



BERMUDA

INSURANCE (PRUDENTIAL STANDARDS) (CLASS E SOLVENCY
REQUIREMENT) RULES 2011

BR 72 / 2011

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SCHEDULES

The Bermuda Monetary Authority, in exercise of the powers conferred by section 6A of the Insurance Act 1978, makes the following Rules—

Citation

1 These Rules may be cited as the Insurance (Prudential Standards) (Class E Solvency Requirement) Rules 2011.

Interpretation

2 In these Rules—

“Act” means the Insurance Act 1978;

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- “accident and health insurance” means an insurance that pays a benefit or benefits in the event of the person insured incurring an insured injury, illness or infirmity;
- “annuity” means insurance that provides savings or income benefits during the lifetime of the person insured or some limited period thereafter;
- “approved internal capital model” means an internal capital model approved under paragraph 5;
- “available statutory capital and surplus” has the meaning given in section 1(1) of the Act;
- “business continuity risk” includes a risk of an event that threatens or disrupts an insurer’s continuous operations;
- “business processes risk” includes a risk of errors arising from data entry, data processing, or application design;
- “Class E BSCR model” means the Bermuda Solvency Capital Requirement model established in accordance with paragraph 4 and Schedule I which is applicable to all Class E insurers;
- “compliance risk” includes a risk of legal or regulatory breaches or both;
- “credit risk” includes the risk of loss arising from an insurer’s inability to collect funds from debtors;
- “critical illness insurance” means a form of accident and health insurance that pays a benefit if the person insured incurs a predefined major illness or injury;
- “disability income insurance” means a form of accident and health insurance that pays a benefit for a fixed period of time during disability;
- “distribution channel risk” includes a risk of disruption to an insurer’s distribution channel arising from employment of inexperienced or incapable brokers or agents;
- “ECR” means the enhanced capital requirement as defined in section 1(1) of the Act;
- “encumbered assets” means assets held for security or as collateral against a liability or contingent liability of the insurer or other person or any other use restriction, excluding encumbered assets for policyholder obligations of the insurer;
- “encumbered assets for policyholder obligations” means the total assets held for security or as collateral or otherwise restricted to meet the liabilities to the policyholders of the insurer in the event of a loss;
- “Form 4” means Form 4 set out in Schedule I of the Insurance Accounts Regulations 1980;

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“fraud risk” includes a risk of misappropriation of assets, information theft, forgery or fraudulent claims;

“group life, health and disability insurance” means insurance that is issued to insureds through a group arrangement such as through an employer or association;

“group risk” means any risk of any kind, arising from membership of a group;

“human resources (or “HR”) risk” includes a risk of employment of unethical staff, inexperienced or incapable staff, failure to train or retain experienced staff, and failure to adequately communicate with staff;

“information technology (or “IT”) risk” includes a risk of unauthorized access to systems and data, data loss, utility disruptions, software and hardware failures, and inability to access information systems;

“insurance rate risk” means the risk of fluctuations or deterioration in the experience affecting the cost of benefits payable to policyholders or impacting upon the amounts held to provide for policyholder obligations;

“interest risk” means the risk that relates to asset values being adversely affected by changes in current interest rates;

“legal risk” means the risk arising from an insurer’s failure to—

- (a) comply with statutory or regulatory obligations;
- (b) comply with its bye-laws; or
- (c) comply with any contractual agreement;

“life insurance” means insurance of risks on the mortality (risk of death) of the life insured; and term insurance, whole life insurance, and universal life insurance are construed accordingly;

“liquidity risk” means—

- (a) the risk that may arise when the realizable value of assets may be insufficient to meet an insurer’s obligations to policyholders at a point in time; or
- (b) an insurer’s inability to meet such obligations except at excessive cost;

“longevity risk” means the risk of fluctuations or improvements in mortality that cause benefits 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 deterioration of morbidity experience causing increased claims on accident and health insurance coverages;

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- “mortality risk” means the risk of fluctuations or deterioration of mortality experience causing increased claims on life insurance coverages;
- “operational risk” means the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events, including legal risk;
- “outsourcing risk” includes a risk of miscommunication of responsibilities in relation to outsourcing, breach of outsource service agreements, or entering into inappropriate outsource service agreements;
- “relevant year” in relation to an insurer, means its financial year;
- “reputational risk” includes risk of adverse publicity regarding an insurer’s business practices and associations;
- “stop loss insurance risk” means 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;
- “strategic risk” means the risk of an insurer’s inability to implement appropriate business plans and strategies, make decisions, allocate resources, or adapt to changes in the business environment;
- “Tail Value-at-Risk (or “TVaR”)” means the conditional average potential given that the loss outcome exceeds a given threshold;
- “variable annuity guarantees” means insurance that provides a minimum investment performance guarantee on variable annuities.

ECR

3 (1) An insurer’s ECR shall be calculated at the end of its relevant year by reference to the following—

- (a) the Class E BSCR model; or
- (b) an approved internal capital model,

provided that the ECR shall at all times be an amount equal to, or exceeding, the minimum margin of solvency (as provided in section 6 of the Act).

(2) The ECR applicable to an insurer shall be—

- (a) the ECR as calculated at the end of its most recent relevant year; or
- (b) the ECR calculated after an adjustment has been made by the Authority under section 6D of the Act and has not been otherwise suspended under section 44A(4) of the Act,

whichever is later.

(3) Every insurer shall maintain available statutory capital and surplus to an amount that is equal to or exceeds the value of the ECR.

(4) Available statutory capital and surplus is determined by calculating the total statutory capital and surplus reported on Form 4, Line 40 and—

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- (a) adding 50% of the amount of the Total Bermuda Statutory Reserves reported on Schedule VII, column (1);
 - (b) less 50% of the amount of the Total Reported Deferred Acquisition Costs reported on Schedule VII, column (2);
 - (c) less 50% of the amount of the Total Best Estimate Reserves with a minimum amount of zero reported on Schedule VII, column (4).
- (5) Notwithstanding subparagraph (4), the ECR shall be phased in over a period of three years as follows—
- (a) the applicable ECR for the financial year ending 2011 shall be 50% of the amount determined by Schedule I or an approved internal capital model;
 - (b) the applicable ECR for the financial year ending 2012 shall be 75% of the amount determined by Schedule I or an approved internal capital model; and
 - (c) the applicable ECR for the financial year ending 2013 and beyond shall be the full amount determined by Schedule I or an approved internal capital model.

BSCR model

4 The Class E BSCR model, set out in Schedule I, has effect.

Approved internal capital model

5 (1) An insurer may apply to the Authority for approval of an internal capital model to be used in substitution of the Class E BSCR model.

(2) Where the Authority is satisfied, having regard to subparagraph (3) that it is appropriate to do so, it may approve the internal capital model and may make its approval subject to conditions.

(3) In considering an application for approval of an internal capital model the Authority shall have regard to the following matters—

- (a) the appropriateness of the internal capital model for the determination of the insurer's capital requirement;
 - (b) the extent to which the internal capital model has been integrated into the insurer's risk management program; and
 - (c) the appropriateness of controls applicable to the creation and maintenance of the insurer's internal capital model.
- (4) The Authority shall serve notice on an insurer of the following matters—
- (a) its decision to approve the internal capital model; or
 - (b) its decision to not approve the internal capital model and the reason for its decision.

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(5) An insurer served with a notice under subparagraph (4)(b) may, within a period of 28 days from the date of the notice, make written representations to the Authority; and where such representations have been made, the Authority shall take them into account in deciding whether to confirm its decision not to approve the insurer's internal capital model.

(6) The Authority may revoke the approval given under subparagraph (2) if satisfied that the insurer has breached a condition of the approval, or where the approved internal capital model is deemed by the Authority no longer appropriate for the determination of the ECR.

