BERMUDA MONETARY AUTHORITY

GUIDANCE NOTE

ACTUARY'S OPINION

on EBS Technical Provisions

MAY 2016

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INTRODUCTION

1. This Guidance Note (GN) sets out the Bermuda Monetary Authority's (the Authority) expectations for the provision of formal professional opinions that are required on the insurance Technical Provision (TP) elements of the Economic Balance Sheet (EBS).

2. The scope of this GN includes the EBS actuarial opinion requirements for all commercial legal entities and groups covered by the relevant legislation. This comprises of all insurers in Class 3A, Class 3B, Class 4, Class C, Class D, Class E and Insurance Groups. (Throughout this GN, the term 'insurer' refers to insurers, reinsurers and insurance / reinsurance groups unless indicated otherwise.)

I. Definitions

3. The following definitions are used throughout this GN:

   'Act' – refers to the "Insurance Act 1978 and Subsequent Amendments"

   'Insurance Prudential Standards Rules' refers to:
   - For Class 3A: Insurance (Prudential Standards) (Class 3A Solvency Requirement) Rules 2011;
   - For Classes 3B and 4: Insurance (Prudential Standards) (Class 4 and 3B Solvency Requirement) Rules 2008;
   - For Classes C, D and E: Insurance (Prudential Standards) (Class C, Class D and Class E Solvency Requirement) Rules 2011; or
   - For Insurance Groups: Insurance (Prudential Standards) (Insurance Group Solvency Requirement) Rules 2011.

   'Actuary' refers to an individual approved by the Authority, being:
   - For Class 3A: the Loss Reserve Specialist (LRS) appointed by the insurer under Section 8B(1A) of the Act;
   - For Classes 3B and 4: the LRS appointed by the insurer under Section 8B(1B) of the Act;
   - For Classes C, D and E: the Approved Actuary (AA) appointed by the insurer under Section 26(1A) of the Act; or
   - For Insurance Groups: the Group Actuary (GA) appointed by the group under Section 27G(1) of the Act.

   'Schedule XIV' refers to Schedule XIV of the relevant Insurance Prudential Standards Rules, which sets out the detailed requirements for the EBS.

   'Schedule XV' refers to Schedule XV of the relevant Insurance Prudential Standards Rules, which sets out the requirements for the Actuary's Opinion.

II. Background

4. Schedule XV of the Prudential Standards Rules stipulates that the Actuary's Opinion (AO) must state whether or not, in the opinion of the Actuary, the aggregate amount of TPs shown in the EBS as at the end of the relevant financial year is reasonable.

5. A primary focus of this Guidance Note is to elaborate upon the Authority's general approach to the supervision of insurers in relation to their engagement of an Actuary appointed to professionally opine upon the reasonableness of the insurers' TPs. This approach involves setting out prudent and robust fundamental requirements that an insurer and their Actuary are expected to adhere to during the course of the engagement.

6. The responsibility of professionally opining upon the reasonableness of TPs contained in the EBS is integral to Bermuda's insurance supervisory framework. As the TPs included in the EBS are not subject to financial audit, the AO issued through this process is especially critical as it is intended to give assurance to the Authority as to whether the TPs have been professionally assessed to be reasonable.

7. The Actuary approval process is intended to ensure that the Authority can place reliance on the professionalism of the Actuary and their credentialing actuarial body(s) whose professional standards the Actuary will comply with during the course of their engagement.

8. The Authority is of the view that once an Actuary has been approved, the focus of the regulatory process should be upon the work product of the Actuary in the context of the insurer.

9. This Guidance Note builds on previously released actuarial guidance, with specific focus upon the EBS framework, the fit and proper criteria for the approval of an Actuary and the roles and responsibilities of an Actuary once approved.

10. The Authority recognises the need for clarity as to the scope and implementation of the provisions of the Act if the regulatory system is to command the confidence of insurers and contract/policyholders as well as other regulatory bodies. The Authority therefore seeks to ensure that those operating within the Bermuda market have a sound understanding of the Authority's approach to implementing the Act.

11. While the Authority aims to provide clarity as to its approach, this Guidance Note cannot be exhaustive. In particular, the Guidance Note does not aim to provide guidance on determining TPs for the EBS.

12. The Authority will endeavour, through this and other Guidance Notes, to set out information about its regulatory approach and expectations regarding the activities associated with an Actuary. Ultimately, it is the responsibility of the insurer to ensure

its compliance with the Act, and all queries associated with this GN should be directed to the Authority.

13. The Authority's guidance is of general application and seeks to take account of the wide diversity of institutions that may be licensed under the Act. There may be a need for revision of this Guidance Note from time to time. Material changes in the Guidance will be published, generally through the issue of revised versions.

III. Interpretation

14. Best Estimate A probability-weighted average of future cash flows, discounted using the relevant adjusted risk-free interest rate term structure. By definition, EBS best estimates allow for discounting of future cash flows, and reflect the full potential range of possible outcomes. Traditional insurance valuation methodologies may not be capable of adequately allowing for all possible scenarios; however, for EBS best estimate valuations, it is expected that due regard be paid to events that may not be adequately reflected in the data used for such traditional approaches. These events have been referred to as 'Binary Events' or 'ENIDs' (Events Not In Data set). A "best estimate" may or may not be the result of the use of a probability distribution or a statistical analysis, and, in the Actuary's professional judgement, is neither optimistic nor pessimistic.

