



**The Actuarial Profession**  
making financial sense of the future

**GIRO Conference and Exhibition 2012**  
Juggling uncertainty the actuary's part to play

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**GIRO Conference and Exhibition 2012**

 **Insight**  
Risk Consulting

**Mind The Gap**  
Buu Truong

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## So who is doing this again?

- If you've been involved with Solvency 2, have you managed to get through the last couple of years without asking this question?
- This talk is about the space in between.
  - Where are the lines in theory?
  - Where are the lines in practice?
- This is about understanding the space for the actuarial profession in an emerging risk landscape.
- Is this an opportunity or a threat to the profession?

## When did it all get so confusing?

- It began to get confusing when we were asked the following questions and weren't really sure about the answer?
  - As Head of Capital do you “own” the Internal Model?
  - As Head of Reserving do you “own” technical provisions?  
You owned the earned reserves?
  - As a CRO, are you first or second line of defence?
  - As a capital modelling actuary, are you in the actuarial team or risk management function?

## When did it all get so confusing?

- Oh, and then outside the theory:
  - Who really wants it (the land-grab principle)?
  - Who really doesn't want it (the teflon principle)?
  - What is the current set-up and reporting structure?
  - Who knows how to do it?
  - Who has the time to do it?

## The actuarial function

### Who they are

- The term 'actuarial function' is being discussed as if it is something new. Is it?
- There are the requirements in the S2 text which aren't too different from what actuarial teams currently do.

### Strengths

- Deep technical knowledge of the Internal Model
- Have taken on the role of thought leaders with respect to technical provisions and standard formula.
- Ability to communicate technical concepts to others.

## Everyone else

### Who they are

- Risk management team are a focal point but there a number of other insurance professionals involved.
- The risk management function in particular has a new role including responsibility for the ORSA and internal model.

### Strengths

- Knowledge from other areas of the business.
- Experience of governance and control environments.
- Broader resource pool and skill set.

## Standard actuarial caveats

- Sticking to the theory and not the practice...
  - Companies have unlimited resources.
  - Independence isn't an issue.
  - No 'land-grab' or 'teflon' in sight...
- It's not that simple...
  - I know. This is a straw man and I'm setting it up for you to knock down with an actuarial relish and fervour!
  - ... and it's still evolving. These slides keep changing. They're starting to annoy me. I'm glad that I had a deadline.

## So what do I do now?

- ✓ Scope: Marking your territory in more ways than one.
- ✓ Governance: Getting the internal model into the business.
- ✓ Validation: Is it a “big V” or “little V”?
- ✓ Data / Inputs / Assumptions / Expert Judgements: Being clear about parameters
- ✓ Risk Reporting: Isn't this the whole point?

## Scope

### What is the issue?

- Internal model is part of the risk management system. Where is the line? How many lines are there?!

### What do I need to do next?

- Draw a line: Risk register should be split between SCR and ORSA risks.
- Draw a line: Scope diagram should be clear about data, inputs, calculation kernel, external models and outputs.
- Draw a line: Validation policy and plan should be clear about who is performing a test (to see if work has been done) and who has done work to support the test.

## Governance

### What is the issue?

- Does governance matter? I didn't think much about it before 2009...

### What do I need to do next?

- The correct governance makes everyone's job easier. Work through the best structure for your organisation.
- Accept that the internal model and all policy and process documents are owned by the risk management function. This includes ensuring adherence to policies.
- So this means the CRO sits over first and second lines with different reports in either one line or the other:
  - Head of Risk Management - second.
  - Capital actuaries involved with model development - first
  - Capital actuaries involved with validation - second.

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## Governance

### What is the issue?

- Model governance documentation is now market standard. Is model governance?

### What do I need to do next?

- Model change policy and model validation policy are the main two 'live' policies that need to fit into a business as usual (BAU) environment. Don't wait for things to be perfect - they won't be!
- Model use has significant timing / frequency issues as well.
- If you haven't done so already, get these dialogues going. This will take time and iteration before it is truly within workflow.

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## Validation

### What is the issue?

- There is so much validation work to do. Who should do it?

### What do I need to do next?

- There are therefore two types of validation activity happening.
  - Big V: This relates to the internal model. It should culminate in a validation report by the risk management function.
  - Small V: This is really assurance work around other non internal model components. It includes the assessment of the appropriateness and completeness of the validation process itself. This can take place in many forms but is likely to include Internal Audit.

## Validation

### What is the issue?

- Even if we now focus on (big V) validation, it is still unclear.

### What do I need to do next?

- Split model validation between the control environment and the internal model itself as the work split is different. The control environment came into scope as validation needed coverage of the six internal model tests.
- What do you call justification of assumptions and documentation in the first instance. Is this management validation or just work? It is easier to classify all validation as the independent type.

## Data / Inputs / Assumptions / Expert Judgments

### What is the issue?

- Where does one start and another end? The ambiguity can cause an ownership problem.

### What do I need to do next?

- Parameter is an excellent word to use for all of them. All parameters are used in the internal model.
- Many firms use 'expert judgement' as something applied to get to an assumption. This interpretation has assumptions and expert judgements as the same type of thing but the latter is more material.
- This distinction helps prioritisation of validation and management attention to the parameters that really matter.

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## Data / Inputs / Assumptions / Expert Judgments

Parameter Type	Description	Assurance / Validation	Owner	Examples
Data	Parameters outside the scope of the model. Other governance processes may exist.	Assurance is via the data audit report.	Various	Can range from 'raw' data to committee approved ULRs. Very broad in lineage and focus.
Inputs	Parameters inside the scope of the model.	Can refer to other assurance where available, but within validation.	Capital modelling team	Very narrow in lineage but as broad as data in focus. A subset of data.
Assumptions	Parameters estimated using <b>some</b> judgement and less material.	No other assurance will be available. Needs validation.	Parameter owner	Cash flow patterns or an assumption to rebalance asset portfolio.
Expert judgements	Material parameters estimated using <b>considerable</b> judgement.	No other assurance will be available. Needs considerable validation.	Parameter owner	Coefficients of variation for reserve volatility or correlation parameters.

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## Risk Reporting

### What is the issue?

- Who should bring together the ORSA?

### What do I need to do next?

- It does depend on what is in the ORSA. But, is it mainly a comparison between capital held and required? It obviously has to have a commentary around this fundamental comparison going forward as well as at the valuation date.
- CRO is a new member to the executive committee and should own the ORSA. It makes perfect sense.
- Is the ORSA the 'raison d'être' of the risk management function?
- Similar to a reserve paper, an ORSA can lay out in detail a risk and capital proposal. Surrounding papers from different executive members may add colour to the ORSA.

## Risk Reporting

### What is the issue?

- Who maintains the economic balance sheet ("BS"), technical provisions ("TPs") and standard formula ("SF")?

### What do I need to do next?

- As in all processes, it is important to differentiate between all the different components of the process and recognise that there are numerous stakeholders.
  - Finance team should **produce** the economic BS, TPs and SF.
  - Some **assumptions** are owned by the actuarial function and other stakeholders.
  - The ORSA provides **comparisons** and forward looking assessments. This can be owned by the CRO.

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## Questions or comments?

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Expressions of individual views by members of The Actuarial Profession and its staff are encouraged.

The views expressed in this presentation are those of Buu Truong.

