### INSURANCE ORDINANCE (Chapter 41)

Pursuant to section 133(1) of the Insurance Ordinance (Chapter 41), the Insurance Authority publishes the revised Guideline on Actuarial Review on Insurance Liabilities in respect of General Business (GL9).

The revised GL9 shall take effect on 1 July 2024, and shall supersede the previous version of the GL9.

14 June 2024

Clement CHEUNG Chief Executive Officer, Insurance Authority

# GUIDELINE ON ACTUARIAL REVIEW OF INSURANCE LIABILITIES IN RESPECT OF GENERAL BUSINESS

**Insurance Authority** 

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### 1 Introduction

- 1.1 The Insurance Authority ("IA") issues this Guideline pursuant to section 133 of the Insurance Ordinance (Cap. 41) ("Ordinance") and the IA's principal function to regulate and supervise the insurance industry for the promotion of the general stability of the insurance industry and for the protection of existing and potential policy holders.
- 12 Pursuant to section 18A(1) of the Ordinance, an authorized insurer (other than an insurer that is exempted under the rules made under section 129 of the Ordinance) must, once in every 12 months or at any such shorter intervals as the IA requires, cause a review of the valuation of its insurance liabilities (as determined in accordance with the rules made under section 129 of the Ordinance) in respect of its general business to be conducted by an actuary appointed under section 15AAA(1) of the Ordinance for that business. The objectives of such actuarial review are (a) to enhance the accuracy of an authorized insurer's financial position and the adequacy and reliability of the reserves it sets aside to meet its insurance liabilities in respect of its general business; and (b) to ensure sustainable market pricing over the longer term. This Guideline is issued to provide guidance on the scope, assumptions and methodologies to be used for the actuarial valuation of general insurance liabilities to be conducted pursuant to section 18A(1) of the Ordinance, to specify the scope and content of the actuarial report and actuarial certificate for such valuation, and to specify the submission requirements of the report and certificate.
- 1.3 The actuarial report should be prepared and certified by the actuary appointed by the authorized insurer under section 15AAA(1)(c) or 15AAA(1)(d) of the Ordinance, referred to as Certifying Actuary ("CA") for the purposes of this Guideline.<sup>1</sup>

### 2 Application of this Guideline

2.1 This Guideline applies to all authorized insurers including professional

<sup>&</sup>lt;sup>1</sup> The "Fit and Proper" requirements for CA is set out in Guideline on "Fit and Proper" Criteria in relation to Authorized Insurers under the Insurance Ordinance (Cap 41)("GL4").

reinsurers which are authorized to carry on general business in or from Hong Kong, except where the exemption criteria under rule 3 of Insurance (Exemption to Appointment of Actuary) Rules (Cap. 41Q) apply. This Guideline also applies to Lloyd's² in respect of the general business it carries on in or from Hong Kong.

2.2 Save as otherwise expressly stated, the terms defined in the Ordinance or in the Insurance (Valuation and Capital) Rules (Cap. 41R) ("Valuation Rules") should have the same meaning whenever used in this Guideline.

### 2.3 In this Guideline,

- (a) "in-scope insurer" refers to an authorized insurer or Lloyd's (as the case may be) to which this Guideline applies as stated in paragraph 2.1 above;
- (b) "insurance liabilities", in relation to an in-scope insurer, refers to its general insurance liabilities determined under rule 27 of the Valuation Rules;
- (c) "reinsurance recoverables", in relation to an in-scope insurer, refers to its reinsurance recoverables valued under rule 33 of the Valuation Rules;
- (d) "insurance liabilities net of reinsurance", in relation to an in-scope insurer means its insurance liabilities less its reinsurance recoverables:
- (e) "regulatory scope", in relation to an in-scope insurer means the scope of its business to which the Valuation Rules apply and, to avoid any doubt, in the case of a Hong Kong incorporated insurer or a designated insurer includes the business carried on by its overseas branches

 $<sup>^2</sup>$  Under section 50BA(2) of the Ordinance, amongst others, sections 18A and 15AAA of the Ordinance apply to Lloyd's as if Lloyd's were a non-HK insurer.

### 3 Valuation Scope and Valuation Basis

3.1 The actuarial review should cover all classes of general business within the regulatory scope, including both onshore and offshore insurance liabilities, gross and net of reinsurance recoverables which must be valued on the basis as prescribed under the Valuation Rules.