15. Reasonable In the context of an Actuary opining on Line 19 and/or Line 27C of the Statutory Economic Balance Sheet [1], "reasonable" means that, considering the nature, scale and complexity of the insurer's business and the requirements and standards of the Act, the TPs held are deemed by the Actuary to fall within a range of best estimate provisions that would be arrived at by two or more actuaries possessing the appropriate integrity, competency, resources, qualifications and experience, and where the subject actuaries exercised the level of care and diligence that, in the Actuary's professional judgment, would be necessary to complete the assignment in an appropriate manner.[2]

16. Adverse Deviation (*General Business – Only)* The potential variation in the actual amount that will be needed to pay future obligations gives rise to uncertainty in the estimates of TPs. In the context of this GN, an adverse deviation occurs when such a

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[1] The Statutory Economic Balance Sheet is found in Schedule XIV of the Prudential Standards Rules for the relevant class of insurer

[2] Actuarial Standards Board (ASB) – http://www.actuarialstandardsboard.org/glossary/reasonable/ - "In many instances, the ASOPs call for the actuary to … produce a "reasonable" result when rendering actuarial services. The intent is to call upon the actuary to exercise the level of care and diligence that, in the actuary's professional judgment, is necessary to complete the assignment in an appropriate manner.
Because actuarial practice commonly involves the estimation of uncertain events, there will often be a range of reasonable methods and assumptions, and two actuaries could follow a particular ASOP, both using reasonable methods and assumptions, and reach different but reasonable results. (ASOP No. 1)"

variation results in amounts higher than provided for in the TPs. The Actuary should consider whether there are significant risks and uncertainties that could result in a material adverse deviation.[3]

17. Materiality (*General Business – Only)* In evaluating materiality within the context of "adverse deviation", the Actuary should consider the purposes and intended uses for which he/she is preparing the statement of actuarial opinion. In discussing "material adverse deviation" within Part 6 – Relevant Comment of the Opinion - (*General Business – Only)* - the Actuary should arrive at a conclusion as to whether or not significant risk factors and/or uncertainties exist that could result in a material adverse deviation from the TPs held. The Actuary is expected to select a materiality standard in the context of the company's (regulatory) EBS capital and surplus and/or held TPs. Finally the Actuary should discuss the considerations underlying their conclusions.[4]

FIT AND PROPER CRITERIA AND APPROVAL PROCESS FOR ACTUARIES

IV. Appointment of an Actuary

18. The Act stipulates that certain insurers must appoint an Actuary, being an actuarially skilled individual, for the purposes of opining upon their TPs. This appointment is subject to approval by the Authority. The AO is to be provided annually with the Statutory Economic Balance Sheet (EBS).

19. Each insurer that is required to appoint an Actuary must apply in writing to the Authority for approval of their candidate(s) for that position. Each Actuary approval is specific to the subject insurer's application, is uniquely determined and is contingent upon the nature, scale and complexity of the insurer's business and the Actuary candidate's suitability to serve as an appointed Actuary for that insurer based upon the fit and proper criteria contained herein. The Authority will confirm in writing its decision concerning the approval or otherwise of the insurer's appointed candidate(s) for Actuary.

20. Where there are any material changes in the information included in the Actuary's application subsequent to the Actuary's approval, the insurer has the duty to forthwith provide written notice of the changes to the Authority.

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[3] This definition is consistent with ASB - ASOP - No. 36 - 3.9.

[4] The ASB - ASOP - No. 36 - 3.6, for example, states that "the actuary should evaluate materiality based on the actuary's professional judgment, any applicable materiality guidelines or standards, and the intended purpose for which the actuary is preparing the statement of actuarial opinion. The actuary should understand which financial values are usually important to the intended users of the statement of actuarial opinion and how those financial values are likely to be affected by changes in the reserves and future payments for losses and loss adjustment expenses."

V. Approval Process for an Actuary

21. The process of approval generally requires that an insurer provide adequate information to the Authority to demonstrate that its candidate for the post meets the eligibility and fit and proper criteria discussed herein. This documentation is expected to include, but is not limited to:

    a. Cover Letter from the insurer making request for the named candidate to be approved. If applicable, this letter should include a written explanation for any change from the current Actuary. This letter should also confirm that the appointed Actuary shall have the ability to communicate directly with the board[5] without the need for management review or approval; and that the board shall have direct access to the Actuary. This requirement might be complied with by ensuring that the Actuary is able to address the board or an appropriate committee thereof, directly without management executives being present;
    b. Letter of Resignation from the current Actuary;
    c. Letter of Undertaking and Acceptance from the candidate stating that the Actuary:

        i. Undertakes to perform their functions in accordance with Schedule XV of the Prudential Standards Rules and the professional standards of their credentialing actuarial body(s);
        ii. Has the ability to fulfil the role of Actuary, laying out specific work experience and skills relevant to the business underwritten by the insurer;
        iii. Confirms their understanding that he/she shall have the ability to communicate directly with the board without the need for management review or approval; and that the board shall have direct access to the Actuary;
        iv. Meets the Continuing Professional Development requirements promulgated by their credentialing actuarial body(s); and
        v. Commits to providing a letter of resignation (as required in b. above) at the time of their resignation from the Actuary role.

    d. Résumé from the candidate with information about relevant qualifications, including membership in professional associations, employment history and related work experience; and
    e. Copy of certificates and/or confirming evidence from credentialing actuarial bodies attesting to the fact that the candidate is a qualified member in good standing of the relevant associations.

