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GUIDELINES ON VALUATION OF POLICY LIABILITIES OF GENERAL BUSINESS

[Note: These Guidelines should be read in conjunction with the Insurance (Valuation and Capital) Regulations 2004 (G.N. No. S 498/2004) and the Insurance (Accounts and Statements) Regulations 2004 (G.N. No. S 494/2004).]

Introduction

1 These Guidelines are intended to provide general guidance on the valuation of general insurance policy liabilities for the purpose of the Insurance (Valuation and Capital) Regulations 2004 (G.N. No. S 498/2004). These Guidelines also provide guidance on how an actuary should prepare the actuarial investigation report required under the Insurance (Accounts and Statements) Regulations 2004 for his investigation into an insurer's liabilities in respect of general insurance policies.

2 These Guidelines apply to —

a) any insurer (except captive insurers and marine mutual insurers) which is for the time being registered under section 8 of the Act in respect of general business; and Amended 3 Jan 2008

b) any actuary approved by the Authority to conduct an investigation for the purpose of section 37(1)(*b*) of the Act into an insurer's liabilities in respect of general insurance policies.

3 These Guidelines set out the following in two parts:

a) Part I — Guidelines on valuation of policy liabilities relating to general business of a registered insurer;

b) Part II — Guidelines on the preparation of the actuarial investigation report by an actuary.

4 While any deviation from these Guidelines does not of itself amount to an offence under the Act, the Authority may consider such deviation as one of the factors in determining whether the insurer should be subjected to additional supervisory requirements as a result of the increased risk in the operations of the insurer, including a

fund solvency or capital adequacy requirement which is higher than those prescribed under section 18 of the Act.

5 These Guidelines should be adhered to for any valuation made or actuarial investigation report prepared on or after 1 January 2005. However, where an insurer elects to be assessed under the risk-based capital framework before 1 January 2005, the insurer should also adhere to these Guidelines when it prepares statements of account and other statements as required under section 36 of the Act set out in the Accounts Regulations under the new reporting format.

Definitions

6 For the purpose of these Guidelines:

"Accounts Regulations" means the Insurance (Accounts and Statements) Regulations 2004 (G.N. No. S 494/2004);

"Approved Actuary" means an actuary approved by the Authority to conduct an investigation into the liabilities of a registered insurer in respect of policies under section 37(1)(*b*) of the Act;

"BE of CL" means the part of CL that relates to the value of the expected future payments in relation to all claims incurred prior to and on the valuation date (other than payments which have fallen due for payment before and on the valuation date), whether or not they have been reported to the insurer, and includes any expense expected to be incurred in settling these claims;

"BE of URR" means the part of URR that relates to the value of the expected future payments arising from future events insured under policies in force as at the valuation date, and includes any expense expected to be incurred in administering the policies and settling relevant claims;

"CL" means claims liabilities;

"general insurer" means an insurer registered to carry on general business;

"PAD" means any provision for any adverse deviation from the expected experience as set out in the Valuation Regulations;

"PAD of CL" means the part of CL that relates to the PAD for the expected experience, calculated based on 75% level of sufficiency;

"PAD of URR" means the part of URR that relates to the PAD for the expected experience, calculated based on 75% level of sufficiency;

"PL" means premium liabilities;

"UPR" means unearned premium reserves;

"URR" means unexpired risk reserves;

"valuation date" means the date on which the valuation is made; and

"Valuation Regulations" means the Insurance (Valuation and Capital) Regulations 2004 (G.N. No. S 498/2004).

7 The expressions used in these Guidelines shall, except where expressly defined in these Guidelines or where the context otherwise requires, have the same respective meanings as in the Act, the Valuation Regulations and the Accounts Regulations.

Background

8 Regulation 19 of the Valuation Regulations defines the policy liabilities for an insurance fund at any point in time. Under that regulation, the policy liabilities for an insurance fund is calculated as the sum of —

a) PL, which is an amount not less than the higher of —

(i) the UPR; or

(ii) the URR, calculated as the sum of —

(A) BE of URR; and

(B) PAD of URR; and

(b) CL, which is an amount not less than the sum of —

(i) BE of CL; and

(ii) PAD of CL.

9 The same regulation also requires separate calculations for the UPR, URR and CL for individual lines of business.

10 Part I of these Guidelines provides technical guidance on how the URR and CL relating to general business of a registered insurer should be calculated.

11 Under section 37(1)(*b*) of the Act, a general insurer is required, for each accounting period to have an investigation made by an actuary approved by the Authority (the "Approved Actuary") into its liabilities in respect of insurance policies. Section 37(1)(*c*) of the Act and the Accounts Regulations require the insurer to lodge with the Authority an abstract of the actuarial investigation report and a certificate relating to such

investigation, while the Accounts Regulations requires the insurer to lodge with the Authority the report itself. Part II of these Guidelines provides guidance on the information that should be disclosed when an actuary prepares the full actuarial investigation report.

