Institute of Actuaries of India

Actuarial Practice Standard (APS) 2:
Additional Guidance for Appointed Actuaries and other Actuaries involved in Life Insurance

Classification: Practice Standard

Legislation or Authority:

1. The Insurance Act 1938 (hereinafter referred to as the Act).
2. The Insurance Rules 1939 (hereinafter referred to as the Rules).
3. Insurance Regulatory and Development Authority (Appointed Actuary) Regulations, 2000 (hereinafter referred to as AA Regulations).
4. Insurance Regulatory and Development Authority (Assets, Liabilities and Solvency Margin of Insurers) Regulations, 2000 (hereinafter referred to as ALSM Regulations).

Application

Appointed Actuaries of life offices having registration to transact life insurance business under Section 3 of the Act, and other actuaries appointed to carry out an investigation and valuation of an insurer under sections 13, 22 and 49 of the Act.

Status

Issued under Due Process in accordance with the "Principles and Procedure of Issue of Guidance Notes (APSs) (adopted by EC on 16.11.1997) and with the concurrence of the Insurance Regulatory and Development Authority as required under regulation 2(e) of AA regulations.

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1. Introduction

1.1 The primary references in this Actuarial Practice Standard are to the ALSM Regulations. The ALSM Regulations govern the investigations made by an actuary into the financial condition of a life office for the purposes of section 13, 22, and 49 of the Act and are also relevant to the determination of the margins of solvency required in terms of section 64 VA of the Act.

1.2 This Practice Standard, which is supplementary to that set out in Actuarial Practice Standard APS 1, has been prepared to draw the attention of Appointed Actuaries and other actuaries to certain aspects of their professional responsibilities relevant to these investigations. Section 64 VA of the Act prescribes margins of solvency for life offices. The amounts of mathematical reserves and of sums at risks to be used in the calculations required for the purpose of Form K of the IRDA (Actuarial Report and Abstract) Regulations, 2000 are required to be assessed by the Appointed Actuary.

1.3 It is the Appointed Actuary's professional duty to make timely disclosures, both to the company and to the Authority about the financial viability of the life office. If for some exceptional reason the Appointed Actuary is unable to comply fully with this Actuarial Practice Standard then the report given by him should be suitably qualified.

2. The Actuarial Valuation

2.1 Sub-clause 2 (4) of Schedule II-A of the ALSM Regulations requires prudent assumptions for all relevant parameters, and states that each such parameter shall be based on the insurer's expected experience and shall include an appropriate margin for adverse deviation. Sub-clause 5 (1) (b) of Schedule II-A of the ALSM Regulations requires the level of margin for adverse deviation for a parameter to depend on the degree of confidence the Appointed Actuary has in the assumption he has made about the expected level of that parameter. The margin for adverse deviation should also depend on the variability of the parameter concerned taking into account the financial siAPSificance of such variability.

2.2 The adjustment to reserves, required by Sub-clause 2 (5) (iii) of Schedule II-A of the ALSM Regulations, to ensure that reserves are at least as large as any guaranteed surrender value and never less than zero, should be entered as a separate column or row on forms NLB-1 and NLB-2 of the abstract of the Appointed Actuary's valuation report.

2.3 Sub-clause 2 (6) of Schedule II-A of the ALSM Regulations specifies that the method of valuation shall be "Gross Premium Method" but in terms of sub-clause 2 (7) thereof an Appointed Actuary can use other methods of valuation subject to the proviso thereto.

2.4 In terms of sub-clause 2 (9) of Schedule II-A of the ALSM Regulations the Appointed Actuary shall consider the resilience of the valuation to changes in circumstances, and provide appropriate margins in the valuation basis or an additional reserve. The Regulations do not give any indication of the range of possible future changes in the value of assets that is to be allowed for. In determining an appropriate range, the actuary shall use professional judgement. If changes would result in a change in the aggregate liability that is not matched by a change in the market value of the corresponding assets, the actuary should consider as to what provision is required as a contingency margin, having regard to the consequences should the provision prove to be insufficient. In deciding whether a provision is required or the amount of any such provision the Appointed Actuary should consider the extent to which liabilities can be reduced by decreasing the rates of future bonus on with profits business. The Regulations apply equally to both non-linked and linked business with additional requirements for linked business as specified in clause 7 of Schedule II-A of the ALSM Regulations.

2.5 The Appointed Actuary shall ensure that the valuation basis for participating business is, in particular, consistent with the provisions of sub-clause 5 (5) (d) of Schedule II-A of the ALSM Regulations. Further the Appointed Actuary shall ensure that the liability in the changed investment conditions envisaged in 2.4 adequately covers latest view of policyholders' reasonable expectations.

2.6 Sub-clause 2 (8) of Schedule II-A of the ALSM Regulations refers to the method of calculation and assumptions used in the valuation not being subject to arbitrary discontinuities from one year to the next. This requirement shall not be interpreted to preclude changes to valuation interest rates which arise on account of actual or anticipated changes in market yields, or changes in other assumptions which arise from changes in the life office's actual or anticipated experience. This requirement shall not be interpreted to preclude changes in the valuation method. Any changes in either the valuation method or assumptions should be capable of justification.

