


The Actuarial Profession
making financial sense of the future

FanTAStic or CaTAStrophic?

A TAS Overview

Nick Dexter and David Hare

21 November 2011



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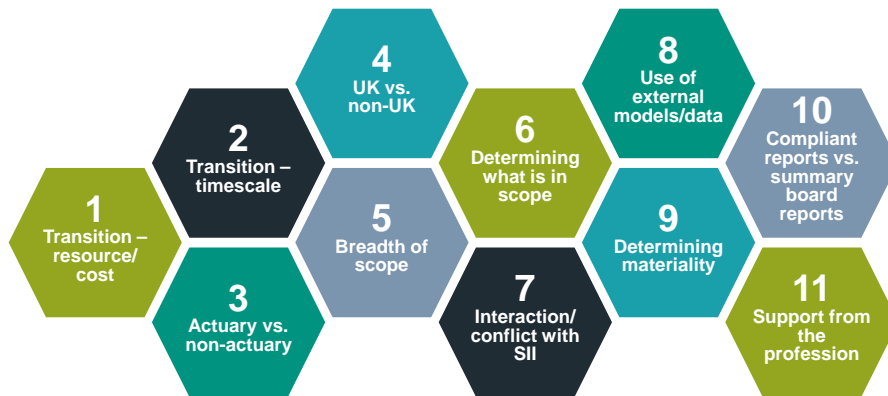
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TAS in practice

What have companies actually done?

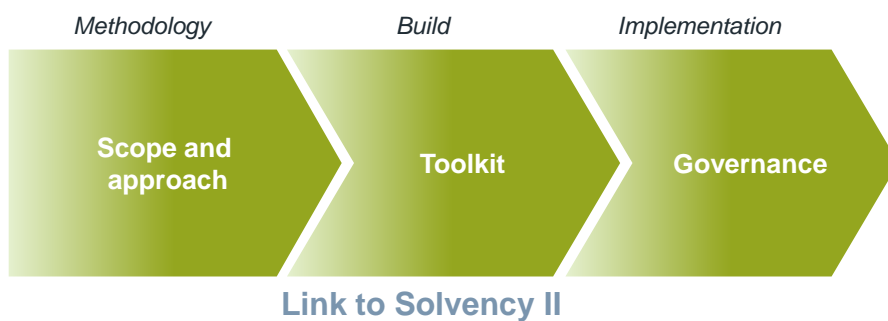
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The key TAS issues from last year



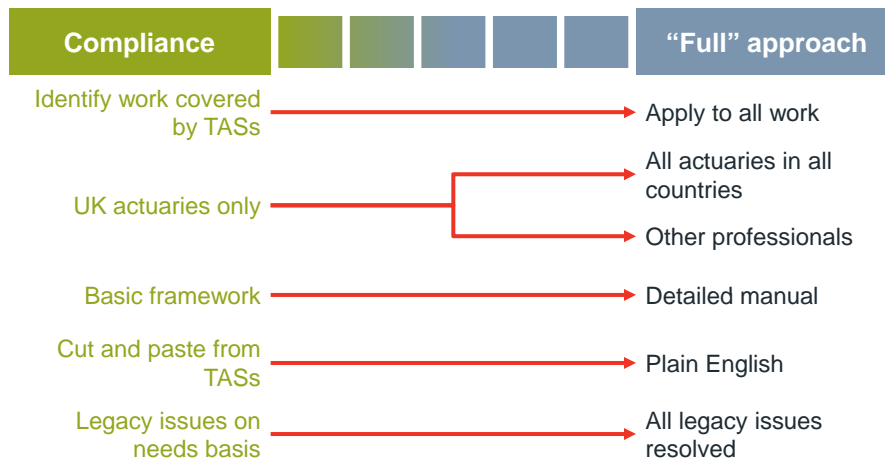
2

Practical implementation



3

Spectrum of approaches



4

Scope – UK plus ...?