### 4 Actuarial Review and Report

- 4.1 The CA who conducts the actuarial review of general insurance liabilities of an in-scope insurer as at the end of each financial year should prepare a formal report on the review.
- 4.2 The valuation date of the actuarial review may be a date other than the financial year end date of the in-scope insurer, provided that prior notification with justifications is given to the IA and such practice is consistently applied.
- 4.3 The report should state the general principles, details of the methods adopted, and analysis in the valuation of outstanding claims liabilities and premium liabilities of each class of business and cover the following subjects:
  - (a) Definition of terms and expressions used in the report that may be ambiguous or subject to wide interpretation;
  - (b) Data;
  - (c) Business environment;
  - (d) Grouping of risks and methods used;
  - (e) Assumptions used;
  - (f) Results commentary and recommendations.
- 4.4 The requirements included in paragraphs 4.5 to 4.21 of this Guideline are expected for material aspects of the valuation of insurance liabilities and the CA has to be satisfied that the information is complete and

appropriate, and attention should be drawn to material and high uncertainty areas appropriately.

### Data

4.5 The CA should ensure that the data used is sufficient and provides an appropriate basis for estimating the insurance liabilities of the in-scope insurer. Reasonable steps should be taken to verify the completeness, accuracy and consistency of the data collated, with reliance and limitations clearly explained in the report.

### **Business Environment**

- 4.6 The CA should describe the nature of the insurance coverage provided and the mix of risks underwritten by the in-scope insurer. The CA should also highlight the material changes in premium rates, business mix or underwriting strategy that may affect the valuation of the insurance liabilities since the previous financial year end.
- 4.7 The CA should comment on the claim operations with emphasis on any material changes and elaborate on how the method or assumptions are affected.
- 4.8 The CA should comment on the reinsurance protection in place and highlight any material changes since the previous financial year end.
- 4.9 The CA should comment where there is a known material risk that any reinsurer may fail to meet its obligations, and the presence and materiality of non-reinsurance recoverables such as salvage and subrogation.
- 4.10 The CA should take into consideration all aspects of economic, demographic, technological, medical, legal, judicial and social trends and other relevant factors within the broader community that may impact upon the value of insurance liabilities.

### Methodology and Grouping of risks

4.11 The CA should consider and determine the most appropriate lines of business ("LOB") grouping and any further sub-division of risks and

types of claim for the purpose of valuation, taking into account factors such as risk exposure pattern, premium earning pattern, risk nature, geographical location, claim characteristics, large/attritional claims. The CA should justify the credibility and homogeneity of the grouping or subdivision so selected. Note that the value of insurance liabilities should also be reported for each line of business (as required in regulatory returns in reporting insurance liabilities) regardless of the grouping or sub-divisions made.

- 4.12 This Guideline is not intended to be prescriptive in terms of the methods to be adopted for valuation of insurance liabilities. The CA is responsible for the selection of an appropriate valuation method, having regard to the availability and reliability of the data and the key drivers of claim cost as revealed by the data analysis or consistent with the nature of the class of business.
- 4.13 Where the CA has used a method that is standard and well understood by the general insurance community, a brief reference to the method and an explanation of the elements of the data to which the method has been applied would suffice. A more detailed description with suitable justification and rationale should be provided where:
  - a non-standard method has been used:
  - material adjustment has been made to the data or where certain data points are ignored that have a material impact in deriving assumptions; or
  - where there has been a material change from the previous financial year end.
- 4.14 In view of the inherent uncertainty in insurance business, it may often be appropriate for the CA to use more than one method in the estimation of insurance liabilities, and then select one result from one of the methods used or a blend of the results from the different methods used. Where results of different methods differ significantly, the CA may choose to present a table of ultimate loss ratios by origin year comparing the methods used, benchmarks or standardized methodologies, together with

the final selected result, and comment on the likely reasons for the differences and explain the basis for the choice of results. Where relevant, the CA may include other diagnostic in the report to support and explain the final selected result.

### Assumptions

- 4.15 The key assumptions of each method should be clearly stated in the report (e.g. in the appendices or provided electronically). The CA is expected to highlight in the main body of the report the material assumptions taken and material changes in assumptions from the previous financial year end, detailing the justifications by way of supporting quantitative and qualitative evidence.
- 4.16 The CA should analyze the actual experience against the assumptions set for the previous financial year of an in-scope insurer. Where there is any significant deviation between the actual experience and such assumptions, the CA should explain in the report the reasons for such significant deviations and describe the implications of such significant deviations on the assumptions or methodologies used in the valuation of insurance liabilities of the insurer for its current financial year.