(7) The Authority shall serve notice on the insurer of its proposal to revoke its approval of the insurer's internal capital model and the reason for its proposal.

(8) An insurer served with a notice under subparagraph (7) may, within a period of 28 days from the date of the notice, make written representations to the Authority; and where such representations have been made, the Authority shall take them into account in deciding whether to revoke its approval.

Capital and solvency return

6 (1) Schedules II, IV(A), V, VI, VII, VIII, IX and XII have effect.

(2) Every insurer shall make a capital and solvency return to the Authority in accordance with Schedules I, II, IV(A), V, VI, VII, VIII, IX and XII.

(3) A capital and solvency return shall comprise the following—

- (a) both an electronic version and a printed version of the Class E BSCR model;
- (b) printed versions of the returns prescribed in Schedules II, IV(A), V, VI, VII, VIII, IX and XII; and
- (c) where applicable, a printed copy of an approved internal capital model.

(4) An insurer shall, on or before its filing date, furnish the Authority with its capital and solvency return.

(5) An insurer shall keep a copy of its capital and solvency return at its principal office for a period of five years, beginning with its filing date, and shall produce it to the Authority if so directed by the Authority on or before a date specified in the direction.

(6) In this paragraph, "filing date" has the meaning given in section 17(4) of the Act.

Declaration of capital and solvency returns

7 Every capital and solvency return made by an insurer under paragraph 6 shall be accompanied with a declaration signed by two directors of the insurer and by the insurer's principal representative declaring that to the best of their knowledge and belief, the return fairly represents the financial condition of the insurer in all material respects.

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Offences

8 Every person who knowingly or recklessly makes a false or misleading statement or return is guilty of an offence and is liable on summary conviction to a fine up to \$50,000.

Commencement

9 These Rules come into operation on 31 December 2011.

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SCHEDULES

*The Schedules to these Rules have been omitted.
They are available for inspection at the offices of the Bermuda Monetary Authority
or on the website www.bma.bm*

Made this 23rd day of December 2011

Chairman
The Bermuda Monetary Authority

SCHEDULE I

(Paragraph 4)

Bermuda Solvency Capital Requirement (Class E BSCR)

1. The Class E BSCR shall be established in accordance with the following formula-

$$BSCR = \sqrt{C_{fi}^2 + C_{eq}^2 + C_{LTcred}^2 + C_{LTint}^2 + (C_{LTmort} + C_{LTsl} + C_{LTTr})^2 + C_{LTmorb}^2 + C_{LTlong}^2 + C_{LTVA}^2 + C_{LToth}^2} + C_{op}$$

where-

C_{fi} = fixed income investment risk capital as calculated in accordance with paragraph 2;

C_{eq} = equity investment risk capital as calculated in accordance with paragraph 3;

C_{cred} = credit risk capital as calculated in accordance with paragraph 4;

C_{LTint} = long-term interest and liquidity risk capital as calculated in accordance with paragraph 5;

C_{LTmort} = long-term insurance risk - mortality capital as calculated in accordance with paragraph 6;

C_{LTsl} = long-term insurance risk - stop loss capital as calculated in accordance with paragraph 7;

C_{LTTr} = long-term insurance risk - riders capital as calculated in accordance with paragraph 8;

C_{LTmorb} = long-term insurance risk - morbidity and disability capital as calculated in accordance with paragraph 9;

C_{LTlong} = long-term insurance risk - longevity capital as calculated in accordance with paragraph 10;

C_{LTVA} = long-term variable annuity guarantee risk capital as calculated in accordance with paragraph 11;

C_{LToth} = long-term other insurance risk capital as calculated in accordance with paragraph 12;

C_{op} = operational risk capital as calculated in accordance with paragraph 13.

2. The fixed income investment risk capital calculation shall be determined in accordance with the following formula-

$$C_{fi} = \sum_i \chi_i \times FI_{astclass}_i, \text{ where-}$$

χ_i = the capital factors prescribed in Table 1 for each type of $FI_{astclass}_i$; and

$FI_{astclass}_i$ = value of investment in corresponding asset Class i .

Table 1 – Capital capital factors for $FI_{astclass}_i$

Type of fixed income investments <i>FI_{astclass}_i</i>	Statement Source	Capital Factor χ_i
Government bonds	Schedule II, Line (1)	0.3%
High investment grade bonds (AAA & AA)	Schedule II, Line (2)	0.8%
Medium investment grade bonds (A)	Schedule II, Line (3)	3.2%
Low investment grade bonds (BBB)	Schedule II, Line (4)	5.0%

Non-investment grade bonds	Schedule II, Line (5)	26.3%
Mortgage-backed securities	Schedule II, Line (6)	10.0%
Mutual funds	Schedule II, Line (7)	15.0%
Non-rated bonds	Schedule II, Line (8)	50.0%
Mortgage loans	Form 4, Line (5c)	5.0%
Other loans	Form 4, Line (8)	5.0%
Cash and time deposits	Form 4, Line (1)	0.3%

- (a) all assets comprising 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.

3. The equity investment risk capital calculation shall be established in accordance with the following formula-

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

χ_i = the capital factors prescribed in Table 2 for each type of $Eqastclass_i$; and

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

Table 2 – Capital factors for $Eqastclass_i$

Type of equity investments	Statement Source	Capital Factor
$Eqastclass_i$		χ_i
Non-affiliated (quoted) common stocks	Form 4, Line (2c)(i)	14.4%
Non-affiliated (unquoted) common stocks	Form 4, Line (3c)(i)	14.4%
Mutual funds included in common stocks portfolio	Form 4, Lines (2c)(iii) and (3c)(iii)	14.4%
Non-affiliated (quoted) preferred stocks	Form 4, Line (2c)(ii)	14.4%
Non-affiliated (unquoted) preferred stocks	Form 4, Line (3c)(ii)	14.4%
Insurer-occupied real estate less: encumbrances	Form 4, Line (7a)	10.0%
Real estate investments less: encumbrances	Form 4, Line (7b)	20.0%
Other equity investments	Form 4, Lines (2e) & (3e)	20.0%

Other tangible assets	Form 4, Lines (13f) & (14d)	20.0%
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- (a) all assets comprising of common stocks, preferred stocks, 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 stocks shall be included in the equity investment risk charge; and
- (c) all common and preferred stocks, real estate, and other miscellaneous investments shall be reported on a basis consistent with that used for purposes of statutory financial reporting.

4. The credit risk capital calculation shall be established in accordance with the following formula-

$$C_{cred} = \sum_i \delta_i \times creditor_i, \quad \text{where-}$$

δ_i = the credit risk capital factor for type of $creditor_i$ as prescribed in Table 11; and

$creditor_i$ = receivable amount from creditor i .