[5] For the purposes of insurance groups, all references to "board" in this Guidance Note are intended to refer to the Group's "parent board".

VI. Criteria for Approval

22. Prior to approving a person as an Actuary, the Authority will assess whether the proposed Actuary is fit and proper to fulfil the role required. Fit and proper criteria would include whether, commensurate with the nature, scale and complexity of the insurer's business and the requirements and standards of the Act, the person possesses the appropriate integrity, competency, resources, qualifications and experience including being appropriately conversant with the Authority's established EBS valuation requirements and guidance material.

23. A person will generally be considered fit and proper to serve as an Actuary if the person:

    a. Is a qualified member in good standing of the Institute and Faculty of Actuaries (in the UK), the Canadian Institute of Actuaries, the Casualty Actuarial Society (in the US), the Society of Actuaries (in the US), the Institute of Actuaries of Australia or a Full Member Association of the Actuarial Association of Europe (in the EU);
    b. Meets the education, examination and experience requirements to be considered qualified to sign statutory statements of actuarial reserve opinions by their credentialing actuarial body(s) as listed in 23a;
    c. Meets the continuing professional development requirements promulgated by their credentialing actuarial body(s);
    d. Has experience in evaluating TPs for the business as written by the insurer, including being appropriately conversant with the Authority's established EBS valuation requirements; and
    e. Is not subject to any actual, potential or perceived conflicts that may prevent the Actuary from objectively fulfilling their role.

24. The Authority will generally approve no more than:

    a. One person to opine upon Line 19 of the EBS where that person meets the criteria set out in paragraph 23 for the General Business of the insurer; and
    b. One person to opine upon Line 27C of the EBS where that person meets the criteria set out in paragraph 23 for the Long-Term Business of the insurer; or
    c. One person to opine upon both Line 19 and 27C of the EBS (as applicable) where that person either meets the criteria set out in paragraph 23 for both the General and Long-Term Business of the insurer or the circumstances are such that paragraph 25 applies.

25. In the event that an insurer wishes to propose the same candidate to opine upon both Line 19 and Line 27C, pursuant to paragraph 24c., but where the proposed Actuary meets the criteria set out in paragraph 23 to opine upon either Line 19 or Line 27C, but not both, then the Authority may use its discretion to approve the appointment of the person, giving due regard to the particular circumstances, such as the materiality of the business, as written by the insurer, to be opined upon. However, the Actuary

will still be subject to the Professional Standards of their credentialing actuarial body(s).

26. The principle of objectivity imposes an obligation on all Actuaries not to compromise their professional or business judgment because of bias, conflict of interest or the undue influence of others. As such, the Authority will generally expect specific disclosures to be made if the Actuary is not financially, organisationally, or otherwise independent in relation to the provision of the AO.[6]

27. While the proposed Actuary may be an employee of, or consultant to, the insurer, a person will generally not be approved as an Actuary if the person is:

    a. A chief executive officer, a chief operating officer, a chief financial officer, a chief risk officer, a chief underwriting officer (or a person performing like functions within the insurer);
    b. A director of the insurer. Where the proposed Actuary holds directorships at the subsidiary level within the insurer, the Authority may exercise its discretion in granting approval in such circumstances provided, generally, that the combined net TPs of the entities for which he/she is a director amount to no more than 30% of the total of line 19 and no more than 30% of the total of line 27C for the insurer;
    c. A person with operational underwriting, pricing, or claims authority for the insurer; or
    d. A person who has any personal financial ties with one or more key personnel of the insurer as identified in a., b. and/or c. herein, where, in the view of the Authority, there is an actual or perceived conflict of interest or lack of independence that could affect the Actuary's ability to objectively fulfil their role.

28. Where the insurer elects to appoint an employee as their Actuary, the insurer is expected to ensure that once the Actuary is appointed, the insurer's compensation package does not compromise the independence of either the proposed Actuary or any persons whose work is being relied upon.

VII. Fitness and Propriety of an Actuary

29. Prior to selecting a candidate for the role of Actuary, the insurer is expected to consider whether its candidate meets the eligibility criteria of the Authority and whether the candidate is fit and proper to fulfil their role. This requires considering whether, commensurate with the nature, scale and complexity of the insurer's business and the requirements and standards of the Act, the person possesses the appropriate integrity, competency, resources, qualifications and experience including being appropriately conversant with the Authority's established EBS valuation

[6] These guidelines are consistent with the ASB - ASOP - No. 41 - Actuarial Communications - 3.4.2 - Conflict of Interest.

requirements. Wherever appropriate, the insurer should seek confirmation of this, in advance, from the candidate.

30. If an insurer becomes aware at any time that its Actuary is no longer fit and proper, the insurer has the duty to forthwith inform the Authority and replace the Actuary with a person who meets the eligibility and fit and proper criteria.

31. An insurer is expected to provide information, when requested by the Authority, to demonstrate that its candidate for Actuary meets, or in the case of an incumbent Actuary, continues to meet the eligibility and fit and proper criteria.

