
ACTUARIAL VALUATIONS

Rules and Statement of Guidance

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List of Acronyms

CLA	Chief Loss Adjuster
IBNR	Incurred but not reported
LOB	Lines of Business
MAL	Monetary Authority Law (2018 Revision)

Rules and Statement of Guidance

Actuarial Valuations

1 Statement of Objectives

- 1.1 These Rules and Guidance are intended to establish minimum requirements in addition to providing guidance to applicable regulated entities on actuarial valuation reports as per the stipulations of Section 9(1) the Insurance Law, 2010. Some licensees are required to provide to the Authority, within six months of the end of their financial year, an actuarial valuation of their assets and liabilities including loss and loss expense provisions, certified by an actuary approved by the Cayman Islands Monetary Authority (the "Authority"). The Rules and Guidance aim to ensure that licensees apply clear, minimum standards and key principles in the preparation of actuarial valuation reports.
- 1.2 The Authority recognises that the arrangements for the preparation of actuarial valuations will vary according to the nature, scale and complexity of a licensee. Hence, this measure is not intended to be exhaustive; rather, these Rules and Guidance set out the Authority's minimum expectations and requirements on the preparation, structure, content and submission of actuarial valuation reports.

2 Statutory Authority

- 2.1 Section 34 of the Monetary Authority Law (2018 Revision) (the "MAL") provides that:
- "(1) After private sector consultation and consultation with the Minister charged with responsibility for Financial Services, the Authority may–*
- (a) issue or amend rules or statements of principle or guidance concerning the conduct of licensees and their officers and employees and any other persons to whom and to the extent that the regulatory laws may apply;..."*
- 2.2 This document establishes the Rules and Statement of Guidance on Actuarial Valuations. It should be read in conjunction with the Insurance Law, 2010, the Insurance (Reporting) Regulations, 2013 and other regulatory instruments issued by the Authority from time to time. Notably, The Authority's *Regulatory Policy on the Recognition and Approval of an Actuary*¹ establish the criteria that the Authority will use for determining whether to recognise or approve an actuary.
- 2.3 In order to highlight the Authority's rules related to Actuarial Valuations within the compendium, a rule is written in light blue and designated with the letter "R" in the right margin.

3 Scope of Application

- 3.1 Section 9(1) of the Insurance Law, 2010 establishes the requirements for insurers to submit a valuation report annually to the Authority as follows:

¹ Issued in July 2007.

"An insurer shall, except as otherwise approved by the Authority in writing and subject to subsection (3), submit to the Authority by way of annual return, within six months of the end of its financial year -

... (b) an actuarial valuation of its assets and liabilities including loss and loss expense provisions, certified by an actuary approved by the Authority;..."

3.2 Section 9(3) of the Insurance Law, 2010 states:

"The following exemptions apply to the requirements of subsection (1)-

(a) a class C insurer or a class B insurer that does not write long term business is not required to make submissions under subsection (1)(b) or (c); and

(b) the Authority may in writing exempt other classes of insurer from the requirement under subsection (1)(b) where it considers it appropriate, based on the nature, scale or scope of the insurance business involved."

3.3 The Rules and Guidance established here apply to all insurers regulated by the Authority and as defined by the Insurance Law, 2010, with the exception of a Class C insurer, or a Class B insurer that does not write long term business. In cases where the measure relates to an insurer which does not write long term business, the capital requirements presented in paragraphs 8.31 and 8.32 will not apply. The Authority may, in writing, exempt other classes of insurers from the requirement per Section 9 (1) (b) of the Insurance Law, 2010 where it considers it appropriate, based on the nature, scale or scope of the insurance business involved.

3.4 The Rules and Guidance established here also apply to all insurers regulated by the Authority, in cases where the Authority has imposed a specific requirement for the licensee to prepare and submit an actuarial valuation report to the Authority.

3.5 The Authority acknowledges that insurers that are part of a group may be subject to group-wide valuation and reporting requirements. However, it is expected that the valuation details and methodologies specific to the business licensed in the Cayman Islands is reported separately.

3.6 The Guidance does not codify or amend any existing law. Where the Guidance is incompatible with existing law, the law takes precedence and prevails.

4 Definitions

4.1 For the purpose of these Rules and Guidance, the definitions below are provided.

a) **Actuary:** means a person who has qualified as an actuary by examination of the Institute of Actuaries in England or the Faculty of Actuaries in Scotland or the Society of Actuaries in the United States of America or Canada, and who is a current member in good standing of one of the above professional associations or a person in good standing with some other actuarial qualification who is recognised by the Authority as such for the purpose of the Insurance Law.

