



Society of Actuaries in Ireland

ACTUARIAL STANDARD OF PRACTICE LA-11

STATEMENTS OF ACTUARIAL OPINION ON LIFE REINSURANCE BUSINESS

Classification

Mandatory

MEMBERS ARE REMINDED THAT THEY MUST ALWAYS COMPLY WITH THE CODE OF PROFESSIONAL CONDUCT AND THAT ACTUARIAL STANDARDS OF PRACTICE IMPOSE ADDITIONAL REQUIREMENTS UNDER SPECIFIC CIRCUMSTANCES.

Legislation or Authority

Requirements issued by the Central Bank of Ireland requiring Statements of Actuarial Opinion relating to life reinsurance business.

Application

Members of the Society of Actuaries in Ireland appointed by reinsurance undertakings to provide a Statement of Actuarial Opinion relating to life reinsurance business pursuant to the *Reserving Requirements*.

Version	Effective from
1.0	30.12.2007
1.1	30.12.2009
1.2	01.11.2010
1.3	30.12.2011
1.4	31.12.2014

Definitions

Words in italics in this *ASP* shall be construed in accordance with the following definitions:

“*ASP*” means Actuarial Standard of Practice

“*Board*” means the board of directors of the *Company*

“*Code*” means the *Society*’s Code of Professional Conduct



“*Company*” means the life reinsurance undertaking by which the *Signing Actuary* is appointed or engaged

“*DAC*” means deferred acquisition costs

“*DAS*” means Data Accuracy Statement

“*financial reinsurance*” means business classified by the *Board* as Financial Reinsurance pursuant to the relevant *Regulatory Requirements*

“*finite reinsurance*” means business classified by the *Board* as Finite Reinsurance pursuant to the relevant *Regulatory Requirements*

“*PCF*” means a pre-approval controlled function, as defined under the Central Bank Reform Act 2010

“*Regulatory Requirements*” means relevant legislation and regulations, including in particular the European Communities (Reinsurance) Regulations, 2006 (S.I. No. 380 of 2006), as well as requirements and guidelines issued by the Central Bank of Ireland, including but not limited to the *Reserving Requirements*, as defined below

“*Reserving Requirements*” means the latest version (as at the effective date of an *SAO* and *Report* provided pursuant thereto) of the “Reserving Requirements for Non-life Insurers and Non-life and Life Reinsurers”, first published by the Central Bank of Ireland in May 2014

“*Reviewing Actuary*” means an actuary appointed or engaged to review an *SAO* and *Report* and produce a *Peer Review Report* pursuant to the *Reserving Requirements*

“*Report*” means an actuarial report supporting the *SAO*, prepared by the *Signing Actuary* in accordance with the *Reserving Requirements* and addressed by the *Signing Actuary* to the *Company*

“*SAO*” means Statement of Actuarial Opinion prepared in accordance with the *Reserving Requirements*

“*Signing Actuary*” means an actuary appointed or engaged to provide an *SAO* and *Report* pursuant to the *Reserving Requirements* and who has been approved by the Central Bank of Ireland to act in the *PCF* of *Signing Actuary* for the *Company*

“*Society*” means the Society of Actuaries in Ireland

“*TRSM-L*” means Total Required Solvency Margin – Life as calculated in accordance with the *requirements* specified by the Central Bank of Ireland.



In addition:

“should normally” and, where the context requires, “should” indicate that members of the *Society* to whom this *ASP* applies must comply with a particular requirement or prohibition, unless the circumstances are such that the requirement or prohibition is inappropriate and non-compliance is consistent with the standards of behaviour, integrity, competence and professional judgement which other members or the public might reasonably expect of a member.

1 Introduction

- 1.1 Reinsurance companies are required to provide to the Central Bank of Ireland each year an *SAO* relating to their life reinsurance business, both gross and net of retrocession.
- 1.2 This *ASP* applies to any member of the *Society* appointed or engaged as a Signing Actuary to provide a Statement of Actuarial Opinion relating to life reinsurance business pursuant to the *Reserving Requirements*.
- 1.3 The *Signing Actuary* must be familiar with and meet the obligations of the relevant parts of the *Reserving Requirements* and any other instructions issued by the Central Bank of Ireland for this purpose.
 - 1.3.1 The *Signing Actuary* may seek clarification from the Central Bank of Ireland on the interpretation of any instructions issued by it.
 - 1.3.2 In the event of any conflict, the *Reserving Requirements* take precedence over any requirements included in this *ASP*.
 - 1.3.3 The *Reserving Requirements* are “the minimum requirements which companies are required to comply with in relation to reserving” (Requirement 2 of the *Reserving Requirements*). Likewise, the purpose of this *ASP* is to set out minimum responsibilities which the *Signing Actuary* is expected to meet. This *ASP* does not preclude the *Signing Actuary* from going beyond these minimum responsibilities if he or she sees fit. The *Signing Actuary* should note in particular that the *Reserving Requirements* set out the minimum content to be included in the *Signing Actuary’s Report*. The *Signing Actuary* should consider whether additional analysis and information beyond that required under the *Reserving Requirements* and this *ASP* is necessary in order to properly inform the *Board* in relation to the subject matter of the *Report*.