32. Where an insurer can establish a valid argument that it underwrites one or more specialist segments of business, where the segment(s) must be reported jointly either as General Business or Long-Term Business, e.g. Health and General P&C and/or Health and General Long-Term, then the Authority may use its discretion to consider an application made by the insurer for an additional Actuary to be appointed for the specialist segment.

33. In the event that an insurer wishes to propose an Actuary who does not appear to meet the criteria of paragraph 23, the insurer should seek preliminary discussions with the Authority in order to identify any issues that would need to be addressed prior to such an appointment being made.

34. When making an approval, the Authority may use its discretion to place appropriate limitations within the notification of approval, giving due regard to the particular circumstances, such as the business as written by the insurer to be opined upon.

VIII. Acceptance of an Engagement

35. Prior to accepting an appointment as an Actuary, and on an ongoing basis, the candidate is expected to be satisfied, given the nature, scale and complexity of the business as written by the insurer, and their level of familiarity with the Authority's established EBS valuation requirements, that the estimation of the TPs of the insurer (pursuant to the Act) is within their professional expertise and proficiency.

36. The candidate is expected to confirm in their Letter of Undertaking and Acceptance that they are not subject to any actual, potential or perceived conflicts that may prevent them from objectively fulfilling their role. An Actuary may be an employee of the insurer. In this instance, and any other similar circumstances (whether or not identified in paragraph 27 above) where there could be a perceived conflict of interest, the candidate is expected to disclose such a relationship to the Authority prior to making formal application for approval.[7] In such circumstances the Authority

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[7] Where a conflict of interest creates a threat to the Actuary's objectivity, confidentiality, or professional behaviour that, in the opinion of the Authority, cannot be eliminated or reduced to an acceptable level

will ascertain whether the perceived conflict disqualifies the candidate from being considered for approval.

IX. Notification of Approval

37. The Authority shall, upon its approval of the candidate for the subject insurer, issue a written notification to the insurer of such approval. Such notification may include specified conditions and may restrict the approval to specific components of General Business and/or Long-Term Business.[8]

X. Change in Actuary

38. Where there is a proposed change to an Actuary, the insurer has the duty to forthwith provide written notice to the Authority of the proposed change and, if applicable, the reasons for the change.

39. Where an Actuary's appointment is terminated or where the Actuary resigns and where there are circumstances connected to the ending of the appointment which, in the Actuary's professional judgment, should be brought to the attention of the Authority, then, in addition to the letter of resignation discussed in paragraph 21b, the Actuary has the duty to forthwith provide written notice to the Authority. This written notice should be issued directly to the Authority without the need for insurer management review or approval and should include details of the reasons for the cessation of appointment.

XI. Disqualifications

40. The Authority may require that an insurer remove a person occupying the role of Actuary where the Authority considers the person to be no longer fit and proper for the role. Criteria for disqualification could include, but are not limited to, where the person:

    a. Has failed to perform the functions and duties of such appointment satisfactorily in the view of the Authority; or
    b. No longer meets the fit and proper criteria for such an appointment; or
    c. Fails to meet the Continuing Professional Development requirements promulgated by the Actuary's credentialing actuarial body(s).

41. The Authority shall not revoke its approval unless it has first notified the Actuary and the insurer of its intention to do so.

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through the application of safeguards, the Actuary shall not accept the engagement or shall resign from one or more conflicting roles or engagements.

[8] When approval notification restrictions arise, they shall be dependent upon the insurer's explicit request and the extent to which the Actuary meets the subject fit and proper criteria.

ROLE OF ACTUARIES

XII. Accepted Actuarial Practice

42. It is the responsibility of the Actuary to be conversant with the requirements of the Act (including the Rules) and their implications with respect to the issuance of their opinion.

43. The Actuary's estimate of TPs and any other matters specified by the Authority are expected to be prepared in accordance with accepted actuarial practice and all applicable standards of practice of their credentialing actuarial body(s), the Authority's established EBS valuation requirements and the Rules. Where actuarial practice standards of the credentialing actuarial body(s) have geographical limitations, these limitations should generally be interpreted to include Bermuda for the purposes of providing an AO. However, where any provisions of the Rules differ from the standards of practice, then the Rules shall prevail.

XIII. EBS valuation principles

44. Schedule XIV of the Rules (Statutory Economic Balance Sheet) - Economic Balance Sheet valuation principles – technical provisions – stipulates that EBS valuation principles must be adhered to for the purposes of assessing TPs. TPs shall be valued at an economic value using the best estimate of cash flows, with an additional risk margin. Some characteristics associated with the valuation of TPs under EBS principles set out in the Rules and associated guidance, are as follows:

    a. Best Estimates:

        i. The best estimate represents a probability-weighted average of future cash flows, discounted using a relevant adjusted risk-free interest rate term structure. By definition EBS best estimates represent the net present value of future cash flows, and reflect the full potential range of possible outcomes.

        ii. Uncertainty associated with the Best Estimates is reflected in the risk margins found on EBS Lines 18 and 27A; and as such, this uncertainty should not be double counted by including allowances for prudence in the Best Estimates on Lines 17 and 27. The best estimate should, however, reflect events that may not be adequately reflected in the data, including such events known as 'Binary Events' or 'ENIDs' (Events Not In Data set)).

