BERMUDA MONETARY AUTHORITY

THE BERMUDA CAPITAL AND SOLVENCY RETURN

2018 INSTRUCTION HANDBOOK
FOR INSURANCE GROUPS

TABLE OF CONTENTS

A. OVERVIEW

A1. INTRODUCTION TO THE GROUP CAPITAL AND SOLVENCY RETURN

Introduction

A1.1 The capital and solvency return is an annual return relating to an insurance group's risk management practices and information used by an insurance group to calculate its Enhanced Capital Requirement (ECR) and Target Capital Level (TCL) as prescribed by Prudential Standard Rules made under section 6A of the Insurance Act 1978 (the Act). Every Class 4, Class 3B, Class 3A, Class E, Class D and Class C insurer, and Insurance Group shall submit to the Bermuda Monetary Authority (the BMA or the Authority) 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.

A1.2 The capital and solvency return is used to calculate an insurance group's ECR, an additional capital and surplus requirement imposed by Rules made under section 6A of the Act. The ECR of an insurance group shall be calculated at the end of its relevant year by the higher of the Bermuda Solvency Capital Requirement (the BSCR) model and an approved internal capital model, provided that the ECR amount is equal to or exceeds the Minimum Margin of Solvency (the MSM). The TCL of an insurance group is calculated as 120% of the ECR and although not a capital requirement per se, insurance groups 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 Long-Term insurance risks, in order to establish an overall measure of capital and surplus for statutory solvency purposes. The capital factor established for each risk element, when applied to that 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 insurance group-specific operational risk and capital add-ons, as assessed by the BMA, to finally produce the BSCR of an insurance group.

A1.4 An insurance group's available statutory capital and surplus divided by the BSCR gives the BSCR ratio. An insurance group'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 insurance group.

A1.5 The BSCR, ECR and TCL establish solvency capital levels that are used by the BMA to monitor the capital adequacy of Class 4, Class 3B, Class 3A Class E, Class D and Class C insurers and Insurance Groups.

A1.6 When completing the BSCR model, the insurance group should be advised of the following:

	Requirement	**Consolidated**	**EBS**
1	Cover Sheet and Solvency Certificate	X	
2	Financial Condition Report (With EBS valuations were applicable)	X	
3	Form 1, 2 and 8 (Based on the insurance group's GAAP statements less the prudential filters)	X	
4	Form 1EBS (Following the Prudential Standard Rules and the principles found in the Guidance Note – For Statutory Reporting)		X
5	Schedules II, IIA, III, IIIA, IV, IVA, IVB, IVC, V, VI, VII, VIII, VIIIA, XVIII, XIX, XX and XXI	X	X
6	Governance Structure (Schedule V(a))	Unconsolidated*	
7	Group Structure (Schedule V(b))	X	
8	Intra-Group Transactions (Schedule V(c))	X	
9	Stress Scenarios (Schedule V(e))	X	
10	LT Modified Coinsurance Arrangements (Schedule V(f))	X	
11	Deposit Assets & Liabilities (Schedule V(k))	X	
12	GISSA (Schedule IX); *Note Capital Charges on a EBS basis	X	X*
13	Catastrophe Risk Return (Schedule X)	X	
14	Schedule of Regulated Non-Insurance Financial Entities (Schedule XIA)	X	
15	Schedule of Unregulated Entities Where Parent Exercises Control (Schedule XIB)	X	
16	Schedule of Unregulated Entities Where Parent Exercises Significant Influence (Schedule XIC)	X	
17	Schedule of Entities Capital Deducted From Available Capital and Surplus (Schedule XID)	X	
18	Schedule of Group Solvency (Schedule XII)	X	
19	Eligible Capital (Schedule XIII)		X
20	Schedules IIB, IIC, IID, IIE, IIF, IVD, IVE, XXA, XXIA, XXIII Are highlighted in yellow and refer to the additional schedules for completing the BSCR methodology for the 2019 year-end and beyond.		X

	This is **not** required for the 2018 year-end and has been included for informational purposes only.		

*Governance Structure (Schedule V(b)) insurers are to provide total assets, net assets, gross premiums written, and net premiums written on a unconsolidated basis for each entity.

Purpose

A1.7 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.

A1.8 The capital and solvency return contains diverse risk elements of an insurance group's operation and will likely require the participation of experienced individuals within the accounting, finance, and actuarial areas of the insurance group. In order to ensure accurate completion, designated insurers of the insurance group are highly advised to refer to this instruction handbook.

Overview

A1.9 Forms 1, 2, and 8 and are published in the Insurance (Group Supervision) Rules 2011. The filing guidance relating to Form 1EBS (refer to Schedule XIV for format and guidance) and Schedules II, IIA, III, IIIA, IV, IVA, IVB, IVC, V, V(a), V(b) V(c), V(e), V(f), V(g), V(k), VI, VII, VIII, VIII(a), IX, X, XIA, XIB, XIC, XID, XII, XIII, XVI, XVII, XVIII, XIX, XX, XXI and operational risk is published in the Prudential Standard Rules. The electronic copy of Forms 1, 2, 8 and Form 1EBS, and Schedules II, IIA, III, IIIA, IV, IVA, IVB, IVC, V, V(a), V(b) V(c), V(e), V(f), V(g), V(k), VI, VII, VIII, VIII(a), IX, X, XIA, XIB, XIC, XID, XII, XIII, XVI, XVII, XVIII, XIX, XX, XXI and operational risk are included in the capital and solvency return and have been appropriately linked to the BSCR model, where applicable

A1.10 Also included is an appendix containing a glossary of terms that is 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

A1.11 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 to the capital factors. Any such changes will be communicated to the designated insurer of the insurance group in a timely fashion, in order to allow adequate time for designated insurer to collect any additional information that may be required.

Work papers and Supporting Documents

A1.12 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

A1.13 Questions pertaining to the content or meaning of any of the items in this report should be addressed to riskanalytics@bma.bm.

A2. SUBMISSION

A2.1 **Both** an **electronic version** and **printed version** of the capital and solvency return should be forwarded to the BMA on or before its specified filing date. Insurance Groups are advised to refer to the BSCR E-Filing Manual, available on the BMA website, for guidance on electronic filing. Insurance groups 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 form and schedule, applicable.

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

Additional Guidance

A2.i. If the designated insurer of the insurance group 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 > Document Center > Reporting Forms and Guidelines > Insurance

A2.ii. If you receive Error #403 or #12029 after you click Submit please create a rule on your firewall telling the document to use port 450. This may require IT assistance. We strongly encourage you to configure your firewall settings to allow for electronic submission as this is the most secure and convenient way to file. You may contact riskanalytics@bma.bm to coordinate testing.

A2.iii. 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 hyperlinks to each of the tabs in the model.

A3.2 Insurance groups 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 Insurance groups can attach any necessary files through the Attachments tab, up to ten files for each category provided. When an attachment is provided, the insurance group 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. GROUP INFORMATION

Items

A7.1 Insurance Group Name — Input the name of the insurance group.

A7.2 Name of the Parent Company — Input the name of the parent company which is the head of the group.

A7.3 Place of Incorporation of Parent Company — Input the jurisdiction where the parent company is incorporated or licensed.

A7.4 Designated Insurer Name — Input the name of the specified insurer, licensed in Bermuda, which is a member of the group.

A7.5 Registration No. — Input the corresponding registration number of the designated insurer, as it appears in the designated insurer's Certificate of Registration.

A7.6 Contact Person Information — Input the insurance group'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 the contact person also has the responsibility to ensure that all amounts reported in the group capital and solvency return respond to the group's statutory financial return, where appropriate.

A8. CAPITAL AND SOLVENCY RETURN DECLARATION

A8.1 The capital and solvency return declaration should be signed and dated by two Directors, one of which may be the chief executive, and either the chief risk officer or chief financial officer of the parent company.

A8.2 The original sign-off should be submitted to the BMA along with the printed version of the capital and solvency return.

B. ADDITIONAL SUPPORTING SCHEDULES

B1.1 Included in the capital and solvency return are the Cover Sheet and Solvency Certificate which is to be completed in its entirety, however the Financial Condition Report is not included in the model and this handbook provides guidance of the requirements that is to be included in the submitted.

B2. COVER SHEET

Background

B2.1 To provide the Authority with details of the insurance group's organisational structure and details to review the statutory statements, the Cover Sheet is to provide more additional information to better assess the insurance group.

Items

Line Item		Description
a	Name of Insurance Group	Row (1) The name of the insurance group shall automatically populate based on the name entered in the Information Sheet tab.
b	Designated Insurer Contact Information	Row (2) The name and address of the designated insurer and the contact person:
c	Competent Authorities Contact Information	Row (3) The name and address of other competent authorities supervising other companies that are members of the insurance group:
D	Certificate of Registration Approved Conditions	Row (4) The Certificate of Registration Approved Conditions is to be entered based on the conditions stipulated on approved certificate of registration. This includes the start date, end date and condition description.
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	Nature of Business	Row (6) Confirmation whether the insurance business carried on is general business or long-term business or both; and

B3. SOLVENCY CERTIFICATE

Background

B3.1 To provide the Authority with approval from the directors that the information contained in the capital and solvency return have been reviewed and confirmed of the following items:

Items

Line Item		Description
a	Name of Insurance Group	Row (1) The name of the insurance group (this information is automatically populate based on the name entered in the Group Information Sheet tab).
b	Statement Availability	Row (2) whether or not the statements are available at the designated insurer's principal office in Bermuda pursuant to Rule 28 or, as the case may be, have been filed pursuant to Rules 23(9) and 24 to 27;
c	Regulation and Direction Compliance	Row (3) whether or not the group has complied with every direction issued by the Authority under the Act, rules, any regulations or legislation pertaining to it;
d	Minimum Margin of Solvency	Row (4) whether the group has complied with the minimum margin of solvency in accordance with these Rules;
e	Statutory Capital and Surplus	Row (5) whether the group has complied with the requirements of the available statutory capital and surplus in accordance with Rules 22(1) and 22(3);
f	Group Statutory Assets	Row (6) the aggregate value of the group's assets as shown in the group statutory balance sheet for the relevant year;
g (i)	Group Statutory Assets Valuation	Row (7) that the group statutory balance sheet assets value was determined in accordance with the requirements of the Act and of any applicable Rules pursuant to Rule 24(2);
g (ii)	Group Statutory Assets Valuation	Row (8) that the value of the group's assets at the end of the relevant year was in the aggregate at least equal to the group statutory balance sheet assets value;
h	Group Statutory Capital & Liabilities	Row (9) whether in the opinion of those signing the certificate the aggregate amount of the group's liabilities at the end of the relevant year (after taking into account all prospective and contingent liabilities, but not liabilities in respect of share capital) is not more than the aggregate amount of the liabilities as shown in the group's statutory financial statements for that year;

Line Item		Description
i	Group Statutory Capital & Surplus	Row (10) the aggregate amount of the statutory capital and surplus as shown in the group statutory statement of capital and surplus for the relevant year;
j	Currency Used	Row (11) whether the currency in which amounts in the group's statutory financial statements for the relevant year have been shown;
k	Exchange Rate	Row (7) the rate of exchange used, in compliance with Rules 23(7), 24(3) and 26(3), for the purposes of any statement called for by these Rules.

a. Confirmation of Corrective Action

Line Item		Description
3	Confirmation of Corrective Action	Row (1) If any question in sub-paragraph (1)(b), (c), (d), (e), (f), (g) or (h) of this paragraph has been answered in the negative, whether or not the parent company has taken corrective action

B4. FINANCIAL CONDITION REPORT

Background

B4.1 To assist with Bermuda being a jurisdiction committed to the principles of transparency to policyholders, beneficiaries and counterparties, the BMA has required Insurance Groups, Class 4, Class 3B, Class 3A, Class C, Class D and Class E insurers to submit a Financial Condition Report with details of inter alia; measures governing the business operations, corporate governance framework, solvency and financial performance of a commercial insurer.

B4.2 The Financial Condition Report is an opportunity for an insurance group to describe its business to the public in relation to the insurance group's business model, whereby the public may make an informed assessment on whether the business is run in a prudent manner. The presentation of the Financial Condition Report is not templated by the BMA. Insurers are expected to prepare the Financial Condition Report in accordance with the requirements per the Insurance (Public Disclosure) Rules 2015.

B4.3 A copy of the Financial Condition Report shall be published on the insurance group's website within 14 days of the date the report was filed with the BMA. If an insurance group does not have a website, the insurance group is to provide the public a copy of a Financial Condition Report within ten days of receipt of a request made in writing.

Items

a. Business and Performance - particulars regarding the organisational structure, insurance business activities and financial performance

Line Item	Description
a	Name of the insurance group;
b	Name and contact details of the group supervisor;
c	Name and contact details of the approved group auditor;
d	A description of the ownership details including proportion of ownership interest of the insurance group;
e	A group structure chart detailing the group structure;
f	Insurance business written by business segment and by geographical region by the insurance group during the reporting period;

Line Item	Description
g	Performance of investments, by asset class and details on material income and expenses incurred by the insurance group during the reporting period;
h	Any other material information.

b. Governance Structure - particulars of corporate governance, risk management and solvency self-assessment frameworks

Line Item	Description
a	Parent Board and Senior Executive: i. a description of the structure of the parent board and senior executive, the roles, responsibilities and segregation of these responsibilities;
a	ii. a description of remuneration policy and practices and performance based criteria governing the parent board, senior executive and employees;
a	iii. a description of the supplementary pension or early retirement schemes for members of the insurance group, the board and senior executive; and
a	iv. any material transactions with shareholder controllers, persons who exercise significant influence, the parent board or senior executive.
b	Fitness and Propriety Requirements: i. a description of the fit and proper process in assessing the parent board and senior executive; and
b	ii. a description of the professional qualifications, skills, and expertise of the parent board and senior executives to carry out their functions.
c	Risk Management and Solvency Self-Assessment: i. a description of the insurance group’s risk management process and procedures to effectively identify, measure, manage and report on risk exposures;
c	ii. a description of how the risk management and solvency self-assessment systems are implemented and integrated into the insurance group’s operations; including strategic planning and organisational and decision making process;
c	iii. a description of the relationship between the solvency self-assessment, solvency needs, and capital and risk management systems of the insurance group; and
c	iv. a description of the solvency self-assessment approval process including the level of oversight and independent verification by the parent board and senior executives.
d	Internal Controls: i. a description of the internal control system; and
d	ii. a description of how the compliance function of the insurance group is executed;

Line Item	Description
e	Internal Audit - a description of how the internal audit function of the insurance group is implemented and how it maintains its independence and objectivity when conducting its functions.
f	Actuarial Function – a description of how the insurance group's actuarial function is implemented.
g	Outsourcing: i. a description of the outsourcing policy and information on any key or important functions that have been outsourced; and
g	ii. a description of material intra-group outsourcing.
h	Any other material information.

c. Risk Profile - particulars on exposures on underwriting risk, market risk including off balance sheet exposures, credit risk, liquidity risk, operational risk and other material risks

Line Item	Description
a	Material risks that the insurance group is exposed to, including how these risks are measured and any material changes that have occurred during the reporting period;
b	How risks of the insurance group are mitigated including the methods used and the process to monitor the effectiveness of these methods;
c	Material risk concentrations;
d	How assets are invested by and on behalf of the insurance group in accordance with the prudent person principle as stated in paragraph 12(1)(a) of these Rules;
e	The stress testing and sensitivity analysis to assess material risks, including the methods and assumptions used by the insurance group, and the outcomes;
f	Any other material information.

d. Solvency Valuation - particulars of the valuation bases, methods and assumptions on the inputs used to determine solvency

Line Item	Description
a	The valuation bases, assumptions and methods used to derive the value of each asset class;
b	The valuation bases, assumptions and methods used to derive the value of technical provisions and the amount of the best estimate. The amount of the risk margin as well as the level of uncertainty to determine the value of the technical provisions should be included;
c	A description of recoverables from reinsurance contracts, including Special Purpose Insurers and other risk transfer mechanisms;
d	The valuation bases, assumptions and methods used to derive the value of other liabilities;
e	Any other material information.

e. Capital Management- particulars regarding an assessment of capital needs and regulatory capital requirements

Line Item	Description
a	Eligible Capital: i. a description of the capital management policy and process to determine capital needs for business planning, how capital is managed and any material changes during the reporting period;
a	ii. a description of the eligible capital of the insurance group categorised by tiers in accordance with the Eligible Capital Rules;
a	iii. a description of the eligible capital insurance group categorised by tiers, in accordance with the Eligible Capital Rules used to meet the Enhanced Capital Requirement (ECR) and the Minimum Margin of Solvency (MSM) defined in accordance with section (1) (1) of the Act;
a	iv. confirmation that insurance group's eligible capital is subject to transitional arrangements as required under the Eligible Capital Rules;
a	v. Identification of any factors of the insurance group affecting encumbrances affecting the availability and transferability of capital to meet the ECR;
a	vi. Identification of ancillary capital instruments that have been approved by the Authority;
a	vii. Identification of differences in shareholder's equity as stated in the financial statements versus available statutory capital and surplus.
b	Regulatory Capital Requirements: i. Identification of the amount of the insurance group ECR and MSM at the end of the reporting period;
b	ii. Identification of any non-compliance by the insurance group with the MSM and the ECR;
b	iii. a description of the amount and circumstances surrounding the insurance group's the non-compliance, the remedial measures taken and their effectiveness; and

Line Item	Description
b	iv. where the non-compliance has not been resolved, a description of the amount of the non-compliance at the end of the reporting period.
c	Approved Internal Capital Model used to derive the ECR: i. a description of the purpose and scope of the business and risk areas where the Group BSCR Model is used;
c	ii. where a partial internal model is used, a description of how it is integrated with the Group BSCR Model;
c	iii. a description of methods used in the Group BSCR Model to calculate the ECR;
c	iv. a description of aggregation methodologies and diversification effects;
c	v. a description of the main differences in the methods and assumptions used for the risk areas in the internal model versus the Group BSCR Model; and
c	vi. a description of the nature and suitability of the data used in the Group BSCR model;
c	vii. any other material information.

f. <u>Significant Event – particulars and explanations of a significant event</u>

Line Item	Description
a	a description of the significant event;
b	approximate date(s) or proposed timing of the significant event;
c	confirmation of how the significant event has impacted or will impact, any information provided in the most recent financial condition report filed with the Authority;
d	Any other material information.

Additional Guidance

<u>Item (i)(g) Business and Performance – Investment Performance and Material Income & Expenses</u>

B4.i. For item (i)(g) Business and Performance, the insurance group shall provide details of the investment performance for the reporting period only. Material Income & Expenses shall be for the reporting period only and include all activities of the insurance group (underwriting, investment, etc.).

B5. ASSETS QUALIFYING FOR RISK MITIGATING PURPOSES

Background

B5.1 In order to promote good risk management and increase risk sensitivity, the scope of risk mitigation in BSCR is extended by allowing insurance groups to explicitly take into account their hedging programmes within market risk calculations, subject to certain rules and restrictions.

B5.2 Credit for risk mitigating effect in BSCR calculations is only allowed if the risk mitigation techniques fulfill a set of criteria set out in the next section.

Instructions

B5.3 The calculation of the ECR will allow for the effects of risk mitigation techniques through a reduction in capital requirements commensurate with the extent of risk mitigation notwithstanding the provisions set in this section.

B5.4 The ECR calculation for market risk is made on the basis of 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 programs which can only be appropriately applied in a context where capital charges are being stochastically calculated.

B5.5 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 insurance groups may take into full account the effect of their dynamic hedging programs as long as they comply with the provisions set in paragraphs B5.6 and B5.9 below. In all other cases, the risk mitigating effect of dynamic hedging programs will be subject to the provisions set in paragraphs B5.6–B5.8 and thus taken into account in a limited manner.

B5.6 When calculating the ECR, insurance groups 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 insurance group has taken all appropriate steps to ensure the effectiveness of the arrangement and to address the risks related to that arrangement;
d) The insurance group is able to monitor the effectiveness of the arrangement and the related risks on an ongoing basis;

e) The calculation of the ECR makes 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 insurance group will receive the protection in the cases specified by the contracting parties.
g) The insurance group 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;
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.

B5.7 Only risk-mitigation techniques that are in force for at least the next 12 months and which meet the qualitative criteria set out in paragraph B5.6 shall be fully taken into account 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 B5.6 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.

B5.8 Where contractual arrangements governing the risk-mitigation techniques will be in force for a period shorter than the next 12 months and the insurance group 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 insurance group 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, which is outside of the control of the insurance group. Where the replacement of the risk-mitigation technique is conditional on any future event, that is within the control of the insurance group, 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 insurance group 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.

h) The hedge effectiveness and any related risks are monitored on an ongoing basis.

B5.9 In the cases of insurance groups 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 insurance group has a written policy on portfolio rebalancing.

b) The portfolio rebalancing shall be realistic based on actions undertaken previously by the insurance group 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.

f) The hedge effectiveness and any related risks are monitored on an ongoing basis.

B6. MANAGEMENT ACTIONS

Background

B6.1 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).

B6.2 Management actions are relevant for products where profits are shared with policyholders, for example participating or "with-profits" products. This means that management actions, in the sense used here, are mainly relevant for Long-Term business only.

B6.3 For BSCR purposes, allowable management actions will be confined to actions reducing or increasing liabilities for future bonuses or other 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.

B6.4 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.

B6.5 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 insurance group can do to reduce its discretionary liabilities is to reduce the profit sharing – policyholder dividends, credited rate – to zero (in all future scenarios), which corresponds to FDB going to zero.

Instructions

B6.6 Management actions are confined to actions reducing or increasing liabilities for future bonuses or other discretionary benefits.

B6.7 Management actions must comply with all the requirements of paragraph 196 of the Guidance Notes for Commercial Insurers and Groups Statutory Reporting Regime (30th November 2016).

B6.8 Given the modular structure of the BSCR standard formula, management actions are to be considered in each applicable risk calculation separately.

B6.9 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 in the calculation of effective durations for liabilities.

B6.10 The shock-based components of the BSCR standard formula are based on the impact of instantaneous stresses (equity risk, interest rate and liquidity risk calculated under the alternative approach, and currency risk), and insurance groups 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. However, future management actions may be taken into account after the instantaneous shocks as a response to the shocks.

B6.11 If management actions are used, the insurance group needs to ensure that the effects of specific management actions are not effectively counted multiple times when the different scenario components are aggregated into total capital requirement.

Loss absorbing capacity of future bonuses and other discretionary benefits

B6.12 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.

B6.13 The *gross* 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 gross best estimate liabilities to the base case best estimate liabilities. The gross capital requirement cannot be less than zero.

B6.14 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.

B6.15 The *gross* BSCR (post diversification) ($BSCR^{div}$) is calculated by aggregating the gross capital requirements using the relevant correlation matrices.

B6.16 The *net* BSCR (post diversification) ($nBSCR^{div}$) is calculated by aggregating the net capital requirements using the relevant correlation matrices.

B6.17 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.

B6.18 The gross capital requirements per risk shall be calculated by keeping the future discretionary benefits unchanged at the best estimate (base scenario) level.

B6.19 The net capital requirements per risk shall be calculated by allowing the future discretionary benefits to change as a result of a shock.

B6.20 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).

B6.21 The procedure as described above requires calculating the relevant capital charges twice: with and without management actions. Typically, this would mean that the insurance group 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 insurance group 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

B6.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.

B6.ii. With regards to paragraph B6.10, 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 modeling realistic time required to implement any management action). Loosely put, the stresses are assumed to happen "overnight", and management actions can be taken immediately on "day 1" afterwards.

B6.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: For example, 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

B6.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.

B6.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.

B6.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).

B6.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 by aggregating individual risk charges without management actions, and the latter is derived by aggregating individual risk charges with management

[3] The overall significance of premium increases is, in any case, mitigated by the fact that if the insurance group 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 insurance group does have an ability to change the premiums, but only in a very limited way.

actions (using the relevant correlation matrices). This is done on the Summary tab of the BSCR model.

B6.viii. However, to avoid double-counting the same management actions in multiple separate risk modules, a cap to the overall credit for management actions needs to be imposed. The cap is equal to the initial reserve for Future Discretionary Benefits (FDB), which needs to be entered in cell M118 on the Summary tab.

B6.ix. The overall adjustment for management actions, subject to the cap, is then automatically calculated in cell M119 of the Summary tab, and gets deducted from the final BSCR (in cell M63).

B7. LOOK-THROUGH

Background

B7.1 Previously look-through was allowed in BSCR in concentration risk calculation. To more properly 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).

B7.2 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
d) No look-through – capital charge for other equities/other assets used

Instructions

B7.3 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.

B7.4 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;
e) Derivatives.

B7.5 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 B7.4a) within other risk calculations; for example, 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 getting the 20% (strategic holdings, duration based) equity charge each.

B7.6 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 application of the look through must be consistent with the EBS rules.

B7.7 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.

B7.8 Where conditions of paragraph B7.7 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.

B7.9 Where no look-through is possible and neither the target-based approach of paragraph B7.7 nor the limit-based approach of paragraph B7.8 can be applied, the whole investment shall be treated as an equity holding of type "Other" for capital charge purposes.

B7.10 Insurance groups should perform a sufficient number of iterations of the look-through approach, where appropriate (e.g. in the case of fund of funds), to properly capture all material risk.

Additional Guidance

B7.i. To illustrate the application of the limit-based approach of paragraph B7.8, consider the following hypothetical example: For a combination fund having allocation limits of, say, 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-, in order to produce the most conservative capital charge consistent with the limits.

B7.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).

B7.iii. As set out in B7.4, 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 vs. 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.

Guidance – BSCR Model

B7.iv. 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.

B7.v. If investments are looked-through, the amounts shown in different risk calculations do not match the balance sheet classifications any more.

a) As a simple example, consider a mixed mutual fund with market value $100, consisting of 60% equities and 40% corporate bonds, and assume it's 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, say, 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.

B7.vi. 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 on one hand; and a reconciliation between Schedules IIB-IIF and the risk calculations (equity, interest rate risk) on the other hand.

B7.vii. To illustrate the investment reconciliation tab, consider the example of paragraph B7.v above.

a) The opening balance on line 1 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-trough was classified in the balance sheet. In the case of the example, the whole $100 fund investment was under equity in balance sheet; hence $100 would be entered in cell F13 (balance sheet amounts reported under equities). However, 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 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.

B8. DEFINITIONS

B8.1 **Developed Markets** - "Developed markets" means regulated markets in countries which are members of the Organization for Economic Co-operation and Development (OECD) or the European Economic Area (EEA), or in Hong Kong or Singapore

B8.2 **Duration based**: means equity securities listed on developed markets (refer to section B8.1), 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 B8.5), 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).

B8.3 **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 for 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 take-or-pay contract;
         4. the level of output or the usage and the price shall independently meet one of the following criteria:
            a. it is regulated,
            b. it is contractually fixed,
            c. it is 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 which 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;
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.
   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 in 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.
   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 which 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 means physical structures or facilities, systems and networks that provide or support essential public services.

B8.4 **Qualifying unlisted equity investments** – are defined as:
(i) direct investments in the equity of unlisted companies; or

(ii) equity investments in unlisted portfolio companies resulting from the look-through of private equity funds or private equity funds of funds;

where the investments fulfill all of the following conditions:

1. Criteria on (underlying) equity investments:
    a. Investments are in the common equity of companies that are unlisted.
    b. 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. Eligible country here is defined as Bermuda or a country such that, if the company was listed in the stock exchange of the country, the listed equity of the company would qualify as Type 1 equity as set out in these Instructions.
    c. The companies have been larger than a small-sized enterprise in the last three years.
        i. For the purposes of this paragraph, a "small-sized enterprise" is defined as an enterprise which employs fewer than 50 persons and whose annual turnover and/or annual balance sheet total does not exceed USD 10 million.
2. Criteria on vehicle (only for fund-type investments)
    a. The fund is closed-end.
    b. The fund does not use leverage, with the following exceptions which are allowed:
        i. borrowing arrangements entered into if these are temporary in nature and are fully covered by contractual capital commitments from investors in the fund;
        ii. derivative instruments used for currency hedging purposes that do not add any incremental exposure, leverage or other risks.
    c. The fund meets the following requirements:
        i. 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.
        ii. The investment strategy includes the intention to remain invested in the underlying companies for a number of years.
        iii. 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 governance of the company with the aim to bring about a significant development or transformation.
    d. The insurance group has all the information necessary to assess the performance of the fund manager (e.g. profit & 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.
    e. The insurance group invests through several independent fund managers to avoid undue concentration.
3. Criteria on own risk management

a. Fund-type investments: the following requirements should be met:
   i. The insurance group computes the portfolio beta whenever BSCR is calculated.
   ii. The insurance group follows a due diligence process prior to investing in the fund, including but not limited to:
      1. qualitative and quantitative analysis of the companies in which the manager has invested with its prior funds;
      2. obtaining information on how the fund is managed and the processes followed before investing.
   iii. The insurance group assesses the fitness of the fund manager on an on-going basis.
   iv. The insurance group benchmarks the performance of the fund against comparable funds.
   v. There are regular and reliable reporting lines between the fund manager and the insurance group.
   vi. The insurance group 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).
   vii. The insurance group verifies that the manager of the fund regularly interacts with the management teams of the companies the fund invests in.
b. Direct investments: the following requirements should be met:
   i. The insurance group computes the beta whenever BSCR is calculated.

4. Similarity criterion
   a. The approach can only be applied for portfolios where any equity investment does not represent more than 10 % of the portfolio value.
   b. The approach cannot be applied to financial companies.
   c. The beta of the unlisted equity portfolio is determined via the following steps:
      i. The hypothetical beta for each individual unlisted equity investment is calculated using the function set out below.
      ii. The portfolio beta is calculated as the average of the individual betas weighted by the book values of the equity investments.
   d. The beta for direct unlisted equity investments is calculated in the same way as the beta for individual portfolio companies above.
   e. The similarity criterion is met if the beta of the portfolio or direct investment does not exceed a cut-off value of 0.80.
   f. 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 multiplied by 100; e.g. a ROE figure of 15.5% (i.e. 0.155 in decimal form) would be entered as '15.5' in the formula.

g. In the above formula, "Avg" means 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 has to 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.

B8.5 **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.

B8.6 **Selected Mutual funds** - defined as units or shares of alternative investment funds authorised as European Long-Term Investment Funds in accordance with Regulation (EU) 2015/760, of 29th April 2015, or units or shares of collective investment undertakings which are qualifying social entrepreneurship funds in accordance with article 3(b) of Regulation (EU) 346/2013, of 17th April 2013 or units or shares of collective investment undertakings which are qualifying venture capital funds as referred to in Article 3(b) of Regulation 345/2013 of 17th 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 8th June 2011, as well as other similarly purposed investment funds approved by the Authority.

B8.7 **Strategic holdings –** A qualifying strategic holding must fulfil all of the following criteria:

a) 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.
b) 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;
c) The nature of the investment is strategic, taking into account:
   (i) the existence of a clear decisive strategy to continue holding the participation for a long period;

(ii) 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;

(iii) the ability of the company to continue holding the participation;

(iv) the existence of a durable link.

C.STATUTORY STATEMENTS AND BSCR SCHEDULES

C1. FORMS 1, 2, 8 AND FORM 1EBS

Background

C1.1 The statutory balance sheet (Form 1), statutory statement of income (Form 2), and statutory statement of capital and surplus (Form 8) shall be completed by the insurance group in accordance with the filing guidance relating to these Forms found in the Insurance (Group Supervision) Rules 2011.

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

C1.3 The Economic Balance Sheet (Form 1EBS) shall be completed by the designated insurer of the insurance group in accordance with the Insurance (Prudential Standard) (Insurance Group Solvency Requirement) Rules 2011.

Additional Guidance

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

C1.i. Although the insurance group does not need to prepare its financial statements in thousands units, the Authority requires insurance group to report its statutory financial statements and economic balance sheet in thousands as this impacts the capital charges calculated in the BSCR model. The insurance group may attach its Statutory Financial Return under "Other Attachments" to provide the BMA with a more accurate financial position.

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 insurance group's bonds & debentures and equity investments by both investment category (Corporate & 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 group's market risk. It is noted that the balances reported on this schedule also serves as a proxy of the group'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.

C2.3 The BMA has identified and defined eight categories of BSCR ratings:

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

C2.4 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.