1.4 The SAO states that:

- In the *Signing Actuary*'s opinion, the total reserves, gross and net of retrocession, comply with Irish legislation (including legislation transposing relevant European Union insurance directives) and other relevant regulatory requirements;
- The *Signing Actuary* is satisfied that the *Company*'s TRSM-L, after allowing for retrocession, has been calculated based on the applicable data in the *Company*'s returns to the Central Bank of Ireland and in accordance with Irish legislation (including legislation transposing relevant European Union insurance directives) and other relevant regulatory requirements.

1.4.1 Insofar as the scope of the SAO includes allowance for retrocession, the *Signing Actuary* must consider retrocession as contemplated in paragraphs 4.2.7 and 5.4. However, the scope of the *Signing Actuary*'s considerations is limited as described in paragraphs 2.2 and 2.3.

1.5 A member of the *Society* must not sign an SAO unless he or she possesses an appropriate practising certificate issued by the *Society* to act as *Signing Actuary* to a life reinsurance undertaking and has been approved by the Central Bank of Ireland to act in the PCF of *Signing Actuary* for the company in question. The practising certificate must be valid as at the date the SAO is signed.

1.6 The nature of the opinion required by the Central Bank of Ireland places a high level of responsibility on the *Signing Actuary*. In accordance with the *Code*, the *Signing Actuary* must consider whether he or she has sufficient knowledge and experience to undertake the assignment, including knowledge of the business procedures of the *Company*, the markets in which it operates and the types of business that it underwrites.

1.7 Before agreeing to prepare an SAO, the *Signing Actuary* must consider the requirements of the *Code* in relation to conflicts of interest.

1.8 The SAO must be supplemented by a *Report* addressed by the *Signing Actuary* to the *Company*. The *Report* should normally be provided no later than two months after the date the SAO is signed. Section 8 of this ASP sets out the minimum responsibilities which the *Signing Actuary* is expected to meet in relation to such *Reports*.

1.9 The *Signing Actuary* must explain in the *Report* his or her reasons for any non-compliance with any obligations which, under this ASP, he or she "should" or "should normally" meet.



2 The SAO

- 2.1 The SAO must cover all the life reinsurance business of the *Company* for all years of account. In respect of the technical provisions, an overall figure is required gross and net of retrocession in respect of:
- 2.1.1 gross reserves in respect of life reinsurance business before DAC;
 - 2.1.2 credit for DAC;
 - 2.1.3 total reserves in respect of life reinsurance business.
- 2.2 In the case of the net reserves and the *TRSM-L* calculations, the *Signing Actuary* is not required to consider the impact of possible unknown future defaults or impairments with respect to reinsurance recoveries. However, the *Signing Actuary* must seek confirmation from the *Company* as to whether there are any known defaults or impairments in reinsurance recoveries and, where applicable, the quantification of any such defaults or impairments, as decided upon by the *Board*, must be taken into account in the calculations.
- 2.3 The *Signing Actuary* is not required to consider or comment on the appropriateness and effectiveness of the investment policy approved by the *Company*, nor the appropriateness and effectiveness of the *Company's* retrocession programme. The *Signing Actuary* must make clear to the *Company* that the SAO refers only to the level of actuarial reserves and the calculation of the *TRSM-L*, and therefore the SAO does not constitute an opinion on the *Company's* overall solvency position.
- 2.4 The reserves must include an allowance for future inflation of claims costs.
- 2.5 The discount rates used by the *Signing Actuary* in his or her projections should normally be estimated by reference to interest rates on assets corresponding to the liabilities as regards currency and duration. If the rates used by the *Signing Actuary* are higher than any rates specified by the Central Bank of Ireland, attention must be drawn to this fact in the SAO and the *Report*.
- 2.6 If, following discussion with the *Company*, the *Signing Actuary* believes that an SAO can be provided but only with a qualification, then he or she may still prepare the SAO, but modified to reflect the qualification, which must make clear to which figure(s) it relates.



- 2.7 The *Reserving Requirements* provide that, where the *Signing Actuary* is unable to provide an unqualified *SAO* or refuses to provide an *SAO*, the *Signing Actuary* must inform the Central Bank of Ireland and the *Company*'s external auditor of the reason for this as soon as possible. The *Signing Actuary* should also so inform the *Board*.
- 2.8 If the *Signing Actuary* is aware of specific features of the business that significantly increase the uncertainty as to future outcomes, then a comment to that effect must be included in the *SAO*.

3 Relationships

- 3.1 In providing the *SAO*, the professional responsibilities of the *Signing Actuary* under the *Code* override any responsibilities he or she might have as an employee or consultant.
- 3.2 The *Signing Actuary* must make it clear at the outset that he or she may require frequent access to the *Board*, management and other members of the *Company*'s staff or consultants, and may wish to have access to work carried out by or for the *Company*, including the internal audit assessment(s) and any previous *SAOs* and related reports. However, since the *Signing Actuary* providing the *SAO* must take full responsibility for the opinion stated, he or she must be satisfied that all material used for that purpose is appropriate.
- 3.3 The *Signing Actuary* should submit the *Report* to the *Company* within six months of the valuation date. As the *Report* is a key document that is (as per the *Reserving Requirements*) intended to inform and assist the *Board* in its running of the *Company*, the *Signing Actuary* must request to present his or her findings to the *Board* or an appropriate *Board* Committee. This request should be documented.
- 3.4 The *Signing Actuary* should liaise with the *Reviewing Actuary* as required for the purposes of the completion of a peer review pursuant to the *Reserving Requirements*.
- 3.5 The *Signing Actuary* may need to rely on or use the work of others, although the reliance of the *Signing Actuary* on other parties must not be absolute. If there is a risk of confusion as to the division of responsibilities between the *Signing Actuary* and other persons or organisations, the respective responsibilities must be made clear in the *Report*.



