Solvency II

Completing the jigsaw:

'Third wave' of consultations outlines plans for use of partial models

The third wave of consultation papers (CPs) on the implementation of Solvency II includes draft proposals on the integration of partial internal models (CP65). Rounding off earlier guidance on the approval and governance of internal models, CP65 helps clarify priority areas for development and implementation. It reflects growing acceptance that most models sanctioned under the Internal Model Approval Process (IMAP) are initially likely to be partial as many firms seek more time to overcome difficulties that may preclude full approval.

Key messages

Planning for a partial model submission can represent good use of resource

Many firms are looking for approval for use of a model that covers all risks and lines of business – a full model. However, this view may alter over time as particular parts of the business prove to be too costly to integrate into a full model in the timescales necessary. More important may be the reaction of the regulator through the approval process. Areas of disagreement between the regulator and the firm may have to be resolved through that part of the model being taken out of scope and made subject to the standard formula, provided this does not undermine the Use Test. Recognising this reality in the initial planning process may save precious firm resources. This CP is therefore as important as the previous CPs on models.

Planning must extend through to the full submission, not just the earlier dry run entry

Planning by firms will currently extend through to 2012, and indeed beyond, yet it is easy to focus too heavily on the dry run entry criteria. These criteria are a crucial first step, and the UK Financial Services Authority (FSA) is currently piloting how they should be judged with a couple of firms. However, a successful project should focus mainly on the full submission and therefore already be pulling together the state of play in each of the model tests. This may well conclude that a partial model is the most viable basis of the submission. Convincing the FSA that a firm is ready and suitable for the dry run will be enhanced by a firm showing clear insight into how such a partial model will fit into current usage, as well as the longer term plan to either remain on a partial model basis or extend the model and its governance.

Partial internal models need to be for a part of the business that leads to an integrated approach to risk management

Firms need to have in place a robust governance and risk management framework, with the internal model at its core. Partial models are limited to 'major business units' and the thrust of CP65 is that these units should be stand-alone in terms of governance, reporting and model use. Only on these terms will the partial model then be able to meet the wider use test, and profit and loss attribution. For example, a partial model may be applied to a with-profits fund, a branch or a well-defined wholesale bulk annuity business unit. The partial model very much needs to follow the grain of the firm's organisation and governance, as only then can the firm justify maintaining such a partial model long-term while still combining capital numbers calculated in potentially very different ways for the whole firm or group.

Group model approval has unsettled issues, but needs action

Group internal model approval represents a significant challenge, not least in terms of resources, for both firms and supervisors. The FSA has put in place a tightly defined process for model pre-approval, with the dry run opening from April 2010. The CEIOPS paper proposing a model pre-approval process across all European territories will not be published until February 2010. Meanwhile, developments at European regulators are at very different stages. A successful application for group model approval, ahead of October 2012, requires coordinated project management of the regulators concerned as well as the firm's resources. Indeed, resource constraints at the regulators may be more critical than resource constraints at the group. Partial models that apply only to certain subsidiaries or EU-wide 'major business units' may be the solution. A key challenge will be to present the application, for the range of supervisors, in a form that is easiest to digest.

CP65: Partial Models – Highlights

We consider below how partial models 'fit' within the wider firm or group.

Use test

The requirement is resolved by applying partial models only to parts of the firm or group that have a clear separate identity. This means there should be governance, reporting of results and model usage for management, focused on the business being modelled by the partial model. Such a subsector of the firm can therefore itself meet the use test. CEIOPS has expanded the wording of the Directive, 'major business unit' in a helpful way, by making clear there is wide choice here – the key is that the major business unit is both material to the firm and has the attributes that it operates as a business in its own right.

Stepping stone or end-state?

Partial models may be seen as a useful half-way house to enable the firm to achieve model approval without the stress of bringing the entire firm's or group's architecture up to internal model standard. Whether they are a transitory step to a full internal model needs both careful thought and careful positioning with the regulator so that expectations are not raised unrealistically. The desired endgame is likely to depend on the firm's view of the most effective way to deliver good enterprise risk management, and this may not need an internal model for all parts of the business. The regulator will look to the ORSA as well as the scale of the business covered by the partial model to judge whether the partial model represents a pragmatic way of soundly running the business, or fails to take appropriate account of risks not covered by the standard formula SCR. CEIOPS, to its credit, has kept faith with the Directive requirement that a supervisor 'may' require a transitional plan to a full internal model rather than 'shall' require one. Firms should find partial models a sensible, and realistic, first stage. They need a very clear plan for where they are heading next.