Items

C2.5 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 Form 1 for the relevant year:

a. <u>Quoted and unquoted bonds and debentures</u> – Line 10, Column (9) 'Total" corresponds to Form 1EBS and Form 1, Line 2(b) and 3(b);
b. <u>Quoted and unquoted equities</u> – Line 21, Column (9) 'Total' corresponds to Form 1EBS and Form 1, Line 2(d) and 3(d); and
c. <u>Mortgage loans</u> – Line 26, Column (1) 'Total' corresponds to Form 1EBS and Form 1, 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. The latest available AM Best, S&P, Moody's, or Fitch ratings shall be used in determining the appropriate BSCR rating of any fixed income security or preferred stock;

C2.1e. Where the ratings of a security by different rating agencies differ, the insurance group shall classify the security according to the most conservative rating;

C2.1f. Unrated securities shall be assigned a BSCR rating of 8;

C2.1g. 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;

C2.1h. 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; and

C2.1i. 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;

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

Additional Guidance

<u>Figures are to be Reported in Thousand Units ('000s)</u>

C2.i. Although the insurance group does not need to prepare its financial statements in thousands units, the Authority requires insurance groups to report its statutory financial statements and economic balance sheet in thousands as this impacts the capital charges calculated in the BSCR model. The insurance group may attach its Statutory Financial Return under "Other Attachments" to provide the BMA with a more accurate financial position

<u>Applying a BSCR Rating to Unquoted Internally Rated Investments</u>

C2.ii. Insurance groups that have developed an internal rating for unquoted investments shall apply a BSCR rating of 8. However if an insurance group would like to request permission to use an equivalent scale of these investments in their BSCR filing, the insurance group 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 insurance group reclassify an unquoted investment from BSCR Rating 8.

<u>GNMA, FNMA and FHLMC are not eligible for BSCR Rating 0</u>

C2.iii. Securities that have a BSCR rating 0 has 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 Government National Mortgage Association (GNMA), Federal National Mortgage Association (FNMA) and Federal Home Loan Mortgage Corporation (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.

<u>Mortgage Backed-Securities to use NAIC Rating</u>

C2.iv. Mortgage Backed Securities do not always adequately reflect the risk associated with being held at less than par value. For this reason, the National Association of Insurance Commissioners (NAIC) has modeled these bonds and provides US insurers with a rating reclassification. The Authority shall allow insurance groups the option 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 insurance groups to provide a separate summary of the Form 1 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 Mortgaged Backed Securities Only)**
0	
1	
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 insurance groups 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 1 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.

<u>BSCR Ratings – Updated Ratings can be applied for the 2018 Year-End Reporting</u>

C2.v. The Authority has updated the BSCR ratings for AM Best and this adjustment will come into effect for the 2019 year-end, however insurance groups may use the new rating scale for the 2018 year-end. The new BSCR rating scale is:

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-

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 Funds Held By Ceding Reinsurers (Form 1EBS, Line 12(c)), the Authority requires insurance groups to determine the arrangement that 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 – Expanded Particulars of Ceded Reinsurance; if the insurance group 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 insurance group 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:

a. <u>Quoted and unquoted bonds and debentures;</u>
b. <u>Quoted and unquoted equities;</u>
c. <u>Other Investment;</u>
d. <u>Mortgage loans;</u> and
e. <u>Cash and time deposits</u>.

Instructions Affecting Schedule IIA

C3.5 All funds held by ceding reinsurers (as reflected in Form 1EBS, Line 12(c) and Form 1, 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 mortgage-backed securities, commercial mortgage-backed securities/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 The latest available AM Best, S&P, Moody's, or Fitch ratings shall be used in determining the appropriate BSCR rating of any fixed income security or preferred stock;

C3.10 Where the ratings of a security by different rating agencies differ, the insurance group shall classify the security according to the most conservative rating;

C3.11 Unrated securities shall be assigned a BSCR rating of 8;

C3.12 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;

C3.13 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;

C3.14 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;

C3.15 Money market funds shall be classified by the underlying credit security based on the BSCR rating prescribed in Schedule XIX.

Additional Guidance

Additional Guidance for assessing the Funds Held By Ceding Reinsurer Arrangement

C3.i. For funds held by ceding companies, the capital risk charge is calculated by the nature of the arrangement.

- 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 insurance groups to look through to the underlying assets, and report these balances on Schedule IIA. This effectively adds to the fixed income risk and 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 Expanded 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. Insurance groups that have developed an internal rating for unquoted investments shall apply a BSCR rating of 8. However if an insurance group would like to request permission to use an equivalent scale of these investments in their BSCR filing, the insurance group 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 insurance group 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, insurance groups may not have the exact details of the underlying assets that the funds are held in. 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.

BSCR Ratings – Updated Ratings can be applied for the 2018 Year-End Reporting

C3.iv. The Authority has updated the BSCR ratings for AM Best and this adjustment will come into effect for the 2019 year-end, however insurance groups may use the new rating scale for the 2018 year-end. The new BSCR rating scale is:

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-

C4. SCHEDULE OF NET LOSS AND LOSS EXPENSE PROVISIONS BY LINE OF BUSINESS (SCHEDULE III)

Background

C4.1 The schedule of net loss and loss expense provisions by line of business — Schedule III — provides a breakdown of an insurance group's net loss and loss expense provisions by statutory lines of business. The BMA has identified and defined 24 statutory lines of business.

C4.2 Line item 25 'Total' of Schedule III for net loss and loss expense provisions should correspond to the balance reported in Form 1, line 17(d) and Form 1EBS, line 17(d) for the relevant year.

Instructions Affecting Schedule III

C4.2a Amounts reported on the Supplemental Notes to Form 1EBS which shall be reported on a EBS basis;

C4.2b The same definition below shall be applied to both proportional and non-proportional statutory lines of business below;

C4.2c Where the BSCR risk factor charges differ in (a), insurance groups shall make a distinction when completing the statutory filing and using the BSCR model;

C4.2d 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, etc.);

C4.2e Insurance group may in good faith determine the allocation of the statutory lines;

C4.2f Where an insurance contract involves multiple lines, the insurance group shall assign to the various lines in accordance with the proportions written;

C4.2g Where an insurance group is unable to make the determination in instruction (e), the business shall be allocated to the line with the highest proportion;

C4.2h Where the insurance group is unable to make the determination in instruction (f), then the business shall be assigned to the line with the highest capital risk charge; and

C4.2i 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 & 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 association with 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, etc.) 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, and 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.

C5. SCHEDULE OF GEOGRAPHICAL DIVERSIFICATION OF NET LOSS AND LOSS EXPENSE PROVISIONS (SCHEDULE IIIA)

Background

C5.1 The schedule of geographical diversification of net loss and loss expense provisions — Schedule IIIA — provides a breakdown of an insurance group'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 geographical zones.

C5.2 Line item 25 'Total' of Schedule IIIA for net loss and loss expense provisions should correspond to the balance reported in Form 1EBS, line 17(d) for the relevant year.

Instructions Affecting Schedule IIIA

C5.2a 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 (EBS);

Underwriting Zone	Location
Zone 1 - Central & Western Asia	Armenia, Azerbaijan, Bahrain, Georgia, Iraq, Israel, Jordan, Kazakhstan, Kuwait, Kyrgyzstan, Lebanon, Oman, Palestinian, Qatar, Saudi Arabia, Saudi Arab Republic, 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, Lao PDR, 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, Wallis & 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, Sudan, Togo, Tunisia, and Western Sahara
Zone 6 - Southern	Angola, Botswana, Burundi, Democratic Republic of Congo, Comoros, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Kenya, Lesotho, Madagascar,

Africa	Malawi, Mauritius, Mayotte, Mozambique, Namibia, Republic of Congo, Reunion, Rwanda, Sao Tome & Principe, Seychelles, Somalia, South Africa, Swaziland, 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, 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 USA)	Bermuda, Canada, Greenland, and St Pierre & Miquelon
Zone 12 - Caribbean & Central America	Anguilla, Antigua & Barbuda, Aruba, Bahamas, Barbados , Belize, British Virgin Islands, Cayman Islands, Costa Rica , Cuba, Dominica, Dominican, El Salvador, Grenada, Guadeloupe Guatemala, Haiti, Honduras, Jamaica, Martinique, Mexico, Montserrat, Netherlands Antilles, Nicaragua, Panama, Puerto Rico, St-Barthelemy, St Kitts & Nevis, St Lucia, St Martin, St Vincent, Trinidad & Tobago, Turks & Caicos Islands, and US Virgin Islands
Zone 13 - Eastern South America	Brazil, Falkland Islands, French Guiana, Guyana, Paraguay, Suriname, 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

C6. SCHEDULE OF PREMIUMS WRITTEN BY LINE OF BUSINESS (SCHEDULE IVA)

Background

C6.1 The schedule of premiums written by line of business — Schedule IVA — provides a breakdown of an insurance group's gross premiums written and net premiums written by statutory lines of business. Insurance groups 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

C6.1a 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 2, Line 1(c) for the same relevant year; and

C6.1b 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 2, Line 3 for the same relevant year.

Additional Guidance

<u>Figures are to be Reported in Thousand Units ('000s)</u>

C6.i. Although the insurance group does not need to prepare its financial statements in thousands units, the Authority requires insurance groups to report its statutory financial statements and economic balance sheet in thousands as this impacts the capital charges calculated in the BSCR model. The insurance group may attach its Statutory Financial Return under "Other Attachments" to provide the BMA with a more accurate financial position.

.

C7. SCHEDULE OF LONG-TERM BUSINESS PREMIUMS (SCHEDULE IVB)

Background

C7.1 The schedule of Long-Term Business Premiums — Schedule IVB — provides a breakdown of an insurance group's gross premiums and other considerations, and net premiums and other considerations by prescribed Long-Term insurance product. Insurance groups are required to separate the Long-Term gross premiums written into 'unrelated' and 'related' business according to statutory Long-Term insurance products.

C7.2 A description of these insurance products is listed below:

	Long-Term Business Lines of Business	**Description**
1	Mortality	The risk of fluctuations or deterioration of mortality experience causing increased claims on life insurance coverages.
2	Critical Illness	A form of accident and health insurance that pays a benefit if the person insured incurs a predefined major illness or injury.
3	Longevity	The risk of fluctuations or improvements in mortality that cause benefits on payout annuities to be paid for longer than expected.
4	Deferred Annuities	An insurance that provides savings or income benefits during the lifetime of the person insured or some limited period thereafter.
5	Disability Income: Active lives with premium guarantee of -	An accident and health insurance that pays a benefit for a fixed period of time during disability, based on contracts that are for active lives and have a premium guarantee.
6	Disability Income: Active lives for other accident and sickness	An accident and health insurance that pays a benefit for a fixed period of time during disability based on contracts that are for active lives and are for other accident and sickness coverage.
7	Disability Income: Claims in payment	An accident and health insurance that pays a benefit for a fixed period of time during disability based on contracts where claims in payment on waiver of premiums.
8	Disability Income: Claims in payment for other accident and sickness	An accident and health insurance that pays a benefit for a fixed period of time during disability based on contracts where claims in payment on waiver of premiums based on contracts that are for active lives and are for other accident and sickness coverage.

9	Group Life	Life insurance that is issued to persons insured through a group arrangement such as through an employer or association.
10	Group Disability	Disability insurance that is issued to persons insured through a group arrangement such as through an employer or association.
11	Group Health	Health insurance that is issued to persons insured through a group arrangement such as through an employer or association.
12	Stop Loss	The risk that arises when total claims experience deteriorates or is more volatile than expected, thereby increasing the likelihood and amount by which actual claims experience exceeds a predefined level.
13	Rider	The risk that arises when total claims experience deteriorates or is more volatile than expected, thereby increasing the likelihood and amount by which actual claims experience exceeds a predefined level.
14	Variable Annuities	Insurance that provides a minimum investment guarantee on variable annuities.

C7.3 Line item 15 'Total' of Schedule IVB for total gross premiums and other considerations, and net premiums and other consideration should correspond to the balance reported in Form 2, Lines 12(c) and 14(d), respectively, for the relevant year.

Additional Guidance

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

C7.i. Although the insurance group does not need to prepare its financial statements in thousands units, the Authority requires insurance groups to report its statutory financial statements and economic balance sheet in thousands as this impacts the capital charges calculated in the BSCR model. The insurance group may attach its Statutory Financial Return under "Other Attachments" to provide the BMA with a more accurate financial position.

C8. SCHEDULE OF GEOGRAPHIC DIVERSIFICATION OF NET PREMIUMS WRITTEN (SCHEDULE IVC)

Background

C8.1 The schedule of geographic diversification of net premiums written — Schedule IVC — provides a breakdown of an insurance group's net premiums written by statutory lines of business and by geographical location. The BMA has identified and defined 24 statutory lines of business and 18 statutory geographical zones.

C8.2 Line item 25 'Total' of Schedule IVC for net premiums written should correspond to the balance reported in Consolidated Form 2, line 3 for the relevant year.

Instructions Affecting Schedule IVC

C8.2a 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 of amounts in zones 1-18 for a given line of business shall equal the corresponding amount of net premiums written shown in Schedule IVA.

C8.2b Amounts shall be reported on a consolidated basis only.

Additional Guidance

C8.2c When allocating the premiums by geographic location, allocate the premiums by the location of the risk.

C9. SCHEDULE OF RISK MANAGEMENT (SCHEDULE V)

Background

C9.1 For assessing the areas of risk of an insurance group, the Authority also takes into consideration the group's risk management structure on an on-going basis. Such areas include: structure of the group, the underwriting risks, market/investment risks, liquidity/interest rate risk, and any other risks (such as deposit assets & liabilities and segregated accounts) associated with the insurance grouper. These areas are to be provided on a forward-looking basis and if there are significant changes to the insurance group's business plan for the upcoming year, the insurance group shall include a description of the change in the supporting documentation.

C9.2 The schedule of risk management shall include the following:

a. Governance structure;
b. Group structure;
c. Intra-group transactions and risk concentrations;
d. Effective duration of assets;
e. Effective duration of liabilities;
f. Description of the effective duration of assets and liabilities calculations and key assumptions;
g. Gross probable maximum loss;
h. Net probable maximum loss;
i. Average annual loss (excluding property catastrophe);
j. Actual attritional losses and large claims losses – relevant year;
k. Arrangements with respect to property catastrophe recoverables;
l. Mutual fund disclosures;
m. Summary of projected performance;
n. Summary of product features and risks;
o. Financial impact and description of stress and scenario tests;
p. Investments and derivatives strategies and policy;
q. Modified co-insurance arrangements;
r. Deferred accumulation annuities disclosures;
s. Reconciliation from GAAP financial statements to Form 1EBS;
t. Description of risk management program;
u. Risk register;
v. List of statutory lines and statutory territories that have catastrophe exposures; and
w. Details of deposit assets and liabilities.

Instructions Affecting Schedule V

C9.2a Governance structure must disclose —

i. the structure of the parent company's Board of Directors; 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 parent Board of Directors that is not affiliated to the group nor a service provider
Non-Executive (Service Provider)	refers to a non-executive member of parent Board of Directors that: a) acting as a company formation agent, or agent for the establishment of a partnership; b) acting as a nominee shareholder of a company; c) providing administrative and secretarial services to the insurance group; d) the performance of functions in the capacity of resident representative under the Companies Act 1981, Exempted Partnerships Act 1992 and the Overseas Partnerships Act 1995; and e) 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 parent Board of Directors

ii. the structure of the management of the parent company; including names, roles, work country of residence, experience, and employee arrangement (for example confirm whether employees are hired or outsourced etc.,);

Additional Guidance for Employee Arrangement:

Chief and Senior Executives Employee Arrangements are categorised as follows:

Insurance Group	Employee working fulltime for the insurance group
External Service Provider	third party service providers e.g. insurance managers

iii. terms of reference of the parent company Board of Directors its sub-committees;

iv. list of major shareholder controllers; and

v. a copy of the latest group organisational chart

Additional Guidance

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

C9.i. Instances where the composition of the Board and Senior Management has undergone changes since the financial year-end, insurance groups are to report the composition of the Board and Senior Managements 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.

C9.ii. Note that under section 30J of the Insurance Act, a notification is required for change in board members and officers within 45 days of the insurance group becoming aware of the change, and thus the inclusion of this information in the BSCR does not qualify as notification of such change.

Terms of Reference Clarification

C9.iii. "Terms of Reference" in this case refers to the duties of the Board and its sub-committees as stated in the Group's charter. If the group's bye-laws include information which aids in the BMA's assessment, it is then acceptable.

C9.2b Group structure must disclose —

i. list of regulated entities, the sectors in which they operate in and their place of incorporation grouped by country or state (for United States);
ii. list of unregulated entities, the sectors in which they operate in and their place of incorporation grouped by country or state (for United States);
iii. the description of the strategic purpose of each entity;
iv. the type of each entity categorised either as a holding entity, operating entity, branch, or other;
v. the description of the products and services sold to external parties;
vi. the total assets (on a unconsolidated/legal basis) of each entity;
vii. the total net assets or equity (on a unconsolidated/legal basis) of each entity;
viii. the gross and net premiums written (on a unconsolidated/legal basis) of each entity, if applicable;
ix. group's participation share (percentage) of each entity; and
x. sector classification;

C9.2c Intra-group transactions that the group is a party to and the insurance group's risk concentrations—

i. details of material intra-group transactions between and among the members of the group 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;

ii. 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 group's insurance business exposure covered by internal reinsurance, retrocession and other risk transfer arrangements;

iii. ten largest exposures to unaffiliated counterparties and any other unaffiliated counterparty exposures or series of linked unaffiliated counterparty exposures exceeding 10% of the group's statutory capital and surplus—

(A) name of counterparty;

(B) exposure values (face value or market value); and

(C) transaction type;

Additional Guidance

<u>Material Intra Group Transactions and Intra-Group Reinsurance & Retrocession Arrangements</u>

C9.iv. 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 insurance group holds cash of $3 million and total assets of $4 million, we would consider the $3 million cash balance to be material as it pertains to 75% of the insurance group's total assets.

When providing details of "intra-group reinsurance and retrocession arrangements" the Authority is looking for **<u>all</u>** intra-group reinsurance and retrocession arrangements. Note that if an insurance group has more than 25 transactions with the same assuming and ceding party can be aggregated together. If an insurance group 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).

Internal Reinsurance Arrangement Calculation

C9.v. 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 insurance group shall only include arrangements where it is the ceding party.

Unaffiliated Counterparties Ten Largest Exposures

C9.vi. Instances where the insurance group does not have any investing activities, yet it holds cash and cash equivalents, the insurance group shall list these as counterparty exposures as well as include each bank separately.

Unaffiliated Counterparties Ten Largest Exposures – Investments to Report

C9.vii. When determining the ten largest unaffiliated counterparty exposures, insurance groups are to include cash & 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, insurance groups are to provide a look through basis of the underlying investment.

C9.2d The effective duration of assets must be determined using the aggregate of the total bonds and debentures (as reflected in Form 1EBS, Lines 2(b) ad 3(b)), preferred stock (as reflected in Form 1EBS, Lines 2(c)(ii) and 3(c)(ii)), and mortgage loans (as reflected in Form 1EBS, Line 5(c)) as a basis;

C9.2e The effective duration of liabilities must be determined using the reserves (as reflected in Form 1EBS, Lines 17(d) and 27(d)) as a basis;

C9.2f The description of the process used for determining the effective duration of assets calculation and effective duration of liabilities calculation, and key assumptions for these calculations;

C9.2g The gross probable maximum loss for natural catastrophe losses (prior to reinsurance) must be calculated at the 99.0% Tail Value-at-Risk level for annual aggregate exposure to all risks and all perils, including reinstatement premiums, for the year following the relevant year based upon the insurance group’s catastrophe model. The documentation used to derive the gross probable maximum loss 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 insurance group and shall be presented to the BMA upon request;

C9.2h The net probable maximum loss for natural catastrophe losses (after reinsurance) must be calculated at the 99.0% Tail Value-at-Risk level for annual aggregate exposure to all risks and all perils, including reinstatement premiums, for the year following the relevant year based on the insurance group's catastrophe model. The support documentation used to derive the net probable maximum loss must be retained for at least five years, one 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 Authority upon request;

Additional Guidance

Probable Maximum Loss and Average Annual Loss Valuation – After Tax

C9.viii. The Probable Maximum Loss and Average Annual loss shall be valued after tax.

C9.2i The average annual loss means-

i. 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 group's catastrophe model;

ii. 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

iii. 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 designated insurer of the insurance group and shall be presented to the BMA upon request;

C9.2j The actual attritional losses and large claim losses – relevant year means the actual aggregate losses (classified by groups as attritional and large claim losses in accordance with its own policy) experienced by the group in the relevant year (not including prior year reserve releases or adverse development);

C9.2k The arrangements with respect to property catastrophe recoverables shall disclose the amounts of-

i. collateral;

ii. catastrophe bonds;

iii. special purpose insurer (indemnity basis);

iv. special purpose insurer (other basis); and

v. total;

C9.2l Mutual fund disclosures shall include the name, type and amount of each mutual fund used by the members of the group;

Additional Guidance

Mutual Fund Information to Provide

C9.ix. Insurance groups to are to provide a summary report (in excel format) that lists each fund the insurance group is actually using, a brief description of the type of fund (such as bond fund, equity fund balanced fund, etc.) and the amount the insurance group has invested in each fund.

C9.2m Summary of projected performance for the year following the relevant year—

a. the insurance group's latest estimate of annual net premiums written;
b. estimated underwriting profit or loss;
c. estimated net income or loss; and
d. a qualitative description of the insurance group's business and underwriting strategy to be used in an attempt to achieve the estimates in (i) and (iii) above;

C9.2n Summary of product features and risks must cover the primary product features and benefits insured and any policyholder options or guarantees that could materially affect the insurance group;

C9.2o Financial impact and description of stress and scenario tests shall disclose the results from the stress and scenario tests prescribed by the BMA annually and published in such manner as the BMA directs;

C9.2p The investments and derivatives strategies and policies shall disclose—

a. a description of the insurance group's investment strategy governing selection and composition of investment portfolio;
b. a description of the strategies and policies surrounding the use of derivatives and other hedging instruments; and
c. the market value and nominal exposure of each derivative financial instrument with a nominal exposure greater than 5% of total assets listed by assets, liabilities, long and short positions, respectively;

C9.2q Modified co-insurance arrangements shall disclose—

a. name of ceding company;
b. type of coverage;
c. amount of reserve; and

d. aggregate asset allocation (book value) and the related affiliated or unaffiliated cedant;

C9.2r Deferred accumulation annuities disclosures—

a. total reserves for deferred accumulation annuities;
b. total reserves for deferred accumulation annuities with contractual guaranteed annuitisation rates;
c. total reserves for deferred accumulation annuities annuitised in the past year at contractual guaranteed rates (prior to annuitisation); and
d. total reserves for deferred accumulation annuities annuitised in the past year at contractual guaranteed rates (post annuitisation).

C9.2s a reconciliation of amounts reported in total assets, total liabilities and total statutory economic capital and surplus comprising of any adjustments applied to the GAAP financial statements to arrive at the amounts disclosed in Form 1EBS;

C9.2t The description of the insurance group's risk management programme shall disclose-

i. a description of the risk management process, including how the risk management programme is used for strategic management decision-making, capital allocation and capital adequacy;
ii. a description of the governance surrounding the risk management process including the identification of the owners of the process and the extent of the Board of Directors' involvement;
iii. a description of the risk appetite including the process for setting and embedding risk limits, and the identification of the types of stress testing carried out to ascertain the suitability of the risk appetite; and
iv. a description of the process undertaken to monitor material risk concentration;

C9.2u Risk register disclosing-

i. a description of the insurance group's material risks;
ii. owners of the respective risks;
iii. the impact and probability of the risk and the overall risk crystallising expressed as quantitative or qualitative measures;
iv. summary of the risk mitigation/controls in place and an assessment of their effectiveness in reducing the probability and/or impact of the risk; and
v. overall assessment of the impact and probability of the residual risk expressed as quantitative or qualitative measures;

C9.2v 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

C9.2w In respect of business for which deposit accounting approaches have been followed: a description of business, total assets held in trust or other collateral, lines of business written, gross premiums written for the period, net premiums written for the period, limits (maximum exposure). For business that has limited exposure, provide the results at a 99.0% TVaR and for business with unlimited exposure, provide details of such business; and

Additional Guidance

Contracts that Qualify as Deposit Assets & Liabilities

C9.x. Deposit Asset & Liability contracts represent insurance contracts that do not meet the definition of meeting insurance risk (as applicable per the insurance group's GAAP). Prior to December 31, 2016, if an insurance group wrote insurance business that did not meet the definition of insurance risk, insurance groups would be required to seek BMA approval to include such contracts in the statutory balance sheet. (Going forward, this approval will not be necessary.)

As a result, the Authority has provided the new schedule V(k) Details of Deposit Asset & Liabilities to assess the insurance group's contracts that do not meet the definition of insurance risk, and lines of business that are written (both on a gross and net basis) for the reporting period, assess the assets that are supporting these obligations, and assess the exposure levels of such contracts.

Details by Contract and Line of Business

C9.xi. Complete the schedule by providing the lines of business written for each exposure type separately. (I.e., if an insurance group has exposure that writes both property and casualty business), then the insurance group is to report the business for the property business on one line and report the casualty business line separately.

C10. SCHEDULE OF FIXED INCOME SECURITIES (SCHEDULE VI)

Background

C10.1 The schedule of fixed income securities — Schedule VI — provides the BMA with details to assess the insurance group'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 insurance group's asset-liability matching practices.

C10.2 It is noted that the allocation and balances reported on Schedule VI are not applied a capital charge, however it is used for BMA to assess the insurance group's investment risk.

C10.3 Securities are to be allocated as follows:

Items

a. <u>Security type;</u>
b. <u>Amount per Form 1EBS, Lines 2(b) and 3(b)</u> – disclosing the amounts contributing to (reflected in) Lines 2(b) and 3(b) of Form 1EBS.;
c. <u>Face value;</u>
d. <u>Fair value;</u>
e. <u>Average effective yield-to-maturity;</u>
f. <u>Average rating of the security type (if applicable);</u>
g. <u>Average effective duration of the security type;</u>
h. <u>Average effective convexity of the security type ;</u>
i. <u>Effective duration of the portfolio;</u>
j. <u>Effective convexity of the portfolio; and</u>

Additional Guidance

<u>Types of Securities</u>

C10.3a The designated insurer of the insurance group 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
- (a) U.S. Government Federal
- (b) U.S. Government Agency - mortgage-backed securities
- (c) U.S. Government Agency - other
- Non-U.S. Government
- States, Municipalities, and Political Subdivision

- Corporate Securities
- (a) U.S. Government-backed Corporate
- (b) Non-U.S. Government-backed Corporate
- (c) FDIC Guaranteed Corporate
- (d) Other Corporate
- Asset-backed Securities
- Mortgage-backed Securities
- (a) Residential Subprime
- (b) Residential Non-subprime
- (c) Commercial
- Mutual Funds
- Bank Loans
- Catastrophe Bonds and Insurance-Linked Securities

C11. SCHEDULE OF LONG-TERM INSURANCE DATA (SCHEDULE VII)

Background

C11.1 The schedule of Long-Term insurance data — Schedule VII — provides a breakdown of an insurance group's Best Estimate Technical Provisions by prescribed Long-Term insurance products. A description of these insurance products is listed below:

	Long-Term Business Lines of Business	**Description**
1	Mortality	The risk of fluctuations or deterioration of mortality experience causing increased claims on life insurance coverages.
2	Critical Illness	A form of accident and health insurance that pays a benefit if the person insured incurs a predefined major illness or injury.
3	Longevity	The risk of fluctuations or improvements in mortality that cause benefits on payout annuities to be paid for longer than expected.
4	Deferred Annuities	An insurance that provides savings or income benefits during the lifetime of the person insured or some limited period thereafter.
5	Disability Income: Active lives with premium guarantee of -	An accident and health insurance that pays a benefit for a fixed period of time during disability, based on contracts that are for active lives and have a premium guarantee.
6	Disability Income: Active lives for other accident and sickness	An accident and health insurance that pays a benefit for a fixed period of time during disability based on contracts that are for active lives and are for other accident and sickness coverage.
7	Disability Income: Claims in payment	An accident and health insurance that pays a benefit for a fixed period of time during disability based on contracts where claims in payment on waiver of premiums.
8	Disability Income: Claims in payment for other accident and sickness	An accident and health insurance that pays a benefit for a fixed period of time during disability based on contracts where claims in payment on waiver of premiums based on contracts that are for active lives and are for other accident and sickness coverage.
9	Group Life	Life insurance that is issued to persons insured through a group arrangement such as through an employer or association.

10	Group Disability	Disability insurance that is issued to persons insured through a group arrangement such as through an employer or association.
11	Group Health	Health insurance that is issued to persons insured through a group arrangement such as through an employer or association.
12	Stop Loss	The risk that arises when total claims experience deteriorates or is more volatile than expected, thereby increasing the likelihood and amount by which actual claims experience exceeds a predefined level.
13	Rider	The risk that arises when total claims experience deteriorates or is more volatile than expected, thereby increasing the likelihood and amount by which actual claims experience exceeds a predefined level.
14	Variable Annuities	Insurance that provides a minimum investment guarantee on variable annuities.

Items

C11.2 The Schedule has the following column items for each individual Long-Term insurance product, where applicable:

a. Bermuda EBS Best Estimate Provisions;
b. BSCR adjusted reserve [Greater of item (1) and 0];
c. Net amount at risk for adjustable product/treaty;
d. Net amount at risk for non-adjustable product/treaty;
e. Total net amount at risk.

C11.3 The Schedule has the following column items for each individual Long-Term insurance product with regards to additional Supplemental Notes, where applicable:

a. Bound But Not Incepted (BBNI) Premium (Form 1EBS, Line 27(d));
b. Best Estimate Provision in Respect to BBNI (Form 1EBS, Line 27(d));
c. Best Estimate Provision Using Transitional Adjustments (Form 1EBS, Line 27(d);
d. Equivalent of Column (14) if Transitional Arrangements were not used (Form 1EBS, Line 27(d);
e. Scenario Based approach Best Estimate for Technical Provisions (Form 1EBS, Line 27(d) ;
f. Equivalent of Column (16) if Scenario Based approach were not used (Form 1EBS, Line 27(d);
g. Equivalent of Column (16) if Based approach were used (Form 1EBS, Line 27(d);
h. Bound But Not Incepted (BBNI) Premium (Form 1EBS, Line 27B(d); and
i. Best Estimate Provision in Respect to BBNI (Form 1EBS, Line 27B(d)),

C12. SCHEDULE OF LONG-TERM VARIABLE ANNUITY (SCHEDULE VIII)

Background

C12.1 The schedule of Long-Term Variable Annuity — Schedule VIII — provides disclosures on the following Long-Term variable annuity guaranty products for both in-the-money and out-of-the-money positions:

a. Guaranteed Minimum Death Benefit (GMDB);
b. Guaranteed Minimum Income Benefit (GMIB);
c. Guaranteed Minimum Withdrawal Benefit (GMWB);
d. Guaranteed Enhanced Earnings Benefit (GEEB); and
e. Guaranteed Minimum Accumulation Benefit (GMAB).

C12.2 The percentage of GMDB with multiple guarantees is also required to be disclosed in this schedule.

C12.3 Long-Term variable annuities are to be reported on Schedule VIII with the requirements listed below. Upon approval from the Authority, the insurance group may have its variable annuity business assessed by its internal capital model and with the details of this provided in Schedule VIIIA.

Items

C12.4 The schedule has the following column items for each individual variable annuity risk, where applicable:

a. Bermuda EBS Best Estimate Provision;
b. Guaranteed value – volatility 0% to 10%;
c. Guaranteed value – volatility 10% to 15%;
d. Guaranteed value – volatility of over 15%;
e. Net amount at risk – volatility 0% to 10%;
f. Net amount at risk – volatility 10% to 15%; and
g. Net amount at risk – volatility of over 15%.

C13. SCHEDULE OF LONG-TERM VARIABLE ANNUITY – INTERNAL CAPITAL MODEL (SCHEDULE VIIIA)

Background

C13.1 The schedule of Long-Term Variable Annuity - Internal Capital Model — Schedule VIIIA — is intended to capture the internal model-based capital requirements for variable annuities.

C13.2 Insurance groups must obtain permission from the BMA to complete Schedule VIIIA in lieu of Schedule VIII.

C13.3 Once the insurance group has selected to complete Schedule VIIIA, it would be unable to switch to completing Schedule VIII without first obtaining approval from the BMA.

Items

C13.4 <u>Disclosures on insurance group's in-force data</u>

For each type of variable annuity guarantee risk, insurance groups will be required to provide summaries of their policy data by policy accounts, account values, guarantee amounts, and net amounts at risk with their BSCR EBS Best Estimate amounts. Such data should be further broken out by policy year, the level of fund volatility (0-10%, 10-20%, 20%+), and how far in or out the money is (less than -15%, -15% to -5%, -5% to +5%, +5 to +15%, greater than +15%).

C13.5 <u>Disclosures on insurance group's internal capital model</u>

Insurance groups may use its own stochastic internal capital model to determine its capital requirements for its variable annuity guarantee business on a one-year model with a 99% TVaR threshold or a runoff model on a 95% TVaR threshold. In addition, insurance groups will be required to disclose the capital requirements determined by its internal capital model reflecting both with hedging and without hedging. Lastly, model results relating to economic sensitivities, as prescribed by the BMA, and behavioural and actuarial sensitivities would be disclosed.

