Feedback Statement

09/1

Financial Services Authority

Insurance Risk Management: The Path to Solvency II

Feedback on DP08/4

May 2009

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Annex 1: High-level timeline of known activities leading up to Solvency II implementation.

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This Feedback Statement reports on the main issues arising from Discussion Paper 08/4 – Insurance Risk Management: The Path to Solvency II.

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1 Introduction

1.1 In September 2008, we published Discussion Paper (DP) *08/4 Insurance Risk Management: The Path to Solvency II*.[1] The purpose of the DP was to highlight and explain the key elements of the Solvency II regime, with the aim of stimulating and helping UK insurers' preparations. The DP included a section on key messages for UK firms and each chapter highlighted the functions within firms that will need to be involved in implementing particular requirements.

1.2 In the DP itself, we recommended to firms that as a minimum, Chapter 2 (key messages for UK firms) be presented to firms' senior management and Board, as the Solvency II Directive sets important responsibilities at the highest level of firms' governance. As Chapter 2 provided an indication to directors of the nature and extent of their responsibilities, and how these responsibilities might be delegated, we suggested that it be tabled for discussion at a Board meeting.

1.3 Throughout the DP we raised questions on issues where specific feedback was sought, though stakeholders were invited to share their views on any of the matters addressed in the DP. The period for stakeholders to respond to the DP was due to close on 31 December 2008; however, due to the large number of responses received, the deadline was extended to 31 January 2009. The level of responses we received was very encouraging and we are grateful to all those that took the time to provide us with detailed feedback.

1.4 Since we published DP08/4, the Solvency II Directive has been officially adopted. Although there have been some changes to the Directive through the co-decision process between the European Parliament and the Council, the key point to note is that the implementation date (stated in the Directive) for Solvency II will remain as 31 October, 2012. In light of this we would like to reinforce the message that it is essential for the UK insurance industry to fully engage now in preparing for the new regime. If firms are yet to do so, senior management should consider now the implications for their business and start planning immediately to ensure compliance with the new rules.

1 DP08/4 - www.fsa.gov.uk/pages/Library/Policy/DP/2008/08_04.shtml.

1.5 Although the Solvency II Directive has now been adopted, it must be translated into all EU languages before it can be published in the Official Journal of the European Union. This may take several months and will also include a renumbering of the Articles to reflect changes and additions.

1.6 Along with the publication of this Feedback Statement (FS) we plan to communicate further with stakeholders as the implementation process continues to progress. In Chapter 7 of this FS we provide details of these plans with respect to forthcoming thematic reviews. At a European level we have also included the Committee of European Insurance and Occupational Pension Supervisors (CEIOPS) consultation schedule for 2009, these being the Consultation Papers (CPs) that have and are scheduled to be published on the advice to the European Commission on Level 2 implementing measures.

1.7 In this FS, we summarise the comments received to the questions we posed in the DP and our responses to them. We note that most respondents were larger UK firms, although smaller firms received some representation through their respective trade bodies. In light of this we understand that some of the comments and responses expressed below may not necessarily be relevant to all firms receiving this document. As noted in the DP, proportionality, in terms of taking account of the nature, scale and complexity of the firm will be a key consideration in the design and application of the regime.

2 Amendments to DP08/4

Revisions to messages in DP08/4 in light of the adopted Level 1 Directive

2.1 On 5 May 2009 the Solvency II Directive was officially adopted. This followed weeks of negotiations between the various EU Member States and representatives of the European Parliament. As our DP was based on the original European Commission proposal, we are highlighting here some of the more significant developments in relation to the messages included in the DP in light of any changes made to the Directive during this time. The points below are set out in the order of the DP chapters and following that, we set out some further points which, although not referred to in the DP, we believe are of sufficient significance to be included in this FS.

Key messages for UK firms

2.2 Although not a change to the Directive, it is an important point for UK firms to note that the implementation date for Solvency II is now definitely set at 31 October 2012. In the DP we encouraged firms to begin planning for Solvency II; however, now we would stress that the risks of not developing detailed plans for Solvency II implementation are great. Firms should have completed or be in the process of completing a detailed gap analysis to identify any shortfalls in expected compliance with the emerging Solvency II requirements, as they bear on their operations.

Systems of governance (Pillar 2) and reporting requirements (Pillar 3) under Solvency II

2.3 The Directive Article outlining the requirements for the Own Risk and Solvency Assessment (ORSA) attracted much debate around the need for appropriate convergence of the assessment across the Member States. Following this, the Directive includes (in Article 49, paragraph 2) the possibility that further Level 2 implementing measures may be adopted to further specify the elements of the assessment.

2.4 The Directive Article on the actuarial function within firms now makes a stronger reference to proportionality, in that actuarial expertise and knowledge should be commensurate with the nature, scale and complexity of the risks the firm is subject to.

Demonstrating adequate financial resources (Pillar 1)

2.5 The Directive allows for the limits applicable to the various own fund 'tiers' (i.e. Tiers 1, 2 and 3) to be adjusted through Level 2 implementing measures. This is because the limits set out in the Directive are now minimum requirements. This could mean, for example, that firms are required to hold more than 1/3 of their Solvency Capital Requirement (SCR) in Tier 1 capital. The possibility to divide the capital tiers into further 'sub-tiers' (e.g. 'core Tier 1'; 'innovative Tier 1') at Level 2 has been removed.

2.6 Recent market events have demonstrated and further reinforced the importance of firms having the right amount of the right quality capital. We will be seeking to secure such requirements on own funds at Level 2 that achieve regulatory capital composition that is of appropriate quality and quantity. We do not believe that a low limit for Tier 1 that would also allow for an unlimited amount of non-core capital instruments to be included, e.g. hybrids or subordinated debt, is consistent with this objective. We believe this is also directionally consistent with developments in the banking sector.

2.7 The DP noted that firms should consider the implications of the new regime on their existing capital instruments as well for their future capital planning. Some existing capital instruments may not necessarily be eligible to meet regulatory capital requirements under Solvency II. We recognise that it may be difficult for firms to amend the terms of existing instruments or to issue replacement capital. However it remains to be seen how, if at all, 'grandfathering' – that is to say – transitionals for existing capital instruments will be dealt with by the implementing measures proposed by the European Commission. Firms that might be affected by this should give early consideration to the possible implications and make any necessary preparations ahead of any rule changes. Firms should also closely monitor any European policy / legal developments in this area.

2.8 The Directive Article dealing with valuation of assets and liabilities has not changed; however, since we published DP08/4 there have been some material developments. In the DP we stated that valuation of liabilities would not take account of firms' own credit standing, however there has been much discussion at the European level on how Article 74 should be interpreted. The CEIOPS consultation paper on valuations[2] gives two options for valuation of non-insurance liabilities, these being (1) use of a risk free rate (RFR) for valuation at all times and (2) use of a market consistent rate which would take into account own credit standing upon initial valuation; but with no subsequent adjustment for changes in own credit standing.

2 CEIOPS Consultation Paper no. 35 – Draft Level 2 Advice on Valuation of Assets and 'other Liabilities' - www.ceiops.eu/media/files/consultations/consultationpapers/CP35/CEIOPS-CP-35-09-Draft-L2-Advice-on-Valuation-of-Assets-and-'Other%20Liabilities'.pdf.

As this choice can have a material impact on own funds, firms are encouraged to carefully consider the impact of the various options on them and make appropriate representations.

2.9 There has been an addition to the Directive to allow for Level 2 implementing measures to be developed to align restrictions on firms' investments in tradable securities of 'repackaged' loans with corresponding requirements in other sectors.

2.10 There is also a further addition to the Directive dealing with significant deviations from the assumptions underlying the standard formula calculation. Where the risk profile of the firm deviates significantly from the assumptions underlying the standard formula, the Directive now gives supervisors the power to require a subset of the parameters in the standard formula calculation in relation to the life, non-life and health underwriting risk modules to be replaced with parameters specific to those firms.

2.11 The Directive Article dealing with the calculation of the Minimum Capital Requirement (MCR) now states that the MCR shall not fall below 25% nor exceed 45% of the firms' SCR. This is a change from 20% and 50% respectively in the former draft Directive. The absolute floors of the MCR have also been increased.

