

MAS 209 (Proposed)

DD MM 2001

NOTICE TO GENERAL INSURERS
INSURANCE ACT, CAP 142

Guidance Notes for the Actuarial Report

1 Introduction

1.1 A general insurer is required under Section 37 of the Insurance Act to have an investigation made by an actuary or other person approved by the Authority into its premium and claim liabilities in respect of insurance policies. The valuation of insurance policy liabilities of each line of business must comprise:

- Best estimate of the premium liabilities,
- Best estimate of the claims liabilities,
- Provision for adverse deviation that relate to the inherent uncertainty in the best estimate value of both the premium and claims liabilities at a minimum 75% confidence level at insurance fund level.

1.2 For the above purpose, the following terms are defined:

- "Premium liabilities" in respect of general business means reserves for unexpired risks and includes liabilities for all benefits, claims and expenses, acquisition costs, maintenance costs and policyholders' experience participation to be incurred after the balance sheet date.
- "Claim liabilities" in respect of general business refers to the obligation whether contractual or otherwise, to make future payments in relation to all claims that have been incurred as at balance sheet date and includes reserves for claims reported, incurred but not reported (IBNR) and incurred but not enough reported (IBNER), as well as direct and indirect claims expenses.
- "Best estimate" refers to the mean value in the range of possible values for the future outcome. It is made with assumptions regarding the future experience, and are made using judgement and experience, and are neither deliberately overstated or understated.
- "Provision for adverse deviation" refers to the additional margin over and above the best estimate to ensure that liabilities can be met with a 75% confidence level at insurance fund level.

1.3 The insurer shall once in a period of 12 months, lodge with the Authority such abstract of the investigation and the actuary valuing the insurance policy liabilities shall state his name,

qualification and in what capacity he is doing the investigation. The actuarial report shall address the issues covered in the following paragraphs.

2 Data

Basis of data

2.1 For direct insurers, the accident year basis should be used for direct and facultative business, and underwriting year basis for treaty business. Marine and aviation business may be reported on an underwriting year basis, if appropriate. For reinsurers, all statistics shall be on underwriting year basis.

2.2 Statistics shall be compiled on both gross and net of reinsurance. Statistics on direct and indirect claims handling expenses should also be collated, where material. Insurers should build up at least 8 development years of data.

Data source and verification

2.3 The actuary should ensure that the data used gives an appropriate basis for estimating the insurance policy liabilities. He should take reasonable steps to verify the consistency, completeness and accuracy of the data collated. The degree to which the actuary relies upon data provided by the insurer, and the work of external auditors, including limitations this reliance places on the actuary's confidence in the data, should be clearly explained in the report.

Grouping of risks

2.4 The valuation of the insurance policy liabilities of the insurer may require the sub-division of risks into classes or sub-classes of business with similar characteristics. The actuary should determine the most appropriate subdivision for the purpose of the valuation. However, the value of insurance policy liabilities must be reported for each line of business prescribed under Form 7 of First Schedule of Insurance (Accounts and Statements) Regulations or as specified by the Authority.

Data adjustment

2.5 The actuary may make adjustments to the data collated to account for abnormal items, such as large losses. Where such adjustments are made, the nature, amount and rationale for the adjustments should be disclosed.

3 Business Profile and Strategy

Business Profile

3.1 The actuary should describe the nature of coverage the insurer provides and the mix of risks it has. He should also address the impact any changes in the business strategy may have on the valuation of the insurance policy liabilities.

Underwriting Policy

3.2 The actuary should comment on any changes in the underwriting policy for each major line of business within the company including the selection of risks, delegation of authority, changes in key underwriting personnel, and rates levels & premium rating methodology. He should take all these factors into consideration in the valuation of insurance policy liabilities.

Claims Policy

3.3 The actuary should comment on any changes in the claims policy for each major line of business within the company including the establishment of claims files, case reserving policy (frequency and guidelines), guidelines on closing claims, use of loss adjusters/solicitors, department structure and case load, claims authority limits and defense of complex claims. He should take all these factors into consideration in the valuation of insurance policy liabilities.

