



Institute  
and Faculty  
of Actuaries

## Actuarial Function

Richard Williams

Matt Byrne



21 April 2015

## Actuarial Function Working Party

- Established April 2013.
- Aim is to provide practical insights and suggestions around the requirements of Article 48 of the Solvency II directive.
- Report to be published shortly.
- Views are those of members of the Working Party.
- EIOPA, PRA and IFoA views override ours (!)



Institute  
and Faculty  
of Actuaries

21 April 2015

2

# Question 1

- How prepared are you to meet the requirements of the Solvency II actuarial function?
  1. We have **not started** to prepare for the Solvency II actuarial function.
  2. We have made **some progress** in preparing for the Solvency II actuarial function.
  3. We have made **good progress** in preparing for the Solvency II actuarial function.



21 April 2015

3



# Actuarial Function

## Opinions

21 April 2015

Articulate  
Sponsorship  
Thought leadership  
Progress  
Community  
Sessional Meetings  
Education  
Working parties  
Volunteering  
Research  
Shaping the future  
Networking  
Professional support  
Enterprise and risk  
Learned society  
Opportunity  
International profile  
Journals  
Support

# Directive, Article 48

**Actuarial function**

1. Insurance and reinsurance undertakings shall provide for an effective Actuarial Function to:
- (a) coordinate the calculation of technical provisions;
  - (b) ensure the appropriateness of the methodologies and underlying models used as well as the assumptions made in the calculation of technical provisions;
  - (c) assess the sufficiency and quality of the data used in the calculation of technical provisions;
  - (d) compare best estimates against experience;
  - (e) inform the administrative, management or supervisory body of the reliability and adequacy of the calculation of technical provisions;
  - (f) oversee the calculation of technical provisions in the cases set out in Article 82 (*Data quality and application of approximations, including case-by-case approaches, for technical provisions*);
  - (g) express an opinion on the overall underwriting policy;
  - (h) express an opinion on the adequacy of reinsurance arrangements; and
  - (i) contribute to the effective implementation of the risk-management system referred to in Article 44, in particular with respect to the risk modelling underlying the calculation of the capital requirements set out in Chapter VI, Sections 4 and 5, and to the assessment referred to in Article 45.
2. The Actuarial Function shall be carried out by persons who have knowledge of actuarial and financial mathematics, commensurate with the nature, scale and complexity of the risks inherent in the business of the insurance or reinsurance undertaking, and who are able to demonstrate their relevant experience with applicable professional and other standards.



# What’s an opinion?

**Actuarial function**

1. Insurance and reinsurance undertakings shall provide for an effective Actuarial Function to:
- (a) coordinate the calculation of technical provisions;
  - (b) ensure the appropriateness of the methodologies and underlying models used as well as the assumptions made in the calculation of technical provisions;
  - (c) assess the sufficiency and quality of the data used in the calculation of technical provisions;
  - (d) compare best estimates against experience;
  - (e) inform the administrative, management or supervisory body of the reliability and adequacy of the calculation of technical provisions;
  - (f) oversee the calculation of technical provisions in the cases set out in Article 82 (*Data quality and application of approximations, including case-by-case approaches, for technical provisions*);
  - (g) express an opinion on the overall underwriting policy;
  - (h) express an opinion on the adequacy of reinsurance arrangements; and
  - (i) contribute to the effective implementation of the risk-management system referred to in Article 44, in particular with respect to the risk modelling underlying the calculation of the capital requirements set out in Chapter VI, Sections 4 and 5, and to the assessment referred to in Article 45.
2. The Actuarial Function shall be carried out by persons who have knowledge of actuarial and financial mathematics, commensurate with the nature, scale and complexity of the risks inherent in the business of the insurance or reinsurance undertaking, and who are able to demonstrate their relevant experience with applicable professional and other standards.



