BERMUDA MONETARY AUTHORITY

INNOVATIVE INSURER-GENERAL BUSINESS (IIGB) RETURN

2021 INSTRUCTION HANDBOOK

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A. OVERVIEW

A1. INTRODUCTION TO THE IIGB RETURN

Introduction

A1.1 The capital and solvency return is an annual return relating to an insurer's risk management practices and information used by an insurer to calculate its Enhanced Capital Requirement (ECR) and Target Capital Level (TCL) as prescribed by the prudential and technical standards made under section 6A of the Insurance Act 1978 (Act). Every IIGB shall submit to the Bermuda Monetary Authority (Authority or BMA) a completed capital and solvency return on or before its filing date. The most recent version of the capital and solvency return is available on the BMA website at: https://www.bma.bm/document-centre/reporting-forms-and-guidelines-insurance.

A1.2 The capital and solvency model is used to calculate an insurer's ECR, an additional capital and surplus requirement imposed by prudential and technical standards made under section 6A of the Act. The ECR of an insurer shall be calculated at the end of its relevant year by the higher of the Bermuda Solvency Capital Requirement (BSCR) model and an approved internal capital model, provided that the ECR amount is equal to or exceeds the Minimum Solvency Margin(MSM). The TCL of an insurer is calculated as 120% of the ECR, and although not a capital requirement per se, insurers are expected to hold eligible capital resources to cover it; failure to do so will result in additional reporting requirements and enhanced monitoring, and in the submission of a remediation plan to restore capital above the TCL.

A1.3 The BSCR model calculates a risk-based capital measure by applying capital factors to capital and solvency return elements, including investments and other assets, operational risk and insurance risks to establish an overall measure of capital and surplus for statutory solvency purposes. When applied to that element, the capital factor established for each risk element produces a required capital and surplus amount. The individual capital amounts generated for each risk element (excluding operational risk) are then summed. Covariance adjustments are made to arrive at the BSCR (after covariance adjustment), which is further adjusted to include insurer-specific operational risk and capital add-ons, as assessed by the BMA, to produce the BSCR of an insurer.

A1.4 An insurer's available statutory capital and surplus divided by the BSCR gives the BSCR ratio. An insurer's available statutory capital and surplus divided by the ECR gives the ECR ratio. The BSCR and ECR ratios will assist the BMA to evaluate the financial strength of an insurer.

A1.5 The BSCR, ECR and TCL establish solvency capital levels that are used by the BMA to monitor the capital adequacy of IIGB insurers.

Purpose

A1.6 This document presents clear instructions for persons responsible for computing the required capital and surplus and for submitting the completed capital and solvency return, including the BSCR model, to the BMA.

A1.7 The capital and solvency return contains diverse risk elements of an insurer's operation and will likely require the participation of experienced individuals within the accounting, finance and actuarial areas of the insurer. Therefore, to ensure accurate completion, insurers are highly advised to refer to this instruction handbook.

Overview

A1.8 Forms 1SFS, 2SFS and 8SFS are published in the Insurance (Technical Standards) (Class IIGB Insurer) (Statements, Returns and Capital Solvency) Rules 2020. The electronic copy of Forms 1SFS, 2SFS, 8SFS and Form 1EBS, and Schedules IIB, IIC, IID, IIE, IIF, IIA, III, IIIA, IV, IVA, IVC, IVD, IVE, IVF, V, V(a), V(c), V(e), V(g), V(k), V(l), VI, IX, X, XI(a)/(b), XII, XVI, XVII, XVIII, XIXA, XXA, XXIA, XXIII, and operational risk are included in the capital and solvency return and have been appropriately linked to the BSCR model, where applicable.

A1.9 Also included is an appendix containing a glossary meant to clarify the meaning of any terms used within the capital and solvency return, as well as to provide guidance on reconciling totals.

Changes to the BSCR Formula

A1.10 Periodically, changes to the BSCR formula may be necessary due to changes in the capital and solvency return, accounting requirements and enhancements to the formula or the capital factors. Any such changes will be communicated to insurers in a timely fashion to allow adequate time for insurers to collect any additional information that may be required.

Work Papers and Supporting Documents

A1.11 Work papers and documents used to prepare the BSCR submission should be retained and kept available for examination and discussion with the BMA, should the need arise.

Contact Person for Questions

A1.12 Questions pertaining to the content or meaning of any of the items in this report should be addressed to riskanalytics@bma.bm.

A2. SUBMISSION

Background

A2.1 For the 2019 year-end and beyond, insurers may file only an **electronic version** if they submit via the "submit" macro embedded in the BSCR model. Otherwise, **both** an **electronic version** and **printed version** of the capital and solvency return must be forwarded to the BMA on or before its specified filing date. Insurers are advised to refer to the BSCR E-Filing Manual, available on the BMA website, for guidance on electronic filing. Insurers are also advised not to alter or modify the capital and solvency return or any part thereof.

Items

A2.2 Input data — Input data in each applicable form and schedule.

A2.3 Submit — Submit the capital and solvency return by clicking the "SUBMIT" button.

Additional Guidance

A2.i. If the insurer is having difficulty submitting the capital and solvency return following the above instructions, it is recommended to review the BSCR E-Filing Manual found on the Authority's website: www.bma.bm > Regulatory Legislative Documents > Reporting Forms and Guidelines > Insurance

A2.ii. If there are still issues with the submission, send an email to riskanalytics@bma.bm with the capital and solvency return attached. If the capital and solvency return is too large to send via email (limited to 15MB), the Authority will advise a course of action.

A3. CONTENTS

A3.1 The Contents tab replaces the Index tab. The Contents tab has validation checks to various forms/schedules in the model as well as hyperlinks to each of the tabs in the model.

A3.2 Insurers should review validation checks prior to submission and acknowledge any errors by selecting "Confirm Message" as applicable. A comment to explain the validation check is to be included on the Submission tab.

A4. IMPORT

A4.1 The Import tab includes links to each of the input cells in the model.

A4.2 Users of the BSCR model can either enter data via the Import tab or can manually enter data throughout the model.

A4.3 Note that cells highlighted in blue are drop-down cells. White highlighted cells are numerical/text entry fields.

A5. EXPORT

A5.1 The Export tab includes links to each of the data cells in the model.

A5.2 This function is useful if there is a need to re-enter data from an existing model to a new model. A user would use the data stored in the Export tab and copy to the Import tab.

A6. ATTACHMENTS

A6.1 Insurers can attach any necessary files through the Attachments tab, up to 10 files for each category provided. When an attachment is provided, the insurer is to include the schedule and/or item the attachment references in the comment field. Note, once attached, the file is embedded in the capital and solvency return and sent to the BMA when the model is transmitted using the "Submit" macro found in the submission tab. The BSCR E-Filing Manual provides guidance on how to attach, view and remove files.

A7. COMPANY INFORMATION

Items

A7.1 Company name — Input the name of the insurer, as it appears on the certificate of registration.

A7.2 Date incorporated or organised — Input the date that the insurer was licensed by the BMA to conduct business in Bermuda.

A7.3 Date commenced business — Input the date that the insurer began writing business as a licensed Bermuda company.

A7.4 Registration no. — Input the corresponding insurer's general business registration number, as it appears on the certificate of registration.

A7.5 Contact person information — Input the insurer's contact person who will be the main conduit through which the BMA will make and respond to enquiries about the BSCR and related information. Note that this person does not have to be the insurer's principal representative.

A7.6 No subsidiaries/subsidiaries — if an insurer has no entities to consolidate, they can select the "No Subsidiaries" button and the model will be adjusted to Unconsolidated BSCR model. If an insurer wishes to revert back to the original model, they can select the "Subsidiaries" button.

A8. CAPITAL AND SOLVENCY RETURN DECLARATION

Background

<u>IIGB Insurers</u>

A8.1 The capital and solvency return declaration should be signed and dated by two directors and the insurer’s principal representative. The signed declaration is to be included in the attachments section of the BSCR model.

B. ADDITIONAL SUPPORTING SCHEDULE

B1. INSURER INFORMATION SHEET

Background

B1.1 Included in the capital and solvency return is the Insurer Information Sheet, which is to be completed in its entirety.

Items

a. Company Information

Line Item		Description
a	Name of Insurer	Row (1) The name of the insurer shall automatically populate based on the name entered in the Information Sheet tab.
b	Certificate of Registration Number	Row (2) The certificate of registration number shall automatically populate based on the number entered in the information sheet tab.
c	Class of Registration	Row (3) The class of registration shall automatically populate based on the class entered in the Information Sheet tab.
d	Statements Availability	Row (4) The confirmation of the statements availability at the insurer's registered office is to be selected from the drop-down menu.
e	Filing Period	Row (5) The filing period start date is to be manually entered, and the period end date shall automatically populate based on the date entered in the Information Sheet tab.
f	Currency Used	Row (6) The currency used in the statutory financial statements shall automatically populate based on the currency type entered in the Form 1SFS tab.
g	Exchange Rate	Row (7) The multiplier exchange rate/translation rate that is applicable in converting the reporting currency to USD/BMD. Additional Guidance i) Note for insurers that report in currencies other than the Bermuda Dollar or United States Dollar, that the exchange rate to report is the rate to convert the figures to Bermuda Dollar/United States Dollar. For insurers reporting in Bermuda Dollar or United States Dollar, enter 1.000. For example, if an insurer reported in Canadian Dollars with an exchange rate of CAD to BDA of 0.7657 and BDA to CAD of 1.3060. The exchange rate to report in paragraph (g) would be 0.7657
h	Ultimate Parent	Row (8) The insurer's ultimate parent is to be entered. In instances where an insurer is part of an insurance group that is owned by a conglomerate, input the head company in the insurance group.

Line Item		Description
i	Insurer's Parent Company	Row (9) The insurer's parent company is to be entered. Parent company refers to the direct parent of the insurer.
j	Industry Sector of the Insurer's Parent	Row (10) The industry sector of the insurer's parent is to be entered. If the insurer's parents are in multiple industries, provide the industry of the parent that has the largest ownership.
k	Insurer's Ownership Structure	Row (11) The insurer's ownership structure is to be selected from the drop-down menu.
l	Insurer's Company Structure	Row (12) The insurer's company structure is to be selected from the drop-down menu.
m	General Questions	Row (13) Select from the drop-down menu of the following questions: (i) Is the insurer a member of a group of companies? A member of an insurance group is defined as: "a group that conducts insurance business."
m	General Questions	(ii) Does the insurer have segregated accounts? Segregated accounts is defined as: "a separate and distinct account (comprising or including entries recording data, assets, rights, contributions, liabilities and obligations linked to such account) of a segregated accounts company pertaining to an identified or identifiable pool of assets and liabilities of such segregated accounts company which are segregated or distinguished from other assets and liabilities of the segregated accounts."
m	General questions	(iii) Is the insurer in run-off? Run-off is defined as: "when an insurer has ceased underwriting new risks and is not offering renewals to existing customers. For long-term insurers the definition will be the same, but the characteristic will differ as insurers may still receive further premiums over multiple years, and policy benefits and values may be variable."
m	General questions	(iv) Whether the general purpose financial statements of the insurer for the relevant year have been audited and an unqualified opinion issued. General purpose financial statements is referred to as "additional GAAP financial statements prepared in accordance with 17A(2) of the Act." <u>Additional Guidance</u> The Authority would like to advise that in relation to paragraph (m)(iv), a qualified opinion would not include qualifications for reporting its financial statements as condensed general purpose financial statements.

Line Item		Description
m	General questions	(v) Whether the Minimum Solvency Margin (MSM) was met. MSM is set in accordance with Paragraph 11 of the Insurance Account Rules 2016.
m	General questions	(vi) The applicable Minimum Liquidity Ratio (MLR) was met during the reporting period: MLR is set in accordance with Paragraph 12 of the Insurance Account Rules 2016.

b. Certificate of Registration Conditions

Line Item		Description
n 1	Certificate of registration effective date	Row (1) The certificate of registration effective date shall automatically populate based on the date entered in the Information Sheet tab.
n 2	Certificate of registration general conditions	Row (2) The certificate of registration general conditions is to be entered based on the conditions stipulated on the certificate of registration. This includes the start date, end date and condition description.
n 3	Certificate of registration approved conditions	Row (3) The certificate of registration approved conditions is to be entered based on the conditions stipulated on the approved certificate of registration. This includes the start date, end date and condition description.
o	Confirmation of condition compliance	Row (4) The confirmation of compliance with the conditions on the certificate of registration is to be selected from the drop-down menu.

c. Regulatory Approvals

Line Item		Description
p 1	Regulatory approvals	Row (1) The regulatory approvals include conditions, directions and restrictions imposed on or approvals granted to the insurer. This includes the start date, end date and condition description.

d. Confirmation of Corrective Action

Line Item		Description
q 1	Confirmation of corrective action	Row (1) If the insurer has answered negative to points (m) (v), (m)(vi) or (o), the insurer is to state the reason for the negative answer and describe whether or not the insurer has taken corrective action in any case and, where the insurer has taken such action, describe the action in a statement attached.

B2. ASSETS QUALIFYING FOR RISK MITIGATING PURPOSES

Background

B2.1 In order to promote good risk management and increase risk sensitivity, the scope of risk mitigation in BSCR is extended by allowing insurers to explicitly take into account their hedging programmes within market risk calculations, subject to certain rules and restrictions.

B2.2 Credit for risk-mitigating effect in BSCR calculations is only allowed if the risk-mitigation techniques fulfil a set of criteria set out in the next section.

Instructions

B2.3 The calculation of the ECR will allow for the effects of risk mitigation techniques through a reduction in requirements commensurate with the extent of risk mitigation notwithstanding the provisions set out in this section.

B2.4 The ECR calculation for market risk is made based on the assets and liabilities existing at the reference date of the ECR calculation and through the use of scenario and factor-based approaches. This design setting excludes, by definition, allowance for the full effect of dynamic hedging programmes, which can only be appropriately applied in a context where capital charges are being stochastically calculated.

B2.5 Internal capital models (ICM) are allowed to be used in the context of the BSCR standard formula for the calculation of the variable annuity guarantees capital charge, which despite being part of the long-term insurance risk module, is predominantly market risk-driven. Concomitantly in these cases, insurers may take into full account the effect of their dynamic hedging programmes as long as they comply with the provisions set in paragraphs B4.6 and B4.9 below. In all other cases, the risk-mitigating effect of dynamic hedging programmes will be subject to the provisions set in paragraphs B4.6–B4.8 and, thus, taken into account in a limited manner.

B2.6 When calculating the ECR, insurers shall only take into account risk mitigation where all of the following qualitative criteria are met:

a) The contractual arrangements and transfer of risk are legally effective and enforceable in all relevant jurisdictions, and there must be an effective transfer of risk to a third party;
b) The contractual arrangement ensures that the risk transfer is clearly defined;
c) The insurer has taken all appropriate steps to ensure the effectiveness of the arrangement and to address the risks related to that arrangement;
d) The insurer is able to monitor the effectiveness of the arrangement and the related risks on an ongoing basis;

e) The calculation of the ECR makes a reasonable allowance for any basis risk effects due to changes in risk mitigation assumptions and relationships during a stress scenario and there is appropriate treatment of any corresponding risks embedded in the use of risk mitigation techniques (e.g., credit risk). These two effects should be separated;
f) Providers of risk mitigation should have adequate credit quality (demonstrable through either adequate rating, capitalisation or collateralisation levels) to guarantee with appropriate certainty that the insurer will receive the protection in the cases specified by the contracting parties;
g) The insurer has, in the event of a default, insolvency or bankruptcy of a counterparty or other credit event set out in the transaction documentation for the arrangement, a direct claim on that counterparty; and
h) There is no double-counting of risk-mitigation effects in technical provisions and in the calculation of the ECR or within the calculation of the ECR.

B2.7 Only risk-mitigation techniques that are in force for at least the next 12 months and meet the qualitative criteria set out in paragraph B4.6 shall be fully considered in the ECR. In all other cases, the effect of risk-mitigation techniques that are in force for a period shorter than 12 months and which meet the qualitative criteria set out in paragraph B4.6 shall be taken into account in the ECR in proportion to the length of time involved for the shorter of the full term of the risk exposure or the period that the risk-mitigation technique is in force.

B2.8 Where contractual arrangements governing the risk-mitigation techniques will be in force for a period shorter than the next 12 months and the insurer intends to replace that risk-mitigation technique at the time of its expiry with a similar arrangement, the risk-mitigation technique shall be fully taken into account in the ECR provided all of the following qualitative criteria are met:

a) The insurer has a written policy on the replacement of that risk-mitigation technique;
b) The replacement of the risk-mitigation technique shall not take place more often than every month, except in duly justified circumstances, which require prior approval from the Authority;
c) The replacement of the risk-mitigation technique is not conditional on any future event outside of the insurer's control. Where the replacement of the risk-mitigation technique is conditional on any future event that is within the control of the insurer, then the conditions should be clearly documented in the written policy referred to in point (a);
d) The replacement of the risk-mitigation technique shall be realistic based on replacements undertaken previously by the insurer and consistent with its current business practice and business strategy;
e) The risk that the risk-mitigation technique cannot be replaced due to an absence of liquidity in the market is not material under different market conditions, and

there is no material basis or operational risks compared to the risk mitigation effect;

f) The risk that the cost of replacing the risk-mitigation technique increases during the following 12 months is reflected in the ECR by deducting it from the value attributed to the risk-mitigation technique;
g) Any additional risk stemming from the risk mitigation arrangement (e.g., credit risk) is taken into account in the ECR; and
h) The hedge effectiveness and any related risks are monitored on an ongoing basis.

B2.9 In the cases of insurers using ICM in the context of the BSCR standard formula for the calculation of the variable annuity guarantees capital charge, where portfolio rebalancing is being performed, the risk-mitigation effect shall be fully taken into account in the ECR, provided all of the following qualitative criteria are met:

a) The insurer has a written policy on portfolio rebalancing;
b) The portfolio rebalancing shall be realistic based on actions undertaken previously by the insurer and consistent with its current business practice and business strategy;
c) The risk that the portfolio rebalancing cannot be performed due to an absence of liquidity in the market is not material under different market conditions;
d) The risk that the cost of the portfolio rebalancing increases during the following 12 months is reflected in the ECR;
e) Any additional risk stemming from the portfolio rebalancing (e.g., credit risk) is taken into account in the ECR; and
f) The hedge effectiveness and any related risks are monitored on an ongoing basis.

B3. MANAGEMENT ACTIONS

Background

B3.1 With the introduction of new shock-based capital charge calculations for certain risks in the BSCR standard formula, the use of management actions will be allowed under certain conditions (as set out in the next section).

B3.2 Management actions are relevant for products where profits are shared with policyholders (e.g., participating or with-profits products). This means that management actions, in a sense used here, are mainly relevant for long-term insurers only.

B3.3 For BSCR purposes, allowable management actions will be confined to actions reducing or increasing liabilities for future bonuses or other discretionary benefits (i.e. Future Discretionary Benefits (FDB)).

a) These include changes to profit-sharing/bonuses/policyholder dividends/credited rates but can also include actions such as changes in investment policy (e.g., the equity backing ratio) affecting FDB.

B3.4 Given that the effect of management actions is considered separately for each risk in the modular BSCR standard formula, there is a risk of double counting the credit for management actions when the individual capital charges are aggregated (through the correlation matrices). For this reason, a cap on the overall credit must be included.

B3.5 The natural cap for the credit for management actions is the total amount of (best-estimate liabilities held for) future discretionary benefits.

a) The most an insurer can do to reduce its discretionary liabilities is reduce the profit-sharing – policyholder dividends, credited rate – to zero (in all future scenarios), which corresponds to FDB going to zero.

Instructions

B3.6 Management actions are confined to actions reducing or increasing liabilities for future bonuses or other discretionary benefits.

B3.7 Management actions must comply with all the requirements of paragraph 196 of the Guidance Notes for Commercial Insurers and Groups Statutory Reporting Regime (30 November 2016).

B3.8 Given the modular structure of the BSCR standard formula, management actions are to be considered in each applicable risk calculation separately.

B3.9 Management actions can be reflected in the shock-based components of the BSCR standard formula and in the variable annuity guarantees capital charges (when an ICM is being used). Management actions shall not be taken into account in the factor-based components of the BSCR standard formula. The exception to this is the duration-based approach to interest rate risk, where management actions may be taken into account to calculate effective durations for liabilities.

B3.10 The shock-based components of the BSCR standard formula are based on the impact of instantaneous stresses (e.g., equity risk, interest rate and liquidity risk calculated under the alternative approach, and currency risk). Insurers shall not take credit for future management actions at the time the stress occurs (i.e., during the stress) due to the instantaneous nature of the stresses. Nevertheless, future management actions may be taken into account after the instantaneous shocks as a response to the shocks.

B3.11 If management actions are used, the insurer must ensure that the effects of specific management actions are not effectively counted multiple times when the different scenario components are aggregated into a total capital requirement.

Loss-absorbing capacity of future bonuses and other discretionary benefits

B3.12 For the purpose of preventing double-counting, the capital requirement for each risk should be calculated both gross and net of the loss-absorbing capacity of technical provisions. That is, the applicable capital charges will be calculated both with (net of) and without (gross of) management actions. This will allow calculating the capital requirement with management actions (net BSCR) and without management actions (gross BSCR) by aggregating the respective (net, gross) component capital requirements using the applicable correlation matrices.

B3.13 The *gross* capital requirement for each applicable risk is obtained as the decrease in the net asset value resulting from the shock, where the change in liabilities is calculated by comparing the after-shock gross best estimate liabilities to the base case best estimate liabilities. The gross capital requirement cannot be less than zero.

B3.14 The *net* capital requirement for each applicable risk is obtained as the decrease in the net asset value as a result of the shock, where the change in liabilities is calculated by comparing the after-shock net best estimate liabilities to the base case best estimate liabilities. The net capital requirement cannot be less than zero.

B3.15 The *gross* BSCR (post diversification) ($BSCR^{div}$) is calculated by aggregating the gross capital requirements using the relevant correlation matrices.

B3.16 The *net* BSCR (post diversification) ($nBSCR^{div}$) is calculated by aggregating the net capital requirements using the relevant correlation matrices.

B3.17 The adjustment to the ECR for the loss-absorbing capacity of technical provisions is then

$$Adj_{TP} = -\max\left(\min\left(BSCR^{div} - nBSCR^{div}, FDB\right), 0\right)$$

where FDB is the net present value of future bonuses or other discretionary benefits corresponding to the best estimate calculation. That is, the FDB amount is used as a cap on the overall credit allowed for in the capital requirement calculation.

B3.18 The gross capital requirements per risk shall be calculated by keeping the future discretionary benefits unchanged at the best estimate (base scenario) level.

B3.19 The net capital requirements per risk shall be calculated by allowing the future discretionary benefits to change as a result of a shock.

B3.20 For those risks which are calculated using a factor-based approach, the net BSCR is defined to be equal to the gross BSCR (with the exception of the duration-based approach to interest rate risk, if the durations are calculated by taking management actions into account).

B3.21 The procedure as described above requires calculating the relevant capital charges twice, with and without management actions. Typically, this would mean that the insurer needs to run two model runs per relevant capital charge. As this may, in some cases, significantly increase the workload and/or the time needed to produce the required numbers, a simplified way to calculate the "gross" charges, as described below, may be used. This approach requires only one set of model runs (base scenario + "net" runs).

(i) Obtain the value of guaranteed[1] benefits and future discretionary benefits, separately, in the base scenario[2].
(ii) Calculate guaranteed benefits and future discretionary benefits, with management actions, in each applicable shock. This gives the net best estimate liabilities in the shock scenarios.
(iii) To derive the gross best estimate liabilities needed for the gross capital requirement calculations, add future discretionary benefits from the base scenario to the guaranteed benefits from the shock scenarios to obtain gross best estimate liabilities in the shock scenarios.

[1] "Guaranteed" benefits here refers to those contractual benefits that the insurer does not have the ability to change at its discretion. In particular, it is taken to mean all benefits other than future discretionary benefits.
[2] Where "baseline" level of management actions is assumed in calculating the best estimate liability for future discretionary benefits.

Additional Guidance

B3.i. Regarding the restriction of management actions to those actions affecting liabilities for future discretionary benefits, it is, in particular, noted that premium increases[3] or expense reductions are out of the scope of allowed management actions.

B3.ii. With regards to paragraph B5.8, it is noted for the sake of clarity that management actions may be taken immediately after the (instantaneous) stress has happened (subject to reflecting in the modelling realistic time required to implement any management action). The stresses are assumed to happen "overnight", and management actions can be taken immediately on "day 1" afterwards.

B3.iii. Both increases and decreases in future discretionary benefits as a result of shocks should be modelled. In particular, the liability for future discretionary benefits may increase as a result of certain shocks (e.g., in the interest rate up shock, the effect of higher future (reinvestment) rates may exceed any negative time-0 effect on the values of fixed-income assets, leading to more profit sharing).

Guidance – BSCR Model

B3.iv. Where applicable, the risk charges per module in the BSCR model are calculated both with and without management actions. This concerns principally those market risks that are calculated using shocks.

B3.v. The schedules feeding the relevant risk calculations contain input fields for entering after shock values for best estimate liabilities both with and without management actions.

B3.vi. If no management actions are assumed, or if management actions do not affect a particular line, the "with" value should be set equal to the "without" value (where the latter is to be always calculated).

B3.vii. The effect of management actions on the ECR is in principle calculated by comparing the "gross BSCR" to the "net BSCR", where the former is derived

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[3] The overall significance of premium increases is, in any case, mitigated by the fact that if the insurer has the possibility to change premium at a certain point, then in most cases, the cash flows after the said point will fall outside of the contract boundaries. Hence, premium increases would only be relevant where the insurer does have an ability to change the premiums, but only in a very limited way.

by aggregating individual risk charges without management actions, and the latter is derived by aggregating individual risk charges with management actions (using the relevant correlation matrices). This is done on the summary tab of the BSCR model.

B3.viii. Nevertheless, to avoid double-counting the same management actions in multiple separate risk modules, a cap to the overall credit for management actions must be imposed. The cap is equal to the initial reserve for FDB, which needs to be entered in cell N143 on the Summary tab.

B3.ix. The overall adjustment for management actions, subject to the cap, is then automatically calculated in cell N144 of the Summary tab, and deducted from the final BSCR (in cell N87).

B4. LOOK-THROUGH

Background

B4.1 Previously, look-through was allowed in BSCR in concentration risk calculation. To better assess the risks of fund type investments and similar assets (and liabilities), the look-through approach is extended to market risk calculated under a shock approach (equity, interest rate and currency risks). This means looking through funds to the underlying investments and considering each of the underlying assets individually in appropriate risk calculation(s).

B4.2 As a default option, a full look-through to underlying assets should be used. If this is not achievable, then a number of partial look-through options are to be considered in turn. As set out in the next section, these options form the following ladder:

a) Full look-through;
b) Partial look-through based on target asset allocation;
c) Partial look-through based on investment limits; and
d) No look-through – capital charge for other equities/other assets used.

Instructions

B4.3 In order to properly assess the risks inherent in collective investment vehicles, other investments packaged as funds, and other types of assets and liabilities (as defined below), each of the assets underlying them shall be considered individually (the look-through approach) in the BSCR calculation.

B4.4 The scope of the look-through covers the following:

a) Collective investment vehicles and other investments packaged as funds, including related undertakings used as investment vehicles;
b) Segregated accounts assets and liabilities;
c) Deposit assets and liabilities;
d) Other sundry assets and liabilities; and
e) Derivatives.

B4.5 The look-through approach applies to market risk calculated under a shock approach (equity, interest rate and currency risks) and concentration risk calculations. It also applies to fund-type investments (as defined in B6.4a) within other risk calculations(e.g., bond funds in fixed income risk calculation).

a) Look-through will be allowed for equity exposures classified as "strategic holdings" or "duration based", with underlying individual assets receiving the 20% (strategic holdings, duration based) equity charge each.

B4.6 The look-through is to be based on the current underlying assets as of the BSCR valuation date (typically year-end). The valuation of assets and liabilities subject to the application of the look through must be consistent with the EBS rules.

B4.7 Where the full look-through approach cannot be applied to collective investment vehicles or other investments packaged as funds, the capital requirement may be calculated based on the target underlying asset allocation of the vehicle or fund, provided that such a target allocation is available at a level of granularity necessary for the calculation, and the underlying assets are managed strictly according to the target allocation.

B4.8 Where conditions of paragraph B6.7 are not fulfilled (i.e., a target allocation does not exist, or it cannot be determined that the assets are managed strictly according to the target allocation), the capital requirement may be calculated by assuming that the vehicle or fund first invests, to the maximum extent allowed under its investment limits, in the asset class with the highest capital charge, and then continues making investments in descending order until the maximum total investment level is reached. This approach requires that such allocation limits exist.

B4.9 Where no look-through is possible and neither the target-based approach of paragraph B6.7 nor the limit-based approach of paragraph B6.8 can be applied, the whole investment shall be treated as an equity holding of type "other" for capital charge purposes.

B4.10 Insurers should perform a sufficient number of iterations of the look-through approach, where appropriate (e.g., in the case of fund of funds), to adequately capture all material risk.

Additional Guidance

B4.i. To illustrate the application of the limit-based approach of paragraph B6.8, consider the following hypothetical example: for a combination fund having allocation limits of 50 – 80% to equity and 20 – 50% to investment grade fixed income, with equity sub-limits of 50 – 100% to European Economic Area (EEA) equities and 0 – 50% to Eastern European (non-EEA) equities, the overall allocation would be considered to be 40% to non-EEA equities, 40% to EEA equities, and 20% to fixed income with rating BBB-, to produce the most conservative capital charge consistent with the limits.

B4.ii. Note that, exactly as for directly held investments, instruments resulting from look-through may need to be considered in several risk calculations if the instruments' price is exposed to several sources of risk. For example, convertible bonds are typically exposed to interest rate, credit (spread) and equity risk and would typically need to be included under all three risk calculations (i.e., interest rate, fixed income and equity).

B4.iii. As set out in B6.4, related undertakings used as investment vehicles must be looked through and the assets underlying them considered individually. In particular, there is no economic difference in the risk of positions held directly on the balance sheet versus holding the same assets in a separate investment company instead. Therefore, the treatment and resulting capital charges should also be the same in both cases.

B4.iv. In the case of long-short funds or leveraged funds, shocks (capital charges) cannot simply be applied to the net asset value (NAV) of the fund; instead, the increased exposure caused by leverage must be taken into account.

a) In the case of leveraged funds, where the leverage is implemented (e.g., by borrowing (instead of short sales)), the capital charge/shock needs to be applied to the gross exposure.
b) In the case of long-short funds, only short positions that qualify as risk mitigating under the BSCR rules can be “netted” against long positions (as described below). Consider the two extremes (i.e., all shorts qualifying versus none qualifying). If none of the short positions qualifies as risk mitigating, only the long positions are shocked (and the short positions ignored); whereas, if all of the short positions qualify as risk mitigating, both the long and the short positions are shocked (separately) and the resulting changes in values summed, so that the short positions provide an offset to the longs. In the former case, the gross long exposure is considered, while in the latter case, the calculation is effectively on a net basis (for clarification, the longs and shorts are shocked separately and then added, instead of shocking the net position). If part of the short positions qualify (and part do not), then only the qualifying short positions are shocked and, therefore, provide some offset to the longs, in addition to shocking all of the long positions.

Guidance – BSCR Model

B4.v. When filling in schedules feeding various risk calculations, the line items and the associated market values entered should already be after look-through. That is, the look-through of investments (necessarily) needs to be done outside the BSCR model and the resulting numbers entered in the schedules.

B4.vi. If investments are looked-through, the amounts shown in different risk calculations do not match the balance sheet classifications anymore.

a) As a simple example, consider a mixed mutual fund with a market value of $100, consisting of 60% equities and 40% corporate bonds, and assume it is originally classified under equity in the balance sheet (line 2.(c)iii.) and is the only investment.

After look-through, $40 would be entered in Schedule IIB (EBS) under corporate bonds and $60 under, for example, listed equity securities in developed markets. This means that the balance sheet shows equity investments of $100, but in the equity risk calculation, the amount of equities is only $60, corresponding to the true exposure after look-through. Similarly, the balance sheet does not show fixed income exposure, but the fixed income risk calculation has bonds worth $40 resulting from the look-through.

B4.vii. An "Investment Reconciliation" tab is included in the BSCR model to do a reconciliation between the balance sheet (Form 1/4EBS) amounts and the amounts in Schedules IIB-IIF feeding the risk calculations in one instance, and reconciliation between Schedules IIB-IIF and the risk calculations (e.g., equity, interest rate risk) in the other.

B4.viii. To illustrate the investment reconciliation tab, consider the example of paragraph B6.vi.

a) The opening balance on line one of the schedule (line 10 in the spreadsheet) would show the values from the balance sheet: $0 in interest-rate sensitive investments (cell G10) and $100 in equity sensitive investments (cell H10).
b) The adjustments for look-through could be done in either of two ways:
   (i) *Entering the net adjustment directly.* This would involve subtracting exposure of $40 from equity (i.e., entering -$40 to cell H13) and adding the $40 to bonds (i.e., entering $40 to cell G12).
   (ii) *Entering full amounts.* Under this alternative, first, indicate under which category the investment being looked-through was classified in the balance sheet. In the case of the example, the whole $100 fund investment was under equity in the balance sheet; hence, $100 would be entered in cell F13 (balance sheet amounts reported under equities). Nevertheless, after looking through, the actual equity exposure was only $60; this amount would be entered into cell H13. The remaining $40, corresponding to bonds, would be entered into cell G12. Entering the original balance sheet amounts under columns E and F makes the reconciliation formula remove these amounts from the opening exposure, and then add the actual values resulting from look-through back. In this example, the $100 reported originally under equity in the balance sheet is first removed from equity, and then only the actual equity exposure resulting from look-through ($60) is added back to equity.
c) In either case above, the final balances on line 18 of the schedule (line 27 of the spreadsheet) will show $40 of interest-rate sensitive investments (in column G) and $60 of equity-sensitive investments (in column H). These should match the amounts reported in Schedule IIB in the fixed income and equity parts of the schedule.

B5. DEFINITIONS

B5.1 **Developed Markets** means regulated markets in countries that are members of the Organization for Economic Co-operation and Development (OECD) or the EEA, or in Hong Kong or Singapore.

B5.2 **Duration based** means equity securities listed on developed markets (refer to section B7.1), held by long-term insurers to cover retirement products where:

1) All assets and liabilities corresponding to the business are ring-fenced (refer to section B7.5), without any possibility of transfer.
2) The average duration of the liabilities corresponding to the business held by the insurer exceeds an average of 12 years.
3) The equity investments backing the liability are type 1 equity exposures, that is, equities listed on developed markets or preferred shares (PS 6 to PS 8).