- 3.6 In the case of composite reinsurance undertakings, where the *Company* is required to obtain a separate *SAO* in respect of its non-life reinsurance business, the *Signing Actuary* must ensure that there is appropriate liaison with the actuary providing that separate *SAO*.

4 Data and Information

- 4.1 There are two sets of data involved in the process of actuarial estimation and provision of an *SAO*:
- 4.1.1 Data used for (a) the determination by the *Signing Actuary* of the *Company*'s technical reserves and (b) the confirmation by the *Signing Actuary* of the calculation of the *TRSM-L* calculation; and
- 4.1.2 The financial information extracted from the statutory returns or published financial statements as appropriate, in respect of which the *SAO* is being signed. These are audited documents and the summary financial information drawn from them must be separately verified by the *Signing Actuary*.
- 4.2 In relation to the data specified in paragraph 4.1.1:
- 4.2.1 The *Signing Actuary* must obtain a comprehensive understanding from the *Company* of the definition, accuracy, completeness and consistency of preparation over time of the data and information provided.
- 4.2.2 The *Signing Actuary* must consider the nature of the risks in respect of which data and information of different types is submitted, and whether or not alternative, more extensive or more suitable data and information are necessary.
- 4.2.3 In respect of some types of reinsurance business, a review of the current position of the reinsurance contracts based on current or recent ceding company data and information may be sufficient for the *Signing Actuary* to form an opinion. Where there is significant uncertainty, the *Signing Actuary* may require further data and information relating to the underlying cedants' business which are the subject business of the reinsurance contracts. This is particularly the case where the performance of such business has a material bearing on the *Company*'s liabilities.



- 4.2.4 The *Signing Actuary* must obtain a *DAS* from the *Company* confirming the accuracy and completeness of the data and information. A specimen *DAS* is provided in Appendix 1. The *Signing Actuary* must not sign the *DAS* as, under the *Reserving Requirements*, the *Signing Actuary* is required to act independently of the *Company* in providing the *SAO*. The *Signing Actuary* must ensure that all data and information on which he or she has relied is specified in the *DAS*. The *Signing Actuary* must ensure the *DAS* is sufficiently up to date when signing the *SAO*.
- 4.2.5 The *Signing Actuary* is allowed to rely on the *DAS*, but must also consider the extent to which it is appropriate to carry out investigations to assess whether the data and information are sufficiently accurate and complete for the purpose of preparing the *SAO*.
- 4.2.6 If there are any material discrepancies or anomalies in the data and information, the *Signing Actuary* must discuss these with the *Company*.
- 4.2.7 The *DAS* contains reference to the treatment of inwards and outwards reinsurance disputes and failures. The *Signing Actuary* must obtain a sufficient knowledge and understanding of how the recording of actual and / or anticipated failures of recovery of retrocessions has affected the data and information supplied to him or her.
- 4.2.8 Many of the data and information sources available for use in life reinsurance have some degree of imperfection. This does not prevent the use of data and information from such sources (with appropriate disclosure in the *Report*, if necessary), provided the *Signing Actuary* has reasonable grounds for believing that the data and information are appropriate and the results appear reasonable.
- 4.2.9 If the *Signing Actuary* encounters anything during the course of his or her work that gives rise to any material concerns with regard to the data and information, he or she must amend the reference to data and information in the wording of the *SAO*.
- 4.2.10 Should the data and information prove to be inadequate, the *Signing Actuary* must consider whether the use of such data and information might produce material biases in the results of the investigation and make appropriate allowances in his or her assessment of the liabilities. If such allowances are material, the *SAO* must be appropriately qualified and details of the allowances made must be included in the *Report*. If appropriate allowances cannot be made, the *Signing Actuary* must decline to provide an *SAO*.



- 4.3 In relation to the data specified in paragraph 4.1.2, if the time-scale is such that the *Signing Actuary* is unable to see the final version of the statutory returns before he or she signs the *SAO*, then he or she must obtain a draft of the statutory returns prior to signing, and a written undertaking from the *Company* that there will be no material changes between the draft and the final version and that details of changes will be provided to the *Signing Actuary*. A specimen undertaking is given in Appendix 1. In these circumstances, the *Signing Actuary* must seek approval from the Central Bank of Ireland to amend the paragraphs in the *SAO* entitled “Scope” and “Solvency Margin”; specimen amended wording is set out in Appendix 2.
- 4.4 If the *Company* advises the *Signing Actuary* of any changes to the data specified in paragraph 4.1.1 or paragraph 4.1.2, then he or she must consider the effect on the calculations, and determine whether the *SAO* needs to be amended and re-issued.
- 4.5 Notwithstanding the above, this *ASP* does not create an audit requirement - the *Signing Actuary* is not required to audit data, and this should be noted in the *Report*.