## What's an opinion?



## What's an opinion?

- Actuarial Function should contribute its knowledge and experience to the sound running of the Insurer.
- An opinion not a formal 'signing-off' of the underwriting policy or reinsurance arrangements.
  - Like a Statement of Actuarial Opinion? No.
  - A view from applying the actuarial skillset? Yes.
- Actuarial may already provide such a contribution, Solvency II will formalise this.

## What's an opinion?

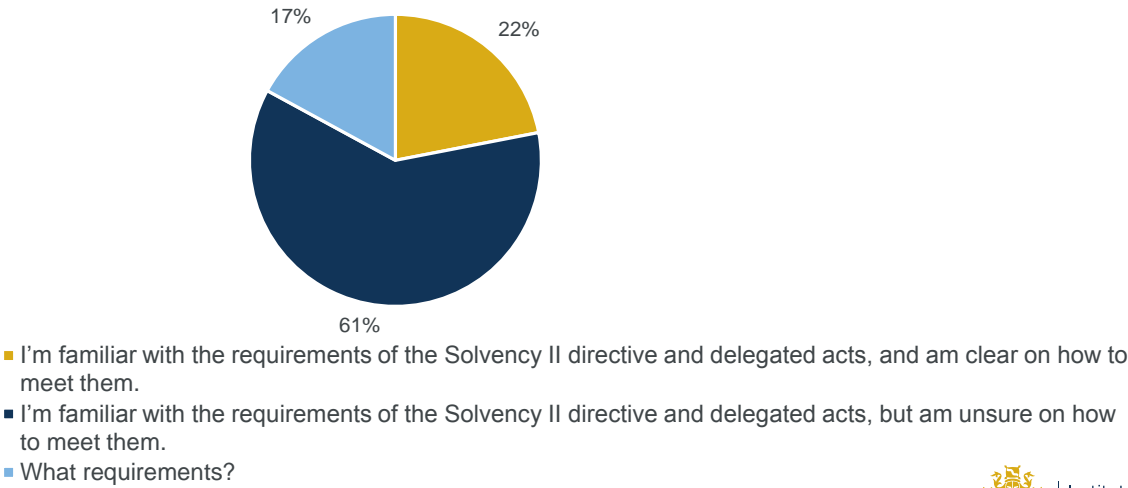
- Actuarial Function and underwriting and reinsurance teams should work together.
- A close working relationship would be essential.
- Actuarial Function should not act as a policeman to the underwriting and reinsurance teams.
- Documentation will be essential in demonstrating its compliance.

## Question 2

- **With regards to the requirement for the Solvency II actuarial function to provide an opinion on your organisation's reinsurance / risk transfer arrangements?**
  1. I'm familiar with the requirements of the Solvency II directive and delegated acts, and am **clear** on how to meet them.
  2. I'm familiar with the requirements of the Solvency II directive and delegated acts, but am **unsure** on how to meet them.
  3. **What requirements?**

## Question 2

With regards to the requirement for the Solvency II actuarial function to provide an opinion on your organisation’s reinsurance / risk transfer arrangements?



21 April 2015

11



## Actuarial Function

Independence & Objectivity

21 April 2015

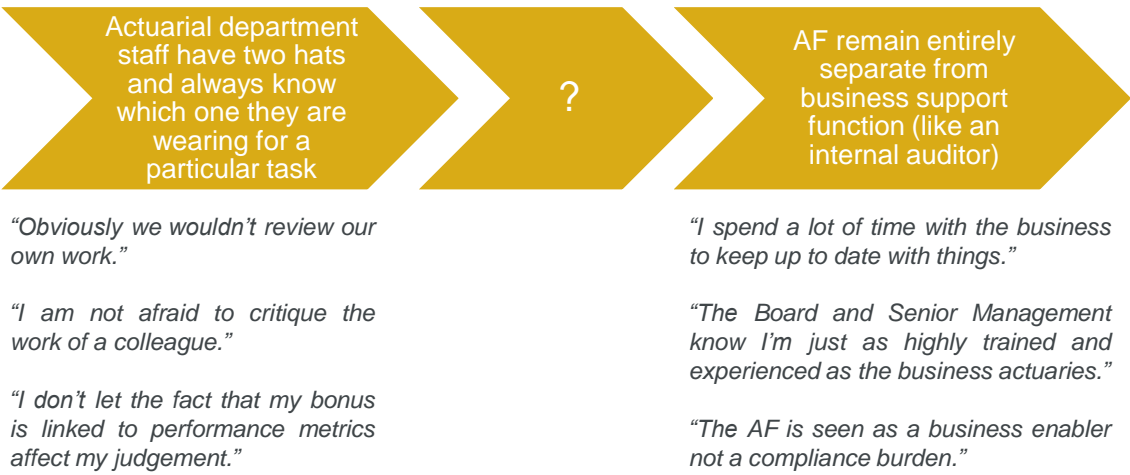
Articulate  
Sponsorship  
Thought leadership  
Progress  
Community  
Sessional Meetings  
Education  
Working parties  
Volunteering  
Research  
Shaping the future  
Networking  
Professional support  
Enterprise and risk  
Learned society  
Opportunity  
International profile  
Journals  
Support