Part I — Guidelines on valuation of policy liabilities relating to general business of a registered insurer

12 The Approved Actuary should, in conducting an investigation for the purpose of section 37(1)(b) of the Act into an insurer's liabilities in respect of general insurance policies, follow the guidance set out in this Part in the calculation URR and CL.

13 While the investigation carried out by the Approved Actuary is conducted annually, an insurer will still need to determine the value of its policy liabilities for quarterly reporting to the Authority and to satisfy itself that it has complied with the fund solvency requirement and the capital adequacy requirement on an on-going basis. It would generally be acceptable for the insurer to assume that the results calculated by the Approved Actuary for the annual investigation remains valid throughout the next accounting period if the insurer's business volume and profile, underwriting and claims process and policy, and the general business conditions have not changed significantly. Otherwise, the insurer should, depending on the extent of such change, make adjustments to the Approved Actuary's calculations or conduct a full re-valuation of the policy liabilities where appropriate.

Valuation Principles

14 The valuations of an insurer's URR and CL should be made based on realistic estimates, and should reflect the individual circumstances of each insurer.

15 The BE of URR and BE of CL represent the mean value in the range of possible values for URR and CL respectively. The determination of the BEs should be based on assumptions as to future experience which reflect the experience and circumstances of the insurer and which is:

a) made using judgment and experience;

b) made having regard to reasonably available statistics and other information; and

c) neither deliberately overstated nor deliberately understated.

16 No material information should be omitted from the valuation process. The Authority would consider a particular piece of information to be material to the overall result of a calculation when its misstatement or omission would cause the result to be misleading to the users of the valuation results.

17 The Authority takes the view that materiality should always be a matter requiring exercise of judgment. The level at which a difference becomes material can be considerably lower than a statistically significant difference. In these circumstances, careful exercise of judgment is expected. While it is reasonable to omit individual items on the grounds of materiality, thought should be given to the cumulative impact. Individual items should not be omitted if the overall result would be materially affected by the omissions.

Basis of Data

18 The data to be used by direct insurers and reinsurers should be on the same basis as that referred to in the Accounts Regulations.

19 The statistics should be compiled on both gross and net of reinsurance bases. Statistics on direct and indirect claims handling expenses should also be collated, where material.

Data Source and Verification

20 The data used should be appropriate for the estimation of policy liabilities.

Grouping of Risks

21 The valuation of the policy liabilities of the insurer may require the subdivision of risks into lines or divisions of lines of business with similar characteristics. The most appropriate subdivision for the purpose of the valuation should therefore be determined.

Data Adjustment

22 Where appropriate, adjustments to the data collated should be made to account for abnormal items, such as large losses.

Business Profile

23 The nature of coverage the insurer provides and the mix of risks the insurer has underwritten should be taken into account.

Underwriting Policy

24 Any change in the underwriting policy for each major line of business of the insurer should be considered. Changes in underwriting policy include changes to the selection of risks, delegation of authority, key underwriting personnel, rate levels and premium rating methodology.

Claims Policy

25 The insurer's case reserving policy, including the policy in setting initial case reserves, should be considered. Consideration should also be given to any change in the case reserving and other claims policy for each major line of business of the insurer such as the establishment of claim files, closing of claims, use of loss adjusters or loss solicitors, department structure and case load, claim authority limits and defence of complex claims.

Reinsurance

26 Subject to the requirements in the Valuation Regulations, the valuation of policy liabilities may be either undertaken on a gross basis, in which case a separate estimate of the value of reinsurance recoveries should be done, or on a net basis. However, where there have been significant changes in the reinsurance arrangements or if the outstanding reinsurance recoveries have a material impact on the estimate of the value of policy liabilities, valuation should be performed on both the gross and net bases.

General Business and Industry Conditions

27 The economic, technological, medical, legal, judicial and social trends within the broader community that may have an impact upon the valuation of policy liabilities should be considered.

Analysis of Experience

28 The assumptions used in the valuation process should take into account the impact of social, economic, environmental, legislative and court precedent factors. Care should also be given to any assumption that is implicit in the valuation method selected.

29 Discounting of liabilities should be carried out where the impact of such discounting is material. Where discounting of liabilities is used, the discount rate adopted should be the gross redemption yield as at the valuation date of a portfolio of government bonds (where available) with its currency and expected payment profile (or duration) similar to the insurance liabilities being valued.