B5.3 **Infrastructure** investments are defined as "investment in an infrastructure project entity that meets all of the following criteria":

1) The infrastructure project entity can meet its financial obligations under sustained stresses that are relevant to the risk of the project.
2) The cash flows that the infrastructure project entity generates for equity investors are predictable.
   a) For the purposes of this paragraph, the cash flows generated for debt providers and equity investors shall not be considered predictable unless all except an immaterial part of the revenues satisfies the following conditions:
      (i) One of the following criteria is met:
         1. The revenues are availability-based. That is, the revenues consist primarily of fixed periodic payments, usually from a public sector authority, and are based on the availability of project facilities for use as specified in the contract;
         2. The revenues are subject to rate-of-return regulation;
         3. The revenues are subject to a take-or-pay contract;
         4. The level of output or the usage and the price shall independently meet one of the following criteria that it is:
            a. Regulated;
            b. Contractually fixed; or
            c. Sufficiently predictable as a result of low demand risk.
      (ii) Where the revenues of the infrastructure project entity are not funded by payments from a large number of users, the party that agrees to purchase the goods or services provided by the infrastructure project entity shall be one of the following:
         1. Central banks or governments, multilateral development banks or international organisations as established in Instructions issued by the Authority;

2. A regional government or local authority as established in Instructions issued by the Authority;
3. An entity with a BSCR credit rating of at least 4; and
4. An entity that is replaceable without a significant change in the level and timing of revenues.

3) The terms and conditions relating to matters such as the infrastructure project assets and infrastructure project entity are governed by a contract (which specifies the laws of the country under which it is governed) that provides equity investors with a high degree of protection, including the following:
   a) Where the revenues of the infrastructure project entity are not funded by payments from a large number of users, the contractual framework shall include provisions that effectively protect equity investors against losses resulting from the termination of the project by the party which agrees to purchase the goods or services provided by the infrastructure project entity; and
   b) The infrastructure project entity has sufficient reserve funds or other financial arrangements to cover the contingency funding and working capital requirements of the project.
4) The infrastructure assets and infrastructure project entity are located in Bermuda or an OECD member country.
5) Where the infrastructure project entity is in the construction phase, the following criteria shall be fulfilled by the equity investor, or where there is more than one equity investor, the following criteria shall be fulfilled by all of the equity investors as a whole:
   a) The equity investors have a history of successfully overseeing infrastructure projects and the relevant expertise to oversee such projects;
   b) The equity investors have a low risk of insolvency, or there is a low risk of material losses for the infrastructure project entity as a result of their insolvency; and
   c) The equity investors are incentivised to protect the interests of investors.
6) The infrastructure project entity has established safeguards to ensure completion of the project according to the agreed specification, budget or completion date.
7) Where operating risks are material, they are properly managed.
8) The infrastructure project entity uses tested technology and design.
9) The capital structure of the infrastructure project entity allows it to service its debt.
10) The refinancing risk for the infrastructure project entity is low.
11) The infrastructure project entity uses derivatives only for risk-mitigation purposes.

Infrastructure project entity means an entity that is not permitted to perform any other function other than owning, financing, developing or operating infrastructure assets, and which is used as the primary source to facilitate payments to debt providers and equity investors out of the income generated by such assets.
Infrastructure assets mean physical structures or facilities, systems and networks that provide or support essential public services.

B5.4 **Qualifying unlisted equity investments** refers to unlisted equity investments that have risk characteristics similar to listed type 1 equities and may be classified as type 1 equities under the category "listed equity securities in developed markets" with the associated lower capital charge. "Qualified unlisted equity investments" are defined as:

1) Direct investments in the equity of unlisted companies; or
2) Equity investments in unlisted portfolio companies resulting from the look-through of private equity funds or private equity funds of funds; where the investments fulfil all of the following conditions:
   a) Criteria on (underlying) equity investments:
      (i) Investments are in the common equity of unlisted companies.
      (ii) The companies are established in, derive a majority of their revenues from, and have the majority of the staff that they employ located in eligible countries. An eligible country here is defined as Bermuda or a country such that, if the company was listed in the country's stock exchange, the listed equity of the company would qualify as type 1 equity as set out in these instructions.
         a. The companies have been larger than a small-sized enterprise in the last three years.
            1. For the purposes of this paragraph, a "small-sized enterprise" is defined as an enterprise that employs fewer than 50 persons and whose annual turnover and/or annual balance sheet total does not exceed USD 10 million.
   b) Criteria on the vehicle (only for fund-type investments)
      (i) The fund is closed-end.
      (ii) The fund does not use leverage, with the following exceptions which are allowed:
         1. Borrowing arrangements entered into if these are temporary and are fully covered by contractual capital commitments from investors in the fund; and
         2. Derivative instruments used for currency hedging purposes that do not add any incremental exposure, leverage or other risks.
      (iii) The fund meets the following requirements:
         1. The fund invests in unlisted companies, listed companies that are to become unlisted as a result of the investment made by the fund or listed companies as the temporary consequence of exiting the investment;
         2. The investment strategy includes the intention to remain invested in the underlying companies for a number of years; and
         3. The manager of the fund has the power to appoint a director to the boards of the underlying companies and takes an active role in the company's governance to bring about a significant development or transformation.
      (iv) The insurer has all the information necessary to assess the performance of the fund manager (e.g., profit and loss, cash flows and profits of the portfolio companies at a meaningful level of aggregation) and continues to get the information on a timely basis.
      (v) The insurer invests through several independent fund managers to avoid undue concentration.
   c) Criteria on own risk management
      (i) Fund-type investments: the following requirements should be met:
         1. The insurer computes the portfolio beta whenever BSCR is calculated.

2. The insurer follows a due diligence process prior to investing in the fund, including but not limited to:
    a. qualitative and quantitative analysis of the companies in which the manager has invested with its prior funds;
    b. obtaining information on how the fund is managed and the processes followed before investing.
3. The insurer assesses the fitness of the fund manager on an ongoing basis.
4. The insurer benchmarks the performance of the fund against comparable funds.
5. There are regular and reliable reporting lines between the fund manager and the insurer.
6. The insurer is able to challenge the investment decisions made by the fund manager (this implies that the fund manager provides sufficient information on the underlying assets).
7. The insurer verifies that the manager of the fund regularly interacts with the management teams of the companies the fund invests in.

(ii) Direct investments: the following requirements should be met:
1. The insurer computes the beta whenever BSCR is calculated.

d) Similarity criterion

(i) The approach can only be applied for portfolios where any equity investment does not represent more than 10% of the portfolio value.

(ii) The approach cannot be applied to financial companies.

(iii) The beta of the unlisted equity portfolio is determined via the following steps:
1. The hypothetical beta for each individual unlisted equity investment is calculated using the function set out below; and
2. The portfolio beta is calculated as the average of the individual betas weighted by the book values of the equity investments.

(iv) The beta for direct unlisted equity investments is calculated in the same way as the beta for individual portfolio companies above.

(v) The similarity criterion is met if the beta of the portfolio or direct investment does not exceed a cut-off value of 0.80.

(vi) The beta for an individual unlisted equity investment is calculated with the following formula: beta = 0.9478 – 0.34%*AvgGrossMargin + 0.0139*TotalDebt/AvgCFO – 0.15%*AvgROE; where AvgGrossMargin = Average Gross Margin, TotalDebt = Total Debt, AvgCFO = Average Cash Flow from Operations, AvgRoe = Average Return on Common Equity. All the numbers should be entered as percentages/decimals, (e.g., a ROE figure of 15.5% (i.e., 0.155 in decimal form) would be entered as “15.5” in the formula).

(vii) In the above formula, “Avg” means the average of the annual figures over the last five financial years. If this information is not available, the value at the end of the last financial year must be used.

The value of unlisted equity investments to which the lower capital charge is applied shall not exceed 5% of the market value of all investments.

B5.5 **Ring-fenced** shall be defined as assets and liabilities that:

1) Are managed and organised separately from other long-term business of the long-term insurer;
2) Are recorded as a separate (internal) financial reporting segment within the long-term insurer's general account; and
3) Have sufficient general account capital allocated to satisfy BSCR requirements on a stand-alone basis.

B5.6 **Selected Mutual funds** are defined as units or shares of alternative investment funds authorised as European Long-Term Investment Funds in accordance with Regulation (EU) 2015/760, of 29 April 2015, or units or shares of collective investment undertakings that are qualifying social entrepreneurship funds in accordance with article 3(b) of Regulation (EU) 346/2013, of 17 April 2013 or units or shares of collective investment undertakings that are qualifying venture capital funds as referred to in Article 3(b) of Regulation 345/2013 of 17 April 2013, and units or shares of closed-ended and unleveraged alternative investment funds where those alternative investment funds are established in the European Union or if they are not established in the European Union, they are marketed in the European Union according to Articles 35 or 40 of Directive 2011/61/EU of 8 June 2011, as well as other similarly purposed investment funds approved by the Authority.

B5.7 **Strategic holdings** that qualify must fulfil all of the following criteria:

1) The investing company holds at least 20% of voting rights or share capital in the investment or is able to demonstrate it has significant influence (as defined by the applicable GAAP) over the investment.
2) The value of the equity investment is likely to be materially less volatile than the value of other equities as a result of both the nature of the investment and the influence exercised by the participating company.
3) The nature of the investment is strategic, taking into account:
   a) the existence of a clear decisive strategy to continue holding the participation for a long period;
   b) the consistency of such strategy with the main policies guiding or limiting the actions of the participating company; and where the company is part of a group, the consistency of such strategy with the main policies guiding or limiting the actions of the group;
   c) the ability of the company to continue holding the participation; and
   d) the existence of a durable link.

C. STATUTORY STATEMENTS AND BSCR SCHEDULES

C1. FORMS 1SFS, 2SFS AND 8SFS

Background

C1.1 The statutory balance sheet (Form 1SFS), statutory statement of income (Form 2SFS), and statutory statement of capital and surplus (Form 8SFS) shall be completed by the insurer in accordance with the filing guidance relating to these forms found in the Insurance Accounts Rules 2016.

C1.2 Additionally, the insurer must ensure that amounts reported in these forms correspond to the general purpose financial statements less prudential filters such as prepaid expenses, intangible assets and goodwill, where appropriate.

C1.3 For insurers that have no change in valuations from an unconsolidated and consolidated basis, the insurer is to provide details in the **consolidated** tabs only and a note in the submission tab indicating no valuation differences between the unconsolidated and consolidated basis.

Additional Guidance

Figures are to be reported in thousands units (‘000s)

C1.i. Although the insurer does not need to prepare its financial statements in thousands units, the Authority requires insurers to report their statutory financial statements and economic balance sheet in thousands as this impacts the capital charges calculated in the BSCR model. The insurer may attach its statutory financial return under “Other Attachments” to provide the BMA with a more accurate financial position.

Future Operating Lease Payments

C1.ii. For the 2019 year-end and beyond, insurers that have future operating lease payments are to gross up their balance sheet for the right of use assets and a lease liability equivalent to the discounted value of future payments under an operating lease **only if the underlying assets being leased are a tangible asset.**

Further, in the Schedule V(e) stress test scenarios, lease liability should be included in the following scenarios:

- Interest rate stress scenario
- Expected inflation stress scenario
- Foreign exchange stress (where relevant)

Insurers are to report the right of use assets on Form 1SFS and 1EBS as “other sundry assets” and on Schedule IIF “Other Sundry Assets and Liabilities” on line 28 “other equities/other assets”.

C2. SCHEDULE OF FIXED INCOME AND EQUITY INVESTMENTS BY BSCR RATING (SCHEDULE II)

Background

C2.1 The schedule of fixed income and equity investments by BSCR rating (Schedule II) provides a breakdown of an insurer's bonds and debentures and equity investments by both investment categories (corporate and sovereign bonds, residential mortgage-backed securities, commercial mortgage-backed securities/asset-backed securities and bond mutual funds) and BSCR ratings (Ratings 0-8).

C2.2 This schedule applies a capital charge based on the type of category and rating of the security held, which is aggregated in the fixed income and equity risk tab. Further, this information provides the BMA with the type and quality of investments held for assessing the insurer's market risk. It is noted that the balances reported on this schedule also serve as a proxy of the insurer's liquidity position when assessed with the schedule of funds held by ceding reinsurers in segregated accounts/trusts by BSCR rating (Schedule IIA) and interest rate/liquidly risk charge.

Items

C2.3 The schedule is broken into three separate sections for which the total of each should correspond to a specific balance reported in form 1EBS and Unconsolidated Form 1SFS for the relevant year:

a) <u>Quoted and unquoted bonds and debentures</u> – Line 10, Column (9) 'Total' corresponds to Unconsolidated Form 1SFS, Line 2(b) and 3(b);
b) <u>Quoted and unquoted equities</u> – Line 21, Column (9) 'Total' corresponds to Unconsolidated Form 1SFS, Line 2(d) and 3(d); and
c) <u>Mortgage loans</u> – Line 26, Column (1) 'Total' corresponds to Unconsolidated Form 1SFS, Line 5(c).

Instructions Affecting Schedule II

C2.1a. Fixed income investments, both quoted and unquoted, shall be categorised into corporate bonds and sovereign bonds, residential mortgage-backed securities, commercial mortgage-backed securities/asset-backed securities, and bond mutual funds and classified by BSCR rating;

C2.1b. Equity investments, both quoted and unquoted, shall be categorised into common stock, preferred stock and equity mutual funds;

C2.1c. Preferred stock shall be classified by BSCR rating;

C2.1d. Sovereign debt issued by a country in its own currency that is rated AA- or better shall be classified under BSCR rating 0 while all other sovereign bonds shall be classified in a similar manner as corporate bonds;

C2.1e. Debt issued by government-owned and related entities that were explicitly guaranteed by that government, with the exception of mortgage-backed securities, shall be assigned a BSCR rating of 0;

C2.1f. Bond mutual funds shall be classified based on the underlying bond ratings as advised by the fund manager; equity mutual funds shall be classified in a similar manner as direct equity investments;

C2.1g. Money market funds shall be classified by the underlying credit security based on the BSCR rating prescribed in Schedule XIX; and

C2.1h. Amounts are to be reported on both an unconsolidated basis.

BSCR Ratings

C2.1i. The following process will apply to determine the BSCR rating classifications:

1. Use the lowest BSCR rating comparable to the ratings of S&P, Moody's, Fitch and AM Best.

2. Insurers may select additional BMA-named rating agencies to use, from those included in the table in the next paragraph, subject to the following:

a) The additional BMA-named rating agencies are Dominion Bond Rating Service (DBRS), Egan Jones Rating Company, Japan Credit Rating Agency, Kroll Bond Rating Agency (KBRA) and Morningstar Credit Ratings;
b) Insurers must document the selection process of credit rating agencies;
c) Insurers must use the selected rating agencies and their ratings in a consistent manner over time. There must be a documented process for making any changes to the list of selected rating agencies and how ratings are selected;
d) The selection process and its outcome must be approved by senior management; and
e) The lowest BSCR rating comparable to the ratings of all the selected rating agencies, including the rating agencies from step 1, is used.

3. For any fixed income instruments for which a credit rating is not available from any of the rating agencies named in step 1 or step 2 (as per the insurer's selection), the insurer may elect to either leave the assets as unrated (i.e., BSCR rating 8) or obtain the BSCR rating from the National Association of Insurance Commissioner's (NAIC) Securities Valuation Office (SVO) rating.

C2.1j. The table below contains, for each credit rating agency, the rating categories for which their ratings are allowed for BSCR purposes (marked with 'X'). Additionally, the NAIC SVO ratings may be applied for otherwise unrated assets in accordance with the previous paragraph.

Credit Rating Agency	*Principal office*	Financial institutions, brokers and dealers	Insurance companies	Corporate issuers	Issuers of asset-backed securities	Government securities, municipal securities, foreign government securities
Moody's Investor's Service*	*U.S.*	X	X	X	X	X
Standard and Poor's*	*U.S.*	X	X	X	X	X
Fitch Ratings*	*U.S.*	X	X	X	X	X
Dominion Bond Rating Service*	*U.S.*	X	X	X	X	X
A.M. Best Company*	*U.S.*		X	X	X	
Morningstar Credit Ratings*	*U.S.*	X		X	X	
Kroll Bond Rating Agency*	*U.S.*	X	X	X	X	X
Egan Jones Rating Company*	*U.S.*	X	X	X		
Japan Credit Rating Agency*	*Japan*	X	X	X		X

* As determined by the United States Securities and Exchange Commission.

C2.1k. The mapping of credit ratings to BSCR ratings are:

BSCR Rating	Standard & Poor's	Moody's	AM Best	Fitch
1	AAA	Aaa	aaa	AAA
2	AA+ to AA-	Aa1 to Aa3	aa+ to aa-	AA+ to AA-
3	A+ to A-	A1 to A3	a+ to a-	A+ to A-
4	BBB+ to BBB-	Baa1 to Baa3	bbb+ to bbb-	BBB+ to BBB-
5	BB+ to BB-	Ba1 to Ba3	bb+ to bb-	BB+ to BB-
6	B+ to B-	B1 to B3	b+ to b-	B+ to B-
7	CCC+ to CCC-	Caa1 to Caa3	ccc+ to ccc-	CCC+ to CCC-
8	Below CCC-	Below Caa3	Below ccc-	Below CCC-

BSCR Rating	KBRA	DBRS	Egan-Jones	Japan Credit Rating Agency	Morningstar Credit Ratings
1	AAA	AAA	AAA	AAA	AAA
2	AA+ to AA-	AA (High) to AA (Low)	AA+ to AA-	AA+ to AA-	AA+ to AA-
3	A+ to A-	A (High) to A (Low)	A+ to A-	A+ to A-	A+ to A-
4	BBB+ to BBB-	BBB (High) to BBB (Low)	BBB+ to BBB-	BBB+ to BBB-	BBB+ to BBB-
5	BB+ to BB-	BB (High) to BB (Low)	BB+ to BB-	BB+ to BB-	BB+ to BB-
6	B+ to B-	B (High) to B (Low)	B+ to B-	B+ to B-	B+ to B-
7	CCC+ to CCC-	CCC (High) to CCC (Low)	CCC+ to CCC-	CCC+ to CCC-	CCC+ to CCC-
8	Below CCC-	Below CCC (Low)	Below CCC-	Below CCC-	Below CCC-

BSCR Rating	NAIC SVO
1	-
2	-
3	1
4	2
5	3
6	4
7	5
8	6

C2.1l. A BSCR rating of 0 (not included above) has been provided for certain high-quality fixed-income investments, specifically sovereign bonds and bond mutual funds.

Additional Guidance

Applying a BSCR Rating to Unquoted Internally Rated Investments

C2.i. Insurers that have developed an internal rating for unquoted investments shall apply a BSCR rating of 8. Nevertheless, if an insurer would like to request permission to use an equivalent scale of these investments in their BSCR filing, the insurer shall request such permission in writing to the BMA and include details on the internal rating assessment and a proposed equivalent scale to the BSCR rating scale. Only upon approval shall the insurer reclassify an unquoted investment from BSCR Rating 8.

Government National Mortgage Association (GNMA), Federal National Mortgage Association (FNMA) and Federal Home Loan Mortgage Corporation (FHLMC) are not eligible for BSCR Rating 0

C2.ii. Securities that have a BSCR rating of 0 have been defined as “sovereign debt issued by a country in its own currency that is rated AA- or better”, however, the Authority would like to acknowledge that GNMA, FNMA and FHLMC are not eligible for the sovereign bond classification BSCR Rating 0 and shall be reported under Mortgage-Backed Securities (MBS). While the Authority acknowledges that an explicit government guarantee applies to the credit risk for GNMA-insured mortgages, uncertainty remains with the timing of the mortgage loan repayments. Consequently, the Authority does not extend the sovereign debt treatment to MBS.

MBS to use NAIC Rating

C2.iii. MBS does not always adequately reflect the risk associated with being held at less than par value. For this reason, the NAIC has modelled these bonds and provides US insurers with a rating reclassification. The Authority shall allow insurers to use these reclassifications when summarising their portfolio. Instances where an instrument has a rating from a rating agency that would put it in BSCR ratings classes 1-2, and it has also been classified as NAIC ratings class 1 (equivalent to BSCR ratings class 3), then the better BSCR ratings class may be selected. The Authority requires insurers to provide a separate summary of the Form 1SFS value by BSCR rating class, both before and after the adjustment.

The NAIC reclassifications of MBS will be assigned to the BSCR ratings classes according to the following table:

BSCR Rating Class	NAIC (for MBS only)
0-2	
3	1
4	2
5	3
6	4
7	5
8	6

Some RMBS bonds are not directly modeled by the NAIC, including bonds held by insurers that do not have a United States presence. The NAIC provides a documented four-step process as part of its SSAP No. 43R for reclassifying such bonds based on their rating and their Form 1SFS value relative to par. The Authority shall allow companies to optionally follow this process in classifying bonds that have not been formally reclassified by the NAIC.

C3. SCHEDULE OF FUNDS HELD BY CEDING REINSURERS IN SEGREGATED ACCOUNTS/TRUSTS BY BSCR RATING (SCHEDULE IIA)

Background

C3.1 To assess the risk of amounts reported in digital assets held in custody for clients (Form 1SFS, Line 12), the Authority requires insurers to determine the arrangement under which the funds are being held. In the event of default, if the reinsurer bears the risk of the assets held, then these amounts are to be reported on Schedule XVIII – Schedule of Particulars of Ceded Reinsurance; if the insurer bears the risk (as well as the market risk of the valuation of investments), then these amounts are to be reported in Schedule IIA – Schedule of Funds Held by Ceding Reinsurers in Segregated Accounts/Trusts By BSCR Rating.

C3.2 The Schedule of Funds Held by Ceding Reinsurers in Segregated Accounts/Trusts by BSCR Rating — Schedule IIA — provides the BMA with details to assess the type and quality of investment held by requiring the insurer to allocate the balances by investment category and BSCR rating (similar to investments reported on Schedule II). Further, the balances reported on Schedule IIA also are used in the calculation for the interest rate/liquidity risk and cash and cash equivalents exposure.

C3.3 The investment categorisation and BSCR ratings shall be based on the same rating scale and principles as those found on Schedule II.

Items

C3.4 The Schedule is broken into four separate sections as follows:

- Quoted and unquoted bonds and debentures
- Quoted and unquoted equities
- Other investment
- Mortgage loans
- Cash and time deposits

Instructions Affecting Schedule IIA

C3.5 All digital assets held in custody for clients (as reflected in Form 1SFS, Line 12) in segregated accounts/trusts with identifiable assets, such as fixed-income investments, equity investments, mortgage loans, other investments and cash and cash equivalents, shall be included here;

C3.6 Fixed income investments, both quoted and unquoted, shall be categorised into corporate bonds and sovereign bonds, residential MBS, commercial MBS/asset-backed securities, and bond mutual funds and classified by BSCR rating;

C3.7 Equity investments, both quoted and unquoted, shall be categorised into common stock, preferred stock and equity mutual funds;

C3.8 Preferred stock shall be classified by BSCR rating;

C3.9 BSCR ratings shall be determined in the manner specified in the instructions affecting Schedule II;

C3.10 Sovereign debt issued by a country in its own currency that is rated AA- or better shall be classified under BSCR rating 0 while all other sovereign bonds shall be classified in a similar manner as corporate bonds;

C3.11 Debt issued by government-owned and related entities that were explicitly guaranteed by that government, with the exception of MBS, shall be assigned a BSCR rating of 0;

C3.12 Bond mutual funds shall be classified based on the underlying bond ratings as advised by the fund manager; equity mutual funds shall be classified in a similar manner as direct equity investments;

C3.13 Money market funds shall be classified by the underlying credit security based on the BSCR rating prescribed in Schedule XIX; and

C3.14 Amounts are to be reported on an unconsolidated basis.

Additional Guidance

<u>Additional Guidance for assessing the Digital Assets Held in Custody for Clients Arrangement</u>

C3.i. For digital assets held in custody for clients, the capital risk charge is calculated by the nature of the arrangement:

1) Where specific assets have been allocated for the benefit of the reinsurer, such that the reinsurer bears market risk on those assets, the Authority requires insurers to look through to the underlying assets and report these balances on Schedule IIA. This effectively adds to the fixed income riskand equity risk modules similar to Schedule II.

- Where there are no specific identified assets, the reinsurer is effectively in a similar position to a typical cedant with reinsurer exposure, and the amounts will thus be treated similarly to reinsurance recoveries and shall be reported on Schedule XVIII Particulars of Ceded Reinsurers. Further, the rating for reinsurance exposures should be based on the financial strength ratings of the insurer.

Applying a BSCR Rating to Unquoted Internally Rated Investments

C3.ii. Insurers that have developed an internal rating for unquoted investments shall apply a BSCR rating of 8. Nevertheless, if an insurer would like to request permission to use an equivalent scale of these investments in their BSCR filing, the insurer shall request such permission in writing to the BMA and include details on the internal rating assessment and a proposed equivalent scale to the BSCR rating scale. Only upon approval shall the insurer reclassify an unquoted investment from BSCR rating 8. For funds held by ceding companies, the capital risk charge is calculated by the nature of the arrangement.

Reporting Hedge Funds

C3.iii. When reporting hedge funds on Schedule II, insurers may not have the exact details of the underlying assets in which the funds are held. In these instances, the Authority advises to allocate on a proportionate basis of the balance of the portfolio to the approved investment guidelines of the hedge fund and provide in the attachment section the methodology used when reporting these figures.

C4. SCHEDULE OF FIXED INCOME AND EQUITY INVESTMENTS BY BSCR RATING (SCHEDULE IIB)

Background

C4.1 The schedule of fixed income and equity investments by BSCR rating (Schedule IIB) provides a breakdown of an insurer's:

1) bonds and debentures by both investment category (corporate and sovereign bonds, residential MBS, commercial MBS/asset-backed securities and bond mutual funds) and BSCR ratings (ratings 0-8);
2) equity investments by asset category (long exposures, short exposures for qualifying assets held for risk mitigation purposes and short exposures for non-qualifying as assets for risk-mitigating purposes) and liability category (without management actions and with management actions);
3) spread risk for credit derivatives by spread up (for long and short exposures) and spread down for (for long and short exposures);
4) counterparty default risk for over-the-counter derivatives by market value of derivatives with positive market values, market value of derivatives with negative market value and market value of collateral excluding any over collateralisation; and
5) cash and cash equivalents.

The amounts reported on Schedule IIB should reflect the balances as shown on Form 1SFS (Consolidated) Lines 2(f) quoted investments, 3(f) unquoted investments and 13(a) derivatives after look-through (where applicable).

C4.2 This schedule applies a capital charge to fixed-income investments based on the type of category and rating of the security held, and a shock to equity investments based on the type of investment. The fixed income and equity charges are aggregated in the fixed income and equity risk tabs, respectively. Further, this information provides the BMA with the type and quality of investments held for assessing the insurer's market risk. It is noted that the balances reported on this schedule are:

1) Where interest-rate sensitive, to be included in the interest rate/liquidity risk charge calculation along with the interest-rate sensitive values reported on Schedules IIC – IIF; and

- To be included in balances in Schedule XIXA Cash and Cash Equivalents.

Items

C4.3 The schedule is broken into five separate sections for which the total of each should, after reconciling for look-through, correspond to balances reported on Form 1SFS (Consolidated) for the relevant year. In the absence of look-through, the following (points a-d) should hold:

1) <u>Quoted and unquoted bonds and debentures, and investment in mortgage loans on real estate</u> – Line 14, Column (11) 'Total' corresponds to Form 1SFS (Consolidated), Line 2(b), 3(b) and 5(c);

2) Quoted and unquoted equities – Line 37, Column (11) 'Total' corresponds to Form 1SFS (Consolidated), Line 2(d) and 3(d);
3) Derivatives instruments – Line 47, Columns (1, 3, 6 and 8) and Line 57, Columns (1, 2 and 3) correspond to Form 1SFS (Consolidated) 13(a);
4) Cash and cash equivalents – Line 58, Column (1) corresponds to cash and cash equivalents from hedge funds as reported on Form 1SFS (Consolidated) Lines 2(e) and 3(e); and
5) Quoted and unquoted investments correspond to hedge funds as reported on Form 1SFS (Consolidated) Lines 2(e) and 3(e) – is to be reported on a look-through basis and allocated in sections a-d above.

Instructions Affecting Schedule IIB

C4.3a Fixed income investments, both quoted and unquoted, shall be categorised into corporate bonds and sovereign bonds, residential MBS, commercial MBS/asset-backed securities and bond mutual funds and classified by BSCR rating;

C4.3b Equity investments, both quoted and unquoted, shall be categorised into long exposures; short exposures qualifying as assets held for risk mitigation purposes in accordance with criteria prescribed in section B4; and short exposures not qualifying as assets held for risk mitigation purposes in accordance with criteria prescribed in section B3 and are further required to be classified by strategic holdings, duration-based, listed equity securities, preferred stocks, other equities, letters of credit, intangible assets, pension benefit surplus, infrastructure, derivatives and real estate;

C4.3c Preferred stock shall be classified by BSCR rating;

C4.3d The BSCR ratings for fixed income securities and preferred stocks shall be determined in the manner specified in the instructions affecting Schedule II;

C4.3e Where a security is rated differently by various rating agencies, the insurer shall classify the security according to the most conservative rating assigned;

C4.3f Unrated securities shall be assigned a BSCR rating of 8;

C4.3g Sovereign debt issued by a country in its own currency that is rated AA- or better shall be classified under BSCR rating 0; while all other sovereign bonds are required to be classified in a manner similar to corporate bonds;

C4.3h Debt issued by government-owned or entities that are explicitly guaranteed by that government (except government-issued MBS) shall be assigned a BSCR rating of 0;

C4.3i "Exposures" shall include those determined by the application of the "look-through" approach calculated in accordance with criteria prescribed in section B5 for collective investment vehicles and other investments packaged as funds;

C4.3j "Strategic holdings" refers to holdings in qualifying equity investments of a strategic nature that meet the criteria prescribed in section B6.7 for such holdings. Where such investments are listed on a designated stock exchange or are investments in certain funds both meeting criteria prescribed by the Authority, then such investments will be classified as "type 1". Investments that do not meet such criterion shall be classified as "type 2";

C4.3k "Infrastructure" refers to holdings in qualifying equity infrastructure investments that meet the criteria prescribed in section B6.3 for such investments that are non-strategic holdings;

C4.3l "Listed equity securities in developed markets" refers to holdings in equity securities listed on designated stock exchanges or investments in certain funds prescribed in section B6.6. Certain qualifying unlisted equity investments may also be included under this category instead of the "other equities" category under conditions set out in section B6.4;

C4.3m "Other equities" shall include holdings in quoted and unquoted equity investments that are not reported in accordance with the requirements of paragraphs "(j)" and "(l)" above; or not listed herein as an "equity holding" in this schedule (i.e., equities not listed on a designated stock exchange prescribed by the Authority, hedge funds, commodities and other alternative investments);

C4.3n Best estimate insurance liabilities and other liabilities (excluding risk margin) whose value is subject to equity risk are to be included in Lines 15 to 36;

C4.3o Exposures qualifying as assets held for risk-mitigation purposes and exposures not qualifying as assets held for risk-mitigation purposes shall be determined in accordance with criteria prescribed in section B3; and

C4.3p For all exposures other than derivatives, a default calculation of after-shock value is provided to expedite the filing of the schedule. It is expected that the default calculation will be appropriate in the majority of cases[4]; however, the insurer must always review the appropriateness and approve any resulting values. If the default formula is not appropriate for certain asset class, or for certain instruments within an asset class, the insurer is responsible for entering correct after-shock values by overriding the default formula.

[4] In particular, this is true for all "delta-one assets", such as common stocks and funds, for which the application of an x% downwards shock is equivalent to reducing the market value (price) by x%.

C4.3q For derivatives, no default formula can be provided due to the non-linearity of the change in value. The change in derivative value (in percentages) is generally different from the shock (in percentages) that is applied to the underlying of the derivative.

Additional Guidance

Applying a BSCR Rating to Unquoted Internally Rated Investments

C4.3.i. Insurers that have developed an internal rating for unquoted investments shall apply a BSCR rating of 8. Nevertheless, if an insurer would like to request permission to use an equivalent scale of these investments in their BSCR filing, the insurer shall request such permission in writing to the BMA and include details on the internal rating assessment and a proposed equivalent scale to the BSCR rating scale. Only upon approval shall the insurer reclassify an unquoted investment from BSCR rating 8.

GNMA, FNMA and FHLMC are not eligible for BSCR Rating 0

C4.3.ii. Securities that have a BSCR rating of 0 have been defined as "sovereign debt issued by a country in its own currency that is rated AA- or better", however, the Authority would like to acknowledge that GNMA, FNMA and FHLMC are not eligible for the sovereign bond classification BSCR rating 0 and shall be reported under MBS. While the Authority acknowledges that an explicit government guarantee applies to the credit risk for GNMA-insured mortgages, uncertainty remains with the timing of the mortgage loan repayments. Consequently, the Authority does not extend the sovereign debt treatment to MBS.

MBS to use NAIC Rating

C4.3.iii. MBS do not always adequately reflect the risk associated with being held at less than par value. For this reason, the NAIC has modelled these bonds and provides US insurers with a rating reclassification. The Authority shall allow insurers to use these reclassifications when summarising their portfolio. In instances where an instrument has a rating from a rating agency that would put it in BSCR ratings classes 1-2, and it has also been classified as NAIC ratings class 1 (equivalent to BSCR ratings class 3), then the better BSCR ratings class may be selected. The Authority requires insurers to provide a separate summary of the Form 1EBS value by BSCR rating class, both before and after the adjustment.

The NAIC reclassifications of MBS will be assigned to the BSCR ratings classes according to the following table:

BSCR Rating Class	**NAIC (for MBS only)**
0	
1	
2	
3	1
4	2
5	3
6	4
7	5
8	6

Some Residential MBS bonds are not directly modelled by the NAIC, including bonds held by insurers that do not have a United States presence. The NAIC provides a documented four-step process as part of its SSAP No. 43R for reclassifying such bonds based on their rating and their Form 1SFS (Consolidated) value relative to par. The Authority shall allow companies to optionally follow this process in classifying bonds that have not been formally reclassified by the NAIC.

Affiliated Balances

C4.3.iv. Investments in affiliates is to be treated like any other financial investment unless they fulfil the criteria prescribed in section B6.7 as “strategic holdings”. Otherwise, the affiliate investment is to be allocated as an equity holding in lines 15-36.

C5. SCHEDULE OF FUNDS HELD (SCHEDULE IIC)

Background

C5.1 To assess the risk of amounts reported in digital assets held in custody for clients (Form 1SFS (Consolidated), Line 12), the Authority requires insurers to determine the arrangement in which the funds are being held. In the event of default, if the reinsurer bears the risk of the assets held, then these amounts are to be reported on Schedule XVIII – Schedule of Particulars of Ceded Reinsurance; if the insurer bears the risk (as well as the market risk of the valuation of investments), then these amounts are to be reported in Schedule IIC – Schedule of Funds Held.