5 Valuation Principles

5.1 General

- 5.1.1 In order to be able to provide an *SAO*, the *Signing Actuary* must be satisfied that the reserves held by the *Company* represent a margin over best estimate. In this context, the term “best estimate” is intended to represent the expected value of the liabilities. The margin over best estimate is intended to reflect the inherent uncertainty in the underlying business and/or the data available to the *Signing Actuary* in determining the expected value of the liabilities.
- 5.1.2 The *SAO* refers explicitly to the inclusion of appropriate margins for adverse deviation of the relevant factors. The *Signing Actuary* must be satisfied that the margin in the reserves reported in the *Company*’s returns to the Central Bank of Ireland are adequate having regard to his or her own assessment of the risks inherent in the nature and conduct of the *Company*’s business.
- 5.1.3 If the *Signing Actuary* is using or relying on the *Company*’s reserving processes, he or she must have reviewed those processes. He or she must also be familiar with the systems and controls in place and be satisfied that the appropriate reserving processes have been applied correctly and are adequately documented.



5.2 Reserving methodology

- 5.2.1 The *Signing Actuary* must use or rely on reserving methodologies that are appropriate to the contracts in question, taking into account not only the principal benefits and how they may increase or decrease over time, but also any ancillary benefits, including surrender and paid-up values and any options and guarantees.
- 5.2.2 In deriving or reviewing the reserving methodology, the *Signing Actuary* is not required to consider each reinsurance contract individually. Rather, the *Signing Actuary* may group contracts with similar types of benefits that he or she considers to be sufficiently homogenous for the purpose of this exercise. In grouping contracts, the *Signing Actuary* must have regard to factors including currency, territory and contract terms.
- 5.2.3 A reserving methodology which is not in general use in the actuarial profession is not precluded, but a *Signing Actuary* who uses or relies on such a methodology must be prepared to justify it by reference to actuarial principles.
- 5.2.4 The *Signing Actuary* must be satisfied that the reserves after allowance for *DAC* represent a margin over best estimate, in accordance with the requirements of paragraph 5.1.
- 5.2.5 In view of the inherent uncertainty and complexity of certain reinsurance contracts, the *Signing Actuary* must consider whether one or more reserving methodologies should be used. The reserving methodology used may vary according to the contracts and the nature and triggers relating to the inward and outward cash flows being modelled.
- 5.2.6 Where the data and/or information available for a contract or contracts is/are inadequate, the *Signing Actuary* must consider whether there is a reserving methodology that will allow him or her to be satisfied that the requirements of paragraph 5.1 are met. He or she must be prepared to justify the reserving methodology used under such circumstances and must have regard to the guidance in paragraphs 4.2.8 to 4.2.10.
- 5.2.7 Where *Regulatory Requirements or Reserving Requirements* refer to the method of calculation and assumptions used in the reserves not being subject to discontinuities from year to year arising from arbitrary changes, this requirement must not be interpreted to preclude changes to valuation interest rates which arise from changes in market yields, or changes to valuation expense, mortality or other assumptions, which arise from changes in the *Company's* actual or anticipated experience.



- 5.2.8 Where it is appropriate to hold an unearned premium reserve to cover unexpired risks, the *Signing Actuary* may assume, unless notified to the contrary by the *Company*, that in the calculation of the unearned premium reserve, the apportionment of premiums across periods of risk is accurate and representative of the risk profile of the business. Any such calculation must have regard to the requirements of paragraph 5.1.
- 5.2.9 Where it is appropriate to hold a reserve in respect of claims that have been incurred but not reported, the *Signing Actuary* must ensure that the methodology used to establish that reserve has regard to the risk profile and expected experience of the business in question. Any such calculation must have regard to the requirements of paragraph 5.1.
- 5.2.10 Where the reserves relating to a contract, calculated in accordance with the *Regulatory Requirements* and *Reserving Requirements*, are negative, the *Signing Actuary* must be satisfied that such reserves are recoverable in the event of a contract recapture.
- 5.2.11 It is recognised that the *Company's* total reserves may be negative. The *Signing Actuary* must be satisfied that, overall, such reserves are recoverable.

5.3 Lack of data for assumption setting

- 5.3.1 In some cases, due to the nature of the reinsurance business, the available historical data may be insufficient to enable the *Signing Actuary* to determine appropriate assumptions for use in conventional projection techniques. In such circumstances, the *Signing Actuary* may have regard to the initial pricing assumptions for the relevant contracts, historic profit and loss experience, experience relating to other similar contracts, industry data and any other relevant data sources. However, the *Signing Actuary* must satisfy himself or herself that any such data used or relied upon are appropriate for the business written. The *Signing Actuary* must also have regard to the reserving methodology used and the requirements of paragraph 5.1.

5.4 Impact of outwards reinsurance

- 5.4.1 The *Signing Actuary* must consider the underlying outward reinsurance and / or retrocession policies, including endorsements, alterations, future and additional premiums, commutation and cancellation or recapture provisions, profit sharing arrangements, letters of intent, offset provisions and any other documentation that may impact on the liability of the contract.