- b) **Insurer:** means a person who is –
 - (a) licensed under section 4(3)(a), (b), (c) or (d) of the Insurance Law to carry on insurance business; or
 - (b) an association of individual underwriters including Lloyd’s of London and other associations of underwriters recognised by the Authority for the purposes of section 18 or 31 of the Insurance Law.
- c) **Long term business:** means insurance business involving the making of contracts of insurance –
 - (a) on human life or contracts to pay annuities on human life, including linked policies, but excluding contracts for credit life insurance and term life insurance other than convertible and renewable term life contracts;
 - (b) against risks of the persons insured –
 - (i) sustaining injury as the result of an accident or of an accident of a specified class;
 - (ii) dying as the result of an accident or of an accident of a specified class; or
 - (iii) becoming incapacitated in consequence of disease or diseases of a specified class,
 being contracts that are expressed to be in effect for a period of not less than five years or without limit of time and either not expressed to be terminable by the insurer before the expiration of five years from the taking effect thereof or expressed to be so terminable before the expiration of that period only in special circumstances therein mentioned; and
 - (c) whether by bonds, endowment certificates or otherwise whereby in return for one or more premiums paid to the insurer a sum or series of sums is to become payable to the person insured in the future, not being contracts falling within paragraph (a) or (b).

5 Submission and Availability of the Actuarial Valuation to the Authority

- 5.1 The Authority requires that a full-scale actuarial report is prepared by the licensee during every annual financial cycle. R
- 5.2 The licensee is required to submit the actuarial valuation report to the Authority within six months of the licensees’ financial year end. R

6 Preparation of the Actuarial Valuation Report

- 6.1 Insurers should ensure that actuarial valuation reports are prepared in accordance with these Rules and Guidance. The requirements set out in this measure are considered to be at the appropriate level however, additional pertinent information can be added at the actuary’s discretion. R
- 6.2 All mandatory content as presented in section 8 of this measure should be addressed in the actuarial valuation report, where applicable. Should any of the mandatory requirements not be considered applicable, the rationale for the exclusion of such points should be explicitly presented in the accompanying R

correspondence to the Authority.

- 6.3 The actuary is encouraged to include as much detail in the report, over and above the requirements presented in section 8 of this measure. *The Capital Adequacy Requirements for Long-term Insurers* presented in section 8 relate to long-term business only.
- 6.4 The valuation report must contain an executive summary which must detail all important matters which the approved actuary would expect to be made aware of in order to be convinced that the conclusions in the report had been produced in a thorough manner. Including, but not limited to, the data², processes and findings which form the basis of the report. R
- 6.5 All aspects of the executive summary must be clearly identifiable in the full report. R
- 6.6 The order in which the sections are presented in the report is at the discretion of the actuary.
- 6.7 The Authority recognises that actuarial valuation reports submitted for the first time in the new format, following the effective date of the Rules and Guidance, may not be comparable to prior reporting periods. Subsequent reports, however, should include comparative analysis with prior periods. R
- 6.8 If an actuary is preparing the actuarial valuation report for the insurer for the first time, it would be prudent to communicate with the Authority regarding any concerns about the expectations of the comparative analysis.

7 Communication with the Authority

- 7.1 The regulated entity should be transparent with respect to its valuation and actuarial arrangements and should always disclose to the Authority any matter which could impact the quality or validity of the results of the actuarial valuation report. R
- 7.2 An insurer should notify the Authority in writing, of any changes to its actuarial arrangements. A notification to the Authority of the termination of an actuary should, at a minimum, include the name of the actuary, date of termination, reason for termination and the plans for appointing a new actuary. R

8 Structure and Content of the Actuarial Valuation Report

This section presents the minimum requirements for completion of the actuarial valuation report. The requirements should not be considered exhaustive.

Requirements for Actuaries' Information

² By way of clarification, when the Authority refers to data it encompasses the variety of exposure measures, claims quantum/types of claims/claims expenses and premiums, by whatever premium definition is relevant to the lines of business (LOB) under review. Data shall also be said to include related information such as direct and reinsurance limits on coverage, number of reinstatements and their premiums and refunds.

- 8.1 The actuary is required to document in the report, the purpose of the investigation; the commissioning entity's name and other details; the limitations placed on the reliance of the report; and the external parties approved for distribution of the report.

The actuary must include his/ her name; professional credentials³ with confirmation of current good standing with that body, including meeting annual continuing professional development requirements; and a declaration of whether the engagement was accepted as an actuary employed by the licensee, or alternatively that the engagement was accepted as a consulting actuary, that is, he/she is not so employed by the licensee.

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- 8.2 The actuary must explain why his/her level of experience is suitable to carry out the analysis, and report on the lines of business (LOBs) presented in the report. If the actuary does not possess sufficient experience to analyse certain LOBs, the report must be counter-signed by a secondary actuary, who is required to confirm that he/she has the necessary level of experience, and has provided the necessary technical input, to validate the specific LOBs. The counter-signing actuary cannot be the same individual as the reviewing actuary.

