Solvency II and the functions of the actuary

Conference Croatian Insurance Days
Opatija 7 November 2014
Siegbert Baldauf
Agenda

1) Today’s role of actuaries
2) On the way to Solvency II
3) Actuarial Function
4) System of Governance
5) About AAE
 Ordinance on Minimum Standards, Methods of Calculating and Guidelines for Calculating Technical Provisions in Insurance

Definitions

Article 1

... • **actuary** – a person who is a regular member of the Croatian Actuarial Association,

• **certified actuary** – a person considered to be a certified actuary pursuant to the Ordinance on the requirements for professional training and examination of technical knowledge needed to perform duties of a certified actuary (Official Gazette 45/06),

• ...
OBLIGATIONS OF CERTIFIED ACTUARIES, Article 13

• Verify whether premium tariffs and technical provisions are calculated in accordance with the rules and
• whether technical provisions established are sufficient to ensure that all liabilities of the insurance company under the insurance contracts are covered at all times.

While verifying the accuracy of the calculation of technical provisions, certified actuaries shall verify:
• whether the insurance company keeps appropriate data for the calculation of technical provisions,
• whether methods and bases for the calculation of technical provisions are aligned with the existing regulation, this Ordinance and actuarial profession.
Article 3
An insurance company shall establish the following types of technical provisions:

- Provision for unearned premiums
- Provision for bonuses and rebates
- Provision for outstanding claims
- Equalisation provision
- Mathematical Provisions for life assurance
- Special life assurance provisions, investment risk borne by policyholder
ORDINANCE ON MINIMUM STANDARDS, METHODS OF CALCULATING AND GUIDELINES FOR CALCULATING TECHNICAL PROVISIONS IN INSURANCE

Rules for the calculation of the technical provisions
Mathematical provision is calculated on the basis of a prospective net method, as difference between:

- the present value of all future liabilities
- the present value of all future payments of technical premium.

V Probability tables
Probability tables which will be applied in the calculation of mathematical provision (such as mortality tables, morbidity tables, cancellation tables, marital status tables and other tables) must be chosen prudently.

VI Interest rate
The highest interest rate in the calculation of mathematical provision is:
- 3.3% for insurance contracts concluded before 2010,
- 3% for insurance contracts concluded in 2010,
- 2.75% for insurance contracts concluded after 2010.
OBLIGATIONS OF CERTIFIED ACTUARIES, Article 13

Report to the supervisory and management board on the findings concerning the supervision performed including the reasons for a positive opinion, reserved opinion or a negative opinion of the certified actuary.

Inform the management board of the insurance company without delay, if:

- premium tariffs or technical provisions are not calculated or established in accordance with the rules, or
- that these are calculated or established in such a manner that payment of the insurance company’s liabilities under the insurance contracts is questionable.

Inform the Financial Services Supervisory Agency

- If the management board of the insurance company fails to take measures pursuant to reported shortcomings.
Agenda

1) Today’s role of actuaries

2) On the way to Solvency II

3) Actuarial Function

4) System of Governance

5) About AAE
Solvency Regulation: Legal framework still not finalized

Level 1: Directive
Enacted 22 May 2014

Level 2: Delegated Acts
Endorsed by EU Commission 10 October 2014

Level 3: Guidelines
1st Set Consulted from June to August 2014

TFEU (Treaty on the functioning fo the EU) and the EIOPA Regulation (EU) No 1094/2010 define next steps
Status and further proceeding according to TFEU and EIOPA regulation

Guidelines 1st Set (√)

EIOPA-Reg. Art. 16 Nr. (25)

EIOPA-Reg. Art 10, TFEU, Art. 290

RTS

ITS (1st Set) (√)

TFEU Art. 290

DA = Delegated Acts

IA = Implementing Acts


DA based on a total of 76 empowerments in the Solvency II Directive

RTS = Regulatory Technical Standard

ITS = Implementing Technical Standard
EIOPA (31. 1. 2014) :
Timeline for outstanding regulations

**Concluded**

- Public consultation on the Set 1 of the ITS
  - April-June 2014

**Next steps**

- Submission to the EC of the Set 1 of the ITS
  - June-September 2014
- Submission to the EC of the Set 2 of the ITS
  - 31 October 2014
- Public consultation on the Set 2 of the ITS
  - Dezember 2014 - March 2015
- Public consultation on the Set 1 of the Guidelines
  - February 2015
- Submission to the EC of the Set 2 of the ITS
  - 30 June 2015
- Publication of the Set 1 of the Guidelines in all the official EU languages
  - July 2015
- Public consultation on the Set 2 of the Guidelines
  - 30 June 2015
- Publication of the Set 2 of the Guidelines in all the official EU languages
  - 1 January 2016

Application of the Solvency II regime
Agenda

1) Today’s role of actuaries

2) On the way to Solvency II

3) **Actuarial Function**

4) System of Governance

5) About AAE
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;
...
1. Insurance and reinsurance undertakings shall provide for an effective actuarial function to:

(i) contribute to the effective implementation of the risk management system in particular with respect to the risk modelling underlying the calculation of the capital requirements and to the assessment referred to in Article 45 (ORSA – own risk and solvency assessment).

