

## KPMG Internal Models working group

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### Agenda

- Purpose and structure of Working Group
- Learning points so far
- Where to from here?

### Purpose and Structure of Working Group

- My company was invited to participate in Group 12 months ago
- Useful for us to be part of a UK based group
  - we have UK style with profits business - conventional and UWP
  - also have other lines of business common in UK - term assurance, unit linked and annuities
  - we do not produce an ICA/Realistic Balance Sheets
  - we use stochastic and internal type models for internal capital monitoring

## Purpose and Structure of Working Group

- Overall awareness of work required to build and implement an internal model for Solvency II
- Survey results from previous slides place us in areas common to many companies
  - potentially developing existing models as opposed to developing new one (64% group)
  - part of a group but probably would need an individual business unit model (70% group)
  - do not as yet have a model implementation plan (73% group)

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## Learning points so far for us

- Good starting point for non UK companies may be to produce a gap analysis of existing models compared to ICA models
- ICA models only a stepping stone towards Solvency II Internal model
- Need to think about the key issues
  - Use test - e.g. pricing
  - Ability to produce numbers quickly
  - Documentation and justification of assumptions
  - Back - testing and Board engagement

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## Learning points so far for us

- We are part of a larger group
  - Does each company in the group produce its own internal model and pass results up to a group level
  - If so then who approves the model - local supervisor, group supervisor or both?
  - Does the group develop a common model and get each company in the group to use it - what about product differences?

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### Learning points so far for us

- Data
  - Business lines where data not readily available
  - Asset shares per policy
  - Experience analysis improvements
- Documentation
  - What do our existing models do plus areas for improvement
  - Ensure new model developments are fully documented
- Not an overnight process

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### Learning points so far for us

- Various individual risks were discussed - these include
  - Credit
  - Persistency
- What did I get from this?
  - More questions raised than answers provided !
  - Lots of work ahead
  - Each considered in turn on next 2 slides

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### Learning points so far for us

- Credit
  - Sources of credit risk for insurers - corporate bonds and reinsurance
  - Various methods used to derive best estimate adjustments for yields on corporate bonds and reinsurance - historical data, judgement, ESGs
  - How are stresses currently determined and modelled e.g. ESGs, scenario testing
  - Improvements needed e.g. understanding of credit model in ESG, more reliable underlying data
  - Not an easy task overall

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## Learning points so far for us

- Persistency - more questions than answers
  - What is a best estimate assumption for a company?
  - Adequate data - does any medium sized company have enough?
  - Is the general approach adopted at the moment sufficient for Solvency II internal models - analysis by type of contract and duration in - force?
  - Are there other factors which may have an impact but are not considered?
  - How do you link persistency to various stresses e.g. market downturns?

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## Where to from here?

- Companies/Groups need to decide whether they want to seek internal model approval
- If so detailed planning is needed
- Each risk should be considered in turn
  - How is the risk currently modelled?
  - How are stresses currently modelled?
  - What improvements can be made?
  - What improvements are necessary for internal models in Solvency II?
- Continue to monitor Solvency II developments

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