    b. Discounting:

        i. The valuation of TPs shall reflect the time value of money, using a risk free discount rate curve which has been adjusted to reflect certain risk characteristics of the liability. The Authority will supply risk free discount curves and discount curves for the 'standard approach' for a number of major currencies. Insurers may use alternative discount curves (e.g. those approved for use in Solvency II) provided they meet the same overall objectives as the rates supplied by the Authority. In this situation the Actuary would be expected to explain how the rates were derived and the justification for their use as part of the 'Summary of Methodology' section of the Opinion – see paragraph 54.

ii. The 'scenario-based approach' may be used for some or all of an insurer's business and is designed to capture both the sensitivity to interest rates and the degree to which assets and liabilities are cash flow matched. The 'scenario-based approach' consists of a base scenario using the actual portfolio of assets supporting the relevant block of business (adjusted for expected default costs) and a range of interest rate stresses to determine the amount by which the market yield should be reduced to reflect interest rate risk and asset-liability mismatching.

c. Risk Margin Calculations:

i. The risk margin shall be calculated using the cost of capital method, which reflects the cost of holding an Enhanced Capital Requirement (ECR) level of capital in respect of insurance risk, credit risk, and operational risk. The cost of capital rate supplied by the Authority shall be used.
ii. The assessment of the risk margin shall cover the full period needed to run-off the insurance liabilities, and may make allowance for the effects of the diversification of regulatory capital requirements within the insurer
iii. The cost of capital for each year shall be discounted using the risk free discount curve based on the EBS reporting currency.
iv. The risk margin shall be calculated separately for General business and Long-Term business
v. The Actuary's opinion in relation to the risk margin is limited to confirmation that the amounts included in the EBS have been calculated in accordance with the Rules.
vi. Where simplifications have been made within the risk margin calculations (e.g. where templates produced by the Authority or other parties have been utilised), the Actuary will need to consider whether the assumptions underlying those simplifications are appropriate and proportionate.

d. Use of 16 year transitional arrangements for Long-Term business:

Where a Long-Term insurer has applied to, and been approved by, the Authority to use the 16 year transitional arrangements for the determination of some or all of its TPs included on Line 27, then a positive opinion can be given if:

i. The amount of the best estimate of TPs using the unadjusted EBS rules is reasonable; and

ii. The amount of the reserves for the remaining business that was in force on 31 December 2015 calculated in accordance with the valuation bases in force at 31 December 2015 (adjusted as appropriate to reflect current assumptions) has been properly determined; and
iii. The interpolation between i. and ii. has been correctly calculated.

e. Consolidation:

It should be noted that the EBS is prepared on a consolidated basis in line with the GAAP principles adopted by the insurer.

XIV. Right to Information

45. The insurer is expected to make any reasonable arrangements that are necessary to enable the Actuary to complete their assigned responsibilities. This includes promptly complying with any and all reasonable requests for information. Where any such arrangement is denied by the insurer, the Actuary has the duty to forthwith notify the Authority.

XV. Communication of Opinion

46. The Actuary shall provide an opinion as to the reasonableness of the TPs and shall disclose any instructions in the Rules relating to the valuation or presentation of the TPs which have not been complied with.

47. The following sets out minimum standards for the presentation, and the level of detail expected to be included in the communication of the AO. The Opinion should normally be comprised of nine parts each for General Business and Long-Term Business, as described below. Where an insurance group or dual licensed insurer carries on both General Business and Long-Term business, then the Opinion will normally consist of up to 18 parts produced by the LRS and AA (for the dual license) and Group Actuary respectively.

Part 1 – Identification

48. This section should:

a. Identify the name of the Actuary; their full address; and the professional qualifications under which the Opinion is being rendered;
b. Include confirmation that the Actuary continues to be a qualified member in good standing of all credentialing actuarial bodies included in the application to the Authority for their approval and that the Actuary has met the Continuing Professional Development requirements promulgated by their credentialing actuarial body(s) for the period ending [day/month/year], where the signing date of the Opinion falls within one year of that date;

c. Confirm whether or not the Actuary has ties to the insurer that could be perceived to render the Actuary as not being financially, organisationally, or otherwise independent relative to the communications disclosed within the AO[9];
d. Where the Actuary holds a directorship in one or more subsidiaries of the insurer, state any directorships held, and include a statement that "the combined net TPs of the subsidiary(s) where I hold a directorship(s) is x% of the total net TPs included in Line 19 and y% of the total net TPs included in Line 27C" as applicable; and
e. Include confirmation that the Actuary satisfies the fit and proper criteria, with due consideration of the nature, scale and complexity of the insurer's business and the Authority's established EBS valuation requirements.

Part 2 – Scope

49. This section should identify the insurer involved and the valuation date of the AO, and provide details defining the business that is the subject of the AO. This section should clearly identify the sections of the Insurance Act and/or Prudential Standards Rules under which the provision is being provided, the relevant lines of the financial statement (or the portion thereof) for which the Opinion is being given, and the date of the Statutory Economic Balance Sheet of which these lines form a part thereof.

Part 3 – Conditions and Limitations

50. In this section the Actuary should provide details concerning all reasonably foreseeable conditions and limitations relevant to the determination of TPs specific to the insurer's business and circumstances. It is not necessary that the Actuary state general broad statements about risks and uncertainties.