Integration of the capital assessment

Much of the CP is given over to the thorny issue of how to integrate the modelled capital with the standard formula capital for business or risk outside the model. It is this that we understand has led to the delay of this CP to the third wave as the issue is certainly challenging. One just has to think of a partial model that cuts across the modules of the standard formula, but for only part of the business falling into the module, and which throws in some new risks to be integrated and appropriately diversified. Models that focus on periods longer than the one year of the standard formula will prove particularly challenging to combine. However, the solutions offered by CEIOPS are pragmatic and focused on firm-led solutions, albeit they end with a regulatory imposed solution if the firm cannot convince its supervisors of an acceptable method. Firms should be concerned most with the governance and use of the partial model within the wider firm. Clarity in these higher level areas and real usage, day to day, will both help the firm to come to an appropriate solution and demonstrate to the regulator that the solution is sensible and enduring.

Diversification credit

The integration of the modelled capital with the standard formula capital for business or risk outside the model is not just challenging; it may be material for the diversification credit enjoyed by the firm. That brings one face to face with the credibility issue of any system that potentially combines co-dependencies from an internal model with those in the standard formula architecture.

CP37 and CP56: Highlights revisited

These papers cover the internal model approval process and the broader tests and standards for internal models approval. They have been reissued as final advice to the European Commission. The Commission will then consult formally on the text – a consultation expected in mid-2010, with the text becoming part of the Directive or regulations under the Directive. Where the Level 2 implementation text sits, may become important. Regulations will be required to be imported into national legislation. In contrast, additional Directive wording is a more principle-based template for national legislation. CP37 shows only minor change though does place more weight on the necessity of pre-approval for any group model application.

Separately the FSA has emphasised that the six-month period set aside for the final application could still lead to rejection, even if the application is complete and valid – if the FSA itself runs out of time/resource. This just highlights the need to ensure that the submission work stream, within a firm's implementation plan, needs to think through how to present the material to the FSA to get the most rapid engagement and comfort with the FSA.

CP56 has clarified a number of areas that we expand on below.

Use test

This remains principles-based, with a foundation principle that use of the model should be evidenced by a desire by management to constantly improve the model to assist their business decision-making. CEIOPS now emphasises:

1. Each member of the governing body needs to understand the model – this differs from the broader risk management requirements elsewhere, which apply a more collective test of understanding. So for models there is to be no escape, even for those with little technical connection with the model. However, the deepest test remains for those who should be using the model the most.
2. Documentation should be about where the model is not used, as well as where it is.
3. Consistency of the model over the various accounting bases in use for a typical firm is better expressed as the documentation showing how the bases join up, rather than the model being entirely multifunctional across all bases.

Statistical quality and data

CEIOPS recognises that sound control over data analysis and collection, that is, a data policy, is needed rather than seeking to set a hurdle that is unachievable in practice for some insured risks. Two areas from the original CP were likely to be particularly challenging and we comment on these below.

1. CEIOPS recognise that expert judgement is often critical to setting key assumptions when little, or no, external or internal data is available. CEIOPS has now toned down its requirements on expert judgement. These judgements are no longer required to be refutable and capable of having an error rate assigned. Rather, they are to be validated more from being based on scientific methods that can be refined as more data accumulates and have some form of track record to justify their starting point. Clearly, this is also an important area for senior management, both for their comfort with the model if it depends very heavily on expert judgement as well as senior management's own ability to approve the model submission to the regulator.
2. CEIOPS also recognise that their belief that the Directive implication of a full distribution of risk outcomes extends to the output of the model – that is, a continuous distribution of the capital required at all percentiles – is aspirational rather than practical. In practice, a number of estimation points (or possible outcomes) for each risk is quite likely and acceptable – to enable management to

plan for potential variations in profit, as well as to consider realistic stresses and scenarios, taking into account relationships and dependencies between risks.

Calibration, validation and profit and loss attribution

While calibration is relatively straightforward, the supervisory toolkit will retain the potential to use benchmark insurance and asset portfolios to be run through the model being submitted for approval. The Level 3 text is likely to describe how this tool might be used.

Profit and loss attribution remains at a 'business unit' level. Given the range of bases for recognising 'profit' – IFRS, local GAAP, change in Solvency II capital – CEIOPS now allows the focus to be on the basis used for the firm's own economic capital assessment – not necessarily the own funds impact – which does align far better with the Use Test.