Use and approval of internal models

2.12 The Directive Article on the general provisions for the approval of full and partial internal models stated in the original Commission proposal Directive that undertakings would be required to provide supervisory authorities with an estimate of the SCR determined in accordance with the Standard Formula for two years after approval. This provision remains; however, instead of a requirement for two years, there is now supervisory discretion as to whether undertakings will be required to provide this estimate.

Further changes to the Level 1 text

2.13 Aside from changes to the messages in the DP, the Directive as adopted contains a number of further changes that may affect firms' planning. These changes are outlined below:

Groups

2.13.1 The Directive as adopted does not include the 'group support' regime (the proposal that subsidiaries meet their Minimum Capital Requirement using locally held capital but rely on a parental guarantee to meet the Solvency Capital Requirement.) The Directive does, however, envisage the Commission will review the benefits of a group support regime within three years following implementation of the Solvency II regime.

2.13.2 Although the group support provisions have been omitted, the articles dealing with group supervision remain. This means that there will still be a requirement for lead (group) supervisors to review the Group SCR calculation and the ability to specify capital add-ons where necessary, in consultation with local regulators. Furthermore, there are provisions setting out the role of 'supervisory colleges' and for further specification on how these will function in practice to be set out at Level 2.

Equity Risk

2.13.3 The Directive as adopted includes a Member State option to allow a duration-based approach to the calculation of the capital charge applied to equity risk in relation to prescribed types of business as a Member State option. This approach would allow for insurers, subject to supervisory approval, to link the calculation of the capital charge for the risk of equity price falls to the duration of the liabilities and the typical holding period of the equities held against those liabilities. This approach will be subject to a review three years after the implementation of the Solvency II regime, with a particular focus on cross-border effects of the use of this approach.

2.13.4 The Directive as adopted also now includes a symmetrical anti-cyclical adjustment mechanism (a so called 'Pillar I dampener') to the standard (non duration-based) equity risk charge. The adjustment mechanism is designed to allow for a reduction in the capital charge applied to equity holdings when equities markets are falling, and conversely an increase in the charge in a rising market. The precise design and functioning of the adjustment mechanism are to be determined at Level 2.

2.13.5 Additionally, if there is an exceptional fall in financial markets, the Directive makes allowance for supervisory authorities to extend the period during which the firms must return to full compliance with its SCR.

3 Responses to questions in DP08/4: Chapter 3

Systems of governance (Pillar 2) and reporting requirements (Pillar 3) under Solvency II

Q1: What views do firms have on the process for the transition from ICA to ORSA?

3.1 Responses were broadly supportive of the Own Risk and Solvency Assessment (ORSA) requirement and respondents saw it as a natural progression towards continuing improvement of risk management in the insurance sector. However, the responses highlight a difference of opinion on how difficult the transition might be. There have been requests for further clarification or a roadmap for firms to make the transition.

3.2 Although the Individual Capital Adequacy Standards (ICAS) process has led to improvements in the way insurers identify and manage their risks, and then hold appropriate capital against those risks, most respondents recognised that the ORSA is intended to go a step further. Other observations focused on the time over which the ORSA requires firms to assess their risks as well as proportionality in the scope of the ORSA.

Our response: As the ORSA is a new concept for all insurers across Europe, we appreciate that respondents would like more details on how to comply with the requirements. CEIOPS recognised this wish of stakeholders for greater clarity on the ORSA requirement and responded by publishing early its views in an Issues Paper.[3] We are aware that the more detailed and prescriptive requirements are for the ORSA, the less it becomes the firm's own assessment so an appropriate balance needs to be struck. The Level 1 Directive states that there may be Level 2 implementing measures introduced for the ORSA. If such measures are developed, we would encourage any CEIOPS advice on these to recognise the importance of the ORSA being able to reflect the firms' nature, scale and complexity.

3 CEIOPS Issues paper on the Own Risk and Solvency Assessment (May 2008): www.ceiops.eu/media/docman/public_files/consultations/IssuesPaperORSA.pdf.

We agree, as some respondents noted, that the ORSA goes further than the ICAS process. Even those firms that have made the most progress in embedding their ICAS assessment will need to further integrate their evaluation and management of their risks into their business strategy under Solvency II. As was highlighted in the CEIOPS issues paper, the ORSA does not require an Internal Model but where a firm has one it is an integral tool to the ORSA process.

Although firms must meet regulatory capital requirements that are calibrated on risks arising over a one year period, the ORSA aims to help firms identify risks arising at any time over their chosen business planning timeframe. We do not view a requirement for firms to fully assess their risks as burdensome, and we would expect firms to already be doing this.

Q2: How should supervisors respond to breach of targeted economic capital?

3.3 Respondents were generally clear that they see the economic capital level as a target, rather than a regulatory capital requirement, and that a breach of the target economic capital should not be considered a 'breach' in the same manner.

3.4 There was some degree of divergence in opinion among respondents between what approach supervisors should take when a firm's capital is below its internal target level. There was recognition that an appropriate response will often be an increase in communication and monitoring by the supervisor, but each scenario should be assessed on a case-by-case basis. Some respondents stated that the disclosure of the economic capital level is for information purposes only and falling below the economic capital level should not lead to any supervisory action.

Our response: As well as being an integral part of how an insurer manages its business, CEIOPS views the ORSA as an important tool for supervisors and management when monitoring the firm. A firm falling below its internal economic capital target would act as an early warning indicator for the supervisor, suggesting that the firm's solvency position had weakened. Although this might not occur often, and the firm has not breached any regulatory capital requirements, the event could act as an opportunity for the supervisor to increase dialogue with the firm.

Discussions should identify the causes of the reduced solvency position and the potential impact on the firm's business strategy, as well as the possibility of future non-compliance with regulatory capital requirements. As the ORSA is an assessment of firms' own risk appetite, a drop in economic capital may trigger discussions around the possibility of de-risking. Furthermore, where a firm has promoted itself to customers on the basis of maintaining a particular level of financial strength, this may give rise to supervisory engagement or intervention.

4 Responses to questions in DP08/4: Chapter 4

Demonstrating adequate financial resources (Pillar I)

Q3: What steps are firms taking to develop the appropriate valuation systems needed to calculate technical provisions under Solvency II? How is this work linked to the implementation of IFRS standards?

4.1 Most respondents stated that they are currently assessing their models which value technical provisions, to identify whether they are aligned to Solvency II requirements. Similarly, they are also assessing their current valuation systems and processes and have undertaken gap analyses and impact assessments to identify both the strengths and weaknesses in their systems, processes and data to meet Solvency II requirements. There was a general agreement that more robust systems may be needed for calculating the risk margin. However, it was noted that different techniques may achieve equivalent outcomes, so a single, prescriptive methodology for valuation may not be appropriate.

4.2 Firms acknowledged that the work needed to calculate technical provisions under Solvency II would not necessarily be linked to the implementation of IFRS, because of differing objectives. However, they noted that it would beneficial if there were synergies between the two as this could help to reduce implementation costs. Many respondents are awaiting further details on the valuation methodology under IFRS, which are expected in October 2009, before embarking on change programmes.

4.3 For some respondents, there was an acknowledgement that valuations systems used as part of the Quantitative Impact Study 4 (QIS4) helped to distinguish between the economic 'Solvency II balance sheet' and the accounting balance sheet.

Our response: We are pleased that firms recognise the need, and are undertaking actions, to identify weaknesses in their valuation processes and techniques.

Regarding concerns around difficulties in valuation and whether CEIOPS should take a more prescriptive approach, any implementing measures (Level 2) arising from that, will have to conform to the requirements for market consistency set out in the Framework Directive.

Q4: What steps have firms taken to consider whether they have the right quality capital to meet the capital requirements?

4.4 Most respondents identified QIS 4 as being helpful to firms in understanding how their capital structures might look under Solvency II and many reported that QIS 4 had identified no or few issues.

