



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 (as amended)

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) of 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.
- 1.3 **These Rules and Statement of Guidance come into effect immediately.**

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 establishes 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 8.35 through 8.37 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, as presented in the Insurance Law (2010), 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 report is prepared by the actuary on behalf of the licensee during every annual financial cycle and additionally, at the direction of the Authority, when major changes to the structure or operations of the licensee’s business take place. R
- 5.2 The licensee is required to submit the actuarial valuation report to the Authority within six months of the licensee’s 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 The choice of accounting basis, or any other matter, underlying the actuary’s report, as allowed by the Insurance Law, 2010 and the Monetary Authority Law (2018 Revision), are not impacted by the Rules and Guidance. R
- 6.3 Except where otherwise stated in the Rules and Guidance or any other requirements the Authority puts in place, the actuary may apply their professional actuarial judgement, subject to challenge by the Authority, at its discretion. R
- 6.4 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 R

mandatory requirements not be considered applicable, the rationale for the exclusion of such points should be explicitly presented in the accompanying correspondence to the report submitted to the Authority.

- 6.5 The actuary is encouraged to include in the report any detail which, in their assessment, significantly informed the determination of any conclusions presented based on the requirements of section 8 of this measure. *The Capital Adequacy Reporting Requirements for Long-term Insurers* presented in section 8 relate to long-term business only.
- 6.6 The valuation report must contain an executive summary which must include all of the key conclusions of the report, alongside the most relevant matters related to these conclusions. This should include, at a minimum, as required under Section 9 (1) (b) of the Insurance Law, 2010, an actuarial valuation result which demonstrates the excess of assets over liabilities, including loss and loss expense provisions; and compares that excess to the prescribed capital requirement. R
- 6.7 All aspects of the executive summary must be clearly identifiable in the full report. R
- 6.8 The order in which the sections are presented in the report is at the discretion of the actuary. The measure seeks to allow the actuary to exercise his/her professional judgement in this regard. In exercising their judgement, the actuary should be mindful that their work is subject to challenge by the Authority and as such, they may be required to provide certain justifications, at the discretion of the Authority. R
- 6.9 The Authority recognises that actuarial valuation reports submitted for the first time, following the implementation of these Rules and Guidance, may not be comparable to prior reporting periods. Subsequent reports, however, should include comparative analysis with prior periods. R
- 6.10 Prior to seeking peer review, the appointed actuary should ensure that their findings are complete and fully checked for numerical and other errors by following their normal office procedures. The peer reviewing actuary is required to formally communicate to the Authority the key steps taken to allow them to confirm, or otherwise, that the appointed actuary followed acceptable professional actuarial approaches and analytics in their work. The peer reviewing actuary is required to comply with the Rules and Guidance and to confirm that the appointed actuary is also in compliance. R
- 6.11 If an actuary is preparing the actuarial valuation report for the insurer for the first time, where applicable, it is required that should they have misgivings about the position shown in the previous report, that they communicate directly with the Authority regarding those concerns. R

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 The regulated entity 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 to be exhaustive.

Requirements for Actuaries' Information

- 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. R
- 8.2 The actuary must verify that the licensee has complied with the requirements in paragraphs 7.1 and 7.2 of this measure; and provide confirmation of this verification to the Authority in the report. R
- 8.3 The appointed actuary must include his/ her name; professional credentials² 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. A peer reviewing actuary must also be nominated in that capacity to take on the duties as established in this measure. R
- 8.4 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, in the actuary's judgement or after challenge by the Authority, it is determined that the appointed 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. R
- 8.5 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 appointed actuary³. The experience of the peer reviewing actuary should be suitable to carry out the review in respect of the LOBs presented in the report. R

Requirements related to Data

- 8.6 The data must be structured into coherent LOBs, which as far as possible comprise homogeneous risk groupings. The report should, where applicable, address separately all such materially different groups of data, with necessary age or cohort classifications provided. Importantly, this should include, at a minimum, any analytics which the actuary deems to have significance in determining any results disclosed based on the requirements of section 8 of this measure. R
- 8.7 The actuary must decide upon homogeneous risk grouping data tables to be used in the analysis with segmentations as presented in paragraph 8.6. Claims and premiums data should include, amongst other information, loss and loss adjustment expense reserves. R

² For example, fellowship with an approved actuarial body.