Table 11 – Capital factors for $creditor_i$

Type of creditor	Statement Source	Capital Factor
$creditor_i$		δ_i
Accounts and Premiums Receivable		

In course of collection	Form 4, Line (10a)	5.0%
Deferred – not yet due	Form 4, Line (10b)	5.0%
Receivables from retrocessional contracts less: collateralized balances	Form 4, Line (10c) Refer to definition in (c) below	10.0%
<i>Reinsurance Balances Receivable</i>		
Foreign affiliates	Form 4, Line (11a)	10.0%
Domestic affiliates	Form 4, Line (11b)	0.0%
Pools & associations	Form 4, Line (11c)	10.0%
All other insurers	Form 4, Line (11d)	9.4%
Less: letters of credit	Refer to definition in (d) below	9.0%
Less: funds held by company	Form 4, Line (34c)	9.7%
<i>All Other Receivables</i>		
Funds held by ceding insurers – rated AAA or AA	Schedule V, Line (g)(i)	0.8%
Funds held by ceding insurers – rated A	Schedule V, Line (g)(ii)	3.2%
Funds held by ceding insurers – below B rating	Schedule V, Line (g)(iii)	5.0%

Accrued investment income	Form 4, Line (9)	2.5%
Investments in and advances to affiliates	Form 4, Line (4c)	5.0%
<i>Reinsurance Recoverable Balance</i>		
Foreign affiliates	Form 4, Line (27b)(i)	10.0%
Domestic affiliates	Form 4, Line (27b)(ii)	0.0%
Pools and associations	Form 4, Line (27b)(iii)	10.0%
All other insurers	Form 4, Line (27b)(iv)	9.4%

- (a) all accounts and premiums receivable, reinsurance balances receivable, all other receivables, and reinsurance recoverable balances 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) collateralized balances are all collaterals issued in favour of the insurer relating to accounts and premiums receivable;
- (d) assets accounted in Form 4, Line (34c) shall not be included in (c);

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- (e) letters of credit are the amount of the letters of credit issued in favour of the insurer relating to reinsurance receivable; and
 - (f) assets accounted for in Form 4, Line (14d) shall not be included in (e).
 - (g) Funds held by ceding insurers are to be based upon the rating of the underlying assets.

5. The long-term interest rate and liquidity risk capital calculation shall be established in accordance with the following formula-

$$C_{LT\text{int}} = (\textit{duration1} \times \textit{rateshock} \times \textit{reserveshare} \times \textit{assets} \times (100\% - \textit{ALMCredit})) + (\textit{duration2} \times \textit{rateshock} \times (1 - \textit{reserveshare}) \times \textit{assets})$$

where-

duration1 applies for business where the duration of assets and liabilities is known. *duration1* = the higher of

- (a) 1; or
- (b) the insurer's effective asset duration less the insurer's effective liability duration; or
- (c) the insurer's effective liability duration less the insurer's effective asset duration;

The statement source for *duration1* is Schedule VII, line 14, column 1.

duration2 applies for business where the duration of assets and liabilities is not known. *duration2* is equal to 2.

rateshock = assumed interest rate adjustment prescribed in Table 3.

assets = quoted and unquoted value of bonds and debentures, preferred stocks, or mortgage loans;

Table 3 – Interest rate adjustment for *assets*

Type of investments	Statement Source	200 basis point interest rate increase
<i>assets</i>		<i>rateshock</i>
Bonds and debentures	Form 4, Lines (2b) and (3b)	2.0%
Preferred stocks	Form 4, Lines (2c)(ii) and (3c)(ii)	2.0%
Mortgage loans	Form 4, Line (5c)	2.0%

- (a) all assets comprising bonds and debentures, preferred stocks, 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 bonds and debentures and preferred stocks shall be included in the interest rate/liquidity risk charge; and
- (c) all bonds and debentures, preferred stocks, and mortgage loans investments shall be reported on a basis consistent with that used for purposes of statutory financial reporting.

reserveshare is the amount of reserves with known mismatch duration divided by the total reserves. The statement source for *reserveshare* is Schedule VII, line 16, column 1.

ALMCredit = the total factor determined in accordance with Table 4.

Table 4 - Asset Liability Management Credit

Criterion	Implemented	Score for yes answers
Has the insurer implemented policies on Asset Liability Management, including tolerances for deviation?	If yes, the answers to remaining questions are used, If no, the ALM Credit is zero	
Have clear roles and responsibilities for the execution of the Asset Liability Management program been assigned?		10%
Are Asset Liability management positions / tolerances communicated to the investment function, senior management and the board on a timely basis?		10%
Have systems and procedures been established to identify, report and promptly address asset liability management deficiencies?		10%
Are the Asset Liability Management policies and		10%

procedures reviewed and reapproved or revised at least annually?		
Is the insurer's current Asset Liability Management position in compliance with the insurer's policies?		10%
Total		XX%

6. The long-term insurance risk - mortality capital calculation shall be established in accordance with the following formula-

$$C_{LTmort} = \left[\sum_{i>1} \alpha 1_i \times NAAR1_i \right] + \left[\sum_{i>1} \alpha 2_i \times NAAR2_i \right]$$

where-

$\alpha 1_i$ = capital factor for adjustable life insurance business as prescribed in Table 5;

$NAAR1_i$ = the Net Amount at Risk of all adjustable life insurance business. The statement source is Schedule VII line 1, column 5.

$\alpha 2_i$ = capital factor for non-adjustable business as prescribed in Table 5;

$NAAR2_i$ = the Net Amount at Risk of all non-adjustable life insurance business. The statement source is Schedule VII, line 1 column 6.

Table 5 - Capital factors for long-term insurance risk - mortality

Net Amount at Risk	Capital Factor	Capital Factor
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NAAR1 or NAAR2	$\alpha 1_i$	$\alpha 2_i$
First \$1 billion	0.00199	0.00397
Next \$4 billion	0.00090	0.00180
Next \$5 billion	0.00072	0.00144
Next \$40 billion	0.00065	0.00129
Excess over \$50 billion	0.00057	0.00113

7. The long-term insurance risk – stop loss capital calculation shall be established in accordance with the following formula-

$$C_{LTSI} = 50\% \times \text{Net Annual Premium for stop loss insurance risks}$$

The statement source for Net Annual Premium for stop loss risks is Schedule VII, line 12, column 7.

8. The long-term insurance risk – riders capital calculation shall be established in accordance with the following formula-

$$C_{LTR} = 25\% \times \text{Net Annual Premium for insurance product riders not included elsewhere}$$

The statement source for Net Annual Premium for insurance riders not included elsewhere is Schedule VII, line 13, column 7.

9. The long-term insurance risk - morbidity and disability capital calculation shall be established in accordance with the following formula-

$C_{LTmorb} =$ (a) 7.00% x reserves for disability income claims in payment on waiver of premium and long-term care. The statement source for reserves for disability income claims in payment on waiver of premium and long-term care is Schedule VII line 7, column 1.

plus

(b) 10% x reserves for disability income claims in payment on other accident and sickness products. The statement source for reserves for disability income claims on other accident and sickness products is Schedule VII, line 8, column 1.

plus

(c) $\left[\sum_{i>1} \alpha_i \times NAP_i \right]$

where-

α_i = capital factor as prescribed in Table 6;

NAP_i = the Net Annual Premium for disability income business –active lives as described in Table 6.

Table 6 - Capital factors for NAP_i

<p>Net Annual Premium</p> <p>NAP_i</p>	<p>Statement Source</p>	<p>Capital Factor</p> <p>α_i</p>
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Benefit period less than or equal to two years, premium guarantee less than or equal to 1 year	Schedule VII, line 5 (a), column 5	9.00%
Benefit period less than or equal to two years, premium guarantee of more than 1 year but less than or equal to 5 years	Schedule VII, line 5 (b), column 5	15.00%
Benefit period less than or equal to two years, premium guarantee of more than 5 years	Schedule VII, line 5 (c), column 5	22.50%
Benefit period greater than two years, premium guarantee less than or equal to 1 year	Schedule VII, line 5 (a), column 6	12.00%
Benefit period greater than two years, premium guarantee of more than 1 year but less than or equal to 5 years	Schedule VII, line 5 (b), column 6	20.00%
Benefit period greater than two years, premium guarantee of more than 5 years	Schedule VII, line 5 (c), column 6	30.00%

plus

(d) 12% x net annual premiums for disability income active lives - other accident and sickness products. The statement source for disability income active lives – other accident and sickness is Schedule VII line 6, column 7

plus

$$(e) \left[\sum_{i>1} \alpha 1_i \times NAAR1_i \right] + \left[\sum_{i>1} \alpha 2_i \times NAAR2_i \right]$$

where-

$\alpha 1_i$ = capital factor as prescribed in Table 7;

$NAAR1_i$ = Net Amount at Risk of all adjustable critical illness insurance business in force. The statement source is Schedule VII line 2, column 5.

