Internal models – challenges of model build – and of gaining regulatory approval

• Lessons learned from experience of large and small firms across Europe

• Challenges of model build – technical, methodological, organisational – both internal and external

• Working towards regulatory approval
“This is an ambitious proposal that will completely overhaul the way we ensure the financial soundness of our insurers. We are setting a world-leading standard that requires insurers to focus on managing all the risks they face and enables them to operate much more efficiently.”

Charlie McCreevy
Internal Market and Services Commissioner
Speaking at the launch of the Solvency II draft Framework Directive

“Solvency II is not just about capital. It is a change of behaviour”

Thomas Steffen
Chairman of the Committee of European Insurance and Occupational Pension Supervisors (CEIOPS)
Internal model approval – the basics

• Historically, solvency requirements have been a simple function of size – premium income / technical provisions
  – But size is not a perfect proxy for risk, so “risk-based capital” regimes are now becoming the norm

• Insurers need to calculate how much capital they need, either using a “standard formula” or an “internal model”
  – So, you are applying to use an internal model, instead of the standard formula, for the purpose of calculating regulatory capital requirements
  – A standard formula is likely to be calibrated on a relatively conservative basis – your own model should reflect better your own risk profile
Internal model approval – the basics

• To gain internal model approval, there are three basic requirements to be met:
  – Be able to demonstrate that the model produces an appropriate level of regulatory capital, on an ongoing basis (including under unknown and potentially stressed future conditions)
  – Be an integral part of a strong regime of risk management and governance, including being governed by and understood at board level (link to ORSA)
  – Satisfy several specific tests and requirements to ensure that the model is robust:
    • Data and statistical quality standards
    • Validation
    • Calibration
    • Profit & Loss Attribution
    • Documentation
    • Use
Lessons learned from Europe

- Internal models are not actuarial toys!

- It takes a lot longer to build and embed an internal model than you might expect

- It is primarily about risk management and governance – how an insurer is managed, and how it is able to calculate its capital requirements
Lessons learned from Europe

• The best-prepared firms have much lower implementation costs than their peers

• The very largest groups are finding Solvency II a huge challenge – it operates at both group and “solo entity” level, and looks for demonstrable transparency of management and governance throughout the organisation

• Solvency II – and model approval – is easiest for those firms with management concentrated in one location, a simple corporate structure and a strong tradition of enterprise risk management-based decision-making
Early advice from UK FSA – 2007
Insurance Sector Briefing:

Pre-application basics

• Purpose of pre-application is to provide clarity of requirements, ensure that plans are on track, and give early feedback on areas of concern

• All supervisors use a mix of techniques in pre-application, including:
  – Insurer walk-through of each activity (series of ppt-based presentations and demos)
  – Documents submitted to supervisor for desk-based review
  – Interview of key people – including board, senior management and subject-matter experts
  – On-site deep-dive review of key elements of models and key risk areas
The pre-application process begins once the FSA have notified the firm that it has met the initial pre-application qualifying criteria (PAQC) and runs until the firm formally submit the application. The pre-application process includes the following steps:
Application v evidence

The application should be a single doc...... The evidence could most likely fill a library

You could expect FSB to read the application....and want to look at the background evidence
What it really means

In reality, the evidence will be stored in an accessible, searchable electronic format
And post-application?

- Once your application has been made, approval is not going to be automatic or immediate

- You will be expected to be fully compliant with IMAP requirements, on an ongoing basis, at least from point of application
  - So, use test, model change policy, model improvements, (re)validation (etc) will all be embedded

- Initial approvals may be conditional upon certain requirements being satisfied within a specified timeframe
  - All approvals will be conditional upon you being able to demonstrate that you continue to meet all requirements
Questions?