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- 8.3 The name and credentials of the peer reviewing actuary are to be included in the report in a similar format as that required for the actuary⁴. The experience of the peer reviewing actuary should be suitable to carry out the review in respect of the LOBs presented in the report.

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Requirements related to Data

- 8.4 The data must be structured into coherent LOBs, which as far as possible comprise homogeneous risk groupings. The report should address separately all such materially different groups of data, with necessary age or cohort classifications provided.

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- 8.5 The actuary must provide homogeneous risk grouping data tables used in the analysis with segmentations as presented in paragraph 8.5. Claims and premiums data should include:

R

- a) Paid Claims;
- b) Reserves for reported claims;
- c) Incurred but not reported claims reserves;
- d) Ultimate forecast claims;
- e) Written premiums;
- f) Earned premiums; and
- g) Ultimate forecast premiums.

The ultimate forecast positions of those quantities should be the results which flow from the modelling analysis.

- 8.6 The effective date of the report must be stated and the effective date of any dataset which does not match the valuation date should be clearly indicated. In the

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³ For example, fellowship with an approved actuarial body.

⁴ See 8.2

latter case, the adjustments applied to achieve consistency between datasets must be stated.

- 8.7 If the actuary has identified material weakness in the data provided or encountered problems in obtaining professional sign-off from competent offices of the licensee, the issues should be clearly presented in the report along with explanations provided on how these issues were mitigated. R

Requirements for the Valuation Analysis

- 8.8 Exposure measures appropriate to the LOBs being analysed must be determined and stated, coupled with documentation justifying the choices. R
- 8.9 Any adverse impact on the analysis caused by budgetary or other resource constraints must be included in addition to the steps taken to mitigate those constraints. R
- 8.10 The modelling analysis and reporting outcomes on claims incurred must extend to claims which are incurred but not reported (IBNR). Expenses should also be allowed for, under the heading of direct claim settlement expenses and under estimated expenses of running off existing business. In the case of the latter, the estimates must be reached through analysis of the entity's current and expected expense base alongside any additional information sources which the actuary assesses as relevant. R
- 8.11 The actuary is required to present a detailed comparative analysis of the modelling for the current report and that for the immediately preceding report alongside clear justification for any inconsistencies. R
- 8.12 The actuary must provide an explanation of the modelling, stochastic processes and cash-flow analyses relevant to the analysis R
- 8.13 The results of the modelling analysis should be presented in the form of a point estimate, subject to a range around the point reflecting the variability of the outcome, with a clear explanation of why the chosen range is regarded as appropriate; or as a range of outcomes with associated probabilities as to the likelihood of each outcome. R
- 8.14 A detailed commentary must be included explaining why the analysis will either take the approach of purely reflecting all outcomes which can "reasonably be expected from what has been seen in the data to date" or, alternatively, take into account the wider picture by considering "all possible reasonable outcomes".⁵ R
- 8.15 Separate analysis must be carried out for each major currency in which exposure and claims are recorded. R
- 8.16 A description of the policies issued (including in-force and run-off risks) and risk transfer agreements must be covered by the analysis. R

⁵An example of the latter case would be the estimation of the effect if the data had been more extensive, including hypothetical events which usually exhibit small probability characteristics but exceptionally large quantum. R

- 8.17 The actuary must describe any large or unusual claims activity and the impact on the valuation.
- 8.18 In cases where reinsurance protects the gross position, the report must include projection and analysis of the ceded exposure and losses, in addition to the gross of reinsurance analysis. The net position will be calculated by subtracting the ceded analysis from the gross amount. R
- 8.19 Where policyholder guarantees have been provided⁶, an explanation of the process used to identify and value these guarantees is to be included in the report. R
- 8.20 The basis of any adjustments made in the analysis for the time value of money must be stated and explained. R
- 8.21 The actuary may have convincing information and/or make an informed judgement, to the effect that the direction of the development of data in the future will be different from the past. In such cases, the circumstances must be fully explained with justifications.⁷ R
- 8.22 If the actuary has determined the need to treat a sub-set of claims and exposures differently from the general procedures of the modelling process, this must be stated with clear explanations and justifications.⁸ R
- 8.23 The actuary may decide to rely upon external reference mortality or morbidity tables, and in some cases, this may be subject to an age adjustment. Justification must be provided for any such tables used. R
- 8.24 A statement must be provided on how the required minimum solvency margin and prescribed solvency margins are met. R
- 8.25 A set of meaningful stress tests must be applied as part of the analysis to test its robustness and inform the drafting of the report's conclusions. R
- 8.26 The actuary must provide a statement regarding any material instance of the entity's cedants, whether in respect of treaties or facultative arrangements, which are relied upon in his/her report; and an indication that provisions have been made in the financial statements for partial or total non-payment. R
- 8.27 The actuary must provide a description, including the potential impact, of any current or pending legal actions which are recorded on the entity's risk register. R
- 8.28 A description of the stages of the actuary peer review process that the report has undergone before it was finalised must be included. R

⁶ For example, in the case of death benefits.