C13.6 <u>Actuarial memorandum</u>

An actuarial memorandum—the designated insurer of the insurance group must file an actuarial memorandum with the Authority that should minimally include the particulars described below. When the information is already available in other documents within the capital and solvency return, it is acceptable to attach those documents and simply make reference to them in the actuarial memorandum. The insurance group should indicate any significant changes from the last memorandum filed with the Authority.

Line No.	Section	**Provide a <u>brief summary or description</u> of the following details under each section:**
1	Executive summary	Required capital amount and drivers of result; Key risks and associated risk mitigation techniques; and The modeling methods used.
2	Overview of business	Type of business; and Key product features and specifications.
3	Key risk exposures	Qualitative description of key risk exposures, such as economic, mortality, surrender, annuitisation, withdrawal, expense and counterparty risks.
4	Description of model	The approach used to calculate total assets and required capital; Key model details, including: - Source of asset and liability data; - Aggregations used to generate model cells; - Allocation of assets to variable annuity blocks; - The reserve basis; - Time step of model (e.g. monthly); - The rate used to accumulate and discount cash flows; and - The treatment of interim solvency (e.g., how are periods of negative cash flows followed by positive cash flows allowed for).
5	Description of assumptions	Basis for economic scenarios, including underlying model and parameters; Information on the average return and volatility on the equity investment funds; For mortality and all policyholder behavior assumptions (e.g. premium payments, withdrawals, annuitisations, and lapses): - Source of data (e.g. company-specific experience); - Any margins for conservatism that were used; and - Any future mortality improvement; Approach to investment fund mapping; Insurer's crediting strategy; Expenses and commissions;

		Treatment of taxes; and Future management actions (other than hedging and reinsurance).
6	Reinsurance	Reinsurance (both assumed and ceded), including a list of counterparties; Nature of arrangements, including caps, floors and recapture provisions; The approach to modeling these arrangements; and Collateral requirements, if relevant.
7	Hedging	Business covered; Hedge target; Hedged parameters (i.e. Greeks) managed/monitored by the group; Internal governance procedures; Currently-held derivatives and range of derivatives approved for trading; Unhedged exposures; Historical hedge effectiveness; Sample attribution reports; and How hedging is reflected in the determination of required capital and stress tests, including how any modeling limitations or simplifications are addressed.
8	Risk mitigation arrangements other than hedging	Business covered; Nature of arrangements; Internal governance procedures; and Other supporting details such as internal analyses, historical results, etc.
9	Results and model output	Capital results (summarised also in Line 1 of the Table under b)) and commentary; Results of stress tests (summarised also in Lines 2 and 3 of the Table under b)) with description and justification for tests selected and commentary on results; Sensitivity results for key assumptions/risk exposures; and The output from model for a single scenario in the tail (e.g. that which most closely corresponds to the TVaR 95% result) showing

		cash flows by guaranteed rider type, accumulation and discounting of cash flows, and total assets required for that scenario.
10	Reviewer and signatory	The memorandum is required to be reviewed and signed by the Approved Actuary

C14. SCHEDULE OF GROUP'S SOLVENCY SELF-ASSESSMENT (SCHEDULE IX)

Background

C14.1 The Group's Solvency Self-Assessment (GSSA) is a regime that requires Bermuda groups to perform an assessment of their own risk and solvency requirements. This provides the BMA with the group's perspective of the capital resources (referred to as GSSA 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.

C14.2 The GSSA is one of the tools used in the supervisory review process to assist in monitoring compliance with the Group Rules given that the GSSA should, at a minimum, consider those risks outlined in the Group Rules.

C14.3 The GSSA process should be integrated into the group'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

C14.4 The schedule of GSSA — Schedule IX — shall provide particulars of the following matters:

a. GSSA capital summary and additional information – disclosing the group's own capital computations, group's comparison of the GSSA capital to regulatory capital, group's plans for raising additional capital and contingency arrangements impacting the available capital.
b. GSSA general questions – providing information on a group's risk management and governance programme, the review and approval of GSSA, and integration of GSSA into the strategic decision-making process.
c. GSSA assessment of material risks of the group – providing information on a group'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 GSSA and the governance and controls surrounding model(s)/tool(s) used to compute the GSSA capital.

Instructions Affecting Schedule IX

C14.4a GSSA capital summary and additional information—

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

Additional information

Line Item		Description
1-7	Questions 1-7	The designated 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 insurance group or the options provided do not fully reflect the insurance group's position, the insurance group shall select the "Others" option and include a brief description. For Question 7 – The insurance group **must** 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 associated amount. The amount should be gross of regulatory capital requirements.

C14.4b GSSA general questions

Line Item		Description
1-5	Questions 1-5	The designated insurer should select the appropriate response from the drop-down menu provided. Where a question/section is not applicable to an insurance group or the options provided do not fully reflect the insurance group'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 GSSA process they review, and are therefore deemed to be independent in their assessment.

C14.4c GSSA assessment of material risks of the group

Line Item		Description
1-11	Questions 1-11	This section requires the insurance group to undertake and file with BMA the group'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 GSSA capital required to cover these risks, while remaining solvent and achieving the insurance group's business goals. The insurance group 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 insurance group should select the appropriate response or otherwise provide a brief description or an attachment. Where an attachment is provided, the insurance group 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 GSSA submission should be retained and kept available for examination and discussion with BMA should the need arise.

C15. CATASTROPHE RISK RETURN (SCHEDULE X)

Background

C15.1 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 insurance groups 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.

C15.2 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 obviously 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 insurance group's capital and a subset of its potential catastrophe liabilities. An insurance group 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.

Items

C15.3 The Cat Return — Schedule X — shall provide the following matters:

a. Total exceedance probability ("EP") curves
b. EP curve for insurance
c. EP curve for region-perils
d. Statutory lines of business and zones exposure per region-perils
e. Accumulations overview
f. Data analysis
g. Reinsurance disclosures
h. Insurance terrorism exposure
i. Reinsurance terrorism limits and
j. Assumed exchange rates

C15.4 The "Catastrophe Risk Return Guidelines (2016)" which provides detailed instructions on the above requirements and has been updated for frequency asked comments and questions. A copy of these guidelines is available on the BMA's website.

C16. SCHEDULE OF REGULATED NON-INSURANCE FINANCIAL OPERATING ENTITIES (SCHEDULE XI(A))

Background

C16.1 The schedule of regulated non-insurance financial operating entities — Schedule XI(A) — shall calculate the group's regulatory capital requirement for regulated non-insurance financial operating entities and shall form part of the group's charge for capital adjustment, which is added to the BSCR (after covariance adjustment) amount to arrive at the Group BSCR.

C16.2 This shall apply to all entities where the parent company exercises either control or significant influence. In determining whether the parent company controls or significant influence over a regulated non-insurance financial operating member of the group, the definitions contained in the US, UK, or Canadian GAAP or IFRS, as applicable, shall apply.

Items

Column Item		Description
1	Group Member Name	Column (1): Input the name of the regulated non-financial operating entity where the parent exercises either control or significant influence — Ensure that the name reflected here is consistent with the name reported in Schedule V(b) in order for the auto-links to work on other column items.
2	Jurisdiction	Column (2): The jurisdiction of said regulated entity shall automatically populate.
3	Sector Classification	Column (3): The sector where the said regulated entity operates in shall automatically populate.
4	Strategic Purpose	Column (4): The description of the strategic purpose of said regulated entity shall automatically populate.
5	Entity Type	Column (5): The entity type of said regulated entity shall automatically populate.
6	Products and Services Offered	Column (6): The description of the products and services offered to external parties by said regulated entity shall automatically populate.
7	Participation	Column (7): The parent company's participation type (whether control or significant influence) on said regulated entity shall automatically populate.
8	Percent of Participating Interest	Column (8): The parent company's participating interest (in percentage) on said regulated entity shall automatically populate.
9	Assets	Column (9): The total assets of said regulated entity shall automatically populate.

Column Item		Description
10	Investment Amount (Equity Method)	Column (10): The investment amount of said regulated entity, which shall be (a) the equity value where the parent company exercises significant influence and has accounted under the equity method of accounting as aggregated in Form 1, Line (4d); or (b) the net asset value where the parent company exercises control over the regulated entity, shall automatically populate.
11	Regulatory Capital Requirement for Regulated Entities (RCR)	Column (11): Input the Regulatory Capital Requirement (RCR) for said regulated entity, which shall be based on the jurisdiction's solvency laws for the regulatory sector in which the said entity is licensed to conduct non-insurance financial business.
12	Applicable Share of the RCR	Column (12): Calculated using [Column (8) x Column (11)].

Instructions affecting Schedule XI(A)

a. The insurance group's regulatory capital requirement for regulated non-insurance financial operating entities, where the parent company exercises either control or significant influence, shall be calculated in accordance with Schedule XI(A) and shall form part of the insurance group's BSCR – where "control" and "significant influence" has the same meaning given in subparagraph 19(4) of the Group Rules;

b. The name of the entity and its jurisdiction of incorporation shall be provided;

c. The sector classification of each of the insurance group's regulated non-insurance financial operating entities shall be provided as prescribed in the Instructions Affecting Schedule V paragraph (b);

d. The description of the strategic purpose of each entity shall be provided;

e. The entity type shall be provided;

f. The description of the products and services offered to external parties of each entity shall be provided;

g. The insurance group’s participation categorised, whether control or significant influence, on each registered entity shall be provided;

h. The percent of participating interest of the insurance group on each registered entity shall be provided;

i. The total assets of each entity shall be provided;

j. The investment amount shall be (1) the equity value of the insurance group’s investment in such regulated entities where the insurance group has significant influence and has accounted under the equity method of accounting as aggregated in Form 1, Line 4(d) and (2) the net asset value of the group’s investment in these regulated entities where the group exercises control shall be provided;

k. The regulatory capital requirement (RCR) shall be provided based on the jurisdiction’s solvency laws for the regulated sector in which the entity is licensed to conduct non-insurance financial business; and

l. The insurance group’s proportionate share of each entity’s RCR.

C17. SCHEDULE OF UNREGULATED ENTITIES WHERE THE PARENT EXERCISES CONTROL (SCHEDULE XI(B))

Background

C17.1 The schedule of unregulated entities where the parent exercises control — Schedule XI(B) — shall calculate the group's capital requirement for unregulated entities and shall form part of the group's charge for capital adjustment, which is added to the BSCR (after covariance adjustment) amount to arrive at the Group BSCR.

C17.2 This shall apply to all entities where the parent company exercises control. In determining whether the parent company controls over an unregulated member of the group, the definitions contained in the U.S., U.K., or Canadian GAAP or IFRS, as applicable, shall apply.

C17.3 The capital charges applied to each unregulated entities' net assets are based on the entities' operating business, as follows:

a. 0% on unregulated entities that conduct ancillary services.
b. 15% on unregulated entities that conduct non-financial operating entities.
c. 50% on unregulated entities that conduct financial operating entities.

Items

Column Item		Description
1	Group Member Name	Column (1): Input the name of the unregulated entity where the parent exercises control — Ensure that the name reflected here is consistent with the name reported in Schedule V(b) in order for the auto-links to work on other column items.
2	Jurisdiction	Column (2): The jurisdiction of said unregulated entity shall automatically populate.
3	Sector Classification	Column (3): The sector where the said unregulated entity operates in shall automatically populate.
4	Strategic Purpose	Column (4): The description of the strategic purpose of said unregulated entity shall automatically populate.
5	Entity Type	Column (5): The entity type of said unregulated entity shall automatically populate.
6	Products and Services Offered	Column (6): The description of the products and services offered to external parties by said unregulated entity shall automatically populate.
7	Group Member Category	Column (7): Select the unregulated entity's appropriate business category from the drop-down list.
8	Percent of Participating Interest	Column (8): The parent company's participating interest (in percentage) on said unregulated entity shall automatically populate.

Column Item		Description
9	Total Assets	Column (9): The total assets of said unregulated entity shall automatically populate.
10	Net Assets	Column (10): The net assets of said unregulated entity shall automatically populate.
11	Applicable Capital Charges	Column (11): Supplied by the BMA; the applicable capital charge applied to the unregulated entity will based on its category (e.g., nature of its business) and shall automatically populate.
12	Capital Requirement	Column (12): Calculated using [Column (8) x Column (10) x Column (11)].

Instructions affecting Schedule XI(B)

a. The insurance group's capital requirement for unregulated entities where the parent company exercises control over these entities shall be calculated in accordance with Schedule XI(B) and shall form part of the insurance group's BSCR – where "control" has the same meaning given in subparagraph 19(4) of the Group Rules;

b. The name of the unregulated entity and its jurisdiction of incorporation shall be provided;

c. The sector classification of each of the insurance group's unregulated entities where the group exercises control shall be provided as prescribed in the Instructions Affecting Schedule V paragraph (b);

d. The description of the strategic purpose of each entity shall be provided;

e. The entity type shall be provided;

f. The description of the products and services offered to external parties of each entity shall be provided;

g. The unregulated entities where the parent company exercises control shall be categorised based on the nature of its business activities, as follows: unregulated entities that conduct ancillary services, unregulated non-financial operating entities or unregulated financial operating entities;

h. The percentage of participating interest on each unregulated entity where the insurance group exercises control shall be provided;

i. The total assets of each unregulated entity shall be provided;

j. The net asset value of the group's investment in these unregulated entities shall be provided;

k. The capital charge applied to each unregulated entity are as follows: 0% to unregulated entities that conduct ancillary services; 15% to unregulated non-financial operating entities; and 50% to unregulated financial operating entities; and

l. The insurance group's proportionate share of each unregulated entity's capital.

C18. SCHEDULE OF UNREGULATED ENTITIES WHERE THE PARENT EXERCISES SIGNIFICANT INFLUENCE (SCHEDULE XI(C))

Background

C18.1 The schedule of unregulated entities where the parent exercises significant influence — Schedule XI(C) — shall provide particulars relating to the group's unregulated entities where the parent company exercises significant influence.

C18.2 This shall apply to all entities where the parent company exercises significant influence. In determining whether the parent company significant influence over an unregulated member of the group, the definitions contained in the US, UK, or Canadian GAAP or IFRS, as applicable, shall apply.

C18.3 The group's capital requirement for unregulated entities shall be calculated and included under the equity investment risk capital charge. The capital charges applied to each unregulated entities' investment amount (equity method) are based on the entities' operating business, as follows:

a. 5% on unregulated entities that conduct ancillary services, as reported on Form 1, Line (4a).
b. 20% on unregulated entities that conduct non-financial operating entities, as reported on Form 1, Line (4b).
c. 55% on unregulated entities that conduct financial operating entities, as reported on Form 1, Line (4c).

Items

Column Item		Description
1	Group Member Name	Column (1): Input the name of the unregulated entity where the parent exercises significant influence — Ensure that the name reflected here is consistent with the name reported in Schedule V(b) in order for the auto-links to work on other column items.
2	Jurisdiction	Column (2): The jurisdiction of said unregulated entity shall automatically populate.
3	Sector Classification	Column (3): The sector where the said unregulated entity operates in shall automatically populate.
4	Strategic Purpose	Column (4): The description of the strategic purpose of said unregulated entity shall automatically populate.
5	Entity Type	Column (5): The entity type of said unregulated entity shall automatically populate.

Column Item		Description
6	Products and Services Offered	Column (6): The description of the products and services offered to external parties by said unregulated entity shall automatically populate.
7	Group Member Category	Column (7): Select the unregulated entity's appropriate business category from the drop-down list.
8	Percent of Participating Interest	Column (8): The parent company's participating interest (in percentage) on said unregulated entity shall automatically populate.
9	Total Assets	Column (9): The total assets of said unregulated entity shall automatically populate.
10	Proportionate Share of the Investment Amount (Equity Method)	Column (10): The investment amount of said unregulated entity, which shall equal to the parent company's carrying amount under equity method, as included or reflected in Form 1, Lines (4a), (4b) and (4c) for each business category – ancillary, non-financial and financial – shall automatically populate.

Instructions affecting Schedule XI(C)

a. The insurance group's capital requirement for unregulated entities where the parent company exercises significant influence shall be calculated in accordance with paragraph 3 under the equity investment risk charge – where "significant influence" has the same meaning given in subparagraph 19(4) of the Group Rules – and Schedule XI(C) shall provide particulars of these entities;

b. The name of the unregulated entity and its jurisdiction shall be provided;

c. The sector classification of each of the insurance group's unregulated entities (significant influence) shall be provide as prescribed in the Instructions Affecting Schedule V paragraph (b);

d. The description of the strategic purpose of each entity shall be provided;

e. The entity type shall be provided;

f. The description of the products and services offered to external parties of each entity shall be provided;

g. The unregulated entities where the parent company exercises significant influence shall be categorised based on the nature of its business activities, as follows: unregulated entities that conduct ancillary services, unregulated non-financial operating entities or unregulated financial operating entities;

h. The percent of participating interest on each unregulated entity (significant influence) shall be provided;

i. The total assets of each entity shall be provided; and

j. The insurance group's proportionate share of the carrying investment amount/value under the equity method.

C19. SCHEDULE OF ENTITIES' CAPITAL DEDUCTED FROM AVAILABLE STATUTORY CAPITAL AND SURPLUS (SCHEDULE XI(D))

Background

C19.1 The schedule of entities' capital deducted from available statutory capital and surplus — Schedule XI(D) — shall calculate capital of entities, where a group cannot supply the necessary data for the BMA to determine a risk profile or to calculate contribution of these entities to the group's eligible capital. Said capital of entities shall be deducted from the group's available statutory capital and surplus for purposes of determining a group's BSCR and ECR ratios.

C19.2 This shall apply to all entities where the parent company exercises either control or significant influence.

Items

Column Item		Description
1	Group Member Name	Column (1): Input the name of the entity where the group cannot supply the necessary data or determine its contributions to the group's eligible capital — Ensure that the name reflected here is consistent with the name reported in Schedule V(b) in order for the auto-links to work on other column items.
2	Jurisdiction	Column (2): The jurisdiction of said entity shall automatically populate.
3	Sector Classification	Column (3): The sector where the said entity operates in shall automatically populate.
4	Strategic Purpose	Column (4): The description of the strategic purpose of said entity shall automatically populate.
5	Entity Type	Column (5): The entity type of said entity shall automatically populate.
6	Products and Services Offered	Column (6): The description of the products and services offered to external parties by said entity shall automatically populate.
7	Participation	Column (7): The parent company's participation type (whether control or significant influence) on said regulated entity shall automatically populate.
8	Group Member Category	Column (8): Select the said entity's appropriate business category from the drop-down list.
9	Reason for Data Deficiency	Column (9): Select the appropriate reason for deducting said entity's capital from the drop-down list.

Column Item		Description
10	Total Assets	Column (10): The total assets of said entity shall automatically populate.
11	Net Assets	Column (11): The net asset or investment amount of said entity shall automatically populate.

Instructions affecting Schedule XI(D)

a. For entities where an insurance group cannot supply the necessary data for the BMA to determine a risk profile or to calculate contributions of these entities to the group's eligible capital, Schedule XI(D) shall be used to calculate these entities' capital to be deducted from the insurance group's available statutory capital and surplus;

b. The insurance group shall provide the name and jurisdiction of these entities;

c. The sector classification of each of the group's member entities shall be provided as prescribed in the Instructions Affecting Schedule V paragraph (b);

d. The description of the strategic purpose of each entity shall be provided;

e. The entity type shall be provided;

f. The description of the products and services offered to external parties of each entity shall be provided;

g. The parent company's participation categorised, whether control or significant influence, on each entity shall be provided;

h. The entities shall be categorised based on the nature of its business activities, as follows: unregulated entities that conduct ancillary services, unregulated non-financial operating entities, unregulated financial operating entities, regulated insurance financial operating entities, and regulated non-insurance financial operating entities;

i. The reason for data deficiency shall be included, as follows: unknown strategic purpose/nature of operations or insufficient information surrounding eligible capital;

j. The total assets of these entities shall be provided; and

k. The net assets or equity values of these entities shall be provided.

C20. SCHEDULE OF GROUP MINIMUM MARGIN OF SOLVENCY (SCHEDULE XII)

Background

C20.1 The schedule of group minimum margin of solvency — Schedule XII — shall calculate the group's minimum margin of solvency in order to determine its ECR. The principles prescribed in paragraph 19 of the Supervision Rules shall apply in calculating a group's minimum margin of solvency.

C20.2 This shall apply to all insurance entities within the group, whether the parent company exercises control or significant influence. In determining whether the parent company controls or significant influence over an insurance member of the group, the definitions contained in the US, UK, or Canadian GAAP or IFRS, as applicable, shall apply.

Items

Column Item		Description
1	Group Member Name	Column (1): Input the name of the insurance entity — Ensure that the name reflected here is consistent with the name reported in Schedule V(b) in order for the auto-links to work on other column items.
2	Jurisdiction	Column (2): The jurisdiction of said insurance entity shall automatically populate.
3	Entity Type	Column (3): The entity type of said insurance entity shall automatically populate.
4	Participation Type	Column (4): The parent company's participation type (whether control or significant influence) on said insurance entity shall automatically populate.
5	Percent of Participation/Interest	Column (5): The parent company's participating interest (in percentage) on said insurance entity shall automatically populate.
6	Net Premiums Written	Column (6): The net premiums written of said insurance entity shall automatically populate.
7	Total Assets	Column (7): The total assets of said insurance entity shall automatically populate.
8	Minimum Margin of Solvency	Column (8): Input the minimum margin of solvency as determined by the jurisdiction where the said insurance entity is registered or licensed.

Column Item		Description
9	Proportionate Share on the Minimum Margin of Solvency	Column (9): Calculated using [Column (5) x Column (8)] if the participation on said insurance entity is categorised as significant influence. Otherwise, this amount shall equal to the Minimum Margin of Solvency or Column (8).

Instructions affecting Schedule XII

a. The name of the registered entity for which the parent company exercises control or significant influence – where "control" and "significant influence" has the same meaning given in subparagraph 19(4) of the Group Rules;

b. The name of the jurisdiction in which the entity is licensed or registered;

c. The entity type shall be provided;

d. The insurance group's participation categorised, whether control or significant influence, on each registered entity shall be provided;

e. The group's participation interest of each registered entity;

f. Net Premiums Written of these entities shall be provided;

g. The total assets of these entities shall be provided;

h. The minimum margin of solvency for each registered entity as determined by the jurisdiction where the group's entity is licensed or registered; and

i. The insurance group's proportionate share of the registered entity's minimum margin of solvency requirement, as prescribed in subparagraph 19(1) and subparagraph 19(2) of the Group Rules.

C21. SCHEDULE OF ELIGIBLE CAPITAL (SCHEDULE XIII)

Background

C21.1 The schedule of eligible capital — Schedule XIII — requires insurance groups to assess the quality of their capital resources eligible to satisfy their regulatory capital requirement levels. The insurance group should report their Eligible Capital on an **EBS basis.**

C21.2 The purpose of this schedule is to consider the uniqueness of capital instruments in their ability to protect policyholders on a going concern basis, run-off basis and during times of distress such as a winding-up or insolvency in the determination of capital adequacy.

C21.3 The schedule also takes into consideration that in times of stress situations, the excess of pledged assets that support policyholder obligations are not available to all policyholder until the obligations of the underlying policyholders have been satisfied. Therefore the statutory surplus must be adjusted to recognise the limited accessibility of these assets. Thus this excess of funds is transferred from Tier 1 to Tier 2 Capital which is calculated in Tier 1 Basic Capital item (h).

C21.4 Further the Authority considers that it would be too punitive that an insurance group maintains capital for these excess of funds for policyholder obligations which have been transferred from Tier 1 to Tier 2 capital, and therefore section (h)(vi) to (h)(xiii) reduces the capital factor charges associated with those assets. The additional guidance provides details on how this capital factor calculation should be completed

C21.5 Refer to the "Insurance (Group Supervision) Rules 2011" for details. A copy of these Rules is available in the BMA website.

Additional Guidance

Insurance Group Does Not Have Any Encumbered Assets for Policyholder Obligations

C21.5a If the insurance group does not have any encumbered assets for policyholder obligations, the insurance group shall report the full amount of Best Estimate Technical Provisions in Column A, Line iv – contracts where policyholder obligations are not collateralised.

Reporting Encumbered Assets for Policyholder Obligations

C21.5b When calculating the excess encumbered assets capital charge in section (h)(vi), this shall be done as follows:

- Encumbered Assets - determine the capital charge for the assets reported in section (h)(i), and reduce the capital charge by the insurance group's overall capital diversification.

For example if the insurance group has encumbered assets in trust equal to $8,000 which is allocated as:

Asset	Amount	BSCR capital factor	Required Capital
Cash BSCR Rating 1	$3,000	0.1%	$3.00
Sovereign Bonds	$2,000	0.0%	$0.00
Corp. Bonds Rating 1	$500	0.4%	$2.00
Corp. Bonds Rating 3	$5,500	1.5%	$37.50
Total	**$8,000**		**$42.50**

In the same example, the insurance group has Bermuda Solvency Capital requirement prior to covariance of $1,500 and the BSCR after covariance adjustment of $1,200, the diversification credit is 0.8. This is shown as follows:

Regulatory capital	Amount	Comments
BSCR prior to covariance	$1,500	
BSCR after covariance	$1,200	
Diversification	0.8	BSCR after covariance adjustment **divided by** BSCR prior to covariance adjustment (1200/1500)

Finally apply the diversification credit to the assets held in trust's capital factor:

Regulatory capital	Amount
Asset in Trust Capital Factor	$42.50
Diversification credit	0.8
Capital requirements arising from encumbered assets	**$34.00**

C22. EXPANDED PARTICULARS OF CEDED REINSURANCE (SCHEDULE XVIII)

Background

C22.1 To assess the risk of amounts reported in Funds Held By Ceding reinsurers (Form 1EBS, Line 12(c)), the Authority requires insurance groups to determine the arrangement that the funds are being held. In the event of default, if the Insurance Group 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 – Expanded Particulars of Ceded Reinsurance.

C22.2 Particulars of reinsurance balances shall disclose at least the ten largest reinsurance exposures with the remaining reinsurance exposures grouped according to BSCR ratings and/or a single consolidated reinsurance exposure—

a. the name of reinsurer;
b. the BSCR rating;
c. the amount of reinsurance recoverable from it in the form of funds held by ceding reinsurers (as reflected in Form 1EBS, Line 12(c) shall be included only to the extent that they are not already included under Schedule IIA
d. the amount of any collateral placed in favor of the members of the group relating to the recoverable balances (as reflected in Notes to Form 1EBS, Lines 11(e), 17(c), and 27(c));
e. the amount of qualifying collateral shall be the collateral amount in iv) 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 reinsurance recoverable and reinsurance balances payable;
f. the net qualifying exposure shall be determined as the net exposure less any funds held by ceding reinsurers included under Schedule IIA and the qualifying collateral;
g. 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 does not relate to the entire reinsurance exposure, the reinsurance exposure should be separated to reflect the

rating of that portion of the exposure which is covered by the letters of credit and the rating of that portion of the exposure which 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 (IAIS' ICPs) 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; and

(E) where the insurance group has disclosed a single consolidated reinsurance exposure, that exposure shall be assigned a BSCR rating of 8;

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

Premiums Receivables to be Reported on Line 10 of Balance Sheet

C22.2.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

Capital Risk Charge based on Nature of the Arrangement

C22.2.ii. For funds held by ceding companies, the capital risk charge is calculated by the nature of the arrangement.

- 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 insurance groups to look through to the underlying assets, and report these balances on Schedule IIA. This effectively adds to the fixed income risk and 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 Expanded Particulars of Ceded Reinsurers. Further, the rating for reinsurance exposures should be based on the financial strength ratings of the insurer.

C23. SCHEDULE OF CASH AND CASH EQUIVALENT COUNTERPARTY ANALYSIS (SCHEDULE XIX)

Background

C23.1 For assessing the underlying credit security of cash and cash equivalent counterparties, the Authority is requiring insurance groups to provide details of the largest 10 exposures and rating 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 XIX

C23.1a Cash and cash equivalent balances are to be reported based on its BSCR Rating;

C23.1b An insurance group may disclose at least the top ten cash and cash counterparty exposures (as reflected in Form 1EBS and Schedule IIA Column 1, Line 27);

C23.1c The remaining balance may be grouped according to BSCR rating;

C23.1d All unreconciled balances shall be allocated to the single consolidated exposure balance that receives a BSCR Rating of 8;

C23.1e 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;

C23.1f Insurance groups may allocate BSCR Rating based on the table below or with the allocation detailed in Schedule II; and

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

C24. SCHEDULE OF CURRENCY RISK (SCHEDULE XX)

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

C24.2 A capital charge is applied 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. The capital charge of 25% is applied to difference between the liabilities plus proxy BCSR for the currency and the assets held in that currency. 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 statutory liabilities found on Form 1EBS Line 39 divided by the total ECR Charge. The proxy BSCR factor shall be the maximum of:

- The prior year value;
- Average of the last 3 years.

Instructions Affecting Schedule XX

C24.2a At least 95% of an insurance group's total liabilities by currency based on the statutory Economic Balance Sheet shall be included;

C24.2b $GrossCurrast_i$ and $GrossCurrliab_i$ shall be valued in line with the Economic Balance Sheet principles set out in Schedule XIV;

C24.2c Where an insurance group uses currency hedging arrangements to manage its currency risk, then $Currast_i$ and $Currliab_i$ may reflect the impact of those arrangements on $GrossCurrast_i$ and $GrossCurrliab_i$ of a 25% adverse movement in foreign exchange rates, otherwise the amounts $GrossCurrast_i$ and $GrossCurrliab_i$ shall apply;

C24.2d A 'currency hedging arrangement' means derivative or other risk mitigation arrangements designed to reduce losses due to foreign currency exchange movements, and which meet the Authority's requirements to be classed as such; and

Additional Guidance

<u>Calculating the BSCR Proxy</u>

C24.2.i. When calculating the BSCR Proxy, insurance groups are to provide Liabilities (on an EBS basis) and total Group ECR capital charge on an EBS basis for the prior 3 years. In the instance the insurance group does not have liabilities and the Group ECR capital charge on an EBS basis, the Authority will allow insurance groups to provide the non-EBS balances for each.

C24.2.ii. If the insurance group does not have either liabilities or Group ECR capital charge for the prior 3 years,

- Insurance groups filing their BSCR for the first time are to use current year figures for the prior year;
- Insurance groups that have previously filed a BSCR however do not have 3 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

C24.2.iii. The insurance group does not meet the 95% minimum test on this schedule. How will this impact the BMA's risk assessment of the insurance group?

- The Authority may require additional information from the insurance group 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 insurance group's ECR and TCL ratios to be revised on its published Financial Condition Report.

Reporting Assets and Liabilities with Hedging Arrangements

C24.2.iv. For insurance groups that have been provided approval from the Authority for including hedging arrangements in their currency risk schedule, the insurance group shall report the total asset and liability of such currency hedge before and after the hedging arrangement.

IE. If an insurance group had $1.2M in USD Assets, $0.75M in USD Liabilities; £0.5M in Sterling Pound Assets and £0.4M in Sterling Pound Liabilities; $0.25M in Canadian Dollar Assets and $0.10M in Canadian Dollar Liabilities; which the insurance group had an approved asset hedge of $0.2M from USD to Sterling pound, this would be represented as follows:

Currency	Assets	Assets with Hedging Arrangements	Liabilities	Liabilities with Hedging Arrangements
USD	$1.2M	$1.0M	$0.75M	$0.75M
Sterling Pound	£0.5M	£0.7M	£0.4M	£0.4M
Canadian Dollar	$0.25M		$0.10M	

C25. SCHEDULE OF CONCENTRATION RISK (SCHEDULE XXI)

Background

C25.1 To assess the insurance group's concentration risk, the Authority requires the identification of largest 10 independent exposures relating to all instruments (such as equity holdings, bonds, real estate, loans, etc.), which would be an addition to the existing BSCR market and/or credit risk contributed by those exposures.

C25.2 For considering which counterparties need to be grouped together to be considered inclusion in this module, a single counterparty should include all related/connected counterparties, which are defined as:

a. Control relationship: one of the counterparties, directly or indirectly, has control over the other(s);
b. Economic inter-dependence: 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

C25.2a Disclosure of an insurance group's ten largest exposures to single counterparty risk by reporting the name, the exposure and allocation by asset type, bond / mortgage type (if applicable), BSCR Rating (if applicable) and asset value consistent with Form 1EBS.

C25.2b A counterparty shall include all related/connected counterparties defined as:

(A) Control relationship: if the counterparty, directly or indirectly, has control over the other(s); or
(B) 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.