4.5 Most respondents commented that greater clarity was needed regarding the treatment of instruments for capital purposes. One respondent observed that insurers have not focused on the area of capital instruments classification, especially on specific and complex instruments, and suggested that the industry needs further support in this area in order to make informed decisions regarding the structure of their capital. Another respondent stated that more clarity was needed from CEIOPS regarding capital definitions and eligibility. Finally, one respondent also asked for more clarity around the treatment of intra-group loans (including contingent loans) under Solvency II.

4.6 One respondent has assigned responsibility to its investments team who monitor the requirements in detail while assessing the quality of eligible own funds on a continuous basis.

Our response: Since drafting the QIS 4 technical specification it has been possible to observe how different own fund items absorb losses in practice. We will draw on recent experience in our discussions of Level 2 implementing measures, with the objective of securing a prudentially sound approach to capital in Solvency II. We anticipate greater clarity will be provided as the Level 2 implementing measures are developed

Q5: What further guidance, in addition to that in the QIS4 technical specification, would be useful for firms on the application of the SCR standard formula for their business?

4.7 Overall QIS 4 was considered to be sufficiently documented as well as a useful starting point to test the standard formula.

4.8 Some firms considered some areas to be too complicated and suggested the need to keep future QIS exercises simpler, especially as a significant proportion of firms expect to use an Internal Model and such models should not be constrained in their design by the standard formula.

4.9 Areas where firms suggested they would require further guidance were:

- treatment of ring fenced funds within life firms;
- treatment of catastrophe risks;
- treatment of deferred taxes;
- counterparty credit assessment, in particular relating to policyholders debtors and unrated intermediaries;
- the allowance for dynamic policyholder behaviour;
- assumptions on future bonus rates for with-profits life business;

- guidance on governance and the requirement for an audit of the processes;
- run-off patterns for the cost of capital risk margin;
- further guidance on partial models; and
- the quarterly calculation of the MCR, without having to calculate the SCR.

Our response: We are pleased at the positive comments made regarding QIS4. There was good participation from the UK industry in this exercise and it has provided us with useful information on the possible impact of the new standards. This insight is allowing us to better reflect any UK-specific issues in the discussions we have with our European colleagues in CEIOPS. There will be a QIS5 exercise in June-November 2010 and we will be issuing more information around this in due course. All firms should be including QIS5 in their planned activities for Solvency II.

Q6: How do you think firms could best demonstrate compliance with the Pillar 1 requirements on a real-time and prospective basis?

4.10 Most respondents suggested that they did not consider real-time reporting would be difficult, particularly for large listed companies with robust systems in place. However to enable more relevant real-time and prospective reporting throughout the year, firms considered that there are a range of ongoing monitoring techniques using proxy measures and simplifications that could provide an appropriately robust assessment, without having to carry out a full calculation.

4.11 Respondents stated they do not expect to run models more frequently than quarterly, unless business conditions have changed materially. Noted by respondents was that frequent full model runs could amplify procyclicality effects as model assumptions are updated.

4.12 For market risk, one respondent suggested that replicating portfolios could help firms to approximate the capital charge on a regular basis. Full models for validation and calibration purposes would still have to be maintained. For non-market risks, a roll forward approach could be used to estimate capital requirements if there had not been significant material changes that could have directly affected the quantification of these risks.

4.13 Firms suggested the need to take proportionality into consideration. The recalculation of Pillar 1 requirements could be costly for small and medium-sized companies and may not be justified given the size and nature of their portfolios.

Our response: With regard to frequency of model runs firms will be required to calculate the Solvency Capital Requirement (SCR) at least once a year and the Minimum Capital Requirement (MCR) at least quarterly. Furthermore, where a firm is using an Internal Model to calculate its SCR and MCR, the firm will need to demonstrate that the frequency of calculation is consistent with its use of the Internal Model for other purposes, as set out by the Use Test requirements in the Directive.

Where a firm's risk profile deviates significantly from the assumptions underlying the last reported SCR, it would be required to recalculate the SCR. Where there is evidence for such a change, the supervisory authority would require a recalculation of the SCR.

In addition, for firms with an Internal Model approved for calculation of the SCR, the Use Test requires that firms demonstrate that the frequency of calculating the SCR is in line with the internal use of the model.

5 Responses to questions in DP08/4: Chapter 5

Use and approval of Internal Models

Q7: To what extent does this [IAIS definition of an Internal Model] … reflect firms' current and planned future Internal Models?

5.1 There was a general consensus from respondents that the IAIS Internal Model definition was an accurate reflection of what the firms were using as a guide in their current and planned future Internal Model development. Many of the respondents felt that the definition did not go far enough in specifying exactly what was required from an Internal Model.

5.2 For instance, some respondents suggested that the definition should include reference to the tests set out by Articles 118 –123 in the Solvency II Framework Directive and specifically the role of the Internal Model in decision making within the business.

5.3 Some respondents were concerned that the implementation of Internal Models would be more rigorous in the UK than other EU Member States and felt that appropriate Level 3 guidance would be necessary to ensure that supervisors across the EU adopt a consistent and equal approach in their review of firms' Internal Models.

5.4 Some respondents said they did not feel an Internal Model could be used when setting economic capital requirements because the model was not trusted by the Board of the company.

Our response: The Directive does not seek to limit the role and scope of an Internal Model, rather it is outcome focused, and sets criteria which a model must meet in order to be used to calculate the SCR. These requirements include that the Internal Model:

- be able to provide an appropriate calculation of the SCR (Article 100);
- be an integrated part of the undertaking's risk management process and systems of governance (Articles 43,110.5 and 118); and
- satisfy the tests and requirements as set out in Articles 118-123.

The wider IAIS definition of Internal Models may be appropriate in some cases, but should not be regarded as a universal standard or requirement. In particular, smaller firms, firms with less complex risks or firms applying for partial Internal Models may take a different view of model scope. There is further detail regarding what an application is expected to cover in CEIOPS' CP 37.[4]

If the Internal Model is not trusted by the Board to set the level of economic capital required by the company then it is unlikely the model is robust enough to be accepted by the regulator for the purposes of calculating the SCR. It is, however, important to realise that the mathematical calculation kernel is just one part of the Internal Model and when calculating economic capital the same caution could be expected to be applied to accepting the models results as when using it to calculate regulatory capital.

We are working closely with CEIOPS to develop consistent standards for Internal Model approval in the EU, including taking part in a series of pre-visits to insurers across the EU to gather more information to inform the development of Level 3 guidance.

Q8: Solvency II is likely to require clear and demonstrable integration between capital measurement systems and capital management. How should firms demonstrate the link between or integration of their Internal Model and their risk management framework?

5.5 Respondents commented that the Internal Model was one part of the risk management framework and some regarded the integration of the Internal Model to be an element of meeting the Use Test requirement.

5.6 There was a general consensus among respondents that the same Internal Model would be used to assess regulatory capital, economic capital and risk-adjusted profitability. Respondents commented that the risk management framework would be used to ensure that all risks are identified and appropriately modelled.

5.7 To demonstrate the integration of the Internal Model into their risk management framework, respondents commented that they would expect their Internal Model to reflect the risk appetite and the risk register of the business. Respondents noted that the output of the Internal Model could then be linked to a number of suggested decisions and processes. Examples given by respondents included:

- pricing strategy;
- strategic decisions;
- capital raising decisions;
- capital allocation by business unit and product;
- reinsurance strategy;
- dividend and share buy-back policy;

4 CEIOPS CP 37 – Draft Level 2 Advice on the Procedure to be followed for the approval of an Internal Model: www.ceiops.eu/media/files/consultations/consultationpapers/CP37/CEIOPS-CP-37-09-Draft-L2-Advice-Procedure-approval-internal-model.pdf.

- bonus setting;
- the purchase of various financial instruments; and
- mergers and acquisitions.

5.8 Some respondents commented that the way in which an Internal Model is used will vary from firm to firm depending upon the nature and needs of the business. Firms that implied that the model output would not be used directly also stated that it would be part of an overall decision-making process that firms would go through. In this case it was suggested that a clear audit trail would be maintained of the management actions and the decisions taken based on the output from the model which could then be used to demonstrate compliance with the Use Test.