### Results Commentary and Recommendations

- 4.17 The CA should include the return forms [F.G.1\_ClaimLiab], [F.G.2\_PL], [F.G.2A\_PL\_Recog] and [F.G.2B\_PL\_notRecog] in the report. Reasonable steps should be taken to verify the consistency of the data and liabilities shown on the forms with other sources of information and estimated liabilities as part of the review.
- 4.18 The CA should present the latest results, both gross and net of reinsurance, in comparison against the previous year in a manner that enables the in-scope insurer to understand how the reserving results influence its financial year results. An example of a summary table is shown for reference in Annex B Example 1. This example focuses on the trends of the ultimate loss ratio and the prior year deterioration (or improvements) separately, which are common material factors. For insurance liabilities where this is not the case, the CA should present a

summary to similar effect based on their professional judgement.

- 4.19 For each LOB (or group of LOBs if the analysis is performed with aggregated LOBs), the CA should include the comparison of the latest valuation results against the previous financial year end, with appropriate breakdown to identify and quantify the effects of experience, methodology changes and assumption changes (for those business included as at the previous financial year end). The same comparison should also be presented for any sub-segment that shows material changes. An example is shown for reference in Annex B Example 2. For insurance liabilities valued using methodologies that do not fit in the example provided, the CA should present appropriate breakdown based on their professional judgement. Commentary on the comparison presented should be provided in key discussion sections of the report for any LOB or sub-segment that has material changes.
- 4.20 The CA should outline the nature and extent of any key sources of uncertainty to which the in-scope insurer is subject and explain the approach taken and assumptions that have been made. Material uncertainties, not including generic uncertainty statements, should be highlighted and supported by a quantification of the significance of uncertainty. Examples of quantification include sensitivity analysis of valuation results to uncertain assumptions, or quantifying the impact to valuation estimate if key assumptions do not hold true, or scenario testing on alternative assumptions.
- 4.21 The CA should, where applicable and material, provide recommendations or comments to improve the reliability of future valuations of insurance liabilities. The CA should also provide commentary on the steps taken by the company on recommendations from previous year's report.

### 5 Certification of the Actuarial Opinion

5.1 Paragraphs 5.2 to 5.5 set out the requirements for the certification and signing of the report by the CA.

- 5.2 To be acceptable to the IA, a certificate should satisfy the requirements under rule 7(3)(b) of Insurance (Submission of Statements, Reports and Information) Rules (Cap. 41S) and should:
  - (a) identify the qualification and work experience of the CA;
  - (b) state that the CA is satisfied with the completeness, accuracy and consistency of the data used in its valuation of the insurance liabilities in respect of the in-scope insurer's general business;
  - (c) confirm that the insurance liabilities in respect of the in-scope insurer's general business have been valued in accordance with the Valuation Rules and other relevant guidelines as issued by the IA;
  - (d) state whether in the CA's opinion, the valuation of the insurance liabilities in respect of the in-scope insurer's general business presented on the returns forms mentioned in paragraph 4.17 makes appropriate provision for the insurer's policy obligations;
  - (e) confirm that the CA has complied with the prescribed standards<sup>3</sup>, or as such other standards as the IA accepts as being comparable to the prescribed standards under section 15C of the Ordinance, which are applicable to the CA and specify the relevant applicable standards with which the CA has complied; and
  - (f) contain such other information as the CA considers necessary, including any qualification, amplification, explanation or aspects with material uncertainty considered appropriate.
- 5.3 Where the CA decides to highlight any aspects of particular importance or aspects with material uncertainty, the CA should describe the factor or combination of factors that would result in significant deviation on the valuations of insurance liabilities of the in-scope insurer, and describe the uncertainty quantification in the certificate. General or broad statements of risks and uncertainties such as those due to economic changes, political or social forces, etc. are not required to be included in the certificate,

<sup>&</sup>lt;sup>3</sup> The prescribed standards are set out in the Insurance (Actuaries' Standards) Rules (Cap. 41H).

albeit they should be included in the report. Only specific factors that may result in significant deviation of insurance liabilities should be included in the certificate.

