

**DUTCH STANDARD OF ACTUARIAL PRACTICE 2  
(DSAP2)**

**ACTUARIAL FUNCTION REPORT UNDER DIRECTIVE 2009/138/EC**

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## Section 1. General

### 1.1 Purpose

- 1.1.1 This DSAP provides guidance to [actuaries](#) when issuing an [Actuarial Function Report \(AFR\)](#) in connection with an [undertaking](#)'s compliance with the reporting requirements in Article 48(1) of the [Solvency II Directive](#) and in paragraph 8 of Article 272 of the Commission Delegated Regulation (EU) 2015/35.
- 1.1.2 The purpose of this DSAP is that the [intended users](#) of the [AFR](#) should be able to place a high degree of reliance on the [AFR](#), its relevance, transparency of assumptions, completeness and comprehensibility, including the [communication](#) of any uncertainty inherent in the results stated in the [AFR](#). In particular it does this by ensuring that the [AFR](#)
- includes sufficient information to enable [intended users](#) to judge the relevance of the contents of the [AFR](#);
  - includes sufficient information to enable [intended users](#) to understand the implications of the contents of the [AFR](#); and
  - such information is presented in a clear and comprehensible manner.
- 1.1.3 This standard will contribute to ensuring consistent, efficient and effective practices within the [Actuarial Function \(AF\)](#) across [undertakings](#) in the European Union concerning the preparation of the [AFR](#). This will strengthen and contribute towards harmonised and consistent application of EU legislation.

### 1.2 Scope

- 1.2.1 This DSAP applies to [actuaries](#) performing [actuarial services](#) when issuing an [AFR](#) in connection with an [undertaking](#)'s compliance with Article 48(1) of the [Solvency II Directive](#) and paragraph 8 of Article 272 of the Commission Delegated Regulation (EU) 2015/35.

### 1.3 Underlying Principles

- 1.3.1 This DSAP is based on four principles, which should be borne in mind in any assessment of compliance with this DSAP.
- 1.3.2 **Principle 1:** [Actuarial services](#) related to the [AFR](#) must be carried out consistently with Solvency II regulations and guidelines.
- 1.3.3 **Principle 2:** [Actuarial services](#) related to the [AFR](#) should be carried out in a way which is proportional to the nature, scale and complexity of the underlying risks of the [undertaking](#) (Principle of Proportionality).

- 1.3.4 **Principle 3:** [Actuarial services](#) related to the [AFR](#) should be consistent with the code of professional conduct of the actuarial profession and with any applicable general actuarial standards.
- 1.3.5 **Principle 4:** The [AFR](#) should be structured according to the needs of the [intended users](#), in particular the [Administrative, Management or Supervisory Body \(AMSB\)](#).

#### 1.4 Relationship to DSAP1

- 1.4.1 Insofar as possible, this DSAP does not repeat guidance already provided in DSAP1. Any [actuary](#) who asserts compliance with this DSAP (as a model standard) must also comply with DSAP1. References in DSAP1 to “this DSAP” should be interpreted as applying equally to this DSAP2, where appropriate.
- 1.4.2 A failure to follow the principles in this standard need not be considered a departure if it does not have a [material](#) effect. The contents of this standard should be read in that context, even where the term [material](#) is not explicitly used or where the word “must” is used.

#### 1.5 Language

- 1.5.1 Some of the language used in all DSAPs is intended to be interpreted in a very specific way in the context of a decision of the [actuary](#). In particular, the following words are to be understood to have the meanings indicated:
- a. “must” means that the indicated action is mandatory and failure to follow the indicated action will constitute a failure to comply with this DSAP, unless the departure is due to a conflict with law (DSAP1 1.3.1) or code of professional conduct (DSAP1 1.3.2).
  - b. “should” (or “shall”) means that, under normal circumstances, the [actuary](#) is expected to follow the indicated action, unless the departure is due to a conflict with law (DSAP1 1.3.1) or code of professional conduct (DSAP1 1.3.2). However, in all other cases, if following the indicated action would produce a result that would be inappropriate or would potentially mislead the [intended users](#) of the [actuarial services](#), the [actuary](#) should depart from that guidance and disclose that fact and provide the reason for not following the indicated action as described in DSAP1 1.3.3.
  - c. “may” means that the indicated action is not required, nor even necessarily expected, but in certain circumstances is an appropriate activity, possibly among other alternatives. Note that “might” is not used as a synonym for “may”, but rather with its normal meaning.