- The geographic scope of TASs is ... limited to work done in relation to the UK operations of entities and **any overseas operations which report into the UK within the context of UK legislation or regulation**
- This definition of scope applies **regardless of the location or domicile** of the person carrying out the work
- Although the standards only apply to the **members of the UK actuarial profession**, wider adoption is encouraged

5

EU standards

Groupe Consultatif has set up a Standards Project Team (SPT)

- The SPT has issued in August 2011 two actuarial standards drafts:
 - Quality of actuarial work under the SII Directive
 - Standard on reporting by the actuarial function under the SII Directive
- SPT has received other suggestions for further EU actuarial standards:
 - The contribution of the actuarial function to the risk management system
 - Carrying out an ORSA
 - Formal reporting to the management on the financial condition of the undertaking
- Objectives are to address quality of actuarial work required under Solvency II and need to comply with Solvency II tests (e.g. Use Test)

6

Wording – Cut and Paste vs. Plain English

TAS R:

An aggregate report shall state:

- a) *the material assumptions on which any calculations or judgements are based;* and
- b) any differences between the assumptions used or recommended in different parts of the work. (C.4.4)

TAS M:

The assumptions used in a specification, its implementation and realisations shall be documented. (C.4.18)

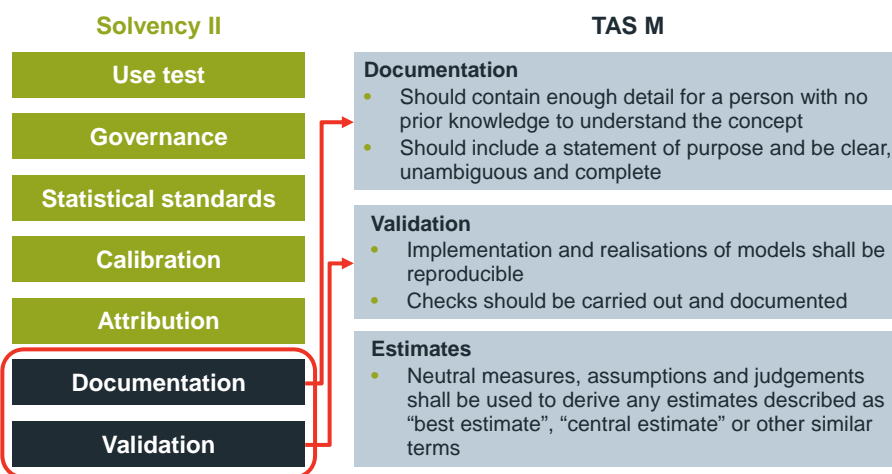
Insurance TAS:

Assumptions used in, or proposed for use in, models shall be appropriate for the purpose of the calculations they are used in. (D.2.2)

- In 'plain English' we might then have:
 - Have you stated and provided the rationale for all material assumptions that you have used?
- Answering this question will provide evidence for all 3 underlined areas across the different TASs (modelling, reporting and insurance)

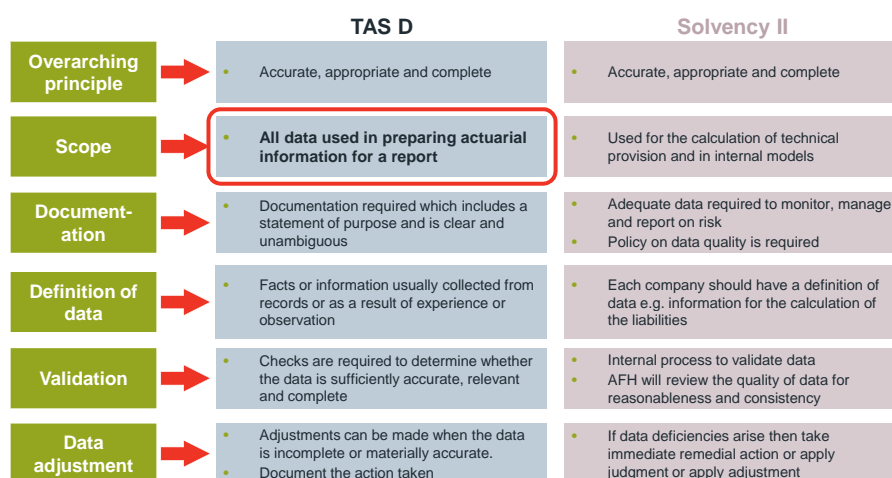
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TAS M – link with Solvency II