$\alpha 2_i$ = capital factor as prescribed in Table 7;

$NAAR2_i$ = the Net Amount at Risk of all non-adjustable critical illness insurance business in force. The statement source is Schedule VII line 2, column 6.

Table 7 - Capital factors for NAAR1 or NAAR2

Net Amount at Risk	Capital Factor	Capital Factor
<i>NAAR1 or NAAR2</i>	$\alpha 1_i$	$\alpha 2_i$
First \$1 billion	0.00596	0.01191
Next \$4 billion	0.00270	0.00540
Next \$5 billion	0.00216	0.00432
Next \$40 billion	0.00194	0.00387
Excess over \$50 billion	0.00170	0.00339

10. The long-term insurance risk – longevity capital calculation shall be established in accordance with the following formula-

$C_{Llong} = 6\% \times$ Net reserves for longevity risk. The statement source for the net reserve for longevity risk is Schedule VII, line 3, column 1.

11. The long-term variable annuity guarantee risk capital calculation shall be established in accordance with the following formula

$$C_{LTVA} = \sum_{i>1} (TotalBS Re q_i - Re s_i)$$

Where (i) $TotalBS Re q_i =$ larger of (a) $\alpha 3_i \times AV1_i + \alpha 4_i \times AV2_i$

and (b) $WF_i \times NAR_i$

(ii) $WF_i = (\alpha 1_i \times AV1_i + \alpha 2_i \times AV2_i) / (AV1_i + AV2_i)$

(iii) $Re s_i, AV1_i, AV2_i, NAR_i$ have the statement source identified in Table 8.

Table 8 Statement Source for $Re s_i, AV1_i, AV2_i$ and NAR_i

Variable Annuity Benefit Type	Statement Source $Re s_i$	Statement Source $AV1_i$	Statement Source $AV2_i$	Statement Source NAR_i
Guaranteed Minimum Accumulation Benefit with less than 5 years to maturity	Schedule VIII, line 1, column (1)	Schedule VIIIIV, line 1, column (2)	Schedule VIII, line 1, column (3)	Schedule VIII, line 1, column (4)
Guaranteed Minimum Accumulation Benefit with 5 years or more to maturity	Schedule VIII, line 2, column (1)	Schedule VIII, line 2, column (2)	Schedule VIII, line 2, column (3)	Schedule VIII, line 2, column (4)

Guaranteed Minimum Death Benefit with Return of Premium, Ratchets or Resets	Schedule VIII, line 3, column (1)	Schedule VIII, line 3, column (2)	Schedule VIII, line 3, column (3)	Schedule VIII, line 3, column (4)
Guaranteed Minimum Death Benefit with Enhanced Benefits (Roll Up)	Schedule VIII, line 4, column (1)	Schedule VIII, line 4, column (2)	Schedule VIII, line 4, column (3)	Schedule VIII, line 4, column (4)
Guaranteed Minimum Income Benefit with less than 5 years to maturity	Schedule VIII, line 5, column (1)	Schedule VIII, line 5, column (2)	Schedule VIII, line 5, column (3)	Schedule VIII, line 5, column (4)
Guaranteed Minimum Income Benefit with 5 years or more to maturity	Schedule VIII, line 6, column (1)	Schedule VIII, line 6, column (2)	Schedule VIII, line 6, column (3)	Schedule VIII, line 6, column (4)
Guaranteed Minimum Withdrawal Benefit	Schedule VIII, line 7, column (1)	Schedule VIII, line 7, column (2)	Schedule VIII, line 7, column (3)	Schedule VIII, line 7, column (4)
Guaranteed Enhanced Earnings Benefit	Schedule VIII, line 8, column (1)	Schedule VIII, line 8, column (2)	Schedule VIII, line 8, column (3)	Schedule VIII, line 8, column (4)

(iv) $\alpha 1_i, \alpha 2_i, \alpha 3_i$ and $\alpha 4_i$ are the capital factors as prescribed in Table 9;

Table 9 Capital Factors for $\alpha 1_i, \alpha 2_i, \alpha 3_i$ and $\alpha 4_i$

Variable Annuity Benefit Type	Weighting Factor	Weighting Factor	Capital Charge	Capital Charge
	$\alpha 1_i$	$\alpha 2_i$	$\alpha 3_i$	$\alpha 4_i$

Guaranteed Minimum Accumulation Benefit with less than 5 years to maturity	65.00%	125.00%	4.00%	7.00%
Guaranteed Minimum Accumulation Benefit with 5 years or more to maturity	20.00%	70.00%	1.50%	4.00%
Guaranteed Minimum Death Benefit with Return of Premium, Ratchets or Resets	4.00%	13.00%	0.25%	0.75%
Guaranteed Minimum Death Benefit with Enhanced Benefits (Roll Up)	12.00%	21.00%	0.75%	1.25%
Guaranteed Minimum Income Benefit	100.00%	160.00%	5.00%	8.00%
Guaranteed Minimum Withdrawal Benefit	60.00%	90.00%	3.25%	5.00%
Guaranteed Enhanced Earnings Benefit	1.00%	17.00%	0.00%	1.00%

12. The long-term other insurance risk capital calculation shall be established in accordance with the following formula-

$$C_{LToth} = \sum_{i>1} \alpha_i \times Net\ Res_i$$

where-

α_i = capital factor as prescribed in Table 8;

$Net\ Re\ s_i$ = the net reserve as described in Table 10.

Table 10 - Capital factors for $Net\ Re\ s_i$

Net Reserves <i>Net Re s_i</i>	Statement Source	Capital Factor α_i
Mortality (term insurance, whole life, universal life)	Schedule VII, column 1, line 1	2.00%
Critical illness (including accelerated CI products)	Schedule VII, column 1, line 2	2.00%
Longevity (payout annuities, contingent annuities, pension blocks)	Schedule VII, column 1, line 3	0.50%
Deferred annuities (including indexed linked products with no guarantees)	Schedule VII, column 1, line 4	0.50%
Disability Income: active lives – including waiver of premium and Long Term Care	Schedule VII, column 1, line 5	2.00%
Disability Income: active lives – other accident and health	Schedule VII, column 1, line 6	2.00%
Disability Income: claims in payment – including	Schedule VII, column 1, line	0.50%

waiver of premium and Long Term Care	7	
Disability Income: claims in payment – other accident and sickness	Schedule VII, column 1, line 8	0.50%
Group Life	Schedule VII, column 1, line 9	0.50%
Group Disability	Schedule VII, column 1, line 10	0.50%
Group Disability	Schedule VII, column 1, line 11	0.50%
Stop Loss	Schedule VII, column 1, line 12	2.00%
All other products (excluding Variable Annuity Guarantees)	Schedule VII, column 1, line 13	2.00%

13. The operational risk capital calculation shall be established in accordance with the following formula:

$$C_{op} = \rho * ACov , \text{ where-}$$

ρ = an amount between 1% and 10% as determined by the Authority in accordance with Table 12; and

$ACov$ = BSCR After Covariance amount or an amount approved by the Authority.

Table 12

Operational Risk Capital Factor

Overall Score	Applicable Operational Risk Charge <i>ρ</i>
<=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%

INSTRUCTIONS AFFECTING TABLE 12

In this table, “overall score” means an amount equal to the sum of the aggregate score derived from each of tables 12A, 12B, 12C, 12D, 12E, and 12F.