Our response: We consider that examples provided by respondents, of where an Internal Model might play an important part in helping the decision-making process within a firm, are all valid. However the uses of an Internal Model will vary from firm to firm. Under the Framework Directive, an Internal Model is one element of the overall risk management framework of a firm. Some identified risks can be expected to be qualitative rather than quantitative, for example those identified in Article 43(2), and therefore may not adequately be captured by a mathematical model but could nonetheless be relevant to the management of risk within a firm.

If a firm cannot demonstrate that their Internal Model is linked or integrated in the risk management framework of a firm (for example if the model is not widely used and does not play an important role in how the firm measures and manages risk in its business) then this would result in the firm's Internal Model not being granted approval.

Q9.i: Does this outline [of the Use Test] cover all the key dimensions of capital management activities within the industry?

5.9 In general respondents agreed that the outline given in the DP covered all the key dimensions of capital management activities within the industry, particularly when viewed from an Internal Model perspective.

5.10 Some respondents stressed that capital allocation is a tool that can be used to assist capital management and is not a pre-requisite for good capital management. Another concern raised was that capital allocation is carried out by the risk management function and this is not specified by the Framework Directive.

5.11 It was highlighted by some respondents that there is no industry or regulatory agreed method of capital allocation and so practices will vary from firm to firm. Respondents noted that as a result of this they were unclear what diversification benefits could be assumed within each capital allocation group and what the implications are where the amount of capital allocated to a line of business is negative, or if capital is allowed to be held centrally within a group.

5.12 Respondents also gave further examples of how their capital management has a part to play in the operations within their own business that were not mentioned in the DP. These included strategy planning, tax efficiency analysis, risk-based performance reviews and management information and reinsurance.

Our response: The way in which an undertaking uses its Internal Model to assess and allocate capital and the level of granularity to which the firm allocates capital is at the discretion of the firm, within the requirements of the Framework Directive and any subsequent implementing measures. The important point is that firms are using the same model to allocate capital as they are for calculating regulatory capital.

In seeking further guidance, firms should look towards the Level 2 advice which CEIOPS will publish in due course.

Q9.ii: How does this compare with current industry practice?

5.13 The general consensus among respondents was that the DP outlines an ambitious approach for the Internal Model regime and in some aspects is expecting more than is seen in current best practice.

5.14 Respondents raised concerns about how the measures would be implemented and whether small to medium enterprises have the resources to perform the level of analysis that appears to be required. Respondents felt they should be implemented proportionately to the size and nature of the undertaking concerned.

Our response: In line with the Framework Directive particular care is being taken to ensure that the Internal Model regime is not too burdensome for small and medium-sized (re)insurance undertakings. The principle of proportionality under the framework Directive, i.e. taking into account the size, nature and complexity of the risks in an undertaking, will need to be taken into account in developing the Internal Model regime. This approach will be further specified in the implementing measures.

Q10.i: What are firms doing to evaluate and improve data?

5.15 Many respondents replied that they were implementing new work streams or project teams to look at identifying data and systems issues, with a view to improving statistical quality and data in preparation for Solvency II.

5.16 Some respondents asked us to be clearer about what we would require regarding data to meet Internal Model approval.

5.17 However some respondents pointed out that in addition to the requirements of Solvency II many benefits can be achieved through having improved data, such as significant savings in terms of capital requirements and reserves resulting from a reduction in volatility.

5.18 Reference was made to data sharing for risks such as operational risk, while respondents also made comment about external data sources needing to be reviewed regularly. It was also suggested that regulators should give a stamp of approval to external party software such as those used to assess natural hazard catastrophe events.

Our response: We commend the work firms are doing to identify data and systems issues. As some respondents acknowledge in their responses the benefits of improved data and streamlined systems are more wide reaching than purely to comply with the regulatory Internal Model regime.

The Framework Directive will be applied proportionately across the industry and further details of how this will be carried out will be in the Level 2 Implementing Measures. Furthermore, we plan to carry out thematic work for publication in September 2009 and Q3 2010, where data issues will form one of the topics for review (for further details see Chapter 7 of this publication).

We recognise the benefits of data sharing especially for some types of risk such as operational risk events, but we do not feel it appropriate for supervisors to formally endorse or approve third party software. In our view, there is significant risk in using external models or data if the user does not understand what the model is doing / how it is doing it or the extent to which the data is appropriate for the user. We expect that in model reviews these areas will be addressed, also recognising the valuable role external models can play.

There is also a possibility of systemic risk if all insurers rely on the same third party software package as opposed to using models appropriately tailored for their business. We consider that it is unlikely that supervisors will approve specific packages, as the implementation will vary from insurer to insurer.

Q10.ii: What further work (including industry-wide initiatives) might be helpful (for example, flood claims, large motor claims) to improve the completeness of firm data along the lines of the Operational Risk Insurance Consortium (ORIC)?

5.19 The general consensus from respondents was that the work the Association of British Insurers (ABI) and the ORIC carry out in collating and publishing industry data has been beneficial.

5.20 However, respondents also mentioned that more time is needed for substantial and significant data to be built up. They said that industry data is put through data cleansing and comes from different sources, and so may not be relevant for every firm to use. Respondents further noted that expert judgement should be employed to give the data maximum usability.

5.21 A number of responses requested further information to be published by us from our returns or regarding prescribed FSA stresses or volatilities that we would expect firms to model.

5.22 Some respondents were unclear whether the data quality requirement applied to detailed policy and claims data held by firms, or more specifically to the key inputs and parameters used in the capital model.

5.23 It was pointed out that the data published by the ABI and the ORIC may not be valid for risks outside of the UK and there may not be any similar organisations outside the UK.

Our response: We recognise the good work that the ABI and particularly the ORIC have carried out in collating industry data and producing information that can be used to improve the completeness of firm data. The work that the ORIC carry out is based on twenty-four member insurers that write risks and carry out business world-wide.

A market or catastrophic 1 in 200 year event put forward by us would affect different insurers in different ways dependent upon their business and exposures. The standard formula will include standard parameters, but firms' Internal Models would be personalised allowing firms the opportunity to improve the calculation of the SCR to better reflect the risks within the firm by allowing firms to model risks in a way they feel is more suitable for their business. In addition to this, we would envisage firms performing stress and scenario testing of their models to consider the appropriateness of the models and the parameters used. CP08/24[5] considered stress and scenario testing more generically.

Q11: What further guidance would be useful on good practice in respect of data?

5.24 Two significant points were raised by respondents in answer to this question. The first was for guidance concerning how much expert judgement would be allowed to be used within the Internal Model in respect of data, especially in areas where data is known to be incomplete.

5.25 The second point raised by respondents was more guidance about how insurers should interpret the requirement to carry out back testing. The main concern here was that back testing is a term that has a specific meaning in the banking sector and there is uncertainty about how this term is being transposed into insurance Internal Models.

5.26 Suggestions were also put forward by respondents for a 'current practice vs. best practice' example of statistical quality standards.[6] A number of respondents also referred to the BAS paper on Generic Data Standards as this paper provides stronger guidelines. However, some also noted that the BAS paper does not take into account the parameterisation of models from data and assumptions.

5.27 Other suggestions outlined by respondents were for setting out minimum standards required to pass the statistical quality tests, what specific aspects of the data quality will be tested, and guidance regarding the classification of operational risks that are ambiguous and could fall into other risk categories.

Our response: When assessing if an Internal Model is suitable for approval we would anticipate that an assessment will be made regarding how material any missing data is in respect of the Internal Model and the expert judgements that have been taken by the firm. Expert judgement may be required to complement the data, as the past experience may not be appropriate for the predictive nature of the model.

5 www.fsa.gov.uk/pubs/cp/cp08_24.pdf.

6 www.frc.org.uk/images/uploaded/documents/Data%20Condoc%20FINAL1.pdf.

Back testing can mean a number of things although it generally refers to the testing of the predictive capability of the Internal Model. For example, comparing historical assumptions to what actually occurred and making an assessment about the likelihood of what actually occurred. The level of statistical quality required may also change over time and releasing a specific example of what is required will become outdated and may not be appropriate in all situations.