30 If government bonds of the same currency do not exist, then the yield will be based on the yield available on the government bond of another currency with an expected payment portfolio similar to that of the insurance liabilities and a subjective adjustment for currency movement.

31 The business environment within which the insurer operates in should be factored into the assumptions on premium rate changes.

32 In relation to recoveries, the nature and spread of reinsurance arrangements, including significant changes to the arrangements and non-performance of reinsurance, should be taken into account. Non-reinsurance recoveries like salvage and subrogation should also be considered.

Deriving Best Estimates

33 In view of the inherent uncertainty in insurance business, it may often be appropriate to use more than one method to determine the BE of URR and BE of CL.

34 It is recognised that a full actuarial valuation of the URR is essentially a re-underwriting of the portfolio. Consideration should be had on whether it is appropriate or possible to complete such a valuation as is necessary for determining the CL.

35 For a reasonably stable portfolio, it is often possible to extend the CL valuation models to estimate the URR, on the basis of claims frequency, average costs, and ultimate loss ratios. If this is done, the assumptions used should be adjusted to reflect the changes in risk exposure, underwriting standards, rate levels, and other factors on the expected claims experience.

Deriving Provision for Adverse Deviation

36 Professional judgement is often applied to determine the PAD for the insurer as a whole, and for each class of business. In determining the PAD, regard should be had to the objective of these Guidelines, and any other guidance note or relevant professional standard.

Part II – Guidelines on the preparation of the actuarial investigation report

37 The Approved Actuary should, in preparing his investigation report —

a) follow the structure and headings at Annex A;

b) make such disclosure, under the relevant headings, as described under paragraphs 38 to 51; and

c) disclose the extent to which, and the reason why, he has deviated from any guideline stipulated in Part II of this Notice.

38 Under the sub-heading “Basis of Data”, the Approved Actuary should disclose —

a) whether the data used in valuation is on an accident year or underwriting year basis;

b) whether the data used in valuation is gross or net of reinsurance;

c) whether direct or indirect or both claims handling expenses data were used in the valuation; and

d) the number of development years of data used in the valuation, and where these feature varies by types of business, it should be disclosed as such.

39 Under the sub-heading “Data Source and Verification”, the Approved Actuary should disclose the steps taken by him to verify the consistency, completeness and accuracy of the data collated. The degree to which the Approved Actuary relies upon data provided by the insurer, and the work of external auditors or any other third party, including the limitations such reliance places on the Approved Actuary’s confidence in the data, should be clearly explained in the report.

40 Under the sub-heading “Grouping of Risks”, the Approved Actuary should disclose how liabilities are grouped by types of business. Where the Approved Actuary has sub-divided the of types of business described in Form 6, as the case may be, of the Accounts Regulations, he should disclose the manner in which such subdivisions are made and the valuation results for each sub-division.

41 Under the sub-heading “Data Adjustment”, where the Approved Actuary has made any adjustment to the data to account for abnormal items, such as large losses, he should clearly disclose the nature, amount and rationale for the adjustment.

42 Under the sub-heading “Business Profile”, the Approved Actuary should —

a) describe broadly the nature of insurance coverage the insurer provides and the mix of risks the insurer has underwritten; and

b) where he observes any material change in the business mix or strategy of the insurer, comment on the impact any change in the business mix or strategy may have on the valuation of the policy liabilities.

43 Under the sub-heading “Underwriting Policy”, the Approved Actuary should comment on any change in the underwriting policy for each major line of business of the insurer such as the selection of risks, delegation of authority, changes in key underwriting personnel, rate levels and premium rating methodology.

44 Under the sub-heading “Claims Policy”, the Approved Actuary should, —

a) where the investigation relates to the first year of the operations of a registered insurer, provide a description of the case reserving policy of the insurer, including the setting of initial case reserves; and

b) in all other cases, comment on any change in the case reserving and other claims policy for each major line of business of the insurer such as the establishment of claim files, closing of claims, use of loss adjusters or loss solicitors, department structure and case load, claim authority limits and defence of complex claims.

45 Under the sub-heading "Reinsurance", the Approved Actuary should disclose whether the valuation was conducted on a gross or net of reinsurance basis.

46 Under the sub-heading "General Business and Industry Condition", the Approved Actuary should disclose whether he has considered economic, technological, medical, legal, judicial and social trends within the broader community that may impact upon the valuation of policy liabilities, and if so, what is his opinion of the impact.