- d. “any” (as in e.g. “any report”) means all such items if they exist, while acknowledging they may not exist. Such a reference does not give rise to a requirement to create such an item.

1.5.2 This DSAP uses various terms whose specific meanings are defined in the [AAE](#) Glossary. These terms are highlighted in the text with a dashed underscore and in blue (e.g. [actuary](#)).

## **1.6 Cross-references**

1.6.1 This DSAP refers to the content of the [Solvency II Directive](#) and the Commission Delegated Regulation (EU) 2015/35 supplementing the [Solvency II Directive](#), both as amended as per the approval date of this DSAP. If the [Solvency II Directive](#) or the Commission Delegated Regulation (EU) 2015/35 is subsequently amended, restated, revoked, or replaced after this date, the [actuary](#) should apply the principles in this DSAP to the extent they remain relevant.

## **1.7 Effective Date**

1.7.1 This standard applies to [actuarial services](#) relating to an [Actuarial Function Report](#) performed after 31 May 2022.

## Section 2. Appropriate Practices

### 2.1 General principles

#### 2.1.1 The Actuarial Function Report and its core parts

2.1.1.1 The [Actuarial Function \(AF\)](#) must produce a written report (the [Actuarial Function Report \(AFR\)](#)) to be submitted to the [Administrative, Management or Supervisory Body \(AMSB\)](#), at least annually. The [actuary](#) should consider that the [intended user](#) is the [AMSB](#) but may also include other functions of the [undertaking](#) or any related [undertaking](#) and the relevant supervisory authorities.

2.1.1.2 The [AFR](#) should have a form, structure, style, level of detail and content which is appropriate to the particular circumstances, taking into account the [intended users](#). This may lead to an [AFR](#) consisting of several component [reports](#) focusing on specific content which may be provided to the [AMSB](#) separately and at different points of time.

2.1.1.3 The [AFR](#) should:

- (a) state which Actuarial Standards apply to the [work](#) that has been carried out and whether the [work](#) complies with those Actuarial Standards;
- (b) state which Actuarial Standards apply to the [AFR](#) and whether the [AFR](#) complies with those Actuarial Standards; and
- (c) give particulars of any [material](#) departures from the Actuarial Standards referred to in (a) and (b) above.

#### 2.1.2 The Actuarial Function

2.1.2.1 The [AFR](#) must document a summary of all major tasks that have been undertaken by the [AF](#) and their results.

2.1.2.2 The [AFR](#) should set out information identifying relevant [conflicts of interest](#) and describing how they have been managed including any potential [conflicts of interest](#) between the individual [undertaking](#) and any group of which it is a part.

2.1.2.3 In applying 2.3 and 3.2.3.f of DSAP1 the [AF](#) should disclose any [material](#) reliance on other persons' work and how the [AF](#) gained assurance on the reliability of the other persons' work.

2.1.2.4 The [AFR](#) must identify the individuals responsible for writing the [AFR](#), and, if applicable, the person taking overall responsibility for its production.

2.1.2.5 The [AFR](#) may provide information to demonstrate that each of the contributors to the [AFR](#), and, if applicable, the individual taking overall responsibility for the [AFR](#), has the relevant knowledge and experience to fulfil the role.

### **2.1.3 Content of the Actuarial Function Report**

2.1.3.1 The [AFR](#) must clearly identify any deficiencies and give recommendations as to how such deficiencies should be remedied having regard to [materiality](#) and proportionality.

2.1.3.2 The [AFR](#) should include sufficient information and discussion about each area covered so as to enable the [AMSB](#) to judge its implications.

2.1.3.3 The [AFR](#) should summarise the key [data](#) used to reach the [opinions](#) expressed and should draw attention to any [material](#) areas of uncertainty and their sources, and also to any [material professional judgement](#) made in the assessments by the [AF](#).

### **2.1.4 Feedback on the Actuarial Function Report**

2.1.4.1 The [AF](#) should discuss its conclusions and recommendations with management when finalizing the [AFR](#). After submission of an [AFR](#) to the [AMSB](#), the [AF](#) should seek feedback from the [AMSB](#) on the contents of the [AFR](#) and should have regard to that feedback when preparing future [AFRs](#).

2.1.4.2 Details of whether recommendations in the [AFR](#) have been accepted and, if so, on progress towards implementation, should be summarised in the next [AFR](#).