⁷ Examples of parameters which may apply include, but are not limited to, inflation rates, lapse rates, taxes, mortality rates morbidity rates, external economic factors, environmental factors (such as global warming), legal factors, legislative and supervisory requirements, and/or competitive influences.

⁸ This will largely apply in cases where there is a high frequency or severity from one cause or incident or because the origin is from a non-typical marketing outlet.

- 8.29 The actuary must include in the report a number of descriptive paragraphs to provide a constructive pathway from the data, via the modelling methods to the findings in the report.

Capital Adequacy Requirements for Long-term Insurers

- 8.30 Details must be provided on the major categories of assets backing the obligations of the insurer, in addition to information on the types of assets, periods to redemption, currency, counterparties, location where the assets are held and whether publicly traded or otherwise. R
- 8.31 An outline and description of the approach used for asset-liability matching and liquidity management must be included. R

9 Additional Guidance

- 9.1 The Authority expects that the actuary should at all times, act with independence of thought and use professional judgment. It is therefore recommended that an agreement is reached between the actuary and senior management of the licensee that direct and effective communication lines will be put in place to ensure the actuary's independence having due regard to constructive input from management.
- 9.2 Licensees should ensure that a structured system of electronic valuation documentation⁹ is developed to record detailed methods, judgements and notes. Additionally, a glossary of technical terms and acronyms used in the report should be documented. These records should include inputs from the actuary and other stakeholders and experts.
- 9.3 It is expected that the data produced by the entity is signed off by senior management, through a written statement on the completeness, reliability and relevance of the data.
- 9.4 The report should include summary tabulations of the data, by ages, years or quarters of exposure, whichever is most suitable. The key LOBs should be presented separately, and the remaining business can be grouped. The gross, ceded and net tabulated calculations should also be presented separately for each LOB.
- 9.5 The results are also expected to be tabulated and presented by LOB.
- 9.6 In certain cases, the actuary may decide that the accuracy or the report may be enhanced if the data received is modified to correct for errors or omissions. It is expected that all modifications are documented with appropriate justifications.
- 9.7 The actuary may find it valuable to consider external data to strengthen the report. The Authority expects that any such data, including that used to exhibit similar broad characteristics to validate the subject data against or data used to act as collateral data within the valuation, is clearly documented and justified in the report.

⁹ For example, Microsoft Word and Excel or similar software programmes.

- 9.8 Novated accepted business will normally justify separate analysis within its own homogeneous risk groupings.
- 9.9 Qualitative processes should be regarded as an integral part of the structure of the valuation to draw in expert judgment which enhances and builds upon what can be obtained from quantitative processes. However, it is normally to be expected that even the qualitative process should be supported by a worthwhile body of analysis, possibly based upon information beyond the dataset arising from the subject valuation. It is expected that the actuary will enhance the report by seeking information from the Chief Underwriting Officer or the Chief Loss Adjuster (CLA) on trends and other relevant information¹⁰. Any judgments made and all related notes should be attributable to the individuals making them and should be clearly dated.
- 9.10 Administrative codes in the data should be validated by the actuary as these are largely expected to impact the valuation results. These include, but are not limited to, claims catastrophe event identifiers, policy series indicators and expense codes.
- 9.11 Where applicable, it is expected that the actuary will take account of the approach, conclusions, lessons and outcomes presented in prior valuation results in undertaking the valuation and preparing the report.
- 9.12 The actuary should consider the gap and variants between the prior valuation report's forecasted valuation outcomes and the actual outcomes. If relevant, the information should be taken into consideration in the current valuation process with appropriate documentation.¹¹
- 9.13 Notwithstanding required contents of the report and further procedural recommendations, the actuary is not required to exceed the depth of analysis within the valuation which is commensurate with the scale of the (re)insurance business and the credibility of the data available. The actuary should provide detailed explanations if, and in what respects, they have taken advantage of this concession and its consequences.
- 9.14 The Authority expects that varying approaches will be examined for suitability during the investigation. The outcomes of approaches not used should be documented in addition to the chosen methods of analysis.

10 Enforcement

- 10.1 In the event of non-compliance with this measure by a licensee, the Authority's policies and procedures as contained in its Enforcement Manual will apply, in addition to any other powers provided in the Insurance Law, 2010 and the Monetary Authority Law (2018 Revision).

¹⁰ Input from the CLA could comprise a short description of a few of the most significant claims from recent years, where perhaps some have been settled and some are yet to be settled. The CLA should also provide a description of the implications for the actuary and the business as a whole.

¹¹ This should be considered, for example, down to the level of quantities such as lapse rates, mortality, mixture of claim types and IBNR requirements.