³ See 8.3

- 8.8 The report should present the gross, ceded and net of ceded amounts for the following data and result items: R
- a) Policyholder reserves by segment;
 - b) Surrenders;
 - c) Bonus payments;
 - d) Paid claims;
 - e) Reserves for reported claims;
 - f) Incurred but not reported claims reserves;
 - g) Ultimate forecast claims;
 - h) Written premiums;
 - i) Earned premiums; and
 - j) Ultimate forecast premiums.
- 8.9 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 latter case, if it has been found necessary to apply material adjustments to achieve consistency between datasets, an explanation must be provided. R
- 8.10 If the actuary has identified material weaknesses in the data provided or encountered problems in obtaining professional sign-off from competent directors/senior officers of the licensee, the issues should be clearly presented in the report along with explanations provided on how these issues were mitigated. R
- 8.11 It is expected that the actuary may combine blocks of business because of their relatively small scale as compared with the whole, in such cases, the basis of the amalgamation must be stated. R

Requirements for the Valuation Analysis

- 8.12 Where suitable analytics for the LOBs depend upon exposure measures, these exposure measures must be clearly stated, coupled with documentation justifying the choices. R
- 8.13 Any adverse impact on the analysis caused by the licensee not, in the actuary's opinion, providing adequate resources, must be commented upon including the steps taken to mitigate those constraints. R
- 8.14 Where applicable, the modelling or other analysis and reporting outcomes on claims incurred must extend, in LOBs where appropriate, to claims which are incurred but not reported. Expenses should also be allowed for, under the heading of direct claim settlement expenses and underestimated expenses of running off existing business, or maintenance/policy expenses. In the case of the expenses, 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
- 8.15 Beginning the second year for which the actuary submits a valuation report following the effective date of these Rules and Guidance, the actuary is required to present a detailed comparison. The comparison should include an analysis of variance between the current and prior year report, with clear justification for any changes which the actuary regards as material. R

- 8.16 The actuary must disclose the accounting regime under which reporting liabilities are determined.⁴ If there has been diversion from the accounting regime, the actuary must state to what extent and provide the rationale. The actuary must also provide, where applicable, an explanation of any modelling, stochastic processes and cash-flow analyses relevant to his/her work. Where management has selected its own best estimate, the process by which this was assessed must be provided to the actuary and this should be clearly attributed to management in the report. R
- 8.17 In respect of all LOBs, a detailed commentary must be included explaining the extent to which the actuarial assumptions and methods used were informed by insured policy experience as compared with industry studies and/or by norms as compared with actuarial judgement. Where applicable, 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
- 8.18 Where the type of analysis undertaken by the actuary makes it applicable, 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 This can also be described as allowing for events not in the data. R
- 8.19 Separate analysis must be carried out for each major currency in which exposures and claims are recorded. The analysis of liabilities below a de minimis level, selected by the actuary, can be grouped for the purpose of preparing the analysis and results. R
- 8.20 A description of the policy types issued (including in-force and run-off risks) and those arising from risk transfer agreements must be included within the report. R
- 8.21 The actuary must describe any historic, large or unusual claims activity, including catastrophes, and the impact on the valuation by way of provision for those types of claims. If the actuary is reserving general LOBs, the impact of exposure to perceived material environmental issues, such as global warming, must be explained. R
- 8.22 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
- 8.23 In respect of with-profit life policies, reserving analyses relating to annual bonus, contingent bonus or terminal bonus must be set out. R
- 8.24 Where policyholder guarantees have been provided⁶, within policy terms and conditions, an explanation of the process used to identify and value these guarantees is to be included in the report. R

⁴ This may, for example, be a point estimate plus a management margin/provision for adverse deviation.

⁵ An 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.

⁶ For example, in the case of death benefits.

- 8.25 If the actuary has decided it is appropriate to make allowance for the time value of money, that is, discounting future cash-flows, the basis for doing so in the analysis must be provided and justified. R
- 8.26 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 materially different from the pattern in the past. In such cases, the circumstances must be fully explained with justifications.⁷ R
- 8.27 If the actuary has determined the need to treat a material sub-set of claims and exposures differently from the general procedures of the analysis/ modelling process, this must be stated with clear explanations and justifications.⁸ R
- 8.28 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 or mortality multiplier. Justification must be provided for any such tables used. R
- 8.29 Investigations conducted to review the consistency between emerging actual experienced mortality, morbidity, frequency, severity, acquisition expenses and lapse/persistency against levels assumed in the previous report, should be described by the actuary together with the implications for the current report. Where the actuary finds it necessary to make judgements these need to be clearly set out alongside clear rationale. R
- 8.30 A set of stringent stress tests must be applied, and set out in convincing detail in the report, as part of the analysis to test its robustness and inform the drafting of the report's conclusions. To fulfil this requirement, it is expected that sensitivity adjustments should be applied to several of the key drivers of the primary results to stress the outcome to the licensee's financial position.⁹ R
- 8.31 The actuary must provide a statement regarding any material instance related to the entity's reinsurers, whether in respect of treaties or facultative arrangements which are relied upon to continue to be solvent in his/her report; and an indication, if necessary, that provisions have been made in the financial statements for partial or total non-payment. R
- 8.32 The actuary must provide a description, including the estimated impact, of any current or pending legal actions which are recorded on the entity's risk register. R
- 8.33 The actuary is justified in relying upon the licensee's legal advisors in deciding upon this estimated impact, where consideration is outside the normal range of their actuarial expertise. R
- 8.34 There should be sufficient detail in the report so that the reviewer, or any other user of the report, is able to understand the appropriateness of data or assumptions or methods including any limitations to the scope thereof. R

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 an exceptionally high or low frequency or severity from one cause or incident or because the origin is from a non-typical marketing outlet.