## **2.2 Technical Provisions**

### **2.2.1 Conclusions on adequacy and reliability of Technical Provisions**

2.2.1.1 The [AFR](#) must clearly state the conclusions of the [AF](#) with regard to its analysis of the adequacy and reliability of the [Technical Provisions](#). The conclusions should include any concerns the [AF](#) has in this regard and identify [material](#) shortcomings or deficiencies, with recommendations as to how these could be remedied.

2.2.1.2 The [AFR](#) should include the results of an assessment whether the [Technical Provisions](#) have been calculated in accordance with Articles 75 to 86 of the [Solvency II Directive](#) and advise if any changes are necessary in order to achieve compliance.

2.2.1.3 The [AFR](#) must clearly state the sources and degree of uncertainty the [AF](#) has assessed in relation to the estimates made in the calculation of the [Technical Provisions](#). The [AFR](#) should explain the potential sources of uncertainty and, where appropriate, illustrate uncertainty by reference to possible scenarios.

### **2.2.2 Important information about Technical Provisions**

2.2.2.1 The [AF](#) should ensure that the factors which have a [material](#) impact on the amount of [Technical Provisions](#), including risk drivers and assumptions, are made clear in the [AFR](#).

2.2.2.2 In particular the [AFR](#) should draw attention to any [material](#) judgements made in the identification of the boundary of insurance or reinsurance contracts and in the calculation of [Technical Provisions](#).

### **2.2.3 Disclosure of opening and closing Technical Provisions**

2.2.3.1 The [AFR](#) should disclose the opening and closing [Technical Provisions](#), split, to the extent possible, between best estimate and risk margin. A commentary on the impact on the Own Funds of the main items of movement of [Technical Provisions](#) should be provided.

### **2.2.4 Co-ordination of process**

2.2.4.1 The [AFR](#) should include a broad overview of the overall process employed in respect of the calculation of the [Technical Provisions](#).



## 2.2.5 Sufficiency and quality of data

- 2.2.5.1 The [AFR](#) must include an overview of the controls surrounding the [data](#) used in the calculation of [Technical Provisions](#) and an explanation of how the [AF](#) is comfortable that the [data](#) is appropriate, accurate, reliable and complete.
- 2.2.5.2 The [AFR](#) must identify any [material](#) uncertainties or limitations in the [data](#) and outline the approach taken to these in the context of the calculation of [Technical Provisions](#). Limitations might include, but are not restricted to, its fitness for purpose, consistency over time, timeliness, information technology systems, availability of individual policy and claims [data](#) and of historical [data](#).
- 2.2.5.3 The [AFR](#) should give an overview of the business covered by the [Technical Provisions](#), the split of [data](#) into homogeneous risk groups and how this split has been assessed for appropriateness in relation to the underlying risks of the [undertaking](#).
- 2.2.5.4 The [AFR](#) should consider relevant information provided by financial markets and generally available [data](#) on [underwriting](#) risks and explain how it is integrated into the assessment of the [Technical Provisions](#).
- 2.2.5.5 The [AFR](#) should disclose any concern the [AF](#) has on the documentation describing the process of the collection of [data](#) and analysis of its quality and other information that relates to the calculation of [Technical Provisions](#), including any concern the [AF](#) has on the directory of the [data](#) used in the calculation of the [Technical Provisions](#).

## 2.2.6 Methods and models

- 2.2.6.1 The [AFR](#) must provide an overview about how the appropriateness of the methods and [models](#) used in the calculation of the [Technical Provisions](#) has been assessed with regard to the main drivers of risk, the lines of business of the [undertaking](#) and the way in which the business is being managed.
- 2.2.6.2 The [AFR](#) should draw attention to any unusual or non-standard method not within usual market practices which has been used to calculate [Technical Provisions](#), including a description of the rationale for the choice of method.

- 2.2.6.3 The [AFR](#) should include, where appropriate, an overview of the methods used to calculate [Technical Provisions](#) in respect of contracts where the insufficiency of the [data](#) has prevented the application of a reliable actuarial method, specifically those cases referred to in Article 82 of the [Solvency II Directive](#). The [AFR](#) should include an assessment of the appropriateness of the approximations used in the calculations of [Technical Provisions](#) for such contracts.
- 2.2.6.4 The [AFR](#) must include an assessment of the appropriateness of the methods and [models](#) used in the calculation of options and guarantees included in insurance or reinsurance contracts and in the valuation of these options and guarantees in the [Technical Provisions](#).
- 2.2.6.5 The [AFR](#) should indicate if the [AF](#) assesses that the information technology systems used in the calculation of [Technical Provisions](#) do not sufficiently support the actuarial and statistical procedures.
- 2.2.6.6 Where the calculation of [Technical Provisions](#) depends on multiple methods or [models](#), the [AFR](#) should make reference to any [material](#) differences between the results according to these methods or [models](#) and what allowance has been made for the differences.
- 2.2.6.7 The [AFR](#) should disclose and justify any [material](#) changes in methods or [models](#) from those used in the previous [AFR](#) and quantify the effect on the [Technical Provisions](#).

