exceed the arithmetical average of the profits made over the last five financial years in the activities listed in Article 2(1)."

Fourthly, if an insurance group relying on group support stops meeting the relevant conditions (for either one subsidiary – Article 250 – or all subsidiaries – Article 251), there should be supervisory action. The CRO Forum suggests that actions in those circumstances are clearly set out, including the relevant timeline. We believe that the relevant comparator for supervisory action in terms of the actions required and the timeline is contained in Article 135 setting out the actions arising and timeline applying when there is non-compliance with the SCR at solo level.

5.2.5 'Prudent person' principle

The CRO Forum welcomes the adoption of the prudent person principle as part of the Solvency II draft directive. In particular, we welcome the application of the prudent person approach to all the insurer's assets. However, we note that there are already two different applications of the prudent person approach in EU legislation: the IORP directive and the reinsurance directive.

We have a number of specific issues concerning the provisions in Article 129(2). We do not believe that the explicit references to all risks, MCR and SCR are needed in the second subparagraph of Article 129(2). The risks related to all assets held are already captured by the SCR. We therefore suggest deleting this subparagraph. The references to ensuring security, quality, liquidity and profitability in this subparagraph are still relevant and should be added to the third subparagraph (see below).

We are also concerned about the implications of a requirement that investments are made in the 'best interest' of the policyholders and beneficiaries in the third sub-paragraph and fourth subparagraph of Article 129(2). These references to 'best interest' are consistent with the IORP directive text (Article 18(1)(a)) but are not found in the relevant article of the Reinsurance Directive. These references are inappropriate because 'best interest' is typically associated with conduct of business discussions, which are not relevant to Solvency II. We believe that the aims of the prudent person approach could be delivered by referring to securing benefits for policyholders and beneficiaries.

The third and fourth subparagraph of Article 129 (2) should read as follows:

> Assets held to cover the technical provisions shall be invested in such a manner as to ensure security, quality, liquidity and profitability and in a manner appropriate to the nature and duration of the insurance liabilities. Those assets shall be invested for the purposes of securing benefits for policyholders and beneficiaries.
>
> In the case of a conflict of interest, insurance undertakings, or the entity which manages their asset portfolio, shall ensure that the investment is made for the purposes of securing benefits for policyholders and beneficiaries.