C5.2 The Schedule of Funds Held — Schedule IIC — provides the BMA with details to assess the type and quality of investment held by requiring the insurer to allocate the balances by investment category and BSCR rating (similar to investments reported on Schedule IIB). Further, the balances reported on Schedule IIC also are used in the calculation for the interest rate/liquidity risk and cash and cash equivalents exposure.

C5.3 The investment categorisation and BSCR ratings shall be based on the same rating scale and principles as those found on Schedule IIB.

Items

C5.4 The amounts reported should correspond to balances reported on Form 1SFS (Consolidated) Line 12 and is allocated in the following five sections:

1) Quoted and unquoted bonds and debentures, and investment in mortgage loans on real estate;
2) Quoted and unquoted equities;
3) Derivatives instruments;
4) Cash and cash equivalents; and
5) Quoted and unquoted investments.

Instructions Affecting Schedule IIC

C5.4a All digital assets held in custody for clients (as reported in Form 1SFS (Consolidated), Line 12) and digital assets held in custody for clients (as reported in Form 1SFS (Consolidated), Line 34) with identifiable assets and liabilities, such as fixed-income investments, equity investments, mortgage loans, derivatives, hedge funds and cash and cash equivalents, are required to be included here, reported on a look-through basis according to section B5 where applicable.

C6. SCHEDULE OF OTHER SUNDRY ASSETS AND LIABILITIES (SCHEDULE IIF)

Background

C6.1 The schedule of Other Sundry Assets and Liabilities (Schedule IIF) provides a breakdown of an insurer's other sundry assets and liabilities:

1) bonds and debentures by both investment category (corporate and sovereign bonds, residential MBS, commercial MBS/asset-backed securities and bond mutual funds) and BSCR ratings (ratings 0-8);
2) equity investments by asset category (long exposures, short exposures for qualifying assets held for risk mitigation purposes and short exposures for non-qualifying as assets for risk-mitigating purposes) and liability category (without management actions and with management actions);
3) spread risk for credit derivatives by spread up (for long and short exposures) and spread down for (for long and short exposures);
4) counterparty default risk for over-the-counter derivatives by market value of derivatives with positive market values, market value of derivatives with negative market value and market value of collateral excluding any over collateralisation; and
5) cash and cash equivalents.

C6.2 This schedule applies a capital charge to fixed-income investments based on the type of category and rating of the security held, and a shock to equity investments based on the type of investment. The fixed income and equity charges are aggregated in the fixed income and equity risk tabs, respectively. Further, this information provides the BMA with the type and quality of investments held for assessing the insurer's market risk. It is noted that the cash and cash equivalent balances reported on this schedule are to be included in the balances in Schedule XIXA Cash and Cash Equivalents.

C6.3 The investment categorisation and BSCR ratings shall be based on the same rating scale and principles as those found on Schedule IIB.

Items

C6.4 The amounts reported should correspond to balances reported on Form 1SFS (Consolidated) Lines 13(c) prepaid expenses, 13(d) goodwill and other intangibles, and 13(e-g) other sundry assets allocated in the following five sections:

1) Quoted and unquoted bonds and debentures, and investment in mortgage loans on real estate;
2) Quoted and unquoted equities;
3) Derivatives instruments;
4) Cash and cash equivalents; and
5) Quoted and unquoted investments.

Instructions Affecting Schedule IIF

C6.4a <u>All other sundry assets with identifiable assets (as reported in Form 1SFS (Consolidated), Lines 13(h)), such as fixed-income investments, equity investments, mortgage loans, and cash and cash equivalents, shall be included here.</u>

C9. SCHEDULE OF NET LOSS AND LOSS EXPENSE PROVISIONS BY LINE OF BUSINESS (SCHEDULE III)

Background

C9.1 The schedule of net loss and loss expense provisions by line of business — Schedule III — provides a breakdown of an insurer's net loss and loss expense provisions by statutory lines of business. The BMA has identified and defined 24 statutory lines of business.

C9.2 Line item 25 'Total' of Schedule III for net loss and loss expense provisions should correspond to the balance reported in Form 1SFS (Consolidated), line 17(d) for the relevant year.

Instructions Affecting Schedule III

C9.2a Amounts shall be reported on a consolidated basis;

C9.2b The same definition below shall be applied to both proportional and non-proportional statutory lines of business below;

C9.2c Where the BSCR risk factor charges differ in (a), insurers shall make a distinction when completing the statutory filing and using the BSCR model;

C9.2d Statutory lines of business shall be mutually exclusive (e.g., "retro casualty" is only to be placed into "retro property" as prescribed, and not any of the other "casualty" related statutory lines);

C9.2e Insurers may in good faith determine the allocation of the statutory lines;

C9.2f Where an insurance contract involves multiple lines, the insurer shall assign to the various lines in accordance with the proportions written;

C9.2g Where an insurer is unable to determine instruction (e), the business shall be allocated to the line with the highest proportion;

C9.2h Where the insurer is unable to determine instruction (f), the business shall be assigned to the line with the highest capital risk charge; and

C9.2i The support and assumptions used by senior management shall be made available for review by the BMA.

Statutory Lines of Business (Proportional and Non-Proportional)	Line of Business Mappings and Definitions
Property catastrophe	*Property catastrophe* — coverage of damage arising from a peril that triggers an event (or events) that causes $25 million or more indirect insured industry losses to property (or a loss value in accordance with the coverage provider's stated policies) and that may affect a significant number of policyholders and insurers – peril could be hurricane, earthquake, tsunami and tornado.
Property	*U.S. property* — coverage of U.S. risks including buildings, structures, equipment, business interruption, contents and all risk (not included in other categories) related losses. *Crop/agriculture* — coverage of risks including onshore/offshore farms, livestock, agriculture and other food production-related losses. *International property* — coverage of non-U.S. risks including buildings, structures, equipment, business interruption, contents and all risk (not included in other categories) related losses.
Personal accident	*Personal accident* — coverage of risks arising from an accident that causes loss of sight, loss of limb, other permanent disablement or death, including related medical expenses, etc.
Aviation	*Aviation* — coverage of risks arising from airport, fleet or satellite property and operations-related losses.
Credit/surety	*Credit/surety* — coverage of risks arising from various types of guarantees, commercial surety bonds, contractor bonds and various credit-related losses.
Energy offshore/marine	*Energy offshore/marine* — coverage of risks arising from offshore exploration and production, refining, power generation and/or cargo, hull and other marine-related losses.
U.S. casualty	*U.S. casualty motor* — coverage of U.S. risks arising from injuries to persons or damage of the property of others and/or legal liability imposed upon the insured for motor-related activities/actions, including auto liability. *U.S. casualty – general* — coverage of U.S. risks arising from injuries to persons or damage of the property of others and/or legal liability imposed upon the insured for non-motor related activities including theft, fraud, negligence and workers' compensation. *Terrorism* — coverage of risks arising from acts of both certified and uncertified acts of terrorism (e.g., the calculated use or threat of violence against civilians to achieve an objective(s)) and related losses associated with an act of terrorism. *Other* — business that does not fit in any other category.

U.S. professional	*U.S. casualty – professional* — coverage of U.S. risks arising from injuries to persons and/or legal liability imposed upon the insured as a professional (e.g., director of a board) for negligent or fraudulent activities.
U.S. specialty	*U.S. casualty – medical malpractice* — coverage of U.S. risks arising from injuries to persons and/or legal liability imposed upon the insured as a medical professional for negligent (or other) medical-related activities.
International motor	*International motor* — coverage of non-U.S. risks arising from injuries to persons or damage of the property of others and/or legal liability imposed upon the insured for motor-related activities/actions, including auto liability.
International casualty non-motor	*International casualty non-motor* — coverage of non-U.S. risks arising from injuries to persons or damage of the property of others and/or legal liability imposed upon the insured for non-motor related activities/actions, including professional, medical and workers' compensation.
Retro property	*Retro property* — retrocession cover for risks including buildings, structures, equipment, business interruption, contents and all risk (not included in other categories) related losses. *Retro casualty* — retrocession cover for risks arising from injuries to persons or damage of the property of others and/or legal liability imposed upon the insured for motor and non-motor related activities, including theft, fraud negligence, etc.
Structured/finite reinsurance	*Structured/finite reinsurance* — limited risk transfer contract comprising reinsurance cover where there is not both significant relative timing AND significant relative underwriting risk transfer – there may be either significant timing OR significant underwriting risk transfer – OR a significant relative economic loss may be possible but not probable (extremely remote) – not including certain catastrophe covers, like earthquake, where the probability of a loss event is also remote.
Health	*Health* — coverage of care, curative or preventive medical treatment or financial compensation arising from illness, accident, disability or frailty, including hospital, physician, dental, vision and extended benefits.

C10. SCHEDULE OF GEOGRAPHICAL DIVERSIFICATION OF NET LOSS AND LOSS EXPENSE PROVISIONS (SCHEDULE IIIA)

Background

C10.1 The schedule of geographical diversification of net loss and loss expense provisions — Schedule IIIA — provides a breakdown of an insurer's net loss and loss expense provisions by statutory lines of business and by geographical location. The BMA has identified and defined 24 statutory lines of business and 18 statutory geographic zones.

C10.2 Line item 25 'Total' of Schedule IIIA for net loss and loss expense provisions should correspond to the balance reported in Form 1SFS (Consolidated), line 17(d) for the relevant year.

Instructions Affecting Schedule IIIA

C10.2a For each line of business, the net loss reserves for the current year stated in Schedule III may be split between the 18 geographic zones set below. If included, the total of amounts in zones 1-18 for a given line of business shall equal the corresponding amount of net loss reserves shown in Schedule III;

C10.2b Amounts shall be reported on a consolidated basis only.

Underwriting Zone	**Location**
Zone 1 - Central and Western Asia	Armenia, Azerbaijan, Bahrain, Georgia, Iraq, Israel, Jordan, Kazakhstan, Kuwait, Kyrgyzstan, Lebanon, Oman, Palestine, Qatar, Saudi Arabia, Tajikistan, Turkey, Turkmenistan, United Arab Emirates and Uzbekistan
Zone 2 - Eastern Asia	China, Hong Kong, Japan, Macao, Mongolia, North Korea, South Korea and Taiwan
Zone 3 - South and South-Eastern Asia	Afghanistan, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, India, Indonesia. Iran, Laos, Malaysia, Maldives, Myanmar, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Thailand, Timor-Leste and Vietnam
Zone 4 - Oceania	American Samoa, Australia, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Micronesia, Nauru, New Caledonia, New Zealand, Niue, Norfolk Island, N. Mariana Islands, Palau, Papua New Guinea, Pitcairn, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu and Wallis and Futuna Island

Zone 5 - Northern Africa	Algeria, Benin, Burkina Faso, Cameroon, Cape Verde, Central African Republic, Chad, Cote d' Ivoire, Egypt, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Libya, Mali, Mauritania, Morocco, Niger, Nigeria, Saint Helena, Senegal, Sierra Leone, South Sudan, Sudan, Togo, Tunisia and Western Sahara
Zone 6 - Southern Africa	Angola, Botswana, Burundi, Democratic Republic of Congo, Comoros, Djibouti, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Gabon, Kenya, Lesotho, Madagascar, Malawi, Mauritius, Mayotte, Mozambique, Namibia, Republic of Congo, Reunion, Rwanda, Sao Tome and Principe, Seychelles, Somalia, South Africa, , Uganda, United Republic of Tanzania, Zambia, and Zimbabwe
Zone 7 - Eastern Europe	Belarus, Bulgaria, Czech Republic, Hungary, Moldova, Poland, Romania, Russian Federation, Slovakia and Ukraine
Zone 8 - Northern Europe	Aland Islands, Channel Islands, Denmark , Estonia, Faeroe Islands, Finland, Guernsey, Iceland, Republic of Ireland, Isle of Man, Jersey, Latvia, Lithuania, Norway, Svalbard, Jan Mayen, Sweden and United Kingdom
Zone 9 - Southern Europe	Albania, Andorra, Bosnia, Croatia, Cyprus, Gibraltar, Greece, Italy, fYR of Macedonia, Malta, Montenegro, Portugal, San Marino, Serbia, Slovenia, Spain and Vatican City
Zone 10 - Western Europe	Austria, Belgium, France, Germany, Liechtenstein, Luxembourg, Monaco, Netherlands and Switzerland
Zone 11 - Northern America (Excluding United States)	Bermuda, Canada, Greenland and St Pierre and Miquelon
Zone 12 - Caribbean and Central America	Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, British Virgin Islands, Cayman Islands, Costa Rica, Cuba, Dominica, Dominican Republic, El Salvador, Grenada, Guadeloupe, Guatemala, Haiti, Honduras, Jamaica, Martinique, Mexico, Montserrat, Netherlands Antilles, Nicaragua, Panama, Puerto Rico, St-Barthelemy, St Kitts and Nevis, St Lucia, St Martin, St Vincent, Trinidad and Tobago, Turks and Caicos Islands, and US Virgin Islands
Zone 13 - Eastern	Brazil, Falkland Islands, French Guiana, Guyana, Paraguay, Suriname

South America	and Uruguay
Zone 14 - Northern, Southern and Western South America	Argentina, Bolivia, Chile, Colombia, Ecuador, Peru and Venezuela
Zone 15 - North-East United States	Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island and Vermont
Zone 16 - South-East United States	Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Puerto Rico, South Carolina, Tennessee, Virginia, and West Virginia
Zone 17 - Mid-West United States	Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, and Wisconsin
Zone 18 - Western United States	Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Texas, Utah, Washington, and Wyoming

C11. SCHEDULE OF PREMIUMS WRITTEN BY LINE OF BUSINESS (SCHEDULE IVA)

Background

C11.1 The schedule of premiums written by line of business — Schedule IVA — provides a breakdown of an insurer's gross premiums written and net premiums written by statutory lines of business. Insurers are required to separate gross premiums written into 'unrelated' and 'related' business according to the 24 prescribed statutory lines of business.

Instructions Affecting Schedule IVA

C11.1a Gross premiums written is the amount of gross premiums written during the relevant year, and the 'total' on Line 25 should correspond to the balance reported in Form 2SFS (Consolidated), Line 1(c) for the same relevant year; and

C11.1b Net premiums written is gross premiums written in instruction (a) less reinsurance premiums ceded during the relevant year, and the 'total' on Line 25 should correspond to the balance reported in Form 2SFS (Consolidated), Line 3 for the same relevant year.

Additional Guidance

<u>Reporting Premiums as Unrelated or Related</u>

C11.i. When reporting the gross premiums as ‘unrelated’ or ‘related’, the Authority advises the following:

1) Schedule of General Business Premiums Unconsolidated - the insurer should look at the nature of the contract and not ‘look through’ the underlying risk. If the insurer writes to an affiliate, then the insurer should include this as related business; if the business is not connected to any affiliate within the insurance group, then this shall be reported as unrelated.

2) Schedule of General Business Premiums Consolidated - the insurer should ‘look through’ to the underlying policyholder and determine the appropriate categorisation based on its relationship with the underlying policyholder. If the insurer writes to an affiliate (or any affiliate within the insurance group), then the insurer shall look through the underlying risk, and if it is to third party, then this shall be included as unrelated business. Otherwise, this is included as related risk.

C12. SCHEDULE OF GEOGRAPHIC DIVERSIFICATION OF NET PREMIUMS WRITTEN (SCHEDULE IVC)

Background

C12.1 The schedule of geographic diversification of net premiums written — Schedule IVC — provides a breakdown of an insurer's net premiums written by statutory lines of business and by geographic location. The BMA has identified and defined 24 statutory lines of business and 18 statutory geographic zones.

C12.2 Line item 25 "total" of Schedule IVC for net premiums written should correspond to the balance reported in Form 2SFS (Consolidated), line 3 for the relevant year.

Instructions Affecting Schedule IVC

C12.2a For each line of business, the net premiums written for the current year stated in Schedule IVA may be split between the 18 geographic zones set below. If included, the total amounts in zones 1-18 for a given line of business shall equal the corresponding amount of net premiums written shown in Schedule IVA;

C12.2b Amounts shall be reported on a consolidated basis only;

Additional Guidance

C12.i. When allocating the premiums by geographic location, allocate the premiums by the location of the risk.

C13. SCHEDULE OF PREMIUM EXPOSURE MEASURE BY LINE OF BUSINESS (SCHEDULE IVD)

Background

C13.1 The schedule of premium exposure measure by line of business — Schedule IVD — provides a breakdown of an insurer's gross premium exposure measure and net premium exposure measure on a consolidated basis. The exposure measure is calculated by the greater of:

1) Gross premium written/net premium written for the current year;
2) Estimate of net earned premiums for the next 12 months;

Plus:

a) Net FP (existing); and
b) Net FP (future).

Instructions Affecting Schedule IVD

C13.1a "Net premiums written" means the consolidated net premiums written for the reporting period;

C13.1b "Estimate of net earned premiums for the next 12 months" means the net premiums earned for the next 12 months (whether arising from policies already incepted, bound but not incepted, or not bound but incepting in the next 12 months);

C13.1c "Net base premium exposure" means the greater of the amounts calculated under lines of business in paragraphs (a) and (b) above;

C13.1d "Net FP (existing)" means the expected present value of net premiums to be earned by the insurer after the next 12 months reporting period for existing qualifying multi-year insurance policies;

C13.1e "Net FP (future)" means the expected present value of net premiums to be earned by the insurer after the next 12 months reporting period for qualifying multi-year insurance policies where the initial recognition date falls in the following 12 months;

C13.1f "Net premium exposure measure" means the total derived from paragraphs (c), (d) and (e) above;

C13.1g "Gross premium exposure measure" means the amount calculated in paragraph (f) above but on a gross of reinsurance basis;

C13.1h "Geographic net premium exposure measure" means the total shown on Schedule IVE; and

C13.1i All amounts shall be reported on a consolidated basis only.

Additional Guidance

Qualifying multi-year insurance policies

C13.i. "Qualifying multi-year insurance policies" means those insurance policies with (an earning) term longer than 12 months after allowing for the criteria prescribed by the Authority;

C13.ii. Corollary to the above is that insurance policies that are earned over a term of 12 months or less (i.e., single-year policies) are not considered "qualifying multi-year insurance policies;

C13.iii. In order to determine what contracts fall under multi-year exposure, insurers should take into account paragraph 122 of the Authority's Guidance Notes for Commercial Insurers and Insurance Groups' Statutory Reporting Regime, of 30 November 2016: "the cash flow projections used in the calculation of the best estimate should take account of all future cash in- and out-flows required to settle the insurance obligations attributable to the lifetime of the policy. This is defined to continue up to the point at which:

a) the insurer is no longer required to provide coverage;
b) the insurer has the right or the practical ability to reassess the risk of the particular policyholder and, as a result, can set a price that fully reflects that risk; and
c) the insurer has the right or the practical ability to reassess the risk of the portfolio that contains the contract and, as a result, can set a price that fully reflects the risk of that portfolio."

C13.iv. For example, multi-year contracts with "getaway clauses", such as annual renewal of cancellation provisions, may be treated as one-year contracts and thus excluded from multi-year exposure.

C13.v. The criteria prescribed in paragraph C20.2c are taken from the Guidance: Actuary's Opinion on EBS Technical Provisions, of December 2017. A natural implication is that the treatment of multi-year contracts should be consistent between the calculation of FP (existing) and loss provisions.

C14. SCHEDULE OF GEOGRAPHIC DIVERSIFICATION OF NET PREMIUM EXPOSURE MEASURE (SCHEDULE IVE)

Background

C14.1 The schedule of geographic diversification of net premium exposure measure — Schedule IVE — provides a breakdown of an insurer's net premium exposure measure by statutory lines of business and geographic location. The BMA has identified and defined 24 statutory lines of business and 18 statutory geographic zones.

C14.2 Line item 25 "total" of Schedule IVE for net premium exposure measure should correspond to the balance reported in IVD Net Premium Exposure Measure for the applicable line of business.

Instructions Affecting Schedule IVE

C14.2a For each line of business, the net premium exposure measure stated in Schedule IVD may be split between the 18 geographic zones set above. If included, the total amounts in zones 1-18 for a given line of business shall equal the corresponding amount of net premiums written shown in Schedule IVD;

C14.2b Amounts shall be reported on a consolidated basis only.

Additional Guidance

C14.i. When allocating the premium exposure measure by geographic location, allocate the premiums by the location of the risk.

C15. SCHEDULE OF RISK EXPOSURE (SCHEDULE IVF)

Background

C15.1 The Schedule of Risk Exposure – Schedule IVF – is intended to capture the location of insurance subsidiaries' jurisdiction of registration:

1) Gross and net premium written by location of risk being underwritten. For worldwide coverage or instances location of risk is not able to be easily determined, insurers can provide location of risk of cedant. This information assists the Authority in determining the location of premiums written from Bermuda insurers;
2) Gross incurred losses by location assists the Authority in determining the location of the losses that have occurred and the impact Bermuda insurers have with worldwide markets; and
3) Gross reserves by location assists the Authority in determining the location of the losses that have occurred and the impact Bermuda insurers have with worldwide markets.

Items

C15.2 Provide jurisdiction of ultimate parent company of insurer;

C15.3 All insurance groups shall provide the following information for the reporting period;

Instructions Affecting Schedule IVF

C15.3a "Location" shall be the location of the risk being underwritten. If the location of the risk being underwritten is not available, then insurers are to allocate based on the location of the cedant;

C15.3b The "number of subsidiaries" refers to the number of subsidiaries licensed within the jurisdiction;

C15.3c All amounts shall be reported on a consolidated basis only.

C16. SCHEDULE OF RISK MANAGEMENT (SCHEDULE V)

Background

C16.1 For assessing an insurer's areas of risk, the Authority also takes into consideration the insurer's risk management structure on an ongoing basis. Such areas include the structure of the insurer, the underwriting risks, market/investment risks, liquidity/interest rate risk and any other risks (e.g., deposit assets and liabilities and segregated accounts) associated with the insurer. These areas are to be provided on a forward-looking basis. If there are significant changes to the insurer's business plan for the upcoming year, the insurer shall include a description of the change in the supporting documentation.

C16.2 The schedule of risk management shall include the following:

- Governance and group structure
- Intra-group transactions to which the insurer is a party and the insurer's risk concentrations
- Effective duration of assets
- Effective duration of liabilities
- Gross probable maximum loss
- Net probable maximum loss
- Average annual loss (excluding property catastrophe)
- Actual attritional losses and large claims losses – relevant year
- Arrangements with respect to property catastrophe recoverables
- Mutual fund disclosures
- Summary of projected performance
- Financial impact and description of stress and scenario tests
- List of statutory lines and statutory territories that have catastrophe exposures
- Reconciliation from GAAP financial statements to Form 1SFS
- Details of alternative capital

Instructions Affecting Schedule V

C16.2a Governance and group structure must disclose (on a legal entity and group basis where applicable):

1) The structure of the board of directors (board); including names, role, country of residence, work experience and status on the board;

Additional Guidance for Status on the Board:

Non-executive (independent)	Refers to a non-executive member of the board that is not affiliated to the insurer nor a service provider

Non-executive (affiliate)	Refers to a non-executive member of the board that is part of the group of the insurer
Non-executive (service provider)	Refers to a non-executive member of the board: 1) Acting as a company formation agent or agent for the establishment of a partnership; 2) Acting as a nominee shareholder of a company; 3) Providing administrative and secretarial services to the insurer; 4) Performing functions in the capacity of resident representative under the Companies Act 1981, Exempted Partnerships Act 1992 and Overseas Partnerships Act 1995; and 5) Providing any additional corporate or administrative services as may be specified in regulations
Non-executive (other)	Refers to a non-executive that does not qualify as an independent director nor is a service provider
Executive	Refers to an executive member of the board

2) The structure of the insurer's management, including names, roles, country of residence, experience, employee arrangement (e.g., confirm whether employees are hired or outsourced) and description of responsibilities of the chief and senior executive;

Additional Guidance for Employee Arrangement:
Chief and senior executives employee arrangements are categorised as follows:

Insurer	Employee working full-time for the insurer
Affiliate	Employee working for the parent company or any other entity affiliated with the company
External service provider	Third-party service providers (e.g., insurance managers)

Additional Guidance for Description of Responsibilities:
Chief and senior executive positions are categorised as follows:

Category A	Has authority to make key strategic, underwriting or investment decisions, etc.
Category B	Has authority to make key strategic, underwriting or investment decisions, etc., within the risk appetite explicitly set by the board
Category C	Must get key strategic, underwriting or investment decisions signed-off by board before executing

3) Terms of reference of the insurer's board and its sub-committees;

3) a. Does the company have tax residency outside of Bermuda? If yes, confirm the location of the tax residency.

4) The jurisdiction(s) where the insurer's board meets on activities including but not limited to —

   a) Setting the strategic direction of the insurer;
   b) Determining the (re)insurer's risk appetite;
   c) Making strategic decisions about new and/or changes to products, lines of business or markets; and
   d) Assessing or managing solvency requirements.

Additional Guidance for Jurisdiction(s) Where the Insurer's Board Meets on Activities:

Select "Yes"	If the insurer's board meet only in Bermuda
Select "No"	If the insurer's board does not meet in Bermuda
Select "No"	If the insurer's board meets both in Bermuda and another jurisdiction(s) and provide details of each jurisdiction and identify the jurisdiction from where activities are mainly deliberated

5) Where functions are outsourced, details of every service provider of the insurer performing the function including name; main jurisdiction of operation; and details of the insurer's operations which are primarily being performed in relation to—

   - Underwriting (re)insurance policies
   - Risk management decisions and activities
   - Investment strategy
   - Actuarial
   - Compliance
   - Internal audit

Additional Guidance for Jurisdiction(s) Where the Insurer's Board Meets on Operations:

Select "Yes"	If the insurer's board meets only in Bermuda
Select "No"	If the insurer's board does not meet in Bermuda
Select "No"	If the insurer's board meets both in Bermuda and another jurisdiction(s) and provide details of each jurisdiction and identify the jurisdiction from where activities are mainly deliberated

Additional Guidance for Outsourced Services:

Insurance manager	Refers to a service provider that is not being an employee of the insurer and holds themselves out as a manager in relation to the insurer, whether or not the functions performed by them as such go beyond the keeping of insurance business accounts and records
Other third party	Refers to a service provider that is not affiliated nor the insurance manager

Affiliate	Refers to a service provider that is part of the group of the insurer

5) a. Details of the services outsourced, and if yes, confirmation if the services are performed in Bermuda;

6) Number of insurer's employees that are resident in Bermuda (non-outsourced positions);

6) a. Confirmation of the number of employees residing in Bermuda employed as

(i) Senior executive – means a person who, under the immediate authority of a director or chief executive of the registered person:
1. Exercises managerial functions; or
2. Is responsible for maintaining accounts or other records of the registered person;

(ii) Senior manager – means in relation to an insurer, a chief executive or senior executive performing the duties of underwriting, actuarial, risk management, compliance, internal audit, finance or investment matters;

(iii) Technical officer – means a person (other than a senior manager) who performs management or other non-management core duties within the underwriting, actuarial, risk management, compliance, internal audit, finance or investment functions;

(iv) Administrative – means a person who is not a senior manager or technical officer;

7) The jurisdiction(s) where the parent board primarily deliberates on matters including, but not limited to—

- Setting strategic decisions
- Determining the group's risk appetite
- Choice of corporate structure, including amalgamations, acquisitions and strategic alliances
- Making strategic decisions about new and/or changes to products, lines of business or markets
- Assessing or managing solvency requirements

8) The jurisdiction(s) where the parent board and chief and senior executives primarily reside;

9) The jurisdiction where the insurance group's control functions reside (i.e., group finance, actuarial and risk management);

10) The insurance group's financial position based on its most recent audited general purpose financial statement regarding its—

a) Total assets;
b) Total reserves; and
c) Capital and surplus;

11) The name of insurers within the insurance group that have the highest—

a) Total asset value;
b) Total insurance reserve value; and
c) Total capital and surplus based on the group's most recent audited general purpose financial statement;

12) The total values for subparagraph 11)a), b) and c);

13) The jurisdiction of licensing of each insurer in subparagraph 11);

14) Any events that have occurred or decisions made after the relevant year-end that would, or have materially changed the information in subparagraphs 9) through 13) (e.g., amalgamation or acquisition or restructuring, etc.); provide a detailed response and explanation; and

15) A copy of the latest group organisational chart.

Additional Guidance

Change in Board and/or Senior Management after Financial Year-End

C16.a.1 In instances where the composition of the board and senior management has undergone changes since the financial year-end, insurers are to report the composition of the board and senior management as of the financial year-end, as well as provide in brackets in the name field, the effective date of the previous and new members of the board or senior management.

C16.a.2 Note that under section 30J of the Insurance Act 1978, a notification is required for change in board members and officers within 45 days of the insurer becoming aware of the change. Thus, the inclusion of this information in the BSCR does not qualify as notification of such change.

Terms of Reference Clarification

C16.a.3 "Terms of reference" in this case refers to the duties of the board and its sub-committees as stated in the company's charter. The BMA reviews the terms of reference in assessing whether significant decisions are deliberated in Bermuda and if the insurer meets the head office requirements. If the insurer's bye-laws include information that aids in the BMA's assessment, it is acceptable.

Figures are to be Reported in Thousand Units ('000s)

C16.a.4 The figures for Schedule V(a), items 10 and 11 are to be reported on the same basis as either thousand units ('000s) or units as indicated in the Summary tab of the return. The insurer may attach additional information under "Other Attachments" to provide the BMA with the financial position of the group and/or the insurers in their local currency.

Insurance Group Details If not Part of an Insurance Group

C16.a.5 If the insurer is not part of an insurance group, the insurer shall put the values reported on Form 1EBS in Schedule V(a), item 10 "group's financial position".

Insurance Group Details of Entities Domiciled in Bermuda

C16.a.6 The insurer is one of a few insurance companies within the group operating out of Bermuda. Does it still report the overall group position or combined amounts for the Bermuda-domiciled entities?

The insurer shall report for all companies within the group, regardless of place of incorporation. Therefore, it shall report the overall group position based on its most recent audited general purpose financial statements.

Insurance Group Details of Unaudited Statements

C16.a.7 The insurance group does not produce audited general purpose financial statements. Shall the insurer report NIL (0) values?

The Authority will accept the requested information based on unaudited group financial statements. Therefore, the insurer should not leave this field blank.

Insurance Group Details – Organisational Chart

C16.a.8 The insurer is part of a large insurance group with subsidiaries worldwide. Can the insurer submit a condensed organisational chart that includes only the Bermuda entities?

The Authority requires the organisational chart to include all group companies and indicate the place of incorporation and percentage holdings. Further, the Bermuda insurer shall be clearly identifiable.

Details of the Services Outsourced – Scope of Services

C16.a.9 When responding to the details of the services outsourced, insurers should consider both internal and external parties in this section.

C16.2b Intra-group transactions to which the insurer is a party and the insurer's risk concentrations—

1) Details of material intra-group transactions between the insurer and other members of the group to which it belongs, including (where applicable):
    a) Exposure value (face value or market value, if the latter is available);
    b) Counterparties involved, including where they are located; and
    c) Summary details of the transactions – including purpose, terms and transaction costs, duration of the transaction and performance triggers;
2) Details surrounding all intra-group reinsurance and retrocession arrangements, and other material intra-group exposures including:
    a) Counterparties involved, including where they are located
    b) Aggregated values of the exposure limits (gross and net) by counterparties broken down by counterparty rating;
    c) Aggregated premium flows between counterparties (gross and net); and
    d) The proportion of the insurer's insurance business exposure covered by internal reinsurance, retrocession and other risk transfer arrangements;
3) The 10 largest exposures to unaffiliated counterparties and any other unaffiliated counterparty exposures or series of linked unaffiliated counterparty exposures exceeding 10% of the insurer's statutory capital and surplus, including:
    a) Name of counterparty;
    b) Exposure values (face value or market value); and
    c) Transaction type;

Additional Guidance

Material Intra Group Transactions and Intra-Group Reinsurance and Retrocession Arrangements

C16.2.b.1 When providing details of "material intra-group transactions", the Authority considers "material exposure" in relation to statutory capital and surplus (i.e., greater than 10% of statutory capital and surplus), as well as the materiality of the specific disclosure. For example, if the insurer holds cash of $3 million and total assets of $4 million, the $3 million cash balance is considered to be material as it pertains to 75% of the insurer's total assets.

When providing details of "intra-group reinsurance and retrocession arrangements", the Authority is looking for **all** intra-group reinsurance and retrocession arrangements. Note that if an insurer has more than 25 transactions with the same assuming and ceding party, these amounts can be aggregated together. If an insurer has more than 25 transactions, please include these details in the attachments section of the BSCR model.

The "aggregated premium flows" shall be the premium written for the reporting period (note that net refers to any reinsurance that is ceded back to the counterparty). The "aggregated values of the exposure limits" shall be the outstanding reserve at the reporting period (note the net refers to any reinsurance that is deducted from the counterparty).

In instances where the insurer is an affiliated reinsurer and all of its transactions are deemed intra-group transactions, the insurer may include an attachment that provides this information.

Internal Reinsurance Arrangement Calculation

C16.2.b.2 The proportion of internal reinsurance arrangements is calculated by dividing the amount of reinsurance provided by affiliates into the total amount of reinsurance available. The insurer shall only include arrangements where it is the ceding party.

Unaffiliated Counterparties 10 Largest Exposures

C16.2.b.3 Instances where the insurer does not have any investing activities, yet it holds cash and cash equivalents, the insurer shall list these as counterparty exposures as well as include each bank separately.

Unaffiliated Counterparties 10 Largest Exposures – Investments to Report

C16.2.b.4 When determining the 10 largest unaffiliated counterparty exposures, insurers are to include cash and cash equivalents, investments (as well as hedge funds), receivables, recoverables and letters of credit at the end of the reporting period. If the information is available, insurers are to provide a look-through basis of the underlying investment.