8

TAS D – link with Solvency II



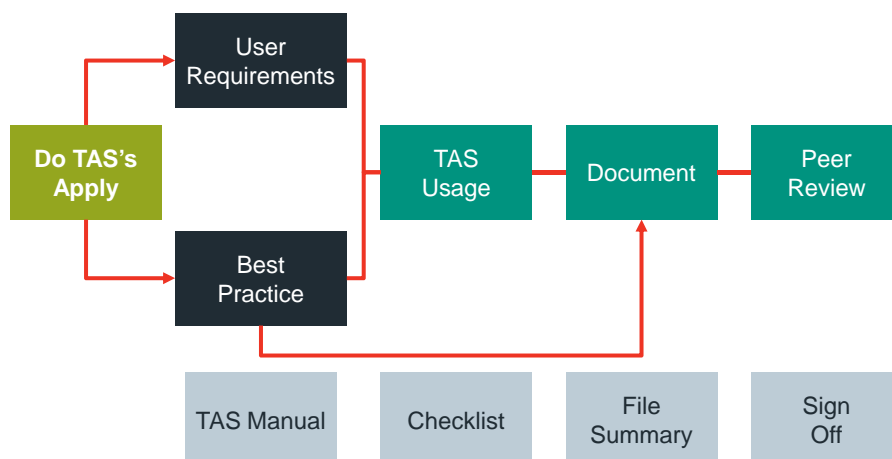
9

Toolkit



10

Adapted Flowchart



11

Governance

Board training			External audit? Reviewing Actuary? Regulators?
1st Line	2nd Line	3rd Line	
<ul style="list-style-type: none"> Annual testing of understanding Peer Review 	<ul style="list-style-type: none"> Risk and oversight review 	<ul style="list-style-type: none"> Internal Audit? 	

12








Life conference and exhibition 2011 Nick Dexter and David Hare

Case Study

Standard Life experience

20-22 November 2011

Recap of 2010 approach

-  Flagged to Board in January 2010 AFH responsibilities paper
-  Mandatory internal CPD session in Q1 for all actuaries in UK
-  Took policy decision to discourage actuaries from claiming TAS compliance except for Reserved Work (or where the user specifically required TAS-R compliant communication)
-  Early adoption of TAS-R for end 2009 valuation report “in all material respects”
-  Introduction of TAS-compliant AFH solvency monitor memo (to sit alongside the solvency estimates in the monthly MI pack)
-  TAS-R compliant ICA presentation in May
-  TAS-D compliance built upon existing valuation checks

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14

What were the main challenges?

Some actuaries “got it” and some didn’t

- E.g. proposed AFH sign-off for FCR update to Board:
 - “Until the report is presented I am unable to confirm that it is understood by the users, but I will support the clarification of any points as required or the correction of any misunderstanding, should they arise.
 - Ignoring the above, I can confirm that this report is compliant with the principles and guidance detailed in TAS-R. In support of this:
 - The introduction clearly states the purpose of the paper ...
 - Where given, the source of each figure is clearly stated, apart from the following ...”

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15

What differences did TASs make initially?

Changing mindset amongst actuaries

- Distinction between Reserved Work and not (e.g. opinion from Risk or from AFH)
- Distinction between what is really important to Board decision and what is nice to have (or there for AFH education) – anticipate board papers getting shorter!
- Increased emphasis on documenting implicit assumptions and judgements – and hence greater transparency to AFH
- Increased emphasis on defining what constitutes materiality
- Increased emphasis on the importance of all the supporting work and the responsibility of each member of the team

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16

What was the focus for next 6 months this time last year?

Embedding and extending

- Another round of internal CPD sessions on BAS standards
- TAS-M preparations – definition of model, implementation, realisation
- Understanding where S2 will require more documentation and why
- Setting the ground rules for compliance with Insurance TAS
- Ensuring actuarial input is enhanced and encouraged through the impact of BAS standards

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17

What did we actually do in 2011?