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 standards¹.

¹ AAE is working on standards to support actuaries
Tasks of the Actuarial Function
Level 2 concretises Level 1 - regulation

In coordinating the calculation of the technical provisions, the actuarial function shall include all of the following tasks:
(a) assess the sufficiency of technical provisions and ensure consistency of calculation with Articles 75 to 86 of Directive
(b) assess the uncertainty resulting from the estimates made
(c) Proper treatment of limitations of data
(d) ensure that the most appropriate approximations are used
(e) ensure that homogeneous risk groups are identified
(f) Integration of relevant information from financial markets and available data on underwriting risks
(g) Year to year comparison of differences in the calculation
(h) Ensure that Options and guarantees are appropriately assessed
Valuation of Technical Provisions consistent with Articles 75 to 86 of Directive

Value of technical provisions = best estimate + risk margin

Best estimate calculation requires cash-flow projection which takes account (on a best estimate basis) of all the cash in- and out-flows over the lifetime of contracts.

The best estimate liability corresponds to the probability-weighted average of future cash-flows, taking account of the time value of money (expected present value of future cash-flows), using the relevant risk-free interest rate term structure. (stochastic calculation needed)

The risk margin shall reflect the cost of capital needed when taking over the insurance obligation (6% of discounted Solvency Capital Requirement over the lifetime).

Insurance and reinsurance undertakings shall value the best estimate and the risk margin separately.
+ Explanatory Texts to these Guidelines

Goal:

“to increase consistency and convergence of professional practice across Member States”

“support undertakings in calculating their technical provisions under Solvency II”.

1.5. The Guidelines will be ultimately applied both by actuaries and by other professionals who may be appointed to carry out the tasks of the actuarial function.
Guidelines on the valuation of Technical Provisions are divided in different sections:

Section 1 on Data Quality (1-16)
Section 2 on Segmentation and Unbundling (16-23)
Section 3 on Assumptions; sets out requirements for the choice of methodologies to calculate technical provisions. (24-44)
Section 4 on the Methodologies to calculate Technical Provisions (45-85)
Section 5 on Validation (86-91)
Section 1: Data quality

Clarification of the concepts of completeness and appropriateness of data 1-2

Review and validation of data quality 3-8

Material limitations of data 9-14

Market data 15
Solvency Regulation
Level 3 concretises Level 2 - Regulation

Delegated Acts Art. 272
c) Proper treatment of limitations of data

B. Valuation of technical provisions Guidelines 9-14

Material limitations of data
GL 9: Identification of the source of material limitations
GL10: Impact of shortcomings
GL 11: Data adjustments
GL 12: Recommendations of the actuarial function
GL 13: Application of expert judgment upon material limitations
GL 14: Documentation of data limitations
Solvency II: Directive and Delegated Acts

Technical Provisions
Article 75-86 Directive
Article 25 Delegated Acts
(Separate calculation of the future discretionary benefits)

- Guaranteed benefit reserve
- Future discretionary benefit reserve
- Options and Guarantees
- Risk margin
Technical Provision: An ambiguous term

Technical Provisions

- Provision for unearned premiums
- Provision for bonuses and rebates
- Provision for outstanding claims
- Equalisation provision
- Mathematical Provisions for life assurance
- Special life assurance provisions, investment risk borne by policyholder

Technical Provisions (SII)

- Guaranteed benefit reserve
- Future discretionary benefit reserve
- Options and Guarantees
- Risk margin
Agenda

1) Today’s role of actuaries
2) On the way to Solvency II
3) Actuarial Function
4) System of Governance
5) About AAE
Solvency II regulation leads to an overlapping of duties

**Appointed Certified Actuary**

**Actuarial Function (AF)**

**Risk Management Function (RMF)**

**Current Insurance Law**

Solvency Directive Art. 48
Delegated Acts Art. 272

Solvency Directive Art. 44
Delegated Acts Art. 269

**Required qualification: Fit and Proper**

**But: Neither AF nor RMF need to be actuaries**
Implementation of the functions

No requirement for a specific organizational structure, but each function shall
• be free from influences that may compromise the function's ability to undertake its duties in an objective, fair and independent manner
• operate under the ultimate responsibility of, and report to the administrative, management or supervisory body
• where appropriate, cooperate with the other functions in carrying out their roles.