C16.2c The effective duration of assets must be determined using the aggregate of the total bonds and debentures (as reflected in Form 1SFS (Consolidated), Lines 2(b) and 3(b)), preferred stock (as reflected in Form 1(Consolidated), Lines 2(c)(ii) and 3(c)(ii)), and mortgage loans (as reflected in Form 1(Consolidated), Line 5(c)) as a basis;

C16.2d The effective duration of liabilities must be determined using the reserves (as reflected in Form 1(Consolidated), Lines 17(d)) as a basis;

C16.2e The gross probable maximum loss (if property catastrophe writer) means the gross probable maximum loss for natural catastrophe losses (prior to reinsurance) at the 99.0% Tail Value at Risk (TVaR) level for annual aggregate exposure to all property-related risks and all perils (for the property catastrophe line only), including reinstatement premiums for the year following the relevant year based upon the insurer's catastrophe model. The support documentation must be retained for at least five years once a capital and solvency return has been filed in accordance with paragraph 6 at the registered office of the insurer and shall be presented to the BMA upon request;

Class 4 and 3B Net Probable Maximum Loss Instructions

C16.2f The net probable maximum loss (if property catastrophe writer) means the net probable maximum loss for natural catastrophe losses (after reinsurance) at the 99.0% TVaR level for annual aggregate exposure to all property-related risks and all perils (for the property catastrophe line only), including reinstatement premiums for the year following the relevant year based on the insurer's catastrophe model. The support documentation must be retained for at least five years once a capital and solvency return has been filed in accordance with paragraph 6 at the registered office of the insurer and shall be presented to the BMA upon request;

Additional Guidance

Probable Maximum Loss and Average Annual Loss Valuation – After Tax

C16.2.g.1 The probable maximum loss and average annual loss shall be valued after tax.

C16.2g The average annual loss means-

1) The expected net natural catastrophe loss (after reinsurance), including reinstatement premiums, for annual aggregate exposure to all property-related risks and all perils other than those relating to the property catastrophe line of business for the year following the relevant year based on the insurer's catastrophe model;
2) The calculation should be from the same underlying loss distribution used to determine the gross probable maximum loss and the net probable maximum loss (excluding the property catastrophe component); and
3) The support documentation must be retained for at least five years once a capital and solvency return has been filed in accordance with paragraph 6 at the registered office of the insurer and shall be presented to the BMA upon request;

C16.2h The actual attritional losses and large claim losses – relevant year means the actual aggregate losses (classified by insurers as attritional and large claim losses in accordance with its own policy) experienced by the insurer in the relevant year (not including prior year reserve releases or adverse development);

C16.2i The arrangements with respect to property catastrophe recoverables shall disclose the amounts of:

- Collateral
- Catastrophe bonds
- Special purpose insurer (indemnity basis)
- Special purpose insurer (other basis)
- Total

C16.2j Mutual fund disclosures shall include the name, type and amount of each mutual fund used by the insurer.

Additional Guidance

<u>Mutual Fund Information to Provide</u>

C16.2k.1 Insurers are to provide a summary report (in Excel format) that lists each fund the insurer is using, a brief description of the type of fund (e.g., bond fund, equity fund balanced fund) and the amount the insurer has invested in each fund.

C16.2k Summary of projected performance for the year following the relevant year:

1) The insurer's latest estimate of annual net premiums written;
2) Estimated underwriting profit or loss;
3) Estimated net income or loss either for the insurer or on a group basis with disclosure of the estimated percentage of the insurer's contribution relative to the group; and
4) A qualitative description of the insurer's business and underwriting strategy to be used in an attempt to achieve the estimates in (1) and (3) above;

C16.2l Financial impact and description of stress and scenario tests shall disclose the results from the <u>stress and scenario tests prescribed by the BMA</u> annually and published in such manner as the BMA directs;

C16.2m The list of statutory lines and statutory territories that have catastrophe exposures as set out below:

Zone	Territories
1	Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, New Jersey, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia, the District of Columbia, Alabama, Arkansas, Louisiana, Mississippi, Texas, Florida, Georgia, North Carolina and South Carolina
2	Caribbean
3	Arizona, Colorado, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Montana, Minnesota, Missouri, Nebraska, Nevada, New Mexico, North Dakota, Ohio, Oklahoma, South Dakota, Tennessee, Utah, Wisconsin and Wyoming
4	California
5	Oregon, Washington
6	Hawaii
7	Canada, Alaska
8	United Kingdom, Continental Europe
9	Australia/New Zealand
10	Japan
11	Nationwide covers
12	Worldwide covers
13	All exposures not included in Zones 1 to 12

C16.2n A reconciliation of amounts reported in total assets, total liabilities and total statutory economic capital and surplus comprising any adjustments applied to the GAAP financial statements to arrive at the amounts disclosed in Form 1SFS;

C16.2o The Alternative Capital Schedule is applicable to insurers that conduct business that is financed by a mechanism other than shareholders' capital of the (re)insurance company. This may take various forms such as catastrophe (cat) bonds, industry loss warranties, sidecars, collateralised reinsurers, longevity and mortality bond/swaps, hybrid securities such as preference shares, swaps, and contingent capital such as letters of credit, among others.

C17. SCHEDULE OF FIXED INCOME SECURITIES (SCHEDULE VI)

Background

C17.1 The schedule of fixed income securities — Schedule VI — provides the BMA with details to assess the insurer's investment risk (other than the allocation provided in Schedule II) and the duration of the holdings. This schedule is also considered when reviewing the insurer's asset-liability matching practices.

C17.2 It is noted that the allocation and balances reported on Schedule VI are not applied to a capital charge; however, it is used for the BMA to assess the insurer's investment risk.

C17.3 Securities are to be allocated as follows:

Items

- Security type
- Amount per Form 1EBS, Lines 2(b) and 3(b) – disclosing the amounts contributing to (reflected in) Lines 2(b) and 3(b) of Form 1EBS
- Face value
- Fair value
- Average effective yield-to-maturity
- Average rating of the security type (if applicable)
- Average effective duration of the security type
- Average effective convexity of the security type
- Effective duration of the portfolio
- Effective convexity of the portfolio
- Amounts are to be reported both on an unconsolidated and consolidated EBS basis

Additional Guidance

Types of Securities

C17.i. The insurer may contact the Authority if it is unsure of the classification of a security. In general, the Authority considers the following types of securities in these categories:

- U.S. Government
    - U.S. Government Federal
    - U.S. Government Agency - MBS
    - U.S. Government Agency - other

- Non-U.S. Government
- States, municipalities and political subdivision
- Corporate securities
    - U.S. Government-backed corporate
    - Non-U.S. Government-backed corporate
    - Federal Deposit Insurance Corporationguaranteed corporate
    - Other corporate
- Asset-backed securities
- MBS
    - Residential subprime
    - Residential non-subprime
    - Commercial
- Mutual funds
- Bank loans
- Catastrophe bonds and insurance-linked securities

<u>Average Yield-To-Maturity Calculation</u>

C17.ii. When reporting the average yield-to-maturity value, the calculation is to be based on the current market price taking into consideration the valuation based on the day the bond was purchased and the coupon payments that have elapsed:

C18. SCHEDULE OF COMMERCIAL INSURER'S SOLVENCY SELF-ASSESSMENT (SCHEDULE IX)

Background

C18.1 The Commercial Insurer's Solvency Self-Assessment (CISSA) is a regime that requires insurers to perform an assessment of their own risk and solvency requirements. This provides the BMA with the insurer's perspective of the capital resources (referred to as CISSA capital) necessary to achieve its business strategies and remain solvent given its risk profile, as well as insight into the risk management and governance procedures surrounding this process. Risk profile considers all reasonably foreseeable material risks arising from its operations or operational environment. Insurers should perform this assessment on an unconsolidated basis, with the exception of internal to regulatory capital level, which should be done on a consolidated basis.

C18.2 The CISSA is one of the tools used in the supervisory review process to assist in monitoring compliance with the Insurance Code of Conduct (Code), given that the CISSA should, at a minimum, consider those risks outlined in the Code.

C18.3 The CISSA process should be integrated into the insurer's decision-making process and serve a critical role in the development, implementation and monitoring of management strategies. This is referred to as the "use test."

Items

C18.4 The schedule of CISSA — Schedule IX — shall provide particulars of the following matters:

1) <u>CISSA capital summary and additional information</u> – disclosing the insurer's own capital computations, insurer's comparison of the CISSA capital to regulatory capital, insurer's plans for raising additional capital and contingency arrangements impacting the available capital.
2) <u>CISSA general questions</u> – providing information on an insurer's risk management and governance programme, the review and approval of CISSA, and integration of CISSA into the strategic decision-making process.
3) <u>CISSA assessment of material risks of the insurer</u> – providing information on an insurer's assessment of material risks, determination of both the quality and quantity of capital required to cover its risks, the forward-looking analysis and its ability to manage its capital needs, the review and approval of CISSA and the governance and controls surrounding model(s)/tool(s) used to compute the CISSA capital.

Instructions Affecting Schedule IX

C18.4a <u>CISSA capital summary and additional information:</u>

Column Item		Description
1	CISSA capital	CISSA capital is the amount of capital the insurer has determined that it requires to achieve its strategic goals upon undertaking an assessment of all material risks (reasonably foreseeable) arising from its operations or operating environment. Input the CISSA capital determined by the insurer for each respective risk category. The BMA is mindful that it is difficult to quantify and, therefore, hold capital regarding certain risks (i.e., liquidity, reputational, concentration, group and strategic risk). Where an insurer does not hold capital against certain risks, it should input a nil amount in the respective cell. Where an insurer uses an internal capital model/tool to determine its CISSA capital, the internal model/tool will not require the BMA's approval for purposes of completing this schedule. All supporting work papers and documents for the purposes of completing this schedule should be retained and kept available for examination and discussion with the BMA should the need arise.
2	Regulatory capital	Regulatory capital is determined by the BSCR or an approved internal capital model at 99.0% TVaR over a one-year time horizon. Input the regulatory capital determined by the insurer for each respective risk category, where applicable.

<u>Additional information</u>

	Line Item	Description
1-7	Questions 1-7	The insurer should select the appropriate response from the drop-down menu provided and/or otherwise provide a brief description, explanation or attachment. Where an attachment is provided, the designated insurer shall include references (e.g., page number, paragraph number) of where the information can be located within the attachment. Where a question/section is not applicable to an insurer or the options provided do not fully reflect the insurer's position, the insurer shall select the "others" option and include a brief description. For Question 7 – The insurer **<u>must</u>** disclose whether a regulator in any jurisdiction has placed a restriction on the movement of assets/payment of dividends from a subsidiary in that jurisdiction and the associated amount. The amount should be gross of regulatory capital requirements.

C18.4b CISSA general questions

Line Item		Description
1-5	Questions 1-5	The insurer should select the appropriate response from the drop-down menu provided. Where a question/section is not applicable to an insurer or the options provided do not fully reflect the insurer's position, a brief description shall be included.
5	Question 5	Independent verification shall be conducted by an internal or external auditor or any other appropriately skilled internal or external function, as long as they have not been responsible for the part of the CISSA process they review and are ,therefore, deemed to be independent in their assessment.

C18.4c CISSA assessment of material risks of the insurer

Line Item		Description
1-11	Questions 1-11	This section requires the insurer to undertake and file with the BMA the insurer's most recent report comprising of a solvency self-assessment of its material risks and the determination of both the quality (types of capital) and quantity of CISSA capital required to cover these risks while remaining solvent and achieving the insurer's business goals. The insurer shall provide attachments containing the information requested. The attachments shall include references (e.g., page number, paragraph number) of where the information can be located within the attachment.
12	Question 12	The insurer should select the appropriate response or provide a brief description or an attachment. Where an attachment is provided, the insurer shall include references (e.g., page number, paragraph number) of where the information can be located within the attachment.
1-12	Questions 1-12	All supporting work papers and documents used to prepare the CISSA submission should be retained and kept available for examination and discussion with the BMA should the need arise.

	Description
Questions (1) to (11)	The insurer is required to undertake and file with the BMA an assessment of its material risks and the determination of both the quality (types of capital) and quantity of CISSA capital required to cover these risks while remaining solvent and achieving its business goals. Attachments containing the information requested should include references (e.g., page number, paragraph number) of where the information can be located within the attachment.

Additional Guidance

<u>Risk Management Policy in lieu of CISSA Report</u>

C17.i. If the insurer's risk management policy is used to assess and monitor strategic goals and it minimally addresses Schedule IX(c), items 1-11, it can be submitted in lieu of the CISSA report. This would also apply to an insurer's code of conduct assessment, risk framework, underwriting framework and other internal documents. Insurers should include a reference table that identifies the CISSA disclosure within the submitted attachment(s) (e.g., CISSA item 3 is covered in the risk management policy, section 5 (pages 40-44)). Note that any documents referenced in the risk management policy (or other such documents) shall be submitted as part of the submission package.

C19. CATASTROPHE RISK RETURN (SCHEDULE X)

Background

C19.1 The Catastrophe Risk Return (Cat Return) is set out to determine the extent of reliance on vendor models to assess catastrophe exposures and highlight the actions insurers take to mitigate model risk, including a description of procedures and analytics in place to monitor and quantify exposure to vendor models. It also serves as a tool to assist the BMA to assess the reasonableness of inputs into the catastrophe component of the regulatory capital requirement and whether standards are being applied evenly.

C19.2 The Cat Return will also be used to assess liquidity. Liquidity risk is not always mitigated simply by holding additional capital. Claims-paying ability is an important factor that is perhaps more pronounced with catastrophe risk where large amounts of capital may have to be liquidated to pay claims at very short notice. Additionally, complexity arises with the currency mismatch that may exist between an insurer's capital and a subset of its potential catastrophe liabilities. An insurer should be able to demonstrate that it has considered potential challenges to liquidity, including the methodology and principles used to measure liquidity, contingency plans, access to new funding sources and projected liquidity requirements.

C19.3 Insurers are only required to complete the Cat Return when the insurer writes property catastrophe line of business.

Items

C19.4 The Cat Return — Schedule X — shall provide the following matters:

- Total Exceedance Probability (EP) curves
- EP curve for insurance
- EP curve for region-perils
- Statutory lines of business and zones exposure per region-perils
- Accumulations overview
- Data analysis
- Reinsurance disclosures
- Insurance terrorism exposure
- Reinsurance terrorism limits
- Assumed exchange rates

C19.5 The Catastrophe Risk Return Guidelines (2016) provides detailed instructions on the above requirements and has been updated for frequently asked comments and questions. A copy of these guidelines is available on the BMA's website.

C20. SCHEDULE OF PARTICULARS OF CEDED REINSURANCE (SCHEDULE XVIII)

Background

C20.1 To assess the risk of amounts reported in Digital Assets Held in Custody for Clients (Form 1SFS (consoldiated), Line 12), the Authority requires insurers to determine the arrangement in which the funds are being held. In the event of default, if the company bears the risk (as well as the market risk of the valuation of investments), then these amounts are to be reported in Schedule IIA, Schedule of Funds Held by Ceding Reinsurers in Segregated Accounts/Trusts By BSCR Rating; if the reinsurer bears the risk of the assets held, then these amounts are to be reported on Schedule XVIII – Schedule of Particulars of Ceded Reinsurance.

C20.2 Particulars of reinsurance balances shall disclose at least the 10 largest reinsurance exposures with the remaining reinsurance exposures grouped according to BSCR ratings and/or a single consolidated reinsurance exposure—

1) The name of reinsurer;
2) The BSCR rating;
3) The amount of reinsurance balances receivable, funds held by ceding reinsurers and reinsurance recoverable balance (as reflected in Form 1EBS, Lines 11(e), 12(c) and 17(c));
4) Digital assets held in custody for clients (as reflected in Form 1SFS (Consolidated), Line 12), in 3) above, shall be included only to the extent that they are not already included under Schedule IIA;
5) The amount of reinsurance balances payable and other payables (as reflected in Form 1SFS (Consolidated), Lines 28, 29, 33 and 34) to the extent that they are attributable to that particular reinsurer or reinsurance exposure balance and there is a contractual right of set-off;
6) The amount of any collateral placed in favour of the insurer relating to the reinsurance balances (as reflected in the Notes to Form 1SFS(Consolidated), Lines 11(c) and 17(c));
7) The amount of qualifying collateral shall be the collateral amount in 6) less a 2% reduction to account for the market risk associated with the underlying collateral assets but, at all times, the qualifying collateral shall not exceed the net exposure, which is the difference between the amounts in 3) and 5);
8) The net qualifying exposure shall be the amount under 3) less the amounts under both 5) and 7) above;
9) For the purposes of this schedule, the appropriate BSCR rating shall be determined as follows—

a) The BSCR rating shall be based on either the rating of the reinsurer or the rating of the letters of credit issuer, if any, whichever is higher;
b) Where the letters of credit do not relate to the entire reinsurance exposure, the reinsurance exposure should be separated to reflect the rating of that portion of the exposure that is covered by the letters of credit and the rating of that portion of the exposure that is not;
c) Where the reinsurer is a domestic affiliate, it shall be assigned a BSCR rating of 0 regardless of its credit rating;
d) Where a reinsurer is not rated but is regulated in a jurisdiction that applies the International Association of Insurance Supervisors' Insurance Core Principles and in particular imposes both a minimum capital requirement and a prescribed capital requirement (PCR) and fully meets its PCR in that jurisdiction, it shall be assigned a BSCR rating of 4 or otherwise, it shall be assigned a BSCR rating of 8;
e) Where the insurer has disclosed a single consolidated reinsurance exposure, that exposure shall be assigned a BSCR rating of 8; and
f) Insurance financial strength ratings, reflecting the claims-paying ability of (re)insurers issued by the recognised credit rating agencies shall be used for the purposes of this schedule. The corresponding BSCR ratings shall be determined in the same manner as specified in sections C2.1a to C2.1l instructions affecting Schedule II.

<u>The Mapping of Credit Ratings to BSCR Ratings are as Follows:</u>

BSCR Rating	Standard & Poor's	Moody's	AM Best	Fitch
1	AAA	Aaa		AAA
2	AA+ to AA-	Aa1 to Aa3	A++ , A+	AA+ to AA-
3	A+ to A-	A1 to A3	A , A-	A+ to A-
4	BBB+ to BBB-	Baa1 to Baa3	B++ , B+	BBB+ to BBB-
5	BB+ to BB-	Ba1 to Ba3	B , B-	BB+ to BB-
6	B+ to B-	B1 to B3	C++ , C+	B+ to B-
7	CCC+ to CCC-	Caa1 to Caa3	C , C-	CCC+ to CCC-
8	Below CCC-	Below Caa3	Below C-	Below CCC-

Additional Guidance

<u>Premiums Receivables to be Reported on Line 10 of Balance Sheet</u>

C20.i. The Authority would like to confirm that premiums receivables should typically be captured under Line 10 of the balance sheet and not Line 11. Reinsurance receivables are typically those recoverables that have now been crystallised – hence both reinsurance receivables and recoverables are assessed together from a credit risk perspective. Additionally, the Authority confirms that the Line 33 offset against reinsurance balances should only apply to the extent that they are attributable to a specific reinsurer.

<u>Capital Risk Charge based on Nature of the Arrangement</u>

C20.ii. For digital assets held in custody for clients, the capital risk charge is calculated by the nature of the arrangement:

1) Where specific assets have been allocated for the benefit of the reinsurer, such that the reinsurer bears market risk on those assets, the Authority requires insurers to look through to the underlying assets and report these balances on Schedule IIA. This effectively adds to the fixed income and equity risk modules similar to Schedule II.

2) Where there are no specific identified assets, the reinsurer is effectively in a similar position to a typical cedant with reinsurer exposure, and the amounts will thus be treated similarly to reinsurance recoveries and shall be reported on Schedule XVIII Particulars of Ceded Reinsurers. Further, the rating for reinsurance exposures should be based on the financial strength ratings of the insurer.

C21. SCHEDULE OF CASH AND CASH EQUIVALENT COUNTERPARTY ANALYSIS (SCHEDULE XIX) - REVOKED

C22. SCHEDULE OF CASH AND CASH EQUIVALENT COUNTERPARTY ANALYSIS (SCHEDULE XIXA)

Background

C22.1 For assessing the underlying credit security of cash and cash equivalent counterparties, the Authority requires insurers to provide details of the largest 10 exposures and ratings of those institutions. The remaining balance can be aggregated by BSCR rating (which is a similar methodology to the Schedule of Particulars of Ceded Reinsurance).

Instructions Affecting Schedule XIXA

C22.1a An insurer may disclose at least the top 10 cash and cash counterparty exposures (as reflected in Form 1SFS (Consolidated) Line 1 and Schedules IIB to IIF Column 1, Line 58);

C22.1b The remaining balance may be grouped according to BSCR rating;

C22.1c All unreconciled balances shall be allocated to the single consolidated exposure balance that receives a BSCR rating of 8;

C22.1d Cash and cash equivalents issued by a country that is rated AA- or better in its own currency shall be classified under BSCR rating class 0;

C22.1e Insurers may allocate BSCR ratings based on the short-term ratings in the table below, or alternatively based on the long-term ratings detailed in Schedule IIB, in each case following the process specified in the instructions affecting Schedule IIB; and

C22.1f Amounts shall be reported on an EBS valuation basis.

BSCR Ratings	Standard & Poor's	Moody's	AM Best	Fitch
Class 2	A1+	P1	AMB-1+	F1+
Class 3	A1	P2	AMB-1	F1
Class 4	A2, A3	P3	AMB-2, AMB-3	F2, F3
Class 5				
Class 6	B-1, B-2			B
Class 7	B-3			
Class 8	Unrated short-term investments and all other ratings			

BSCR Ratings	KBRA	DBRS	Egan-Jones	Japan Credit Rating Agency	Morningstar Credit Ratings
Class 2	K1+	R-1 H,M	A-1+	J1+	M1+
Class 3	K1	R-1 L	A-1	J1	M1

Class 4	K2, K3	R-2 H,M,L	A-2, A-3	J2	M2, M3
Class 5		R-3	B-1	J3	
Class 6	B	R-4	B-2		
Class 7			B-3	NJ	
Class 8	Unrated short-term investments and all other ratings				

C23. SCHEDULE OF CURRENCY RISK (SCHEDULE XX) - REVOKED

C24. SCHEDULE OF CURRENCY RISK (SCHEDULE XXA)

C24.1 For insurers that write business in multiple currencies, the Authority has developed a capital charge for each currency where the insurer's liabilities may exceed its assets. For the grounds of proportionality, the Authority requires insurers to provide currency exposures for at least 95% of total assets and liabilities held.

C24.2 For those currencies for which the assets in the currency are less than the sum of the liabilities denominated in the currency plus a proxy BSCR for that currency, shocks are applied to the assets and liabilities to determine a capital charge. The proxy BSCR for a given currency shall be calculated as the product of the liabilities in that currency and the proxy BSCR factor. The proxy BSCR factor is calculated as the total liabilities found on Form 1EBS Line 39 divided by the total ECR charge. The proxy BSCR factor shall be the maximum of:

1) The prior-year value;
2) Average of the last three years.

Instructions Affecting Schedule XXA

C24.2a Insurers shall report currencies representing not less than 95% of their economic balance sheet liabilities;

C24.2b Assets qualifying as held for risk mitigation purposes; assets not qualifying for risk mitigation purposes and liabilities without management actions shall be valued in accordance with criteria prescribed in section B3;

C24.2c Liabilities with management actions shall be valued in accordance with criteria prescribed in section B4 in relation to the valuation of future bonuses and other discretionary benefits; and

C24.2d For all exposures other than Foreign Exchange (FX) derivatives, a default calculation of after-shock value is provided to expedite the filling of the schedule. It is expected that the default calculation will be appropriate in the majority of cases[5]; however, the insurer always needs to review the appropriateness and approve any resulting values. If the default formula is not appropriate for a certain asset class, or for certain instruments

[5] In particular, this is true for all assets whose value is not directly sensitive to exchange rate movements (i.e., whose local (foreign) currency value is independent of changes in exchange rates). For example, and assuming that USD is the reporting currency: although the value *in dollars* of a bond or common stock denominated in EUR will change as a result of a shock to USD/EUR exchange rate, the local currency value of the bond or common stock will not change as a result of the shock. For such assets, the only change in value is the change in reporting currency terms, meaning that the percentage shock can be straightforwardly applied to the reporting currency value of the foreign currency position.

within an asset class, the insurer is responsible for entering correct after-shock values by overriding the default formula.

C24.2e For FX derivatives, no default formula can be provided due to the non-linearity of the change in value. That is, the change in derivative value (in percentages) is generally different from the shock (in percentages) that is applied to the exchange rate underlying the derivative.

C24.2f Amounts shall be reported on a consolidated basis.

Additional Guidance

Calculating the BSCR Proxy

C27.i. When calculating the BSCR proxy, insurers are to provide liabilities and ECR capital charges for the prior three years.

C27.ii. If the insurer does not have either liabilities or ECR capital charges for the prior three years,

1) Insurers filing their BSCR for the first time are to use current year figures for the prior year; and
2) Insurers that have previously filed a BSCR and do not have three years of historical data shall provide the years they have data for and leave the years with no data reported as blank.

Meeting the 95% Minimum Asset and Liability Test

C27.iii. The insurer does not meet the 95% minimum test on this schedule. How will this impact the BMA's risk assessment of the insurer?

The Authority may require additional information from the insurer to assess its currency risk if it does not meet the 95% minimum test. This may result in a capital add-on which will require the insurer's ECR and TCL ratios to be revised.

Guidance for Reporting Currency Shocks for FX Forward Positions

C27.iv.

When reporting foreign exchange hedges on Schedule XXA, the before-shock market value is the fair value of the contract on a consolidated basis and should be already available without a need for separate calculations (from the financial statements/asset reports/asset system). The after-shock value is calculated by the insurer under the prescribed currency shocks, following standard market practices and using generally accepted models for the valuation of specific assets.

In particular, as the cash flows of an FX forward occur at its maturity, the forward exchange rate and the discount rate for the appropriate term should be used to value the FX forward, both at the valuation date and after the shock.

To avoid doubt, the before-shock value (i.e., the balance sheet value) and the after-shock value may be either positive or negative (or zero), depending on the specifics and the circumstances. As a result of the shock, a negative market value may become more negative, less negative or positive; and a positive market value may become more positive, less positive or negative. Only the change in the market value matters, where the change is calculated as [market value before shock] minus [market value after shock].

Below is a simplified example of the calculation of the after-shock value of an FX forward contract for illustration purposes. The example assumes that an insurer's reporting currency is USD and that it has GBP-denominated liabilities in excess of GBP-denominated assets. The insurer is, therefore, exposed to the risk of GBP appreciating against the USD; or, equivalently, to the risk of USD depreciating against the GBP. Assume that the insurer has entered into an FX forward to sell USD (buy GBP) at a fixed price to hedge some of this risk.

1) Let the GBP/USD rate entered be 1.3 (the forward rate/delivery price), and the insurer is selling $1,000 USD (the nominal amount). At the contractual rate, this is equivalent to buying 769.23 GBP. The market value of the FX forward at inception is, by definition, 0. Assume the original maturity of the contract is T (in years).

2) Assume that, as of the valuation date (denote this by time t), the current GBP/USD forward rate for the period equal to the remaining maturity of the contract (i.e., T-t) is 1.5. This means that if the insurer were to enter into a new forward contract, at time t, to sell 1000 USD for GBP at time T, it would receive 666.67 GBP at time T. Nevertheless, the delivery rate of the FX forward stays unchanged over the life of the contract, and under the contract, the insurer can get 769.23 GBP for 1000 USD at the maturity, T. Therefore, ignoring discounting for the sake of simplicity in this example, the market value of the FX forward is equal to the difference, 102.56 GBP. Alternatively, this can be thought of as closing the position by entering into an opposite contract (i.e., selling 666.67 GBP to receive $1,000 USD, at time T; the USD payments cancel at T, and the GBP legs yield a net profit of 769.23 - 666.67 = 102.56 GBP at T). The GBP value then needs to be converted into the reporting currency (at the spot rate). Assuming that the spot GBP/USD rate at valuation date is, say, 1.4, the market value of the FX forward is 143.58 USD. This is the before-shock market value in Schedule XXA, which should correspond to the fair value at which the FX forward is recorded on the EBS balance sheet (after properly accounting for all the factors affecting the price of the forward, such as discounting the payoff from time T to present time t).

3) Under the BSCR currency risk calculation – Schedule XXA – the FX forward is revalued under the prescribed currency shock. In this case, the shock is a 25% depreciation of the USD against GBP (or, equivalently, a 25% appreciation of the GBP

against the USD). The shocked GBP/USD forward rate is, therefore, 1.875 (assuming that neither the relevant USD nor GBP interest rates change as a result of the shock). At this rate, 1,000 USD could be sold forward for 533.33 GBP at the maturity T. Nevertheless, the forward contract entitles the insurer to receive 769.23 GBP for 1,000 USD. Therefore, the market value of the contract after the shock is 235.90 GBP (ignoring discounting). Using the shocked spot rate of 1.75 (i.e., (1+25%)*1.4), the shocked market value is 412.83 USD. This is the after-shock market value in Schedule XXA.

4) The effect of the currency shock on the FX forward is the difference between the before and after-shock market values (i.e., an increase in value of 269.25 USD in this example). Note that the insurer needs to only fill the before-shock and after-shock values in Schedule XXA; the change in market value is then automatically calculated in the Currency Risk tab. This increase in the value of the FX forward would help to offset some of the increase, in USD terms, in the value of the GBP-denominated liabilities.

C10.1.ii. Alternatively, instead of reporting the (net) market value of an FX forward contract, insurers may report both legs of the FX forward separately on Schedule XXA, with each leg allocated to the line for the appropriate currency. In this case, the sum of the reported (before-shock) values of the legs must be equal to the fair value, as of the valuation date, of the FX forward contract as a whole. Similarly, the sum of the mark-to-model values of the legs after the shock should, by definition, be equal to the after-shock mark-to-model value of the contract as a whole if the calculation is carried out correctly. The market value of the contract, or the results of the shock calculation, shall not be affected by the chosen representation.

C25. SCHEDULE OF CONCENTRATION RISK (SCHEDULE XXI) - REVOKED

(i)

C26. SCHEDULE OF CONCENTRATION RISK (SCHEDULE XXI)

Background

C26.1 To assess the insurer's concentration risk, the Authority requires the identification of largest 10 independent exposures relating to all instruments (e.g., equity holdings, bonds, real estate, loans), which would be an addition to the existing BSCR market and/or credit risk contributed by those exposures.

C26.2 For considering which counterparties need to be grouped together to be considered included in this module, a single counterparty should include all related/connected counterparties, which are defined as:

1) Control relationship: one of the counterparties, directly or indirectly, has control over the other(s);
2) Economic interdependence: if one of the counterparties were to experience financial problems, in particular funding or repayment difficulties, the other(s), as a result, would also be likely to encounter funding or repayment difficulties.

Instructions Affecting Schedule XXI

C26.2a Disclosure of an insurer's 10 largest exposures to single counterparty risk by reporting the name, the exposure and allocation by asset type, bond or mortgage type (if applicable), BSCR rating (if applicable) and the asset value consistent with Form 1SFS (Consolidated).

C26.2b For the purposes of this schedule, a counterparty shall include all related or connected counterparties captured by either of the following criteria:

1) Controller relationship: if a counterparty, directly or indirectly, has control of (as a result of its majority shareholding in or significant influence) the other counterparties; or

2) Economic interdependence: if one of the counterparties were to experience financial difficulties that directly or indirectly affect the ability of any or all of the remaining counterparties to perform their financial obligations (e.g., where a counterparty becomes unable to fund or repay certain financial contractual obligations, and as a result, other counterparties are likely to be unable to fund or repay certain obligations imposed on them);

C26.2c Asset type (Column A) shall be determined by the insurer as one of the following:

1) Cash and cash equivalents (as defined in Schedule XIX Column B Schedules IIB, IIC, IID, IIE and IIF Column (1), Line 68);

2) Quoted and unquoted investments (as defined in Schedules IIB, IIC, IID, IIE and IIF Column (11), Line 14);
3) Equity holdings (as defined in Schedules IIB, IIC, IID, IIE and IIF Column (11), Line 37);
4) Advances to affiliates (reported on Form 1SFS (Consolidated), Line 4);
5) Real estate (reported on Form 1SFS (Consolidated), Line 7); and
6) Loans receivable (reported on Form 1SFS (Consolidated), Line 8(c)).

C26.2d When reporting asset sub-type (under Column B), the insurer shall provide further details of the type of asset as included in Table 1, Table 2 or Table 8, as appropriate;

C26.2e When applying the BSCR rating (under Column C), the insurer shall apply the BSCR rating that was allocated to the asset when it was included in Table 1, Table 2 or Table 8, as appropriate;

C26.2f Amounts shall be reported on a consolidated basis.

Additional Guidance

Reporting Largest 10 Independent Exposures

C29.i. Complete the schedule by providing the 10 largest independent exposures relating to all instruments (e.g., equity holdings, bonds, real estate, loans) largest counterparties. If a counterparty has more than one BSCR rating or asset type, enter each rating separately (i.e., if an insurer has purchased bonds and preferred shares of a company, then the insurer is to report "asset type" as "bond types"; "bond/mortgage loan type" as the applicable bond type, and "BSCR rating" as the rating of the company in one line. In the second line, the insurer is to report the "asset type" as "preferred shares" and "BSCR rating" as the rating of the company.

C27. SCHEDULE OF INTEREST RATE SENSITIVE ASSETS AND LIABILITIES (SCHEDULE XXIII)

Background

C27.1 An alternative and more risk-sensitive method for determining capital requirements for interest and liquidity risk has been developed. This method will require companies to apply shocks to the yield curve used for determining best estimate liabilities (which includes segregated account company liabilities, deposit liabilities and sundry liabilities) and market values of assets (which includes segregated account company assets, deposit assets and sundry assets) exposed to interest rate risk (e.g., fixed income and hybrid assets, bank deposits). Any changes in market values of assets and best estimate liabilities due to interest rate-sensitive cash flows should be accounted for. The capital requirement is then determined as the negative change to the net asset value (net balance sheet) of the highest magnitude resulting from these shocks.

Instructions Affecting Schedule XXIII

C27.1a The shock-based method requires companies to apply shocks to the yield curve used for determining best estimate liabilities[6] and market values of assets[7] exposed to interest rate risk (e.g., fixed income and hybrid assets, bank deposits). Any changes in market values of assets and best estimate liabilities due to interest rate-sensitive cash flows should be accounted for.

C27.1b Two shocks are to be applied: an upwards shock and a downwards shock. The capital requirement is then determined as the negative change to the net asset value (net balance sheet) of the highest magnitude resulting from these shocks.

C27.1c For the purposes of calculating capital requirements for interest rate risk, rates are allowed to go negative. If the application of the downward shock leads to negative rates, these shall not be floored at zero.

C27.1d For the calculation of the interest risk capital charge under the shock-based approach, hedging and risk transfer mechanisms should be taken into account as long as they comply with the requirements set in the risk mitigation section of these instructions. Also, management actions should be taken into account as long as they comply with the requirements set in the management actions section of these instructions.

Additional Guidance

C30.i. The shocks (per currency) are to be applied to the valuation date spot curve (per currency). The shocks are absolute shocks expressed in percentage points (i.e., are added on top of the base spot curve).

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[6] As well as segregated account company liabilities, deposit liabilities and sundry liabilities.

[7] Including segregated account company assets, deposit assets and sundry assets.

For companies using the standard approach to calculating Best Estimate Liability (BEL), the shocks are applied to the standard spot curves published by the Authority.