C25.2c Asset Type (Column A) shall be one of the following lines taken from Form 1EBS;

(A) Cash and cash equivalents (Line 1)
(B) Quoted Investments (Line 2)
(C) Unquoted investments (Line 3)
(D) Investments in and Advances to Affiliates (Line 4)
(E) Investments in Mortgage Loans on Real estate (Line 5)
(F) Policy Loans (Line 6)
(G) Real Estate (Line 7)
(H) Collateral Loans (Line 8)

(I) Funds held by ceding Reinsurers (Line 12)

C25.2d Asset sub-type (Column B) shall provide further details of the type of asset as included in Table 1, Table 2 or Table 8 as appropriate;

C25.2e BSCR Rating (Column C) shall be the BSCR rating that was allocated to the asset when it was included in Table 1, Table 2 or Table 8 as appropriate;

C25.2f Asset Value (Column D) shall be the value of the asset as required by the Economic Balance Sheet valuation principles as set out in Schedule XIV; and

Additional Guidance

Reporting Largest 10 Independent Exposures

C25.2.i. Complete the schedule by providing the 10 largest independent exposures relating to all instruments (e.g. equity holdings, bonds, real estate, loans, etc.) largest counterparties. If a counterparty has more than one BSCR rating or Asset Type, enter each rating separately (i.e., if an insurance group has purchased bonds and preferred shares of a company, then the insurance group 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 bond in one line. In the second line, the insurance group is to report the "Asset Type" as "Preferred Shares" and "BSCR Rating" as the rating of the shares.

Hedge Funds

C25.2.ii. When counterparty exposure to collective investment funds such as hedge funds and diversified fund-of-one structures, insurance groups are to report the portfolio on a look through basis.

Investment in Affiliates Types

C25.2.iii. For investment in affiliates, allocate based on the following categories:

(i) Regulated Entity – an entity that files to a regulatory body or supervisory authority; Note that each regulated entity is required to provide the required capital requirement equivalent to the Bermuda Monetary Authority's Enhanced Capital Requirement;

(ii) Operating Entity – is an entity that sells products and takes on business risk;

(iii) Unregulated entities that conduct ancillary services – refers to unregulated entities that provide support services to the primary activities of an insurance group (this would include marketing, information;

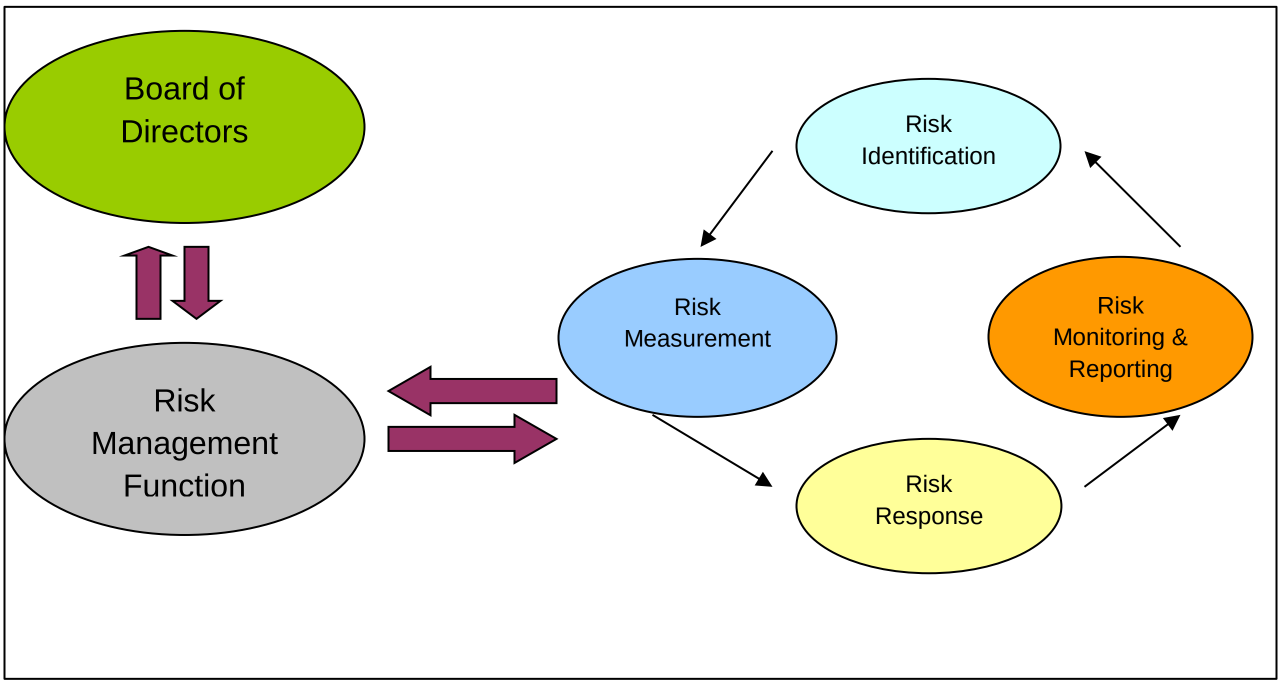
(iv) Unregulated non-financial operating entities – refers to an entity that sells products and takes on business risk (this would include department stores and automobile sales);

(v) Unregulated financial operating entities – refers to an entity that sells financial instruments (this would include Credit Default Swaps (CDS) and weather derivatives)

C26. COMMERCIAL INSURER RISK ASSESSMENT (CIRA)

Background

C26.1 The Commercial Insurer Risk Assessment (CIRA) framework assesses the quality of the group's risk management function surrounding its 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:



C26.2 The parent company's Board of Directors has an influential role in establishing, inter alia, the strategic direction and risk culture of the parent company. 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 group's management in steering the organisation forward

C26.3 The risk management function within the CIRA has four components: Risk Identification, Risk Measurement, Risk Response, and Risk Monitoring & Reporting. The group will undertake the self-assessment by answering the questions related to the calibre of its risk management processes in place to address the material risk arising from each operational risk area.

C26.4 The CIRA framework embodies a maturity model approach to identify a group's developmental stage with respect to a specific operational risk area. It rewards the group for achieving progress in each risk management area. It reviews the following eight operational risk exposures as follows:

a. Business Processes Risk – includes a risk of errors arising from data entry, data processing, or application design.
b. Business Continuity Risk – includes a risk of an event that threatens or disrupts an insurance group's continuous operations.
c. Compliance Risk – includes a risk of legal or regulatory breaches or both.
d. 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.
e. Distribution Channels Risk – includes a risk of disruption to an insurance group's distribution channel arising from employment of inexperienced or incapable brokers or agents.
f. Fraud Risk – includes a risk of misappropriation of assets, information theft, forgery, or fraudulent claims.
g. Human Resources Risk – includes a risk of employment of unethical staff, inexperience or incapable staff, failure to train or retain experienced staff, and failure to adequately communicate with staff.
h. Outsourcing Risk – includes a risk of miscommunication of responsibilities in relation to outsourcing, breach of outsource service agreements or entering into inappropriate service agreements.

C26.5 The CIRA framework applies the components within the Risk Management function to each operational risk area. The group assesses each operational risk area and selects the applicable descriptor under the "Dimension" column that reflects the developmental stage of the group's process surrounding the specific risk area

C26.6 In order to be credited for a relevant score within the CIRA Framework, the group must fulfil the criteria in the "Dimension" column. In its assessment, if the group finds itself between stages, the group must select the lower stage. The insurance group can supplement the selection with additional comments that can be made at the end of each risk management function.

C26.7 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.

Items

a. Corporate Governance – the group 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 insurance group may provide comments in the space provided to support its responses.

Parent Company's Board of Directors

Dimension	Implemented	Score
Sets risk policies, practices and tolerance limits for all material foreseeable operational risks at least annually and ensures they are communicated to insurance group entities		200
Monitors adherence to operational risk tolerance limits more regularly than annually		200
Sets risk policies, practices and tolerance limits for all material foreseeable operational risks at least annually and ensures they are communicated to insurance group entities		200
Monitors adherence to operational risk tolerance limits more regularly than annually		200
Sets risk policies, practices and tolerance limits for all material foreseeable operational risks at least annually and ensures they are communicated to insurance group entities		200
Monitors adherence to operational risk tolerance limits more regularly than annually		200

b. Risk Management Function – the group assesses each statement in the "Dimension" column and places an "X" in the column "Implemented" where the Risk Management function meets the criteria (150 points for each fulfilled area). The worksheet will automatically aggregate all scores.

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

Risk Management Function:

Dimension	Implemented	Score
Is independent of other operational units and has direct access to the parent company's Board of Directors		150
Is entrenched in strategic planning, decision making and budgeting process		150
Ensures that the risk management procedures and policies are well documented and approved by the parent company's Board of Directors		150
Ensures the risk management policies and procedures are communicated throughout the insurance group		150
Reviews operational risk management processes and procedures at least annually		150
Ensures that loss events arising from operational risks are documented and loss event data is integrated into enterprise risk management		150
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 parent company's Board of Directors at least annually		150

c. Risk Identification – the insurance group is to answer the following question:

"Has the insurance group taken steps to identify material risks arising from the Operational Risk Areas identified below?"

If the answer to the question is "No" then the insurance group does not have to complete the matrix/grid. If the answer to the question is "Yes" then the group is to identify the stage of progression of each Operational Risk Area based on the Dimension descriptor. The insurance group is then to input an "X" in the grid corresponding to the stage in the matrix table under the relevant Operational Risk Area.

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

Risk Identification Processes:

Progression		Dimension	Operational Risk Areas							
Stage	**Scoring**		**Fraud**	**HR**	**Outsourcing**	**Distribution Channel**	**Business Processes**	**Business Continuity**	**IT**	**Compliance**
1	50	"ad hoc"								
2	100	Implemented but not standardised across the insurance group								
3	150	Implemented, well documented policies and procedures that are understood by relevant staff, and standardised across the entire insurance group								
4	200	In addition to Stage 3, processes are reviewed at least annually with the view to assessing effectiveness and introducing improvements								

d. Risk Measurement – the insurance group is to answer the following question:

"Has the insurance group taken steps to measure material risks arising from the Operational Risk Areas identified below?"

If the answer to the question is "No" then the insurance group does not have to complete the matrix/grid. If the answer to the question is "Yes" then the insurance group is to identify the stage of progression of each Operational Risk Area based on the Dimension descriptor. The insurance group is then to input an "X" in the grid corresponding to the stage in the matrix table under the relevant Operational Risk Area.

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

Risk Measurement Processes:

Progression		Dimension	Operational Risk Areas							
Stage	Scoring		Fraud	HR	Outsourcing	Distribution Channel	Business Processes	Business Continuity	IT	Compliance
1	50	“ad hoc”								
2	100	Implemented but not standardised across the insurance group								
3	150	Implemented, well documented policies and procedures that are understood by relevant staff, and standardised across the entire insurance group								
4	200	In addition to Stage 3, processes are reviewed at least annually with the view to assessing effectiveness and introducing improvements								

e. Risk Response – the insurance group is to answer the following question:
“Has the insurance group taken steps to control and/or mitigate material risks arising from the Operational Risk Areas identified below?”

If the answer to the question is “No” then the insurance group does not have to complete the matrix/grid. If the answer to the question is “Yes” then the insurance group is to identify the stage of progression of each Operational Risk Area based on the Dimension descriptor. The insurance group is then to input an “X” in the grid corresponding to the stage in the matrix table under the relevant Operational Risk Area.

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

Risk Response Processes:

Progression		Dimension	Operational Risk Areas							
Stage	Scoring		Fraud	HR	Outsourcing	Distribution Channel	Business Processes	Business Continuity	IT	Compliance
1	50	"ad hoc"								
2	100	Implemented but not standardised across the insurance group								
3	150	Implemented, well documented policies and procedures that are understood by relevant staff, and standardised across the entire insurance group								
4	200	In addition to Stage 3, processes are reviewed at least annually with the view to assessing effectiveness and introducing improvements								

f. <u>Risk Monitoring & Reporting</u> – the insurance group is to answer the following question:
"Has the insurance group taken steps to monitor and report material risks arising from the Operational Risk Areas identified below?"

If the answer to the question is "No" then the insurance group does not have to complete the matrix/grid. If the answer to the question is "Yes" then the insurance group is to identify the stage of progression of each Operational Risk Area based on the Dimension descriptor. The insurance group is then to input an "X" in the grid corresponding to the stage in the matrix table under the relevant Operational Risk Area.

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

Risk Monitoring & Reporting Processes:

Progression		Dimension	Operational Risk Areas							
Stage	**Scoring**		**Fraud**	**HR**	**Outsourcing**	**Distribution Channel**	**Business Processes**	**Business Continuity**	**IT**	**Compliance**
1	50	"ad hoc"								
2	100	Implemented but not standardised across the insurance group								
3	150	Implemented, well documented policies and procedures that are understood by relevant staff, and standardised across the entire insurance group								
4	200	In addition to Stage 3, processes are reviewed at least annually with the view to assessing effectiveness and introducing improvements								

g. <u>Operational Risk Charge Calculation</u>

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 insurance group's BSCR (After Covariance Adjustment) sub-total for purposes of arriving at its ECR for the year-end filing.

i. <u>Overall CIRA Score</u> – the aggregate of all the total scores from the Corporate Governance, Risk Management Function, Risk Identification, Risk Measurement, Risk Response, Risk Monitoring & Reporting assessment used to determine the Operational Risk Charge %.

ii. CIRA Scoring Grid – the applicable Operational Risk Charge % that would be used to determine the insurance group's Total Operational Risk Capital Charge.

Overall Score	Applicable Operational Risk Charge % "BSCR (After Covariance Adjustment)"
<= 5200	10%
> 5200 <= 6000	9%
> 6000 <= 6650	8%
> 6650 <= 7250	7%
> 7250 <= 7650	6%
> 7650 <= 7850	5%
> 7850 <= 8050	4%
> 8050 <= 8250	3%
> 8250 <=8450	2%
> 8450	1%

iii. Total Operational Risk Capital Charge – calculated using the [Operational Risk Charge % x BSCR (After Covariance Adjustment)].

C27. SCHEDULE OF FIXED INCOME AND EQUITY INVESTMENTS BY BSCR RATING (SCHEDULE IIB)

Background

C27.1 The schedule of fixed income and equity investments by BSCR rating (Schedule IIB), provides a breakdown of an insurance group's:

a) bonds & debentures by both investment category (Corporate & Sovereign Bonds, Residential Mortgage-Backed Securities, Commercial Mortgage-Backed Securities/Asset-Backed Securities and Bond Mutual Funds) and BSCR ratings (Ratings 0-8);
b) 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);
c) spread risk for credit derivatives by spread up (for long and short exposures) and spread down for (for long and short exposures);
d) 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 collateralization; and
e) cash and cash equivalents

The amounts reported on Schedule IIB should reflect the balances as shown on Form 1EBS Lines 2(f) Quoted Investments, 3(f) Unquoted investments and 13(a) Derivatives after look-through (where applicable).

C27.2 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 insurance group's market risk. It is noted that the balances reported on this schedule:

- are, where interest-rate sensitive, to be included in Interest Rate/Liquidity Risk charge calculation along with the interest-rate sensitive values reported on Schedules IIC – IIF; and
- are to be included in balances in Schedule XIXA Cash and Cash Equivalents.

C27.3 The BMA has identified and defined eight categories of BSCR ratings:

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-

C27.4 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.

Items

C27.5 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 1EBS for the relevant year. In the absence of look-through, the following (points a-d) should hold:

a. Quoted and unquoted bonds and debentures, and Investment in Mortgage Loans on Real Estate – Line 14, Column (11) 'Total" corresponds to Form 1EBS, Line 2(b), 3(b) and 5(c);
b. Quoted and unquoted equities – Line 37, Column (11) 'Total' corresponds to Form 1EBS, Line 2(d) and 3(d);
c. Derivatives instruments – Line 47, Columns (1, 3, 6 and 8) and Line 57, Columns (1, 2 and 3) corresponds to Form 1EBS 13(a);
d. Cash and Cash Equivalents – Line 58, Column (1) corresponds to Form 1EBS 1; and
e. Quoted and unquoted investments corresponds to hedge funds as reported on Form 1EBS 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

C27.5a 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;

C27.5b Equity investments, both quoted and unquoted, shall be categorized into long exposures, short exposures qualifying as assets held for risk mitigation purposes in accordance with criteria prescribed in section B5; and short exposures not qualifying as assets held for risk mitigation purposes in accordance with criteria prescribed in section B5 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;

C27.5c Preferred stock shall be classified by BSCR rating;

C27.5d The latest available AM Best, S&P, Moody's, or Fitch ratings shall be used in determining the appropriate BSCR rating of any fixed income security or preferred stock;

C27.5e Where a security is rated differently by various rating agencies, the insurance group shall classify the security according to the most conservative rating assigned;

C27.5f Unrated securities shall be assigned a BSCR rating of 8;

C27.5g 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;

C27.5h Debt issued by government-owned or entities that are explicitly guaranteed by that government, (except government issued mortgage-backed securities), shall be assigned a BSCR rating of 0;

C27.5i "Exposures" shall include those determined by the application of the "look-through" approach calculated in accordance with criteria prescribed in section B7 for collective investment vehicles and other investments packaged as funds;

C27.5j "Strategic holdings" refers to holdings in qualifying equity investments of a strategic nature which meet the criteria prescribed in section B8.7 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".

C27.5k "Infrastructure" refers to holdings in qualifying equity infrastructure investments which meet criteria prescribed in section B8.3 for such investments that are non-strategic holdings.

C27.5l "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 B8.1.

C27.5m "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;

C27.5n Best estimate insurance liabilities and other liabilities (excluding risk margin) whose value is subject to equity risk are to be included in Lines 31 to 46;

C27.5o 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 B5; and

C27.5p Fixed income investments and preferred stocks shall be classified by the following BSCR Ratings:

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-

C27.5q For all exposures other than 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 cases4; however, the insurance group always needs to 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 insurance group is responsible for entering correct after-shock values by overriding the default formula.

C27.5r For 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 underlying of the derivative.

Additional Guidance

Applying a BSCR Rating to Unquoted Internally Rated Investments

C27.5.i. Insurance groups that have developed an internal rating for unquoted investments shall apply a BSCR rating of 8. However if an insurance group would like to request permission to use an equivalent scale of these investments in their BSCR filing, the insurance group 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 insurance group reclassify an unquoted investment from BSCR Rating 8.

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

[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%.

C27.5.ii. Securities that have a BSCR rating 0 has 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 Government National Mortgage Association (GNMA), Federal National Mortgage Association (FNMA) and Federal Home Loan Mortgage Corporation (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.

Mortgage Backed-Securities to use NAIC Rating

C27.5.iii. Mortgage Backed Securities do not always adequately reflect the risk associated with being held at less than par value. For this reason, the National Association of Insurance Commissioners (NAIC) has modeled these bonds and provides US insurers with a rating reclassification. The Authority shall allow insurance groups the option 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 insurance groups 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 Mortgaged Backed Securities Only)
0	
1	
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 1EBS 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.

C28. SCHEDULE OF FUNDS HELD (SCHEDULE IIC)

Background

C28.1 To assess the risk of amounts reported in Funds Held By Ceding Reinsurers (Form 1EBS, Line 12(c)), the Authority requires insurance groups to determine the arrangement that 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 insurance group 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.

C28.2 The Schedule of Funds Held — Schedule IIC — provides the BMA with details to assess the type and quality of investment held by requiring the insurance group 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.

C28.3 The investment categorisation and BSCR ratings shall be based on the same rating scale and principles as those found on Schedule IIB.

Items

C28.4 The amounts reported should correspond to balances reported on Form 1EBS Line 12(c) and is allocated in the following five sections:

a. Quoted and unquoted bonds and debentures, and Investment in Mortgage Loans on Real Estate;
b. Quoted and unquoted equities;
c. Derivatives instruments;
d. Cash and Cash Equivalents; and
e. Quoted and unquoted investments.

Instructions Affecting Schedule IIC

C28.4a All funds held by ceding reinsurers (as reported in Form 1EBS, Line 12(c)) and funds held under retrocession (as reported in Form 1EBS, Line 34(c)) 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 B7, where applicable;

C29. SCHEDULE OF SEGREGATED ACCOUNTS (SCHEDULE IID)

Background

C29.1 The schedule of Segregated Accounts (Schedule IID) provides a breakdown of an insurance group's Segregated Accounts by:

a) bonds & debentures by both investment category (Corporate & Sovereign Bonds, Residential Mortgage-Backed Securities, Commercial Mortgage-Backed Securities/Asset-Backed Securities and Bond Mutual Funds) and BSCR ratings (Ratings 0-8);
b) 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);
c) spread risk for credit derivatives by spread up (for long and short exposures) and spread down for (for long and short exposures);
d) 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 collateralization; and
e) cash and cash equivalents

C29.2 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 his information provides the BMA with the type and quality of investments held for assessing the insurance group's market risk. It is noted that the cash and cash equivalent balances reported on this schedule are to be include in the balances in Schedule XIXA Cash and Cash Equivalents.

C29.3 The investment categorisation and BSCR ratings shall be based on the same rating scale and principles as those found on Schedule IIB.

Items

C29.4 The amounts reported should correspond to balances reported on Form 1EBS Lines 13(b, c and d) and 36 (c, d and e) and is allocated in the following five sections:

a. <u>Quoted and unquoted bonds and debentures, and Investment in Mortgage Loans on Real Estate</u>;
b. <u>Quoted and unquoted equities</u>;
c. <u>Derivatives instruments;</u>
d. Cash and Cash Equivalents; and
e. Quoted and unquoted investments.

Instructions Affecting Schedule IID

C29.4a All segregated account companies with identifiable assets (as reported in Form 1EBS, Lines 13(b), (c), (d)) and liabilities (as reported in Form 1EBS, Lines 36(c), (d), (e)), such as fixed income investments, equity investments, mortgage loans, and cash and cash equivalents, shall be included here;

C29.4b Fixed Income investments (Lines 1-13): In columns 2, 4, 6, 8, and 10, insurance groups shall only enter liabilities that are directly linked to, and move in line with, corresponding assets entered in columns 1, 3, 5, 7, and 9, respectively. Only such linked liabilities are allowed to offset the risk charge on assets, up to the amount of assets they correspond to. Any liabilities not directly linked to assets reflected in the Schedule shall be ignored in the fixed income risk calculation.

C30. SCHEDULE OF DEPOSIT ASSETS AND LIABILITIES (SCHEDULE IIE)

Background

C30.1 The schedule of Deposit Assets and Liabilities (Schedule IIE) provides a breakdown of an insurance group's Deposit Assets and Liabilities:

a) bonds & debentures by both investment category (Corporate & Sovereign Bonds, Residential Mortgage-Backed Securities, Commercial Mortgage-Backed Securities/Asset-Backed Securities and Bond Mutual Funds) and BSCR ratings (Ratings 0-8);
b) 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);
c) spread risk for credit derivatives by spread up (for long and short exposures) and spread down for (for long and short exposures);
d) 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 collateralization; and
e) cash and cash equivalents

C30.2 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 his information provides the BMA with the type and quality of investments held for assessing the insurance group's market risk. It is noted that the cash and cash equivalent balances reported on this schedule are to be include in the balances in Schedule XIXA Cash and Cash Equivalents.

C30.3 The investment categorisation and BSCR ratings shall be based on the same rating scale and principles as those found on Schedule IIB.

Items

C30.4 The amounts reported should correspond to balances reported on Form 1EBS Lines 13(e) Deposit Assets and 36(f) Deposit Liabilities and is allocated in the following five sections:

a. Quoted and unquoted bonds and debentures, and Investment in Mortgage Loans on Real Estate;
b. Quoted and unquoted equities;
c. Derivatives instruments;
d. Cash and Cash Equivalents; and
e. Quoted and unquoted investments.

Instructions Affecting Schedule IIE

C30.4a All deposit assets and liabilities with identifiable assets (as reported in Form 1EBS, Lines 13(e)) and liabilities (as reported in Form 1EBS, Lines 36 (f)), such as fixed income investments, equity investments, mortgage loans, and cash and cash equivalents, are required to be included here;

C30.4b Insurance groups should look into the nature of the deposit assets and map them in the BSCR template to appropriate categories based on the cash flow profile and risk sensitivities. For example, bond-like cash flow profile would be mapped to corporate bonds (based on counterparty's credit rating).

C31. SCHEDULE OF OTHER SUNDRY ASSETS AND LIABILITIES (SCHEDULE IIF)

Background

C31.1 The schedule of Other Sundry Assets and Liabilities (Schedule IIF) provides a breakdown of an insurance group's Other Sundry Assets and Liabilities:

a) bonds & debentures by both investment category (Corporate & Sovereign Bonds, Residential Mortgage-Backed Securities, Commercial Mortgage-Backed Securities/Asset-Backed Securities and Bond Mutual Funds) and BSCR ratings (Ratings 0-8);
b) 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);
c) spread risk for credit derivatives by spread up (for long and short exposures) and spread down for (for long and short exposures);
d) 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 collateralization; and
e) cash and cash equivalents

C31.2 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 his information provides the BMA with the type and quality of investments held for assessing the insurance group's market risk. It is noted that the cash and cash equivalent balances reported on this schedule are to be include in the balances in Schedule XIXA Cash and Cash Equivalents.

C31.3 The investment categorisation and BSCR ratings shall be based on the same rating scale and principles as those found on Schedule IIB.

Items

C31.4 The amounts reported should correspond to balances reported on Form 1EBS Line 13(j) Other Sundry Assets and 36(i) Other Sundry Liabilities is allocated in the following five sections:

a. Quoted and unquoted bonds and debentures, and Investment in Mortgage Loans on Real Estate;
b. Quoted and unquoted equities;
c. Derivatives instruments;
d. Cash and Cash Equivalents; and
e. Quoted and unquoted investments.

Instructions Affecting Schedule IIF

C31.4a All other sundry assets and liabilities with identifiable assets (as reported in Form 1EBS, Lines 13(j)) and liabilities (as reported in Form 1EBS, Lines 36 (i)), such as fixed income investments, equity investments, mortgage loans, and cash and cash equivalents, shall be included here;

C32. SCHEDULE OF PREMIUM EXPOSURE MEASURE BY LINE OF BUSINESS (SCHEDULE IVD)

Background

C32.1 The schedule of premium exposure measure by line of business — Schedule IVD — provides a breakdown of an insurance group's gross premium exposure measure and net premium exposure measure on a consolidated basis. The exposure measure is calculated by the greater of:

a) Gross Premium Written / Net Premium Written for the current year;
b) Estimate of Net Earned Premiums for the next 12 months;

Plus

- Net FP (Existing); and
- Net FP (Future)

Instructions Affecting Schedule IVD

C32.1a "Net Premiums Written" means the consolidated net premiums written for the reporting period;

C32.1b "Estimate of Net Earned Premiums" for the next twelve months; means the net premiums earned for the next twelve months including exposures to bound but not incepted premiums;

C32.1c "Net Base Premium Exposure" means the greater of the amounts calculated under Lines of Business in paragraphs (a) and (b) above;

C32.1d "Net FP (existing)" means the expected present value of net premiums to be earned by the insurance group after the next twelve months reporting period for existing qualifying multi-year insurance policies;

C32.1e "Net FP (future)" means the expected present value of net premiums to be earned by the insurance group after the next twelve months reporting period for qualifying multi-year insurance policies where the initial recognition date falls in the following twelve months;

C32.1f "Net Premium Exposure Measure" means the total derived from paragraphs (c), (d) and (e) above;

C32.1g "Gross Premium Exposure Measure" means the amount calculated in paragraph (f) above but on a gross of reinsurance basis;

C32.1h "Geographic Net Premium Exposure Measure" means the total shown on Schedule IVE.

Additional Guidance

Qualifying multi-year insurance policies

C32.1a "qualifying multi-year insurance policies" means those insurance policies with (an earning) term longer than twelve months after allowing for the criteria prescribed by the Authority;

C26.7a Corollary to the above is that insurance policies which are earned over a term of twelve months or less (i.e. single year policies) are not considered "qualifying multi-year insurance policies";

C32.1b In order to determine what contracts fall under multi-year exposure, insurance groups should take into account paragraph 122 of the Authority's Guidance Notes for Commercial Insurers and Insurance Groups' Statutory Reporting Regime, of 30th 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 insurance group is no longer required to provide coverage;
b) the insurance group 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;
c) the insurance group 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

C32.1c 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.

C32.1d The criteria prescribed in paragraph C26.7c are taken from the Guidance for calculating the EBS Technical Provisions. A natural implication is that the treatment of multi-year contracts should be consistent between the calculation of FP(Existing) and EBS Technical Provisions.

C33. SCHEDULE OF GEOGRAPHIC DIVERSIFICATION OF NET PREMIUM EXPOSURE MEASURE (SCHEDULE IVE)

Background

C33.1 The schedule of geographic diversification of net premium exposure measure — Schedule IVE — provides a breakdown of an insurance group's net premium exposure measure by statutory lines of business and by geographical location. The BMA has identified and defined 24 statutory lines of business and 18 statutory geographical zones.

C33.2 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

C33.2a For each line of business, the net premium exposure measure stated in Schedule IVD 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 premiums written shown in Schedule IVD.

Additional Guidance

C33.2b When allocating the premium exposure measure by geographic location, allocate the premiums by the location of the risk.

C34. SCHEDULE OF CASH AND CASH EQUIVALENT COUNTERPARTY ANALYSIS (SCHEDULE XIXA)

Background

C34.1 For assessing the underlying credit security of cash and cash equivalent counterparties, the Authority is requiring insurance groups to provide details of the largest 10 exposures and rating 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

C34.1a an insurance group may disclose at least the top 10 cash and cash counterparty exposures (as reflected in Form 1EBS and Schedules IIB to IIF Column 1, Line 58)

C34.1b the remaining balance may be grouped according to BSCR rating;

C34.1c all unreconciled balances shall be allocated to the single consolidated exposure balance that receives a BSCR Rating of 8;

C34.1d 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;

C34.1e insurance groups may allocate BSCR Rating based on the table below or with the allocation detailed in Schedule IIB; and

C34.1f amounts shall be reported on an EBS Valuation basis.

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

C35. SCHEDULE OF CURRENCY RISK (SCHEDULE XXA)

C35.1 For insurance groups that write business in multiple currencies, the Authority has developed a capital charge for each currency where the insurance group's liabilities may exceed its assets. For the grounds of proportionality, the Authority is requiring insurance groups to provide currency exposures for at least 95% of total assets and liabilities held.

C35.2 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:

- The prior year value;
- Average of the last 3 years.

Instructions Affecting Schedule XXA

C35.2a insurance groups shall report currencies representing not less than 95% of their economic balance sheet liabilities;

C35.2b assets qualifying as held for risk mitigation purposes; assets not qualifying for risk mitigation purposes and liabilities without management actions shall be valued in line with the Economic Balance Sheet principles set out in Schedule XIV and in accordance with criteria prescribed in section B5;

C35.2c liabilities with management actions shall be valued in in accordance to with criteria prescribed in section B6 in relation to the valuation of future bonuses and other discretionary benefits; and

C35.2d For all exposures other than 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 cases5; however, the insurance group always needs to 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 insurance group is responsible for entering correct after-shock values by overriding the default formula.

[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, say, 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.

C35.2e 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; and

C35.2f amounts shall be reported on a both an EBS Valuation.

Additional Guidance

Calculating the BSCR Proxy

C35.2.i. When calculating the BSCR Proxy, insurance groups are to provide Liabilities (on an EBS basis) and total ECR capital charge on an EBS basis for the prior 3 years. In the instance the insurance group does not have liabilities and the ECR capital charge on an EBS basis, the Authority will allow insurance groups to provide the non-EBS balances for each.

C35.2.ii. If the insurance group does not have either liabilities or ECR capital charge for the prior 3 years,

- insurance groups filing their BSCR for the first time are to use current year figures for the prior year;
- insurance groups that have previously filed a BSCR however do not have 3 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

C35.2.iii. The insurance group does not meet the 95% minimum test on this schedule. How will this impact the BMA's risk assessment of the insurance group?

- The Authority may require additional information from the insurance group 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 insurance group's ECR and TCL ratios to be revised on its published Financial Condition Report.

C36. SCHEDULE OF CONCENTRATION RISK (SCHEDULE XXI)

Background

C36.1 To assess the insurance group's concentration risk, the Authority requires the identification of largest 10 independent exposures relating to all instruments (such as equity holdings, bonds, real estate, loans, etc.), which would be an addition to the existing BSCR market and/or credit risk contributed by those exposures.

C36.2 For considering which counterparties need to be grouped together to be considered inclusion in this module, a single counterparty should include all related/connected counterparties, which are defined as:

a. Control relationship: one of the counterparties, directly or indirectly, has control over the other(s);
b. Economic inter-dependence: 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

C36.2a disclosure of an insurance group's ten 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 asset value consistent with Form 1EBS.