Part 4 – Expression of Opinion

51. The Opinion should be clearly stated, without restriction where appropriate, and must show the Actuary's quantified best estimate (and/or ranges for the best estimates**)** of TPs, and other information as required by Schedule XV.

    a. The Actuary should show the best estimate and/or lower and upper bound of their range of reasonable best estimates, as appropriate where these have been calculated. For the purpose of the EBS, the best estimate and any range shown is expected to give due regard to events that may not be adequately reflected in the data used in traditional provisioning approaches. These events have been referred to as 'Binary Events' or 'ENIDs' (Events Not In Data set);
    b. Where the Actuary issues a qualified Opinion in circumstances where the TPs for certain item(s) are in question because they cannot be reasonably estimated or the actuary is unable to issue an opinion on the reserves for those items, the Actuary

[9] Where this statement does not confirm independence, as discussed in paragraphs 26 and 27, the Actuary should disclose any pertinent information that is not apparent.

should disclose in the opinion the item or items to which the qualification relates, the reasons for the qualification, and the amount of TPs held for such items if this detail is disclosed by the insurer. If the amounts for such items are not separately disclosed by the insurer, then the Actuary should disclose whether the insurer's held TPs include un-quantified values for such qualified items. The Actuary should also disclose whether the held TPs make a reasonable provision for the aggregate liabilities for all business written except for the item or items to which the qualification relates.

52. ***(General Business only)*** The opinion paragraph for insurers writing general business should include the relevant sentences which cover the points listed in the following illustration:

A. "In my opinion, the amount of $x carried as the Total General Business Insurance technical provisions on line 19 of the Statutory Economic Balance Sheet, which is comprised of:

i. the amounts for Best Estimate - General Business Insurance - Premium Provisions of:

- $a for Line 16(a), gross of reinsurance;
- $b for Line 16(d), net of reinsurance;

ii. the amounts for Best Estimate - General Business Insurance - Loss and Loss Expenses Provisions of:

- $c for Line 17(a), gross of reinsurance;
- $d for Line 17(d), net of reinsurance;

iii. and the Risk Margin – General Insurance Business - of $e for Line 18

a. [meets; does not meet] the requirements of the Insurance Act 1978 and related rules and regulations;
b. [makes; does not make] a reasonable provision for the total insurance technical provisions of the [insurer; group] under the terms of its insurance contracts and agreements."

B. Where the Actuary reports a best estimate, a statement reflecting the following should be included:

"My actuarial best estimates of the corresponding liabilities are:

- $g for Line 16(a), gross of reinsurance;
- $h for Line 16(d), net of reinsurance;
- $i for Line 17(a), gross of reinsurance;
- $j for Line 17(d), net of reinsurance."

C. Where the Actuary reports a range of reasonable estimates, a statement reflecting the following should be included:

   i. "My selected ranges of actuarial best estimates of the corresponding liabilities have an upper bound value of:

      - $m for Line 16(a), gross of reinsurance;
      - $n for Line 16(d), net of reinsurance;
      - $o for Line 17(a), gross of reinsurance;
      - $p for Line 17(d), net of reinsurance."

   ii. "My selected ranges of actuarial best estimates of the corresponding liabilities have a lower bound value of:

      - $mb for Line 16(a), gross of reinsurance;
      - $nb for Line 16(d), net of reinsurance;
      - $ob for Line 17(a), gross of reinsurance;
      - $pb for Line 17(d), net of reinsurance."

D. "My actuarial best estimates of the corresponding liabilities [have; have not] been calculated in accordance with the requirements of Schedule XIV, and [have; have not] been computed in accordance with accepted actuarial practice."

E. "My actuarial best estimates of liabilities have been discounted reflecting rate(s) of interest that [have; have not] been supplied by the Authority."

F. "In my opinion, the amount carried as the Risk Margin – General Insurance Business - in the Statutory Economic Balance Sheet of $e for Line 18, [has; has not] been calculated in accordance with the requirements of Schedule XIV. Where simplifications have been made in the calculation of the risk margin, the assumptions underlying those simplifications are appropriate and proportionate."

53. ***(Long-Term Business only)*** The opinion paragraph for insurers writing Long-Term business should include the relevant sentences which cover the points listed in the following illustration:

A. "In my opinion, the amount of $y carried as the Total Long-Term Business Insurance technical provisions on line 27C of the Statutory Economic Balance Sheet, which is comprised of:

   i. the amounts for Total Best Estimate - Long-Term Business Insurance Provisions of:

- $aa for Line 27(a), gross of reinsurance;
- $ab for Line 27(d), net of reinsurance;

ii. the amounts for Best Estimate - Long-Term Technical provisions calculated as a whole of:

- $ac for Line 27B(a), gross of reinsurance;
- $ad for Line 27B(d), net of reinsurance;

iii. and the amount for the Risk Margin – Long-Term Insurance Business - of $ae for Line 27A,

a. [meets; does not meet] the requirements of the Insurance Act 1978 and related rules and regulations;
b. [makes; does not make] a reasonable provision for the total insurance technical provisions of the [insurer; group] under the terms of its insurance contracts and agreements."

B. Where the Actuary reports a best estimate, a statement reflecting the following should be included:

"My actuarial best estimates of the corresponding liabilities are:

- $ag for Line 27(a), gross of reinsurance;
- $ah for Line 27(d), net of reinsurance;
- $ai for Line 27B(a), gross of reinsurance;
- $aj for Line 27B (d), net of reinsurance."