C30.ii. The assets and liabilities need to be revalued under the shocks. For assets, this involves calculating the market value of assets after the shock (i.e., the shocked value). Depending on the asset, this may be a mark-to-model calculation. Conceptually the shocked value corresponds to the expected present value of cash flows projected under the stress scenario (taking into account that the amount and/or timing of cash flows themselves might change due to the shock (e.g., for bonds with call/put options, or for derivatives)).

C30.iii. Revaluing the (best estimate) liabilities involves calculating the expected present value of cash flows projected under the stress scenarios. In particular, where the amount and/or timing of liability cash flows themselves depends on interest rates, the liability cash flows need to be projected (re-evaluated) under the stress scenarios, as opposed to simply re-discounting the base scenario cash flows.

Interaction between Shock-based approach and the Scenario-based approach for BEL

C30.iv. For companies using the scenario-based approach for BEL calculation, there is an offset from the interest rate risk capital charge when the shock-based approach is used. The offset is based on the difference in the best estimate liability between the "worst" scenario and the base scenario under the scenario-based approach, according to the formula specified in the Prudential Rules.

C30.v. As a simplification, companies using the scenario-based approach may calculate the capital charge for interest rate risk (before the application of offset) based on shocks to the balance sheet as if the base scenario had been applied. In this case, the offset is to be calculated as the difference between the “worst” scenario and the base scenario before the application of shocks.

C28. SCHEDULE OF DIGITAL ASSETS

Background

C28.1 Every Class IIGB insurer shall provide the following information in relation to its digital assets and liability holdings as follows:

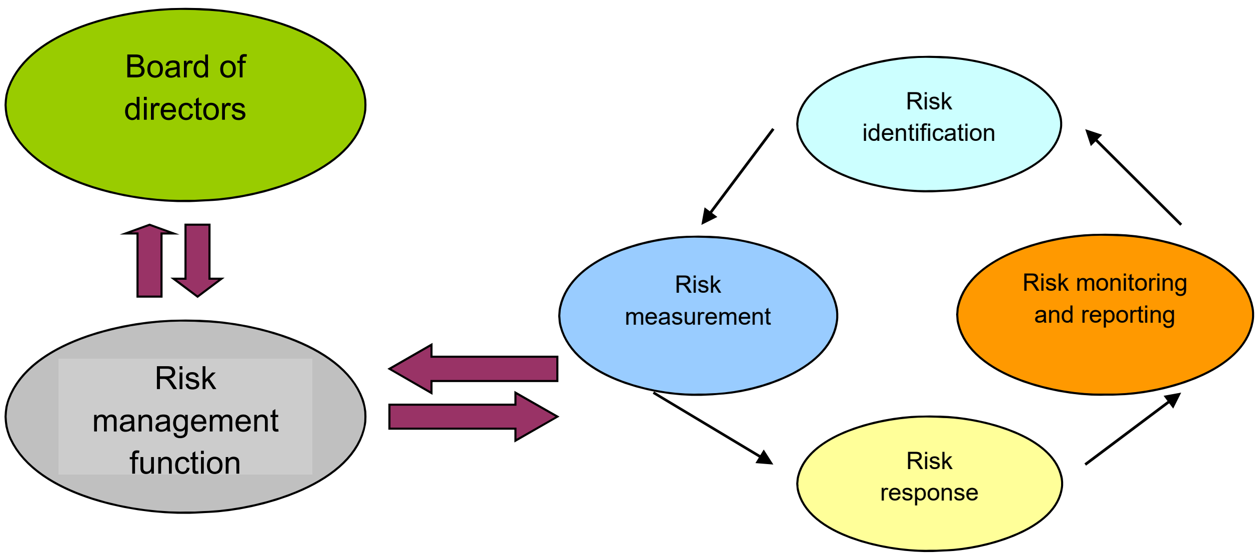
C28.2 Stablecoins are to be; a digital asset that is fully funded by a fiat currency reserve and can be used at any point in time to redeem that fiat currency from the issuer of the stablecoin or the issuer's agent on a one-to-one basis. Only fiat-backed stablecoins audited by a professional firm recognised by the Authority are allowed to be classified as stablecoins for the purposes of this rule; and

C28.3 Other digital assets include all other digital assets that are not classified as "stablecoins" for the purposes of this rule.

C29. COMMERCIAL INSURER RISK ASSESSMENT (CIRA)

Background

C29.1 The CIRA framework assesses the quality of the risk management function surrounding the insurer's operational risk exposures. Operational risk is the risk of loss arising from inadequate or failed internal processes, people, systems or external events. Operational risk also includes legal risks. Reputational risks arising from strategic decisions do not count as operational risks. The CIRA framework emphasises the interrelationships between the risk management and corporate governance functions as seen below:



C29.2 The board has an influential role in establishing, inter alia, the insurer's strategic direction and risk culture. The BMA views the risk management function as a critical tool to furnish the board with the necessary information to make appropriate decisions and assist the insurer's management in steering the organisation.

C29.3 The risk management function within the CIRA has four components: risk identification, risk measurement, risk response, and risk monitoring and reporting. The insurer will undertake the self-assessment by answering the questions related to the calibre of the risk management processes it has in place to address the material risk arising from each operational risk area.

C29.4 The CIRA framework embodies a maturity model approach to identify an insurer's developmental stage with respect to a specific operational risk area. It rewards the insurer for achieving progress in each risk management area. It reviews the following eight operational risk exposures as follows:

1) Business processes risk – includes a risk of errors arising from data entry, data processing or application design;
2) Business continuity risk – includes a risk of an event that threatens or disrupts an insurer's continuous operations;
3) Compliance risk – includes a risk of legal or regulatory breaches or both;
4) Information system risk – includes a risk of unauthorised access to systems and data, data loss, utility disruptions, software and hardware failures, and inability to access information systems;
5) Distribution channels risk – includes a risk of disruption to an insurer's distribution channel arising from the employment of inexperienced or incapable brokers or agents;
6) Fraud risk – includes a risk of misappropriation of assets, information theft, forgery or fraudulent claims;
7) Human resources risk – includes a risk of employment of unethical staff, inexperienced or incapable staff, failure to train or retain experienced staff, and failure to communicate with staff adequately; and
8) Outsourcing risk – includes a risk of miscommunication of responsibilities concerning outsourcing, breach of outsource service agreements or entering into inappropriate service agreements.

C29.5 The CIRA framework applies the components within the risk management function to each operational risk area. The insurer assesses each operational risk area and selects the applicable descriptor under the "Dimension" column that reflects the developmental stage of the insurer's process surrounding the specific risk area.

C29.6 In order to be credited for a relevant score within the CIRA framework, the insurer must fulfill the criteria in the "Dimension" column. In its assessment, if the insurer finds itself between stages, the insurer must select the lower stage. The insurer can supplement the selection with additional comments that can be made at the end of each risk management function.

C29.7 The total scores for each component within the CIRA framework are aggregated and produce the pertinent operational risk charge percentage. The operational risk charge ranges from 1% to 10%. The relevant operational risk charge percentage is applied to the "BSCR (After Covariance Adjustment)" subtotal. The resultant figure is the operational risk capital charge.

1) Corporate governance – the insurer assesses each statement in the "Dimension" column and places an "X" in the column "Implemented" where the corporate governance function meets the criteria (200 points for each fulfilled area). The worksheet will automatically aggregate all scores.

The insurer may provide comments in the space provided to support its responses.

Dimension	Implemented	Score
Sets risk policies, practices and tolerance limits for all material foreseeable operational risks at least annually		200
Ensures they are communicated to relevant business units		200
Monitors adherence to operational risk tolerance limits more regularly than annually		200
Receives, at least annually, reports on the effectiveness of material operational risk internal controls as well as management's plans to address related weaknesses		200
Ensures that systems and/or procedures are in place to identify, report and promptly address internal control deficiencies related to operational risks		200
Promotes full, open and timely disclosure from senior management on all significant issues related to operational risk		200
Ensures that periodic independent reviews of the risk management function are performed and receives the findings of the review		200

2) Risk management function – the insurer assesses each statement in the "Dimension" column and places an "X" in the column "Implemented" where the risk management function meets the criteria (200 points for each fulfilled area). The worksheet will automatically aggregate all scores.

The insurer may provide comments in the space provided to support its responses.

Dimension	Implemented	Score
Is independent of other operational units and has direct access to the board		200
Is entrenched in the strategic planning, decision making and budgeting process		200
Ensures that the risk management procedures and policies are well documented and approved by the board		200
Ensures the risk management policies and procedures are communicated throughout the organisation		200
Reviews operational risk management processes and procedures at least annually		200
Ensures that loss events arising from operational risks are documented, and loss event data is integrated into enterprise risk management		200
Documents its risk management recommendations for operational units, ensures that deficiencies have remedial plans and progress on the execution of such plans are reported to the board at least annually		200

3) Operational risk charge calculation – Subject to the BMA having a different opinion and reassessing the charge through an onsite inspection, the "Total Operational Risk Capital Charge" is applied to the insurer's BSCR (after covariance adjustment) sub-total for purposes of arriving at its ECR for the year-end filing.
   a) Overall CIRA score – the aggregate of all the total scores from the corporate governance and risk management function to determine the operational risk charge %.
   b) CIRA scoring grid – the applicable operational risk charge % that would be used to determine the insurer's total operational risk capital charge.

Overall Score	Applicable Operational Risk Charge % "BSCR (after covariance adjustment)"
<= 800	10%
> 800 <= 1200	9%
> 1200 <= 1400	8%
> 1400 <= 1600	7%
> 1600 <= 1800	6%
> 1800 <= 2000	5%
> 2000 <= 2200	4%
> 2200 <= 2400	3%
> 2400 <=2600	2%
> 2600	1%

c) Total operational risk capital charge – calculated using the [operational risk charge % x BSCR (after covariance adjustment)].

D. SUMMARY

D1. FEATURES – BSCR

Background

D1.1 The summary exhibit has seven key features: required capital and surplus, available statutory capital and surplus, MSM, ECR and TCL ratios, solvency capital distribution chart, and regulatory action level graph. Each feature is described below. At the bottom of the page, the BSCR formula for combining the various risk capital charges is displayed. The data input into the summary exhibit are i) the BMA approved capital contribution of the insurance group; ii) initial best estimate liabilities held for FDB (if any); iii) the effective (federal) tax rate of the insurance group, and iv) the amount of loss carryback.

Required Capital and Surplus

D1.2 The BSCR is determined according to the following formula:

$$\boxed{BSCR_{Corr} = \text{Basic BSCR} + C_{operational} + C_{regulatoryadj} + C_{otheradj} + C_{AdjTP}}$$

Where:

$Basic\ \ BSCR$	= basic BSCR risk module charge;
$C_{operational}$	= operational risk charge;
$C_{regulatoryadj}$	= regulatory capital requirement for regulated non-insurance financial operating entities;
C_{AdjTP}	= adjustment for the loss-absorbing capacity of loss provisions;
$C_{otheradj}$	= adjustment for the loss-absorbing capital of deferred taxes;

D1.3 The Basic BSCR risk module charge calculation is determined in accordance with the following formula—

$$\boxed{Basic\ BSCR = \sqrt{\sum_{i,j} CorrBBSCR_{i,j} \times C_i \times C_j}}$$

Where —

$CorrBBSCR_{i,j}$	=	the correlation factors of the Basic BSCR correlation matrix in accordance with Table A;
i, j	=	the sum of the different terms should cover all possible combinations of *i* and *j*;
C_i and C_j	=	risk module charge *i* and risk module charge *j*, which are replaced by the following:

C_{Market}, $C_{\text{P\&C}}$, C_{Credit};

C_{Market}	=	capital charge in respect to market risk;
$C_{\text{P\&C}}$	=	capital charge in respect to Property and Casualty (P&C) risk; and
C_{Credit}	=	capital charge in respect to credit risk.

Table A – Basic BSCR Correlation Matrix

$CorrBBSCR_{i,j}$	C_{Market}	C_{Credit}	$C_{\text{P\&C}}$
C_{Market}	1		
C_{Credit}	0.25	1	
$C_{\text{P\&C}}$	0.125	0.50	1

D1.4 The market risk module charge calculation is determined in accordance with the following formula—

$$\boxed{C_{Mrket} = \sqrt{\sum_{i,j} Market_{i,j} \times C_i \times C_j}}$$

Where —

$CorrMarket_{i,j}$	=	the correlation factors of the market risk module in accordance with Table B; where A = 0 if interest rate and liquidity risk charge is calculated using the shock-based approach and the risk charge is being determined based on the interest rate up shock, and A = 0.25 otherwise;
i,j	=	the sum of the different terms should cover all possible combinations of *i* and *j*;
C_i and C_j	=	risk charge *i* and risk charge *j*, which are replaced by the following: $C_{fixedIncome}$, C_{equity}, C_{interest}, C_{currency}, $C_{\text{concentration}}$;
$C_{fixedIncome}$	=	capital charge in respect to fixed income investment risk;
C_{equity}	=	capital charge in respect to equity investment risk;
C_{interest}	=	capital charge in respect to interest rate and liquidity risk;
C_{currency}	=	capital charge in respect to currency risk;
$C_{\text{digital asset}}$	=	capital charge in respect to digital asset risk; and
$C_{\text{concentration}}$	=	capital charge in respect to concentration risk.

Table B – Market Risk Module Correlation Matrix

$CorrMarket_{i,j}$	$C_{fixedIncome}$	C_{equity}	C_{interest}	C_{currency}	$C_{\text{digital asset}}$	$C_{\text{concentration}}$

$C_{fixedIncome}$	1					
C_{equity}	0.50	1				
$C_{interest}$	A	A	1			
$C_{currency}$	0.25	0.25	0.25	1		
$C_{digital\ asset}$	0.25	0.25	0.25	0.25	1	
$C_{concentration}$	0.00	0.00	0.00	0.00	0.00	1

D1.5 The P&C risk module charge calculation is determined in accordance with the following formula—

$$\boxed{C_{P\&C} = \sqrt{\sum_{i,j} CorrP\&C_{i,j} \times C_i \times C_j}}$$

Where—

$CorrP\&C_{i,j}$ = the correlation factors of the P&C risk module correlation matrix in accordance with Table C;

i,j = the sum of the different terms should cover all possible combinations of *i* and *j*;

C_i and C_j = risk charge *i* and risk charge *j*, which are replaced by the following:

$C_{premium}$, $C_{reserve}$, $C_{catastrophe}$;

$C_{premium}$ = capital charge in respect to premium risk;

$C_{reserve}$ = capital charge in respect to reserve risk; and

$C_{catastrophe}$ = capital charge in respect to catastrophe risk;

Table C - P&C Risk Module Correlation Matrix

$CorrP\&C_{i,j}$	$C_{premium}$	$C_{reserve}$	$C_{catastrophe}$
$C_{premium}$	1		
$C_{reserve}$	0.25	1	
$C_{catastrophe}$	0.125	0.00	1

D1.6 This formula utilises the correlation matrix to aggregate the various risks under the assumption that the risks are not independent of one another and, therefore, provides a linear diversification benefit when combining the risk charges. The end result is the BSCR (after correlation adjustment).

D1.7 The operational risk capital charge is the operational risk charge multiplied by the sum of (gross) BSCR (after correlation adjustment) and the loss-absorbing capacity of loss provisions according to paragraph D11.4. The risk charge ranges from 1% to 20% based on each insurer's self-assessment of the CIRA framework.

D1.8 Capital add-ons/reductions may be assessed where the BMA believes that an insurer's risk profile deviates significantly from the risk assumptions underlying the ECR or from the insurer's assessment of its risk management policies and practices. These include, but are not limited to, items such as provisions for reserve deficiencies, significant growth in premiums and quality of risk management surrounding operational risk.

D1.9 The BSCR is equal to the sum of the BSCR (after correlation adjustment), operational risk capital charge, capital add-ons/reductions (if assessed), adjustment for loss-absorbing capacity of technical provisions and adjustment for loss-absorbing capacity of deferred taxes.

Available Statutory Economic Capital and Surplus

D1.10 Available statutory capital and surplus is defined as the total statutory capital and surplus of the insurer, including subsequent capital contribution less capital add-ons/reductions (BMA assessment). All capital contributions are to be approved by the BMA, and all capital add-ons/reductions are determined at the discretion of the BMA.

D1.11 The insurer's available statutory economic capital and surplus are determined for purposes of calculating the BSCR and ECR ratios.

Minimum Margin of Solvency

D1.12 The MSM is prescribed by the Insurance (Technical Standards) (Class IIGB Insurer) (Statements, Returns and Capital Solvency) Rules 2020.

ECR and TCL

D1.13 The ECR is the higher of the MSM and the BSCR/approved internal capital model.

D1.14 The TCL is equal to 120% of the ECR.

Ratios

D1.15 The BSCR ratio is the ratio of the available statutory capital and surplus to the BSCR.

D1.16 The ECR ratio is the ratio of the available statutory capital and surplus to the ECR.

Solvency Capital Distribution Chart

D1.17 The solvency capital distribution chart displays the relative contribution of each charge to the BSCR, prior to the correlation adjustment.

Regulatory Action Level Graph

D1.18 The regulatory action level graph displays the insurer's available statutory capital and surplus position relative to the BMA's regulatory action guidelines, where regulatory action level 1 is equal to the insurer's ECR and regulatory action level 2 is equal to the insurer's TCL.

Items

a) Required capital and surplus – The calculation of the required capital and surplus is used for the purpose of determining the required capital level.

Line Item		Description
1	Fixed income investment risk	Based on current year fixed income investment risk (Column (3), Row (g))
2	Equity investment risk	Based on current year equity investment risk (Column (11), Row (f))
3	Interest rate and liquidity risk	Based on current year interest rate and liquidity risk (Column (4))
4	Currency risk	Based on current year currency risk (Column (20))
5	Digital asset risk	Based on current year digital asset risk (column (x)
6	Concentration risk	Based on current year concentration risk (Column (3), Row (i))
7	Premium risk	Based on current year premium risk (Column (11) Row (d) for Class 4 and 3B insurers and Column (11) Row (e) for Class 3A insurers)
8	Reserve risk	Based on current year reserve risk (Column (5) Row (c) for Class 4 and 3B insurers and Column (5) Row (d) for Class 3A insurers)
9	Credit risk	Based on current year credit risk (Column (3), Row (e))
10	Catastrophe risk	Based on current year catastrophe risk (Row (g)))

Line Item		Description
11	BSCR (prior to correlation adjustment)	BSCR (prior to correlation adjustment) is the sum of the line items (1) to (9) above
12	BSCR (after correlation adjustment)	BSCR (after correlation adjustment) is the resulting amount after applying the correlation matrix on line item (10) to reflect a diversification benefit when aggregating all the risks described above
13	Operational risk (%)	Operational risk (%) is the applicable operational risk charge % of "BSCR after correlation adjustment" based on the overall score derived from the CIRA framework as prescribed by the BMA
14	Operational risk capital charge ($)	Operational risk capital charge ($) is the resulting amount when the operational risk (%), as prescribed in line item (12), is applied to the BSCR (after correlation adjustment) (including the loss-absorbing capacity of technical provisions, if any)
15	Regulated non-insurance financial operating entities capital charge	Regulated non-insurance financial operating entities capital charge is the resulting amount from the sum of the insurer's proportionate share of each entity's regulatory capital requirement in accordance with the applicable solvency laws of the jurisdiction where the entity is licensed or registered
16	Capital add-on/reduction (BMA assessment)	Capital add-ons/reductions on the required capital and surplus is the difference between the user required capital (using insurer-specific capital factors) and the standard required capital (using the prescribed BSCR capital factors) determined under the company-specific parameters section, which is to be completed only with the prior approval of the BMA
17	Adj. for loss-absorbing capacity of technical provision	Adjustment for loss-absorbing capacity of technical provision is the resulting amount from the sum of basic BSCR correlation before management actions less the sum of basic BSCR correlation after management actions, capped at the initial base level of bonus reserves at EBS basis
18	Adj. for loss-absorbing capacity of deferred taxes	Adjustment for loss-absorbing capacity of deferred taxes reflects a potential tax benefit in a loss scenario envisaged by the BSCR, resulting in current or future taxes payable, as determined according to paragraph D11.5: a) Past loss carry back provision; b) Current loss carry back provision; and c) Future loss carry back provision.
19	Final BSCR	BSCR is the sum of the line items (12), (14), (15), (16), (17) and (18)

b) Available statutory capital and surplus – The calculation of the available statutory capital and surplus is used for the purpose of determining the appropriate regulatory action level.

Line Item		Description
1	Total statutory capital and surplus	Based on the insurer's current year economic balance sheet, as reported on Form 1SFS (Consolidated), Line 40
2	Capital contribution	The BMA must approve capital contributions. Note that a capital contribution increases the total statutory capital and surplus
3	Pre-adjustment available statutory capital and surplus	Pre-adjustment available statutory capital and surplus is the sum of lines (1) and (2) above
4	Capital add-ons/reductions (BMA assessment)	Capital add-ons/reductions may be assessed where the BMA believes that an insurer's risk profile deviates significantly from the risk assumptions underlying the ECR
5	Available statutory capital and surplus	Available statutory capital and surplus is the sum of lines (3) and (4) above

D2. FIXED-INCOME INVESTMENT RISK

Background

D2.1 There are various categories of assets comprising of bonds, loans, and other miscellaneous investments that are used to determine the fixed income investment risk capital charge.

D2.2 Where applicable, the amounts must reconcile to the appropriate line(s) of the insurer's Form 1SFS(Consolidated) or the schedules prescribed by or under the rules for the relevant year.

Fixed Income Investment Risk Capital Charge

D2.3 The fixed-income investment risk charge calculation can be summarised by the following formula:

$$C_{fixedIncome} = \sum_i \chi_i \times FIastclass_i \times \mu_r + Credit\ Derivatives$$, where:

χ_i = the BMA supplied asset class capital charge factor for the type of fixed income asset class i ;

$FIastclass_i$ = value of investment in fixed income asset class i ; and

μ_r = additional diversification adjustment factor applied to cash and cash equivalent balances, or 1 for other asset classes; and

$Credit\ Derivatives$ = the spread risk charge for credit derivatives calculated as per the following formula:

$CreditDerivatives$ = greater of:

i) $CreditDerivatives_{ShockUp}$;

ii) $CreditDerivatives_{ShockDown}$; and

iii) 0.

$CreditDerivatives_{ShockUp}$ = the spread risk charge for credit derivatives resulting from an upward credit spread shock calculated as per the following formula:

$CreditDerivatives_{ShockUp}$ = $\sum_i \left[\left(LCD_i^{BShock} - LCD_i^{AShock}(\chi_i)\right) + \left(SCD_i^{BShock} - SCD_i^{AShock}(\chi_i)\right)\right]$

$CreditDerivatives_{ShockDow}$ = the spread risk charge for credit derivatives resulting from an downward credit spread shock calculated as per the following formula:

$CreditDerivatives_{ShockDow}$ = $\sum_i \left[\left(LCD_i^{BShock} - LCD_i^{AShock}(\chi_i)\right) + \left(SCD_i^{BShock} - SCD_i^{AShock}(\chi_i)\right)\right]$

LCD_i^{BShock} = refers to the valuation of long exposures for credit derivatives before applying the instantaneous shock χ_i over the classes as set out below;

$LCD_i^{AShock}(\chi_i)$ = refers to the valuation of long exposures for credit derivatives after applying instantaneous shock χ_i over the classes as set out below

SCD_i^{BShock} = refers to the valuation of short exposures for credit derivatives before applying the instantaneous shock χ_i over the classes as set out below

$SCD_i^{AShock}(\chi_i)$ = refers to the valuation of short exposures for credit derivatives after applying the instantaneous shock χ_i over the classes as set out below

Items

a) Corporate and sovereign bonds

	Line Item	Statement Source – The Rules
1	BSCR rating 0	Based on Schedule IIB-IIF, Line 1, Column (1)

	Line Item	Statement Source – The Rules
2	BSCR rating 1	Based on Schedule IIB-IIF, Line 2, Column (1)
3	BSCR rating 2	Based on Schedule IIB-IIF, Line 3, Column (1)
4	BSCR rating 3	Based on Schedule IIB-IIF, Line 4, Column (1)
5	BSCR rating 4	Based on Schedule IIB-IIF, Line 5, Column (1)
6	BSCR rating 5	Based on Schedule IIB-IIF, Line 6, Column (1)
7	BSCR rating 6	Based on Schedule IIB-IIF, Line 7, Column (1)
8	BSCR rating 7	Based on Schedule IIB-IIF, Line 8, Column (1)
9	BSCR rating 8	Based on Schedule IIB-IIF, Line 9, Column (1)

b) Residential MBS

	Line Item	Statement Source – The Rules
1	BSCR rating 1	Based on Schedule IIB-IIF, Line 2, Column (3)
2	BSCR rating 2	Based on Schedule IIB-IIF, Line 3, Column (3)
3	BSCR rating 3	Based on Schedule IIB-IIF, Line 4, Column (3)
4	BSCR rating 4	Based on Schedule IIB-IIF, Line 5, Column (3)
5	BSCR rating 5	Based on Schedule IIB-IIF, Line 6, Column (3)
6	BSCR rating 6	Based on Schedule IIB-IIF, Line 7, Column (3)
7	BSCR rating 7	Based on Schedule IIB-IIF, Line 8, Column (3)
8	BSCR rating 8	Based on Schedule IIB-IIF, Line 9, Column (3)

c) Commercial MBS/asset-backed securities

	Line Item	Statement Source – The Rules
1	BSCR rating 1	Based on Schedule IIB-IIF, Line 2, Column (5)
2	BSCR rating 2	Based on Schedule IIB-IIF, Line 3, Column (5)
3	BSCR rating 3	Based on Schedule IIB-IIF, Line 4, Column (5)
4	BSCR rating 4	Based on Schedule IIB-IIF, Line 5, Column (5)
5	BSCR rating 5	Based on Schedule IIB-IIF, Line 6, Column (5)
6	BSCR rating 6	Based on Schedule IIB-IIF, Line 7, Column (5)
7	BSCR rating 7	Based on Schedule IIB-IIF, Line 8, Column (5)
8	BSCR rating 8	Based on Schedule IIB-IIF, Line 9, Column (5)

d) Bond mutual funds

	Line Item	Statement Source – The Rules
1	BSCR rating 0	Based on Schedule IIB-IIF, Line 1, Column (7)

	Line Item	Statement Source – The Rules
2	BSCR rating 1	Based on Schedule IIB-IIF, Line 2, Column (7)
3	BSCR rating 2	Based on Schedule IIB-IIF, Line 3, Column (7)
4	BSCR rating 3	Based on Schedule IIB-IIF, Line 4, Column (7)
5	BSCR rating 4	Based on Schedule IIB-IIF, Line 5, Column (7)
6	BSCR rating 5	Based on Schedule IIB-IIF, Line 6, Column (7)
7	BSCR rating 6	Based on Schedule IIB-IIF, Line 7, Column (7)
8	BSCR rating 7	Based on Schedule IIB-IIF, Line 8, Column (7)
9	BSCR rating 8	Based on Schedule IIB-IIF, Line 9, Column (7)

e) Mortgage loans

	Line Item	Statement Source – The Rules
1	Insured/guaranteed mortgages	Based on Schedule IIB-IIF, Line 10, Column (9)
2	Other commercial and farm mortgages	Based on Schedule IIB-IIF, Line 11, Column (9)
3	Other residential mortgages	Based on Schedule IIB-IIF, Line 12, Column (9)
4	Mortgages not in good standing	Based on Schedule IIB-IIF, Line 13, Column (9)

f) Other fixed income investments

	Line Item	Statement Source – The Rules or IAR
1	Other loans	Based on Form 1SFS(Consolidated), Line 8

g) Cash and cash equivalents

	Line Item	Statement Source – The Rules
1	BSCR rating 0	Based on Schedule XIXA, Column (A)
2	BSCR rating 1	Based on Schedule XIXA, Column (A)
3	BSCR rating 2	Based on Schedule XIXA, Column (A)
4	BSCR rating 3	Based on Schedule XIXA, Column (A)
5	BSCR rating 4	Based on Schedule XIXA, Column (A)
6	BSCR rating 5	Based on Schedule XIXA, Column (A)
7	BSCR rating 6	Based on Schedule XIXA, Column (A)
8	BSCR rating 7	Based on Schedule XIXA, Column (A)
9	Less: diversification adjustment	Based on Schedule XIXA, Column (A)

Instructions Affecting Fixed Income Investment Risk

1) All assets comprising of bonds and debentures, loans and other miscellaneous investments that are subject to capital charges within the fixed income investment risk charge shall be included;

2) All non-affiliated quoted and unquoted bonds and debentures shall be included in the fixed income investment charge;

3) All bonds and debentures, loans and other miscellaneous investments shall include amounts reported for economic balance sheet reporting purposes and include fixed income risk exposures as determined by application of the "look-through" approach calculated in accordance with the criteria prescribed in section B5 for the following items:
    a) collective investment vehicles and other investments packaged as funds, including related undertakings used as investment vehicles;
    b) segregated accounts assets and liabilities;
    c) deposit asset and liabilities;
    d) assets and liabilities held by ceding insurers or under retrocession;
    e) other sundry assets and liabilities; and
    f) derivatives.

4) The capital requirements relating to cash and cash equivalents shall be reduced by a diversification adjustment of up to a maximum of 40%; and

5) The diversification adjustment in paragraph (d) is determined as 40% multiplied by one minus the ratio of the largest cash and cash equivalent balance held with a single counterparty to the total of all cash and cash equivalent balance.

h) Spread risk shocks for credit derivatives

Line Item		Statement Source – The Rules	
Spread Up			
		Long Exposures	Short Exposures
1	BSCR rating 0	Based on Schedules IIB-IIF Column (1) Line 38	Based on Schedules IIB-IIF Column (3), Line 38
2	BSCR rating 1	Based on Schedules IIB-IIF Column (1) Line 39	Based on Schedules IIB-IIF Column (3), Line 39
3	BSCR rating 2	Based on Schedules IIB-IIF Column (1) Line 40	Based on Schedules IIB-IIF Column (3), Line 40

4	BSCR rating 3	Based on Schedules IIB-IIF Column (1) Line 41	Based on Schedules IIB-IIF Column (3), Line 41
5	BSCR rating 4	Based on Schedules IIB-IIF Column (1) Line 42	Based on Schedules IIB-IIF Column (3), Line 42
6	BSCR rating 5	Based on Schedules IIB-IIF Column (1) Line 43	Based on Schedules IIB-IIF Column (3), Line 43
7	BSCR rating 6	Based on Schedules IIB-IIF Column (1) Line 44	Based on Schedules IIB-IIF Column (3), Line 44
8	BSCR rating 7	Based on Schedules IIB-IIF Column (1) Line 45	Based on Schedules IIB-IIF Column (3), Line 45
9	BSCR rating 8	Based on Schedules IIB-IIF Column (1) Line 46	Based on Schedules IIB-IIF Column (3), Line 46
Spread Down			
		Long Exposures	Short Exposures
10	BSCR rating 0	Based on Schedules IIB-IIF Column (6) Line 38	Based on Schedules IIB-IIF Column (8), Line 38
11	BSCR rating 1	Based on Schedules IIB-IIF Column (6) Line 39	Based on Schedules IIB-IIF Column (8), Line 39
12	BSCR rating 2	Based on Schedules IIB-IIF Column (6) Line 40	Based on Schedules IIB-IIF Column (8), Line 40
13	BSCR rating 3	Based on Schedules IIB-IIF Column (6) Line 41	Based on Schedules IIB-IIF Column (8), Line 41
14	BSCR rating 4	Based on Schedules IIB-IIF Column (6) Line 42	Based on Schedules IIB-IIF Column (8), Line 42
15	BSCR rating 5	Based on Schedules IIB-IIF Column (6) Line 43	Based on Schedules IIB-IIF Column (8), Line 43
16	BSCR rating 6	Based on Schedules IIB-IIF Column (6) Line 44	Based on Schedules IIB-IIF Column (8), Line 44
17	BSCR rating 7	Based on Schedules IIB-IIF Column (6) Line 45	Based on Schedules IIB-IIF Column (8), Line 45
18	BSCR rating 8	Based on Schedules IIB-IIF Column (6) Line 46	Based on Schedules IIB-IIF Column (8), Line 46

D3. EQUITY INVESTMENT RISK

Background

D3.1 There are various categories of equity investments comprising common stocks, preferred stocks, real estate and other miscellaneous investments that are used to determine the equity investment risk capital charge. All non-affiliated stocks held by the insurer should be reported, including both quoted and unquoted issues.