Holder of a function shall
• be able to communicate at their own initiative with any staff member
• have the necessary authority, resources and expertise as well as unrestricted access to all relevant information necessary to carry out their responsibilities
• shall promptly report any major problem in their area of responsibility to the administrative, management or supervisory body.
Introduction

1.12. With respect to the actuarial function, these Guidelines focus on **what should be done by the actuarial function, rather than how it should be performed**. As the purpose of having the actuarial function is to provide a measure of quality assurance through expert technical actuarial advice, it is especially important to establish specific technical guidance on the tasks, responsibilities and other aspects of the actuarial function.

1.13. Currently, the institution of the “responsible/appointed actuary” exists in some Member States. **As the “responsible/appointed actuary” is not foreseen by Solvency II, it is up to the supervisory authorities concerned to decide on whether to keep the “responsible/appointed actuary” or not, and how it relates to the actuarial function. However, this issue is not addressed under these Guidelines.**
Comparison of (some) duties assigned to Appointed certified actuary / Actuarial function

Verification of accordance with the rules when calculating premium tariffs and technical provisions

and

Sufficiency of technical provisions to ensure that all liabilities of the insurance company under the insurance contracts are covered at all times.

Verification that

- methods and bases for the calculation of technical provisions are aligned with the existing regulation, this Ordinance and actuarial profession.

- the insurance company keeps appropriate data for the calculation of technical provisions,

(OBLIGATIONS OF CERTIFIED ACTUARIES, Article 13)

1. In coordinating the calculation of the technical provisions, the actuarial function shall include all of the following tasks:

a) ...assess the sufficiency of technical provisions and to ensure that their calculation is consistent with the requirements set out in Articles 75 to 86 of Directive 2009/138/EC;...

__________________________

d) ensure that any limitations of data used to calculate technical provisions are properly dealt with

(Delegated Acts Art. 272)
Comparison of some duties assigned to Appointed certified actuary / Actuarial function

3. Submission to the supervisory and management board of the report on the findings concerning the supervision performed in the previous business year.

The report shall first of all contain reasons for a positive opinion, reserved opinion or a negative opinion of the certified actuary accompanying the annual report.

5. Submission to the administrative, management or supervisory body on the calculation of the technical provisions shall include at least a reasoned analysis on the reliability and adequacy of their calculation and on the sources and the degree of uncertainty of the estimate of the technical provisions.

Analysis shall be supported by a sensitivity analysis that includes an investigation of the sensitivity of the technical provisions to each of the major risks underlying the obligations covered in the technical provisions.

The actuarial function shall clearly estate and explain any concerns it may have concerning the adequacy of technical provisions.

(OBLIGATIONS OF CERTIFIED ACTUARIES, Article 13)
System of Governance
Actuarial Function vs. Appointed Certified Actuary

Sufficiency of Liabilities under insurance contracts at all times

Management rules
Legal framework

Management actions

Coverage of liabilities at all times

ACA Accounting

AF Solvency

Data
Assumptions

( Depending on accounting requirements)
System of Governance
Actuarial Function vs. Appointed Certified Actuary

Actuarial issues are overlapping – close cooperations required
Agenda

1) Today’s role of actuaries
2) On the way to Solvency II
3) Actuarial Functions
4) System of Governance
5) About AAE
AAE established as Groupe Consultatif in 1978
Represents more than 20,000 actuaries in Europe

- Membership criteria
- Observer Member Association (4): association in Europe
  - Full Member Association (33)
    - Code of Conduct / disciplinary process
    - Minimum education standards (Core Syllabus)
    - Due process if standards are promulgated
    - Ability to sign the Mutual Recognition Agreement
Membership of the AAE

Full Member Association

• 33 in 31 European states
• Two Member Associations from Italy and Spain
• 26 Member States
  • Malta is observer
• 3 Member Associations from the EFTA (Iceland, Norway, Switzerland) and Channel Islands
• Observer Status for Serbia, Turkey and Ukraine
Volunteers!
Each Full Member Association is fully represented
Principle of subsidiarity
Consensus seeking
- internal issues – 1 yr cooling-off and 75% majority
- technical questions – maybe majority/minority
Committees meet twice a year
General Assembly annually
Committees, Project Teams and Task Forces

AAE

Chief Executive

Secretary General

Education

Standards, Freedoms and Professionalism

Standards Project Team

Insurance

Solvency II Project Team

Pillar 1-5 working groups

Investment and Financial Risk

Pensions

Sub-Committee on Social Security

Ad hoc wg’s on IORP/QIS
Development of Standards to support actuaries

Actuarial Standard of Practice 1
- General Actuarial Practice

Actuarial Standard of Practice 2
- Actuarial Function Report Standard

Current activities/discussion
- Contribution of AF to Risk Management
- Actuarial work in the risk management function
- Carrying out an ORSA
- Reporting to management on financial condition
- Independent review by actuaries
- Validation of internal model
- Regular Supervisory Report