C. Where the Actuary reports a range of reasonable estimates, a statement reflecting the following should be included:

i. "My selected ranges of actuarial best estimates of the corresponding liabilities have an upper bound value of:

- $ak for Line 27(a), gross of reinsurance;
- $al for Line 27(d), net of reinsurance;
- $am for Line 27B(a), gross of reinsurance;
- $an for Line 27B(d), net of reinsurance."

ii. "My selected ranges of actuarial best estimates of the corresponding liabilities have a lower bound value of:

- $ao for Line 27(a), gross of reinsurance;
- $ap for Line 27(d), net of reinsurance;
- $aq for Line 27B(a), gross of reinsurance;

- $ar for Line 27B(d), net of reinsurance."

D. In instances where the best estimate provisions shown on Line 27 (d) have been calculated making use of the 16 year transitional arrangements, a statement reflecting the following should be included:

"My actuarial estimate of $ah for Line 27(d) has been calculated making use of the 16 year transitional arrangements and is based upon an interpolation of:

a) a best estimate amount of $ak contributing $al to Line 27 (d) and
b) an amount of $am for the business that was in force on 31 December 2015 calculated under the valuation approach used as of 31 December 2015 and contributing $an to Line 27 (d)."

E. "My actuarial best estimates of the corresponding liabilities [have; have not] been calculated in accordance with the requirements of Schedule XIV, and [have; have not] been computed in accordance with accepted actuarial practice.

F. In accordance with the requirements of Schedule XIV, my actuarial estimates of best estimate technical provisions have been discounted reflecting rate(s) of interest that [have; have not] been supplied by the Authority."

G. "In my opinion, the amount carried as the Risk Margin – Long-Term Insurance Business - in the Statutory Economic Balance Sheet of $ae for Line 27A, [has; has not] been calculated in accordance with the requirements of Schedule XIV Where simplifications have been made, the assumptions underlying those simplifications are appropriate and proportionate."

Part 5 – Summary of Methodology

54. In this section the Actuary should provide an executive summary of methodologies used in arriving at their Opinion including the following:

a. Brief commentary on the extent to which the data underlying the EBS TPs is the same as the data underlying the calculation of insurance reserves as reported in the audited GAAP financial statements for the insurer. Where the data underlying the EBS TPs cannot be reconciled to the data underlying the audited GAAP financial statements, the reasons should be clearly documented. For the purposes of data integrity, this section should include disclosure of the senior official(s) of the regulated entity(s) upon whom the Actuary relied for preparation of the data. The commentary should cover whether additional data checks have been performed by the Actuary if any.
b. Brief discussion of how the Actuary arrived at their actuarial estimates of the insurer's aggregate TPs, including main assumptions, use of expert judgment, actuarial methods, allowance for Binary Events / ENIDS and discussions related

to any ranges of reasonable estimates produced (where applicable), along with the date(s) through which data or other information has been considered in developing the findings included in the report.

c. ***(Long-Term Business – Only)*** Brief discussion of the amount of best estimate provisions calculated making use of the 16 year transitional arrangements including the amount of best estimate provisions which would have resulted had the transitional arrangements not been applied. These amounts shall be separately split between the lines of business in relation to amount held on Line 27(d).
d. Where the Actuary has not selected discount rate(s) that have been supplied by the Authority then the Actuary should indicate the rates selected, how they have been derived, and explain whether or not the rates are consistent with the rates supplied by the Authority.
e. Where the 'Scenario-based approach' has been used, the Actuary shall disclose the amount of best estimate TPs along with details of the business it was applied to. The insurer shall also disclose the amount of TPs according to the 'base scenario', the various required interest rate stress scenarios, and also the 'standard approach'.
f. Brief commentary on the methodology used to identify and value the Bound But Not Incepted business (BBNI business). The commentary should include the amount of premium included as BBNI business along with the amount of best estimate provision.
g. Brief commentary on the methodology used to arrive at the adjustment included in the best estimate of reinsurance recoveries that was made to reflect expected losses due to counterparty default (for whatever reason, including reinsurer insolvency or contractual disputes) in relation to reinsurance recoveries held on Lines 16(c), 17(c), 27(c) and 27B(c).
h. ***(Long-Term Business – Only)*** Where the insurer has chosen to calculate some or all of its TPs 'as a whole', the Actuary shall briefly discuss the method used to determine the best estimate technical provision and whether or not the approach adopted by the insurer is reasonable and in accordance with the requirements of Schedule XIV.
i. The name of each legal entity, business unit and/or reserving group along with their respective contributions to the held TPs. This detail is only required for legal entities, business units and/or reserving groups where TPs comprise of 5% or more of the insurer's TPs, with the remainder shown as balancing amounts.