47 Under the sub-heading "Assumptions on Discounting, Premium Rate Changes, Development Factors and Ultimate Loss Ratios, Expense Rate and Recoveries", the Approved Actuary should —

a) in relation to discount rate —

   (i) disclose whether discounting was used, and if so, the discount rate used; and

   (ii) disclose and explain any subjective adjustment made to the discount rate used;

b) in relation to premium rate changes, disclose his assumptions on premium rate changes;

c) in relation to development factor and ultimate loss ratios, disclose his assumptions underpinning the development factors and ultimate loss ratios chosen for the valuation;

d) in relation to the expense rate, disclose his assumptions used on direct and indirect claim expenses rate in the valuation; and

e) in relation to recoveries, disclose how he has taken into account reinsurance and non-reinsurance recoveries, and any assumptions made relating to them in the process.

48 Under the sub-heading "Comparison between Insurer's Actual Experience and Previous Valuation", the Approved Actuary should —

a) compare the actual experience of the insurer, for both URR and CL, with the results of the previous valuation; and

b) highlight and clearly explain where any significant differences between the actual experience and the previous valuation is observed.

49 Under the sub-heading "Comparison between Current and Previous Valuation", the Approved Actuary should —

a) compare the results of the current valuation with those of the previous valuation or earlier reports of a similar nature;

b) justify any material changes in the assumptions made, methods used, or conclusions between the current valuation and previous valuations; and

c) quantify the financial implication arising from such changes in assumptions, conclusions or methods.

50 Under the sub-heading "Best Estimate", the Approved Actuary should —

a) disclose and explain in detail the methods used and key assumptions made in deriving the BE of URR and BE of PAD (except where the method used is very widely used, for example, the chain-ladder method or the BF method, in which case a brief description will suffice);

b) where more than one valuation method is used and where the results differ significantly, comment on the likely reasons for the differences and explain the basis for the choice of results; and

c) where the Approved Actuary's choice of result leads to negative incurred but not reported (IBNR) claim reserves, disclose why a release of reserves is justified; and

d) disclose whether a re-underwriting of the portfolio is made in the derivation of the URR.

51 Under the sub-heading "Provision for Adverse Deviation", the Approved Actuary should disclose the approach used for the assessment of uncertainty and the derivation of the PAD of URR and PAD of CL.

52 The Approved Actuary should present the valuation results for the Singapore Insurance Fund and Offshore Insurance Fund separately using the table format as stated in the Second Schedule to the Accounts Regulations.

53 The actuary should also include in the report —

a) the definitions of terms and expressions used in the report that may be ambiguous or subject to wide interpretation;

b) recommendations or comments to improve the reliability of future valuations of policy liabilities arising from the valuation;

c) the insurer's responses to the comments and recommendations made under sub-paragraph (b); and

d) the follow-up actions, if any, taken in relation to any comments and recommendations made under sub-paragraph (b) in previous reports.

Annex A
Name of Insurer
Actuary's Report for the year ended 31 Dec 20xx

1 Scope of Report

1.1 The actuary should state his name and professional qualifications. Where the actuary is an employee of the insurer or a related company, the capacity in which he is carrying out the investigation to be stated.

1.2 The actuary should confirm compliance with the requirements of the Authority and state the reasons for not complying fully with any requirements.

2 Data

2.1 Basis of data

2.2 Data source and verification

2.3 Grouping of risks

2.4 Data adjustment

3 Business Profile and Strategy

3.1 Business Profile

3.2 Underwriting Policy

3.3 Claims Policy

3.4 Reinsurance

3.5 General Business and Industry Conditions

4 Analysis of Experience

4.1 Assumptions on discounting, premium rate changes, development factors and ultimate loss ratios, expense rate and recoveries.

4.2 Comparison between insurer's actual experience and previous valuation

4.3 Comparison between current and previous valuation

5 Methods

Best Estimate

5.1 Methodology for Best Estimate of Claim Liabilities

5.2 Methodology for Best Estimate of Premium Liabilities

Provision For Adverse Deviation

5.3 Assessment of Uncertainty

5.4 Methodology for the 75% Level of Sufficiency

5.5 Derivation of the Provision for Adverse Deviation

6 Valuation and Presentation of Results

6.1 Valuation for Singapore Insurance Fund

- Results for premium and claim liabilities presented as per the table format stated in the Second Schedule of the Accounts Regulations.

6.2 Valuation for Offshore Insurance Fund

- Results for premium and claim liabilities presented as per the table format stated in the Second Schedule of the Accounts Regulations.

7 Others

7.1 Recommendations to improve reliability of future valuations

8 Name and signature of actuary, followed by date of report.

Appendix 1 – Data

- Data after adjustments used by actuary in the valuation

Appendix 2 – Valuation

- For each line of business, show development factors and actuary's selected factors for each method used. State basis for choice.
- For each line of business, show results of different methods used and actuary's selected result. State basis for choice.