Table 12A
Corporate Governance Score Table

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

INSTRUCTIONS AFFECTING TABLE 12A

The total score is derived by adding the score for each criterion of an insurer’s corporate governance structure that the insurer has implemented.

Table 12B
Risk Management Function (‘RMF’) Score Table

Criterion	Implemented	Score
RMF is independent of other operational units and has direct access to the Board of Directors		150
RMF is entrenched in strategic planning, decision making and the budgeting process		150
RMF ensures that the risk management procedures and policies are well documented and approved by the Board of Directors		150
RMF ensures that the risk management policies and procedures are communicated throughout the organization		150
RMF ensures that operational risk management processes and procedures are reviewed at least annually		150
RMF ensures that loss events arising from operational risks are documented and loss event data is integrated into the risk management strategy		150
RMF ensures that risk management recommendations are documented for operational units, ensures that deficiencies have		150

remedial plans and that progress on the execution of such plans are reported to the Board of Directors at least annually		
TOTAL		XX

COMMENTS

INSTRUCTIONS AFFECTING TABLE 12B

The total score is derived by adding the score for each criterion of an insurer's risk management function that the insurer has implemented.

Table 12C
Risk Identification Processes ('RIP') Score Table

Progression		Criterion	Operational Risk Areas							
Stage	Scoring		Fraud	HR	Outsourcing	Distribution Channel	Business Processes	Business Continuity	IT	Compliance
1	50	RIP are ad hoc								
2	100	RIP have been implemented but not standardized across the organization								
3	150	RIP have been implemented, well documented and understood by relevant staff, and standardized across the entire organization								
4	200	In addition to Stage 3, RIP are reviewed at least annually with a view to assessing effectiveness and introducing								

		improvements								
TOTAL			XX	XX	XX	XX	XX	XX	XX	XX

COMMENTS

INSTRUCTIONS AFFECTING TABLE 12C

- (a) the total score is derived by adding the individual score for each operational risk area corresponding to the stage of the insurer's implementation in respect of its RIP;
- (b) where the insurer's assessment of the operational risk area is between stages (i.e. exceeds the criterion for given stage, while only partially meeting the criterion of the next stage), the insurer shall be deemed to have met the criterion of the lower stage; and
- (c) where an operational risk area is not applicable to the insurer's operations, the insurer shall record such fact and the reasons for arriving at this conclusion in the comments section and be deemed to have met the criterion of the highest stage.

Table 12D
Risk Measurement Processes ('RMP') Score Table

Progression		Criterion	Operational Risk Areas							
Stage	Scoring		Fraud	HR	Outsourcing	Distribution Channel	Business Processes	Business Continuity	IT	Compliance
1	50	RMP are ad hoc								
2	100	RMP have been implemented but not standardized across the organization								
3	150	RMP have been implemented, well documented and understood by relevant staff, and standardized across the entire organization								
4	200	In addition to Stage 3, RMP are reviewed at least annually with a view to assessing effectiveness and introducing								

		improvements								
TOTAL			XX	XX	XX	XX	XX	XX	XX	XX

COMMENTS

INSTRUCTIONS AFFECTING TABLE 10D

- (a) the total score is derived by adding the individual score for each operational risk area corresponding to the stage of the insurer's implementation in respect of its RMP;
- (b) where the insurer's assessment of the operational risk area is between stages (i.e. exceeds the criterion for given stage, while only partially meeting the criterion of the next stage), the insurer shall be deemed to have met the criterion of the lower stage; and
- (c) where an operational risk area is not applicable to the insurer's operations, the insurer shall record such fact and the reasons for arriving at this conclusion in the comments section and be deemed to have met the criterion of the highest stage.

Table 12E
Risk Response Processes ('RRP') Score Table

Progression		Criterion	Operational Risk Areas							
Stage	Scoring		Fraud	HR	Outsourcing	Distribution Channel	Business Processes	Business Continuity	IT	Compliance
1	50	RRP are ad hoc								
2	100	RRP have been implemented but not standardized across the organization								
3	150	RRP have been implemented, well documented and understood by relevant staff, and standardized across the entire organization								
4	200	In addition to Stage 3, RRP are reviewed at least annually with a								

		view to assessing effectiveness and introducing improvements								
TOTAL			XX	XX	XX	XX	XX	XX	XX	XX

COMMENTS

INSTRUCTIONS AFFECTING TABLE 12E

- (a) the total score is derived by adding the individual score for each operational risk area corresponding to the stage of the insurer's implementation in respect of its RRP;
- (b) where the insurer's assessment of the operational risk area is between stages (i.e. exceeds the criterion for given stage, while only partially meeting the criterion of the next stage), the insurer shall be deemed to have met the criterion of the lower stage; and
- (c) where an operational risk area is not applicable to the insurer's operations, the insurer shall record such fact and the reasons for arriving at this conclusion in the comments section and be deemed to have met the criterion of the highest stage.

Table 12F
Risk Monitoring and Reporting Processes ('RMRP') Score Table

Progression		Criterion	Operational Risk Areas							
Stage	Scoring		Fraud	HR	Outsourcing	Distribution Channel	Business Processes	Business Continuity	IT	Compliance
1	50	RMRP are ad hoc								
2	100	RMRP have been implemented but not standardized across the organization								
3	150	RMRP have been implemented, well documented and understood by relevant staff, and standardized across the entire organization								
4	200	In addition to Stage 3, RMRP are reviewed at least annually with a view to assessing effectiveness and introducing								

		improvements								
TOTAL			XX	XX	XX	XX	XX	XX	XX	XX

COMMENTS

INSTRUCTIONS AFFECTING TABLE 12F

- (a) the total score is derived by adding the individual score for each operational risk area corresponding to the stage of the insurer's implementation in respect of its RMRP;
- (b) where the insurer's assessment of the operational risk area is between stages (i.e. exceeds the criterion for given stage, while only partially meeting the criterion of the next stage), the insurer shall be deemed to have met the criterion of the lower stage; and
- (c) where an operational risk area is not applicable to the insurer's operations, the insurer shall record such fact and the reasons for arriving at this conclusion in the comments section and be deemed to have met the criterion of the highest stage.

SCHEDULE II

(Paragraph 6)

Schedule of fixed income investments by rating categories

[blank] name of Company

As at [blank] (day/month/year)

[All amounts are expressed in _____ (currency used)]

Schedule Line No.	QUOTED INVESTMENTS		UNQUOTED INVESTMENTS		TOTAL	
	Bonds and Debentures		Bonds and Debentures		TOTAL	
	[Form 4 Line 2(b)]		[Form 4 Line 3(b)]		[Form 4 Lines 2(b) & 3(b)]	
	20XX	20XX	20XX	20XX	20XX	20XX
1. Government	XXX	XXX	XXX	XXX	XXX	XXX
2. High Investment Grade (AAA & AA)	XXX	XXX	XXX	XXX	XXX	XXX
3. Medium Investment Grade (A)	XXX	XXX	XXX	XXX	XXX	XXX
4. Low Investment Grade (BBB)	XXX	XXX	XXX	XXX	XXX	XXX
5. Non Investment Grade	XXX	XXX	XXX	XXX	XXX	XXX
6. Mortgage-backed securities	XXX	XXX	XXX	XXX	XXX	XXX
7. Mutual Funds	XXX	XXX	XXX	XXX	XXX	XXX
8. Non Rated	XXX	XXX	XXX	XXX	XXX	XXX
9. Total	XXX	XXX	XXX	XXX	XXX	XXX

INSTRUCTIONS AFFECTING SCHEDULE II

- (a) quoted and unquoted issues shall be combined;
- (b) all non-government bonds shall be segregated according to the latest available AM Best, S&P, Moody's, or Fitch ratings of the issues with unrated bonds assigned to Non-Rated;
- (c) where the ratings differ between agencies, insurers shall segregate according to the most conservative rating;
- (d) the "Government" line includes all bonds and mortgage-backed securities issued by any government authority (including non-US jurisdictions, government agencies, and government-sponsored enterprises); and
- (e) all other types of bonds and debentures not included in Lines 6 or 7 may be segregated in Lines 1 to 5 or 8 as appropriate.