Part 6 - Relevant Comment

55. In this section the Actuary should include comment on matters that create additional uncertainty in the TPs or where the amount of liability is subject to an unusual amount of uncertainty, such as:

    a. Where there has been a material change in the actuarial assumptions or methods employed, the Actuary should describe the nature of the change and the impact of these changes on the Actuary's valuation;

b. Material changes to the insurer reserve risk profile due to, but not limited to, material Mergers & Acquisitions activity, material changes to policy conditions (coverage, deductible, exclusions), material change to reinsurance arrangements, material change to the (case) reserving policy and material legal changes with an impact on the level and uncertainty surrounding the TPs.
c. Where the information provided by the insurer is incomplete or inadequate so as to prevent completion of the evaluation in accordance with accepted actuarial standards, the Authority's established EBS valuation requirements and other professional standards in general, the Actuary should state this and describe the impact on their evaluation;
d. Where the Actuary has had to select a key assumption with limited analytical support, the Actuary should state this and describe the risks and uncertainties associated with these selections;
e. (***General Business – Only)*** Whether the Actuary reasonably believes there are significant risks that could result in material adverse deviation, the Actuary should identify the materiality standard selected and include an explanatory paragraph to describe the major risk factors. Where the Actuary reasonably believes there are no apparent significant risks that could result in material adverse deviation, the Actuary should include a statement attesting to this observation in this section, including identification of the materiality standard adopted. At a minimum, the Actuary should include in the opinion the following statements, as appropriate:

   i. "I conclude that there are [no reasonably foreseeable] significant risk factors and/or uncertainties that could result in a material adverse deviation from the held insurance technical provisions.
   ii. My determination is based upon a materiality standard of x% of the insurer's [economic capital and surplus, held insurance technical provisions, etc.] or $y."

   Where an affirmative risk of material adverse deviation comment is indicated, the Actuary should include in the opinion a statement similar to the following as appropriate:

   "I conclude that the major risk factors associated with the uncertainty in insurance technical provisions are z [lines of business, specified risks and/or events, etc.]."

Part 7 – Reliance on Opinions of Other Actuaries

56. It is anticipated that there will be circumstances where an Actuary is called upon to rely on the opinion of another actuary, including one or more actuaries affiliated with the insurer,[10] in order to render an opinion on an insurer's TPs.

57. In this section the Actuary should:

[10] Where the Actuary relies on the opinion of professionals, other than actuaries, similar disclosures should be made.

a. Claim reliance on the opinion of another actuary only if the Actuary ascertains that reliance on the other actuary's opinion is consistent with the other actuary's intended use. The reliance on the opinion of another actuary should be disclosed within this section of the Opinion including discussion relating to any modifications made to the relevant TPs or subject matter to which the reliance applies;
b. Disclose where reliance on another actuary's opinion precludes or limits the Actuary's recognition of significant risks and uncertainties concerning material adverse deviation relating to the subject TPs;
c. Discuss their evaluation of the appropriateness of their reliance and whether such portions of the subject TPs relied upon are likely to have a material impact on the AO regarding the total subject TPs. If the impact is likely to be material, the Actuary should decide whether or not, within their professional judgment, it is appropriate to claim reliance on such opinions;
d. Discuss the use of their professional judgment:
    i. in self-assessing their ability to evaluate the quality of the work product relied upon, and
    ii. in evaluating the fitness and propriety of all persons upon whose opinion he/she is relying. (In making this latter assessment, it is not necessary for the Actuary to restrict consideration of professional memberships only to those bodies referred to in paragraph 23.);
e. Disclose the person(s) upon whose opinion is being relied including their name(s), the relevant professional designation(s), appointment status (i.e. officer designation, or consultant), and the associated firm(s); and
f. Acknowledge awareness of their ultimate professional responsibility for the results signed off in the Opinion.

Part 8 – Work Papers

58. This section should include a statement describing all actuarial reports, analyses and work products that have been completed, indicating a statement that these same documents will be made available in Bermuda upon request by the Authority. If requested, such documents should be sufficient in and of themselves to enable the completion of an independent review of the AO by another unrelated but qualified actuary and should at a minimum typically include:

    a. Descriptions of each legal entity, business unit and/or reserving group consolidated into the insurer's EBS along with their respective contributions to the held TPs;
    b. Reconciliations from all applicable actuarial reports to the TPs recorded in the Statutory Economic Balance Sheet; and
    c. Discussions of how the Actuary arrived at their actuarial estimate and actuarial range of best estimates (as applicable) of the insurer's aggregate TPs, including (where relevant to TPs) how intragroup transactions have been addressed.

d. (***General Business – Only)*** Exhibits that reconcile to the following BSCR schedules:

   i. Form 1EBS:
      1. This exhibit should include a comparison between the held provisions on Lines 16(a), 16(b), 17(a), 17(b) and 19 and the actuary's estimates showing any redundancy (deficiency).
      2. Schedule III (Schedule of Net Loss and Loss Expense Provisions by Line of Business)

   ii. These exhibits should:
      1. Map the segmentation of exposure or liability groupings used in the actuarial analysis to the BSCR Lines of Business as per Schedule III
      2. By Line of Business and selected evaluation period (i.e. underwriting year, accident year, treaty year, etc.):
         a. Show the Actuary's conclusions including the actuary's point estimates(s) and range(s) of reasonable estimates;
         b. Compare the two most recent prior years vs the current year estimated ultimate losses on a gross and net basis showing adverse vs. favourable one year and two year development including extended discussion of factors underlying any material changes.

Part 9 - Signature

59. This section should include the Actuary's signature, their relevant professional designations, appointment status (i.e. officer designation, consultant, etc. including name of firm), and contact information including telephone number and e-mail address.