- 5.4 Where the CA decides to issue a qualified opinion, the CA should disclose the reason, the items to which such qualification relates and the amount of provision held by the in-scope insurer for such items. If the amounts of such items are not separately disclosed, the CA should disclose whether the insurer's held provisions include allowance for such qualified items. The CA should also disclose whether the insurer holds an appropriate provision for the aggregate insurance liabilities for all general businesses written except for the items to which the qualification relates.
- 5.5 A pro-forma actuarial certificate prescribed for the purpose of this Guideline is shown in Annex A.

### 6 Submission of the Actuarial Review Report and Certificate

- 6.1 The actuarial report and certificate defined under this Guideline are to be submitted to the IA on an annual basis. The IA may contact the CA directly for further information or clarifications as it considers appropriate.
- 6.2 The chief executive of an in-scope insurer (including a designated insurer) should ensure that the actuarial report and certificate are submitted to the Board of the in-scope insurer for information and any necessary follow up on the recommendations or areas of uncertainty highlighted in the report as part of the in-scope insurer's enterprise risk management framework. In case of a non-Hong Kong incorporated in-scope insurer (other than a designated insurer), the local chief executive (or the authorized representative in the case of Lloyd's) should submit the actuarial report and certificate to its regional headquarters or head office to which it reports in accordance with its corporate structure for information and necessary follow-up actions as stated. The CA should be given an opportunity to raise any matters arising out of the preparation of the report directly with the Board, the regional headquarters or head

office (as the case may be). This includes matters that the CA may have previously raised with the management of the in-scope insurer, but which have not been addressed to the satisfaction of the CA.

6.3 The actuarial report and certificate prepared are to be submitted to the IA within 4 months (or 6 months during the transitional period as stipulated in rule 7(1) of Insurance (Submission of Statements, Reports and Information) Rules (Cap. 41S) unless otherwise requested by the IA) after the end of the financial year to which the report and certificate relate, together with the following returns:

Return ID	Short name	Return name							
F.G.1	ClaimLiab	General Insurance Liabilities – Claims Liabilities							
F.G.2	PI.	General Insurance Liabilities - Total Premium							
F.G.2	FL	Liabilities							
		General Insurance Liabilities - Premium Liability							
F.G.2A	PL_Recog	in which premium is received or already							
r.G.2A		recognized as a receivable asset item under the							
		EBS [F.1 EBS]							
		General Insurance Liabilities - Premium							
F.G.2B	PL notRecog	Liabilities in which the premium is yet to be							
F.G.2B	I L_noticeog	recognized as a receivable asset item under the							
		EBS [F.1 EBS]							

### 7 Commencement

7.1 This Guideline shall come into effect on 1 July 2024.

### June 2024

### CERTIFICATE OF ACTUARIAL OPINION ON GENERAL INSURANCE LIABILITIES OF [THE COMPANY] AS AT [31 DECEMBER XXXX]

### Identification and qualification of the certifying actuary

[I, John Citizen, am an actuary employed by XYZ ("the Company") / I, John Citizen, am associated with the Firm of ABC Consulting Actuaries.] I am a Fellow of the [ABC] and a Fellow of Actuarial Society of Hong Kong with [x] years of experience in insurance liabilities reserving in general insurance business and am familiar with the situation in Hong Kong as it affects the value of insurance liabilities.

### Scope

I have been retained by [XYZ ("the Company") / the Company] to conduct an actuarial review of the liabilities. I have reviewed the data, actuarial assumptions and methods used in determining the general insurance liabilities and reinsurance recoverables of the Company in accordance with the requirements of the Insurance Ordinance (Cap. 41), Insurance (Valuation and Capital) Rules (Cap. 41R), [and relevant Guidelines] issued by the Insurance Authority. I have complied with the [prescribed standards under Section 15C of the Ordinance / XXX standards which are comparable to the prescribed standards].

In forming my opinion on the adequacy of the liabilities, I have relied upon the data prepared by the Company. Reasonable steps have been taken to check the completeness, accuracy and consistency of the data, but otherwise the data has not been independently verified.

The liabilities are the responsibility of the Company. My responsibility is to express an opinion on those liabilities based on my review.

[The Company has adopted my estimated liabilities which are shown in the table below. / The liabilities being reviewed are compared with my estimate of the liabilities in the table below.] The details of the review are set out in my report "TITLE as at 31 December XXXX" and dated XX April XXXX (the "Actuarial Report").