Equity Investment Risk Capital Charge

D3.2 The equity investment risk charge calculation can be summarised by the following formula:

$$\boxed{C_{\text{equity}} = \sqrt{\sum_{i,j} CorrEq_{i,j} \times C_i \times C_j}}$$

, where

$CorrEq_{i,j}$ = the correlation factors of the equity risk correlation matrix in accordance with Table 2A;

i,j = the sum of the different terms should cover all possible combinations of correlation *i* and *j*;

C_i and C_j = risk charge *i* and risk charge *j*, which are replaced by the following: C_{Type1}, C_{Type2}, C_{Type3}, C_{Type4};

C_{Type1} = *Type1* equity risk charge as calculated over the classes set out below;

C_{Type2} = *Type2* equity risk charge as calculated over the classes set out below;

C_{Type3} = *Type3* equity risk charge as calculated over the classes set out below;

C_{Type4} = *Type4* equity risk charge as calculated over the classes set out below;

Table 2A – Equity Risk Charge Correlation Matrix

Equity Corr Matrix	C_{Type1}	C_{Type2}	C_{Type3}	C_{Type4}
C_{Type1}	1.00			
C_{Type2}	0.75	1.00		
C_{Type3}	0.75	0.75	1.00	
C_{Type4}	0.50	0.50	0.50	1.00

D3.3 Type1, Type2, Type3 and Type4 equity risk charges calculation shall be determined in accordance with the following formulas—

$$\boxed{C_{Type1} = \max\left\{\sum_{i \in Type1}\left[\begin{array}{c}\max\left(LAssets_i^{BShock} - LAssets_i^{AShock}(\chi_i), 0\right) + \left(SQAssets_i^{BShock} - SQAssets_i^{AShock}(\chi_i)\right) + \cdots \\ + \max\left(SNQAssets_i^{BShock} - SNQAssets_i^{AShock}(\chi_i), 0\right) - \left(BELiabilities_i^{BShock} - BELiabilities_i^{AShock}(\chi_i)\right)\end{array}\right], 0\right\}}$$

$$C_{Type2} = \max\left\{ \sum_{i \in Type2} \left[\begin{array}{c} \max\left(LAssets_i^{BShock} - LAssets_i^{AShock}(\chi_i), 0\right) + \left(SQAssets_i^{BShock} - SQAssets_i^{AShock}(\chi_i)\right) + \cdots \\ + \max\left(SNQAssets_i^{BShock} - SNQAssets_i^{AShock}(\chi_i), 0\right) - \left(BELiabilities_i^{BShock} - BELiabilities_i^{AShock}(\chi_i)\right) \end{array} \right], 0 \right\}$$

$$C_{Type3} = \max\left\{ \sum_{i \in Type3} \left[\begin{array}{c} \max\left(LAssets_i^{BShock} - LAssets_i^{AShock}(\chi_i), 0\right) + \left(SQAssets_i^{BShock} - SQAssets_i^{AShock}(\chi_i)\right) + \cdots \\ + \max\left(SNQAssets_i^{BShock} - SNQAssets_i^{AShock}(\chi_i), 0\right) - \left(BELiabilities_i^{BShock} - BELiabilities_i^{AShock}(\chi_i)\right) \end{array} \right], 0 \right\}$$

$$C_{Type4} = \max\left\{ \sum_{i \in Type4} \left[\begin{array}{c} \max\left(LAssets_i^{BShock} - LAssets_i^{AShock}(\chi_i), 0\right) + \left(SQAssets_i^{BShock} - SQAssets_i^{AShock}(\chi_i)\right) + \cdots \\ + \max\left(SNQAssets_i^{BShock} - SNQAssets_i^{AShock}(\chi_i), 0\right) - \left(BELiabilities_i^{BShock} - BELiabilities_i^{AShock}(\chi_i)\right) \end{array} \right], 0 \right\}$$

Where—

χ_i	= the instantaneous shocks prescribed in Table 2B for each type of equity class i ; and
$LAssets^{BShock}$	= refers to the valuation of long asset exposures before applying shock
$LAssets^{AShock}$	= refers to the valuation of long asset exposures after applying shock
$SQAssets_{BShock}$	= refers to the valuation of short exposures for qualifying assets that are held for risk-mitigating purposes as determined in accordance with the criteria prescribed in section B3 before applying shock
$SQAssets_{AShock}$	= refers to the valuation of short exposures for qualifying assets that are held for risk-mitigating purposes as determined in accordance with the criteria prescribed in section B3 after applying shock
$SNQAssets_{BShock}$	= refers to the valuation of short exposures for assets that do not qualify for risk-mitigating purposes as determined in accordance with the criteria prescribed in section B3 before applying shock
$SNQAssets_{AShock}$	= refers to the valuation of short exposures for assets that do not qualify for risk-mitigating purposes as determined in accordance with the criteria prescribed in section B3 after applying shock
$BELiabilities^{BShock}$	= refers to the best estimate of insurance liabilities and other liabilities before applying shock
$BELiabilit\,ies^{AShock}$	= refers to the best estimate of insurance liabilities and other liabilities after applying shock

Items

a) <u>Type 1 equity holdings</u>

	Line Item	Statement Source – The Rules			
		Assets			**Liabilities**
		Long Exposures	**Short Exposures**		
			Qualifying as assets held for risk mitigation purposes	**Qualifying as assets held for risk mitigation purposes**	**Without management actions**
1	Strategic holdings – listed	Based on Sch. IIB-IIF Col. (1) Line 15 Col. (2) Line 15	Based on Sch. IIB-IIF Col. (3) Line 15 Col. (4) Line 15	Based on Sch. IIB-IIF Col. (5) Line 15 Col. (6) Line 15	Based on Sch. IIB-IIF Col. (7) Line 15 Col. (8) Line 15
2	Duration based	Based on Sch. IIB-IIF Col. (1) Line 16 Col. (2) Line 16	Based on Sch. IIB-IIF Col. (3) Line 16 Col. (4) Line 16	Based on Sch. IIB-IIF Col. (5) Line 16 Col. (6) Line 16	Based on Sch. IIB-IIF Col. (7) Line 16 Col. (8) Line 16
3	Listed equity securities in developed markets	Based on Sch. IIB-IIF Col. (1) Line 17 Col. (2) Line 17	Based on Sch. IIB-IIF Col. (3) Line 17 Col. (4) Line 17	Based on Sch. IIB-IIF Col. (5) Line 17 Col. (6) Line 17	Based on Sch. IIB-IIF Col. (7) Line 17 Col. (8) Line 17
4	Preferred stocks rating 1	Based on Sch. IIB-IIF Col. (1) Line 18 Col. (2) Line 18	Based on Sch. IIB-IIF Col. (3) Line 18 Col. (4) Line 18	Based on Sch. IIB-IIF Col. (5) Line 18 Col. (6) Line 18	Based on Sch. IIB-IIF Col. (7) Line 18 Col. (8) Line 18
5	Preferred stocks rating 2	Based on Sch. IIB-IIF Col. (1) Line 19 Col. (2) Line 19	Based on Sch. IIB-IIF Col. (3) Line 19 Col. (4) Line 19	Based on Sch. IIB-IIF Col. (5) Line 19 Col. (6) Line 19	Based on Sch. IIB-IIF Col. (7) Line 19 Col. (8) Line 19
6	Preferred stocks rating 3	Based on Sch. IIB-IIF Col. (1) Line 20 Col. (2) Line 20	Based on Sch. IIB-IIF Col. (3) Line 20 Col. (4) Line 20	Based on Sch. IIB-IIF Col. (5) Line 20 Col. (6) Line 20	Based on Sch. IIB-IIF Col. (7) Line 20 Col. (8) Line 20
7	Preferred stocks rating 4	Based on Sch. IIB-IIF Col. (1) Line 21 Col. (2) Line 21	Based on Sch. IIB-IIF Col. (3) Line 21 Col. (4) Line 21	Based on Sch. IIB-IIF Col. (5) Line 21 Col. (6) Line 21	Based on Sch. IIB-IIF Col. (7) Line 21 Col. (8) Line 21
8	Preferred stocks rating 5	Based on Sch. IIB-IIF Col. (1) Line 22 Col. (2) Line 22	Based on Sch. IIB-IIF Col. (3) Line 22 Col. (4) Line 22	Based on Sch. IIB-IIF Col. (5) Line 22 Col. (6) Line 22	Based on Sch. IIB-IIF Col. (7) Line 22 Col. (8) Line 22
9	Preferred stocks rating 6	Based on Sch. IIB-IIF Col. (1) Line 23 Col. (2) Line 23	Based on Sch. IIB-IIF Col. (3) Line 23 Col. (4) Line 23	Based on Sch. IIB-IIF Col. (5) Line 23 Col. (6) Line 23	Based on Sch. IIB-IIF Col. (7) Line 23 Col. (8) Line 23
10	Preferred stocks rating 7	Based on Sch. IIB-IIF Col. (1) Line 24 Col. (2) Line 24	Based on Sch. IIB-IIF Col. (3) Line 24 Col. (4) Line 24	Based on Sch. IIB-IIF Col. (5) Line 24 Col. (6) Line 24	Based on Sch. IIB-IIF Col. (7) Line 24 Col. (8) Line 24
11	Preferred stocks rating 8	Based on Sch. IIB-IIF Col. (1) Line 25 Col. (2) Line 25	Based on Sch. IIB-IIF Col. (3) Line 25 Col. (4) Line 25	Based on Sch. IIB-IIF Col. (5) Line 25 Col. (6) Line 25	Based on Sch. IIB-IIF Col. (7) Line 25 Col. (8) Line 25
12	Equity derivatives on type 1 equities	Based on Sch. IIB-IIF Col. (1) Line 26 Col. (2) Line 26	Based on Sch. IIB-IIF Col. (3) Line 26 Col. (4) Line 26	Based on Sch. IIB-IIF Col. (5) Line 26 Col. (6) Line 26	Based on Sch. IIB-IIF Col. (7) Line 26 Col. (8) Line 26

b) Type 2 equity holdings

Line Item		Statement Source – The Rules			
	Assets				Liabilities
		Long Exposures	Short Exposures		
			Qualifying as assets held for risk mitigation purposes	Qualifying as assets held for risk mitigation purposes	Without management actions
16	Strategic holdings – unlisted	Based on Sch. IIB-IIF Col. (1) Line 27 Col. (2) Line 27	Based on Sch. IIB-IIF Col. (3) Line 27 Col. (4) Line 27	Based on Sch. IIB-IIF Col. (5) Line 27 Col. (6) Line 27	Based on Sch. IIB-IIF Col. (7) Line 27 Col. (8) Line 27
17	Other equities	Based on Sch. IIB-IIF Col. (1) Line 28 Col. (2) Line 28	Based on Sch. IIB-IIF Col. (3) Line 28 Col. (4) Line 28	Based on Sch. IIB-IIF Col. (5) Line 28 Col. (6) Line 28	Based on Sch. IIB-IIF Col. (7) Line 28 Col. (8) Line 28
18	Letters of credit	Based on Sch. IIB-IIF Col. (1) Line 29 Col. (2) Line 29	Based on Sch. IIB-IIF Col. (3) Line 29 Col. (4) Line 29	Based on Sch. IIB-IIF Col. (5) Line 29 Col. (6) Line 29	Based on Sch. IIB-IIF Col. (7) Line 29 Col. (8) Line 29
19	Intangible assets	Based on Sch. IIB-IIF Col. (1) Line 30 Col. (2) Line 30	Based on Sch. IIB-IIF Col. (3) Line 30 Col. (4) Line 30	Based on Sch. IIB-IIF Col. (5) Line 30 Col. (6) Line 30	Based on Sch. IIB-IIF Col. (7) Line 30 Col. (8) Line 30
20	Pension benefit surplus	Based on Sch. IIB-IIF Col. (1) Line 31 Col. (2) Line 31	Based on Sch. IIB-IIF Col. (3) Line 31 Col. (4) Line 31	Based on Sch. IIB-IIF Col. (5) Line 31 Col. (6) Line 31	Based on Sch. IIB-IIF Col. (7) Line 31 Col. (8) Line 31
21	Equity derivatives on type 2 investments	Based on Sch. IIB-IIF Col. (1) Line 32 Col. (2) Line 32	Based on Sch. IIB-IIF Col. (3) Line 32 Col. (4) Line 32	Based on Sch. IIB-IIF Col. (5) Line 32 Col. (6) Line 32	Based on Sch. IIB-IIF Col. (7) Line 32 Col. (8) Line 32

c) Type 3 Equity Holdings

Line Item		Statement Source – The Rules			
	Assets				Liabilities
		Long Exposures	Short Exposures		
			Qualifying as assets held for risk mitigation purposes	Qualifying as assets held for risk mitigation purposes	Without management actions
22	Infrastructure	Based on Sch. IIB-IIF Col. (1) Line 33 Col. (2) Line 33	Based on Sch. IIB-IIF Col. (3) Line 33 Col. (4) Line 33	Based on Sch. IIB-IIF Col. (5) Line 33 Col. (6) Line 33	Based on Sch. IIB-IIF Col. (7) Line 33 Col. (8) Line 33
23	Derivatives on infrastructure	Based on Sch. IIB-IIF Col. (1) Line 34 Col. (2) Line 34	Based on Sch. IIB-IIF Col. (3) Line 34 Col. (4) Line 34	Based on Sch. IIB-IIF Col. (5) Line 34 Col. (6) Line 34	Based on Sch. IIB-IIF Col. (7) Line 34 Col. (8) Line 34

d) <u>Type 4 Equity Holdings</u>

Line Item		Statement Source – The Rules			
	Assets				Liabilities
		Long Exposures	Short Exposures		
			Qualifying as assets held for risk mitigation purposes	**Qualifying as assets held for risk mitigation purposes**	**Without management actions**
24	Equity real estate 1	Based on Sch. IIB-IIF Col. (1) Line 35 Col. (2) Line 35	Based on Sch. IIB-IIF Col. (3) Line 35 Col. (4) Line 35	Based on Sch. IIB-IIF Col. (5) Line 35 Col. (6) Line 35	Based on Sch. IIB-IIF Col. (7) Line 35 Col. (8) Line 35
25	Equity real estate 2	Based on Sch. IIB-IIF Col. (1) Line 36 Col. (2) Line 36	Based on Sch. IIB-IIF Col. (3) Line 36 Col. (4) Line 36	Based on Sch. IIB-IIF Col. (5) Line 36 Col. (6) Line 36	Based on Sch. IIB-IIF Col. (7) Line 36 Col. (8) Line 36

Instructions Affecting Equity Investment Risk

1) All assets (except regulated non-insurance financial operating entities) and liabilities (except the risk margin) whose value is subject to equity risk shocks are to be reported on a basis consistent with that used for the purposes of economic balance sheet reporting. Such assets and liabilities shall include equity risk exposures determined by application of the "look-through" approach calculated in accordance with criteria prescribed in section B6 for the following items:

    a) Collective investment vehicles and other investments packaged as funds, including related undertakings used as investment vehicles;
    b) Segregated accounts assets and liabilities;
    c) Deposit assets and liabilities;
    d) Assets and liabilities held by ceding insurers or under retrocession;
    e) Other sundry assets and liabilities; and
    f) Derivatives.

2) (b) For asset types referred to in paragraph (1) (a) to (f) where the "look-through" approach cannot be applied, the residual balance shall be included in "Equity Securities – Other Investments";
3)
4) (c) Short exposures qualifying as assets held for risk-mitigation purposes and short exposures not qualifying as assets held for risk-mitigation purposes shall both be determined in accordance with criteria prescribed in section B4; and
5)
6) (d) Amounts are to be reported on a consolidated statutory valuation basis.

D4. INTEREST RATE AND LIQUIDITY RISK

Background

D4.1 The interest rate and liquidity risk charge calculation may be calculated based on instructions D4.2-D4.9 (option 1) or based on instructions D4.10-D4.15 (option 2). Once the insurer selects to use option 2, the insurer cannot move back to option 1 without the prior written approval of the Authority.

Interest Rate and Liquidity Risk Capital Charge - Option 1

D4.2 The interest rate and liquidity risk option 1 represents the economic risk an insurer is subjected to due to changes in interest rates. The charge is calculated by applying the "shock" of a 2% increase in interest rates to the portion of the insurer's assets (proportionate to the percentage of reserves) related to the duration difference. These assets include quoted and unquoted bonds and debentures - other, quoted and unquoted preferred stocks, and mortgage loans as reported on Schedules IIB and IIC.

D4.3 The interest rate and liquidity risk option 2 represents an alternative and more risk-sensitive method that requires insurers to apply shocks to the yield curve used for determining best estimate liabilities and market value of assets (which includes changes for interest rate-sensitive cash flows in the calculation). The capital requirement is determined as the negative changes to the net asset value of the highest magnitude resulting from these shocks.

D4.4 The interest rate and liquidity risk option 1 charge calculation can be summarised by the following formula:

$C_{\text{int}} = bonds \times duration \times marketdecline$, where

$bonds$ = quoted and unquoted value of bonds and debentures - other, preferred stocks or mortgage loans;

$duration$ = the higher of 1 or the insurer's effective asset duration less the insurer's effective liability duration or the insurer's effective liability duration less the insurer's effective asset duration; and

$marketdecline$ = assumed interest rate shock supplied by BMA.

Items

D4.5 Bonds and debentures – Based on current year Schedule IIB Column (11), Lines 1 to 9 and Schedule IIC Column (11), Lines 1 to 9; total quoted and unquoted value of bonds and debentures.

D4.6 Preferred stocks – Based on current year Schedule IIB Column (11), lines 18 to 25 and Schedule IIC Column (11), lines 18 to 25; total value of preferred stocks portfolio.

D4.7 Mortgage loans – Based on current year Schedule IIB Column (11), lines 10 to 13 and Schedule IIC Column (11), lines 10 to 13; total amortised cost (outstanding principal amount less any provision made for doubtful collection) of the mortgage loan portfolio.

D4.8 Effective duration of assets – The effective duration calculation is based on total bonds and debentures from D4.5, preferred stocks from D4.6 and mortgage loans portfolios from D4.7. The effective asset duration is pulled from Schedule V, Line (c).

D4.9 Effective duration of liabilities – The effective duration calculation is based on the reserves (Form 1SFS (consolidated), Line 17(d)). The effective liability duration is pulled from Schedule V, Line (d).

Instructions Affecting Interest Rate and Liquidity Risk

1) All assets comprising of total bonds and debentures, preferred stock and mortgage loans investments that are subject to capital charges within the interest rate/liquidity risk charge shall be included;
2) All quoted and unquoted non-affiliated other bonds and debentures and preferred stock shall be included in the interest rate/liquidity risk charge; and
3) All other bonds and debentures, preferred stock and mortgage loans investments shall be reported on a basis consistent with the statutory reporting regime.

Interest Rate and Liquidity Risk Capital Charge Option 2

D4.10 The interest rate and liquidity risk option 2 charge calculation can be summarised by the following formula:

$$\boxed{C_{Interest} = \max\{\max(Shock_{IR,Down}, Shock_{IR,Up}) - OffSet_{ScenarioBased}, 0\}}$$

Where—

$$Shock_{IR,\omega} = \sum_{CCY} Shock_{IR,\omega}^{CCY}$$

$$Shock_{IR,\omega}^{CCY} = (MVA_{Before}^{CCY,Q} - MVA_{After,\omega}^{CCY,Q}) + \max(MVA_{Before}^{CCY,NQ} - MVA_{After,\omega}^{CCY,NQ}, 0) - (MVL_{Before}^{CCY} - MVL_{After,\omega}^{CCY})$$

$$\omega = Down, Up$$

$$OffSet_{ScenarioBased} = \min(0.5 \cdot (BELiability_{WorstScenario} - BELiability_{BaseScenario}), 0.75 \cdot C_{Interest}^{WithoutOffset})$$

$$C_{Interest}^{WithoutOffset} = \max(Shock_{IR,Down}, Shock_{IR,Up})$$

$MVA_{Before}^{CCY,Q}$ = refers to the market value of qualified assets including derivatives qualifying as held for risk-mitigating purposes (as described in section B3) before shock ω (ω = Up or Down) by currency type (CCY), that has been converted to the functional currency as expressed in Form 1SFS (Consolidated);

$MVA^{CCY,Q}_{After}$ = refers to the revaluation of qualified assets including derivatives qualifying as held for risk-mitigating purposes (as described in section B3) after shocking interest rates by χ(CCY,ω) where (CCY) refers to currency type, ω refers to shock Down and Up, and χ refers to the shock vector where the revalued amount has been converted to the functional currency as reported in Form 1SFS (Consolidated) prescribed in Table 3B;

$MVA^{CCY,NQ}_{Before}$ = refers to the market value of non-qualified assets, which are derivatives not qualifying as held for risk-mitigating purposes (as described in section B3) before shockω (ω = Up or Down) by currency type (CCY), that has been converted to the functional currency as expressed in Form 1SFS (Consolidated);

$MVA^{CCY,NQ}_{After}$ = refers to the revaluation of non-qualified assets, which are derivatives not qualifying as held for risk-mitigating purposes (as described in section B3) after shocking interest rates by χ(CCY,ω) where (CCY) refers to currency type, ω refers to shock Down and Up, and χ refers to the shock vector where the revalued amount has been converted to the functional currency as reported in Form 1SFS (Consolidated) prescribed in Table 3B;

MVL^{CCY}_{Before} = refers to the best estimate of insurance liabilities and other liabilities before shock ω (ω = Up or Down) by currency type that has been converted to the functional currency as reported in Form 1SFS (Consolidated);

MVL^{CCY}_{After} = refers to the revaluation of the best estimate of insurance liabilities and other liabilities after shocking interest rates by χ(CCY,ω) where (CCY) refers to currency type, ω refers to shock Down and Up, and χ refers to the shock vector where the revalued amount has been converted to the functional currency as reported in Form 1SFS (Consolidated) prescribed in Table 3B;

$BELiability_{BaseScenario}$ = refers to the best estimate of liabilities in the base case scenario when using the scenario-based approach; and

$BELiability_{WorstScenario}$ = refers to the best estimate of liabilities in the worst-case scenario when using the scenario-based approach.

Items

D4.11 Assets (exposures other than derivatives) – based on current year interest rate-sensitive assets including interest rate-sensitive exposures from investment holdings packaged as funds, segregated account company assets, deposit assets and other sundry assets as determined from the application of the look-through provisions.

D4.12 Assets qualifying as held for risk-mitigating purposes (derivative exposures) – based on current year interest rate-sensitive assets including interest rate-sensitive exposures from investment holdings packaged as funds, segregated account company assets, deposit assets and other sundry assets as determined from the application of the look-through provisions.

D4.13 Assets not qualifying as held for risk-mitigating purposes (derivative exposures) – based on current year interest rate-sensitive assets including interest rate-sensitive exposures from investment holdings packaged as funds, segregated account company assets, deposit assets and other sundry assets as determined from the application of the look-through provisions.

D4.14 Liabilities (exposures other than derivatives) – based on current year interest rate-sensitive exposures from insurance technical provisions, segregated account company liabilities, deposit liabilities and other sundry liabilities as determined from the application of the look-through provisions.

D4.15 Liabilities (derivative exposures) – based on current year interest rate-sensitive exposures from insurance technical provisions, segregated account company liabilities, deposit liabilities and other sundry liabilities as determined from the application of the look-through provisions.

1) Interest Rate Down – Exposures without Derivatives

Currency	Market Value of Assets	Market Value of Liabilities
United States Dollars	Based on Sch. XXIII, Col.(A), Line 1 Less Col. (B), Line 1	Based on Sch. XXIII, Col. (C), Line 1 Less Col. (D), Line 1
Euro	Based on Sch. XXIII, Col.(A), Line 2 Less Col. (B), Line 2	Based on Sch. XXIII, Col.(C), Line 2 Less Col. (D), Line 2
United Kingdom Pounds	Based on Sch. XXIII, Col.(A), Line 3 Less Col. (B), Line 3	Based on Sch. XXIII, Col.(C), Line 3 Less Col. (D), Line 3
Japan Yen	Based on Sch. XXIII, Col.(A), Line 4 Less Col. (B), Line 4	Based on Sch. XXIII, Col.(C), Line 4 Less Col. (D), Line 4
Canada Dollars	Based on Sch. XXIII, Col.(A), Line 5 Less Col. (B), Line 5	Based on Sch. XXIII, Col.(C), Line 5 Less Col. (D), Line 5
Swiss Francs	Based on Sch. XXIII, Col.(A), Line 6 Less Col. (B), Line 6	Based on Sch. XXIII, Col.(C), Line 6 Less Col. (D), Line 6
Australia Dollars	Based on Sch. XXIII, Col.(A), Line 7 Less Col. (B), Line 7	Based on Sch. XXIII, Col.(C), Line 7 Less Col. (D), Line 7
New Zealand Dollars	Based on Sch. XXIII, Col.(A), Line 8 Less Col. (B), Line 8	Based on Sch. XXIII, Col.(C), Line 8 Less Col. (D), Line 8
Other currency 1	Based on Sch. XXIII, Col.(A), Line 9 Less Col. (B), Line 9	Based on Sch. XXIII, Col.(C), Line 9 Less Col. (D), Line 9
Other currency 2	Based on Sch. XXIII, Col.(A), Line 10 Less Col. (B), Line 10	Based on Sch. XXIII, Col.(C), Line 10 Less Col. (D), Line 10
Other currency 3	Based on Sch. XXIII, Col.(A), Line 11 Less Col. (B), Line 11	Based on Sch. XXIII, Col.(C), Line 11 Less Col. (D), Line 11
Other currency 4	Based on Sch. XXIII, Col.(A), Line 12 Less Col. (B), Line 12	Based on Sch. XXIII, Col.(C), Line 12 Less Col. (D), Line 12
Other currency 5	Based on Sch. XXIII, Col.(A), Line 13 Less Col. (B), Line 13	Based on Sch. XXIII, Col.(C), Line 13 Less Col. (D), Line 13
Other currency 6	Based on Sch. XXIII, Col.(A), Line 14 Less Col. (B), Line 14	Based on Sch. XXIII, Col.(C), Line 14 Less Col. (D), Line 14
Other currency 7	Based on Sch. XXIII, Col.(A), Line 15 Less Col. (B), Line 15	Based on Sch. XXIII, Col.(C), Line 15 Less Col. (D), Line 15
Other currency 8	Based on Sch. XXIII, Col.(A), Line 16 Less Col. (B), Line 16	Based on Sch. XXIII, Col.(C), Line 16 Less Col. (D), Line 16
Other currency 9	Based on Sch. XXIII, Col.(A), Line 17 Less Col. (B), Line 17	Based on Sch. XXIII, Col.(C), Line 17 Less Col. (D), Line 17
Other currency 10	Based on Sch. XXIII, Col.(A), Line 18 Less Col. (B), Line 18	Based on Sch. XXIII, Col.(C), Line 18 Less Col. (D), Line 18

2) Interest Rate Down – Derivative Exposure

Currency	Market Value of Assets Qualifying for Risk Mitigating Purposes	Market Value of Assets Not Qualifying for Risk Mitigating Purposes	Market Value of Liabilities
United States Dollars	Based on Sch. XXIII, Col.(G), Line 1 Less Col. (H), Line 1	Based on Sch. XXIII, Col. (I), Line 1 Less Col. (J), Line 1	Based on Sch. XXIII, Col. (K), Line 1 Less Col. (L), Line 1
Euro	Based on Sch. XXIII, Col.(G), Line 2 Less Col. (H), Line 2	Based on Sch. XXIII, Col.(I), Line 2 Less Col. (J), Line 2	Based on Sch. XXIII, Col.(K), Line 2 Less Col. (L), Line 2
United Kingdom Pounds	Based on Sch. XXIII, Col.(G), Line 3 Less Col. (H), Line 3	Based on Sch. XXIII, Col.(I), Line 3 Less Col. (J), Line 3	Based on Sch. XXIII, Col.(K), Line 3 Less Col. (L), Line 3
Japan Yen	Based on Sch. XXIII, Col.(G), Line 4 Less Col. (H), Line 4	Based on Sch. XXIII, Col.(I), Line 4 Less Col. (J), Line 4	Based on Sch. XXIII, Col.(K), Line 4 Less Col. (L), Line 4

Canada Dollars	Based on Sch. XXIII, Col.(G), Line 5 Less Col. (H), Line 5	Based on Sch. XXIII, Col.(I), Line 5 Less Col. (J), Line 5	Based on Sch. XXIII, Col.(K), Line 5 Less Col. (L), Line 5
Swiss Francs	Based on Sch. XXIII, Col.(G), Line 6 Less Col. (H), Line 6	Based on Sch. XXIII, Col.(I), Line 6 Less Col. (J), Line 6	Based on Sch. XXIII, Col.(K), Line 6 Less Col. (L), Line 6
Australia Dollars	Based on Sch. XXIII, Col.(G), Line 7 Less Col. (H), Line 7	Based on Sch. XXIII, Col.(I), Line 7 Less Col. (J), Line 7	Based on Sch. XXIII, Col.(K), Line 7 Less Col. (L), Line 7
New Zealand Dollars	Based on Sch. XXIII, Col.(G), Line 8 Less Col. (H), Line 8	Based on Sch. XXIII, Col.(I), Line 8 Less Col. (J), Line 8	Based on Sch. XXIII, Col.(K), Line 8 Less Col. (L), Line 8
Other currency 1	Based on Sch. XXIII, Col.(G), Line 9 Less Col. (H), Line 9	Based on Sch. XXIII, Col.(I), Line 9 Less Col. (J), Line 9	Based on Sch. XXIII, Col.(K), Line 9 Less Col. (L), Line 9
Other currency 2	Based on Sch. XXIII, Col.(G), Line 10 Less Col. (H), Line 10	Based on Sch. XXIII, Col.(I), Line 10 Less Col. (J), Line 10	Based on Sch. XXIII, Col.(K), Line 10 Less Col. (L), Line 10
Other currency 3	Based on Sch. XXIII, Col.(G), Line 11 Less Col. (H), Line 11	Based on Sch. XXIII, Col.(I), Line 11 Less Col. (J), Line 11	Based on Sch. XXIII, Col.(K), Line 11 Less Col. (L), Line 11
Other currency 4	Based on Sch. XXIII, Col.(G), Line 12 Less Col. (H), Line 12	Based on Sch. XXIII, Col.(I), Line 12 Less Col. (J), Line 12	Based on Sch. XXIII, Col.(K), Line 12 Less Col. (L), Line 12
Other currency 5	Based on Sch. XXIII, Col.(G), Line 13 Less Col. (H), Line 13	Based on Sch. XXIII, Col.(I), Line 13 Less Col. (J), Line 13	Based on Sch. XXIII, Col.(K), Line 13 Less Col. (L), Line 13
Other currency 6	Based on Sch. XXIII, Col.(G), Line 14 Less Col. (H), Line 14	Based on Sch. XXIII, Col.(I), Line 14 Less Col. (J), Line 14	Based on Sch. XXIII, Col.(K), Line 14 Less Col. (L), Line 14
Other currency 7	Based on Sch. XXIII, Col.(G), Line 15 Less Col. (H), Line 15	Based on Sch. XXIII, Col.(I), Line 15 Less Col. (J), Line 15	Based on Sch. XXIII, Col.(K), Line 15 Less Col. (L), Line 15
Other currency 8	Based on Sch. XXIII, Col.(G), Line 16 Less Col. (H), Line 16	Based on Sch. XXIII, Col.(I), Line 16 Less Col. (J), Line 16	Based on Sch. XXIII, Col.(K), Line 16 Less Col. (L), Line 16
Other currency 9	Based on Sch. XXIII, Col.(G), Line 17 Less Col. (H), Line 17	Based on Sch. XXIII, Col.(I), Line 17 Less Col. (J), Line 17	Based on Sch. XXIII, Col.(K), Line 17 Less Col. (L), Line 18
Other currency 10	Based on Sch. XXIII, Col.(G), Line 18 Less Col. (H), Line 18	Based on Sch. XXIII, Col.(I), Line 18 Less Col. (J), Line 18	Based on Sch. XXIII, Col.(K), Line 18 Less Col. (L), Line 18

3) Interest Rate Up – Exposures without Derivatives

Currency	**Market Value of Assets**	**Market Value of Liabilities**
United States Dollars	Based on Sch. XXIII, Col.(A), Line 20 Less Col. (B), Line 20	Based on Sch. XXIII, Col.(C), Line 20 Less Col. (D), Line 20
Euro	Based on Sch. XXIII, Col.(A), Line 21 Less Col. (B), Line 21	Based on Sch. XXIII, Col.(C), Line 21 Less Col. (D), Line 21

United Kingdom Pounds	Based on Sch. XXIII, Col.(A), Line 22 Less Col. (B), Line 22	Based on Sch. XXIII, Col.(C), Line 22 Less Col. (D), Line 22
Japan Yen	Based on Sch. XXIII, Col.(A), Line 23 Less Col. (B), Line 23	Based on Sch. XXIII, Col.(C), Line 23 Less Col. (D), Line 23
Canada Dollars	Based on Sch. XXIII, Col.(A), Line 24 Less Col. (B), Line 24	Based on Sch. XXIII, Col.(C), Line 24 Less Col. (D), Line 24
Swiss Francs	Based on Sch. XXIII, Col.(A), Line 25 Less Col. (B), Line 25	Based on Sch. XXIII, Col.(C), Line 25 Less Col. (D), Line 25
Australia Dollars	Based on Sch. XXIII, Col.(A), Line 26 Less Col. (B), Line 26	Based on Sch. XXIII, Col.(C), Line 26 Less Col. (D), Line 26
New Zealand Dollars	Based on Sch. XXIII, Col.(A), Line 27 Less Col. (B), Line 27	Based on Sch. XXIII, Col.(C), Line 27 Less Col. (D), Line 27
Other currency 1	Based on Sch. XXIII, Col.(A), Line 28 Less Col. (B), Line 28	Based on Sch. XXIII, Col.(C), Line 28 Less Col. (D), Line 28
Other currency 2	Based on Sch. XXIII, Col.(A), Line 29 Less Col. (B), Line 29	Based on Sch. XXIII, Col.(C), Line 29 Less Col. (D), Line 29
Other currency 3	Based on Sch. XXIII, Col.(A), Line 30 Less Col. (B), Line 30	Based on Sch. XXIII, Col.(C), Line 30 Less Col. (D), Line 30
Other currency 4	Based on Sch. XXIII, Col.(A), Line 31 Less Col. (B), Line 31	Based on Sch. XXIII, Col.(C), Line 31 Less Col. (D), Line 31
Other currency 5	Based on Sch. XXIII, Col.(A), Line 32 Less Col. (B), Line 32	Based on Sch. XXIII, Col.(C), Line 32 Less Col. (D), Line 32
Other currency 6	Based on Sch. XXIII, Col.(A), Line 33 Less Col. (B), Line 33	Based on Sch. XXIII, Col.(C), Line 33 Less Col. (D), Line 33
Other currency 7	Based on Sch. XXIII, Col.(A), Line 34 Less Col. (B), Line 34	Based on Sch. XXIII, Col.(C), Line 34 Less Col. (D), Line 34
Other currency 8	Based on Sch. XXIII, Col.(A), Line 35 Less Col. (B), Line 35	Based on Sch. XXIII, Col.(C), Line 35 Less Col. (D), Line 35
Other currency 9	Based on Sch. XXIII, Col.(A), Line 36 Less Col. (B), Line 36	Based on Sch. XXIII, Col.(C), Line 36 Less Col. (D), Line 36
Other currency 10	Based on Sch. XXIII, Col.(A), Line 37 Less Col. (B), Line 37	Based on Sch. XXIII, Col.(C), Line 37 Less Col. (D), Line 37

4) Interest Rate Up – Derivative Exposure

Currency	**Market Value of Assets Qualifying for Risk Mitigating Purposes**	**Market Value of Assets Not Qualifying for Risk Mitigating Purposes**	**Market Value of Liabilities**
United States Dollars	Based on Sch. XXIII, Col.(G), Line 20 Less Col. (H), Line 20	Based on Sch. XXIII, Col.(I), Line 20 Less Col. (J), Line 20	Based on Sch. XXIII, Col.(K), Line 20 Less Col. (L), Line 20
Euro	Based on Sch. XXIII, Col.(G), Line 21 Less Col. (H), Line 21	Based on Sch. XXIII, Col.(I), Line 21 Less Col. (J), Line 21	Based on Sch. XXIII, Col.(K), Line 21 Less Col. (L), Line 21
United Kingdom Pounds	Based on Sch. XXIII, Col.(G), Line 22 Less Col. (H), Line 22	Based on Sch. XXIII, Col.(I), Line 22 Less Col. (J), Line 22	Based on Sch. XXIII, Col.(K), Line 22 Less Col. (L), Line 22
Japan Yen	Based on Sch. XXIII, Col.(G), Line 23 Less Col. (H), Line 23	Based on Sch. XXIII, Col.(I), Line 23 Less Col. (J), Line 23	Based on Sch. XXIII, Col.(K), Line 23 Less Col. (L), Line 23
Canada Dollars	Based on Sch. XXIII, Col.(G), Line 24 Less Col. (H), Line 24	Based on Sch. XXIII, Col.(I), Line 24 Less Col. (J), Line 24	Based on Sch. XXIII, Col.(K), Line 24 Less Col. (L), Line 24
Swiss Francs	Based on Sch. XXIII, Col.(G), Line 25 Less Col. (H), Line 25	Based on Sch. XXIII, Col.(I), Line 25 Less Col. (J), Line 25	Based on Sch. XXIII, Col.(K), Line 25 Less Col. (L), Line 25

Australia Dollars	Based on Sch. XXIII, Col.(G), Line 26 Less Col. (H), Line 26	Based on Sch. XXIII, Col.(I), Line 26 Less Col. (J), Line 26	Based on Sch. XXIII, Col.(K), Line 26 Less Col. (L), Line 26
New Zealand Dollars	Based on Sch. XXIII, Col.(G), Line 27 Less Col. (H), Line 27	Based on Sch. XXIII, Col.(I), Line 27 Less Col. (J), Line 27	Based on Sch. XXIII, Col.(K), Line 27 Less Col. (L), Line 27
Other currency 1	Based on Sch. XXIII, Col.(G), Line 28 Less Col. (H), Line 28	Based on Sch. XXIII, Col.(I), Line 28 Less Col. (J), Line 28	Based on Sch. XXIII, Col.(K), Line 28 Less Col. (L), Line 28
Other currency 2	Based on Sch. XXIII, Col.(G), Line 29 Less Col. (H), Line 29	Based on Sch. XXIII, Col.(I), Line 29 Less Col. (J), Line 29	Based on Sch. XXIII, Col.(K), Line 29 Less Col. (L), Line 29
Other currency 3	Based on Sch. XXIII, Col.(G), Line 30 Less Col. (H), Line 30	Based on Sch. XXIII, Col.(I), Line 30 Less Col. (J), Line 30	Based on Sch. XXIII, Col.(K), Line 30 Less Col. (L), Line 30
Other currency 4	Based on Sch. XXIII, Col.(G), Line 31 Less Col. (H), Line 31	Based on Sch. XXIII, Col.(I), Line 31 Less Col. (J), Line 31	Based on Sch. XXIII, Col.(K), Line 31 Less Col. (L), Line 31
Other currency 5	Based on Sch. XXIII, Col.(G), Line 32 Less Col. (H), Line 32	Based on Sch. XXIII, Col.(I), Line 32 Less Col. (J), Line 32	Based on Sch. XXIII, Col.(K), Line 32 Less Col. (L), Line 32
Other currency 6	Based on Sch. XXIII, Col.(G), Line 33 Less Col. (H), Line 33	Based on Sch. XXIII, Col.(I), Line 33 Less Col. (J), Line 33	Based on Sch. XXIII, Col.(K), Line 33 Less Col. (L), Line 33
Other currency 7	Based on Sch. XXIII, Col.(G), Line 34 Less Col. (H), Line 34	Based on Sch. XXIII, Col.(I), Line 34 Less Col. (J), Line 34	Based on Sch. XXIII, Col.(K), Line 34 Less Col. (L), Line 34
Other currency 8	Based on Sch. XXIII, Col.(G), Line 35 Less Col. (H), Line 35	Based on Sch. XXIII, Col.(I), Line 35 Less Col. (J), Line 35	Based on Sch. XXIII, Col.(K), Line 35 Less Col. (L), Line 35
Other currency 9	Based on Sch. XXIII, Col.(G), Line 36 Less Col. (H), Line 36	Based on Sch. XXIII, Col.(I), Line 36 Less Col. (J), Line 36	Based on Sch. XXIII, Col.(K), Line 36 Less Col. (L), Line 36
Other currency 10	Based on Sch. XXIII, Col.(G), Line 37 Less Col. (H), Line 37	Based on Sch. XXIII, Col.(I), Line 37 Less Col. (J), Line 37	Based on Sch. XXIII, Col.(K), Line 37 Less Col. (L), Line 37

Instructions Affecting Interest Rate and Liquidity Risk

1) All assets sensitive to interest rates shall be included in the table, including but not limited to fixed income assets, hybrid instruments, deposits, loans (including mortgage and policyholder loans), reinsurance balance receivables and exposures as determined by application of the “look-through” approach calculated in accordance with criteria prescribed in section B5 for the following items:

    a) Collective investment vehicles and other investments packaged as funds, including related undertakings used as investment vehicles;
    b) Segregated accounts assets;
    c) Deposit assets;
    d) Other sundry;
    e) Derivatives; and
    f) Funds held by ceding insurers.