5.4.2 In order to estimate the expected recoveries from an outward retrocession programme, the *Signing Actuary* must obtain sufficient details of the programme and must consider whether it is necessary to conduct a review of the reinsurance contract documentation.

5.4.3 The *Signing Actuary* must not take credit for an outward reinsurance programme to the extent that the relevant benefits of such a programme have been included in the value of the *Company's* assets.

5.5 Valuation data lags

5.5.1 The *Signing Actuary* must ensure that the reserves make appropriate allowance for delays in reporting by ceding companies.

5.5.2 The *Signing Actuary* may be asked by the *Company* to carry out some of his or her work as at a valuation date prior to the *SAO* valuation date. In all circumstances, the *Signing Actuary* must carry out sufficient work as at the *SAO* valuation date, in order to be satisfied that he or she can sign the *SAO*. He or she must have regard to all inwards and outwards contracts entered into up to and including the *SAO* valuation date.

5.5.3 The *Signing Actuary* must ascertain from the *Company* whether there have been any material events between the valuation date and the date of signing the *SAO* that impact on the reserves as at the *SAO* valuation date and make an appropriate adjustment to his or her projections for such events.

5.6 Review of documentation

5.6.1 Reinsurance contracts may have complex features that will require careful interpretation and scrutiny in order to produce an appropriate reserve. In this context, the *Signing Actuary* must consider whether it is necessary to review relevant documents relating to inwards and outwards contracts, including endorsements, alterations, future and additional premiums, commutation and cancellation or recapture provisions, profit sharing arrangements, letters of intent, offset provisions and any other documentation that may impact on the liability of the contract.

5.6.2 For those contracts which are subject to a dispute, or in arbitration, and where the financial amounts are material, the *Signing Actuary* must satisfy himself or herself that the *Company* has obtained appropriate professional advice and must obtain written evidence of such advice. The *Signing Actuary* should normally rely on that professional advice in estimating the liability under such contracts.



5.7 Interest rate assumptions

- 5.7.1 In reviewing or deciding upon the rates of interest used in setting the reserves, the *Signing Actuary* must have regard to the value placed by the *Company* on the assets covering the reserves and to the nature and term of the assets covering such reserves.
- 5.7.2 The *Signing Actuary* must take into account the rate at which future investment will be possible and must have regard to the yields obtained on the existing portfolio of assets and to the anticipated yield on future investments. Any such review or decision must have regard to the requirements of paragraphs 5.1 and 5.7.1.
- 5.7.3 For the purpose of determining the rates of interest used in reserving for a particular category of contract, assets may be notionally apportioned, where appropriate, between different categories of contracts.
- 5.7.4 The *Signing Actuary* must have regard to any deductions that should be made for investment expenses or tax.
- 5.7.5 In determining the appropriateness of any margin for adverse deviation as contemplated in paragraph 5.1, the *Signing Actuary* must pay regard to the relationship between the assets and the corresponding liabilities. The importance of this will vary widely from one situation to another, but experience suggests that this can be an area of particular importance.
- 5.7.6 The *Signing Actuary* must be aware of the possible effects of derivative instruments used by the *Company* when setting reserves. The appropriate interest rates used for reserving purposes must allow for the return on the assets held, as adjusted to reflect economic exposure under futures contracts and contracts for differences. Consideration must be given to the treatment of, and allowance for, financial options, particularly when close to an option date.
- 5.7.7 Where derivative contracts are held in connection with particular assets or liabilities, it will be generally appropriate to apportion these derivatives together with the corresponding assets and liabilities.
- 5.7.8 The *Signing Actuary* must have regard to the possibility of an asset default. When assessing the deduction to be made to the rates of interest used for reserving purposes to allow for default risk, it is appropriate to have regard to any differences in yield which arise from differences in the marketability of the asset in question as compared with the risk-free alternative. Provision for the possibility of default for credit-rated securities, including government and sovereign bonds, must be made on a prudent basis. Making this provision will



require the exercise of professional judgement. In all cases, including but not limited to government and sovereign bonds, the *Signing Actuary* must consider (a) historical default rates of similar securities with a similar credit rating, taking into account differences in credit characteristics that may not be reflected in ratings and (b) alternative approaches, such as by reference to current and historical market based measures. Provision for the possibility of default for securities that are not credit-rated must be made on principles at least as prudent as those adopted for credit-rated securities.

5.7.9 The *Signing Actuary* must consider the direction of the margin adjustment to the interest rate (as contemplated in paragraph 5.1) where the reserves produced are negative reserves.

5.8 Claims decrement assumptions

5.8.1 In reviewing or deciding upon the rates of mortality and morbidity to be used in setting the reserves, the *Signing Actuary* must take account of relevant trends in experience within the *Company* or the industry. Any such review or decision must have regard to the requirements of paragraph 5.1.

5.8.2 For assurance and sickness business, allowance must be made for the incidence of mortality and morbidity arising from known diseases, the impact of which may not yet be reflected fully in current mortality or morbidity experience.

5.8.3 The *Signing Actuary* is not required to allow for the emergence of unanticipated major new types or classes of claims.