C36.2b for the purposes of this Schedule, a counterparty shall include all related or connected counterparties captured by either of the following criteria:

(i) 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

(ii) economic interdependence: if one of the counterparties were to experience financial difficulties which directly or indirectly affect the ability of any or all of the remaining counterparties to perform their financial obligations (for example 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);

C36.2c asset Type (Column A) shall be determined by the insurance group as one of the following:

(i) cash and cash equivalents (as defined in Schedule XIX Column B Schedules IIB, IIC, IID, IIE, and IIF Column (1), Line 68);
(ii) quoted and Unquoted Investments (as defined in Schedules IIB, IIC, IID, IIE, and IIF Column (11), Line 14);

(iii) equity holdings (as defined in Schedules IIB, IIC, IID, IIE, and IIF Column (11), Line 37);
(vi) advances to Affiliates (reported on Form 1EBS, Line 4(g));
(vii) policy Loans (reported on Form 1EBS, Line 6);
(viii) real Estate 1 (reported on Form 1EBS, Line 7(a));
(ix)real Estate 2 (reported on Form 1EBS, Line 7(b));
(x) collateral Loans (reported on Form 1EBS, Line 8).

C36.2d when reporting asset sub-type (under Column B) shall provide further details of the type of asset as included in Table 1, Table 2 or Table 8 as appropriate;

C36.2e when applying the BSCR Rating (under Column C) the insurance group 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;

C36.2f asset value (under Column D) shall be the value of the asset as required by the Economic Balance Sheet valuation principles as set out in Schedule XIV; and

C36.2g amounts shall be reported on an EBS Valuation basis.

Additional Guidance

Reporting Largest 10 Independent Exposures

C36.2.i. Complete the schedule by providing the 10 largest independent exposures relating to all instruments (e.g. equity holdings, bonds, real estate, loans, etc.) largest counterparties. If a counterparty has more than one BSCR rating or Asset Type, enter each rating separately (i.e., if an insurance group has purchased bonds and preferred shares of a company, then the insurance group 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 bond in one line. In the second line, the insurance group is to report the "Asset Type" as "Preferred Shares" and "BSCR Rating" as the rating of the shares.

C37. SCHEDULE OF INTEREST RATE SENSITIVE ASSETS AND LIABILITIES (SCHEDULE XXIII)

Background

C37.1 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, etc.). 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

C37.1a 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, etc.). Any changes in market values of assets and best estimate liabilities due to interest rate-sensitive cash flows should be accounted for.

C37.1b 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.

C37.1c 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.

C37.1d 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 section Risk Mitigation of these instructions. Also, management actions should be taken into account as long as they comply with the requirements set in section Management Actions of these instructions.

Interaction between Shock-based approach and interest rate risk captured in VA guarantee risk

C37.1e In order to prevent double-counting capital charges for Variable Annuity guarantees when using the shock-based approach, the following provisions apply:

a. Where companies are using an internal model for Variable Annuity risk, assets and liabilities associated with Variable Annuity (VA) guarantees may be excluded from the interest rate shock, if the following conditions are fulfilled:

---

[6] And segregated account company liabilities, deposit liabilities and sundry liabilities.

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

i. The company is able to identify and track assets associated with Variable Annuity guarantees.
ii. Interest rate risk associated with both the VA guarantee liabilities and the associated assets is explicitly modeled in the internal model.

b. Where interest rate risk is modelled for VA guarantees, but not for the associated assets, or the associated assets cannot be separately identified; then the VA guarantee liabilities may be excluded from the interest rate shock, but any assets may not.
c. Where companies are using the BSCR Standard Formula to calculate Variable Annuity guarantee risk, only the VA guarantee liabilities may be excluded from the interest rate shock, but any assets may not.

Additional Guidance

C37.1.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.

- 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.

C37.1.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).

C37.1.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 e.g. simply re-discounting the base scenario cash flows.

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

C37.1.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.

C37.1.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.

D. SUMMARY

D1. FEATURES – BSCR ON CURRENT BASIS

Background

D1.1 The Summary Exhibit has seven key features: Required Capital and Surplus, Available Statutory Capital and Surplus, MSM, ECR and TCL, Ratios, Group 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 only financial data input into the Summary Exhibit is the BMA approved Capital Contribution of the insurance group.

Required Capital and Surplus

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

$$BSCR = \sqrt{C_{fi}^2 + C_{eq}^2 + C_{\text{int}}^2 + C_{curr}^2 + C_{conc}^2 + C_{prem-gb}^2 + \left[\frac{1}{2}C_{cred} + C_{rsvs-gb}\right]^2 + \left[\frac{1}{2}C_{cred}\right]^2 + (C_{LTmort} + C_{LTsl} + C_{LTr})^2}$$

$$\text{cont'd } \sqrt{-.5 \times (C_{LTmort} + C_{LTsl} + C_{LTr}) \times C_{LTlong} + C_{LTlong}^2 + C_{LTmorb}^2 + C_{LTVA}^2 + C_{LTother}^2 + C_{cat-gb}^2} + C_{op} + C_{adj}$$

$$+ \left[BSCR_{Corr} - \left(\sqrt{C_{fi}^2 + C_{eq}^2 + C_{\text{int}}^2 + C_{curr}^2 + C_{conc}^2 + C_{prem-gb}^2 + \left[\frac{1}{2}C_{cred} + C_{rsvs-gb}\right]^2 + \left[\frac{1}{2}C_{cred}\right]^2 + (C_{LTmort} + C_{LTsl} + C_{LTr})^2}\right.\right.$$

$$\left.\left.\text{cont'd } \sqrt{-.5 \times (C_{LTmort} + C_{LTsl} + C_{LTr}) \times C_{LTlong} + C_{LTlong}^2 + C_{LTmorb}^2 + C_{LTVA}^2 + C_{LTother}^2 + C_{cat-gb}^2} + C_{op} + C_{adj}\right)\right]$$

$$\boxed{\times \text{TransitionalFactor}}$$

Where:

C_{fi} = capital charge in respect of fixed income investment risk;

C_{eq} = capital charge in respect of equity investment risk capital;

C_{int} = capital charge in respect of interest rate and liquidity risk;

C_{curr} = capital charge in respect of currency risk;

C_{conc} = capital charge in respect of concentration risk;

C_{prem} = capital charge in respect of general business premium risk;

C_{rsvs} = capital charge in respect of general business reserve risk;

C_{cred} = capital charge in respect of credit risk capital;

C_{cat} = capital charge in respect of catastrophe risk;

C_{LTmort} = capital charge in respect of Long-Term – mortality;

C_{LTsl} = capital charge in respect of Long-Term – stop loss;

C_{LTr} = capital charge in respect of Long-Term– riders;

C_{LTmorb} = capital charge in respect of Long-Term – morbidity & disability;

C_{LTlong} = capital charge in respect of Long-Term – longevity;

C_{LTVA} = capital charge in respect of Long-Term – variable annuity guarantee risk;

C_{LToth} = capital charge in respect of Long-Term – other insurance risk;

C_{op} = capital charge in respect of operational risk; and

C_{adj} = capital charge adjustment, calculated as the sum of (a), (b) and (c) where:

(a) Regulatory capital requirement for regulated non-insurance financial operating entities;
(b) Regulatory capital requirement for unregulated entities; and
(c) Capital adjustment for the loss absorbing capacity of deferred taxes.

$BSCR_{Corr}$ = as calculated in section D12.

TransitionalFactor = The transitional factor is calculated in accordance to subparagraphs i to iii for insurance groups and increases in equal steps from 1/T on for the financial year beginning on or after 1st January 2019 to 100 % by the end of the transitional period T in financial year beginning on or after year 2018+T. The length of the transitional period, T, for insurance groups is based on relative proportions of long term and P&C risks and will be determined as follows:

i. The proportions of insurance risks that apply only to P&C and only to long-term business are calculated as follows:
   LT Proportion = $C_{LT} / (C_{LT} + C_{P\&C})$
   P&C Proportion = 1- LT Proportion
   Where—
   $C_{P\&C}$ = The P&C risk module charge as calculated in section D19.5.
   C_{LT} = The Long-Term risk module charge as calculated in section D19.6
ii. The transitional period is calculated by taking a weighted average of a three year transitional period and a ten year transitional period, using as

weights the proportions calculated in point i. above, and the result is rounded to the nearest integer. The transitional period is always between three and ten years.

iii. The transitional period will remain fixed.

D1.3 This formula utilises the square root rule to aggregate the various risks under the assumption that the risks are at least partially independent of one another, and therefore, some diversification benefit is provided when combining the risk charges. The end result is the Group BSCR (after covariance adjustment).

D1.4 The operational risk capital charge is the operational risk charge multiplied by the Group BSCR (after covariance adjustment). The risk charge ranges from 1% to 10% based on each group's self-assessment of the CIRA framework.

D1.5 Capital add-ons/reductions may be assessed where the BMA believes that an insurance group's risk profile deviates significantly from the risk assumptions underlying the Group ECR or from the group'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.

D1.6 The Group BSCR is equal to the sum of the Group BSCR (after covariance adjustment), operational risk capital charge, and capital add-ons/reductions (if assessed).

Available Statutory Economic Capital and Surplus

D1.7 Available Statutory Economic Capital and Surplus is defined as the Total Statutory Economic Capital and Surplus of the insurance group as reported on Form 1EBS, 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.

D1.8 The group's available statutory economic capital and surplus is further adjusted to reflect capital of entities where there are insufficient data for the BMA to determine their risk profiles or capital contributions to the group's eligible capital (as reflected on Schedule XI(D).

D1.9 The insurance group's available statutory economic capital and surplus is determined for purposes of calculating the Group BSCR and Group ECR ratios.

Minimum Margin of Solvency

D1.10 The Minimum Margin of Solvency is calculated using the aggregation approach, as reported on Schedule XII, Column (10). The solvency requirement of each entity is derived from the solvency rules applicable to that entity, as determined by the jurisdiction where the entity is licensed or registered.

Group ECR and Group TCL

D1.11 The Group ECR is the higher of the MSM and the Group BSCR / approved internal capital model.

D1.12 The Group TCL is equal to 120% of the Group ECR.

Ratios

D1.13 The Group BSCR Ratio is the ratio of the Available Statutory Economic Capital and Surplus to the Group BSCR.

D1.14 The Group ECR Ratio is the ratio of the Available Statutory Economic Capital and Surplus to the Group ECR.

Solvency Capital Distribution Chart

D1.15 The Solvency Capital Distribution chart displays the relative contribution of each charge to the Group BSCR, prior to the covariance adjustment.

Regulatory Action Level Graph

D1.16 The Regulatory Action Level graph displays the insurance group's Available Statutory Economic Capital and Surplus position relative to the BMA's regulatory action guidelines, where Regulatory Action Level 1 is equal to the insurance group’s ECR and Regulatory Action Level 2 is equal to the insurance group’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 (3), Row (e)).
3	Interest Rate / Liquidity Risk	Based on current year interest rate / liquidity risk (Column (4)).
4	Currency Risk	Based on current year currency risk (Column (G)).

Line Item		Description
5	Concentration Risk	Based on current year concentration risk (Column (3), Row (i)).
6	Premium Risk	Based on current year premium risk (Column (5) Row (e).
7	Reserve Risk	Based on current year reserve risk (Column (5) Row (c).
8	Credit Risk	Based on current year credit risk (Column (3), Row (d)).
9	Catastrophe Risk	Based on current year catastrophe risk.
10	Insurance Risk – Mortality (Long-Term Business)	Based on current year insurance risk – mortality (Column (6)).
11	Insurance Risk – Stop Loss (Long-Term Business)	Based on current year insurance risk – stop loss (Column (6)).
12	Insurance Risk – Riders (Long-Term Business)	Based on current year insurance risk – riders (Column (6)).
13	Insurance Risk – Morbidity and Disability (Long-Term Business)	Based on current year insurance risk – morbidity and disability (Column (6)).
14	Insurance Risk – Longevity (Long-Term Business)	Based on current year insurance risk – longevity (Column (6)).
15	Variable Annuity Guarantee Risk (Long-Term Business)	Based on current year variable annuity guarantee risk (Column (13), Row (33)) or Schedule VIIIA (Column (7), Line (1)).
16	Other Insurance Risk (Long-Term Business)	Based on current year other insurance risk (Column (3)).
17	Group BSCR (Prior to Covariance Adjustment)	Group BSCR (Prior to Covariance Adjustment) is the sum of the line items (1) to (16) above.
18	Group BSCR (After Covariance Adjustment)	Group BSCR (After Covariance Adjustment) is the resulting amount after applying the square root rule on line item (17) to reflect a diversification benefit when aggregating all the risks described above.

Line Item		Description
19	Operational Risk (%)	Operational Risk (%) is the applicable operational risk charge % of "Group BSCR After Covariance Adjustment" based on the overall score derived from the CIRA framework as prescribed by the BMA.
20	Operational Risk Capital Charge ($)	Operational Risk Capital Charge ($) is the resulting amount when the operational risk (%), as prescribed in line item (18), is applied to the Group BSCR (After Covariance Adjustment).
21	Capital Adjustment	Based on the current year's capital adjustment for (i) the regulatory capital requirement for regulated non-insurance financial operating entities, as determined in Schedule XI(A), Column (12); and (ii) the capital requirement for unregulated entities where the parent exercises control, as determined in Schedule XI(B), Column (12).
22	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 groups-specific capital factors) and the standard required capital (using the prescribed BSCR capital factors) determined under the group specific parameters section, which is to be completed only with the prior approval of the BMA.
23	Group BSCR	Group BSCR is the sum of the line items (18), (20) (21) and (22) above.
24	BSCR Correlation	SCR capital charge on the new basis after the correlation adjustment. The revised capital charge approach is phased in 3-10 year period based on the proportions of long-term and P&C risks.
25	Final BSCR	BSCR is the sum of the line items (23) and [the difference between (24) and (23)] times the Transitional Factor.

b. Available Statutory Economic 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 Economic Capital and Surplus	Based on the current year economic balance sheet of the insurance group as reported on Form 1EBS, Line 40.
2	Capital Contribution	Capital Contributions must be approved by the BMA. Note that a Capital Contribution increases the Total Statutory Capital and Surplus.
3	Capital Reduction for Entities with Insufficient Data	Capital Reduction for entities with insufficient data represents Total Bermuda statutory reserves, less Total reported DAC, if any, less Total value of business acquired, less Total present value of future profits, less Total best estimate reserves; as reported on Schedule XI(D), Column (11).

Line Item		Description
4	Pre-Adjustment Available Statutory Economic Capital and Surplus	Pre-Adjustment Available Statutory Economic Capital and Surplus is the sum of lines (1) to (3) above.
5	Capital Add-Ons / Reductions (BMA assessment)	Capital Add-ons / Reductions may be assessed where the BMA believes that an insurance group’s risk profile deviates significantly from the risk assumptions underlying the Group ECR.
6	Available Statutory Economic Capital and Surplus	Available Statutory Economic Capital and Surplus is the sum of lines (4) and (5) 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 insurance group's Form 1EBS or to 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:

$C_{fi} = \sum_i \chi_i \times FIastclass_i \times \mu_r$, where:

i = ranges over the classes set out below;

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

$FIastclass_i$ = 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.

Items

a. <u>Corporate and Sovereign Bonds</u>

Line Item		Statement Source – The Rules
1	BSCR rating 0	Based on Schedule II EBS and IIA EBS, Line 1, Column (1).
2	BSCR rating 1	Based on Schedule II EBS and IIA EBS, Line 2, Column (1).
3	BSCR rating 2	Based on Schedule II EBS and IIA EBS, Line 3, Column (1).
4	BSCR rating 3	Based on Schedule II EBS and IIA EBS, Line 4, Column (1).
5	BSCR rating 4	Based on Schedule II EBS and IIA EBS, Line 5, Column (1).
6	BSCR rating 5	Based on Schedule II EBS and IIA EBS, Line 6, Column (1).
7	BSCR rating 6	Based on Schedule II EBS and IIA EBS, Line 7, Column (1).

	Line Item	Statement Source – The Rules
8	BSCR rating 7	Based on Schedule II EBS and IIA EBS, Line 8, Column (1).
9	BSCR rating 8	Based on Schedule II EBS and IIA EBS, Line 9, Column (1).

b. <u>Residential Mortgage-Backed Securities</u>

	Line Item	Statement Source – The Rules
1	BSCR rating 1	Based on Schedule II EBS and IIA EBS, Line 2, Column (3).
2	BSCR rating 2	Based on Schedule II EBS and IIA EBS, Line 3, Column (3).
3	BSCR rating 3	Based on Schedule II EBS and IIA EBS, Line 4, Column (3).
4	BSCR rating 4	Based on Schedule II EBS and IIA EBS, Line 5, Column (3).
5	BSCR rating 5	Based on Schedule II EBS and IIA EBS, Line 6, Column (3).
6	BSCR rating 6	Based on Schedule II EBS and IIA EBS, Line 7, Column (3).
7	BSCR rating 7	Based on Schedule II EBS and IIA EBS, Line 8, Column (3).
8	BSCR rating 8	Based on Schedule II EBS and IIA EBS, Line 9, Column (3).

c. <u>Commercial Mortgage-Backed Securities/Asset-Backed Securities</u>

	Line Item	Statement Source – The Rules
1	BSCR rating 1	Based on Schedule II EBS and IIA EBS, Line 2, Column (5).
2	BSCR rating 2	Based on Schedule II EBS and IIA EBS, Line 3, Column (5).
3	BSCR rating 3	Based on Schedule II EBS and IIA EBS, Line 4, Column (5).
4	BSCR rating 4	Based on Schedule II EBS and IIA EBS, Line 5, Column (5).
5	BSCR rating 5	Based on Schedule II EBS and IIA EBS, Line 6, Column (5).
6	BSCR rating 6	Based on Schedule II EBS and IIA EBS, Line 7, Column (5).
7	BSCR rating 7	Based on Schedule II EBS and IIA EBS, Line 8, Column (5).
8	BSCR rating 8	Based on Schedule II EBS and IIA EBS, Line 9, Column (5).

d. <u>Bond Mutual Funds</u>

	Line Item	Statement Source – The Rules
1	BSCR rating 0	Based on Schedule II EBS and IIA EBS, Line 1, Column (7).

	Line Item	Statement Source – The Rules
2	BSCR rating 1	Based on Schedule II EBS and IIA EBS, Line 2, Column (7).
3	BSCR rating 2	Based on Schedule II EBS and IIA EBS, Line 3, Column (7).
4	BSCR rating 3	Based on Schedule II EBS and IIA EBS, Line 4, Column (7).
5	BSCR rating 4	Based on Schedule II EBS and IIA EBS, Line 5, Column (7).
6	BSCR rating 5	Based on Schedule II EBS and IIA EBS, Line 6, Column (7).
7	BSCR rating 6	Based on Schedule II EBS and IIA EBS, Line 7, Column (7).
8	BSCR rating 7	Based on Schedule II EBS and IIA EBS, Line 8, Column (7).
9	BSCR rating 8	Based on Schedule II EBS and IIA EBS, Line 9, Column (7).

e. Mortgage Loans

	Line Item	Statement Source – The Rules
1	Insured/guaranteed mortgages	Based on Schedule II EBS and IIA EBS, Line 22, Column (1).
2	Other commercial and farm mortgages	Based on Schedule II EBS and IIA EBS, Line 23, Column (1).
3	Other residential mortgages	Based on Schedule II EBS and IIA EBS, Line 24, Column (1).
4	Mortgages not in good standing	Based on Schedule II EBS and IIA EBS, Line 25, Column (1).

f. Other Fixed Income Investments

	Line Item	Statement Source – The Rules or IAR
1	Other loans	Based on Form 1 EBS, Line 8.

g. Cash and Cash Equivalents

	Line Item	Statement Source – The Rules
1	BSCR rating 0	Based on Schedule XIX, Column (B).
2	BSCR rating 1	Based on Schedule XIX, Column (B).
3	BSCR rating 2	Based on Schedule XIX, Column (B).

	Line Item	Statement Source – The Rules
4	BSCR rating 3	Based on Schedule XIX, Column (B).
5	BSCR rating 4	Based on Schedule XIX, Column (B).
6	BSCR rating 5	Based on Schedule XIX, Column (B).
7	BSCR rating 6	Based on Schedule XIX, Column (B).
8	BSCR rating 7	Based on Schedule XIX, Column (B).
9	Less: Diversification Adjustment	Based on Schedule XIX, Column (B).

Instructions Affecting Fixed Income Investment Risk

a. 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;

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

c. All bonds and debentures, loans, and other miscellaneous investments shall be reported on a basis consistent with that used for purposes of statutory financial reporting;

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

e. The diversification adjustment in paragraph (d) is determined as 40% multiplied by 1 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.

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 insurance group should be reported, including both quoted and unquoted issues.

D3.2 Where applicable, the amounts must reconcile to the appropriate line(s) of the insurance group's Form 1 EBS or to the schedules prescribed by or under the Prudential Standards for the relevant year.

Equity Investment Risk Capital Charge

D3.3 The equity investment risk charge calculation can be summarised by the following formula:

$$C_{eq} = \sum_i \chi_i \times Eqastclass_i ,$$ where

i = ranges over the classes set out below;

χ_i = BMA supplied asset class capital factor for type of equity class i; and

$Eqastclass_i$ = value of investment in corresponding asset class i.

Items

a. Common Stocks

Line Item		Statement Source – The Rules
1	Non-affiliated quoted common stock	Based on Schedule II EBS and IIA EBS, Line 19, Column (1).
2	Non-affiliated unquoted common stock	Based on Schedule II EBS and IIA EBS, Line 20, Column (1).
3	Equity mutual funds	Based on Schedule II EBS and IIA EBS, Line 21, Column (5).

b. Preferred Stocks

	Line Item	Statement Source – The Rules
1	BSCR rating 1	Based on Schedule II EBS and IIA EBS, Line 11, Column (3).
2	BSCR rating 2	Based on Schedule II EBS and IIA EBS, Line 12, Column (3).
3	BSCR rating 3	Based on Schedule II EBS and IIA EBS, Line 13, Column (3).
4	BSCR rating 4	Based on Schedule II EBS and IIA EBS, Line 14, Column (3).
5	BSCR rating 5	Based on Schedule II EBS and IIA EBS, Line 15, Column (3).
6	BSCR rating 6	Based on Schedule II EBS and IIA EBS, Line 16, Column (3).
7	BSCR rating 7	Based on Schedule II EBS and IIA EBS, Line 17, Column (3).
8	BSCR rating 8	Based on Schedule II EBS and IIA EBS, Line 18, Column (3).

c. Other Equity Investments

	Line Item	Statement Source – The IAR or the Rules
1	Real estate: Company - occupied less encumbrances	Based on Form 1EBS, Line 7(a).
2	Real estate: Other properties less encumbrances	Based on Form 1EBS, Line 7(b).
3	Other equity investments	Based on Form 1EBS, Lines 2(e) and 3(e).
4	Other tangible assets – net of segregated account companies	Based on Form 1EBS, Lines 13(k), 14(d), and 36(f) less Lines 13(b) 13(c), 13(d) and 13(h).

d. Investments in Affiliates

	Line Item	Statement Source – The IAR
1	Unregulated entities that conduct ancillary services	Based on Form 1EBS, Line 4(a).
2	Unregulated non-financial operating entities	Based on Form 1EBS, Line 4(b).
3	Unregulated financial operating entities	Based on Form 1EBS, Line 4(c).
4	Regulated insurance financial operating entities	Based on Form 1EBS, Line 4(e).

Instructions Affecting Equity Investment Risk

a. All assets comprising of common stock, preferred stock, real estate, and other miscellaneous investments that are subject to capital charges within the equity investment risk charge shall be included;

b. All non-affiliated quoted and unquoted common and preferred stock shall be included in the equity investment charge; and

c. All common and preferred stock, real estate, and other miscellaneous investments shall be reported on a basis consistent with that used for purposes of statutory financial reporting.

D4. INTEREST RATE / LIQUIDITY RISK (GENERAL BUSINESS)

Background

D4.1 The interest rate/liquidity risk represents the economic risk an insurance group 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 insurance group'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.

D4.2 The Group BSCR model has been calibrated that if the technical provisions for the general business is greater than the technical provisions for long-term business, then the formula would recognise the methodology below:

Interest Rate/Liquidity Risk Capital Charge (General Business)

D4.3 The interest rate/liquidity risk 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 group's effective asset duration less the group's effective liability duration or the group's effective liability duration less the group's effective asset duration; and

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

Items

D4.4 Bonds and Debentures – Based on current year Form 1EBS, Lines 2(b) and 3(b); total quoted and unquoted value of bonds and debentures.

D4.5 Preferred Stocks – Based on current year Form 1EBS, Lines 2(c)(ii) and 3(c)(ii); total quoted and unquoted value of preferred stocks portfolio.

D4.6 Mortgage Loans – Based on current year Form 1EBS, Line 5(c); total amortized cost (outstanding principal amount less any provision made for doubtful collection) of mortgage loan portfolio.

D4.7 Effective Duration of Assets – The effective duration calculation is based on total bonds and debentures (Form 1EBS, Lines 2(b) and 3(b), preferred stocks (Form 1EBS, Lines 2(c)(ii) and 3(c)(ii), and mortgage loans portfolios (Form 1EBS, Line 5(c)). The effective asset duration is pulled from Schedule V, Line (c).

D4.8 Effective Duration of Liabilities – The effective duration calculation is based on the reserves (Form 1EBS, Lines 17(d) and 27(d)). The effective liability duration is pulled from Schedule V, Line (d).

Instructions Affecting Interest Rate/Liquidity Risk

a. 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;

b. All quoted and unquoted non-affiliated other bonds and debentures and preferred stock shall be included in the interest rate/liquidity risk charge; and

D4.9 All other bonds and debentures, preferred stock, and mortgage loans investments shall be reported on a basis consistent with that used for purposes of described in the Prudential Standard Rules Schedule XIV and the guidance note for statutory reporting regime.

D5. CURRENCY RISK

Background

D5.1 The currency risk charge is based on amounts reported on Form 1EBS total assets and liabilities. It represents the risk that the net position of an insurance group may worsen as a result of exchange rate changes if assets and liabilities are not currency matched. Insurance groups are to include at least 95% of their total assets and liabilities based on the predefined five currency types (United States Dollar, Euro, United Kingdom Pounds, Canadian Dollar and Japanese Yen) and ten other currency types.

D5.2 The charge is first calculated by determining the assessment charge which is based on the greater of:

a. the prior year Group ECR charge to the prior year total EBS liabilities reported and
b. the average of the last three prior years Group ECR charge to last three prior year's total EBS liabilities reported.

D5.3 The currency risk capital charge is applied based on the asset held for each currency type less the liabilities and the proxy BSCR (proxy BSCR is determined by applying the assessment charge 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 25% capital charge is applied to the difference, if there are sufficient assets held to the liabilities and proxy BSCR, then there is no/NIL capital charge applied.

Currency Risk Capital Charge

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

$$C_{Curr} = \sum_i \chi_i \times (Currproxybscr_i + Currliab_i - Currast_i),$$ where

χ_i = 25% where $(Currast_i - Currliab_i - Currproxybscr_i) < 0$

0% otherwise

$Currency_i$ = refers to currency type that has been translated to the functional currency as expressed in Form 1EBS

$GrossCurrast_i$ = value of assets corresponding to $Currency_i$ as reported on Form 1EBS Line 15

$Currast_i$ = value of assets corresponding to $Currency_i$ as reported on Form 1EBS Line 15 adjusted to allow for currency hedging arrangements

$GrossCurrliab_i$ = value of liabilities corresponding to $Currency_i$ as reported on Form 1EBS Line 39.

$Currliab_i$ = value of liabilities corresponding to $Currency_i$ as reported on Form 1EBS Line 39 adjusted to allow for currency hedging arrangements

$Currproxybscr_i$ = refers to the product of $GrossCurrliab_i$ and BSCR Proxy factor

$BSCR\,\mathrm{Pr}oxyfactors$ = greater of:

i. the Enhanced Capital Requirement divided by Form 1EBS Line 39 Total Liabilities for the preceding year;
ii. 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 EBS Assets by Currency Types – Based on current year Form 1EBS Line 15; 95% of total EBS assets by type of currency.

D5.6 EBS Liabilities by Currency Types – Based on current year Form 1EBS Line 39; 95% of total EBS liabilities by type of currency.

D5.7 Total Group ECR Requirement– Based on three prior years Group ECR Requirement.

D5.8 Total EBS Liabilities– Based on three prior years Form 1EBS Line 39; total EBS liabilities (note if the EBS liabilities for the preceding three years is not available, provide the statutory liability as reported on Line 39).

Instructions Affecting Currency Risk

a. Where the insurance group uses currency hedging arrangements to manage its currency risk, then $Currast_i$ and $Currliab_i$ may reflect the impact of those arrangements on $GrossCurrast_i$ and $GrossCurrliab_i$ of a 25% adverse movement in foreign exchange currency rates, otherwise the amounts $GrossCurrast_i$ and $GrossCurrliab_i$ shall apply;
b. Any adjustment to reflect currency hedging arrangements shall not apply to the calculation of $Currproxybscr_i$;
c. "Currency hedging arrangements" means derivative or other risk mitigation arrangements designed to reduce losses due to foreign currency exchange movements, and which meet the Authority's requirements to be classed as such; and
d. Insurance groups are to report currencies representing at least 95% of their economic balance sheet liabilities.

D6. CONCENTRATION RISK

Background

D6.1 The concentration risk charge is based on asset counterparty exposures as reported on the Form 1EBS. It represents the risk of losses due to asset concentrations.

D6.2 The charge is calculated by assigning 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

D6.3 The concentration risk charge calculation can be summarised by the following formula:

$$C_{Conc} = \sum_i \chi_i \times Concastclass_i$$ where

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

$Concastclass_i$ = value of corresponding asset in Asset Class.

Items

a. Cash and Cash Equivalents

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

b. Corporate & Sovereign Bonds

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

c. Residential Mortgage- Backed Securities

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

d. Commercial Mortgage-Backed Securities/Asset-Backed Securities

Line Item		Description
1	BSCR rating 0	Based on Schedule XXI, Column D
2	BSCR rating 1	Based on Schedule XXI, Column D
3	BSCR rating 2	Based on Schedule XXI, Column D
4	BSCR rating 3	Based on Schedule XXI, Column D
5	BSCR rating 4	Based on Schedule XXI, Column D

Line Item		Description
6	BSCR rating 5	Based on Schedule XXI, Column D
7	BSCR rating 6	Based on Schedule XXI, Column D
8	BSCR rating 7	Based on Schedule XXI, Column D
9	BSCR rating 8	Based on Schedule XXI, Column D

e. Bond Mutual Funds

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

f. Preferred Shares

Line Item		Description
1	BSCR rating 1	Based on Schedule XXI, Column D
2	BSCR rating 2	Based on Schedule XXI, Column D
3	BSCR rating 3	Based on Schedule XXI, Column D
4	BSCR rating 4	Based on Schedule XXI, Column D
5	BSCR rating 5	Based on Schedule XXI, Column D
6	BSCR rating 6	Based on Schedule XXI, Column D
7	BSCR rating 7	Based on Schedule XXI, Column D
8	BSCR rating 8	Based on Schedule XXI, Column D

g. Mortgage Loans

Line Item		Description
1	Insured/Guaranteed Mortgages	Based on Schedule XXI, Column D
2	Other Commercial and Farm Mortgages	Based on Schedule XXI, Column D
3	Other Residential Mortgages	Based on Schedule XXI, Column D
4	Mortgages Not In Good Standing	Based on Schedule XXI, Column D

h. Other Asset Classes

Line Item		Description
1	Quoted and Unquoted Common Stock and Mutual Funds	Based on Schedule XXI, Column D
2	Other Quoted and Unquoted Investments	Based on Schedule XXI, Column D
3	Investment in Affiliates – Unregulated entities that conduct ancillary services	Based on Schedule XXI, Column D
4	Investment in Affiliates – Unregulated non-financial operating entities	Based on Schedule XXI, Column D
5	Investment in Affiliates – Unregulated financial operating entities	Based on Schedule XXI, Column D
6	Investment in Affiliates – Regulated insurance financial operating entities	Based on Schedule XXI, Column D
7	Advances to Affiliates –	Based on Schedule XXI, Column D
8	Policy Loans	Based on Schedule XXI, Column D
9	Real Estate: Occupied by company	Based on Schedule XXI, Column D
10	Real Estate: Other properties	Based on Schedule XXI, Column D
11	Collateral Loans	Based on Schedule XXI, Column D

Instructions Affecting Concentration Risk

a. $Concastclass_i$ shall only apply to the insurance groups ten largest counterparty exposures based on the aggregate of all instruments included in Table above, which related to that counterparty

b. A counterparty shall include all related/connected counterparties defined as:

   (i) control relationship: if the counterparty, directly or indirectly, has control over the other(s); or

   (ii) 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; and

c. It is allowed to perform look through on collective investment funds such as equity and hedge funds as well as on exposures to diversified fund-of-one structures, whenever information at position level is available. Instructions on points a) and b) above apply also in this case.

D7. PREMIUM RISK

Background

D7.1 The premium risk charge is based on reported net premiums written for the latest calendar year by predefined statutory lines of business, and if available, reporting net premiums written by predefined statutory geographic locations. Note that although net premiums written 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.

