


The Actuarial Profession
making financial sense of the future

EARNIX
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a s s o c i a t e s

GIRO Conference and Exhibition 2012

Juggling uncertainty the actuary's part to play

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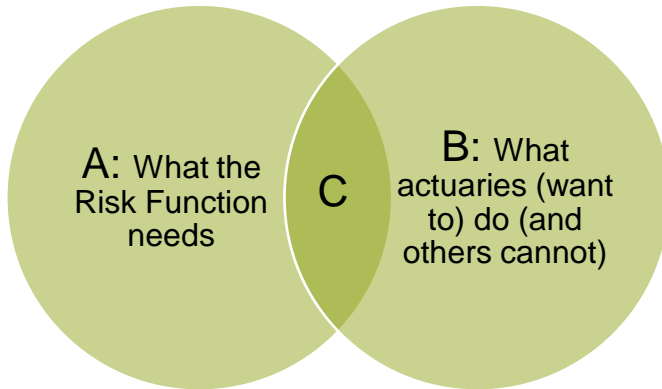
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Actuaries and the risk function

Tony Brooke-Taylor, Aviva

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Setting up the Problem



To Prove: $\frac{C}{B} \geq \frac{C}{A}$

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What does the Risk Function need?

...and which bits can actuaries do?...

Facilitate Implementation	Oversee Risk Management System
Co-ordinate and challenge	IMMMR
Report on effectiveness	Risk-taking Strategy
Report on material risks	Risk Management Strategy
'Own' Internal Model	Policies
• Design & Implement	Risk Appetite
• Test & Validate	Controls
• Document	ORSA
• Analyse & Report	• Underwriting and Reserving
• Inform on Performance	• ALM and Investment
Specialist analysis and QA	• Liquidity and Concentration
Maintain view of Risk Profile	• Operational Risk
Emerging Risks	• Reinsurance and other mitigation

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Why the Risk Function needs actuaries...

What key skills and experience would you bring to the role?

- Core quantitative skills from measuring insurance risk
- Understanding of the underlying processes that I measure means that I can pick out the most important risk drivers
- Used to being an independent voice when tough decisions are being made

Why the Risk Function needs actuaries...

What activities could you contribute most to?

- Suggesting and critiquing management actions
- Highlighting the most important assumptions; illustrating possible implications of failed assumptions
- Cashflow analysis from liability projections informing liquidity management
- Specialist analyses and quality reviews
- Internal Model...

Why the Risk Function needs actuaries...

Aren't these jobs for the Actuarial Function?

- Characteristics in common:
 - Objectivity and independence
 - ?Oversight from a member of senior management
- The Actuarial Function does not need to worry about strategy
- Someone has to come up with point estimates,

Why the Risk Function needs actuaries...

Where are your weaknesses?

- More focused on measuring and reporting
- Not as familiar with financial or operational risks
- Specialist reviews limited to own sphere of expertise
- Less concerned about controlling individual processes actively
- Some risk-taking counter-intuitive to actuaries
- Used to dealing with more financially literate audience

What do Actuaries do?

“... effective risk management tool and not just a calculation kernel...”

Liability Behaviour	Assets/ALM/Operational
Timing, frequency and severity	Cashflow patterns and variability
Classification	Unpicking complexity of financial instruments (but must know limits)
Common risk-drivers (concentration)	Pricing different parts of the loss distribution: informing the reinsurance programme
Correlations with asset types	
Consumption of AEC by underpriced business	Observing features in loss data that might imply operational risk developing
Margins in technical provisions	One firm's operational risk is another insurer's business opportunity
Changes to underwriting limits	Changes to controls?
Pricing guarantees/profit shares	
	Processes to ensure good data/stats

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Efficient allocation of resources: a challenge to us all

$$\text{Risk Capital} = f\left(\frac{\text{Environment.Exposures}}{\text{Controls}}\right)$$

Is capital allocation a self-correcting control mechanism?

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Why actuaries need the Risk Function...

What attracts you to the role?

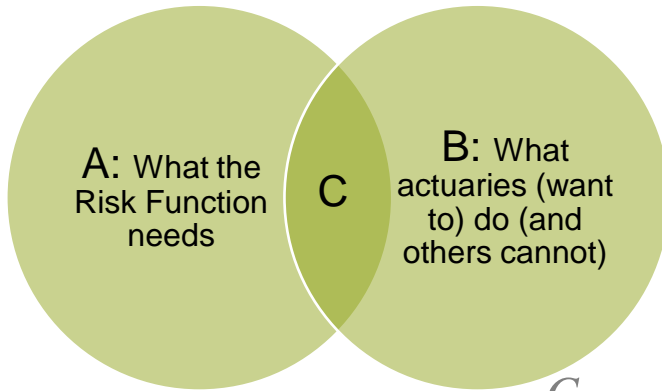
- It's a natural progression for my skill-set
- It will get me involved in broader business activities
- I want to challenge business leaders, not just give them MI
- I will have to think more strategically
- Solvency II seems to place more importance on the Risk Function

Why actuaries need the Risk Function...

Can you see any downsides?

- I'm not so sure about all this checking. Model validation looks painful.
- There are some things that I will probably need to outsource back to the Actuarial Function, but I would prefer to do myself

Conclusion?



$$\frac{C}{B} \ll \frac{C}{A} \xrightarrow{\text{1st line QA}} 0$$