# Independence & Objectivity

- PRA expects the actuarial function:
  - “to be **independent** of an insurer’s revenue-generating functions”.
  - “possess sufficient authority to **offer robust challenge** to the business.”
  - To be “**operationally independent** ...commensurate with the nature, scale and complexity of the risks inherent in the firm’s business”



## Independence & Objectivity: How to achieve it & be seen to be achieving it!



# Independence & Objectivity: How to achieve it & be seen to be achieving it!



- Segregation of responsibilities (to the degree that it is practical).
- Reporting lines designed to minimise conflicts of interest.
- Gatekeeping of inputs, models and outputs.
- Peer review regimes.
- Clear policies for expert judgement and governance review of material decisions.
- Robust documentation.



## Actuarial Function

### Actuarial Function Report

21 April 2015

Articulate  
Sponsorship  
Thought leadership  
Progress  
Community  
Sessional Meetings  
Education  
Working parties  
Volunteering  
Research  
Shaping the future  
Networking  
Professional support  
Enterprise and risk  
Learned society  
Opportunity  
International profile  
Journals  
Support



# Actuarial Function Report

- Delegated Acts:
  - “The actuarial function shall produce a written report to be submitted to the administrative, management or supervisory body, **at least annually**. The report shall document **all tasks** that have been undertaken by the actuarial function and their results, and shall clearly **identify any deficiencies** and **give recommendations** as to how such deficiencies should be remedied”

# Actuarial Function Report

- Purpose of Actuarial Function Report:
  - To enable informed decisions to be made on the administration of the insurer, based on reasoned analysis, evidence and justification; and
  - To demonstrate compliance with the requirements of the Directive.
- Should be produced “*at least annually*”.

## Actuarial Function Report

- Structure:
  - Could build an **aggregate report** made up of multiple component reports.
  - May decide to produce **multiple component reports** throughout the year, covering the various tasks.
  - May be necessary to have an **over-arching component report** referencing all the constituents of the aggregate report and outstanding requirements, e.g. a Terms of Reference or TAS-R compliance.
  - Danger of **disjointed report** from this approach.

## Actuarial Function Report

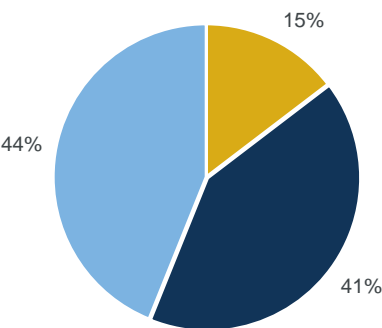
- Possible content:
  - Executive Summary;
  - Introduction;
  - Technical Provisions;
  - Underwriting;
  - Reinsurance;
  - Risk Management;
  - Conclusions and recommendations.

### Question 3

- Have you produced an actuarial function report yet (to the standards required by the Solvency II guidance)?
  1. I've **produced** what I believe is a fully Solvency II compliant report.
  2. I've made **some progress** to producing what I believe is a fully compliant report.
  3. I've made **no significant progress** in producing what I believe would be a fully compliant report.