4 Reinsurance

4.1 The valuation of insurance policy liabilities may be either undertaken on a gross basis, with a separate estimate of the value of reinsurance recoveries, or on a net basis. But whenever there have been significant changes in the reinsurance arrangements or when the ceded outstanding claims have a material impact on the actuary's valuation of insurance policy liabilities, he should also perform his valuation on a gross basis.

4.2 The actuary should take into account the nature and spread of reinsurance arrangements. Considerations include significant changes to the arrangements and non-performance of reinsurance.

5 Non-reinsurance Recoveries

5.1 The actuary should take into consideration non-reinsurance recoveries that may be recovered under arrangements other than reinsurance arrangements. These would include salvage and subrogation.

6 General Business and Industry Conditions

6.1 The actuary should take into consideration economic, technological, medical, legal, judicial and social trends within the broader community that may impact upon the value of insurance policy liabilities.

7 Discounting

7.1 The actuary should consider whether discounting is to be used in the valuation of insurance policy liabilities. Where the impact is material, discounting should be carried out.

7.2 The rate to be used in discounting the expected future payments for a class of business is the gross redemption yield, as at the valuation date, of a portfolio of government bonds with currency and expected payment profile (or duration) of the insurance liabilities for that class.

7.3 In the eventuality that 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 expected payment portfolio of the insurance liabilities and a subjective adjustment for currency movement. In the event that no government bonds exist then the yield will be based on the subjective opinion of the actuary. In the case of subjective adjustments or opinions, appropriate justification must be given in the actuary's report.

8 Methods

8.1 The report should outline and discuss the methods and key assumptions made.

8.2 Where the actuary has used a method that is standard and well understood by the general insurance community (such as chain-ladder method for claims provisioning), a brief reference to the method and an explanation of the elements of the data to which the method has been applied would suffice. Where an unusual or non-standard method has been used, a more detailed description of the method should be given.

8.3 In view of the inherent uncertainty in insurance business, it may be often appropriate for the actuary to use more than one method. The key assumptions of each method should be clearly stated in the report. Where results of different methods differ significantly, the actuary should comment on the likely reasons for the differences and explain the basis for the choice of results.

8.4 Assumptions made should have regard to the insurer's claims experience, highlighting significant aspects of recent experience. The impact of social, economic, environmental, legislative and court precedent factors should also be considered. Where assumptions are implicit in the method selected, this should be discussed.

8.5 It is recognised that a full actuarial valuation of premium liabilities is essentially a re-underwriting of the portfolio. It may not be appropriate or even possible to complete a valuation as is appropriate for outstanding claims liabilities.

8.6 For a reasonably stable portfolio, it will often be possible to extend the outstanding claims valuation models on the basis of claims frequency, average costs, and ultimate loss

ratios to estimate the premium liabilities. It may be necessary to adjust the assumptions to reflect the changes in risk exposure, underwriting standards, rate levels, and other factors on the expected claims experience.

8.7 If there are material differences in the assumptions or conclusions in the present work from those in earlier reports of a similar nature, or if a different method is used, the actuary should justify the change. He should quantify the financial implication arising from such changes in assumptions, conclusions or method.

8.8 The actuary should also discuss the approach to the assessment of uncertainty, 75% confidence level and derivation of the provision for adverse deviation.

9 Valuation and Presentation of Results

9.1 The actuary shall submit the valuation of insurance policy liabilities to the Authority in the following format:

Table 1: SIF/OIF Premium Liabilities

\$'000				
Line of Business (please specify)	Unearned Premium Reserves (UPR) ¹	Best Estimate (BE) of Unexpired Risk Reserves (URR)	75% confidence level	Higher of UPR and BE of URR
1	A (i)	B (i)	B(I) +PAD (I)	PL (i)
2	A (ii)	B (ii)	B(ii) +PAD (ii)	PL (ii)
3	A (iii)	B (iii)	B(iii) +PAD (ii)	PL (iii)
Fund	A(F) ¹	B(F) ²	B(F) +PAD(F) ³	PL (F) ⁴

¹ Calculated in accordance with the basis set out in Regulation 20(3) of the Insurance Regulations 2001. $A(F) = A(i) + A(ii) + A(iii)$.