We appreciate the good work carried out by BAS on this topic and we anticipate that more information will be published as part of developing Level 2 implementing measures and in the Level 3 guidance. Along with this, we will also examine this issue in the thematic reviews due for publication in September 2009 and Q3 2010.

Q12: Which approaches do firms use within their capital model? How and why are these approaches used? ('Approaches' can be defined or applied at a high level, e.g. stochastic/deterministic)

5.28 Respondents indicated that, in general, firms use both stochastic and deterministic models. Responses from the life industry noted that this is especially true of large life firms, where stochastic modelling is used to evaluate market and credit risk, particularly where there are financial guarantees, options and where the firms can apply management actions.

5.29 Respondents commented that smaller life firms in general use a deterministic model or a closed form solution approach to model their business, especially where their business is non-profit and contains no options. Further noted by respondents was that non-life firms use stochastic models in most cases to model insurance risk and in some cases also to model market, credit and operational risks.

5.30 Respondents stated that where a firm does not use a model that implicitly aggregates all risks the majority use a correlation matrix to combine the risks. Some firms have also started to use non-Gaussian copulas.

5.31 A few firms stated that they have started to think about reverse stress testing, to identify and assess the scenarios most likely to cause their current business plan to become unviable.

Our response: We recognise that some firms prefer to use a simpler modelling approach (for example deterministic models along with a stronger challenge of the model) than other firms that invest time into a complex model that can be harder to interpret and challenge. We are also aware that a number of firms have started to perform reverse stress-testing scenarios and we support this development as a method for firms to evaluate their risk tolerance levels.

With regard to modelling carried out by small and medium-sized firms we recognise that smaller firms may not have the resource or knowledge to carry out some of the more sophisticated modelling techniques adopted by the larger insurers. We would anticipate that development of Internal Model standards will need to take account of the nature, scale and complexity of the risks in question. In seeking guidance, firms should look towards the advice on Level 2 implementing measures which will be published by CEIOPS in due course.

> Q13: Do you consider that there are areas where industry or the professions should be focusing their research capabilities to improve Internal Models? Please provide examples.

5.32 The overwhelming response to this question was the demand for more research to be carried out in modelling the dependencies between risks. Some respondents commented that this research would need to cover aggregation of risks and tail dependencies (including copulas), in order to represent the impact of extreme conditions. It is recognised by respondents that when assessing the 99.5% Value at Risk (VAR) the tail dependencies between events and risk classes is critical, especially given the scarcity of information on past data.

5.33 Other responses in relation to extreme market events included more modelling of changes in policy holder behaviour and systematic risks, including how to carry out dynamic stress testing in respect of running stress tests during already stressed market conditions.

5.34 There was also a consensus among respondents that further research ought to be carried out on credit risks, particularly in respect of corporate bond losses.

5.35 Some respondents suggested it would be difficult for small and medium-sized firms to research and implement modelling techniques that are as advanced as some of the larger companies. A suggestion was raised for research to be carried out into industry-accepted proxies that smaller firms can use in respect of correlations and tail dependencies.

5.36 A number of further issues were raised by respondents but to a lesser degree than the above issues. Suggestions were made for there to be extra research carried out into:

- valuation of reserves;
- longevity risk;
- stochastic mortality modelling;
- catastrophe models;
- operational risk models;
- economic Scenario Generators (ESGs);
- the meaning of a Value at Risk measure over a one year period;
- replicating portfolios; and
- anti-cyclical measures.

Our response: We agree with respondents that aggregation of risk and extreme events needs further research. The more research carried out in these areas, and the more data collected, the greater the understanding of the risks being modelled leading to greater certainty within the mathematical modelling of the Internal Model.

We would support firms adopting a method of modelling that they can understand where there is awareness of the limitations of the modelling they are carrying out rather than providing industry proxies that may not be applicable to the firm in question. If many firms were to use largely inappropriate industry proxies, there would be the possibility of systemic risk as firms would be modelling their risks incorrectly, leading to an accumulation of risk. We therefore would envisage firms coming up with their own assumptions that would be open to challenge within the review of the Internal Model.

We recognise that a lot of work is being carried out by firms, consultants and professional bodies in each of the areas listed. We support the continuation of this work. We would also like to draw firms' attention to the areas of possible further research highlighted in the Actuarial Sessions paper,[7] while noting that further feedback and observations on industry practice will be provided by us through the planned thematic reviews as discussed earlier.

Q14.i: Firms are invited to comment on how explicitly their risk appetite links to their credit rating, where applicable.

5.37 Some respondents stated that there was no explicit link between their credit rating and their risk appetite and some firms had no link at all. Other respondent firms said they targeted a specific credit rating to enable them to raise debt more quickly and to assist in their capital management planning.

Our response: We were interested to see how a firm's credit rating influences their risk appetite and although the responses were as we would have expected, we would certainly welcome further dialogue with firms on this issue.

Q14.ii: How do you think we should test the adequacy of Internal Models – for example, should we require evidence of peer review, benchmark by industry sector, require external audit, run benchmark portfolios or develop our own capital model? What other possibilities do you consider appropriate?

5.38 Respondents replied that external reviews, if carried out, should be proportionate and not unduly onerous. It was also suggested that external reviewers may not have sufficient knowledge to review an Internal Model to the standards required for model approval.

5.39 It was suggested that the external review of the Internal Model should be at least as much as for the standard formula, unlike the current regime where the ICA model is not required to have any external peer review or audit.

5.40 There were concerns expressed by respondents that too much ongoing external involvement could be unduly onerous and hinder the implementation of the Internal Model within the business. Some respondents supported a requirement for an external review at initial approval but for regulators to be responsible for model adequacy as they become more knowledgeable and familiar with the models, the firms and the new regime.

7 www.actuaries.org.uk/__data/assets/pdf_file/0009/146664/sm20090223.pdf.

5.41 Some respondents did not agree with any external audit of models being required. One of the reasons for this was that consultants may not agree with the principle of another consultancy reviewing their model and software for confidentiality purposes. Another reason was that this was not stated to be a requirement of the Framework Directive.

5.42 There was a strong consensus among respondents that the regulator should not come up with its own Internal Model as this would need to be too extensive and would not be a good use of the regulator's resources. Respondents further noted that as the model would have to be very expansive to cover all the lines of business and reinsurance arrangements a firm could have, such an exercise would take too much time to reconcile resulting in too much cost for the firm. It was further suggested that it would be unfair if we used just one vendor's platform.

5.43 Respondents commented that caution should be exercised where benchmarks against other firms were used, as it is likely that, even if two firms look similar at first, there may be significant differences between them. Respondents suggested that benchmarking firms against the standard formula rather than other firms would be an option.

5.44 Many respondents said they would like to see us suggest stresses and scenarios that are perceived to be 1 in 200 year events.

Our response: We do not currently expect that at this stage that it will be a necessary prerequisite for Internal Model approval for a firm to have engaged and had audited sign-off of the Internal Model by an external third party. However, we expect that internal reviews would be performed, whether or not there is an external review.

We do not envisage producing our own Internal Model or endorsing any vendors' software packages that firms may use as a platform for any mathematical modelling they perform. A review of an Internal Model is wider than any mathematical calculation and as such it would not be possible to agree on any consultants' model being 'Internal Model compliant' as we are also interested in the way the model is used and embedded into the business functions.

Further work will need to be done on the nature of the '1 in 200 VaR' concept in the context of 'capital outcome', as this is of wider application than simple [underwriting] event risk. We seek input from catastrophe risk experts and the actuarial profession, and this is also likely to be a key subject for review in our Stage 2 thematic reviews (see Chapter 7).

Q15: How do firms presently carry out this activity [profit and loss attribution] and how will it be developed towards Solvency II implementation?

5.45 There was a general agreement from respondents that back testing, by way of profit and loss attribution, was an important method of validating the data, structure of the model and the assumptions behind the model. It was also noted that it is a useful tool to demonstrate to senior management the uses of the model.