5.9 Expense assumptions

5.9.1 The *Signing Actuary* must ensure that the provision for maintenance expenses (including fixed expense and/or overhead obligations of the *Company*) has regard to how the contracts will be fulfilled in the future, taking account of whether the *Company* is open or closed to new business at the valuation date.

5.9.2 The *Signing Actuary* must allow for any contractual obligations imposed on the *Company*, including those arising from third party administration agreements, where a third party administrator is being used to fulfil the existing contracts.

5.9.3 Where there are service agreements with other companies (whether or not within the group structure), the *Signing Actuary* must consider whether any additional provision is appropriate for the contingency that such agreements might cease. This is particularly relevant where a subsidised or preferential agreement exists.



- 5.9.4 The *Signing Actuary* must make provision for the future increases considered likely in expenses for existing business, based, inter alia, on assumptions as to future rates of increase in prices and earnings which impact such expenses. Any such provision must have regard to the requirements of paragraph 5.1.
- 5.9.5 In providing for the expenses likely to be incurred in the future in fulfilling the existing contracts, it is permissible to take credit for the difference between the gross premium and the valuation net premium except to the extent that this difference is already taken into account in the valuation of reserves or the recoverability testing of *DAC*. The *Signing Actuary* must be satisfied, in this instance, that the provision on such an implied basis has regard to the requirements of paragraph 5.1.
- 5.9.6 In providing for the expenses likely to be incurred in the future in respect of collateral costs being funded by the *Company*, the *Signing Actuary* must have regard to relevant market information. Any such provision must have regard to the requirements of paragraph 5.1.
- 5.9.7 The *Signing Actuary* should normally ensure that the allowance for future maintenance expenses within the reserves is at least as great as the actual maintenance expenses of the *Company* as at the effective date of the *SAO*. The allowance for future maintenance expenses for the purposes of this paragraph may include approaches based on assumed future management actions, for example an assumption to transfer the business to another reinsurer, or to terminate treaties at an additional cost to the *Company*. Such approaches are acceptable subject to proper documentation of the basis together with the overarching requirement that the aggregate reserve is both prudent and meets the *Regulatory Requirements*.

5.10 Lapse rate and other assumptions

- 5.10.1 In reviewing or deciding upon the best estimate lapse rates, the *Signing Actuary* must take account of the relevant historic trends in experience where available, both within the *Company* and in the industry, and any future expected impacts, internal or external, on such lapse rate experience going forward.
- 5.10.2 The *Signing Actuary* must consider how the best estimate lapse assumptions used in setting the reserves should be adjusted to take account of the requirements of paragraph 5.1. In particular, the direction and shape of any margin in the lapse assumptions must be considered.
- 5.10.3 In reviewing or deciding upon various other decrement assumptions not specifically mentioned, the *Signing Actuary* must follow the principles specified in paragraph 5.8 and this paragraph in relation to the claims decrement and lapse rate assumptions respectively.



5.11 Options and guarantees

- 5.11.1 Provision must be made, having regard to the requirements of paragraph 5.1, to cover any increase in reserves under contracts caused by options being exercised under such contracts. The *Signing Actuary* must consider all options in both new and existing contracts to determine whether the reserves established make allowance for all known liabilities.
- 5.11.2 Where an optional benefit is of greater value than the basic benefit under the reserving assumptions, the *Signing Actuary* must make appropriate allowance within the reserves for the likelihood of the reinsurance contract holder exercising the option or for the proportion of underlying policyholders likely to exercise the option, having regard to the circumstances in which such options are likely to be attractive to the reinsurance contract holder or the underlying policyholders. In this regard, past experience may only be taken into account to the extent that it is relevant under the reserving assumptions or where there is no market information and such past experience is likely to give a reasonable estimate of future experience and is appropriate in the context of possible future changes in circumstances. The appropriateness of the allowance should be assessed with regard to the requirements of paragraph 5.1.
- 5.11.3 Many options are long-term and need careful consideration in that context. In addition many options may be significantly “out of the money”. The *Signing Actuary* must have regard to the fact that economic circumstances or the behaviour of the reinsurance contract holder or the underlying policyholders may change over time as reinsurance contract holders or policyholders become more aware of the value of their options. The *Signing Actuary* must also be aware that reinsurance contract holders may be more rational and knowledgeable than the underlying policyholders in assessing the value of the option(s) available to them.
- 5.11.4 Options may be valued using a variety of techniques. Where an option offers a choice between a number of non-discretionary financial benefits and where there is a wide range of possible outcomes, the *Signing Actuary* should normally model such liabilities stochastically, where those liabilities are material in the context of the overall position of the *Company*. Where the *Signing Actuary* does not model such liabilities stochastically he or she must justify his or her decision in the *Report* referred to in paragraph 1.8.
- 5.11.5 The type and calibration of the stochastic models used will depend to a significant extent on the underlying option being valued and the nature of the guarantee involved.