### Question 3

Have you produced an actuarial function report yet (to the standards required by the Solvency II guidance)?



- I've produced what I believe is a fully Solvency II compliant report.
- I've made some progress to producing what I believe is a fully compliant report.
- I've made no significant progress in producing what I believe would be a fully compliant report.

# Actuarial Function

## Regulation

21 April 2015

Articulate  
Sponsorship  
Thought leadership  
Progress  
Community  
Sessional Meetings  
Education  
Working parties  
Volunteering  
Research  
Shaping the future  
Networking  
Professional support  
Enterprise and risk  
Learned society  
Opportunity  
International profile  
Journals  
Support

## Regulation

- Sources of Solvency II regulation:
  - Europe
  - PRA
  - IFoA

# Actuarial Function

## Organisation & Structure

21 April 2015

Artisan  
Sponsorship  
Thought leadership  
Progress  
Community  
Sessional Meetings  
Education  
Working parties  
Volunteering  
Research  
Shaping the future  
Networking  
Professional support  
Enterprise and risk  
Learned society  
Opportunity  
International profile  
Journals  
Support

## Organisation & Structure

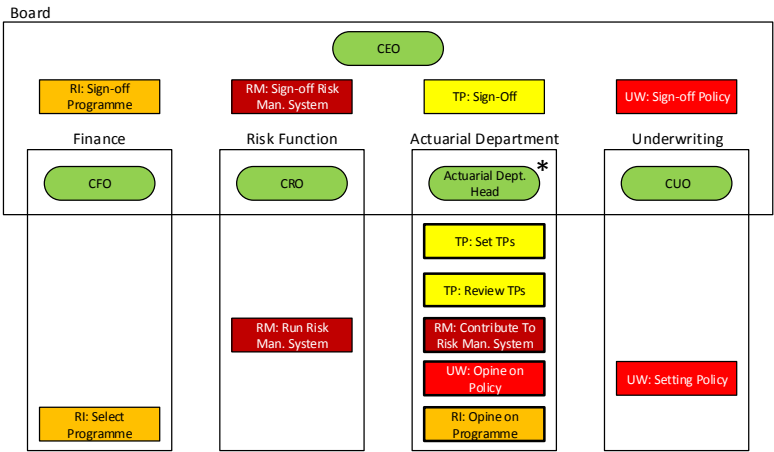
- Key requirements:
  - Meeting the requirements of the regulations and other guidance.
  - Addressing issues of Independence and objectivity.
  - Deciding on a “Chief Actuary” for the PRA.
  - Availability of suitably qualified and experienced (fit & proper) resource.
- Other requirements:
  - Non-Solvency II requirements; What is already being done?; Reflecting the organisation’s complexity; Departmental interactions; Outsourcing, etc....

# Organisation & Structure

Actuarial Function Area Of Involvement ("AF Area")	Leader	Tasks (excluding non-actuarial function review)		
Technical Provisions	Actuarial Dept. Head	TP: Set TPs	TP: Review TPs	TP: Sign-Off
Reinsurance Arrangements	CFO	RI: Select Programme	RI: Opine on Programme	RI: Sign-off Programme
Underwriting Policy	CUO	UW: Setting Policy	UW: Opine on Policy	UW: Sign-off Policy
Internal Model	CRO	RM: Run Risk Man. System	RM: Contribute To Risk Man. System	RM: Sign-off Risk Man. System