As a core part of model governance, management are required to put adequate independent review procedures in place. CEIOPS now emphasise that validation and the validation policy should be subject to materiality considerations. Back-testing is also described as most useful for capturing common events, but that further methods are needed to address risks represented by rare events.

External models and external data

An area of concern has been the ability of users to apply the Directive tests to proprietary models without jeopardising external providers' intellectual property. CEIOPS' requirements appear sensibly judged; firms must understand, document and validate their use of an external model. This includes an understanding of key methodologies, assumptions and an assessment of the model's fitness for purpose. External providers must now act to meet these demands.

Actions needed

1. Model scope and understanding how the models will be validated remains a critical first step. Are partial models the solution? And, is this a long-term or short-term solution?
2. Clearly define desired 'end-state' for risk management and internal model usage in managing the business, and ensure that these overriding objectives are built into Solvency II implementation planning.
3. Consider which key risks and/or business units will be included in the model (that is, whether to apply for full or partial model approval), as well as how to define and maintain the link between the internal model calculation kernel and the surrounding risk management framework.
4. Consider whether resources are better spent on bringing the bulk of the model, and risk governance, up to the new standard, or ensuring the model is universal by geography and risk. There are indications that CEIOPS is moving to the more pragmatic view that a fully embedded partial model may be appropriate in the long term, if it captures key elements of a firm's risk profile more effectively. Decisions here clearly rest also with how the firm can most efficiently run its own economic capital assessment.

The result should be a clear picture of the geographical areas, business units and entities of the group, divided between their preferred end state; definitely an internal model; definitely the standard formula SCR; temporarily the standard formula, but expected to transition to an internal model.

Early and open dialogue with regulators and industry bodies is recommended. The approval process is likely to be new for most regulators (although they will draw lessons from their banking colleagues) – an iterative dialogue will improve mutual understanding of the implications. Clearly, as we get closer to Solvency II implementation, regulators will appreciate 'no surprises' in terms of their workload and their expectations.

Finally, this is not a done deal. CEIOPS is working not just on Level 2 technical advice for the Commission, but it is also laying the foundations for Level 3 standards and guidance. These could become binding if, as proposed in the de Larosière report on the recent financial crisis and its implications for supervision in the EU, CEIOPS, like the other Level 3 Committees, is converted to a European 'authority'. Thinking around the use of internal models in the context of Solvency II continues to evolve. It is important to stay abreast of, and contribute to, as much as possible, the CEIOPS consultation process.

What are the consequences of 'getting it wrong'?

Higher regulatory capital requirement: Firms will have to calculate their SCR, using the standard formula, if their internal model approval request is refused – and there will be a waiting period before they can reapply. Using the standard formula could leave many insurers with a substantially higher regulatory capital requirement, particularly non-life, monoline and reinsurers, if the QIS4 results are anything to go by. This is likely to be a more significant issue, should all the proposed methodological and calibration amendments for QIS5 get adopted.

Reputational damage: Reputational damage could result from a market perception that rejection means the firm's own economic capital assessment is flawed. While we understand that public disclosure of rejections is not intended, the lack of positive disclosure of acceptance will be visible.

Capital add-ons and/or model approval delays while firms make the changes required by the supervisor: If the supervisor wants modifications to the model, these will need to be done before model approval application proceeds. Delays might be significant and capital add-ons may be required in the meantime. The supervisor will have six months from the date of receipt to assess the application. If the supervisor recommends major modifications, a new six-month period will begin, following resubmission of the model.

A significant amount of effort will be necessary for firms to enhance their internal models up to the standard that the supervisor requires for model approval. Ultimately, the value of this investment in resources, time and costs will not be realised if firms fail this hurdle. So the final piece of the jigsaw, CP65, means firms have everything to define their overall internal model scope, and thus the scale of the submission to the regulators. An open debate with the regulator, supported by a clear vision of the use of the internal model will help the firm to its target – model approval.

If you would like to discuss any of the areas covered in this paper, as well as the implications for yourself and your firm, please contact one of our experts:

David Wong
PricewaterhouseCoopers (UK)
44 7804 3587
david.l.wong@uk.pwc.com

James Tuley
PricewaterhouseCoopers (UK)
44 20 7804 7343
james.tuley@uk.pwc.com

www.pwc.com/solvencyII