	Company's Position	Actuary Estimated liability (if different)
Gross outstanding claims liabilities		
Case Outstanding	XX	XX
IBNR	XX	XX
ULAE	XX	XX
MOCE (Risk Margin)	XX	XX
Discounting Impact	XX	XX
Total gross outstanding claims liabilities	XX	XX
Net outstanding claims liabilities		
Case Outstanding	XX	XX
IBNR	XX	XX
ULAE	XX	XX
MOCE (Risk Margin)	XX	XX
Discounting Impact	XX	XX
Total net outstanding claims liabilities	XX	XX
Total gross premium liabilities	XX	XX
Total net premiums liabilities	XX	XX

The Company's position is taken from return forms [F.G.1\_ClaimLiab] and [F.G.2\_PL] on General Business covering Claims and Premium liabilities for the financial year ended XXXX [submitted / to be submitted] to the Insurance Authority which forms part of the Company's Economic Balance Sheet as at 31 December XXXX. My estimates of the general insurance liabilities are calculated according to the Insurance (Valuation and Capital) Rules (Cap. 41R).

 $\begin{tabular}{ll} \bf Additional \ comments \ / \ variabilities \ [Include \ if applicable \ as \ per \ paragraph \ 5.3 \ of \ GL9] \end{tabular}$ 

### Opinion

In my opinion, subject to the comments above and qualification below, the Company's liabilities identified above have been valued in accordance with the Insurance (Valuation and Capital) Rules (Cap. 41R), [and relevant Guidelines], the Company makes / does not make appropriate provision for its general insurance liabilities and the liabilities reported by the Company on return forms [F.G.1 ClaimLiab] and [F.G.2\_PL] are appropriate.

<b>Qualified Opinion</b> [reasons for qualifying the opinion or if unable to form a opinion as per paragraph 5.4 of GL9]
John Citizen] Fellow of the]
Date:

Annex B

### Example 1

This example provides an in-scope insurer level summary showing prior year experience and recent loss ratio trends for direct business. The CA should provide suitable commentary on it as per paragraph 4.18 of GL9. The CA may adjust the layout of the table according to their own professional judgement, in order to improve communication of the results or to align with the analysis performed.

		Unearned Premium								
	remium	% inc / (dec) from AY 2023								
	Earned Premium	AY 2024								
	Œ	Unexpired Risk								
	ULR @ [Previous Financial YE] 2023YE	AY 2023								
	ious Financi	AY 2022								
	ILR @ [Prev	AY 2020 AY 2021								
surance	n									
[Gross/Net] of Reinsurance	ULR @ [Current Valuation] 2024YE	Unexpired Risk								
[Gross/		AY 2024								
		AY 2023								
		AY 2022								
	ULR	AY 2021								
		AY 2020								
	ience	PYD per B.E. Claim Reserves @ 2023 YE								
	Prior Year Experience	PYD <sup>4</sup> (imp) / det								
	Prior	B.E.Claim Reserves @ 2023 YE								
			LOB1	LOB2	:	 :	 	 	 	Total

4 Prior Year Development ("PVD") represents the change in best estimate ultimate claim on prior origin years, from previous valuation year to current valuation year. In the above table, a positive figure represents a deterioration and a negative figure represents an improvement from previous valuation.

## Example 2

This example provides a cohort level table analyzing the movement of undiscounted best estimate from previous financial year end to this valuation. The CA should provide suitable commentary as per paragraph 4.19 of GL9. The CA may adjust the layout of the table according to their own professional judgement, in order to improve communication of the results or to align with the analysis performed.

_	1															
		ULR														
	FY	Claims Paid within FY														
		B.E. Claim Reserves														
		B.E. Claim Ultimate														
Iovement	Mvmt Per Reserves Ratio	PYD per B.E. Reserves @FY-1														
ate Claims N		B.E. Claim Ultimate Mvmt														
d Best Estim	B.E. Ultimate Movement	due to other reasons														
[Gross/Net] of Reinsurance - Undiscounted Best Estimate Claims Movement		due to change in methodology														
f Reinsurance		due to change in a priori assumption														
[Gross/Net] o		due to change in loss development assumption														
		due to change in claims experience														
		ULR														
	FY - 1	B.E. Claim Reserves														
		B.E. Claim Ultimate														
		Accident Year	Prior Years	FY-11	FY-10	FY-9	FY-8	FY-7	FY-6	FY-5	FY-4	FY-3	FY-2	FY-1	FY	All Years