5.46 Respondents noted that they generally carry out a form of profit and loss attribution or similar 'actual versus expected' analysis, although many believe their current process will have to be built upon to comply with the Solvency II regime. This was especially true of life insurers.

5.47 Respondents noted that some of the analyses of causes of profit and loss are currently carried out around volumes of business written, changes in levels of technical reserves, differences in the levels of expected versus actual claims and differences in investment returns. However, the level of granularity varies significantly from firm to firm.

5.48 Respondents again pointed out that back testing has historically been a term used primarily in the banking sector where significant new data is available to use every day. Causes of profit and loss analyses were currently considered by some firms on a monthly or quarterly basis although some carried this analysis out annually.

5.49 There was a strong demand among respondents for further clarity about what is actually required from profit and loss attribution and from back testing. The general consensus is that, because of the nature of the analysis, a requirement that is too granular would take away any value designed to show a significant difference between actual and expected, rather than highlighting any differences that could have occurred by chance.

5.50 Respondents specifically asked for information about: the need for the analysis to be carried out according to the requirement for group and solo submissions; and around the classification of risks, e.g. by territory, risk class, contract length, sales channel, etc.

Our response: In respect of profit and loss attribution and, to an extent, back testing, we would support firms carrying out these analyses as they deem necessary in order for them to manage, analyse, understand and report risks within their firm. These analyses may also play a significant part in the process that the firm has in place to validate its model. The way in which each of these tasks is applied may vary massively from company to company and it can be envisaged that the level and depth carried out by firms would be dependent on the materiality of the risks that firms underwrite. The greater the complexities or the larger the business, or indeed the more granular the assumptions in the Internal Model, the more detailed an appropriate profit and loss attribution might be.

We would welcome firms' examples of profit and loss attributions that they could carry out which they believe to be good practice to develop thinking in this area.

The Directive requirements on validation envisage firms' back testing analysis would entail more than purely looking at the difference between what they have assumed and what has actually occurred in practice. Further analysis could be to review how likely the actual outcome had been perceived to have been given the assumptions taken at the start of that period. Firms may be able to take this analysis further and into more depth over time in order to have a better idea of the risks that they are writing and to better demonstrate that the parameters they are using in the Internal Model are appropriate.

Q16: How do firms validate Internal Models currently and to what extent do their processes meet the indicated criteria?

5.51 Most respondents said that their Internal Models were validated by external third parties. In the majority of cases, the third party was also the software provider for the Internal Model.

5.52 In some cases respondents stated an external review was carried out infrequently, with ongoing validation carried out by the model users performing checks such as reconciliation to audited balance sheets or by way of statistical tests, sensitivity tests or through Sarbanes-Oxley procedures and expert judgements.

5.53 Respondents said internal validation was also carried out within a number of firms, proposing that the internal validation could be carried out by internal audit or as a challenge from the board or a board committee, the chief risk officer, the non-executive directors, the risk management function or a combination of these parties.

5.54 The level of validation carried out varied from firm to firm with some respondents describing validation as being primarily a challenge to the model's results and some describing from a more technical point of view the numbers and assumptions that went into the model.

5.55 Most respondents said their model numbers were updated annually unless there was a major change in the business plan. A validation process would then take place on updated figures after they had been inputted into the model. Some respondents said that validations took place less frequently than annually and in some cases not at all.

Our response: The levels or detail of validation carried out appear to vary significantly from firm to firm. The Framework Directive requires an effective statistical process for validating the Internal Model (Article 122). Firms are therefore likely to need to demonstrate that their validation process is appropriately rigorous and structured in order to gain model approval.

There is also a requirement in Article 118 for management bodies of firms to ensure that the design and operation of the Internal Model remains appropriate, and that it continues to reflect the risk profile of the insurance and reinsurance undertakings. There will be further guidance developed in this area by CEIOPS in its Level 2 advice to the commission (see Chapter 7).

Q17.i: One simple guideline for documentation might be that it is extensive enough for the firm to replicate its model in a different platform and in the absence of original developers. To what extent do firms already have this in place?

5.56 The general consensus among respondents was that this guideline is excessive, not what is required and needs more caveats.

5.57 Respondents commented that an Internal Model is more than a mathematical calculation but respondents generally responded specifically in respect of the mathematical model.

5.58 Respondents widely agreed that there should be a caveat that any reconstruction of the model based on the documentation should be by a knowledgeable, professional, financially aware person with capital modelling experience.

5.59 Respondents felt that the main aim of the documentation is to improve understanding of the model and thereby reduce key man risk, rather than to allow for a complete rebuild to be carried out. Many respondents therefore thought that documentation of information held in the model would not be required.

5.60 It was also said that the Internal Model is a subset of the ORSA and good documentation would be required for the ORSA.

5.61 Respondents suggested that the core components of good documentation should include:

- model, design and methodology;
- parameterisation including assumptions;
- sources of the underlying data;
- audit trail;
- controls; and
- model weaknesses, uncertainties and strengths.

5.62 It was further suggested by respondents that good practice would dictate the inclusion of:

- a user guide; and
- communications fed to the Board or senior management of model results.

To achieve this, respondents said the documentation should be a live up-to-date document.

Our response: The Directive requires that the documentation must provide a detailed outline of the theory, assumptions, and mathematical and empirical basis underlying the internal model. We would support the view that the documentation of the model is kept up to date on an ongoing basis and therefore seen as a set of working documents and an audit trail. Model documentation could also be seen as a core element of a firm's contingency planning. In seeking guidance, firms should look towards the advice on Level 2 Implementing Measures which will be published by CEIOPS in due course.

Q17.ii: What do you consider should be the balance between hard and soft copy documentation?

5.63 The overwhelming response was that documentation should be held in soft copy. The reasons respondents gave for this include that it is easier to update, maintain document changes, retrieve an up-to-date version and have links to relevant sections making it easier to navigate.

5.64 However, some respondents commented that firms maintaining documentation in soft copy should ensure that it is fully backed up, can easily be retrieved and can be printed.

5.65 Some respondents felt that high-level documentation in the form of reports, such as those undertaken for ICA submission, should be printed and held as a hard copy.

Our response: We note the benefits in firms holding documentation in soft copy (i.e. digital document files) and the Framework Directive does not prevent firms maintaining their documentation in this format, producing hard copies only when necessary and to the level of detail appropriate for the purpose intended. Guidance in this area will be provided in the CEIOPS Level 2 advice (see Chapter 7).

Q17.iii: Where do you consider the balance should rest between Internal Model documentation and the ORSA requirement – for example, should Use Test compliance be primarily a matter for Internal Model documentation or for the ORSA?

5.66 Respondents felt that the documentation for an Internal Model and documentation for an ORSA would contain largely different information. One view was that the Internal Model documentation would explain how the model would work and the ORSA documentation would explain how the Internal Model would be used in the business and what the underlying assumptions were.

5.67 Some respondents saw the Internal Model as an input into the ORSA and it was commented that the requirements of the ORSA would not change because a firm has an Internal Model.

5.68 However, some respondents suggested that it would be difficult to keep the Internal Model and ORSA documentation separate as the Internal Model is a key part of the ORSA.

5.69 In this regard respondents suggested that the requirements for documenting the Internal Model and the ORSA should not be too prescriptive and that documentation would be adequate as long as it contains the necessary information to demonstrate robustness of the Internal Model and ORSA to the regulator. Respondents also requested that the level of documentation required should be proportionate to the size of the firm.

Our response: The Framework Directive requires that Internal Model documentation needs to demonstrate compliance with the model approval process (see Article 123), whereas the ORSA is a wider, forward-looking evaluation of a firm's risk and solvency position, to include both the quantifiable and non-quantifiable risks. We expect that more clarity around this will be provided as CEIOPS work progresses.

Q18: Should the Internal Model be subject to formal independent challenge? If so, what form should this take – for example, peer review, internal audit or external audit?

5.70 Respondents felt that the Internal Model should be subject to some independent challenge, but there were various suggestions as to where the challenge should come from. The general consensus was that the decision of whether to engage an external review should rest with the firm's Board.