2.7 Clause 3 of Schedule II-A of the ALSM Regulations requires an allowance for tax to be made. The Appointed Actuary should describe in his Valuation Report how such allowance for tax has been made.

3. Valuation Parameters

3.1 Clause 5 of Schedule II-A of the ALSM Regulations sets out the criteria for the valuation basis of a life office. The basis shall be appropriate for the block of business to be valued.

3.2 Sub-clause 5 (2) of Schedule II-A of the ALSM Regulations requires that the mortality rates used shall be by reference to a published table, unless the life office has constructed a separate table based on its own experience. While making adjustment to the published mortality table adopted, due regard shall be given to the likely future experience of the life office, including the likely incidence of AIDS, and possible improvements in mortality. The morbidity rates shall also be determined in similar manner.

3.3 Sub-clause 5 (4) of Schedule II-A of the ALSM Regulations requires that all expenses shall be increased in future years for inflation and that the rate of inflation assumed shall be consistent with the valuation rate of interest. Sub-clause 2 (4) of Schedule II-A of the ALSM Regulations requires prudent assumptions for all relevant parameters. These should not be interpreted to require a margin for adverse deviation in both the valuation interest rate and the valuation inflation rate. Provided that there is a margin for adverse deviation in the valuation interest rate then it is sufficient for the Appointed Actuary to ensure that there is a margin for adverse deviation in the difference between the valuation interest rate and the valuation inflation rate.

3.4 With the exception of investment expenses there must be explicit allowance for future expenses. If there is no explicit allowance for investment expenses then they must be allowed for by a prudent reduction in the valuation interest rate. Special care must be taken in determining the allowance for future expenses for policies for which premiums are no longer being paid.

3.5 All references to yield in sub-clause 5 (5) of Schedule II-A of the ALSM Regulations should be interpreted to mean prospective yield gross of tax.

3.6 Sub-clause 5 (5) of Schedule II-A of the ALSM Regulations refers to yields from existing assets attributable to blocks of life insurance business. This would help in determining the rates of interest to be used in valuing those blocks of life insurance business. This shall have due regard to the prudence concept. The yields on existing assets should be determined by reference to the statutory value of the assets to ensure consistency between the valuation of assets and liabilities. When derivative contracts are held in connection with particular assets or liabilities in the life insurance fund, then it will generally be appropriate to apportion those derivatives with the corresponding assets and liabilities.

3.7 Sub-clause 5 (5) (a) (ii) of Schedule II-A of the ALSM Regulations requires adjustment to the yield on assets to recoAPSise the possibility of default. The Appointed Actuary shall make suitable provision for this taking into account any implicit or explicit provision for default in the statutory value placed on assets, and the manner in which the statutory value and the yield have been determined.

3.8 Sub-clause 5 (5) (c) of Schedule II-A of the ALSM Regulations requires that in respect of non-participating business the risk of a decline in the interest rate should be duly recoAPSised and a suitable adjustment made. This is not sufficient on its own, the Appointed Actuary needs to consider all future interest rate scenarios that can reasonably be foreseen.

3.9 Sub-clause 5 (5) (e) of Schedule II-A of the ALSM Regulations requires that, in respect of single premium business, the Appointed Actuary should take into account the effect of changes in risk free interest rates. This should not be interpreted to mean that Appointed Actuaries do not have to take into account the effect of changes in risk free interest rates for business other than single premium.

4. Additional Requirements for Linked Business

4.1 The value to be placed on the unit reserve shall be the current value of the assets underlying the unit fund determined in accordance with the IRDA (Preparation of Financial Statements and Auditor's Report of Insurance Companies) Regulations. The IRDA has clarified that this should be interpreted to mean that the value to be placed on the unit reserve shall be the current mid-market value of the assets underlying the unit fund.

4.2 If unit liabilities are not matched, a mismatch reserve shall be created.

4.3 Separate unit and non-unit reserves shall be held. The sum of these reserves would represent the total reserve for a policy.

4.4 The non-unit reserves should take into account morbidity benefits to the extent provided by the non-unit reserves, as well as death benefits.

4.5 The total reserve in respect of a policy shall not be less than the guaranteed surrender value on the valuation date. Neither the unit reserve nor the non-unit reserve in respect of a policy shall be negative.

5 Additional Requirements for Provisions

5.1 Provision shall be made for any options contained in policy contracts, and such provision should be based on prudent assumptions. The assumptions should take into account factors the internal or external to the company that might accompany the exercising of the option.

5.2 Provision shall be made for investment guarantees, on prudent assumptions and taking into account the changes in circumstances envisaged in section 2.4.

5. 6 Solvency Margin

6.1 The Appointed Actuary shall, in terms of sub-regulation 8 (a) to 8 (e) of the AA Regulations, suitably advise the Directors to ensure that the company is at all times able to meet the solvency requirements as prescribed in section 64VA of the Act. He has to ensure that the company's available assets can provide explicit cover for the amount of required solvency margin.