D7.2 The first step of the calculation applies a statutory line of business specific premium risk capital factor to the respective net premiums written amounts.

D7.3 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.

D7.4 In the Premium risk calculation, a concentration adjustment is determined to reflect the overall diversification of the premium risk. Finally, there is a further adjustment to reflect the fact 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.

D7.5 The concentration adjustment factor is based on the ratio of the largest individual line of net premiums written to total net premiums written. If all net premiums written are allocated to a single line of business (other than Property Catastrophe), this ratio is equal to 100%. If net premiums written are evenly spread among five lines of business (other than Property Catastrophe), this ratio is equal to 20%. The concentration adjustment factor is obtained by multiplying this ratio by 40% and then adding 60%. So for an insurance group with only one line of business the concentration adjustment factor is 100%, which means that no adjustment is made for diversification and the required premium risk charge is the same as that calculated in the first step. For an insurance group with net premiums written that are evenly spread among five lines of business, the concentration adjustment factor is 68%, leading to a required premium risk charge that is lower than the sum of all the individual lines of business premium risk charges calculated in the first step.

Premium Risk Capital Charge

D7.6 The premium risk charge calculation can be summarised by the following formula:

$$C_{prem} = \left[\sum_{i>1} \alpha_i \times geolineprem_i\right] \times \left[\max_{i>1}\left\{\frac{geolineprem_i}{totalprem}\right\} \times \mu + \vartheta\right] - \left[avgpremcap \times \frac{avgannloss}{catlossratio}\right]$$

, where

α_i = individual $geolineprem_i$ premium risk capital charge factor;

totalprem = total geographic diversification of premium measure over all lines of business (except Property Catastrophe), i.e. $\sum_{i>1} geolineprem_i$;

$geolineprem_i$ = geographic diversification of premium measure for line of business i;

avgpremcap = weighted average premium risk capital charge factor (after concentration adjustment and allowing for geographic diversification);

avgannloss = average annual loss estimated with catastrophe models; and

catlossratio = expected industry average catastrophe loss ratio provided by BMA.

μ = additional concentration adjustment factor equal to 40%;

ϑ = minimum concentration adjustment factor equal to 60%;

Items

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

Line Item		Description
1	Gross Premiums Written	Column (1): Current year gross premiums written by predefined statutory line of business and geographic zone, as reported on Schedule IVA, Lines (1) to (24). Total must tie to the Total Gross Premiums Written of Form 2, Line 1(c).
2	Net Premiums Written	Column (2): Current year net premiums written (after reinsurance) by predefined statutory line of business and geographic zone, as reported on Schedule IVA, Lines (1) to (24). Total must tie to the Total Net Premiums Written of Form 2, Line 3.

Line Item		Description
3	Geo Diversified Written	Column (3): Current year net premiums written (after reinsurance) by predefined statutory line of business and geographic zone, as reported on Schedule IVC, Lines (1) to (24). Total must tie to the Total Net Premiums Written of Form 2, Line (3).
4	Capital Factor	Column (4): Supplied by BMA; premium charge factors for individual lines of business.
5	Required Capital	Column (5): Calculated using [Column (3) x Column (4)]; premium charge amounts for individual lines of business.

b. Concentration 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	Maximum Premium	Row (i): Calculated using Max [Column (1) of (a) excluding Property Catastrophe]; largest premium amount appearing in Column (1) of (a), excluding the premium amount for Property Catastrophe.
2	Total Premium	Row (ii): Calculated using Sum [Column (1) of (a) excluding Property Catastrophe]; total of premium amounts appearing in Column (1) of (a), excluding the premium amount for Property Catastrophe.
3	Maximum Premium / Total Premium	Row (iii): Calculated using [Row (i) / Row (ii)]; ratio that measures the degree of concentration.
4	Maximum Adjustment	Row (iv): Supplied by BMA; parameter that limits the maximum credit that is given for diversification.
5	Minimum Adjustment Factor	Row (vi): Calculated using [1 - Row (iv)]; lower bound for the concentration adjustment factor. The formula ensures that no diversification credit will be given when all net premiums written other than Property Catastrophe are concentrated in a single line of business.
6	Concentration Adjustment Factor	Calculated using [Row (iii) x Row (iv) + Row (vi)].

c. Required Capital Charge – Calculated using [(Total of Column (3) of (a)) x (Concentration Adjustment Factor)]; premium risk capital charge, after concentration factor adjustment, but before adjustment for natural catastrophe exposure.

d. 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 (c) / [Row (ii) of (b)]; ratio of required premium risk capital charge after concentration adjustment to total net premiums written excluding Property Catastrophe.
4	Catastrophe Premium Adjustment	Calculated using [Row (i) / Row (ii) x Row (iii)].

e. Required Capital Charge Adjusted for Catastrophe Premium – Calculated using [(c) - (d)]; the premium risk capital charge (after concentration factor and catastrophe adjustment) is carried to the Summary section.

Instructions Affecting Premium Risk

D7.6a All reported net premiums written for the relevant year by statutory line of business as prescribed in this Schedule that are subject to capital charges within the premium risk charge shall be included;

D7.6b All net premiums written by statutory line of business shall be reported on a basis consistent with that used for purposes of statutory financial reporting; and

D7.6c An insurance group may provide premium exposure for all statutory lines of general business, or for particular statutory lines of general business, split by geographic zone as set out by the BMA. $geolineprem_i$ 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 = net premiums written in that line of business for $Zone_i$; and where summation covers all zones.

D8. RESERVE RISK

Background

D8.1 The reserve risk charge is based on the statutory net loss and loss expense provisions by predefined statutory lines of business, and if available, reporting net technical provision by predefined statutory geographic locations.

D8.2 The first step of the calculation applies a line of business specific reserve risk capital factor to the respective reserve amounts.

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

D8.4 In the Reserve risk calculation, a concentration adjustment is determined to reflect the overall diversification of the reserve risk.

D8.5 The concentration adjustment factor is based on the ratio of the largest individual line of business reserve to total reserves. If all reserves are allocated to a single line of business, this ratio is equal to 100%. If the reserves are evenly spread among five lines of business, this ratio is equal to 20%. The concentration adjustment factor is obtained by multiplying this ratio by 40% and then adding 60%. So for an insurance group with only one line of business the concentration adjustment factor is 100%, which means that no adjustment is made for diversification and the required reserve risk charge is the same as that calculated in the first step. For an insurance group with reserves that are evenly spread among five lines of business the concentration adjustment factor is 68%, leading to a required reserve risk charge that is lower than the sum of all the individual line of business reserve risk charges calculated in the first step.

Reserve Risk Capital Charge

D8.6 The reserve risk charge calculation can be summarised by the following formula:

$$C_{rsvs} = \left[\sum_i \beta_i \times geolinersvs_i\right] \times \left[\max_i \left\{\frac{geolinersvs_i}{totalrsvs}\right\} \times \mu + \vartheta\right], \quad \text{where}$$

β_i = individual $geolinersvs_i$ reserve risk charge factor;

$totalrsvs$ = total geographic diversification of reserves over all lines of business, i.e. $\sum_{i>1} geolinersvs_i$; $geolinersvs_i$ = geographic diversification of reserve measure for individual line of business i ;

μ = additional concentration adjustment factor equal to 40%; and

ϑ = minimum concentration adjustment factor equal to 60%.

Items

a. Lines of Business – 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 economic balance sheet (Form 1EBS, 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 economic balance sheet (Form 1EBS, Line 17(d) and should be input on an undiscounted basis.
1	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 economic balance sheet (Form 1EBS, Line 17(d) and should be input on an economic balance sheet basis.
2	Capital Factor	Column (4): Supplied by BMA; reserve charge factors for individual lines of business.
3	Required Capital	Column (5): Calculated using [Column (3) x Column (4)]; reserve charge amounts for individual lines of business.

b. Concentration Adjustment Calculation – Calculates a factor that determines how much credit is given for diversification of reserve risk across all lines of business.

Line Item		Description
1	Maximum Reserve	Row (i): Calculated using Max [Column (1) of (a)]; largest reserve amount appearing in [Column (1) of (a)].
2	Total Reserve	Row (ii): Calculated using Sum [Column (1) of (a)]; total of reserve amounts appearing in [Column (1) of (a)].
3	Maximum Reserve / Total Reserve	Row (iii): Calculated using [Row (i) / Row (ii)]; this ratio measures the degree of concentration.

Line Item		Description
4	Maximum Adjustment	Row (iv): Supplied by BMA; parameter that limits the maximum credit that is given for diversification.
5	Minimum Adjustment Factor	Row (vi): Calculated using [1 - Row (iv)]; lower bound for the concentration adjustment factor. The formula ensures that no diversification credit will be given when all net premiums written are concentrated in a single line of business.
6	Concentration Adjustment Factor	Calculated using [Row (iii) x Row (iv) + Row (vi)].

c. Required Capital Charge – Calculated using [(Total of Column (3) of (a)) x (Concentration Adjustment Factor)]; the reserve capital charge (after concentration factor adjustment) is carried to the Summary section.

Instructions Affecting Reserve Risk

D8.6a All reported net loss and loss expense provisions for the relevant year by statutory line of business as prescribed in this Schedule are subject to capital charges within the reserve risk charge shall be included;

D8.6b 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; and

D8.6c An insurance group may provide loss and loss expense provisions exposure for all statutory lines of general business, or for particular statutory lines of general business, split by geographic zone as set out by the BMA. $geolinersvs_i$ 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.

D9. CREDIT RISK

Background

D9.1 Credit risks are partitioned into three categories: accounts and premiums receivable, reinsurance balances, and all other receivables.

D9.2 Where applicable, the amounts must reconcile to the appropriate line(s) of the insurance group's Form 1EBS or to the schedules prescribed by or under the Prudential Standard Rules for the relevant year.

Credit Risk Capital Charge

D9.3 The credit risk charge calculation can be summarised by the following formula:

$$C_{cred} = \sum_i \delta_i \times debtor_i \times \mu_r , \quad \text{where}$$

δ_i = BMA supplied credit risk capital charge factor for type of debtor i;

$debtor_i$ = receivable amount from debtor i; and

μ_{r_i} = additional diversification adjustment factor applied to reinsurance balances only taking into consideration diversification by number of reinsurers, equal to 40%.

Items

a. Accounts and Premiums Receivable

Line Item		Statement Source – The IAR
1	In course of collection	Based on Form 1EBS, Line 10(a).
3	Receivables from retrocessional contracts Less: Collateralised balances	Based on Form 1EBS, Line 10(c) less Notes to Form 1EBS. Collateralised balances are all collaterals issued in favour of the group members relating to accounts and premiums receivable. Assets accounted in Form 1EBS, Line (34) should not be included here.

b. 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 ‘Funds Held by Ceding Reinsurers’ should not be included; (iii) all uncollectible amounts, as determined by the insurance group, 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

c. <u>All Other Receivables</u>

Line Item		Statement Source – IAR
1	Advances to affiliates	Based on Form 1EBS, Line 4(g).
2	Accrued investment income	Based on Form 1EBS, Line 9.
3	Policy loans	Based on Form 1EBS, Line 6.

Instructions Affecting Credit Risk

a. All accounts and premiums receivable and all other receivables that are subject to capital charges within the credit risk charge shall be included;

b. All accounts and premiums receivable, reinsurance balances receivables, all other receivables, and reinsurance recoverable balances shall be reported on a basis consistent with that used for purposes of statutory financial reporting;

c. Collateralised balances are all collaterals issued in favour of the insurance group relating to accounts and premiums receivable;

d. The net qualifying exposure comprises of reinsurance balances receivable and reinsurance recoverable balances less the corresponding reinsurance balances payable and other payables less the qualifying collateral issued in favour of the insurance group in relation to the reinsurance balances;

e. The net qualifying exposure in instruction (d) shall be subject to the prescribed credit risk capital factor;

f. The total capital requirement relating to the reinsurance balances shall be reduced by a diversification adjustment of up to a maximum of 40%; and

g. The diversification adjustment in instruction (f) is determined as 40% multiplied by 1 minus the ratio of the largest net reinsurance exposure, on an individual reinsurer basis, to total net reinsurance exposure.

D10. CATASTROPHE RISK

Background

D10.1 The catastrophe risk charge is based on group-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. Modeled losses should include demand surge, storm surge, fire following earthquakes and secondary uncertainty.

D10.2 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). 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

D10.3 The catastrophe risk charge calculation can be summarised by the following formulae:

$C_{cat} = NetPML - Netcatprem + CR_{PML}$, where

$NetPML$ = Net probable maximum loss;

$Netcatprem$ = Property catastrophe premium + (modeled AAL) / (estimated industry catastrophe loss ratio of 40.0%); and

CR_{PML} = Credit risk charge associated with reinsurance recoveries of ceded catastrophe losses calculated as {(gross probable maximum loss less net probable maximum loss less arrangements with respect to property catastrophe recoverables) x credit risk charge equal to 10.0%}.

a. Gross Probable Maximum Loss – Based on the insurance group'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" as reported on Schedule V, Line (h).

b. Net Probable Maximum Loss – Based on the insurance group'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" as reported on Schedule V, Line (i).

c. Average Annual Loss Excluding Property Catastrophe (AAL) – Based on the insurance group's catastrophe model; the 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, Line (j). 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).

d. Industry Catastrophe Loss Ratio – Supplied by BMA; used to calculate the embedded catastrophe premiums from lines of business other than Property Catastrophe.

e. Property Catastrophe Premium – Copied from Premium Risk section; current year net premiums written amount for Property Catastrophe line of business as reported on Schedule IVA, Line (1).

f. Total Catastrophe Premium – Is calculated using [(c) / (d) + (e)]; used to calculate the embedded catastrophe premiums from lines of business other than Property Catastrophe.

g. Credit Risk Capital Factor – Supplied by BMA; credit risk factor applied to ceded catastrophe losses at the 99.0% TVaR level equal to 10.0%.

h. Arrangements with Respect to Property Catastrophe Recoverables – Copied from Schedule V, Line (l)(v).

i. Credit Risk Charge – Calculated using [(a) - (b) – ((h) * 98%) x (g)]; ceded catastrophe losses times the catastrophe credit risk capital factor.

j. Catastrophe Capital Charge – Calculated using [(b) - (f) + (i)]; the catastrophe capital charge is carried to the Summary section.

Instructions Affecting Catastrophe Risk

a. All reported net probable maximum loss, gross probable maximum loss, average annual loss excluding property catastrophe, property catastrophe premium and arrangements with respect to property catastrophe recoverables as prescribed in Schedule V that are subject to capital charges within the catastrophe risk charge shall be included; and

D10.4 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.

D11. INSURANCE RISK – MORTALITY

Background

D11.1 Insurance products that are considered to be exposed to mortality risk include term assurance, whole life, universal life, and accidental death and dismemberment insurance. These exclude life policies with critical illness acceleration riders.

D11.2 The insurance risk-mortality charge is calculated by applying a capital factor to the respective net amount at risk. The capital risk factors are applied on an additive basis (i.e. 3.97/1000 on first $1 billion of business, plus 1.80/1000 on the next $4 billion of business, etc.).

D11.3 A 50% reduction is applied to adjustable products and accidental death products. Adjustable products are defined as any insurance contracts in which the insurance group has the ability to make a material adjustment to the premiums / cost of insurance charges / dividends, based on recent experience.

Insurance Risk – Mortality Capital Charge

D11.4 The insurance risk - mortality charge calculation can be summarised by the following formula:

$$C_{LTmort} = \left[\sum_i \alpha 1_i \times NAAR1_i\right] + \left[\sum_i \alpha 2_i \times NAAR2_i\right], \quad \text{where}$$

$\alpha 1_i$ = capital charge factor for adjustable mortality Long-Term business;

$NAAR1_i$ = the net amount at risk of all adjustable mortality Long-Term business;

$\alpha 2_i$ = capital charge factor for non-adjustable mortality Long-Term business; and

$NAAR2_i$ = the net amount at risk of all non-adjustable mortality Long-Term business.

Items

	Column Item	Description
1	Net Amount At Risk	Column item 1: Net amount at risk for adjustable products/treaties, as reported on Schedule VII EBS, Column (9), Line 1; and Net amount at risk for non-adjustable products/treaties, as reported on Schedule VII EBS, Column (10), Line 1.
2	Capital Factor	Column item 2: Supplied by the BMA; capital charge factors applied to individual net amount at risk for (a) adjustable products/treaties; and (b) non-adjustable products/treaties.
3	Required Capital	Column item 3: Calculated using [Column item 1 x Column item 2] for both (a) and (b) and summed up.

D12. INSURANCE RISK – STOP LOSS

Background

D12.1 A capital factor is applied to the respective net annual earned premiums of stop loss covers provided.

Insurance Risk – Stop Loss Capital Charge

D12.2 The insurance risk – stop loss charge calculation can be summarised by the following formula:

$$C_{LTsl} = 50\% \text{ x net annual premium for stop loss covers.}$$

Items

Column Item		Description
1	Net Annual Premium	Column item 1: Net annual premium for stop loss covers, as reported on Schedule VII EBS, Column (11), Line 14.
2	Capital Factor	Column item 2: Supplied by the BMA; capital charge factors applied on net annual premiums for stop loss covers.
3	Required Capital	Column item 3: Calculated using [Column item 1 x Column item 2].

D13. INSURANCE RISK – RIDERS

Background

D13.1 For any other product riders not included in the following insurance risk charges: i) mortality; ii) morbidity and disability; iii) longevity; and iv) stop loss, a capital factor is applied to the respective net annual earned premiums.

Insurance Risk – Riders Capital Charge

D13.2 The insurance risk – riders charge calculation can be summarised by the following formula:

C_{LTr} = 25% x net annual premium for insurance product riders not included elsewhere.

Items

Column Item		Description
1	Net Annual Premium	Column item 1: Net annual premium for other product riders, as reported on Schedule VII EBS, Column (11), Line 15.
2	Capital Factor	Column item 2: Supplied by the BMA; capital charge factors applied on net annual premiums for other products riders.
3	Required Capital	Column item 3: Calculated using [Column item 1 x Column item 2].

D14. INSURANCE RISK – MORBIDITY AND DISABILITY

Background

D14.1 Morbidity and disability risks are separated by critical illness insurance products and health insurance products.

D14.2 For critical illness insurance products, including accelerated critical illness insurance products, a prescribed capital factor is applied to the net amount at risk, on an additive basis. A 50% reduction in the capital risk factors is applied to adjustable products.

D14.3 Health insurance products include disability income products, Long-Term care insurance products, waiver of premium benefits, and other accidental and sickness products.

Insurance Risk – Morbidity and Disability Capital Charge

D14.4 The insurance risk – morbidity and disability charge calculation can be summarised by the following formula:

$C_{LTmorb} =$ (a) + (b) + (c) + (d) + (e) where:

a. = 7% x BSCR adjusted reserves for disability income claims in payment on waiver of premium and long-term care;

b. = 10% x BSCR adjusted reserves for disability income claims in payment on other accident and sickness products;

c. $= \left[\sum_i \alpha_i \times NAP_i \right]$ Where –

α_i = individual NAP_i capital charge factor;

NAP_i = the Net Annual Premium for disability income business – active lives;

d. = 12% x net annual premiums for disability income - active lives for other accident and sickness; and

e. $= \left[\sum_i \alpha 1_i \times NAAR1_i \right] + \left[\sum_i \alpha 2_i \times NAAR2_i \right]$ Where –

$\alpha 1_i$ = capital charge factor for adjustable critical illness insurance business;

$NAAR1_i$ = the Net Amount at Risk of all adjustable critical illness insurance business in force;

$\alpha 2_i$ = capital charge factor for non-adjustable critical illness insurance business; and

$NAAR2_i$ = the Net Amount at Risk of all non-adjustable critical illness insurance business in force.

Items

a. Subtotal Charge for Critical Illness

Column Item		Description
1	Net Amount At Risk	Column item 1: Net amount at risk for adjustable products/treaties, as reported on Schedule VII EBS, Column (9), Line 2; and Net amount at risk for non-adjustable products/treaties, as reported on Schedule VII , Column (10), Line 2.
2	Capital Factor	Column item 2: Supplied by the BMA; capital charge factors applied to individual net amount at risk for (a) adjustable products/treaties; and (b) non-adjustable products/treaties.
3	Required Capital	Column item 3: Calculated using [Column item 1 x Column item 2] for both (a) and (b) and summed up.

b. Subtotal Charge for Disability Income (Active Lives with Premium Guarantee)

Column Item		Description
1	Net Annual Premium	Column item 1: Net annual premium with benefit period of less than or equal to two years listed according to length of premium guarantee, as reported on Schedule VII EBS, Column (9) (i) premium guarantee of less than one year – Line 7(a), (ii) premium guarantee of more than one year but less than five years – Line 7(b), and (iii) premium guarantee of over five years – Line 7(c); and Net annual premium with benefit period of greater than two years listed according to length of premium guarantee, as reported on Schedule VII EBS, Column (10) — (i) premium guarantee of less than one year – Line 7(a), (ii) premium guarantee of more than one year but less than five years – Line 7(b), and (iii) premium guarantee of over five years – Line 7(c).
2	Capital Factor	Column item 2: Supplied by the BMA; capital charge factors applied to individual (a) net annual premiums with benefit period of less than or equal to two years according to the length of premium guarantee – (i) less than one year, (ii) more than a year but less than five years, and (iii) over five years; and (b) on net annual premiums with benefit period of greater than two years according to the length of premium guarantee – (i) less than one year, (ii) more than a year but less than five years, and (iii) over five years.
3	Required Capital	Column item 3: Calculated using [Column item 1 x Column item 2] for both (a) and (b) for each length of premium guarantee provided – (i), (ii) and (iii) – and summed up.

c. Subtotal Charge for Disability Income (Claims in Payment)

Column Item		Description
1	BSCR Adjusted Reserve	Column item 1: (a) Disability income: claims in payment relating to waiver of premium and Long-Term care, as reported on Schedule VII EBS, Column (7), Line 9; and Disability income: claims in payment relating to other accident and sickness, as reported on Schedule VII EBS, Column (7), Line 10.

Column Item		Description
2	Capital Factor	Column item 2: Supplied by the BMA; capital charge factors applied to individual BSCR adjusted reserves with respect to disability income – claims in payment relating to (a) waiver of premium and long-term care, and (b) other accident and sickness.
3	Required Capital	Column item 3: Calculated using [Column item 1 x Column item 2] for both (a) and (b) and summed up.

d. Subtotal Charge for Disability Income (Active Lives for other accident and sickness products):

Column Item		Description
1	Net Annual Premium	Column item 1: Net annual premium for disability income (active lives), including other accident and sickness; as reported on Schedule VII EBS, Column (11), Line 8.
2	Capital Factor	Column item 2: Supplied by the BMA; capital charge factor applied on the net annual premium for disability income – active lives.
3	Required Capital	Column item 3: Calculated using [Column item 1 x Column item 2].

e. Total Charge – Calculated using lines [(a) + (b) + (c) + (d)] above; the resulting figure is carried to the Summary section.

D15. INSURANCE RISK – LONGEVITY

Background

D15.1 Products that are considered to be exposed to longevity risks include, but not limited to, payout annuities and contingent annuities.

Insurance Risk – Longevity Capital Charge

D15.2 The insurance risk – longevity charge calculation can be summarised by the following formula:

$$\boxed{C_{LTlong} = \sum_i \alpha_i \times BAR_i}$$ Where –

α_i = individual BAR_i capital charge factor; and

BAR_i = the BSCR adjusted reserves for Long-Term products with longevity risk.

Items

Column Item		Description
1	BSCR Adjusted Reserves	Column item 1: BSCR adjusted reserves for Long-Term products with longevity risk as follows: (a) immediate pay-out annuities, contingent annuities, pension pay-outs according to the attained age of annuitant, as reported on Schedule VII EBS, Column (7): (i) 0-55 – Line 3(a) (ii) 56-65 – Line 3(b) (iii) 66-70 – Line 3(c) (iv) 71-80 – Line 3(d) and (v) 81+ – Line 3(e); and (b) deferred pay-out annuities, future contingent annuities, future pension pay-outs according to the age at which the annuity benefits commence, as reported on Schedule VII EBS, Column (7): (i) 0-55 – Line 4(a) (ii) 56-60 – Line 4(b) (iii) 61-65 – Line 4(c) (iv) 66-70 – Line 4(d) (v) 71-75 – Line 4(e) and (vi) 76+ – Line 4(f)

Column Item		Description
2	Capital Factor	Column item 2: Supplied by the BMA; capital charge factor applied to individual BSCR adjusted reserves for longevity risk for both (a) immediate pay-out annuities, contingent annuities, pension pay-outs – (i) to (v); and (b) deferred pay-out annuities, future contingent annuities, future pension pay-outs – (i) to (vi).
3	Required Capital	Column item 3: Calculated using [Column item 1 x Column item 2] for both (a) and (b) for each attained age of annuitant and for each age at which the annuity benefits commence, respectively, and summed up.

Instructions Affecting Longevity Risk

a. For joint and survivor annuities, the youngest age should be used.

D16. OTHER INSURANCE RISK

Background

D16.1 The other insurance risk captures other risks related to policyholder behaviour, expenses and guarantees.

Other Insurance Risk Capital Charge

D16.2 The other insurance risk charge calculation can be summarised by the following formula:

$\boxed{C_{LToth} = \sum_i \alpha_i \times BAR_i}$ Where:

α_i = individual BAR_i capital charge factor; and

BAR_i = the BSCR adjusted reserves for other insurance risk.

Items

Line Item		Description
1	BSCR Adjusted Reserves	Column item 1: Current year BSCR adjusted reserves by the fifteen predefined lines, as reported on Schedule VII EBS, Column (1), Lines 1 to 15.
2	Capital Factor	Column item 2 Supplied by the BMA; capital charge factors applied to individual BSCR adjusted reserves for other insurance risk.
3	Required Capital	Column item 3: Calculated using [Column item 1 x Column item 2] for each line item.

D17. VARIABLE ANNUITY GUARANTEE RISK

Background

D17.1 Variable annuity benefits are partitioned into five categories:

i) Guaranteed Minimum Accumulation Benefit (GMAB);

ii) Guaranteed Minimum Death Benefit (GMDB),

iii) Guaranteed Minimum Income Benefit (GMIB),

iv) Guaranteed Minimum Withdrawal Benefit (GMWB), and

v) Guaranteed Enhanced Earnings Benefit (GEEB). Variable annuities contain various minimum guarantees that expose insurance groups to risks of a particularly volatile nature.

D17.2 The capital risk factors differentiate by volatility levels and are applied to the net amount at risk ("NAR"). Volatility is defined as the annual historic volatility of the fund. In the case where there is no, or limited, history of the fund, use the volatility of the benchmark. Where the Guarantee Value (GV) is less than the Account Value (AV), the minimum floor factors are applied to the account values. The proportion used for the AV under reinsurance is the proportion used for net amount at risk.

D17.3 Net amount at risk (net of reinsurance) is defined as follows: GMAB – total claim payable if all contracts mature immediately; GMDB – total claim amount payable upon immediate death of all policyholders; GMIB – total claim payable upon full and immediate annuitisation of all policies using an 80% factor applied to the GV (the 80% represents the ratio between current market annuitisation factors and the guaranteed annuitisation factors); GMWB – total claim payable if 100% of the guaranteed withdrawal benefit base in excess of the current AV is withdrawn immediately; and GEEB – total guaranteed enhanced payments upon immediate death of all policyholders.

Variable Annuity Guarantee Capital Charge

D17.4 The variable annuity guarantee risk charge calculation can be summarised by the following formula:

C_{LTVA} = either $\left(\sum_i TotalBSReq_i - TotalBAR - TotalGMB_{adj}\right)$ or $(IMCReq_{LTVA})$ wherein —

i. $TotalBS\,\mathrm{Re}\,q_i$ = higher of (a) $(\alpha 1_i \times GV1_i + \alpha 2_i \times GV2_i + \alpha 3_i \times GV3_i)$ and (b) $(\alpha 4_i \times NAR1_i + \alpha 5_i \times NAR2_i + \alpha 6_i \times NAR3_i)$;

ii. $TotalBAR$ = the total BSCR adjusted reserves for variable annuity guarantee risk;

iii. $TotalGMDB_{adj}$ = capital requirement charged on Guaranteed Minimum Death Benefit (GMDB) policies multiplied by the percentage of GMDB with multiple guarantees;

iv. $IMC\operatorname{Re}q_{LTVA}$ = the capital requirement for variable annuity guarantee risk determined in accordance with an insurance group's internal capital model, if applicable;

v. $GV1_i$, $GV2_i$, $GV3_i$, $NAR1_i$, $NAR2_i$, and $NAR3_i$ are the guaranteed value and net amount at risk under each range of volatility for each specified variable annuity product risk; and

vi. $\alpha 1_i$, $\alpha 2_i$, $\alpha 3_i$, $\alpha 4_i$, $\alpha 5_i$ and $\alpha 6_i$ are the capital factors applied to the guaranteed value and net amount at risk under each range of volatility for each specified variable annuity product risk.

Items

a. Factor-Based Capital Requirement

Column Item		Description
1	Guaranteed Values: Volatility 0%-10%	Column (1): Guaranteed values for each type of variable annuity risk with volatility that is less than or equal to 10% according to policy position (i.e. in/out-of-the-money); as reported on Schedule VIII EBS, Column (2).
2	Capital Factor	Column (2): Capital factors supplied by the BMA for each type of variable annuity risk with volatility that is less than or equal to 10% according to policy position.
3	Guaranteed Values: Volatility 10%-15%	Column (3): Guaranteed values for each type of variable annuity risk with volatility that is more than 10% but less than 15% according to policy position; as reported on Schedule VIII EBS, Column (3).
4	Capital Factor	Column (4): Capital factors supplied by the BMA for each type of variable annuity risk with volatility that is more than 10% but less than 15% according to policy position.
5	Guaranteed Values: Volatility >15%	Column (5): Guaranteed values for each type of variable annuity risk with volatility that is more than 15% according to policy position; as reported on Schedule VIII EBS, Column (4).
6	Capital Factor	Column (6): Capital factors supplied by the BMA for each type of variable annuity risk with volatility that is more than 15% according to policy position.
7	Net Amount at Risk: Volatility 0%-10%	Column (7): Net amount at risk for each type of variable annuity risk with volatility that is less than or equal to 10% for in-the-money positions only; as reported on Schedule VIII EBS, Column (5).

Column Item		Description
8	Capital Factor	Column (8): Capital factors supplied by the BMA for each type of variable annuity risk with volatility that is less than or equal to 10% for in-the-money positions only.
9	Net Amount at Risk: Volatility 10%-15%	Column (9): Net amount at risk for each type of variable annuity risk with volatility that is more than 10% but less than 15% for in-the-money positions only; as reported on Schedule VIII EBS, Column (6).
10	Capital Factor	Column (10): Capital factors supplied by the BMA for each type of variable annuity risk with volatility that is more than 10% but less than 15% for in-the-money positions only.
11	Net Amount at Risk: Volatility >15%	Column (11): Net amount at risk for each type of variable annuity risk with volatility that is more than 15% for in-the-money positions only; as reported on Schedule VIIII EBS, Column (7).
12	Capital Factor	Column (12): Capital factors supplied by the BMA for each type of variable annuity risk with volatility that is more than 15% for in-the-money positions only.
13	Capital Requirements	Column (13): Calculated using the maximum of [{Column (1) x Column (2) + Column (3) x Column (4) + Column (5) x Column (6)} or {Column (7) x Column (8) + Column (9) x Column (10) + Column (11) x Column (12)}]; less percentage of guaranteed minimum death benefit with multiple guarantees, as reported on Schedule VIII EBS, Column (4), Line 32, applied to GMDB; less total BSCR adjusted reserves for variable annuities.

b. Internal Model-Based Capital Requirement

Column Item		Description
1	Without Hedging	Column (1): The total capital requirement for variable annuity risk based on internal model results without taking into account hedging; as reported on Schedule VIIIA EBS, Column (6), Line 1.
2	With Hedging	Column (2): The total capital requirement for variable annuity risk based on internal model results taking into account hedging; as reported on Schedule VIIIA EBS, Column (7), Line 1.

D18. CAPITAL ADJUSTMENT

Background

D18.1 The capital adjustment charge represents the capital requirements for the following:

a. Regulated non-insurance financial operating entities.

b. Unregulated entities where the parent exercises control

D18.2 The sum of items (1) and (2) shall comprise the capital adjustment, which is added to the Group BSCR (after covariance adjustment) to arrive at the Group BSCR. The Group BSCR will be used to determine a group's ECR for the relevant year, as reported in the Summary section of the Group BSCR model.

Capital adjustment

D18.3 The capital adjustment charge calculation can be summarised by the following formula:

C_{adj} = (1) + (2) where:

(1) = Regulatory capital requirement for regulated non-insurance financial operating entities; and

(2) = Capital requirement for unregulated entities where the parent company exercises control.