5.71 Other respondents suggested that the main sources of challenge would be from the risk management function, internal audit, the Board and the non-executive directors. A comment was made that any detailed challenge would need to come from skilful, experienced people and it was suggested that some internal audit functions would not have the necessary skills to be able to challenge the assumptions of the model.

5.72 A few respondents also said that an external reviewer would be unlikely to have enough detailed knowledge of a firm to be able to produce a comprehensive review of the firm's Internal Model.

Our response: We note respondents' views that the Internal Model should be subject to some independent challenge, whether that be internal or external. We expect that the CEIOPS Level 2 advice will make this clearer.

Q19: How might firms ensure that senior executives acquire the relevant knowledge and understanding to fulfil the duties imposed upon them in respect of Internal Models review under the risk management framework? How might this be demonstrated?

5.73 The overriding consensus from respondents was that good communication and translation of technical issues arising from the mathematical modelling of risks was required to engage Board members.

5.74 Where respondents felt Board knowledge was lacking, Board and non-executive director training sessions should be carried out to improve their understanding and knowledge of Solvency II.

5.75 To improve board understanding, respondents felt it would be beneficial to engage Board members at an early stage and encourage them to gain understanding of the implications of Solvency II on the business.

5.76 To ensure the ongoing understanding of the Internal Model, respondents felt that clear and concise documentation would be required, the Board should be required to sign off the Internal Model at regular intervals, the business strategy and objectives should have links to the Internal Model results, and discussions of material risks by Board members would be directly fed into the Internal Model so Board members could see the result.

5.77 It was also proposed that those areas of an Internal Model relating to a specific part of the business should be made the overall responsibility of that Board director.

5.78 In order to demonstrate continued understanding of the Internal Model, respondents suggested that minutes of Board meetings be documented to such a level to demonstrate the understanding of the model. To be able to do this, key decision making processes should involve ORSA and Internal Model outputs.

5.79 Respondents also suggested that as part of our ARROW assessment, the Board could be questioned on their understanding of the Internal Model.

Our response: Training Board members may help to improve their technical knowledge of the Internal Model. The Framework Directive requires that undertakings demonstrate that the Internal Model is widely used and plays an important role in their system of governance. It places responsibility on the administrative or management body to ensure the ongoing appropriateness of the Internal Model.

6 Responses to questions in DP08/4: Annex 2

Impact assessment – scope and process

> Q20: Which of these issues [covered in Chapters 3 to 6][8] do you expect to generate additional costs of more than minimal significance for firms and how do you intend to approach quantification of those costs?

6.1 Many respondents suggested that a large part of their costs are not seen as a pure compliance burden, but as a direct result of improving firms' risk management, where a lot of work is being undertaken regardless of Solvency II. Some respondents felt that firms with strong ICAS processes would not incur too much additional cost transitioning into the Solvency II regime (particularly with regard to Internal Models). It was also noted in many responses, however, that in many areas, quantifying these costs is difficult at the current time. Indeed, many firms are still in the process of completing gap analyses and producing detailed implementation plans. Due to this, some respondents noted that a large proportion of the industry may not as yet have grasped the full significance of the potential costs associated with Solvency II implementation.

6.2 Aside from the more general comments set out above, the consensus among respondents was that the main areas that could generate additional costs are the ORSA, Internal Models (including the link to risk management and the Use Test), documentation and data quality.

6.3 Many respondents noted that there could be significant costs associated with developing the capability to undertake the ORSA, especially considering the implications for firms' risk management framework. Although the ORSA is very much aligned with the current ICA work, some firms felt there would be significant additional cost due to the additional risks that will need to be included. Also the fact that the ORSA may require enhanced or renewed technology solutions was another area picked up on in the responses, this being of particular concern for groups.

8 In Annex 2 of the DP we provided a list that summarised the areas discussed in Chapters 3 to 6 that we expected may generate more than minimal additional costs for some firms: www.fsa.gov.uk/pages/Library/Policy/DP/2008/08_04.shtml.

6.4 The consensus among respondents on the issue of costs associated with Internal Models was that without further guidance from us on this issue, the costs are very difficult to quantify. However, it is expected that this will be an area of significant cost, particularly improvements to systems to run the model on a more frequent basis (particularly relevant for Life) and integrating the model with risk management (including the Use Test).

6.5 Most respondents identified that data quality will be a significant challenge in the transition to Solvency II and therefore involve significant costs. It was also noted that developing documentation around existing and future actuarial models will be particularly challenging, with many respondents placing a great deal of importance on proportionality in this area.

Our response: We are pleased that many respondents recognise that preparation for Solvency II is an important move towards improved risk management for firms, rather than a pure compliance burden. Noting the importance of making effective plans now for the implementation of Solvency II, we are pleased to see that many respondents have completed, or are in the process of completing, a detailed gap analysis.

The costs associated with internal models should become clearer as CEIOPS advice and subsequently Level 2 implementing measures and any CEIOPS level 3 guidance are developed on the relevant standards.

Q21: Which of these issues [covered in Chapters 3 to 6] do you expect will generate the most significant additional costs for firms?

6.6 It is clear that the additional costs for firms relating to Solvency II implementation will depend very much on the scale, nature and complexity of the organisation. However, there is general consensus among respondents on the issues that may generate the most significant additional costs for the business. For larger firms, these were around Internal Models and embedding these into risk management culture; for mid sized firms, the calculation of the SCR with the standard formula; and for smaller firms, the possibility of increased capital requirements.

6.7 Where some respondents cited Internal Models as the most significant cost, the reasons for this related to improving data and documentation and strengthening the systems and processes around these two areas. A further recurring theme from respondents was that if firms are required to have an external audit of the Internal Model, this will add significant additional cost.

Our response: We acknowledge that there may be significant costs arising for firms associated with the implementation of Solvency II. However, we also recognise that this will vary depending on the nature, scale and complexity of the firm. We continue to commit to incorporating an element of proportionality in all of our activities.

Q22: Where these issues are likely to generate additional requirements to your firm's current regulatory commitments, what do you think the benefits are to firms and their customers?

6.8 One area of consensus between respondents was the advantages of a more consistent supervisory framework and fewer barriers across the EU. Many respondents alluded to Solvency II being recognised as the leading supervisory and capital assessment regime. Therefore as early adopters, Europe would have the advantage of a leading competitive position. The benefits of this that were noted included improved competition through transparency and thus consistency in pricing, and the benefits of a more homogenous and robust regime providing more protection of customers. Further noted was that large groups/firms operating in more than one jurisdiction in Europe will benefit from greater consistency.

6.9 A particular area of focus among respondents related to enhancements in risk management, with improved identification, understanding, management and mitigation of risks. Production of the ORSA was cited as an important step for firms having a central document with the entire risk framework of the organisation. This would then lead to better understanding of the firm's own risk appetite and make it better able to react to adverse conditions with better informed judgements, particularly as the Internal Model is embedded in risk management and operational decision making.

6.10 Regarding benefits to customers, consensus among respondents centred on an increase in consumer confidence through enhanced policyholder protection. It was noted that in light of the current market conditions, the direction of Solvency II (particularly more robust risk management) will have significant impact in this area. Also, most respondents acknowledged that greater transparency and relevant disclosure, coupled with a reduced cost of capital being reflected in premiums, would lead to more innovative products in a more competitive marketplace.

6.11 Where the benefits to firms were identified, there were a few recurring themes among respondents, the main one being around cost efficiencies in the long-term where processes become more streamlined, efficient and well documented. The link between risk and capital management and operational decisions would lead to better managed and stronger firms. This and the enhanced risk management framework would also mean greater capital efficiency through clearer allocation strategies.

Our response: Many foreseen benefits were given in the responses; however, we are pleased that firms in general view Solvency II as a great step forward in the European supervisory framework. We are also pleased that firms recognise that, in particular, the improvements in risk management that the new regime will bring will carry large benefits for firms and customers alike.

7 Next steps and further materials

Thematic reviews (Internal Models)

7.1 We are currently in the process of producing a thematic review linked to our Internal Models Approval Process (IMAP). The purpose of the thematic review is to provide feedback and observations on industry practice to firms on aspects of Internal Models, while also assisting us in planning the Internal Models approval process and in the development of standards.