Line Item		Description
1	Government	All quoted and unquoted bonds and mortgage-backed securities issued by any government authority (including non-US jurisdiction).
2	High Investment Grade (AAA & AA)	All quoted and unquoted non-government bonds rated AAA & AA by any of the rating agencies mentioned above or equivalent.
3	Medium Investment Grade (A)	All quoted and unquoted non-government bonds rated A by rating agencies mentioned above or equivalent.

Line Item		Description
4	Low Investment Grade (BBB)	All quoted and unquoted non-government bonds rated BBB by rating agencies mentioned above or equivalent.
5	Non-Investment Grade	All quoted and unquoted non-government bonds rated as non-investment grade by rating agencies mentioned above or equivalent.
6	Mortgage-backed securities	All quoted and unquoted mortgage-backed securities not issued by any government authority.
7	Mutual Funds	All quoted and unquoted mutual funds.
8	Non-Rated	All quoted and unquoted non-government bonds non-rated by rating agencies mentioned above or equivalent.

Schedule IV(A) (Paragraph 6)

Schedule of long-term business premiums

[blank] name of Company

As at [blank] (day/month/year)

[All amounts are expressed in _____ (currency used)]

Schedule Line No.	GROSS PREMIUMS AND OTHER CONSIDERATIONS [Form 5 Line 19(c)]						NET PREMIUMS AND OTHER CONSIDERATIONS [Form 5 Line 19(e)]					
	Unrelated		Related		Total		Adjustable/Benefit Period <=2 years		Non-Adjustable/Benefit Period >2 years		Total	
	20xx	20xx	20xx	20xx	20xx	20xx	20xx	20xx	20xx	20xx	20xx	20xx
1. Mortality	XXX	XXX	XXX	XXX	XXX	XXX					XXX	XXX
2. Critical illness	XXX	XXX	XXX	XXX	XXX	XXX					XXX	XXX
3. Longevity	XXX	XXX	XXX	XXX	XXX	XXX					XXX	XXX
4. Deferred annuities	XXX	XXX	XXX	XXX	XXX	XXX					XXX	XXX
5. Disability income:												
Active lives with												
Premium guarantee of-												
(i) <= 1 year	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
(ii) 1-5 years	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX

(iii) > 5 years	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX		XXX	XXX
6. Deferred annuities:											
Active lives others	XXX	XXX	XXX	XXX	XXX	XXX				XXX	XXX
7. Disability income:											
Claims in payment	XXX	XXX	XXX	XXX	XXX	XXX				XXX	XXX
8. Disability income:											
Claims in payment other	XXX	XXX	XXX	XXX	XXX	XXX				XXX	XXX
9. Group life	XXX	XXX	XXX	XXX	XXX	XXX				XXX	XXX
10. Group disability	XXX	XXX	XXX	XXX	XXX	XXX				XXX	XXX
11. Group health	XXX	XXX	XXX	XXX	XXX	XXX				XXX	XXX
12. Stop lossXXX	XXX	XXX	XXX	XXX	XXX					XXX	XXX
13. Rider	XXX	XXX	XXX	XXX	XXX	XXX				XXX	XXX
14. Variable annuities	<u>XXX</u>	<u>XXX</u>	<u>XXX</u>	<u>XXX</u>	<u>XXX</u>	<u>XXX</u>				<u>XXX</u>	<u>XXX</u>
15. Total	<u>XXX</u>	<u>XXX</u>	<u>XXX</u>	<u>XXX</u>	<u>XXX</u>	<u>XXX</u>	<u>XXX</u>	<u>XXX</u>	<u>XXX</u>	<u>XXX</u>	<u>XXX</u>

SCHEDULE V-Long-Term **(paragraph 6)**
SCHEDULE OF RISK MANAGEMENT

1. The schedule of risk management shall disclose the Class E insurer's riskmanagement program as follows—
 - (a) governance structure;
 - (b) ten largest exposures to counterparties and any other counterparty exposures or series of linked counter party exposures exceeding 10% of the insurer's statutory capital and surplus;
 - (c) Summary of company performance;
 - (d) Summary of product features and risks;
 - (e) Financial impact and description of stress and scenario tests;
 - (f) Description of investments and derivatives strategies and policy;
 - (g) Details of the composition of funds held; and
 - (h) Details of material intra-group transactions;

INSTRUCTIONS AFFECTING SCHEDULE V

- (a) "governance structure" shall disclose—
 - (i) the structure and names of the board of directors and chief and senior executives, including roles and work experience of officers;
 - (ii) terms of reference of the board of directors and its sub-committees.
 - (iii) name of the jurisdiction(s) where the group's board of directors primarily deliberates on matters including—
 - (a) setting strategic decision;

-
- (b) determining the (re)insurer's risk appetite;
 - (c) choosing of corporate structure, including amalgamations, acquisitions and strategic alliances;
 - (d) choosing of new lines of business, new products, marketplace positioning; and
 - (e) assessing solvency needs;
- (iv) name of the jurisdiction(s) where the group's board of directors and chief and senior executives primarily reside;
 - (v) name of the jurisdiction(s) where the group's control functions reside (i.e. group finance, actuarial, and risk management);
 - (vi) group's financial position based on its most recent audited general purpose financial statement regarding its—
 - (a) total assets;
 - (b) total reserves; and
 - (c) capital and surplus;
 - (vii) name of (re)insurers within the group that have the three highest
 - (a) total asset value
 - (b) total insurance reserve value and
 - (c) total capital and surplusbased on the group's most recent audited general purpose financial statements; and provide the total values for items (a), (b) and (c); and confirm the jurisdiction of incorporation of each (re)insurer; and
 - (viii) explanation of any events which have occurred or decisions made subsequent to the relevant year-end that would, or have, materially changed the information above (e.g., amalgamation or acquisition or restructuring, etc.);

-
-
- (ix) Group organizational chart.
- (b) ten largest exposures to counterparties and any other counterparty exposures exceeding 10% of the insurer's statutory capital and surplus, including—
- (i) name of counterparty;
 - (ii) exposure values (face value or market value); and
 - (iii) transaction type;
- (c) Summary of company performance should cover a qualitative description of the company's business strategy, the projected net premiums to be written and net income or loss. The summary shall disclose:
- (i) the insurer's latest estimate of new business premiums written;
 - (ii) estimated net income or loss for the year following the relevant year either for the insurer or on a group basis with disclosure of the estimated percentage of the insurer's contribution relative to the group; and
 - (iii) a description of the insurer's business strategy to be used in an attempt to achieve the estimates in (1) and (2).
- (d) 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 company.
- (e) Estimated impact of stress scenario tests prescribed by the Authority.
- (f) Description of the investments and derivatives policies and strategies should cover:
- (i) Description of the investment policy;
 - (ii) Description of the policies surrounding the use of derivatives; and
 - (iii) 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.