Items

D18.4 Regulatory capital requirement for regulated non-insurance financial operating entities – This capital adjustment charge shall be determined in accordance with Schedule XI(A), where this amount shall be equal to the sum of the group'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; and

D18.5 Capital requirement for unregulated entities where the parent company exercises control – This capital adjustment charge shall be determined in accordance with Schedule XI(B), where this amount shall be equal to the sum of the capital requirement based on the capital charges applied to each unregulated entity's net assets, as follows:

i. 0% to unregulated entities that conduct ancillary services to members of the group;

ii. 15% to unregulated non-financial operating entities; and

iii. 50% to unregulated financial operating entities.

D19. FEATURES – BSCR ON NEW BASIS

Background

D19.1 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 future discretionary benefits (FDB) (if any); iii) the effective (federal) tax rate of the insurance group; and iv) the amount of loss carryback.

Required Capital and Surplus

D19.2 The BSCR is determined on an economic balance sheet (EBS) valuation basis 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 technical provisions;
$C_{otheradj}$	= adjustment for the loss absorbing capital of deferred taxes;

D19.3 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}, $C_{P\&C}$, C_{LT}, C_{Credit};
C_{Market}	=	capital charge in respect to market risk;

$C_{P\&C}$ = capital charge in respect to P&C risk;

C_{LT} = capital charge in respect to Long-Term risk; and

C_{Credit} = capital charge in respect to credit risk.

Table A – Basic BSCR Correlation Matrix

$CorrBBSCR_{i,j}$	C_{Market}	C_{Credit}	$C_{P\&C}$	C_{LT}
C_{Market}	1			
C_{Credit}	0.25	1		
$C_{P\&C}$	0.125	0.50	1	
C_{LT}	0.125	0.25	0.00	1

D19.4 The market risk module 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}, $C_{interest}$, $C_{currency}$, $C_{concentration}$;

$C_{fixedIncome}$ = 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; and

$C_{concentration}$ = capital charge in respect to concentration risk.

Table B – Market Risk Module Correlation Matrix

$CorrMarket_{i,j}$	$C_{fixedIncome}$	C_{equity}	$C_{interest}$	$C_{currency}$	$C_{concentration}$
$C_{fixedIncome}$	1				
C_{equity}	0.50	1			

C_{interest}	A	A	1		
C_{currency}	0.25	0.25	0.25	1	
$C_{\text{concentration}}$	0.00	0.00	0.00	0.00	1

D19.5 The P&C risk module charge calculation is determined in accordance with the following formula—

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

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

D19.6 The long-term risk module charge calculation is determined in accordance with the following formula—

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

Where—

$CorrLT_{i,j}$ = the correlation factors of the long-term risk module correlation matrix in accordance with Table D;

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:

$C_{LTmortality}$, $C_{LTstoploss}$, $C_{LTrider}$, $C_{LTmorbidity}$, $C_{LTlongevity}$, $C_{LTVariableAnnuity}$, $C_{LTotherrisk}$;

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

$C_{LTstoploss}$ = capital charge in respect to stop loss risk; and

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

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

$C_{LTVariableAnnuity}$ = capital charge in respect to variability annuity risk;

$C_{LTotherrisk}$ = capital charge in respect to other long-term insurance risk;

Table D – Long-Term Risk Module Correlation Matrix

D19.7 This formula utilises the correlation matrix to aggregate the various risks under the assumption that the risks are not independent with one another, and therefore, provides a linear diversification benefit when combining the risk charges. The end result is the BSCR (after correlation adjustment).

D19.8 The operational risk capital charge is the operational risk charge multiplied by the sum of (gross) BSCR (after correlation adjustment) and the adjustment for loss-absorbing capacity of technical provisions calculated according to paragraph D36.5. The risk charge ranges from 1% to 20% based on each insurance group's self-assessment of the Commercial Insurer's Risk Assessment (CIRA) framework.

$CorrLT_{i,j}$	$C_{LTmortality}$	$C_{LTstoploss}$	$C_{LTrider}$	$C_{LTmorbidity}$	$C_{LTlongevity}$	$C_{LTVariableAnnuity}$	$C_{LTotherrisk}$
$C_{LTmortality}$	1						
$C_{LTstoploss}$	0.75	1					
$C_{LTrider}$	0.75	0.75	1				
$C_{LTmorbidity}$	0.25	0.00	0.00	1			
$C_{LTlongevity}$	-0.50	-0.50	-0.50	0.00	1		
$C_{LTVariableAnnuity}$	0.00	0.00	0.00	0.00	0.00	1	
$C_{LTotherrisk}$	0.125	0.25	0.25	0.25	0.25	0.25	1

D19.9 Capital add-ons/reductions may be assessed where the BMA believes that an insurance group's risk profile deviates significantly from the risk assumptions underlying the ECR or from the insurance group'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.

D19.10 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

D19.11 Available Statutory Economic Capital and Surplus is defined as the Total Statutory Economic Capital and Surplus of the insurance group, 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.

D19.12 The insurance group's available statutory economic capital and surplus is determined for purposes of calculating the BSCR and ECR ratios.

Minimum Margin of Solvency

D19.13 The MSM is prescribed by the Insurance Account Rules 2016.

ECR and TCL

D19.14 The ECR is the higher of the MSM and the BSCR / approved internal capital model.

D19.15 The TCL is equal to 120% of the ECR.

Ratios

D19.16 The BSCR Ratio is the ratio of the Available Statutory Economic Capital and Surplus to the BSCR.

D19.17 The ECR Ratio is the ratio of the Available Statutory Economic Capital and Surplus to the ECR.

Solvency Capital Distribution Chart

D19.18 The Solvency Capital Distribution chart displays the relative contribution of each charge to the BSCR, prior to the correlation adjustment.

Regulatory Action Level Graph

D19.19 The Regulatory Action Level graph displays the insurance group's Available Statutory Capital and Surplus position relative to the BMA's regulatory action guidelines, where

Regulatory Action Level 1 is equal to the insurance group's ECR and Regulatory Action Level 2 is equal to the insurance group's TCL.

Items

c. 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 / Liquidity Risk	Based on current year interest rate / liquidity risk (Column (4)).
4	Currency Risk	Based on current year currency risk (Column (20)).
5	Concentration Risk	Based on current year concentration risk (Column (3), Row (i)).
6	Premium Risk	Based on current year premium risk (Column (11) Row (e)).
7	Reserve Risk	Based on current year reserve risk (Column (5) Row (c)).
8	Credit Risk	Based on current year credit risk (Column (3), Row (e)).
9	Catastrophe Risk	Based on current year catastrophe risk.
10	Insurance Risk – Mortality	Based on current year insurance risk – mortality (Column (6)).
11	Insurance Risk – Stop Loss	Based on current year insurance risk – stop loss (Column (6)).
12	Insurance Risk – Riders	Based on current year insurance risk – riders (Column (6)).
13	Insurance Risk – Morbidity and Disability	Based on current year insurance risk – morbidity and disability (Column (6)).
14	Insurance Risk – Longevity	Based on current year insurance risk – longevity (Column (6)).
15	Variable Annuity Guarantee Risk	Based on current year variable annuity guarantee risk (Column (13), Row (33)) or Schedule VIIIA (Column (7), Line (1)).
16	Other Insurance Risk	Based on current year other insurance risk (Column (3)).
17	Group BSCR (Prior to Correlation Adjustment)	Group BSCR (Prior to Correlation Adjustment) is the sum of the line items (1) to (16) above.

Line Item		Description
18	Group BSCR (After Correlation Adjustment)	Group BSCR (After Correlation Adjustment) is the resulting amount after applying the correlation matrix on line item (17) to reflect a diversification benefit when aggregating all the risks described above.
19	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.
20	Operational Risk Capital Charge ($)	Operational Risk Capital Charge ($) is the resulting amount when the operational risk (%), as prescribed in line item (19), is applied to the BSCR (After Correlation Adjustment).
21	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 insurance group'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.
22	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 groups-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.
23	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.
24	Adj. for Loss Absorbing Capacity of Deferred Taxes	Adjustment for Loss Absorbing Capacity of Deferred Taxes is the resulting amount from the greater of the insurance group's: a) Past Loss Carry Back Provision; b) Current Loss Carry Back Provision; and c) Future Loss Carry Back Provision.
25	BSCR	BSCR is the sum of the line items (18), (20) (21), (22), (23) and (24) above.

d. Available Statutory Economic Capital and Surplus – The calculation of the Available Statutory Economic Capital and Surplus is used for the purpose of determining the appropriate regulatory action level.

Line Item		Description
1	Total Statutory Economic Capital and Surplus	Based on the current year economic balance sheet of the insurance group; as reported on Form 1EBS, Line 40.
2	Capital Contribution	Capital Contributions must be approved by the BMA. Note that a Capital Contribution increases the Total Statutory Economic Capital and Surplus.
3	Pre-Adjustment Available Statutory Economic Capital and Surplus	Pre-Adjustment Available Statutory Economic 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 insurance group's risk profile deviates significantly from the risk assumptions underlying the ECR.
5	Available Statutory Economic Capital and Surplus	Available Statutory Economic Capital and Surplus is the sum of lines (3) and (4) above.

D20. FIXED INCOME INVESTMENT RISK

Background

D20.1 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.

D20.2 Where applicable, the amounts must reconcile to the appropriate line(s) of the group's Form 1EBS or to the schedules prescribed by or under the Rules for the relevant year.

Fixed Income Investment Risk Capital Charge

D20.3 The fixed income investment risk charge calculation can be summarised by the following formula:

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

χ_i = the BMA supplied asset class capital charge factor for 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) $CreditDerivatives_{ShockUp}$ and

ii) $CreditDerivatives_{ShockDown}$;

iii) 0.

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

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

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

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

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 EBS, Line 1, Column (1).

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

b. Residential Mortgage-Backed Securities

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

c. Commercial Mortgage-Backed Securities/Asset-Backed Securities

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

d. Bond Mutual Funds

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

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

e. <u>Mortgage Loans</u>

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

f. <u>Other Fixed Income Investments</u>

	Line Item	Statement Source – The Rules or IAR
1	Other loans	Based on Form 1EBS, Line 8.

g. <u>Cash and Cash Equivalents</u>

	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

(a) 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;

(b) all non-affiliated quoted and unquoted bonds and debentures shall be included in the fixed income investment charge;

(c) 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 B7 for the following items:

(i) collective investment vehicles and other investments packaged as funds, including related undertakings used as investment vehicles;
(ii) segregated accounts assets and liabilities;
(iii) deposit asset and liabilities;
(iv) assets and liabilities held by ceding insurers or under retrocession;
(v) other sundry assets and liabilities; and
(vi) derivatives.

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

(e) the diversification adjustment in paragraph (d) is determined as 40% multiplied by 1 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

D21. EQUITY INVESTMENT RISK

Background

D21.1 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 insurance group should be reported, including both quoted and unquoted issues.

Equity Investment Risk Capital Charge

D21.2 The equity investment risk charge calculation can be summarised by the following formula:

$$\boxed{C_{\text{equity}} = C^{basic}_{equity} + C^{grandfathered}_{equity}}$$

, where

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

$CorrEq_{i,j}$ = 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

D21.3 Type1, Type2 Type3 and Type4 equity risk charges calculation shall be determined in accordance with the following formulas—

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

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

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

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

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 B5 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 B5 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 B5 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 B5 after applying shock
$BELiabilit\,ies^{BShock}$	= 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. Type 1 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**
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. Type 4 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
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

(a) 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 B7 for the following items:

- (i) collective investment vehicles and other investments packaged as funds, including related undertakings used as investment vehicles;
- (ii) segregated accounts assets and liabilities;
- (iii) deposit asset and liabilities;
- (iv) assets and liabilities held by ceding insurers or under retrocession;
- (v) other sundry assets and liabilities; and
- (vi) derivatives.

(b) for asset types referred to in paragraph (a) (i) to (vi) where the "look through" approach cannot be applied, the residual balance shall be included in "Equity Securities – Other Investments";

(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 B5; and

(d) amounts are to be reported on an EBS Valuation basis.

D21A. The equity investments that are eligible to be used in the calculation of $C_{equity}^{grandfathered}$ as defined in section D21.2 are determined as follows:

- i. The average value of equities as percentage of total assets over the prior three financial year ends before January 1st 2019 (i.e., over which the financial years ending 2016 to 2018) is calculated.
  - a. Similarly, for each class of equities in accordance with Table 2B, the average amounts as a percentage of total equities shall be determined over the same prior three years, i.e. the allocations for each equity class.
- ii. The total amount of equities eligible to be used in the calculation of $C_{equity}^{grandfathered}$ as defined in section D21.2 at each year end is determined by multiplying the amount of legacy reserves by the equity percentage of paragraph i., where
  - a. "Legacy reserves" are defined as the long term best estimate labilities, at the applicable point in time (financial year-end), for insurance business carried on as at December 31st 2018.
  - b. The total amount of equities eligible to be used in the calculation of $C_{equity}^{grandfathered}$ as defined in section D21.2 at each year end shall not be greater than the amount of the legacy reserves.
- iii. The equity investments eligible being used in the calculation of $C_{equity}^{grandfathered}$ as defined in section D21.2 per equity class are calculated by multiplying the total amount in paragraph ii. by the equity class allocation in paragraph i.

iv. Future applicable reserves shall be capped at the initial reserve. The amount of equities eligible to be used in the calculation of $C_{equity}^{grandfathered}$ as defined in section D21.2 can therefore never be greater than the initial amount.

v. Equities that are eligible to be used being used in the calculation of $C_{equity}^{grandfathered}$ as defined in section D21.2 may be traded or replaced within a specific equity class and still receive the aforementioned treatment.

D22. INTEREST RATE AND LIQUIDITY RISK

Background

D22.1 The interest rate and liquidity risk charge calculation may be calculated based on the instructions D22.2-D22.9 (option 1) or based on the instructions D22.10-D22.15 (option 2). Once the insurance group selects to use option 2, the insurance group cannot move back to option 1 without the prior written approval of the Authority.

Interest Rate and Liquidity Risk Capital Charge - Option 1

D22.2 The interest rate and liquidity risk option 1 represents the economic risk an insurance group 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 insurance group'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.

D22.3 The interest rate and liquidity risk option 2 represents an alternative and more risk sensitive method that requires insurance groups 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.

D22.4 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 insurance group's effective asset duration less the insurance group's effective liability duration or the insurance group's effective liability duration less the insurance group's effective asset duration; and

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

Items

D22.5 Bonds and Debentures – Based on current year Schedule II (EBS) Column (9), Line 10 and Schedule IIA (EBS) Column (9), Line 10; total quoted and unquoted value of bonds and debentures.

D22.6 Preferred Stocks – Based on current year Schedule II (EBS) Column (9), Line 21 and Schedule IIA (EBS) Column (9), Line 21; total quoted and unquoted value of preferred stocks portfolio.

D22.7 Mortgage Loans – Based on current year Schedule II (EBS) Column (1), Line 26 and Schedule IIA (EBS) Column (1), Line 26; total amortized cost (outstanding principal amount less any provision made for doubtful collection) of mortgage loan portfolio.

D22.8 Effective Duration of Assets – The effective duration calculation is based on total bonds and debentures (Schedule II (EBS) Column (9), Line 10 and Schedule IIA (EBS) Column (9), Line 10), preferred stocks (Schedule II (EBS) Column (9), Line 21 and Schedule IIA (EBS) Column (9), Line 21), and mortgage loans portfolios (Schedule II (EBS) Column (1), Line 26 and Schedule IIA (EBS) Column (1), Line 26). The effective asset duration is pulled from Schedule V, Line (c).

D22.9 Effective Duration of Liabilities – The effective duration calculation is based on the reserves (Form 1EBS, Lines 17(d)). The effective liability duration is pulled from Schedule V, Line (d).

Instructions Affecting Interest Rate and Liquidity Risk

a. 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;

b. All quoted and unquoted non-affiliated other bonds and debentures and preferred stock shall be included in the interest rate/liquidity risk charge; and

All other bonds and debentures, preferred stock, and mortgage loans investments shall be reported on a basis consistent with that used for purposes of described in the Prudential Standard Rules Schedule XIV and the guidance note for statutory reporting regime.

Interest Rate and Liquidity Risk Capital Charge Option 2

D22.10 The interest rate and liquidity risk option 2 charge calculation can be summarised by the following formula:

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

Where—

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

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

$$\omega = Down, Up$$

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

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

$MVA_{Before}^{CCY,Q}$ = refers to the market value of qualified assets including derivatives qualifying as held for risk-mitigating purposes (as described in section B5) before shock ω (ω =Up or Down) by currency type (CCY), that has been converted to the functional currency as expressed in Form 1EBS;

$MVA_{After}^{CCY,Q}$ = refers to the revaluation of qualified assets including derivatives qualifying as held for risk-mitigating purposes (as described in section B5) 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 1EBS prescribed in Table 3B;

$MVA_{Before}^{CCY,NQ}$ = refers to the market value of non-qualified assets which are derivatives not qualifying as held for risk-mitigating purposes (as described in section B5) before shockω (ω =Up or Down) by currency type (CCY), that has been converted to the functional currency as expressed in Form 1EBS;

$MVA_{After}^{CCY,NQ}$ = refers to the revaluation of non-qualified assets which are derivatives not qualifying as held for risk-mitigating purposes (as described in section B5) 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 1EBS prescribed in Table 3B;

MVL_{Before}^{CCY} = 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 1EBS;

MVL_{After}^{CCY} = 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 1EBS prescribed in Table 3B;

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

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

Items

D22.11 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.

D22.12 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.

D22.13 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.

D22.14 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.

D22.15 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

a. 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
UK 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

b. 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
UK 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

c. 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
UK 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

d. 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
UK 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

(a) 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 B7 for the following items:

- (i) collective investment vehicles and other investments packaged as funds, including related undertakings used as investment vehicles;
- (ii) segregated accounts assets;
- (iii) deposit asset;
- (iv) other sundry;
- (v) derivatives;
- (vi) funds held by ceding insurers.

(b) all liabilities sensitive to interest rates shall be included in the table, including but not limited to 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 B7 for the following items:

- (i) segregated accounts liabilities;
- (ii) deposit liabilities;
- (iii) other sundry liabilities;
- (iv) derivatives;
- (v) funds held under retrocession.

(c) amounts are to be reported on an EBS Valuation basis.

D23. CURRENCY RISK

Background

D23.1 The currency risk charge is based on amounts reported on Form 1EBS total assets and liabilities. It represents the risk that the net asset position of an insurance group may worsen as a result of exchange rate changes if assets and liabilities are not currency matched. Insurance groups 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 ten other currency types.

D23.2 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 D23.3 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.

D23.3 The proxy BSCR factor is determined as the greater of:

a. the prior year ECR charge to the prior year total EBS liabilities reported and
b. the average of the last three prior years ECR charge to last three prior year's total EBS liabilities reported.

Currency Risk Capital Charge

D23.4 The currency risk charge calculation can be summarised by the following formula:

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

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

$Currency_i$ = refers to currency type that has been converted to the functional currency as reported in Form 1EBS

$MVA_{i,Before}$ = 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 1EBS;

$MVA_{i,After}$ = 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 1EBS;

$MVDL^{Q}_{i,Before}$ = refers to the market value of long positions in derivatives qualifying as held for risk-mitigating purposes (as described in section B5) by currency type (CCY), that has been converted to the functional currency as reported in Form 1EBS;

$MVDL^{Q}_{i,After}$ = refers to the revaluation of long positions in derivatives qualifying as held for risk-mitigating purposes (as described in section B5) 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 1EBS;

$MVDS^{Q}_{i,Before}$ = refers to the market value of short positions in derivatives qualifying as held for risk-mitigating purposes (as described in section B5) by currency type (CCY), that has been converted to the functional currency as reported in Form 1EBS;

$MVDS^{Q}_{i,After}$ = refers to the revaluation of short positions in derivatives qualifying as held for risk-mitigating purposes (as described in section B5) 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 1EBS;

$MVDL^{NQ}_{i,Before}$ = refers to the market value of long positions in derivatives not qualifying as held for risk-mitigating purposes (as described in section B5) by currency type (CCY), that has been converted to the functional currency as reported in Form 1EBS;

$MVDL^{NQ}_{i,After}$ = refers to the revaluation of long positions in derivatives not qualifying as held for risk-mitigating purposes (as described in section B5) 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 1EBS;

$MVDS^{NQ}_{i,Before}$ = refers to the market value of short positions in derivatives not qualifying as held for risk-mitigating purposes (as described in section B5) by currency type (CCY), that has been converted to the functional currency as reported in Form 1EBS;

$MVDS^{NQ}_{i,After}$ = refers to the revaluation of short positions in derivatives not qualifying as held for risk-mitigating purposes (as described in section B5) 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 1EBS;

$MVL_{i,Before}$ = 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 1EBS;

$MVL_{i,After}$ = 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 1EBS;

$Currproxybscr_i$ = 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 1EBS 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

D23.5 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.

D23.6 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.

D23.7 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.

D23.8 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.

D23.9 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.

D23.10 EBS Liabilities by Currency Types – Total Best estimate liabilities denominated in given currency.

D23.11 Total ECR Requirement– Based on three prior years ECR Requirement.

D23.12 Total EBS Liabilities– Based on three prior years Form 1EBS Line 39; total EBS liabilities (note if the EBS liabilities for the preceding three years is not available, provide the statutory liability as reported on Line 39).

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
UK 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

(a) The initials “A” to “J” on the column labeled “Shock Otherwise χ_i” shall be replaced by the following shock values:

- “A” by:
  - “0%” if the reporting currency is the Bermuda Dollar or,
  - “5.00%” if the reporting currency is the Qatari Riyal or,
  - “1.00%” if the reporting currency is the Hong Kong Dollar or,
  - “25%” otherwise.
- “B” by:
  - “0%” if the reporting currency is the United States Dollar or,
  - “25%” otherwise.
- “C” by:
  - “5.00%” if the reporting currency is the United States Dollar or,
  - “25%” otherwise.
- “D” by:
  - “1.00%” if reporting currency is the United States Dollar or,
  - “25%” otherwise.
- “E” by:
  - “0.39%” if the reporting currency is the Danish Krone or,
  - “1.81%” if the reporting currency is the Bulgarian Lev or,
  - “2.18%” if the reporting currency is the West African CFA Franc or,
  - “1.96%” if the reporting currency is the Central African CFA Franc or,
  - “2.00%” if the reporting currency is the Comorian Franc or,
  - “25%” otherwise.
- “F” by:
  - “0.39%” if reporting currency is the Euro or,
  - “25%” otherwise.
- “G” by:
  - “1.81%” if reporting currency is the Euro or,
  - “25%” otherwise.
- “H” by:
  - “2.18%” if reporting currency is the Euro or,
  - “25%” otherwise.
- “I” by:
  - “1.96%” if reporting currency is the Euro or,
  - “25%” otherwise.
- “J” by:
  - “2.00%” if reporting currency is the Euro or,
  - “25%” otherwise.

(b) 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 B7 for the following items:

   (i) collective investment vehicles and other investments packaged as funds, including related undertakings used as investment vehicles;
   (ii) segregated accounts assets and liabilities;
   (iii) deposit asset and liabilities;
   (iv) assets and liabilities held by ceding insurers or under retrocession;
   (v) other sundry assets and liabilities; and
   (vi) derivatives.

(c) where the reporting currency is the United States Dollar, the capital factor χ_i charge shall be reduced to:

   i. 0.00% for the Bermuda Dollar;
   ii. 5.00% for the Qatari Riyal;
   iii. 1.00% for the Hong Kong Dollar.

(d) 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.

(e) 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.

(f) 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.

(g) where the reporting currency is Euros, the capital factor χ_i shall be reduced to:

   i. 0.39% for the Danish Krone;
   ii. 1.81% for the Bulgarian Lev;
   iii. 2.18% for the West African CFA Franc;
   iv. 1.96% for the Central African CFA Franc;
   v. 2.00% for the Comorian Franc.

(h) where the reporting currency is the Danish Krone the capital factor χ_i charge shall be reduced to 0.39% for the Euro.

(i) where the reporting currency is the Bulgarian Lev the capital factor χ_i charge shall be reduced to 1.81% for the Euro.

(j) 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.

(k) 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.

(l) where the reporting currency is the Comorian Franc the capital factor χ_i charge shall be reduced to 2.00% for the Euro.

(m) insurance groups are to report currencies representing at least 95% of their economic balance sheet liabilities; and

(n) amounts are to be reported on an EBS Valuation basis.

.

D24. CONCENTRATION RISK

Background

D24.1 The concentration risk charge is based on asset counterparty exposures as reported on the Form 1EBS. It represents the risk of losses due to asset concentrations.

D24.2 The charge is calculated by assigning 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

D24.3 The concentration risk charge calculation can be summarised by the following formula:

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

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

$Concastclass_i$ = value of corresponding asset in Asset Class.

Items

a. Cash and Cash Equivalents

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

b. Corporate & Sovereign Bonds

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

Line Item		Description
8	BSCR rating 7	Based on Schedule XXIA, Column D
9	BSCR rating 8	Based on Schedule XXIA, Column D

c. Residential Mortgage- Backed Securities

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

d. Commercial Mortgage-Backed Securities/Asset-Backed Securities

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

e. Bond Mutual Funds

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

f. Preferred Shares

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

g. Mortgage Loans

Line Item		Description
1	Insured/Guaranteed Mortgages	Based on Schedule XXIA, Column D
2	Other Commercial and Farm Mortgages	Based on Schedule XXIA, Column D
3	Other Residential Mortgages	Based on Schedule XXIA, Column D
4	Mortgages Not In Good Standing	Based on Schedule XXIA, Column D

h. Other Asset Classes

Line Item		Description
1	Infrastructure	Based on Schedule XXIA, Column D
2	Listed Equity Securities in Developed Markets	Based on Schedule XXIA, Column D
3	Other Equities	Based on Schedule XXIA, Column D
4	Strategic Holdings	Based on Schedule XXIA, Column D
5	Duration Based	Based on Schedule XXIA, Column D
6	Letters of Credit	Based on Schedule XXIA, Column D
7	Advances to Affiliates –	Based on Schedule XXIA, Column D
8	Policy Loans	Based on Schedule XXIA, Column D
9	Equity Real Estate 1	Based on Schedule XXIA, Column D
10	Equity Real Estate 2	Based on Schedule XXIA, Column D
11	Collateral Loans	Based on Schedule XXIA, Column D

Instructions Affecting Concentration Risk

(a) $Concastclass_i$ shall only apply to an insurance groups' ten largest counterparty exposures based on the aggregate of all assets relating to that counterparty;

(b) 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 B7) for all amounts reported on the balance sheet;

(c) a counterparty shall include all related or connected counterparties captured by either of the following criteria:

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

   (ii) economic interdependence: if one of the counterparties were to experience financial difficulties which directly or indirectly affect the ability of any or all of the remaining counterparties to perform their financial obligations (for example 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);

(d) amounts are to be reported on an EBS Valuation basis.

D25. PREMIUM RISK

Background

D25.1 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 measure 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.

D25.2 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.

D25.3 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.

D25.4 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 the fact 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:

$C_{premium_i}$, $C_{premium_j}$ 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 reporting period and the estimate of the net premiums to be earned by the insurance group during the next twelve-month accounting period;

$geolineprem_i$ = geographic diversification of premium exposure measure for 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 insurance group after the next twelve-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 insurance group after the next twelve-month reporting period for qualifying multi-year insurance policies where the initial recognition date falls in the following twelve-months for line of business $_i$;

$ExposureMeasure_i$ = 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).

Line Item		Description
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)
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)]
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

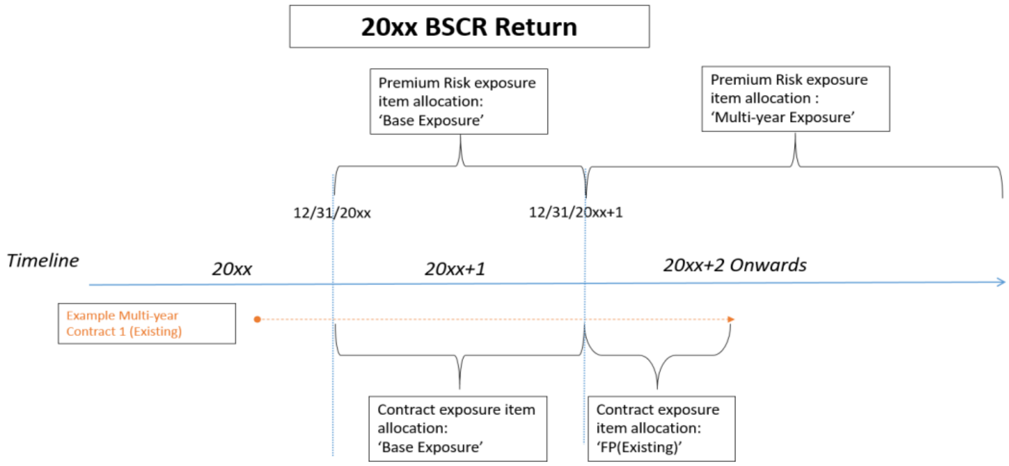
D25.4a all reported net premium exposure measures as prescribed in Schedule IVD that are subject to capital charges within the premium risk charge shall be included;

D25.4b "qualifying multi-year insurance policies" means those insurance policies with (an earning) term longer than twelve months after allowing for the criteria prescribed by the Authority;

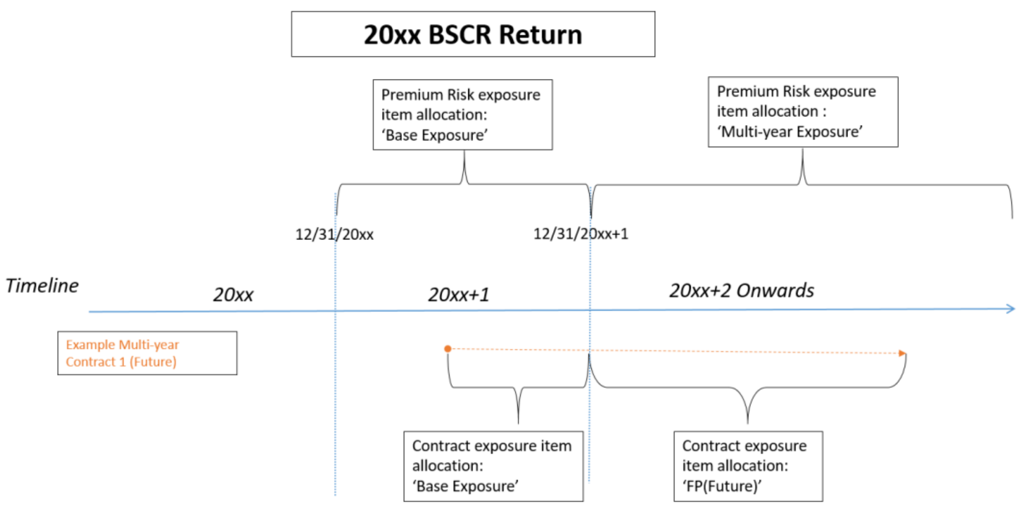
D25.4c all net premium exposure measures by statutory Line of Business shall be reported on a basis consistent with that prescribed in Schedule IVD;

D25.4d an insurance group 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

D25.4a A graphical example of the earned premium allocation of a hypothetical existing qualifying multi-year contract is provided below. Premium earned during the next twelve months is classified as ‘Base Exposure’ while premium earned after the next twelve-month period is classified as ‘FP (Existing)’.



D25.4b A graphical example of the earned premium allocation of a hypothetical future qualifying multi-year contract is provided below. Premium earned during the next twelve months is classified as ‘Base Exposure’ while premium earned after the next twelve-month period is classified as ‘FP (future)’.



D26. RESERVE RISK

Background

D26.1 The reserve risk charge is based on the statutory net loss and loss expense provisions (on an EBS basis) by predefined statutory lines of business, and if available, reporting net technical provision by predefined statutory geographic locations.

D26.2 The first step of the calculation applies a line of business specific reserve risk capital factor to the respective reserve amounts.

D26.3 In the second step of the calculation applies sum squared diversification credit based on 18 geographic zones. Note that this is not a necessary requirement in the reserve risk calculation and if used, this is not required for all lines of business.

D26.4 In the Reserve risk calculation, a correlation adjustment is determined to reflect the overall diversification of the reserve risk.

Reserve Risk Capital Charge

D26.5 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. Lines of Business – 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 economic balance sheet (Form 1EBS, 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 economic balance sheet (Form 1EBS, 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 economic balance sheet (Form 1EBS, Line 17(d) and should be input on an economic 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. Correlation Adjustment Calculation – 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. Required Capital Charge – 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

D26.5a all reported net loss and loss expense provisions for the relevant year by statutory Line of Business as prescribed in this Schedule are subject to capital charges within the reserve risk charge and shall be included;

D26.5b 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;

D26.5c an insurance group may provide loss and loss expense provisions exposure 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. $geolinersvs_i$ 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

D26.5d amounts are to be reported on a consolidated EBS basis

D27. CREDIT RISK

Background

D27.1 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.