2) All liabilities sensitive to interest rates shall be included in the table, including but not limited to the best estimate of insurance liabilities, other liabilities (except risk margin) and liability exposures determined by application of the “look-through” approach calculated in accordance with the criteria prescribed in section B5 for the following items:
    a) Segregated accounts liabilities;
    b) Deposit liabilities;
    c) Other sundry liabilities;
    d) Derivatives; and
    e) Funds held under retrocession.

3) Amounts are to be reported on a <u>consolidated statutory</u> valuation basis.

D5. CURRENCY RISK

Background

D5.1 The currency risk charge is based on amounts reported on Form 1SFS (Consolidated) total assets and liabilities. It represents the risk that the net asset position of an insurer may worsen as a result of exchange rate changes if assets and liabilities are not currency matched. Insurers are to include at least 95% of their total assets and liabilities based on the predefined thirteen currency types (United States Dollar, Bermuda Dollar, Qatar Riyal, Hong Kong Dollar, Euro, Denmark Kroner, Bulgaria Leva, West African CFA Franc, Central African CFA Franc, Comorian Francs United Kingdom Pounds, Canadian Dollar and Japanese Yen) and 10 other currency types.

D5.2 The currency risk capital charge is based on the assets held for each currency type and the liabilities and the proxy BSCR (proxy BSCR is determined by applying the proxy BSCR factor of D4.3 to the currency type's liabilities). In instances there is a currency type that has insufficient assets held to the liabilities and proxy BSCR, a shock is applied to both the assets and the liabilities and the allocated capital requirement. The shock is a downwards shock to the reporting currency, meaning that the reporting currency will depreciate relative to other currencies. If there are sufficient assets held to the liabilities and proxy BSCR, then there is no/NIL capital charge applied.

D5.3 The proxy BSCR factor is determined as the greater of:

1) The prior year ECR charge to the prior year total EBS liabilities reported; and
2) The average of the last three prior years ECR charge to last three prior years total liabilities reported.

Currency Risk Capital Charge

D5.4 The currency risk charge calculation can be summarised by the following formula:

$$C_{Currency} = \sum_i \max\left\{\begin{bmatrix} \left(MVA_{i,Before} - MVA_{i,After}(\chi_i)\right) + \left(MVDL^{Q}_{i,Before} - MVDL^{Q}_{i,After}(\chi_i)\right) + \cdots \\ + \left(MVDS^{Q}_{i,Before} - MVDS^{Q}_{i,After}(\chi_i)\right) + \max\left(MVDL^{NQ}_{i,Before} - MVDL^{NQ}_{i,After}(\chi_i), 0\right) + \cdots \\ + \max\left(MVDS^{NQ}_{i,Before} - MVDS^{NQ}_{i,After}(\chi_i), 0\right) - \left(MVL_{i,Before} - MVL_{i,After}(\chi_i)\right) + \cdots \\ + Currproxybscr_i \times \chi_i \end{bmatrix}, 0\right\}$$

χ_i = the instantaneous shocks prescribed in Table 4A for each type of currency where ($MVA_{i,Before} + MVDL^{NQ}_{i,Before} + MVDS^{NQ}_{i,Before} + MVDL^{Q}_{i,Before} + MVDS^{Q}_{i,Before} - MVL^{Q}_{i,Before} - Currproxybscr_i$)<0 and 0 otherwise;

$Currency_i$ = refers to currency type that has been converted to the functional currency as reported in Form 1SFS (Consolidated);

$MVA_{i,Before}$ = refers to the market value of assets excluding currency-sensitive derivatives prescribed by the Authority by currency type (CCY), that has been converted to the functional currency as reported in Form 1SFS (Consolidated);

$MVA_{i,After}$ = refers to the revaluation of assets excluding currency-sensitive derivatives after shocking by χ(CCY) where (CCY) refers to currency type, and χ refers to the shock, where the revalued amount has been converted to the functional currency as reported in Form 1SFS (Consolidated);

$MVDL^{Q}_{i,Before}$ = refers to the market value of long positions in derivatives qualifying as held for risk-mitigating purposes (as described in section B3) by currency type (CCY), that has been converted to the functional currency as reported in Form 1SFS (Consolidated);

$MVDL^{Q}_{i,After}$ = refers to the revaluation of long positions in derivatives qualifying as held for risk-mitigating purposes (as described in section B3) after shocking by χ(CCY) where (CCY) refers to currency type, and χ refers to the shock, where the revalued amount has been converted to the functional currency as reported in Form 1SFS (Consolidated);

$MVDS^{Q}_{i,Before}$ = refers to the market value of short positions in derivatives qualifying as held for risk-mitigating purposes (as described in section B3) by currency type (CCY), that has been converted to the functional currency as reported in Form 1SFS (Consolidated);

$MVDS^{Q}_{i,After}$ = refers to the revaluation of short positions in derivatives qualifying as held for risk-mitigating purposes (as described in section B3) after shocking by χ(CCY) where (CCY) refers to currency type, and χ refers to the shock, where the revalued amount has been converted to the functional currency as reported in Form 1SFS (Consolidated);

$MVDL^{NQ}_{i,Before}$ = refers to the market value of long positions in derivatives not qualifying as held for risk-mitigating purposes (as described in section B3) by currency type (CCY), that has been converted to the functional currency as reported in Form 1SFS (Consolidated);

$MVDL^{NQ}_{i,After}$ = refers to the revaluation of long positions in derivatives not qualifying as held for risk-mitigating purposes (as described in section B3) after shocking by χ(CCY) where (CCY) refers to currency type, and χ refers to the shock, where the revalued amount has been converted to the functional currency as reported in Form 1SFS (Consolidated);

$MVDS^{NQ}_{i,Before}$ = refers to the market value of short positions in derivatives not qualifying as held for risk-mitigating purposes (as described in section B3) by currency type (CCY), that has been converted to the functional currency as reported in Form 1SFS (Consolidated);

$MVDS^{NQ}_{i,After}$ = refers to the revaluation of short positions in derivatives not qualifying as held for risk-mitigating purposes (as described in section B3) after shocking by χ(CCY) where (CCY) refers to currency type, and χ refers to the shock, where the revalued amount has been converted to the functional currency as reported in Form 1SFS (Consolidated);

$MVL_{i,Before}$ = refers to the market value of the best estimate of insurance liabilities and other liabilities by currency type that has been converted to the functional currency as reported in Form 1SFS (Consolidated);

$MVL_{i,After}$ = refers to the revaluation of the best estimate of insurance liabilities and other liabilities after shocking by χ(CCY) where (CCY) refers to currency type and

χ refers to the shock, where the revalued amount has been converted to the functional currency as reported in Form 1SFS (Consolidated);

Currproxyb scr_i = refers to the product of $MVL_{i,Before}$ and BSCR Proxy factor

BSCR Proxy factor = greater of paragraphs (a) and (b) below:

(a) the ECR divided by Form 1SFS (Consolidated) Line 39 total liabilities for the preceding year and

(b) the average of the above ratio for the preceding three years.

Where there are no prior submissions available, the BSCR proxy factor is the above ratio that would be obtained from the current submission without taking into account the currency risk charge.

Items

D5.5 Assets (exposures other than derivatives) – Based on current year currency exchange rate sensitive exposures including from cash, investment holdings packaged as funds, segregated account company assets, deposit assets and other sundry assets as determined from the application of the look-through provisions.

D5.6 Assets – derivatives with long exposures not qualifying as held for risk-mitigating purposes – Based on current year currency derivatives including from investment holdings packaged as funds, segregated account company assets, deposit assets and other sundry assets as determined from the application of the look-through provisions.

D5.7 Assets – derivatives with short exposures qualifying as held for risk-mitigating purposes – Based on current year currency derivatives including from investment holdings packaged as funds, segregated account company assets, deposit assets and other sundry assets as determined from the application of the look-through provisions.

D5.8 Assets – derivatives with short exposures not qualifying as held for risk-mitigating purposes – Based on current year currency derivatives including from investment holdings packaged as funds, segregated account company assets, deposit assets and other sundry assets as determined from the application of the look-through provisions.

D5.9 Assets – derivatives with long exposures qualifying as held for risk mitigating purposes – Based on current year currency derivatives including from investment holdings packaged as funds, segregated account company assets, deposit assets and other sundry assets as determined from the application of the look-through provisions.

D5.10 Liabilities by currency types – Total liabilities denominated in given currency.

D5.11 Total ECR requirement – Based on three prior years ECR requirement.

D5.12 Total liabilities – Based on three prior years Form 1SFS (Consolidated) Line 39; total liabilities.

Currency	Assets Exposures Other than Derivatives	Long Exposures		Short Exposures		Liabilities
		Qualifying as held for risk mitigation purposes	Not qualifying as held for risk mitigation purposes	Qualifying as held for risk mitigation purposes	Not qualifying as held for risk mitigation purposes	
United States Dollars	Based on Sch. XXA, Col.(A), Line 1	Based on Sch. XXA, Col.(B), Line 1	Based on Sch. XXA, Col.(C), Line 1	Based on Sch. XXA, Col.(D), Line 1	Based on Sch. XXA, Col.(E), Line 1	Based on Sch. XXA, Col.(F), Line 1
Bermuda Dollars	Based on Sch. XXA, Col.(A), Line 2	Based on Sch. XXA, Col.(B), Line 2	Based on Sch. XXA, Col.(C), Line 2	Based on Sch. XXA, Col.(D), Line 2	Based on Sch. XXA, Col.(E), Line 2	Based on Sch. XXA, Col.(F), Line 2
Qatar Riyals	Based on Sch. XXA, Col.(A), Line 3	Based on Sch. XXA, Col.(B), Line 3	Based on Sch. XXA, Col.(C), Line 3	Based on Sch. XXA, Col.(D), Line 3	Based on Sch. XXA, Col.(E), Line 3	Based on Sch. XXA, Col.(F), Line 3
Hong Kong Dollars	Based on Sch. XXA, Col.(A), Line 4	Based on Sch. XXA, Col.(B), Line 4	Based on Sch. XXA, Col.(C), Line 4	Based on Sch. XXA, Col.(D), Line 4	Based on Sch. XXA, Col.(E), Line 4	Based on Sch. XXA, Col.(F), Line 4
Euro	Based on Sch. XXA, Col.(A), Line 5	Based on Sch. XXA, Col.(B), Line 5	Based on Sch. XXA, Col.(C), Line 5	Based on Sch. XXA, Col.(D), Line 5	Based on Sch. XXA, Col.(E), Line 5	Based on Sch. XXA, Col.(F), Line 5
Denmark Kroner	Based on Sch. XXA, Col.(A), Line 6	Based on Sch. XXA, Col.(B), Line 6	Based on Sch. XXA, Col.(C), Line 6	Based on Sch. XXA, Col.(D), Line 6	Based on Sch. XXA, Col.(E), Line 6	Based on Sch. XXA, Col.(F), Line 6
Bulgaria Leva	Based on Sch. XXA, Col.(A), Line 7	Based on Sch. XXA, Col.(B), Line 7	Based on Sch. XXA, Col.(C), Line 7	Based on Sch. XXA, Col.(D), Line 7	Based on Sch. XXA, Col.(E), Line 7	Based on Sch. XXA, Col.(F), Line 7
West African CFA Francs	Based on Sch. XXA, Col.(A), Line 8	Based on Sch. XXA, Col.(B), Line 8	Based on Sch. XXA, Col.(C), Line 8	Based on Sch. XXA, Col.(D), Line 8	Based on Sch. XXA, Col.(E), Line 8	Based on Sch. XXA, Col.(F), Line 8
Central African CFA Francs	Based on Sch. XXA, Col.(A), Line 9	Based on Sch. XXA, Col.(B), Line 9	Based on Sch. XXA, Col.(C), Line 9	Based on Sch. XXA, Col.(D), Line 9	Based on Sch. XXA, Col.(E), Line 9	Based on Sch. XXA, Col.(F), Line 9
Comorian Francs	Based on Sch. XXA, Col.(A), Line 10	Based on Sch. XXA, Col.(B), Line 10	Based on Sch. XXA, Col.(C), Line 10	Based on Sch. XXA, Col.(D), Line 10	Based on Sch. XXA, Col.(E), Line 10	Based on Sch. XXA, Col.(F), Line 10
United Kingdom Pounds	Based on Sch. XXA, Col.(A), Line 11	Based on Sch. XXA, Col.(B), Line 11	Based on Sch. XXA, Col.(C), Line 11	Based on Sch. XXA, Col.(D), Line 11	Based on Sch. XXA, Col.(E), Line 11	Based on Sch. XXA, Col.(F), Line 11
Canada Dollars	Based on Sch. XXA, Col.(A), Line 12	Based on Sch. XXA, Col.(B), Line 12	Based on Sch. XXA, Col.(C), Line 12	Based on Sch. XXA, Col.(D), Line 12	Based on Sch. XXA, Col.(E), Line 12	Based on Sch. XXA, Col.(F), Line 12
Japan Yen	Based on Sch. XXA, Col.(A), Line 13	Based on Sch. XXA, Col.(B), Line 13	Based on Sch. XXA, Col.(C), Line 13	Based on Sch. XXA, Col.(D), Line 13	Based on Sch. XXA, Col.(E), Line 13	Based on Sch. XXA, Col.(F), Line 13

Other currency 1	Based on Sch. XXA, Col.(A), Line 14	Based on Sch. XXA, Col.(B), Line 14	Based on Sch. XXA, Col.(C), Line 14	Based on Sch. XXA, Col.(D), Line 14	Based on Sch. XXA, Col.(E), Line 14	Based on Sch. XXA, Col.(F), Line 14
Other currency 2	Based on Sch. XXA, Col.(A), Line 15	Based on Sch. XXA, Col.(B), Line 15	Based on Sch. XXA, Col.(C), Line 15	Based on Sch. XXA, Col.(D), Line 15	Based on Sch. XXA, Col.(E), Line 15	Based on Sch. XXA, Col.(F), Line 15
Other currency 3	Based on Sch. XXA, Col.(A), Line 16	Based on Sch. XXA, Col.(B), Line 16	Based on Sch. XXA, Col.(C), Line 16	Based on Sch. XXA, Col.(D), Line 16	Based on Sch. XXA, Col.(E), Line 16	Based on Sch. XXA, Col.(F), Line 16
Other currency 4	Based on Sch. XXA, Col.(A), Line 17	Based on Sch. XXA, Col.(B), Line 17	Based on Sch. XXA, Col.(C), Line 17	Based on Sch. XXA, Col.(D), Line 17	Based on Sch. XXA, Col.(E), Line 17	Based on Sch. XXA, Col.(F), Line 17
Other currency 5	Based on Sch. XXA, Col.(A), Line 18	Based on Sch. XXA, Col.(B), Line 18	Based on Sch. XXA, Col.(C), Line 18	Based on Sch. XXA, Col.(D), Line 18	Based on Sch. XXA, Col.(E), Line 18	Based on Sch. XXA, Col.(F), Line 18
Other currency 6	Based on Sch. XXA, Col.(A), Line 19	Based on Sch. XXA, Col.(B), Line 19	Based on Sch. XXA, Col.(C), Line 19	Based on Sch. XXA, Col.(D), Line 19	Based on Sch. XXA, Col.(E), Line 19	Based on Sch. XXA, Col.(F), Line 19
Other currency 7	Based on Sch. XXA, Col.(A), Line 20	Based on Sch. XXA, Col.(B), Line 20	Based on Sch. XXA, Col.(C), Line 20	Based on Sch. XXA, Col.(D), Line 20	Based on Sch. XXA, Col.(E), Line 20	Based on Sch. XXA, Col.(F), Line 20
Other currency 8	Based on Sch. XXA, Col.(A), Line 21	Based on Sch. XXA, Col.(B), Line 21	Based on Sch. XXA, Col.(C), Line 21	Based on Sch. XXA, Col.(D), Line 21	Based on Sch. XXA, Col.(E), Line 21	Based on Sch. XXA, Col.(F), Line 21
Other currency 9	Based on Sch. XXA, Col.(A), Line 22	Based on Sch. XXA, Col.(B), Line 22	Based on Sch. XXA, Col.(C), Line 22	Based on Sch. XXA, Col.(D), Line 22	Based on Sch. XXA, Col.(E), Line 22	Based on Sch. XXA, Col.(F), Line 22
Other currency 10	Based on Sch. XXA, Col.(A), Line 23	Based on Sch. XXA, Col.(B), Line 23	Based on Sch. XXA, Col.(C), Line 23	Based on Sch. XXA, Col.(D), Line 23	Based on Sch. XXA, Col.(E), Line 23	Based on Sch. XXA, Col.(F), Line 23

Instructions Affecting Currency Risk

1) The initials "A" to "J" on the column labelled "Shock Otherwise χ_i" shall be replaced by the following shock values:
   a) "A" by:
      (i) "0%" if the reporting currency is the Bermuda Dollar;
      (ii) "5.00%" if the reporting currency is the Qatari Riyal;
      (iii) "1.00%" if the reporting currency is the Hong Kong Dollar; or
      (iv) "25%" otherwise.
   b) "B" by:
      (i) "0%" if the reporting currency is the United States Dollar; or
      (ii) "25%" otherwise.
   c) "C" by:
      (i) "5.00%" if the reporting currency is the United States Dollar; or
      (ii) "25%" otherwise.
   d) "D" by:
      (i) "1.00%" if reporting currency is the United States Dollar; or
      (ii) "25%" otherwise.
   e) "E" by:
      (i) "0.39%" if the reporting currency is the Danish Krone;
      (ii) "1.81%" if the reporting currency is the Bulgarian Lev;
      (iii) "2.18%" if the reporting currency is the West African CFA Franc;
      (iv) "1.96%" if the reporting currency is the Central African CFA Franc;
      (v) "2.00%" if the reporting currency is the Comorian Franc; or
      (vi) "25%" otherwise.
   f) "F" by:
      (i) "0.39%" if reporting currency is the Euro; or
      (ii) "25%" otherwise.
   g) "G" by:
      (i) "1.81%" if reporting currency is the Euro; or
      (ii) "25%" otherwise.
   h) "H" by:
      (i) "2.18%" if reporting currency is the Euro; or
      (ii) "25%" otherwise.
   i) "I" by:
      (i) "1.96%" if reporting currency is the Euro; or
      (ii) "25%" otherwise.
   j) "J" by:
      (i) "2.00%" if reporting currency is the Euro; or
      (ii) "25%" otherwise.

2) All assets and liabilities (except the risk margin) whose value is subject to currency risk shocks shall be reported on a basis consistent with that used for purposes of economic balance sheet reporting. These assets and liabilities shall include currency risk exposures

determined by application of the "look-through approach" calculated in accordance with criteria prescribed in section B6 for the following items:

a) Collective investment vehicles and other investments packaged as funds, including related undertakings used as investment vehicles;
b) Segregated accounts assets and liabilities;
c) Deposit asset and liabilities;
d) Assets and liabilities held by ceding insurers or under retrocession;
e) Other sundry assets and liabilities; and
f) Derivatives.

3) Where the reporting currency is the United States Dollar, the capital factor χ_i charge shall be reduced to:
    a) 0.00% for the Bermuda Dollar;
    b) 5.00% for the Qatari Riyal;
    c) 1.00% for the Hong Kong Dollar.

4) Where the reporting currency is the Bermuda Dollar, the capital factor χ_i charge shall be reduced to 0.00% for the United States Dollar.

5) Where the reporting currency is the Qatari Riyal, the capital factor χ_i charge shall be reduced to 5.00% for the United States Dollar.

6) Where the reporting currency is the Hong Kong Dollar, the capital factor χ_i charge shall be reduced to 1.00% for the United States Dollar.

7) Where the reporting currency is Euros, the capital factor χ_i shall be reduced to:
    a) 0.39% for the Danish Krone;
    b) 1.81% for the Bulgarian Lev;
    c) 2.18% for the West African CFA Franc;
    d) 1.96% for the Central African CFA Franc;
    e) 2.00% for the Comorian Franc.

8) Where the reporting currency is the Danish Krone, the capital factor χ_i charge shall be reduced to 0.39% for the Euro.

9) Where the reporting currency is the Bulgarian Lev, the capital factor χ_i charge shall be reduced to 1.81% for the Euro.

10) Where the reporting currency is the West African CFA Franc, the capital factor χ_i charge shall be reduced to 2.18% for the Euro.

11) Where the reporting currency is the Central African CFA Franc, the capital factor χ_i charge shall be reduced to 1.96% for the Euro.

12) Where the reporting currency is the Comorian Franc, the capital factor χ_i charge shall be reduced to 2.00% for the Euro.

13) Insurers are to report currencies representing at least 95% of their economic balance sheet liabilities; and

14) Amounts are to be reported on an EBS valuation basis.

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D6. DIGITAL ASSET RISK

Background

D6.1 The digital asset risk charge is based on all assets and liabilities denominated in digital assets and allocated by:

1) All audited fiat-backed stablecoins are to be included in the relevant line;

2) All other digital assets are to be allocated by market cap, according to the table.

Digital Asset Capital Charge

D6.2 The digital asset charge calculation can be summarised by the following formula:

$$C_{da} = \sum_i (\chi_i \times MNE_i)$$

with $MNE_i = \max(A_i, L_i, A_i - L_i) - AL^{offsset}{}_i$

where $AL^{offsset}{}_i = \max(0, \mu_i x \min(A_i, L_i))$

χ_i	=	the capital charge factor prescribed in Table 5 for each type of digital asset *i*;
A_i	=	value of assets in each type of digital asset *i*;
L_i	=	value of liabilities in each type of digital assets *i*; and
μ_i	=	credit for asset-liability offset (nature hedge) for each type of digital asset *i*.

D7. CONCENTRATION RISK

Background

D7.1 The concentration risk charge is based on asset counterparty exposures reported on the Form 1EBS. It represents the risk of losses due to asset concentrations.

D7.2 The charge is calculated by aggregating all the asset type, bond/mortgage loan type (if applicable), BSCR rating (if applicable), and asset value together and assigning the values to the respective fixed income, equity, credit capital factor charge.

Concentration Risk Capital Charge

D7.3 The concentration risk charge calculation can be summarised by the following formula:

$$\boxed{C_{Concentration} = \sum_i \chi_i \times Concastclass_i}$$ where

χ_i = the capital charge factors supplied by the BMA for each type $Concastclass_i$ of; and

$Concastclass_i$ = value of corresponding asset in asset class.

Items

a) <u>Cash and cash equivalents</u>

Line Item		Description
1	BSCR rating 0	Based on Schedule XXIA, Column H
2	BSCR rating 1	Based on Schedule XXIA, Column H
3	BSCR rating 2	Based on Schedule XXIA, Column H
4	BSCR rating 3	Based on Schedule XXIA, Column H
5	BSCR rating 4	Based on Schedule XXIA, Column H
6	BSCR rating 5	Based on Schedule XXIA, Column H
7	BSCR rating 6	Based on Schedule XXIA, Column H
8	BSCR rating 7	Based on Schedule XXIA, Column H
9	BSCR rating 8	Based on Schedule XXIA, Column H

b) <u>Corporate and sovereign bonds</u>

Line Item		Description
1	BSCR rating 0	Based on Schedule XXIA, Column H
2	BSCR rating 1	Based on Schedule XXIA, Column H
3	BSCR rating 2	Based on Schedule XXIA, Column H
4	BSCR rating 3	Based on Schedule XXIA, Column H
5	BSCR rating 4	Based on Schedule XXIA, Column H
6	BSCR rating 5	Based on Schedule XXIA, Column H
7	BSCR rating 6	Based on Schedule XXIA, Column H
8	BSCR rating 7	Based on Schedule XXIA, Column H

Line Item		Description
9	BSCR rating 8	Based on Schedule XXIA, Column H

c) Residential MBS

Line Item		Description
1	BSCR rating 0	Based on Schedule XXIA, Column H
2	BSCR rating 1	Based on Schedule XXIA, Column H
3	BSCR rating 2	Based on Schedule XXIA, Column H
4	BSCR rating 3	Based on Schedule XXIA, Column H
5	BSCR rating 4	Based on Schedule XXIA, Column H
6	BSCR rating 5	Based on Schedule XXIA, Column H
7	BSCR rating 6	Based on Schedule XXIA, Column H
8	BSCR rating 7	Based on Schedule XXIA, Column H
9	BSCR rating 8	Based on Schedule XXIA, Column H

d) Commercial MBS/asset-backed securities

Line Item		Description
1	BSCR rating 0	Based on Schedule XXIA, Column H
2	BSCR rating 1	Based on Schedule XXIA, Column H
3	BSCR rating 2	Based on Schedule XXIA, Column H
4	BSCR rating 3	Based on Schedule XXIA, Column H
5	BSCR rating 4	Based on Schedule XXIA, Column H
6	BSCR rating 5	Based on Schedule XXIA, Column H
7	BSCR rating 6	Based on Schedule XXIA, Column H
8	BSCR rating 7	Based on Schedule XXIA, Column H
9	BSCR rating 8	Based on Schedule XXIA, Column H

e) Bond mutual funds

Line Item		Description
1	BSCR rating 0	Based on Schedule XXIA, Column H
2	BSCR rating 1	Based on Schedule XXIA, Column H
3	BSCR rating 2	Based on Schedule XXIA, Column H
4	BSCR rating 3	Based on Schedule XXIA, Column H
5	BSCR rating 4	Based on Schedule XXIA, Column H
6	BSCR rating 5	Based on Schedule XXIA, Column H
7	BSCR rating 6	Based on Schedule XXIA, Column H
8	BSCR rating 7	Based on Schedule XXIA, Column H
9	BSCR rating 8	Based on Schedule XXIA, Column H

f) Preferred shares

Line Item		Description
1	BSCR rating 1	Based on Schedule XXIA, Column H
2	BSCR rating 2	Based on Schedule XXIA, Column H

Line Item		Description
3	BSCR rating 3	Based on Schedule XXIA, Column H
4	BSCR rating 4	Based on Schedule XXIA, Column H
5	BSCR rating 5	Based on Schedule XXIA, Column H
6	BSCR rating 6	Based on Schedule XXIA, Column H
7	BSCR rating 7	Based on Schedule XXIA, Column H
8	BSCR rating 8	Based on Schedule XXIA, Column H

g) Mortgage loans

Line Item		Description
1	Insured/guaranteed Mortgages	Based on Schedule XXIA, Column H
2	Other commercial and farm mortgages	Based on Schedule XXIA, Column H
3	Other residential mortgages	Based on Schedule XXIA, Column H
4	Mortgages not in good standing	Based on Schedule XXIA, Column H

h) Other asset classes

Line Item		Description
1	Infrastructure	Based on Schedule XXIA, Column H
2	Listed equity securities in developed markets	Based on Schedule XXIA, Column H
3	Other equities	Based on Schedule XXIA, Column H
4	Strategic holdings	Based on Schedule XXIA, Column H
5	Duration based	Based on Schedule XXIA, Column H
6	Letters of credit	Based on Schedule XXIA, Column H
7	Advances to affiliates	Based on Schedule XXIA, Column H
8	Policy loans	Based on Schedule XXIA, Column H
9	Equity real estate 1	Based on Schedule XXIA, Column H
10	Equity real estate 2	Based on Schedule XXIA, Column H
11	Collateral loans	Based on Schedule XXIA, Column H

Instructions Affecting Concentration Risk

1) $Concastclass_i$ shall only apply to an insurers' 10 largest counterparty exposures based on the aggregate of all assets relating to that counterparty;

2) A counterparty exposure shall be reported on the valuation of individually underlying assets (i.e., determined by application of the "look through" approach (as described in B6) for all amounts reported on the balance sheet);

3) A counterparty shall include all related or connected counterparties captured by either of the following criteria:

   a) Controller relationship: if a counterparty, directly or indirectly, has control of (as a result of its majority shareholding in or effective management) of a subsidiary company; or

   b) Economic interdependence: if one of the counterparties were to experience financial difficulties that directly or indirectly affect the ability of any or all of the remaining counterparties to perform their financial obligations (e.g., where a counterparty becomes unable to fund or repay certain financial, contractual obligations and, as a result, other counterparties are likely to be unable to fund or repay certain obligations imposed on them);

4) Amounts are to be reported on a statutory consolidated valuation basis.

D8. PREMIUM RISK

Background

D8.1 The premium risk charge is based on net premiums exposure measure for the following calendar year by predefined statutory lines of business and, if available, reporting net premiums exposure measure by predefined statutory geographic locations. Note that although net premiums exposure measures for property catastrophe business are inputted in this section, they do not enter the calculation of the premium risk charge. All capital requirements pertaining to catastrophe exposures are explicitly calculated in the Catastrophe Risk section.

D8.2 The first step of the calculation applies a statutory line of business-specific premium risk capital factor to the respective net premiums exposure measure amounts.

D8.3 The second step of the calculation applies a sum squared diversification credit based on 18 geographic zones. Note that this is not a necessary requirement in the premium risk calculation and, if used, this is not required for all lines of business.

D8.4 In the premium risk calculation, a correlation adjustment is determined to reflect the overall diversification of the premium risk. Finally, there is a further adjustment to reflect that some of the lines of business premiums, other than property catastrophe, include a loading for losses resulting from natural catastrophes. The appropriate risk charge for this portion of the premiums is calculated in the catastrophe risk section; the premium risk charge is reduced to avoid double counting.

Premium Risk Capital Charge

$$C_{Premium} = \sqrt{\sum_{i,j} CorrPrem_{i,j} \times C_i \times C_j} - avgpremcap \times \frac{avgannloss}{catlossratio};$$ where-

$CorrPrem_{i,j}$ = the correlation factors of the premium risk module correlation matrix;

i,j = the sum of the different terms should cover all possible combinations of *i* and *j*; and

C_i and C_j = risk charge *i* and risk charge *j*, which are replaced by the following:

$C_{premium_j}$, $C_{premium_j}$ by BMA-supplied premium risk capital charge:

$avgpremcap$ = weighted average premium risk capital charge factor for $BaseExp_i$, as defined below, (excluding the property catastrophe line of business and after correlation adjustment and allowing for geographic diversification);

$avgannloss$ = average annual loss estimated with catastrophe models;

$catlossratio$ = expected industry average catastrophe loss ratio;

$$C_{prem_i} = [(\chi_i^1 \times BaseExp_i) + (\chi_i^2 \times FPExisting_i) + (\chi_i^3 \times FPFuture_i)] \frac{ExposureMeasure_i}{geolineprem_i}$$ Where—

χ_i^1 = individual $BaseExp_i$ risk capital charge factor;

$BaseExp_i$ = the greater of premium written in the reporting period and the estimate of the net premiums to be earned by the insurer during the next 12-month accounting period;

$geolineprem_i$ = geographic diversification of premium exposure measure for the line of business $_i$;

χ_i^2 = individual $FPExisting_i$ risk capital charge factor;

$FPExisting_i$ = expected present value of premiums to be earned by the insurer after the next 12-month reporting period for existing qualifying multi-year insurance policies for line of business $_i$;

χ_i^3 = individual $FPFuture_i$ risk capital charge factor;

$FPFuture_i$ = expected present value of net premiums to be earned by the insurer after the next 12-month reporting period for qualifying multi-year insurance policies where the initial recognition date falls in the following 12 months for the line of business $_i$; and

$ExposureMeasure_i$ = the sum of $BaseExp_i$, $FPExisting_i$ and $FPFuture_i$.