-
- (iv) Description of the process for calculating the effective duration for both investment assets and insurance obligations and key assumptions;
- (g) Details of the composition of funds held broken down by the underlying securities rating classification (AAA & AA, A etc) on aggregate basis. Funds held means the amounts included in Form 4, Line 12.
- (h) Details of Intra-group transactions shall include:
- (i) A list of material intra-group transactions
 - (ii) Details of material intra-group transactions including (where applicable):
 - (a) exposure value (face value or market value, if the latter is available);
 - (b) counterparties involved including where they are located;
 - (c) summary details of the transactions – including purpose, terms and transaction costs;
 - (d) duration of the transaction; and
 - (e) performance triggers.
 - (iii) Details surrounding all intra-group reinsurance and retrocession arrangements, and other material intra-group exposures including:
 - (a) aggregated values of the exposure limits (gross and net) by counterparties broken down by counterparty rating;
 - (b) aggregated premium flows between counterparties (gross and net); and
 - (c) the proportion of the insurer's insurance business exposure covered by internal reinsurance, retrocession and other risk transfer arrangements.

SCHEDULE VI (Paragraph 6)

SCHEDULE OF FIXED INCOME SECURITIES

[blank] name of Parent

as at [blank] (day/month/year)

[All amounts are expressed in _____ (currency used)]

The schedule of fixed income securities shall-

- (a) represent the amounts stated in the Form 4 – Statutory Balance Sheet Lines (2b) and (3b);
- (b) include the following information according to security type-
 - i. amount reflected in the Statutory Balance Sheet balance on Lines (2b) or (3b);
 - ii. amount contributing to (reflected in) the Statutory Balance Sheet balance on Lines (2b) or (3b);
 - iii. face value;
 - iv. fair value;
 - v. average effective yield to maturity;
 - vi. average rating of the security type (if applicable);

-
- vii. average duration and convexity; and
 - (c) include the effective duration and the convexity of the portfolio.

SCHEDULE VII (Paragraph 6)

SCHEDULE OF LONG-TERM INSURANCE DATA

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
						Net Amount at Risk		
		Bermuda Statutory Reserve	Reported DAC (if any)	Best Estimate Reserve	Best Estimate Reserve (Subject to zero floor)	Adjustable Product or treaty	Non-Adjustable Product or Treaty	Total
		(000)	(000)	(000)	(000)	(000)	(000)	(000)
1	Mortality (term assurance, whole life, universal life)							
2	Critical Illness (including accelerated CI products)							
3	Longevity (payout annuities, contingent annuities, pension blocks)							
4	Deferred Annuities (including indexed linked products with							

	no guarantees)							
5	Disability Income: Active Lives – including waiver of premium and Long Term Care					Net Annual Premium		
	Length of Premium Guarantee					Benefit Period less than or equal to two years	Benefit Period greater than two years	Total
	(a) less than or equal to 1 year							
	(b) one to five years							
	(c) greater than 5 years							
	Total							
6	Disability Income: Active Lives – other accident and sickness							
7	Disability Income: Claims in payment – including waiver of premium and LTC							
8	Disability Income: Claims in payment – other accident and sickness							

9	Group Life					
10	Group Disability					
11	Group Health					Adjustable Product Treaty
12	Stop Loss					
13	Other product riders not included above					
14	Total Reserves (excluding Variable Annuities)					
			Duration (years)			
15	Weighted average of the difference between assets duration and liabilities duration (weighted by reported reserves)					
			% Reserves			
16	Reserves with known difference in duration / Total Reserves					

SCHEDULE VIII

(Paragraph 6)

SCHEDULE OF LONG-TERM VARIABLE ANNUITY DATA AND RECONCILIATION

[All amounts expressed in (currency used)]

	[1] Bermuda Satutory Reserve	[2] Account Value⁴ Volatility (0%,10.0%)	[3] Volatility >10.0%	[4] Net Amount at Risk _{1, 3}
	('000)	('000)	('000)	('000)
1 Guaranteed Minimum Accumulation Benefit: <5 years to maturity	XXX	XXX	XXX	XXX
2 Guaranteed Minimum Accumulation Benefit: >=5 years to maturity	XXX	XXX	XXX	XXX
3 Guaranteed Minimum Death Benefit: Return of Premium, Ratchet and Reset ² .	XXX	XXX	XXX	XXX
4 Guaranteed Minimum Death Benefit: Enhanced Benefits (Roll up) ² .	XXX	XXX	XXX	XXX
5 Guaranteed Minimum Income Benefit	XXX	XXX	XXX	XXX
6 Guaranteed Minimum Withdrawal Benefit	XXX	XXX	XXX	XXX
7 Guaranteed Enhanced Earnings Benefit	XXX	XXX	XXX	XXX
Total (Variable Annuities)	XXX	XXX	XXX	XXX

INSTRUCTIONS AFFECTING SCHEDULE VIII

Notes

- Factors should be applied to Net Amount at Risk (NAR) defined as:
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 annuitization of all policies using an 80% factor applied to the GV (the 80% represents the ratio between current market annuitization factors and the guaranteed annuitization factors)
GMWB	Total claim payable if 100% of the guaranteed withdrawal benefit base in excess of the current account value is withdrawn immediately
GEEB	Total guaranteed enhanced payments upon immediate death of all policyholders

- 2 Where ratchets, resets and roll-ups exist, the roll-up category is to be used.
- 3 NAR is net of reinsurance.
- 4 The proportion used for the account value under reinsurance is the proportion used for NAR.
- 5 For the purposes of Schedule VIII “volatility” is defined as the annual volatility of the fund. In the case where there is no or insufficient history of the annual volatility of the fund available to determine volatility; the volatility of the benchmark [for the fund] should be used to determine volatility.

SCHEDULE IX (Paragraph 6)

SCHEDULE OF COMMERCIAL INSURER'S SOLVENCY SELF ASSESSMENT (CISSA)

The Schedule of CISSA shall provide particulars of the following matters:

- a) Table 13: CISSA Capital Summary disclosing the insurer's own capital computations, insurer's plans for raising additional capital and contingency arrangements impacting the available capital.
- b) Table 13A: CISSA General Questions relating to an insurer's risk management and governance program, the review and approval of CISSA, integration of CISSA into the strategic decision making process, governance and controls surrounding the model(s)/tool(s) used to compute the capital, assessment of risk appetite of an insurer.
- c) Table 13B: CISSA – Assessment of Material Risks of the Insurer disclosing the insurer's material risks and the determination of the quality and quantity of CISSA capital required to cover these risks.

INSTRUCTIONS AFFECTING SCHEDULE IX

Table 13

CISSA Capital Summary

	CISSA capital	Regulatory capital
Risk Categories		
Insurance risk – mortality	_____	_____
Insurance risk – longevity	_____	_____
Insurance risk – morbidity	_____	_____

Insurance risk – variable annuity guarantees		
Insurance risk – other		
Insurance risk – stop loss		
Insurance risk – rider		
Market risk		
Credit risk		
Interest and Liquidity risk		
Group, Reputational and Strategic risk		
Other (specify)		
Total capital pre-diversification between risk categories		
Diversification credit between risk categories		
Total capital after diversification before operational risk		
Operational risk		
Total capital after diversification and operational risk		

Where:

- a) CISSA Capital is the amount of capital the **insurer** has determined, that is required to achieve its strategic goals upon undertaking an assessment of all material (reasonably foreseeable) risks arising from its operations or operational environment.

b) Regulatory capital as determined by the Bermuda Solvency Capital Requirement ("BSCR") as described in the Insurance Prudential Standards (Class E Solvency Requirement) Order or regulatory capital determined from an approved internal model for regulatory purposes at 99% TVaR.

Table 13, continued

ADDITIONAL INFORMATION

1. What is the primary reason(s) (select multiple responses where applicable) for aiming at the disclosed Projected Target Economic Capital amount? (select all that apply)
 - target agency rating (e.g. "A-", "AA", etc);
 - market share;
 - business expansion;
 - nature of product(s) (e.g. risk characteristics);
 - manage downgrade risk;
 - regulatory capital requirements; and
 - others (briefly describe).