## **2.2.7 Assumptions**

- 2.2.7.1 The [AFR](#) must include a description of how the appropriateness of the [data](#) and methods used to determine the assumptions underlying the [Technical Provisions](#) have been assessed.
- 2.2.7.2 The [AFR](#) should disclose the key assumptions underlying the calculation of the [Technical Provisions](#) and explain their appropriateness in relation to the main drivers of risk likely to affect the insurance or reinsurance obligations of the [undertaking](#).
- 2.2.7.3 The [AFR](#) should disclose any [material](#) changes made to the assumptions used compared to the previous [AFR](#).

2.2.7.4 The [AFR](#) should disclose its assessment of the appropriateness of [material](#) judgements made in the determination of assumptions. These may include, but are not restricted to, assumptions or interpretations made in relation to the following:

- contractual options and guarantees;
- policyholder behaviour;
- future management actions;
- amounts recoverable from counterparties;
- areas of future discretion exercised by the [undertaking](#) which might impact its insurance or reinsurance obligations; and
- obligations which might exist over and above contractual obligations.

## **2.2.8 Comparing best estimates against experience**

2.2.8.1 The [AFR](#) should include an overview of the process used to compare best estimates against actual experience and must draw attention to any concerns the [AF](#) has in regard to the effectiveness of this process.

2.2.8.2 The [AFR](#) should disclose the findings of the [AF](#)'s review of the quality of past best estimates and the conclusions from this in relation to the appropriateness of [data](#), methods or assumptions used in the calculation of the [Technical Provisions](#). In reviewing the quality of past estimates, the [AFR](#) should draw attention to those areas where actual experience has deviated in a [material](#) way from the assumptions made and provide a commentary in this regard. It may assist understanding if this commentary distinguishes between deviations which are judged to arise from volatility of the underlying experience and those which are viewed as relevant to the appropriateness of the [data](#), methods or assumptions used. The [AFR](#) should disclose any [material](#) judgement when such a distinction is made.

## **2.2.9 Sensitivity analysis**

2.2.9.1 The [AFR](#) must report on the results of an analysis of the sensitivity of the [Technical Provisions](#) to each of the major risks underlying the obligations which are covered in the [Technical Provisions](#).

## **2.3 Opinion on underwriting policy**

### **2.3.1 Opinion on the overall underwriting policy of the undertaking**

2.3.1.1 The [AFR](#) must express an [opinion](#) on the overall [underwriting](#) policy of the [undertaking](#).

2.3.1.2 The [AFR](#) should set out how the [AF](#) has arrived at its [opinion](#) on the overall [underwriting](#) policy of the [undertaking](#).

2.3.1.3 The [AFR](#) should explain any concerns which the [AF](#) may have as to the suitability of the overall [underwriting](#) policy.

2.3.1.4 The [AFR](#) should outline recommendations to remedy any deficiencies the [AF](#) has identified in relation to the overall [underwriting](#) policy having regard to [materiality](#) and proportionality.

### **2.3.2 Areas of consideration**

2.3.2.1 An assessment of the suitability of the overall [underwriting](#) policy should at least include the areas set out in 2.3.3 to 2.3.7.

### **2.3.3 Sufficiency of premiums**

2.3.3.1 The [AFR](#) must conclude whether the premiums are expected to be sufficient in the light of the operation of the overall [underwriting](#) policy. The assessment must take into consideration the impact of the underlying risks (including [underwriting](#) risks) to which the business is exposed and the impact on the sufficiency of premiums of options and guarantees included in insurance and reinsurance contracts.

### **2.3.4 Environmental changes**

2.3.4.1 The [AFR](#) should describe the external environmental factors which have the potential to influence the profitability of new business including renewals. These factors might include inflation, legal risk, sustainability risks and changes in the market in which the [undertaking](#) operates affecting business volumes and business mix.