Items

a) Lines of business – As categorised by the 24 predefined statutory lines of business.

Line Item		Description
1	Gross premium exposure measure	Column (1): Gross premium exposure measure by predefined statutory line of business and geographic zone, as reported on Schedule IVD, Column (G), lines (1) to (24)
2	Net premium exposure measure	Column (2): Net premium exposure measure by predefined statutory line of business and geographic zone, as reported on Schedule IVD, Column (F) lines (1) to (24)
3	Geo diversified written	Column (3): Net premium exposure measure by predefined statutory line of business and geographic zone, as reported on Schedule IVE, lines (1) to (24)
4	Geo diversified SCALAR	Column (4) geographic diversified written (3) divided by net premium exposure measure (2)
5	Geo diversified net base exposure	Column (5) net base exposure by predefined statutory line of business as reported on Schedule IVD Column (C) lines (1) to (24), multiplied by geo diversified SCALAR (4)

Line Item		Description
6	Geo diversified net FP (existing)	Column (6) net FP (existing) by predefined statutory line of business as reported on Schedule IVD Column (D) lines (1) to (24), multiplied by geo diversified SCALAR (4)
7	Geo diversified net FP (future)	Column (7) net FP (future) by predefined statutory line of business as reported on Schedule IVD Column (E) lines (1) to (24), multiplied by geo diversified SCALAR (4)
8	Capital factor 1 net base exposure	Column (8): supplied by BMA; premium charge factors for individual lines of business
9	Capital factor 2 net FP (existing)	Column (9): supplied by BMA; premium charge factors for individual lines of business
10	Capital factor 3 net FP (future)	Column (10): supplied by BMA; premium charge factors for individual lines of business
11	Required capital	Column (11): calculated using [Column (5) x Column (8)]+[Column (6) x Column (9)]+[Column (7) x Column (10)]; premium charge amounts for individual lines of business

b) Correlation adjustment calculation – Calculates a factor that determines how much credit is given for diversification of premium risk across all lines of business other than property catastrophe.

Line Item		Description
1	Required capital	Row(i): Total from (a) Column 11 above
2	Correlation adjustment	Row(ii): Reduction from correlation matrix for diversified premiums
3	Capital charge after correlation	Row(iii): Calculated using [Line 1 less Line 2]

c) Catastrophe premium adjustment calculation – Calculation reflects a reduction to the required premium risk capital for the "catastrophe-exposed" portion of the premium that is otherwise contemplated within the catastrophe risk capital charge. See Catastrophe Risk section for further information.

Line Item		Description
1	Average annual loss excluding property catastrophe (AAL)	Row (i): Pulled from Catastrophe Risk section; the expected net natural catastrophe loss (after reinsurance), including reinstatement premiums, for annual aggregate exposure to all risks and perils other than those relating to the property catastrophe line of business. See Catastrophe Risk section for further information.
2	Industry catastrophe loss ratio	Row (ii): Pulled from Catastrophe Risk section; used to calculate the embedded catastrophe premiums from lines of business other than property catastrophe. See Catastrophe Risk section for further information.
3	Average capital factor	Row (iii): Calculated using X/total from (a) column (5) above; where X is the 'capital charge after correlation' in (b) row (iii) but with the required capital in (b) row (1) recalculated as [(a) column (5) x (a) column (8)]

Line Item		Description
4	Catastrophe premium adjustment	Row(iv): Calculated using [Row (i)/row (ii) x row (iii)].

d) Required capital charge adjusted for catastrophe premium – Calculated using [(b) - (c)]; the premium risk capital charge (after correlation factor and catastrophe adjustment) is carried to the Summary section.

Instructions Affecting Premium Risk

D8.4a All reported net premium exposure measures as prescribed in Schedule IVD that are subject to capital charges within the premium risk charge shall be included;

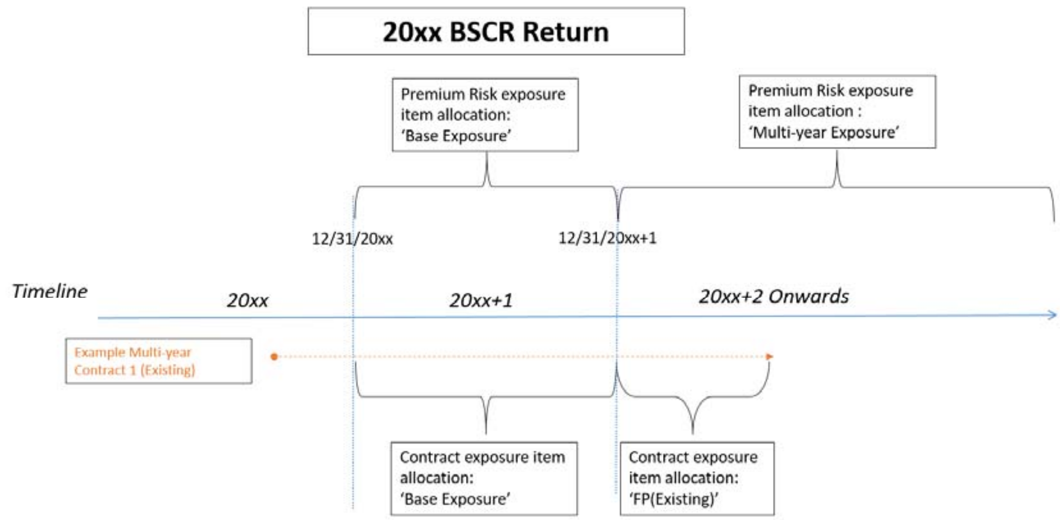
D8.4b “Qualifying multi-year insurance policies” means those insurance policies with (an earning) term longer than 12 months after allowing for the criteria prescribed by the Authority;

D8.4c All net premium exposure measures by statutory line of business shall be reported on a basis consistent with that prescribed in Schedule IVD;

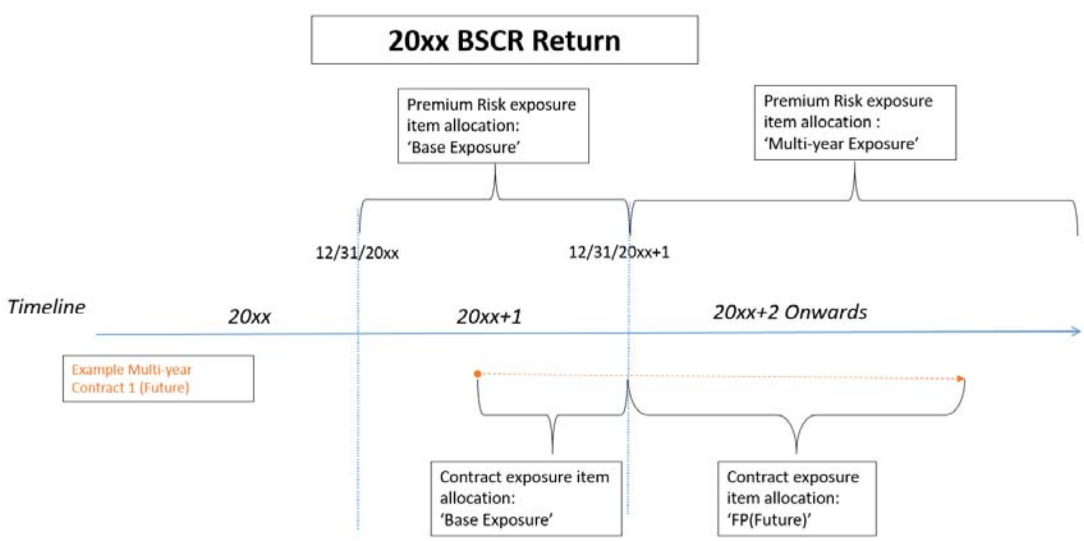
D8.4d An insurer may provide net premium exposure measures for all statutory lines of general business, or for particular statutory lines of general business, split by geographic zone as set out in Table 6D. $geolineprem_i$ is then derived from the total premium for that line of business by reducing the total by 25% times $\frac{\sum x_i^2}{(\sum x_i)^2}$ where x_i = the net premium exposure measure in the line of business for $Zone_i$; and where the summation covers all zones; and

D8.4e Amounts are to be reported on a consolidated basis.

D8.4f A graphical example of the earned premium allocation of a hypothetical existing qualifying multi-year contract is provided below. Premium earned during the next 12 months is classified as ‘Base Exposure’ while premium earned after the next 12 month period is classified as ‘FP (Existing)’.



D8.4g A graphical example of the earned premium allocation of a hypothetical future qualifying multi-year contract is provided below. Premium earned during the next 12 months is classified as 'Base Exposure' while premium earned after the next 12-month period is classified as 'FP (Future)'.



D9. RESERVE RISK

Background

D9.1 The reserve risk charge is based on the consolidated statutory net loss and loss expense provisions by predefined statutory lines of business and, if available, reporting net loss provision by predefined statutory geographic locations.

D9.2 The first step of the calculation applies a line of business-specific reserve risk capital factors to the respective reserve amounts.

D9.3 The second step of the calculation applies sum squared diversification credit based on 18 geographic zones. Note that this is not a requirement in the reserve risk calculation and, if used, this is not required for all lines of business.

D9.4 In the reserve risk calculation, a correlation adjustment is determined to reflect the overall diversification of the reserve risk.

Reserve Risk Capital Charge

D9.5 The reserve risk charge calculation can be summarised by the following formula:

$$\boxed{C_{reserve} = \sqrt{\sum_{i,j} CorrReserve_{i,j} \times C_i \times C_j}}$$

Where—

$CorrReserve_{i,j}$ = the correlation factors of the reserve risk module correlation matrix;

i,j = the sum of the different terms should cover all possible combinations of *i* and *j*;

C_i and C_j = risk charge *i* and risk charge *j*, which are replaced by the following:

$C_{reserve_i}$, $C_{reserve_j}$ by BMA-supplied reserve risk capital charge;

$$\boxed{C_{reserve_i} = \beta_i \times geolinersvs_i}$$

Where—

β_i = individual $geolinersvs_i$ risk capital charge factor;

$geolinersvs_i$ = geographic diversification of reserves for individual lines of business i;

Items

a) <u>Lines of business</u> – As categorised by the 24 predefined statutory lines of business.

Line Item		Description
1	Gross loss and loss expense provisions	Column (1): Gross loss and loss expense provisions by predefined statutory line of business, as reported on Schedule III, Lines (1) to (24). Total must tie to the gross loss and loss expense provisions of the statutory balance sheet (Form 1SFS (Consolidated), Line 17 (a).
2	Net loss and loss expense provisions	Column (2): Net loss and loss expense provisions by predefined statutory line of business and geographic zone, as reported on Schedule IIIA, lines (1) to (24). Total must tie to the net loss and loss expense provisions of the statutory balance sheet (Form 1SFS (Consolidated), Line 17(d) and should be input on an undiscounted basis.
3	Geo net loss and loss expense provisions	Column (3): Net loss and loss expense provisions by predefined statutory line of business and geographic zone, as reported on Schedule IIIA, lines (1) to (24). Total must tie to the net loss and loss expense provisions of the statutory balance sheet (Form 1SFS (Consolidated), Line 17(d) and should be input on a statutory balance sheet basis.
4	Capital factor	Column (4): Supplied by BMA; reserve charge factors for individual lines of business.
5	Required capital	Column (5): Calculated using [Column (3) x Column (4)]; reserve charge amounts for individual lines of business.

b) <u>Correlation adjustment calculation</u> – Calculates a factor that determines how much credit is given for diversification of reserve risk across all lines of business.

Line Item		Description
1	Required capital	Total from (a) Column 5 above
2	Correlation adjustment	Reduction from correlation matrix for diversified reserves
3	Capital charge after correlation	Calculated using [Line 1 less Line 2]

c) <u>Required capital charge</u> – Calculated using [(total of column (5) of (a)) - (correlation adjustment)]; the reserve capital charge (after correlation adjustment) is carried to the summary section.

Instructions Affecting Reserve Risk

D9.5a All reported net loss and loss expense provisions for the relevant year by the statutory line of business as prescribed in this Schedule are subject to capital charges within the reserve risk charge and shall be included;

D9.5b All reported net loss and loss expense provisions by statutory line of business shall be reported on a basis consistent with that used for purposes of statutory financial reporting;

D9.5c An insurer may provide loss and loss expense provisions exposure for all statutory lines of general business, or particular statutory lines of general business, split by geographic zone as set out in Table 6D. $geolinerss_i$ is then derived from the total loss and loss expense provisions for that line of business by reducing the total by 25% times $\frac{\sum x_i^2}{(\sum x_i)^2}$ where x_i = best estimate net loss and loss expense provisions in that line of business for $Zone_i$; and where the summation covers all zones; and

D9.5d Amounts are to be reported on a statutory consolidated basis.

D10. CREDIT RISK

Background

D10.1 Credit risks are partitioned into four categories: accounts and premiums receivable, all other receivables, particulars of reinsurance balances (current and future), and counterparty default risk for over-the-counter derivatives.

D10.2 Particulars of reinsurance balances is based on the greater of:

1) Current reinsurance balances receivable (as reported on Form 1SFS (Consolidated) lines 11(c) Reinsurance Balances Receivable, 12(c) Funds Held by Ceding Reinsurers, which are not reported on Schedule IIA, and 17(c) Total Reinsurance Recoverable Balance); and
2) Future reinsurance balances receivable (as calculated on the Credit Risk Schedule).

This approach allows new insurers that have not had claims and allow for a more reflective approach of reinsurance exposures in stressed circumstances.

D10.3 Where applicable, the amounts must reconcile to the appropriate line(s) of the insurer's Form 1SFS (Consolidated) or the schedules prescribed by or under the Prudential Standard Rules.

Credit Risk Capital Charge

D10.4 The credit risk charge calculation can be summarised by the following formula:

$$C_{credit} = \sum_i \delta_i \times debtor_i \times \mu_r + \text{CCROTC}$$

δ_i = BMA-supplied credit risk capital charge factor for the type of $debtor_i$;

$debtor_i$ = receivable amount from $debtor_i$ net of any collateral in favour of the insurer;

μ_r = additional diversification adjustment factor applied to reinsurance balances only taking into consideration diversification by number of reinsurers, equal to 40%.

CCROTC = counterparty default risk for over-the-counter derivatives calculated as per the following formula:

$$\boxed{CCROTC = \sum_i Max\left(0, MVDerivativeP_i - (1-\beta_i)Min\left(MVderivativeP_i, MVCollateral_i\right)\right) \times \alpha_i}$$

$MVDerivativeP_i$ = Market value of over-the-counter derivatives with positive market values and BSCR rating *i*,

β_i = BMA-supplied collateral factor;

α_i = BMA-supplied capital factor for the BSCR rating *i*;

$MVCollateral$ = market value of collateral of over-the-counter derivatives with positive market values and BSCR rating *i*.

Items

a) Receivables from clearing brokers

b) All other receivables

	Line Item	Statement Source –
1	Accrued investment income	Based on Form 1SFS (Consolidated), Line 9.
2	Balances receivable on sale of investments	Based on Form 1 SFS (Consolidated), Line 13(b).

c) (i) Particulars of reinsurance balances by BSCR rating - (i) amounts receivable on account of policies of reinsurance from any person, whether an affiliate or not, should be included; (ii) any amount included in 'Accounts and Premiums Receivable' and 'Digital Assets Held in Custody for Clients' should not be included; (iii) All uncollectible amounts, as determined by the insurer, should be deducted.

	Line Item	Statement Source – The Rules
1	BSCR rating 0	Based on Schedule XVIII Column E
2	BSCR rating 1	Based on Schedule XVIII Column E
3	BSCR rating 2	Based on Schedule XVIII Column E
4	BSCR rating 3	Based on Schedule XVIII Column E
5	BSCR rating 4	Based on Schedule XVIII Column E
6	BSCR rating 5	Based on Schedule XVIII Column E
7	BSCR rating 6	Based on Schedule XVIII Column E
8	BSCR rating 7	Based on Schedule XVIII Column E
9	BSCR rating 8	Based on Schedule XVIII Column E
10	Less: diversification adjustment	Based on Schedule XVIII Column E
11	Total	Sum of c(i) 1 to 10

c) (ii) Particulars of reinsurance balances for future premiums by BSCR rating

	Line Item	Statement Source – The Rules	
1	Premium risk capital charge (gross)	Based on premium risk capital charge calculated on a gross basis, in line with the prescription in (f)	
2	Premium risk capital charge (net)	Based on premium risk capital charge as calculated in section D7	
3	Premium risk capital charge (ceded)	Calculated using [line 1 less line 2]	
	Line Item	**Statement Source – The Rules**	**Debtor Allocation**
4	BSCR rating 0	c(i)1 BSCR Rating 0 / c(i) Total of BSCR Rating 0 – 8	Based on row (3) Premium Risk Capital Charge (Ceded)
5	BSCR rating 1	c(i)1 BSCR Rating 1 / c(i) Total of BSCR Rating 0 – 8	Based on row (3) Premium Risk Capital Charge (Ceded)
6	BSCR rating 2	c(i)1 BSCR Rating 2 / c(i) Total of BSCR Rating 0 – 8	Based on row (3) Premium Risk Capital Charge (Ceded)
7	BSCR rating 3	c(i)1 BSCR Rating 3 / c(i) Total of BSCR Rating 0 – 8	Based on row (3) Premium Risk Capital Charge (Ceded)

Line Item		Statement Source – The Rules	
8	BSCR rating 4	c(i)1 BSCR Rating 4 / c(i) Total of BSCR Rating 0 – 8	Based on row (3) Premium Risk Capital Charge (Ceded)
9	BSCR rating 5	c(i)1 BSCR Rating 5 / c(i) Total of BSCR Rating 0 – 8	Based on row (3) Premium Risk Capital Charge (Ceded)
10	BSCR rating 6	c(i)1 BSCR Rating 6 / c(i) Total of BSCR Rating 0 – 8	Based on row (3) Premium Risk Capital Charge (Ceded)
11	BSCR rating 7	c(i)1 BSCR Rating 7 / c(i) Total of BSCR Rating 0 – 8	Based on row (3) Premium Risk Capital Charge (Ceded)
12	BSCR rating 8	c(i)1 BSCR Rating 8 / c(i) Total of BSCR Rating 0 – 8	Based on row (3) Premium Risk Capital Charge (Ceded)
13	Less: diversification adjustment		Based on Schedule VIIII Column E

Instructions Affecting Credit Risk

D10.5 All accounts and premiums receivable and all other receivables that are subject to capital charges within the credit risk charge shall be included;

D10.6 All accounts and premiums receivable, other receivables from digital asset business, all other receivables and reinsurance recoverable balances shall be reported on a basis consistent with that used for purposes of statutory financial reporting;

D10.7 "Collateralised balances" for the purposes of this paragraph shall mean assets pledged in favour of the insurer relating to accounts and premiums receivable as prescribed by the BMA capital charge factors for $debtor_i$;

D10.8 Particulars of reinsurance balances shall be the greater of paragraphs D10.9 and D10.10 below;

D10.9 Particulars of reinsurance balances for the current year by BSCR rating are as follows:

1) The net qualifying exposure which is comprised of reinsurance balances receivable and reinsurance balances recoverable, less the corresponding reinsurance balances payable and other payables less the qualifying collateral issued in favour of the insurer in relation to the reinsurance balances;

2) The "net qualifying exposure" referenced in paragraph D10.9(1) above shall be subject to the BMA prescribed credit risk capital factor;

3) The total capital requirement relating to the reinsurance balances shall be reduced by a diversification adjustment of up to a maximum of 40%; and

4) The "diversification" adjustment" referenced in paragraph D10.9(3) above shall be determined by calculating 40% multiplied by one minus

the ratio of the largest net reinsurance exposure, on an individual reinsurer basis, to total net reinsurance exposure.

D10.10 Particulars of reinsurance balances for future premium by BSCR rating are as follows:

1) The premium risk capital charge (gross), as prescribed in D10.10(2) less the premium risk capital charge (net), as prescribed in D7, shall be referred to as "premium risk capital charge (ceded)". Such amount shall be allocated to the type of debtor ($debtor_i$) by BSCR rating net qualifying exposure measure as reported on Schedule XVIII;

2) The premium risk capital charge (gross) is calculated in the same manner as premium risk capital charge (net) using the gross premium exposure measure (Schedule IVD, Column G) rather than the net premium exposure measure (Schedule IVD, Column F) as the input $ExposureMeasure_i$. $ExposureMeasure_i$ is allocated to $BaseExp_i$, $FPExisting_i$ and $FPFuture_i$ for the premium risk capital charge (gross) calculation in the same proportions as in the premium risk capital charge (net) calculation;

3) The premium risk capital charge (ceded) shall be subject to the BMA prescribed credit risk capital charge factor;

4) The total capital requirement relating to the reinsurance balances shall be reduced by a diversification adjustment of up to a maximum of 40%; and

5) The "diversification adjustment" referenced in paragraph D10.10(4) above shall be determined by calculating 40% multiplied by one minus the ratio of the largest net reinsurance exposure, on an individual reinsurer basis, to total net reinsurance exposure; and

D10.11 Amounts are to be reported on a statutory consolidated valuation basis

D11. CATASTROPHE RISK

Background

D11.1 The catastrophe risk charge is based on insurer-specific catastrophe risk modelling output. All exposures and premiums used in the Probable Maximum Loss (PML) and Average Annual Loss (AAL) calculations should include amounts for second, third and subsequent events or losses following the initial loss event. Modelled losses should include demand surge, storm surge, fire following earthquakes and secondary uncertainty.

D11.2 The calculated catastrophe risk charge has two components. The first component is the average premium shortfall for the top 1% worst-case scenarios (i.e., at the 99.0% TVaR level).

D11.3 The second component is a credit risk charge for reinsurance recoverables under the 1% worst-case scenarios. Since the PML calculations use annual aggregate exposure for all risks, the formula uses an imputed total catastrophe premium in its calculation of the premium shortfall component. In addition to actual property catastrophe premiums, this imputed total catastrophe premium is based on the AAL divided by the industry catastrophe loss ratio as determined by the BMA.

Catastrophe Risk Capital Charge

D11.4 The catastrophe risk charge calculation can be summarised by the following formula:

$\boxed{C_{catastrophe} = NetPML - Netcatprem + CR_{PML}}$; Where —

$NetPML$ = net probable maximum loss;

$Netcatprem$ = Property catastrophe premium + (modeled AAL) / (estimated industry catastrophe loss ratio of 40.0%) for Class 4 and 3B insurers; or property catastrophe premium only for Class 3A insurers; and

CR_{PML} = Credit risk charge associated with reinsurance recoveries of ceded catastrophe losses is calculated as {(gross PML; minus net PML; minus arrangements with respect to property catastrophe recoverables); times (credit risk charge, equal to 10%, associated with reinsurance recoveries of ceded catastrophe losses)}:

a) All reported net PML, gross PML, AAL excluding property catastrophe, property catastrophe premium and arrangements with respect to property catastrophe recoverables that are subject to capital charges herein shall be included; and
b) The amount of collateral and other funded arrangements with respect to property catastrophe recoverables shall be reported and reduced by 2% to account for the market risk associated with the underlying collateral assets.

a) Gross probable maximum loss – Based on the insurer's catastrophe model, probable maximum gross natural catastrophe loss (prior to reinsurance) at the 99.0% TVaR level for annual aggregate exposure to all related risks and perils, including reinstatement premiums, for the year following the "relevant year".

b) Net probable maximum loss – Based on the insurer's catastrophe model, probable maximum net natural catastrophe loss (after reinsurance) at the 99.0% TVaR level for annual aggregate exposure to all related risks and perils, including reinstatement premiums, for the year following the "relevant year".

c) Property catastrophe premium – Copied from Premium Risk section; net base exposure for property catastrophe line of business as reported on Schedule IVD, Column (C), Line (1).

d) Credit risk capital factor – Supplied by the BMA; credit risk factor applied to ceded catastrophe losses at the 99.0% TVaR level equal to 10.0%.

e) Arrangements with respect to property catastrophe recoverables – Copied from Schedule V, Line (k)(v).

f) Credit risk charge – Calculated using [(a) - (b) – ((e) * 98%) x (d)]; ceded catastrophe losses times the catastrophe credit risk capital factor.

g) Catastrophe capital charge – Calculated using [(b) - (c) + (f)]; the catastrophe capital charge is carried to the Summary section.

D12. CAPITAL ADJUSTMENT

Background

D12.1 The capital adjustment charge represents:

1) The capital requirements for regulated non-insurance financial operating entities and shall comprise the capital adjustment;
2) Adjustment for loss-absorbing capacity of technical provisions; and

Adjustment for absorbing capital of deferred taxes, which is added to the BSCR (after correlation adjustment) to arrive at the BSCR. The BSCR will be used to determine an insurer's ECR for the relevant year, as reported in the Summary section of the BSCR model.

Capital Adjustment – Non-Insurance Financial Operating Entities

D12.2 The capital adjustment charge calculation for regulated non-insurance financial operating entities can be summarised by the following formula:

$C_{regulatoryadj}$ = Regulatory capital requirement for regulated non-insurance financial operating entities.

Items

D12.3 <u>Regulatory capital requirement for regulated non-insurance financial operating entities</u> – This capital adjustment charge shall be determined in accordance with Schedule XVI, where this amount shall be equal to the sum of the insurer's proportionate share of each registered entity's regulatory capital in accordance with the applicable solvency rules of the jurisdiction where the entity was licensed or registered.

Capital Adjustment – Management Actions

D12.4 The capital adjustment charge calculation for loss-absorbing capacity of technical provisions due to management actions can be summarised by the following formula:

$$\boxed{Adj_{TP} = -\max(\min(Basic\ BSCR - Basic\ nBSCR, FDB), 0)}$$

Where—

Basic BSCR = $\sqrt{\sum_{i,j} CorrBBSCR_{i,j} \times C_i \times C_j}$

Basic nBSCR = $\sqrt{\sum_{i,j} CorrBBSCR_{i,j} \times nC_i \times nC_j}$

$CorrBBSCR_{i,j}$ = the correlation factors of the Basic BSCR correlation matrix as determined by Table A in section D1;

C_i = risk module charge *i*, which is replaced by the following: C_{Market}, $C_{P\&C}$, C_{Credit};

C_{Market} = market risk module charge as determined by section D1.4;

$C_{P\&C}$ = P&C risk module charge as determined by section D1.5; and

C_{Credit} = credit risk module charge as determined by section D9.

nC_i = net risk module charge i, which is calculated the same way as C_i but by allowing the future discretionary benefits to change and by allowing managements actions to be performed in accordance with the criteria prescribed in section B5 and which is replaced by the following:

nC_{Market} , $nC_{\text{P\&C}}$, nC_{Credit};

FDB = net present value of future bonuses and other discretionary benefits.

Capital Adjustment – Deferred Taxes

D12.5 The capital adjustment charge calculation for loss-absorbing capacity of deferred taxes can be summarised by the following formula:

$$\boxed{C_{otheradj} = Min\left(\left(Basic\ BSCR + C_{operational} + C_{regulatoryadj} + Adj_{TP}\right) \times t, Limit, \left(Basic\ BSCR + C_{operational} + C_{regulatoryadj} + Adj_{TP}\right) \times 20\%\right)}$$

Where —

$Basic\ BSCR$ = Basic BSCR risk module charge as determined by section D1;

$C_{operational}$ = operational risk charge as determined by section D1.7;

$C_{regulatoryadj}$ = regulatory capital requirement for regulated non-insurance financial operating entities as determined by section D11.2;

Adj_{TP} = adjustment for the loss-absorbing capacity of technical provisions as determined by section D11.4;

t = insurer's standard federal tax rate;

$Limit$ = $PastLAC + CurrentLAC + FutureLAC$;

$PastLAC$ = loss carryback provision multiplied by t;

$CurrentLAC$ = current deferred tax liabilities minus current deferred tax assets;

$FutureLAC$ = risk margin as reported on Form 1EBS Line 18 multiplied by t;

E. APPENDIX A - GLOSSARY

Act – Insurance Act 1978.

Approved internal capital model – A model approved under paragraph 5 of the Rules.

Available statutory capital and surplus – total statutory capital and surplus, including subsequent capital contribution and "deductions". All capital contributions are to be approved by the BMA, and all adjustments are determined at the discretion of the BMA.

Average Annual Loss (AAL) – Based on insurer CAT models, means expected net natural catastrophe loss (after reinsurance), including reinstatement premiums, for annual aggregate exposure to all related risks and perils other than those relating to the property catastrophe line of business for the year following the "relevant year" as reported on Schedule V. The AAL should be calculated from the same underlying loss distribution used to determine the gross PML and net PML (excluding the property catastrophe component).

Bermuda Monetary Authority (BMA or Authority) – The BMA is the integrated regulator of the financial services sector in Bermuda. Established under the Bermuda Monetary Authority Act 1969, the Authority supervises, regulates and inspects financial institutions operating in or from within the jurisdiction. It also issues Bermuda's national currency; manages exchange control transactions; assists other authorities in Bermuda with the detection and prevention of financial crime; and advises the Government and public bodies on banking and other financial and monetary matters. The Authority develops risk-based financial regulation that it applies to the supervision of Bermuda's banks, trust companies, investment businesses, investment funds, fund administrators, money service businesses, corporate service providers, digital asset businesses, digital asset issuances and insurance companies. It also regulates the Bermuda Stock Exchange and Bermuda Credit Union.

Bermuda Solvency Capital Requirement (BSCR) – Establishes a measure of solvency capital that is used by the BMA to monitor the capital adequacy of IIGB insurers domiciled in Bermuda. The BSCR is determined by combining the calculated capital for each risk category (excluding operational risk) and applying a covariance adjustment with the square root rule, which is further adjusted to include insurer-specific operational risk and capital add-on.

BSCR ratio – The BSCR ratio is the ratio of the available statutory capital and surplus to the BSCR (after covariance adjustment).

Capital and solvency return – Such return relating to the insurer's risk management practices and to the information used by the insurer to calculate its ECR as may be prescribed by or under Rules made under section 6A of the Act.

CAT – Abbreviation of the word catastrophe.

Catastrophe risk – The risk of a single catastrophic event or series of catastrophic events that lead to a significant deviation in actual claims from the total expected claims.

Concentration adjustment factor –used in relation to the premium risk and the reserve risk. It is based on the ratio of the largest individual line of business amount to total amount. The factor will decrease as the number of lines of business increases to a minimum value of 60%.

Concentration risk – The risk of exposure to losses associated with inadequate diversification of portfolios of assets or liabilities.

Credit risk – Includes the risk of loss arising from an insurer's inability to collect funds from debtors.

Enhanced Capital Requirement (ECR) – Establishes a measure of solvency capital that the BMA uses to monitor the capital adequacy of IIGB insurers domiciled in Bermuda. It is equal to the higher of an insurer's approved internal capital model/BSCR or MSM.

ECR Ratio – The ratio of available statutory capital and surplus to the ECR.

Form 1SFS – Statutory balance sheet as defined by the BMA.

Form 2SFS – Statutory statement of income as defined by the BMA.

Form 8SFS – Statutory statement of capital and surplus as defined by the BMA.

Insurance (Technical Standards) (Class IIGB InsurerSolvency Requirement) Rules 2020, including any amendments thereto (Prudential Standard Rules) – Under section 6A of the Act, the BMA may make Rules prescribing prudential standards in relation to (a) ECR, (b) capital and solvency returns, (c) insurance reserves, and (d) eligible capital that must be complied with by Class IIGB insurers.

Legal risk – The risk arising from (a) an insurer's failure to comply with statutory or regulatory obligations, (b) failure to comply with its bye-laws, or (c) failure to comply with any contractual agreement.

Liquidity risk – The risk arising from (a) an insurer's inability to meet its obligations as they fall due or (b) an insurer's inability to meet such obligations except at excessive costs.

Market risk – The risk arising from fluctuations in values of, or income from, assets or in interest rates or exchange rates.

Non-proportional insurance – The coverage of risk that is not shared at a given layer or that attach above an insured layer.

Non-rated bonds – Bonds that have not been rated by AM Best, Standard & Poor's, Moody's, Fitch or equivalent agencies.

Operational risk – The risk of loss resulting from inadequate or failed internal processes, people and systems or external events, including legal risk.

Quoted – Assets that are carried at fair value quoted on an exchange or a determinable market.

Premium risk – The risk that premium is insufficient to meet future obligations.

Probable Maximum Loss (PML) – Based on insurer CAT models, the PML is the anticipated maximum loss that can occur with a certain level of probability. The BSCR utilises a probable maximum natural catastrophe loss at a 99.0% TVaR level for annual aggregate exposure to all related risks and all perils, including reinstatement premiums.

Rated bonds – Bonds rated with respect to the latest available AM Best, Standard & Poor's, Moody's, Fitch or equivalent agencies.

Regulatory action level – Defined by BMA's regulatory action guidelines.

Relevant year – In relation to an insurer, this means its financial year.

Reputational risk – Includes risk of adverse publicity regarding an insurer's business practices and associations.

Required capital and surplus – See Enhanced Capital Requirement.

Retrocessional contracts – Reinsurance contract whereby one reinsurer transfers all or part of the reinsurance risk that it has assumed or will assume to another reinsurer.

Schedule III – Schedule of loss and loss expense provisions by line of business as defined by the BMA.

Schedule IV – Schedule of premium written by line of business as defined by the BMA.

Schedule V – Schedule of risk management as defined by the BMA.

Schedule VI – Schedule of fixed income securities as defined by the BMA.

Schedule IX – Schedule of commercial insurer's solvency self-assessment as defined by the BMA.

Schedule X – Catastrophe risk return as defined by the BMA.

Schedule XI – Schedule of loss triangles (Schedule XI(a)) or reconciliation of net loss reserves (Schedule XI(b)) as defined by the BMA.

Schedule XII – Schedule of eligible capital as defined by the BMA.

Strategic risk – The risk of an insurer's inability to implement appropriate business plans and strategies, make decisions, allocate resources or adapt to changes in the business environment.

Tail Value-at-Risk (TVaR) – The conditional average potential, given that the loss outcome exceeds a given threshold.