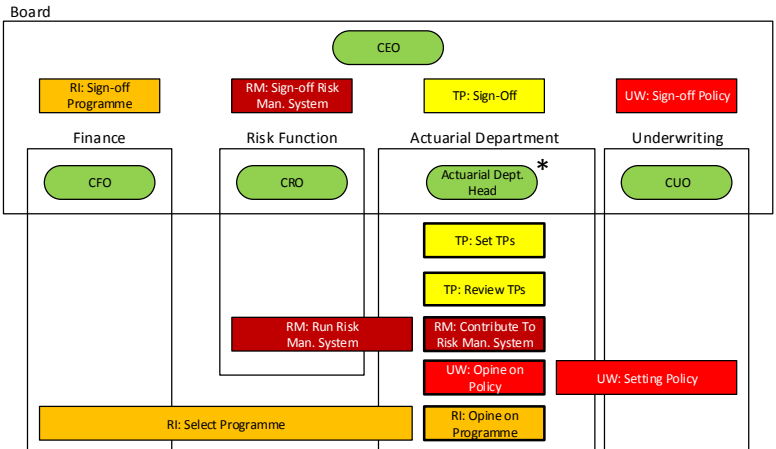
# Organisation & Structure – Example 1



- Arranged around requirements of Article 48.
- Strength: separation of the performing and the actuarial reviewing of the underwriting policy and reinsurance arrangements AF Areas.
- Weakness: Potential splitting of actuarial resources.



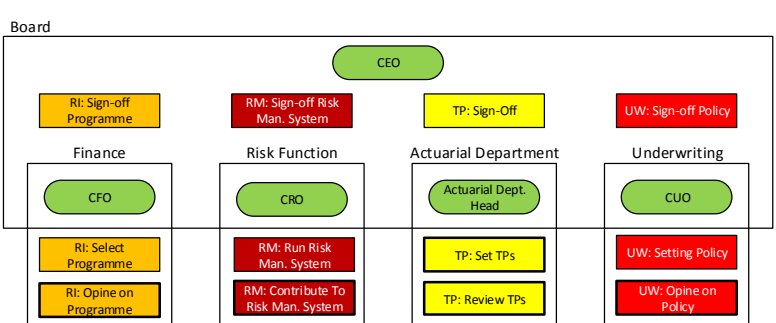
Organisation & Structure – Example 2



- All actuarial tasks contributed to by actuarial department (not just Article 48 tasks).
- Strength: Efficient use of actuarial staff, all under one department head.
- Weakness: Lack of independence of performing and reviewing.



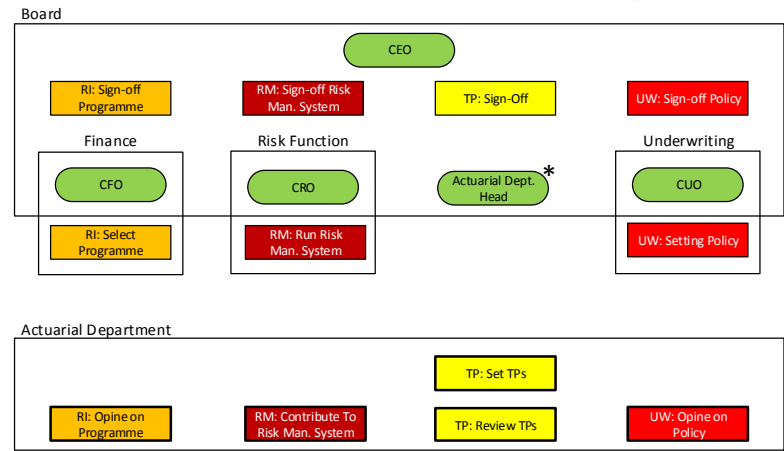
Organisation & Structure – Example 3



- Actuarial department and its head are only responsible for the technical provisions AF Area.
- The actuarial contributions to the other three AF Areas are the responsibility of the lead in the relevant department.
- Strength: Responsibility for each of the four AF Area tasks resides in the department with most general experience and skills for that task.
- Weakness: Actuarial Function is dispersed between four areas of the business with four different leaders.



# Organisation & Structure – Example 4



- Whole actuarial department is outsourced.
- Strength: Potentially more cost effective for smaller Insurers who don't want to have their own actuarial departments.
- Weakness: Potentially less understanding and interaction between the Insurer and the outsourced actuarial department.



Expressions of individual views by members of the Institute and Faculty of Actuaries and its staff are encouraged.

The views expressed in this presentation are those of the presenter.