² $B(F) = B(i) + B(ii) + B(iii)$.

³ Calculated at 75% confidence level by line and on a fund basis. PAD (F) is not equal to PAD (i) + PAD (ii) + PAD (iii)

⁴ PL(i) = higher of A(i) and B(i). Same applies for the computation of PL(ii) and PL(iii).

9.2 The premium liability for the insurance fund [PL(F)] is equal to the greater of:

- B(F) + PAD(F); and
- PL(F)

Table 2: SIF/OIF Claims Liabilities

Line of Business (please specify)	Best Estimate	Provision for Adverse Deviations ⁴	Claim Liabilities
1			
2			
3			
4			
5			
Fund	E	F⁴	G

⁴ Calculated at 75% confidence level by line and on a fund basis (F). F is not the sum of the PAD of all the individual lines of business.

9.3 Claim liabilities for each line of business shall be the best estimate plus the fund provision of adverse deviations (F) allocated to each line of business on a consistent and logical manner.

9.4 There should be a comparison of the results between the current and prior review. This should include comparisons of the current and previous outlook on ultimate losses.

10 Others

10.1 The actuarial report should include definition of terms and expressions used in the report that may be ambiguous or subject to wide interpretation. The actuary should disclose the extent of compliance with the requirements specified by MAS and reasons for not complying fully with the requirements. Lastly, the report should also contain recommendations or comments to improve the reliability of future valuations of insurance policy liabilities arising from the valuation, and the insurer's responses and follow-up actions.

Annex 1

1 Valuation of Premium Liability

1.1 Using the table below as reference, the actuary will compute the unearned premium reserves (UPR) (column B) and the best estimate (BE) (column C) of the unexpired risk reserves (URR) for each line of business.

1.2 The actuary would also compute the provision for adverse deviation (PAD) for each line of business, as well as on the insurance fund level, on a 75% confidence level (Column D).

1.3 For the purpose of computing the premium liability on the insurance fund basis, the greater of the UPR and the BE of URR (column E) would be used. The sum of figures in column E (550) would be compared against the (BE + PAD) of the URR at fund level (560).

1.4 The premium liability in this example would be \$560,000. This would be the amount of reserves that the Company needs to provide for this insurance fund to meet the premium liability.

\$'000

A	B	C	D	E
Line of Business (please specify)	Unearned Premium Reserves (UPR) ¹	Best Estimate (BE) of Unexpired Risk Reserves (URR) ²	75% confidence level	Higher of UPR and BE of URR
1	200	150	190	200
2	300	350	400	350
Fund	500 ¹	500 ²	560 ³	550 ⁴

¹ Calculated in accordance with the basis set out in Regulation 20(3) of the Insurance Regulations 2001. Fund total for Column B is the sum of individual lines.

² Fund total for Column C is the sum of individual lines.

³ Calculated at 75% confidence level by line and on a fund basis. Fund total for Column D is not the sum of individual lines

⁴ Fund total for Column E to be compared to Fund Total for Column D

2 Valuation of Claims Liability

2.1 Using the table below as reference, the actuary will compute the best estimate for each line of business. He would also compute C, the BE + PAD for the whole fund on a 75% confidence level.

2.2 In this example, the amount of reserves that the Company needs to provide for this insurance fund to meet the claims liability is \$340,000.

(\$'000)

	A	B
Lines of Business	BE of Claims Liability	BE + PAD (at 75% level of confidence)
X	180	200
Y	150	180
Total (x + y, except C)	330	340* (C)

* C is computed on a fund basis and is not sum of all the lines' BE plus PAD computed on line basis.