- ➔ Ensuring sufficient evidence in place for TAS-D certification for end 2010 valuation
- ➔ Developing a framework for the implementation of TAS M and to assess which activities involved a 'Model' as defined by TAS M, particularly for AFH and WPA work
- ➔ Compulsory internal CPD sessions in April 2011 to ensure all actuaries employed by Standard Life were aware of the initial experiences of complying with TASs and their obligations under the TASs so that:
 - Actuaries could start to claim compliance with TASs on non-Reserved Work if they felt it was appropriate
 - To pave the way for the implementation of the Insurance TAS in October 2011
- ➔ Mapping out activities covered by the various sections of the Insurance TAS to identify which operational areas much comply

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18

TAS D – further implications

Introduction of “Data Confidence Statement”

- “This document is owned by the FSSC and will be subject to twice-yearly review and sign-off.”
- “The document aims to substantiate why the FSSC can provide assurance to the AFH the data complies with the guidance stipulated in TAS D, and that the data presented in relation to the valuation of liabilities is reliable and ‘fit for purpose’.”
- Scope covers:
 - The valuation policy data extraction and model point generation processes
 - Investment data
 - Source data from policy admin systems
 - Known limitations and associated mitigants
- Joint sign-off by FSSC staff, valuation actuary and AFH

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19

TAS M – interpretation and implementation

- TAS M assists the achievement of the BAS's Reliability Objective by ensuring that models:
 - Sufficiently represent the matters that are relevant to the decisions for which the actuarial information based on them will be used
 - Are fit for purpose both in theory and in practice
- and that the actuarial information based on them:
 - Includes explanations of the purposes the models are intended to serve, how the inputs to the models are derived and what the outputs from the models are intended to represent
 - Includes explanations of the significant limitations of the models

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20

TAS M – interpretation and implementation

What is a Model?

“.....a representation of some aspect of the world.”

- We have few individual models in the TAS M sense
- **Not every spreadsheet or calculation routine is a model**

Model limitations

- Initial concern around being able to cover all limitations

Our approach

“Approximately right rather than exactly wrong”

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21

TAS M – interpretation and implementation

Guidance framework

Model coverage	What 'aspect of the world' does this model represent?	<ul style="list-style-type: none"> What is being modelled? Is it a single phenomena (e.g. equity markets or mortality) or an aggregation of various items (e.g. solvency of the Office)?
Model construction	What components does the model contain?	<ul style="list-style-type: none"> Does the model have clearly identifiable components or modules? Are the components themselves models? (if so, consider whether each one must comply)
Satisfactory representation/ Fitness for purpose	Why is the model a suitable method of calculating XYZ?	<ul style="list-style-type: none"> What checks have been done to show the model is appropriate? Describe basic tests and provide reference to fuller documentation if necessary Are these one-off checks or are they done for each realisation of the model? (include consideration of back-testing to observed behaviour and checking the validity of realisations) What (if any) rules/guidance/regulation cover this area? Confirm/comment whether the model contains complexities that are not necessary for this use
Inputs	What inputs are required to use the model?	<ul style="list-style-type: none"> Where do these inputs come from? e.g. Judgement, raw data, outputs from other models
Data	What data is the model run on?	<ul style="list-style-type: none"> What checks are performed on the data? Is it grouped, model points or full data? If grouped then why and what is the impact of grouping?
Limitations	What are the key limitations of the model?	<ul style="list-style-type: none"> Does the model contain (necessary) approximations which limit the accuracy of the output? Do the prevailing economic/demographic conditions strain the credibility of the dynamics specified within the model? Is the model being used for a purpose other than that for which it was originally designed?

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22

Insurance TAS – interpretation and implementation

Action taken

- A Steering Group was established as a central point of reference and discussion
 - N.B. The SG was *not* to give approval – individual Actuaries remain responsible for compliance
 - SG members included UK AFH, WPA, Group CRO and other senior Actuaries
- Compulsory internal CPD sessions ensured all Actuaries knew of their obligations
- An initial mapping of the content of the Insurance TAS onto SL's activities

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23

Insurance TAS – interpretation and implementation

Helpful guidance

“User, judgement and evidence”

- The Actuary completing the work must consider:
 - The **user** and what the user requires from the work being done or the information being passed across
 - How **evidence** can be provided to show that the appropriate aspects of the work have been covered
 - What **judgement** has been applied, both in the completion of the work and in the application of the TASs in a suitable and proportionate manner

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24

Insurance TAS – interpretation and implementation

What is scope?