⁹ To provide some possibilities, these could be to interest rates, or age adjustments to mortality tables, or variations in rates of medical expense inflation, or altered policy persistency assumptions, or changes to the mix of sizes of large claims applied to an excess of loss treaty.

- 8.35 The actuary must include in the report, a detailed description, to provide a constructive pathway from the data, via the assumptions, modelling and other analytical methods, to the findings in the report. R

Capital Adequacy Reporting Requirements for Long-term Insurers

- 8.36 Details must be provided on the major categories of assets backing the obligations of the insurer. This must include information on the types of assets, periods to redemption, currency, counterparties, location where the assets are held and whether publicly traded or otherwise. R
- 8.37 An outline and description of the approach used for asset-liability matching and liquidity management must be included in sufficient depth to enable the reviewing actuary to confirm its validity. The appointed actuary should articulate the extent of any mismatches between assets and liabilities. The actuary should do so by estimating the extent to which interest rates would need to move adversely to take ten percentage points off the licensee's coverage of the prescribed capital ratio which has arisen from the actuary's valuation. R
- 8.38 The actuary must provide in the report, a reasoned description of the means by which they have valued the assets and, in a consistent manner, compared them to the valuation of the liabilities. R

9 Additional Guidance

- 9.1 The Authority expects that the appointed 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 directors/senior officers 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 directors/senior officers.
- 9.2 Licensees should ensure that a structured system of electronic valuation documentation¹⁰ is developed to record detailed methods, judgements, assumptions and notes. Additionally, a glossary of technical terms and acronyms used in the report should be documented. The valuation documentation records should include inputs from the appointed actuary and other stakeholders and experts, as needed.
- 9.3 It is expected that the data produced by the entity is signed off on by directors/senior officers, through a written statement on the completeness, reliability and relevance of the data.
- 9.4 The report is expected to include summary tabulations of the data, by ages, years or quarters of exposure, or in a manner considered appropriate. 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 expected to be tabulated and presented by LOB in the report.
- 9.6 In certain cases, the actuary may decide that the accuracy of the report may be enhanced if the data they have been provided with is modified to correct for

¹⁰ For example, Microsoft Word and Excel or similar software programmes.

- perceived errors or omissions. All material modifications are to be documented by the actuary with appropriate justifications.
- 9.7 The actuary may find it valuable to consider external data to strengthen the statistical support to the report. The Authority expects that any such data is clearly documented, and its use justified in the report.
 - 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 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 and/ or the Chief Loss Adjuster on trends and other relevant information¹¹. Any judgments provided by these officers and all related notes should be attributable to the respective individuals and clearly dated.
 - 9.10 Information provided by the licensee to the actuary describing administrative codes in the data should, at a minimum, be validated, through sampling by the actuary. Examples of these codes include, but are not limited to, claims catastrophe code event identifiers, policy series indicators and expense codes.
 - 9.11 Where applicable, it is expected that the appointed actuary will take account of the approach, conclusions, lessons learned, and outcomes presented in prior valuation reports before undertaking the valuation and preparing the report. Circumstances may have changed, or the previous approach, conclusions and outcomes may have proved invalid over time; in which case the actuary is encouraged to make such changes as can be justified.
 - 9.12 The appointed actuary should consider the gap and variants between the prior valuation report's forecasted valuation outcomes as at the current reporting date, and the actual outcomes which have been experienced. If relevant, the information should be taken into consideration in the current valuation process with appropriate documentation.¹²
 - 9.13 The actuary may treat deferred acquisition costs in the same manner as required by the accounting regime.
 - 9.14 Where appropriate, the actuary must consider the implications of the insurance cycle on his/her reserving processes, particularly where downward pressure on premium rates might lead to pressure from directors/senior officers to call for reserve releases.
 - 9.15 Notwithstanding required contents of the report, including the rules presented in this measure and further procedural recommendations, the actuary is not required to exceed the depth of analysis within the valuation which is commensurate with

¹¹ 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.

¹² This should be considered, for example, down to the level of quantities such as lapse rates, mortality, mixture of claim types and IBNR requirements.

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 applied this guidance and the related implications.

- 9.16 The Authority expects that varying approaches, by way of methodology, assumptions and analysis, will be examined for suitability by the actuary during the investigation process which culminates with the report's findings. The outcomes of major alternative approaches not used, should be documented in the report.

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 (as amended).