7.2 The review process will split into two stages:

- Stage 1 will be a stock-take report produced by us on our current state of knowledge, highlighting some key messages to UK firms. The report will include input from subject experts across the FSA and will be further informed by the many previous publications produced with regard to Internal Models.
- Stage 2 will be a more detailed report that will involve FSA experts and a selection of firms and other stakeholders who we will visit.

7.3 Stage 1 will culminate in the publication of four reports. Each of these reports will focus on four broad areas that have been identified for review, namely qualitative standards, quantitative standards, model validation, and data and ensuring stability. Each of these reports will also include a methodology and timeline for the execution of the Stage 2 reviews. Also, as in DP08/4, each report will contain a section on 'key messages', while also highlighting the key stakeholders for each section of the report.

7.4 We currently plan to publish the Stage 1 reports in early September 2009: following this, the Stage 2 exercise is planned to begin in October 2009. For the Stage 1 reports however, the four broad areas of the report will be broken down into sub-sections, these being the main issues that have been identified as the key areas to be focused on.

Report	Subject to be reviewed
Risk management, risk governance, model governance and the Use Test	• Demonstrating the use-test • Risk governance • Model governance • Senior management understanding • Management actions
Quantitative standards	• Operational risk • Dependency structures • Model calibration • Modelling catastrophe risk • Market and credit risk • Technical provisions
Model validation	• Validation (model input and output credibility and feed into decision making) • Compliance with other directive tests
Data and ensuring stability	• Compliance with data requirements

CEIOPS Consultation Papers (CPs)

7.5 The supplementary EU legislation necessary to operationalise the new solvency regime (so-called 'Level 2 implementing measures') will be drafted and proposed by the European Commission. Although the Commission is ultimately responsible for proposing this legislation, and for deciding what legal form it will take (i.e. EU Regulation or Directive), it has asked the Committee of European Insurance and Occupational Pensions Supervisors (CEIOPS) for help in developing the necessary technical standards, as well as to work towards common EU-level guidance on how to implement the new legislation (so-called 'Level 3 guidance').

7.6 CEIOPS has been very active over the past year in developing its advice on the more detailed technical implementing rules. During the course of 2009 CEIOPS is publishing several CPs seeking views from stakeholders on the proposed CEIOPS advice for the Level 2 implementing measures.

7.7 These consultations will cover all of the major areas of the new rules and will provide a useful early indication of what the final rules and requirements might look like. This should be helpful for firms in their preparations to be compliant in time for the new rules. We devote considerable resources to this work.

7.8 The CEIOPS consultation schedule for 2009 includes CPs on the following issues:

Working Group	Date of Publication	Consultation Paper Subject (*published*)
Financial Requirements (*Pillar I*)	March	• Technical provisions o Allowance of financial mitigation techniques o Treatment of future premiums o Assumptions about future management actions o Segmentation o Methods and statistical techniques for calculating the best estimate • Counterparty default risk • Criteria for supervisory approval of ancillary own funds
	June	• Standard formula • Further work on technical provisions • Overall valuation principles, including: o modelling techniques o assumptions • Policyholder behaviour • Market risk: concentration risk
Internal Governance, Supervisory Review and Reporting (*Pillar V*)	March	• System of governance • Special purpose vehicles • Valuation of assets and other liabilities (excluding technical provisions) • Transparency and accountability of supervisors
	June	• Regulatory reporting • Capital add-ons
Internal Models	March	• Model approval process
	June	• Integration of a partial internal model into the standard formula • Tests that the model need to comply with • Model approval process for group models
Insurance Group Supervision	June	• Group capital add-on and group SFCR (to be included as part of the Pillar 5 CPs) • Group Solvency Capital Requirement (SCR) • Colleges • Intra-group transactions / risk concentration

Quantitative Impact Study 5 (QIS5)

7.9 Following on from QIS4, there will be a QIS 5 exercise in June-November 2010 and we will be issuing more information in due course. This should be included in firms Solvency II planning, not just for firms that have completed the QIS4 exercise. We would encourage any firms who have not completed the QIS4 exercise to do so in the meantime.

High-level timeline of known activities leading up to Solvency II implementation

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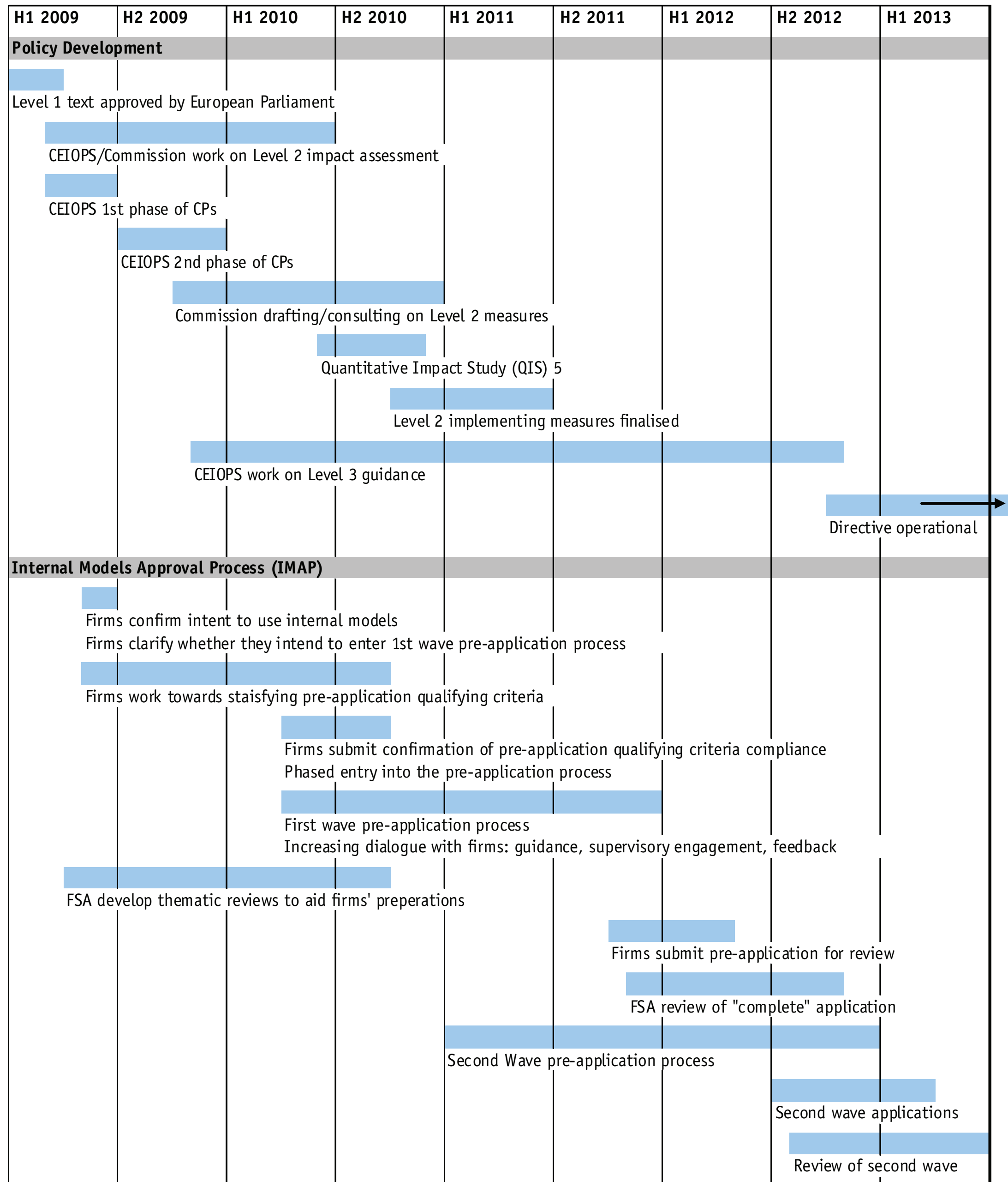

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