- 5.11.6 The *Signing Actuary* must benchmark the stochastic model to relevant market asset prices. Where the exact assets are difficult to calibrate against, the nearest available asset may be a suitable alternative. However, the *Signing Actuary* must take care with any interpolation or extrapolation of asset prices for the purposes of calibration. In benchmarking to asset prices, the *Signing Actuary* must take into account the relative “moneyness” of the option. Where no market exists, historical data may be used as a suitable alternative.
- 5.11.7 Dependencies between assets may be determined from historical data where no market data exists. The *Signing Actuary* must take into account the quality of the historical data and the extent of fluctuation in correlations over the period, in particular, the correlations in stressed conditions.
- 5.11.8 The *Signing Actuary* may base the risk-free rate used for the purposes of the model, on relevant zero coupon yields or swap curves. He or she must be prepared to justify whichever is chosen.
- 5.11.9 If the option is significantly “out of the money”, the *Signing Actuary* must recognise that there will be limited historical observations of the more extreme tail outcomes, even for the most common economic variables. A considerable degree of uncertainty will therefore exist as to the behaviour of the tails of distributions. The *Signing Actuary* must check that the model and assumptions produce a sufficient number of adverse scenarios. If necessary, stress testing, can assist in assessing the behaviour of options in adverse circumstances.
- 5.11.10 In carrying out such modelling, the *Signing Actuary* must take into account, on a prudent basis, the choices likely to be made by reinsurance contract holders or the underlying policyholders in each scenario.
- 5.11.11 The *Signing Actuary* must ensure that the degree of prudence used in the valuation of options and guarantees is appropriate having regard to the availability of market prices and historical data.

6 DAC

- 6.1 The *Signing Actuary* must ensure that the credit for the *DAC* asset in the *SAO* complies with the relevant *Regulatory Requirements*.
- 6.2 The *Signing Actuary* must ensure that the *DAC* asset held is recoverable out of future margins. In addition, the *Signing Actuary* must ensure that future margins which will be used to recover the *DAC* asset have not already been included in the derivation of the reserves.



- 6.3 The methods and assumptions used to test for recoverability of the *DAC* asset must be consistent with those used for the valuation of the reserves in respect of the calculation of the corresponding classes of business in accordance with section 5 of this *ASP*.
- 6.4 When testing for recoverability of the *DAC*, the *Signing Actuary* is not required to consider each reinsurance contract individually. Rather, the *Signing Actuary* may group contracts with similar types of benefits that he or she considers to be sufficiently homogenous for the purpose of this exercise. In grouping contracts, the *Signing Actuary* must have regard to factors including currency, territory and contract terms.
- 6.5 The *Signing Actuary* must consider any contract features that may limit the recoverability of *DAC* due to early redemption of the reinsurance contract, in addition to the experience relating to the underlying business.
- 6.6 The *Signing Actuary* must assess whether or not the credit for the *DAC* asset in the *SAO* is less than or equal to the expected amount recoverable having regard to paragraphs 6.1 to 6.6. This does not preclude the *Signing Actuary* from signing an *SAO* that includes a lower amount of *DAC*.

7 TRSM-L

- 7.1 It is the responsibility of the *Board* to classify the liabilities in accordance with the definitions and guidance set out in the relevant *Regulatory Requirements*. However, for the purposes of confirmation of the *TRSM-L* calculation, the *Signing Actuary* must be familiar with the *Board's* criteria for the classification of reinsurance liabilities, including *finite* and *financial reinsurance*.
- 7.2 The *Signing Actuary* must ensure that the solvency margin for each respective class of business is determined in accordance with the relevant *Regulatory Requirements*, which may include the use of an internal model agreed by the Company with the Central Bank of Ireland. Where such an internal model is used, then, for the purposes of the *SAO*, the *Signing Actuary* must verify that the *TRSM-L*, as stated in the *SAO*, has been calculated by correctly applying the model to the relevant data but he or she is not required to opine on the appropriateness of the model assumptions or methodologies.
- 7.3 For certain life reinsurance contracts, the reinsurance undertaking may separate premiums, claims and technical provisions under such contracts for the purpose of determining the required solvency margin. Where such separation occurs, the *Signing Actuary* must satisfy himself or herself that it has been done in accordance with the relevant *Regulatory Requirements*.



- 7.4 In accordance with *Regulatory Requirements*, the *TRSM-L* may be reduced to allow for retrocessions. The *Signing Actuary* must ensure that he or she has reviewed the retrocession programme put in place by the *Company* and that he or she considers that the application of this programme is sufficient to support the credit for retrocessions incorporated in the calculation of the *TRSM-L*.

8 The Report

- 8.1 In accordance with the *Reserving Requirements*, the *Signing Actuary* must document his or her work and conclusions in a *Report* addressed to the *Company*. The *Report* must be signed by the *Signing Actuary* and the date of signing must be included. As indicated at paragraph 1.3.3, the *Signing Actuary* should consider whether it is necessary to include in the *Report* additional analysis and information beyond that required under the *Reserving Requirements* and this *ASP*, in order to properly inform the *Board* in relation to the subject matter of the *Report*.
- 8.2 The *Report* must be prepared in accordance with ASP LA-12 (Life Reinsurance Business: Actuarial Reports) issued by the Society of Actuaries in Ireland. Subject to 8.2.1, the *Report* must state that it has been prepared in accordance with the versions of ASP LA-12 and this ASP LA-11 current at the date on which the *Report* is signed.
- 8.2.1 In the event of conflict between the *Reserving Requirements* and this *ASP*, the *Signing Actuary* should note this in the *Report* and state that he or she followed the *Reserving Requirements*.
- 8.2.2 As per paragraph 1.9, the *Signing Actuary* must explain in the *Report* his or her reasons for non-compliance with any obligations which, under his *ASP*, he or she ‘should’ or ‘should normally’ meet.
- 8.3 The *Report* must state that it may be made available by the *Company* to the Central Bank of Ireland, and the extent, if any, to which it may be distributed to third parties other than the Central Bank of Ireland. It must be made clear that the *Report* should not be used for purposes for which it is not intended.
- 8.4 The *Report* should normally contain all the information and analyses outlined in the *Reserving Requirements*.