### **2.3.5 Adjustments to premiums**

2.3.5.1 For products where premiums may be adjusted in response to experience, the [AFR](#) must comment on the effect of systems which adjust the premiums policyholders pay upwards or downwards depending on their claims history (bonus-malus systems) or similar systems, implemented in specific homogeneous risk groups.

### **2.3.6 Anti-selection**

2.3.6.1 The [AFR](#) must include the [AF](#)'s conclusions concerning anti-selection risks within the [undertaking](#)'s portfolio of contracts if these risks might have an adverse impact on the [Technical Provisions](#) or sufficiency of premiums. The [AFR](#) should outline the [AF](#)'s recommendations for improvements to the [underwriting](#) policy which might mitigate these risks.

### **2.3.7 Interrelationships**

2.3.7.1 The [AFR](#) should outline the extent to which the overall [underwriting](#) policy of the [undertaking](#) is not consistent with other relevant policies of the [undertaking](#).

2.3.7.2 This should at least include an assessment of the consistency with the risk appetite and the reinsurance arrangements of the [undertaking](#) and with the [underwriting](#) risks that the [undertaking](#) reflects in the calculation of the [Technical Provisions](#).

## 2.4 Opinion on reinsurance arrangements

### 2.4.1 Opinion on the adequacy of reinsurance arrangements

- 2.4.1.1 The [AFR](#) must express an [opinion](#) on the adequacy of the reinsurance arrangements.
- 2.4.1.2 The [AFR](#) should explain any concerns which the [AF](#) may have concerning the adequacy of the reinsurance arrangements.
- 2.4.1.3 If the [AF](#) identifies deficiencies the [AFR](#) should outline recommendations to improve the reinsurance arrangements, including actions which might be taken to:
- eliminate inconsistencies in reinsurance coverage;
  - reduce the risk of non-performance by reinsurance counterparties; and
  - extend coverage of [material](#) risks.
- 2.4.1.4 The [AFR](#) should set out how the [AF](#) has arrived at its [opinion](#).

### 2.4.2 Interrelationships

- 2.4.2.1 The [AFR](#) should outline the extent to which the reinsurance arrangements of the [undertaking](#) are not consistent with the [undertaking](#)'s:
- risk appetite;
  - [underwriting](#) policy; and
  - [underwriting](#) risk,
- and include recommendations as to how any inconsistencies should be remedied.
- 2.4.2.2 The commentary on interrelationships should incorporate the [AF](#)'s assessment of the credit standing of the reinsurance counterparties, including the assessment whether the [undertaking](#) needs to produce and use its own internal credit assessment of one or more of the reinsurance counterparties.

### 2.4.3 Effectiveness of reinsurance arrangements

2.4.3.1 The [AFR](#) should include assessments of how the reinsurance arrangements, including any special purpose vehicles, might respond in a number of stressed scenarios or refer to where this is considered in the ORSA. The scenarios might include:

- catastrophic claims experience;
- risk aggregations;
- reinsurance defaults; and
- reinsurance exhaustion.

2.4.3.2 The assessments should include indications of:

- the amounts recoverable from reinsurance contracts and special purpose vehicles; and
- the impact on the [undertaking](#)'s own funds.

2.4.3.3 The assessments should consider, if appropriate, the impact of reinstatements or renewal of reinsurance cover and the potential unavailability of reinsurance cover.

2.4.3.4 The [AFR](#) might include an assessment of the effectiveness of the reinsurance arrangements in mitigating the volatility of the [undertaking](#)'s own funds.

## 2.5 Contribution to risk management

- 2.5.1 The [AFR](#) should describe the areas where the [AF](#) has made a [material](#) contribution to the implementation of the risk management system and the [work](#) performed. In particular, this should cover the contribution of the [AF](#) to the risk modelling underlying the calculation of the capital requirements, including contribution to the modelling of the loss-absorbing capacity of deferred taxes. It should also cover the contribution that the [AF](#) has made with regard to the assessment of the expected profit included in future premiums (EPIFP). Other examples might include the role of the [AF](#) and its contribution in relation to the internal model, the identification of [material](#) deviations in the company's risk profile from the assumptions underlying the standard formula and the contribution of the [AF](#) to the ORSA process, including its views in relation to the stress- and scenario-testing undertaken.
- 2.5.2 The [AFR](#) may summarise the main findings of these activities and in such cases should provide appropriate reference to reporting from the risk management function.