D27.2 Particulars of reinsurance balances is based on the greater of:

(a) Current reinsurance balances receivable (as reported on Form 1EBS Lines 11(e) 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

(b) Future reinsurance balances receivable (as calculated on the Credit Risk Schedule).

This approach allows for new insurance groups that have not had claims and allows for a more reflective approach of reinsurance exposures in stressed circumstances.

D27.3 Where applicable, the amounts must reconcile to the appropriate line(s) of the insurance group's Form 1EBS or to the schedules prescribed by or under the Prudential Standard Rules.

Credit Risk Capital Charge

D27.4 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 type of $debtor_i$;

$debtor_i$ = receivable amount from $debtor_i$ net of any collateral in favour of the insurance group;

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. Accounts and Premiums Receivable

	Line Item	Statement Source – The Rules
1	In course of collection	Based on Form 1EBS, Line 10(a).
2	Deferred Not Yet Due	Based on Form 1, Line 10(b).
3	Receivables from retrocessional contracts Less: Collateralised balances	Based on Form 1EBS, Line 10(c) less Notes to Form 1EBS. Collateralised balances are all collaterals issued in favour of the group members relating to accounts and premiums receivable. Assets accounted in Form 1EBS, Line (34) should not be included here.

b. All Other Receivables

	Line Item	Statement Source –
1	Advances to affiliates	Based on Form 1EBS, Line 4(g).
2	Accrued investment income	Based on Form 1EBS, Line 9.
3	Balances Receivable on Sale of Investments	Based on Form 1EBS, Line 13(f).

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 'Funds Held by Ceding Reinsurers' should not be included; (iii) all uncollectible amounts, as determined by the insurance group, 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 D25	
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)
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

D27.5 all accounts and premiums receivable and all other receivables that are subject to capital charges within the credit risk charge shall be included;

D27.6 all accounts and premiums receivable, reinsurance balances receivables, all other receivables, and reinsurance recoverable balances shall be reported on a basis consistent with that used for purposes of statutory financial reporting;

D27.7 "collateralized balances" for the purposes of this paragraph shall mean assets pledged in favor of the insurance group relating to accounts and premiums receivable as prescribed by the BMA Capital charge factors for $debtor_i$;

D27.8 Particulars of reinsurance balances shall be the greater of paragraphs D27.9 and D27.10 below

D27.9 Particulars of reinsurance balances for current year by BSCR rating are as follows:

(A) 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 favor of the insurance group in relation to the reinsurance balances;

(B) the "net qualifying exposure" referenced in paragraph D27.9A) above shall be subject to the BMA prescribed credit risk capital factor;

(C) the total capital requirement relating to the reinsurance balances shall be reduced by a diversification adjustment of up to a maximum of 40%;

(D) the "diversification" adjustment" referenced in paragraph D27.9C) above shall be determined by calculating 40% multiplied by 1 minus the ratio of the largest net reinsurance exposure, on an individual reinsurer basis, to total net reinsurance exposure;

D27.10 Particulars of reinsurance balances for future premium by BSCR rating are as follows:

(A) the Premium Risk Capital Charge (Gross), as prescribed in D27.10(B) less the Premium Risk Capital Charge (Net), as prescribed in D25, 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;

(B) 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;

(C) the Premium Risk Capital Charge (Ceded) shall be subject to the BMA prescribed credit risk capital charge factor;

(D) the total capital requirement relating to the reinsurance balances shall be reduced by a diversification adjustment of up to a maximum of 40%; and

(E) the "diversification" adjustment" referenced in paragraph D27.10D) above shall be determined by calculating 40% multiplied by 1 minus the ratio of the largest net reinsurance exposure, on an individual reinsurer basis, to total net reinsurance exposure; and

D27.11 amounts are to be reported on an EBS Valuation basis

D28. CATASTROPHE RISK

Background

D28.1 The catastrophe risk charge is based on group-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. Modeled losses should include demand surge, storm surge, fire following earthquakes and secondary uncertainty.

D28.2 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). 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

D28.3 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%); 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.

Items

a. Gross Probable Maximum Loss – Based on the insurance group'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 insurance group'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. Average Annual Loss Excluding Property Catastrophe (AAL) – Based on the insurance group's catastrophe model; the 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". 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).

d. Industry Catastrophe Loss Ratio – Supplied by BMA; used to calculate the embedded catastrophe premiums from lines of business other than Property Catastrophe.

e. Property Catastrophe Premium – Copied from Premium Risk section; net base exposure for Property Catastrophe line of business as reported on Schedule IVD Column (B), Line (1).

f. Total Catastrophe Premium – Is calculated using [(c) / (d) + (e)]; used to calculate the embedded catastrophe premiums from lines of business other than Property Catastrophe.

g. Credit Risk Capital Factor – Supplied by BMA; credit risk factor applied to ceded catastrophe losses at the 99.0% TVaR level equal to 10.0%.

h. Arrangements with Respect to Property Catastrophe Recoverables.

i. Credit Risk Charge – Calculated using [(a) - (b) – ((h) * 98%) x (g)]; ceded catastrophe losses times the catastrophe credit risk capital factor.

j. Catastrophe Capital Charge – Calculated using [(b) - (f) + (i)]; the catastrophe capital charge is carried to the Summary section.

D29. INSURANCE RISK – MORTALITY

Background

D29.1 Insurance products that are considered to be exposed to mortality risk include term assurance, whole life, universal life, and accidental death and dismemberment insurance. These exclude life policies with critical illness acceleration riders.

D29.2 The insurance risk-mortality charge is calculated by applying a capital factor to the respective net amount at risk. The capital risk factors are applied on an additive basis (i.e. 3.97/1000 on first $1 billion of business, plus 1.80/1000 on the next $4 billion of business, etc.).

D29.3 A 50% reduction is applied to adjustable products and accidental death products. Adjustable products are defined as any insurance contracts in which the insurance group has the ability to make a material adjustment to the premiums / cost of insurance charges / dividends, based on recent experience.

Insurance Risk – Mortality Capital Charge

D29.4 The insurance risk - mortality charge calculation can be summarised by the following formula:

$$C_{LTmort} = \left[\sum_i \alpha 1_i \times NAAR1_i\right] + \left[\sum_i \alpha 2_i \times NAAR2_i\right],$$ where

$\alpha 1_i$ = capital charge factor for adjustable mortality Long-Term business;

$NAAR1_i$ = the net amount at risk of all adjustable mortality Long-Term business;

$\alpha 2_i$ = capital charge factor for non-adjustable mortality Long-Term business; and

$NAAR2_i$ = the net amount at risk of all non-adjustable mortality Long-Term business.

Items

	Column Item	Description
1	Net Amount At Risk	Column item 1: Net amount at risk for adjustable products/treaties, as reported on Schedule VII EBS, Column (9), Line 1; and Net amount at risk for non-adjustable products/treaties, as reported on Schedule VII EBS, Column (10), Line 1.
2	Capital Factor	Column item 2: Supplied by the BMA; capital charge factors applied to individual net amount at risk for (a) adjustable products/treaties; and (b) non-adjustable products/treaties.
3	Required Capital	Column item 3: Calculated using [Column item 1 x Column item 2] for both (a) and (b) and summed up.

D30. INSURANCE RISK – STOP LOSS

Background

D30.1 A capital factor is applied to the respective net annual earned premiums of stop loss covers provided.

Insurance Risk – Stop Loss Capital Charge

D30.2 The insurance risk – stop loss charge calculation can be summarised by the following formula:

C_{LTsl} = 50% x net annual premium for stop loss covers.

Items

Column Item		Description
1	Net Annual Premium	Column item 1: Net annual premium for stop loss covers, as reported on Schedule VII EBS, Column (11), Line 14.
2	Capital Factor	Column item 2: Supplied by the BMA; capital charge factors applied on net annual premiums for stop loss covers.
3	Required Capital	Column item 3: Calculated using [Column item 1 x Column item 2].

D31. INSURANCE RISK – RIDERS

Background

D31.1 For any other product riders not included in the following insurance risk charges: i) mortality; ii) morbidity and disability; iii) longevity; and iv) stop loss, a capital factor is applied to the respective net annual earned premiums.

Insurance Risk – Riders Capital Charge

D31.2 The insurance risk – riders charge calculation can be summarised by the following formula:

$C_{LTr} =$ 25% x net annual premium for insurance product riders not included elsewhere.

Items

Column Item		Description
1	Net Annual Premium	Column item 1: Net annual premium for other product riders, as reported on Schedule VII EBS, Column (11), Line 15.
2	Capital Factor	Column item 2: Supplied by the BMA; capital charge factors applied on net annual premiums for other products riders.
3	Required Capital	Column item 3: Calculated using [Column item 1 x Column item 2].

D32. INSURANCE RISK – MORBIDITY AND DISABILITY

Background

D32.1 Morbidity and disability risks are separated by critical illness insurance products and health insurance products.

D32.2 For critical illness insurance products, including accelerated critical illness insurance products, a prescribed capital factor is applied to the net amount at risk, on an additive basis. A 50% reduction in the capital risk factors is applied to adjustable products.

D32.3 Health insurance products include disability income products, Long-Term care insurance products, waiver of premium benefits, and other accidental and sickness products.

Insurance Risk – Morbidity and Disability Capital Charge

D32.4 The insurance risk – morbidity and disability charge calculation can be summarised by the following formula:

C_{LTmorb} = (a) + (b) + (c) + (d) + (e) where:

a. = 7% x BSCR adjusted reserves for disability income claims in payment on waiver of premium and long-term care;

b. = 10% x BSCR adjusted reserves for disability income claims in payment on other accident and sickness products;

c. $= \left[\sum_i \alpha_i \times NAP_i \right]$ Where –

α_i = individual NAP_i capital charge factor;

NAP_i = the Net Annual Premium for disability income business – active lives;

d. = 12% x net annual premiums for disability income - active lives for other accident and sickness; and

e. $= \left[\sum_i \alpha 1_i \times NAAR1_i \right] + \left[\sum_i \alpha 2_i \times NAAR2_i \right]$ Where –

$\alpha 1_i$ = capital charge factor for adjustable critical illness insurance business;

$NAAR1_i$ = the Net Amount at Risk of all adjustable critical illness insurance business in force;

$\alpha 2_i$ = capital charge factor for non-adjustable critical illness insurance business; and

$NAAR2_i$ = the Net Amount at Risk of all non-adjustable critical illness insurance business in force.

Items

a. Subtotal Charge for Critical Illness

Column Item		Description
1	Net Amount At Risk	Column item 1: Net amount at risk for adjustable products/treaties, as reported on Schedule VII EBS, Column (9), Line 2; and Net amount at risk for non-adjustable products/treaties, as reported on Schedule VII , Column (10), Line 2.
2	Capital Factor	Column item 2: Supplied by the BMA; capital charge factors applied to individual net amount at risk for (a) adjustable products/treaties; and (b) non-adjustable products/treaties.
3	Required Capital	Column item 3: Calculated using [Column item 1 x Column item 2] for both (a) and (b) and summed up.

b. Subtotal Charge for Disability Income (Active Lives with Premium Guarantee)

Column Item		Description
1	Net Annual Premium	Column item 1: Net annual premium with benefit period of less than or equal to two years listed according to length of premium guarantee, as reported on Schedule VII EBS, Column (9) (i) premium guarantee of less than one year – Line 7(a), (ii) premium guarantee of more than one year but less than five years – Line 7(b), and (iii) premium guarantee of over five years – Line 7(c); and Net annual premium with benefit period of greater than two years listed according to length of premium guarantee, as reported on Schedule VII EBS, Column (10) — (i) premium guarantee of less than one year – Line 7(a), (ii) premium guarantee of more than one year but less than five years – Line 7(b), and (iii) premium guarantee of over five years – Line 7(c).

	Column Item	Description
2	Capital Factor	Column item 2: Supplied by the BMA; capital charge factors applied to individual (a) net annual premiums with benefit period of less than or equal to two years according to the length of premium guarantee – (i) less than one year, (ii) more than a year but less than five years, and (iii) over five years; and (b) on net annual premiums with benefit period of greater than two years according to the length of premium guarantee – (i) less than one year, (ii) more than a year but less than five years, and (iii) over five years.
3	Required Capital	Column item 3: Calculated using [Column item 1 x Column item 2] for both (a) and (b) for each length of premium guarantee provided – (i), (ii) and (iii) – and summed up.

c. Subtotal Charge for Disability Income (Claims in Payment)

	Column Item	Description
1	BSCR Adjusted Reserve	Column item 1: (a) Disability income: claims in payment relating to waiver of premium and Long-Term care, as reported on Schedule VII EBS, Column (7), Line 9; and Disability income: claims in payment relating to other accident and sickness, as reported on Schedule VII EBS, Column (7), Line 10.
2	Capital Factor	Column item 2: Supplied by the BMA; capital charge factors applied to individual BSCR adjusted reserves with respect to disability income – claims in payment relating to (a) waiver of premium and long-term care, and (b) other accident and sickness.
3	Required Capital	Column item 3: Calculated using [Column item 1 x Column item 2] for both (a) and (b) and summed up.

d. Subtotal Charge for Disability Income (Active Lives for other accident and sickness products):

	Column Item	Description
1	Net Annual Premium	Column item 1: Net annual premium for disability income (active lives), including other accident and sickness; as reported on Schedule VII EBS, Column (11), Line 8.
2	Capital Factor	Column item 2: Supplied by the BMA; capital charge factor applied on the net annual premium for disability income – active lives.
3	Required Capital	Column item 3: Calculated using [Column item 1 x Column item 2].

e. Total Charge – Calculated using lines [(a) + (b) + (c) + (d)] above; the resulting figure is carried to the Summary section.

D33. INSURANCE RISK – LONGEVITY

Background

D33.1 Products that are considered to be exposed to longevity risks include, but not limited to, payout annuities and contingent annuities.

Insurance Risk – Longevity Capital Charge

D33.2 The insurance risk – longevity charge calculation can be summarised by the following formula:

$$\boxed{C_{LTlong} = \sum_i \alpha_i \times BAR_i}$$ Where –

α_i = individual BAR_i capital charge factor; and

BAR_i = the BSCR adjusted reserves for Long-Term products with longevity risk.

Items

Column Item		Description
1	BSCR Adjusted Reserves	Column item 1: BSCR adjusted reserves for Long-Term products with longevity risk as follows: (a) immediate pay-out annuities, contingent annuities, pension pay-outs according to the attained age of annuitant, as reported on Schedule VII EBS, Column (7): (i) 0-55 – Line 3(a) (ii) 56-65 – Line 3(b) (iii) 66-70 – Line 3(c) (iv) 71-80 – Line 3(d) and (v) 81+ – Line 3(e); and (b) deferred pay-out annuities, future contingent annuities, future pension pay-outs according to the age at which the annuity benefits commence, as reported on Schedule VII EBS, Column (7): (i) 0-55 – Line 4(a) (ii) 56-60 – Line 4(b) (iii) 61-65 – Line 4(c) (iv) 66-70 – Line 4(d) (v) 71-75 – Line 4(e) and (vi) 76+ – Line 4(f)
2	Capital Factor	Column item 2: Supplied by the BMA; capital charge factor applied to individual BSCR adjusted reserves for longevity risk for both (a) immediate pay-out annuities, contingent annuities, pension pay-outs – (i) to (v); and (b) deferred pay-out annuities, future contingent annuities, future pension pay-outs – (i) to (vi).
3	Required Capital	Column item 3: Calculated using [Column item 1 x Column item 2] for both (a) and (b) for each attained age of annuitant and for each age at which the annuity benefits commence, respectively, and summed up.

Instructions Affecting Longevity Risk

b. For joint and survivor annuities, the youngest age should be used.

D34. OTHER INSURANCE RISK

Background

D34.1 The other insurance risk captures other risks related to policyholder behaviour, expenses and guarantees.

Other Insurance Risk Capital Charge

D34.2 The other insurance risk charge calculation can be summarised by the following formula:

$$C_{LTmort} = \left[\sum_i \alpha 1_i \times NAAR1_i\right] + \left[\sum_i \alpha 2_i \times NAAR2_i\right]$$ Where:

α_i = individual BAR_i capital charge factor; and

BAR_i = the BSCR adjusted reserves for other insurance risk.

Items

Line Item		Description
1	BSCR Adjusted Reserves	Column item 1: Current year BSCR adjusted reserves by the fifteen predefined lines, as reported on Schedule VII EBS, Column (1), Lines 1 to 15.
2	Capital Factor	Column item 2 Supplied by the BMA; capital charge factors applied to individual BSCR adjusted reserves for other insurance risk.
3	Required Capital	Column item 3: Calculated using [Column item 1 x Column item 2] for each line item.

D35. VARIABLE ANNUITY GUARANTEE RISK

Background

D35.1 Variable annuity benefits are partitioned into five categories:

i) Guaranteed Minimum Accumulation Benefit (GMAB);

ii) Guaranteed Minimum Death Benefit (GMDB),

iii) Guaranteed Minimum Income Benefit (GMIB),

iv) Guaranteed Minimum Withdrawal Benefit (GMWB), and

v) Guaranteed Enhanced Earnings Benefit (GEEB). Variable annuities contain various minimum guarantees that expose insurance groups to risks of a particularly volatile nature.

D35.2 The capital risk factors differentiate by volatility levels and are applied to the net amount at risk ("NAR"). Volatility is defined as the annual historic volatility of the fund. In the case where there is no, or limited, history of the fund, use the volatility of the benchmark. Where the Guarantee Value (GV) is less than the Account Value (AV), the minimum floor factors are applied to the account values. The proportion used for the AV under reinsurance is the proportion used for net amount at risk.

D35.3 Net amount at risk (net of reinsurance) is defined as follows: GMAB – total claim payable if all contracts mature immediately; GMDB – total claim amount payable upon immediate death of all policyholders; GMIB – total claim payable upon full and immediate annuitisation of all policies using an 80% factor applied to the GV (the 80% represents the ratio between current market annuitisation factors and the guaranteed annuitisation factors); GMWB – total claim payable if 100% of the guaranteed withdrawal benefit base in excess of the current AV is withdrawn immediately; and GEEB – total guaranteed enhanced payments upon immediate death of all policyholders.

Variable Annuity Guarantee Capital Charge

D35.4 The variable annuity guarantee risk charge calculation can be summarised by the following formula:

C_{LTVA} = either $\left(\sum_i TotalBSReq_i - TotalBAR - TotalGMB_{adj}\right)$ or $(IMCReq_{LTVA})$

wherein —

i. $TotalBS\,\mathrm{Re}\,q_i$ = higher of (a) $(\alpha 1_i \times GV1_i + \alpha 2_i \times GV2_i + \alpha 3_i \times GV3_i)$ and (b) $(\alpha 4_i \times NAR1_i + \alpha 5_i \times NAR2_i + \alpha 6_i \times NAR3_i)$;

ii. $TotalBAR$ = the total BSCR adjusted reserves for variable annuity guarantee risk;

iii. $TotalGMDB_{adj}$ = capital requirement charged on Guaranteed Minimum Death Benefit (GMDB) policies multiplied by the percentage of GMDB with multiple guarantees;

iv. $IMC\,\mathrm{Re}\,q_{LTVA}$ = the capital requirement for variable annuity guarantee risk determined in accordance with an insurance group's internal capital model, if applicable;

v. $GV1_i$, $GV2_i$, $GV3_i$, $NAR1_i$, $NAR2_i$, and $NAR3_i$ are the guaranteed value and net amount at risk under each range of volatility for each specified variable annuity product risk; and

vi. $\alpha1_i$, $\alpha2_i$, $\alpha3_i$, $\alpha4_i$, $\alpha5_i$ and $\alpha6_i$ are the capital factors applied to the guaranteed value and net amount at risk under each range of volatility for each specified variable annuity product risk.

Items

c. Factor-Based Capital Requirement

Column Item		Description
1	Guaranteed Values: Volatility 0%-10%	Column (1): Guaranteed values for each type of variable annuity risk with volatility that is less than or equal to 10% according to policy position (i.e. in/out-of-the-money); as reported on Schedule VIII EBS, Column (2).
2	Capital Factor	Column (2): Capital factors supplied by the BMA for each type of variable annuity risk with volatility that is less than or equal to 10% according to policy position.
3	Guaranteed Values: Volatility 10%-15%	Column (3): Guaranteed values for each type of variable annuity risk with volatility that is more than 10% but less than 15% according to policy position; as reported on Schedule VIII EBS, Column (3).
4	Capital Factor	Column (4): Capital factors supplied by the BMA for each type of variable annuity risk with volatility that is more than 10% but less than 15% according to policy position.
5	Guaranteed Values: Volatility >15%	Column (5): Guaranteed values for each type of variable annuity risk with volatility that is more than 15% according to policy position; as reported on Schedule VIII EBS, Column (4).
6	Capital Factor	Column (6): Capital factors supplied by the BMA for each type of variable annuity risk with volatility that is more than 15% according to policy position.
7	Net Amount at Risk: Volatility 0%-10%	Column (7): Net amount at risk for each type of variable annuity risk with volatility that is less than or equal to 10% for in-the-money positions only; as reported on Schedule VIII EBS, Column (5).
8	Capital Factor	Column (8): Capital factors supplied by the BMA for each type of variable annuity risk with volatility that is less than or equal to 10% for in-the-money positions only.
9	Net Amount at Risk: Volatility 10%-15%	Column (9): Net amount at risk for each type of variable annuity risk with volatility that is more than 10% but less than 15% for in-the-money positions only; as reported on Schedule VIII EBS, Column (6).

Column Item		Description
10	Capital Factor	Column (10): Capital factors supplied by the BMA for each type of variable annuity risk with volatility that is more than 10% but less than 15% for in-the-money positions only.
11	Net Amount at Risk: Volatility >15%	Column (11): Net amount at risk for each type of variable annuity risk with volatility that is more than 15% for in-the-money positions only; as reported on Schedule VIIII EBS, Column (7).
12	Capital Factor	Column (12): Capital factors supplied by the BMA for each type of variable annuity risk with volatility that is more than 15% for in-the-money positions only.
13	Capital Requirements	Column (13): Calculated using the maximum of [{Column (1) x Column (2) + Column (3) x Column (4) + Column (5) x Column (6)} or {Column (7) x Column (8) + Column (9) x Column (10) + Column (11) x Column (12)}]; less percentage of guaranteed minimum death benefit with multiple guarantees, as reported on Schedule VIII EBS, Column (4), Line 32, applied to GMDB; less total BSCR adjusted reserves for variable annuities.

d. Internal Model-Based Capital Requirement

Column Item		Description
1	Without Hedging	Column (1): The total capital requirement for variable annuity risk based on internal model results without taking into account hedging; as reported on Schedule VIIIA EBS, Column (6), Line 1.
2	With Hedging	Column (2): The total capital requirement for variable annuity risk based on internal model results taking into account hedging; as reported on Schedule VIIIA EBS, Column (7), Line 1.

D36. CAPITAL ADJUSTMENT

Background

D36.1 The capital adjustment charge represents the capital requirements for the following:

a. Regulated non-insurance financial operating entities;

b. Unregulated entities where the parent exercises control;

c. Adjustment for loss absorbing capacity of technical provisions; and

d. Adjustment for absorbing capital of deferred taxes

which is added to the BSCR (after correlation adjustment) to arrive at the Group BSCR. The Group BSCR will be used to determine an insurance group's ECR for the relevant year, as reported in the Summary section of the BSCR model.

Capital adjustment

D36.2 The capital adjustment charge calculation can be summarised by the following formula:

C_{adj} = (1) + (2) where:

(1) = Regulatory capital requirement for regulated non-insurance financial operating entities; and

(2) = Capital requirement for unregulated entities where the parent company exercises control.

Items

D36.3 Regulatory capital requirement for regulated non-insurance financial operating entities – This capital adjustment charge shall be determined in accordance with Schedule XI(A), where this amount shall be equal to the sum of the group'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; and

D36.4 Capital requirement for unregulated entities where the parent company exercises control – This capital adjustment charge shall be determined in accordance with Schedule XI(B), where this amount shall be equal to the sum of the capital requirement based on the capital charges applied to each unregulated entity's net assets, as follows:

i. 0% to unregulated entities that conduct ancillary services to members of the group;
ii. 15% to unregulated non-financial operating entities; and
iii. 50% to unregulated financial operating entities.

Capital adjustment – Management Actions

D36.5 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—

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

$$\text{Basic nBSCR} = \sqrt{\sum_{i,j} CorrBBSCR_{i,j} \times nC_i \times nC_j}$$

$CorrBBSCR_{i,j}$ = the correlation factors of the Basic BSCR correlation matrix as determined by Table A in section D19;

C_i = risk module charge *i* which are replaced by the following:

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

C_{Market} = market risk module charge as determined by section D19.4;

$C_{\text{P\&C}}$ = P&C risk module charge as determined by section D19.5;

C_{LT} = Long-Term risk module charge as determined by section D19.6; and

C_{Credit} = credit risk module charge as determined by section D27.

nC_i = net risk module charge *i* which are 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 to with the criteria prescribed in section B6 and which are replaced by the following:

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

FDB = net present value of future bonuses and other discretionary benefits.

Capital adjustment – Deferred Taxes

D36.6 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 D19;

$C_{operational}$ = operational risk charge as determined by section D19.8;

$C_{regulatoryadj}$ = regulatory capital requirement for regulated non-insurance financial operating entities as determined by section D36.2;

Adj_{TP} = adjustment for the loss-absorbing capacity of technical provisions as determined by section D36.5;

t	=	insurance group's effective (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 – Means the Insurance Act 1978.

Accident and Health Insurance – Means an insurance that pays a benefit or benefits in the event of the insured incurring an insured injury, illness or infirmity.

Annuity or Annuities – Means an insurance that provides savings or income benefits during the lifetime of the insured or some limited period thereafter.

Approved Group Internal Capital Model – Means a model approved under paragraph 5 of the Rules.

Available Statutory Capital and Surplus – Available Statutory Capital and Surplus is defined as Total Statutory Capital and Surplus including subsequent Capital Contribution including "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 insurance group's CAT models; mean 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, and insurance companies. It also regulates the Bermuda Stock Exchange.

Group Bermuda Solvency Capital Requirement (Group BSCR) – Establishes a measure of solvency capital that is used by the BMA to monitor the capital adequacy of insurance groups domiciled in Bermuda. The Group 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 group-specific operational risk, group-specific catastrophe-related measures, group-related risks and capital add-on.

Group BSCR Ratio – The Group BSCR Ratio is the ratio of the Available Statutory Economic Capital and Surplus to the Group BSCR (after covariance adjustment).

Group Capital and Solvency Return – Means such return relating to the group's risk management practices and to the information used by the group to calculate its ECR as may be prescribed by or under Rules made under section 6A.

CAT – Abbreviation of the word catastrophe.

Catastrophe Risk – Means 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 – The concentration adjustment factor is 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 – Means 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 insurance group's inability to collect funds from debtors.

Critical Illness Insurance – Means a form of accident and health insurance that pays a benefit if the insured incurs a predefined major illness or injury.

Deferred Annuity – Means an insurance that provides benefits at a future date which may be fixed deferred annuities where specified amounts are payable or variable annuities where the benefits are dependent on the performance of an investment fund or funds.

Disability Income Insurance – Means an accident and health insurance that pays a benefit for a fixed period of time during disability.

Form 1 – Statutory balance sheet as defined by the BMA.

Form 2 – Statutory statement of income as defined by the BMA.

Form 8 – Statutory statement of capital and surplus as defined by the BMA.

Form 1EBS – Economic balance sheet as defined by the BMA.

Group Enhanced Capital Requirement (Group ECR) – Establishes a measure of solvency capital that is used by the BMA to monitor the capital adequacy of insurance groups domiciled in Bermuda. It is equal to the higher of an approved group internal capital model/Group BSCR or MSM.

Group ECR Ratio – The Group ECR Ratio is the ratio of Available Statutory Economic Capital and Surplus to the Group ECR.

Group Life, Health and Disability Insurance – Means insurance that is issued to insureds through a group arrangement such as through an employer or association.

Insurance (Group Supervision) Rules 2011(the Supervision Rules) – These Rules apply to insurance groups for which the BMA is the group supervisor.

Insurance (Prudential Standards) (Insurance Group Solvency Requirement) Rules 2011 (the 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 insurance groups for which the BMA is the group supervisor

Insurance Risk – Means the risk of fluctuations or deterioration in the experience factors affecting the cost of benefits payable to policyholders or impacting upon the amounts held to provide for policyholder obligations, including Long-Term business risks.

Legal Risk – Means the risk arising from (a) an insurance group's failure to comply with statutory or regulatory obligations; or (b) failure to comply with its bye-laws; or (c) failure to comply with any contractual agreement.

Life Insurance – Including term insurance, whole-life insurance and universal-life insurance; means insurance of risks on the mortality (risk of death) of the life insured.

Liquidity Risk – Means (a) the risk arising from an insurance group's inability to meet its obligations as they fall due or (b) an insurance group's inability to meet such obligations except at excessive costs.

Longevity Risk – Means the risk of fluctuations or improvements in mortality that causes benefits or payout annuities to be paid for longer than expected.

Market Risk – Means the risk arising from fluctuations in values of, or income from, assets or in interest rates or exchange rates.

Morbidity Risk – Means the risk of fluctuations or deteriorations of morbidity experience causing increased claims on accident and health insurance coverage.

Mortality Risk – Means the risk of fluctuations or deteriorations of mortality experience causing increased claims on life insurance coverage.

Non-Proportional Insurance – Means 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 – Means the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events including legal risk.

Quoted – Assets that are carried at fair value quoted on an exchange or a determinable market.

PML – See Probable Maximum Loss definition.

Premium Risk – Means the risk that premium is insufficient to meet future obligations.

<u>Probable Maximum Loss ("PML")</u> – Based on insurance group's CAT models; probable maximum loss is the anticipated maximum loss that can occur with a certain level of probability. The BSCR utilizes 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.

<u>Rated Bonds</u> – Bonds rated with respect to the latest available AM Best, Standard & Poor's, Moody's, Fitch or equivalent agencies.

<u>Regulatory Action Level</u> – Defined by BMA's regulatory action guidelines.

<u>Relevant Year</u> – In relation to an insurance group, this means its financial year.

<u>Reputational Risk</u> – Includes risk of adverse publicity regarding an insurance group's business practices and associations.

<u>Required Capital and Surplus</u> – see Enhanced Capital Requirement.

<u>Retrocessional Contracts</u> – Reinsurance contract whereby one reinsurer transfers all or part of the reinsurance risk that it has assumed or will assume to another reinsurer.

<u>Schedule II</u> – Schedule of Fixed Income and Equity Investments By BSCR Rating as defined by the BMA.

<u>Schedule IIA</u> – Schedule of Funds Held by Ceding Reinsurers In Segregated Accounts/Trusts by BSCR Rating as defined by the BMA.

<u>Schedule III</u> – Schedule of loss and loss expense provisions by line of business as defined by the BMA.

<u>Schedule IV</u> – Schedule of premium written by line of business as defined by the BMA.

<u>Schedule IV(B)</u> – Schedule of Long-Term Business Premiums as defined by the BMA.

<u>Schedule V</u> – Schedule of Risk Management as defined by the BMA.

<u>Schedule VI</u> – Schedule of Fixed Income Securities as defined by the BMA.

<u>Schedule VII</u> – Schedule of Long-Term Insurance Data as defined by the BMA.

<u>Schedule VIII</u> – Schedule of Long-Term Variable Annuity as defined by the BMA.

<u>Schedule VIIIA</u> – Schedule of Long-Term Variable Annuity – Internal Capital Model as defined by the BMA.

<u>Schedule IX</u> – Schedule of Group's Solvency Self-Assessment as defined by the BMA.

<u>Schedule X</u> – Catastrophe risk return as defined by the BMA.

<u>Schedule XIA</u> – Schedule of regulated non-insurance financial operating entities as defined by the BMA.

<u>Schedule XIB</u> – Schedule of unregulated entities where the parent exercises control as defined by the BMA.

Schedule XIC – Schedule of unregulated entities where the parent exercises significant influence as defined by the BMA.

Schedule XID – Schedule of entities' capital deducted from the available statutory capital and surplus as defined by the BMA.

Schedule XII – Schedule of group minimum margin of solvency as defined by the BMA.

Schedule XIII – Schedule of group eligible capital as defined by the BMA.

Square Root Rule – The square root rule is an approximation of the covariance effect of the risk categories.

Strategic Risk – Means the risk of an insurance group's inability to implement appropriate business plans and strategies, make decisions, allocate resources, or adapt to changes in the business environment.

Stop Loss Insurance Risk – Is a form of non-proportional risk that provides benefits if total claims experience exceed a predefined level.

Supervision Rules – See Insurance (Group Supervision) Rules 2011.

Tail Value-at-Risk ("TVaR") – Means the conditional average potential given that the loss outcome exceeds a given threshold.