- 8.5 The *Signing Actuary* must ensure that the *Report* is clear and appropriate to the circumstances and its expected audience (which may be expected to include the management and the *Board* of the *Company*, and the Central Bank of Ireland). The *Signing Actuary* must therefore ensure that the *Report* is written in appropriate terms so that its readers will be able to understand its basic assumptions, conclusions and recommendations. An executive summary or overview drawing attention to important issues should normally be included.
- 8.6 If the *Signing Actuary* uses industry or benchmark data in the course of estimating the technical reserves, the source and relevance of such data must be stated in the *Report*.
- 8.7 Relevant data summaries should normally be included in or with the *Report* either in hard copy or electronic form.
- 8.8 The *Report* should normally include a statement of movement in the net and gross of retrocession reserves (including *DAC*), with a statement of broad reasons for the movement in the *Signing Actuary*'s estimate between the last and current analysis.
- 8.9 Occasionally, the *Signing Actuary* may be required to make a judgement about a future event for which he or she can gain no guidance from historic events. If such judgements have been made, the *Report* must draw particular attention to the issue, outline how the particular assessment has been made and indicate the potential impact if the actual experience is different from the assumptions made.
- 8.10 In accordance with the *Reserving Requirements*, the *Report* must include documentation and justification for any material uses of expert judgement.
- 8.10.1 Proportionality may be applied and the discussion may be limited to the key drivers and those areas and / or assumptions that may materially change the calculation of the technical reserves.
- 8.10.2 Commentary should be included on why the judgement used is appropriate and how the *Signing Actuary* has satisfied himself or herself that it is appropriate for the purposes of calculating the technical reserves. The discussion should include some quantification of the sensitivity of the results to the expert judgement selected, along with a possible range of values.



- 8.10.3 The *Signing Actuary* should mention the limitations of using expert judgement. Consideration should be given as to how the expert judgement may have changed since the last *Report* and an explanation should be provided where the judgement has changed. The *Signing Actuary* should explain why the revised judgement is now appropriate.
- 8.11 This Section 8 must be read in conjunction with the following paragraphs of this *ASP*, which include specific requirements relating to the content of the *Report*: paragraphs 2.5, 3.5, 4.2.8, 4.2.10 and 5.11.4.



Appendix 1

Specimen Data Accuracy Statement

I, [Name], [Title], hereby affirm that regarding [Company Name] as at [valuation date]:

- the data and information provided to [Signing Actuary's name and firm] for the Statement of Actuarial Opinion as follows:

[List of Data and Information provided]

were prepared under my direction and, to the best of my knowledge and belief, are accurate and complete [except where advised otherwise]; and

- the classification of the reinsurance contracts and treaties, both inwards and outwards, and the data and information used in the Total Required Solvency Margin – Life calculation, as provided to [Signing Actuary's name and firm] were prepared under my direction and, to the best of my knowledge and belief, are accurate and complete [except where advised otherwise] and comply with relevant Irish legislation (including legislation transposing relevant European Union insurance directives) and any other relevant regulatory requirements.

Signed: _____ Date: _____

Specimen undertaking on draft statutory returns

I, [Name], [Title], hereby undertake to provide to [Signing Actuary's name and firm], prior to the submission to the Central Bank of Ireland of the final statutory returns relating to [Company Name] for the year ended [Valuation date], full details of any changes between the draft and final versions of those returns and full details of any differences between the data underlying the draft and final returns. I also confirm that there will be no material changes between the draft and final return.

Signed: _____ Date: _____

Note: Where appropriate, the Data Accuracy Statement and the undertaking on draft statutory returns may be merged into one document.



Appendix 2

Alternative version of the paragraphs in the SAO entitled “Scope” and “Solvency Margin”

Scope – opening paragraph

I have examined the reserves listed below for [Name of Life Reinsurance Company] as at [year ending], as reported in the Company's draft returns to the Central Bank of Ireland [(except for immaterial differences, possibly due to rounding)/(except for rounding differences)]. The Company has confirmed that there was/will be no material change to the draft statutory returns before submission.

Solvency Margin

I am aware that the Total Required Solvency Margin – Life of the Company in respect of life reinsurance business as at (year ending)reported in the Company's draft returns to the Central Bank of Ireland was €..... The Company has confirmed that there was/will be no material change to the draft statutory returns before submission.



EXPLANATORY NOTE

ACTUARIAL STANDARD OF PRACTICE LA-11, VERSION 1.4

This Explanatory Note does not form part of the ASP.

Version 1.4 incorporates changes required following the May 2014 publication by the Central Bank of Ireland of ‘Reserving Requirements for Non-Life Insurers and Non-Life and Life Reinsurers’.