Group Financial Reporting – What is actuarial Work?

- Potential ambiguity around the application to global groups with non-UK business units (BUs)
 - Setting methodology by Group for assumption setting by BUs for IFRS and EEV insurance liabilities **is** actuarial work
 - Applying methodology by BUs **is** actuarial work
 - Reporting on methodology and assumptions by Group to Group CFO **is** actuarial work
 - CFO reports to Group Audit Committee **is not** actuarial work, although it may include the results of actuarial work
 - BU FD submits results and commentaries to Group Finance **is not** actuarial work

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25

Insurance TAS – interpretation and implementation

What is scope?

FSA/EIOPA submission – an ad-hoc request by the regulator

- An exercise by EIOPA to allow them to perform a sector-wide analysis on a low interest rate environment. Work was prepared by non-actuaries but sponsored by the Group CRO, an actuary
- The Insurance TAS covers:
 - “.....actuarial work concerning insurance business performed to enable an insurer or its parent undertakings to fulfil their obligations to their regulators and to the tax authorities.”
- This submission was considered to be **not** actuarial work
 - It was not a legal obligation but an ad-hoc request by the regulator
 - Furthermore, the preparation of the paper included nothing more than arithmetic

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26

Insurance TAS – interpretation and implementation

Areas yet to clarify fully

Work undertaken by UK Investment Risk Management

- The Insurance TAS covers:
 - “C.1.22 This standard shall apply to actuarial work concerning the post-sale exercise of discretion by an **insurer** which affects policyholders’ premiums or benefits.”
 - Is all work related to investment decisions for WP business in scope?
 - Is all such investment decision making actuarial work?
 - Setting the framework for WP investment risk management is actuarial work
 - Lower level asset decisions (e.g. setting individual counterparty limits) **are not** necessarily actuarial work
 - We are perhaps currently including more within scope than is strictly necessary

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27

Insurance TAS – interpretation and implementation

Areas yet to clarify fully

Work undertaken in product pricing areas

- The Insurance TAS covers:
 - *“C.1.12 This standard shall apply to actuarial work that supports the development and implementation of pricing frameworks for products provided by an **insurer**.”*
 - Pricing of individual policies is **not** in scope
 - Product *Risk and Profitability Reports* form SL's 'pricing framework' and so the work for these is within scope
 - Pricing of a large strategic tie-up or a single large corporate pension scheme **may** be in scope if it poses a significant potential risk to the company

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28

What differences have the TASs made?

Benefits of TAS M

- All the existing modelling limitations and approximations documented in one place
- This enables better overall understanding of our models and methodology rather relying on 'experts' knowing specific parts
- Focuses the mind in ensuring we have consistent models and methodology for different purposes
 - (e.g. at the moment we have different stressing approaches for RBS and ICA – we are addressing this to provide one version of the truth)
- Helps have a tighter more defined model development process

A.N. Actuary, SL Actuarial Reporting

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29

What differences have the TASs made?

Focus on the user

BAS's Reliability Objective

- The BAS's Reliability Objective is that the users for whom a piece of actuarial information was created should be able to place a high degree of reliance on the information's
 - Relevance
 - Transparency of assumptions
 - Completeness
 - Comprehensibility
- Including the communication of any uncertainty inherent in the information

What differences have the TASs made?

If complying with a TAS would involve a disproportionate amount of work, is this work necessary?

“...Complying with a TAS should not involve disproportionate work; indeed disproportionate work might constitute a departure from the TAS. The TASs have been drafted to facilitate proportionate compliance: the levels of detail of analysis and reporting are usually matters for judgement, having regard to the purpose of the work.”

Answers to FAQs for Practitioners, October 2010