2. What methodology is used to aggregate the risk categories? (select all that apply)
 - correlation matrix;
 - linear correlations;
 - T copulas;
 - Gumbel copulas;
 - Clayton copulas;
 - causal drivers approach e.g. inflation, cycles; and
 - others (briefly describe)

3. What contingency plans are in place for raising additional capital under stress situations? (select all that apply)
 - parental guarantees;
 - revolving letters of credit;
 - issue subordinated debt;
 - issue preference shares;
 - float additional shares;
 - capital injections from parent;
 - contingent surplus notes; 52
 - catastrophe derivatives (e.g. bonds, swaps and options); and
 - others (briefly describe)

4. Does the insurer have arrangements/ contractual commitments to provide support, including forward purchase arrangements or guarantees, to affiliates/other companies in stressed situations? (Yes or No)

INSTRUCTIONS AFFECTING TABLE 13

- Total capital pre-diversification between risk categories is derived by aggregating all the risk categories.
- Total capital after diversification between risk categories shall be derived by deducting the diversification benefit (calculated by an insurer) from the “Total capital pre-diversification between risk categories”.
- Where a question/section is not applicable to an insurer or the options provided do not fully reflect the insurer’s position, the insurer shall include a brief description in the comment fields.

Table 13A

CISSA General Questions

1. CISSA Integration

Is the CISSA and its underlying information integrated (ie considered when making key strategic decisions) into the insurer's strategic and risk management decision-making processes? (Yes or No)

If yes, how is CISSA and its underlying information used? (select all that apply)

- strategic planning;
- annual business planning;
- setting risk limits;
- defining risk appetite;
- evaluation of capital adequacy;
- allocation of capital to business segments and lines of business;
- capital management;
- determination of rates of return for pricing and underwriting guidelines;
- reinsurance purchase;
- determination of investment policies and strategies;
- meeting regulatory requirements;
- improving credit rating;
- improving investor relations;
- assessing risk adjusted product profitability;
- performance measurement and assessment;
- improving mergers and acquisition decisions; and
- others (list)

-
- 2. Has the insurer applied reverse stress testing to both identify the scenarios that could cause business failure and the required actions to manage such situations? (Yes or No)**
- 3. Is the CISSA process clearly documented and regularly amended for changes in strategic direction, risk management framework, and market developments? (Yes or No)**
- 4. How often is the information underlying CISSA discussed and reviewed by the board and chief and senior executives?**
- 5. Has the board and chief and senior executives ensured that an appropriate oversight process is in place, including an appropriate level of independent verification, whereby material deficiencies are reported on a timely basis and suitable actions taken? (Yes or No)**

Instructions affecting Table 13A

- Where a question/section is not applicable to an insurer or the options provided do not fully reflect the insurer's position, a brief description shall be included in the comment fields.
- independent verification shall be conducted by an internal or external auditor or any other appropriately skilled internal or external function, as long as they have not been responsible for the part of the CISSA process they review, and are therefore deemed to be independent in their assessment.
- In relation to intra-group transactions, materiality will be defined as:
 - i. an intra-group transaction whose impact can cause a reduction in the insurer's available statutory capital and surplus by 5% or more;
 - ii. a series of linked intra-group transactions that can cumulatively reduce an insurer's available capital and surplus by 10% or more; and
 - iii. Qualitative risk characteristics of the transaction: for example, a transaction may be assessed as high risk; however, the quantitative impact remains unknown.

Table 13B

CISSA Assessment of Material Risks of the Insurer–

The insurer must undertake and file with the Authority an assessment of the insurer’s material risks and the determination of both the quality (types of capital) and quantity of CISSA Capital required to cover these risks, while remaining solvent and achieving the insurer’s business goals.

Minimally, the assessment should include:

1. The date the assessment was completed.
2. The identification and assessment of all reasonably foreseeable material risks (i.e. insurance underwriting risk; investment, liquidity and concentration risk; market risk; credit risk; operational risk; group risk; strategic risk; reputational risk; and legal risk).
3. The identification of the relationships of the material risk with one another and the quantity and type of capital required to cover the risks.
4. A description of the insurer’s risk appetite, including limits imposed and how they are enforced.
5. Assumptions and methodology used to assess and aggregate risks.
6. A forward looking analysis of the risks faced by the insurer over its planning horizon and an analysis demonstrating the ability to manage its business and capital needs in adverse circumstances and still meet regulatory capital requirements.
7. An evaluation of whether the insurer has sufficient capital and liquidity available, including an assessment of whether capital is fungible and assets are transferable, to achieve its strategic goals over its planning horizon and any potential adverse consequences if insufficient.
8. A Description of business continuity and disaster plans.
9. A Description of how the results of the self assessment are integrated into the management and strategic decision making process.
10. Approval and signed declaration of the CISSA assessment by two members of the Board of directors.
11. For each material risk identified the submission should minimally include:
 - a. Identification of the risk owner, qualifications and responsibilities;
 - b. The risk drivers (e.g. for catastrophe risk the drivers could be epidemic, medical advancements, etc);
 - c. The primary model(s)/tool(s) used to calculate the CISSA Capital for the risk, where applicable;

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- d. The primary sources of data used as inputs to the model(s)/tool(s);
 - e. The key assumptions used in the assessment of the risk
 - f. A description and quantitative impact of stress and scenarios test on capital (if any) including key assumptions;
 - g. A description of measures taken to transfer or otherwise mitigate the risk;
 - h. Quantification of the risk if the insurer is holding capital against it both pre and post diversification;
 - i. An explanation of the primary reasons for any material deviations between the CISSA capital as it pertains to the risk and the associated capital (if holding capital against the risk) and the regulatory capital charge for the risk, if the deviation is greater than 15%.
-

12 **The insurer shall review the following statements and select from the drop-down list as applicable and/or provide a brief description or an attachment. Where the insurer provides an attachment, include references (e.g. page number, paragraph number) of where the information is located within the attachment.**

Model(s)/tool(s) used to calculate the CISSA capital

	Select	Comments
Governance		
a) Does the Board of Directors, chief and senior executives approve the design, maintenance and use of the model(s)/tool(s)?		
b) How often does the Board or relevant Board committees review outputs, changes and issues arising from the model(s)/tool(s) (review should be documented e.g. minutes, presentations etc)?		
c) Does the Board and chief and senior executives have a general understanding of the key assumptions/elements and the implications of the outputs (including limitations) of the model(s)/tool(s)?		
Validation		
d) Is the model(s)/tool(s) subject to a regular cycle of validation, which includes the monitoring of performance, review appropriateness of model specifications and testing of forecast results against actual results?	Select	Comments

-
- e)** How often is the validation of the model(s)/tool(s) performed?
- f)** Does the validation process demonstrate that the model(s)/tool(s) remains suitable during changing conditions (e.g. changes in inflation, interest rate, etc)? If no, provide comments.
- Documentation** **Select** **Comments**
- g)** Does the insurer have formal documentation of the structure, design, operational details, input assumptions, parameters, governance process and controls of the model(s)/tool(s)?
- h)** If yes, to what extent is the model(s)/tool(s) documented such that it can be used by new personnel with limited user experience? (include comments for partial or no documentations)
- i)** How often does the Board of Directors or chief and senior executives review and approve the model/input documentation?
- Internal controls** **Select** **Comments**
- j)** How does the insurer rate the effectiveness of the controls in place to monitor and evaluate the operation and maintenance of the model(s)/tool(s)?
- k)** Are there strict protocols in place restricting access to the model(s)/tool(s) and ability to make adjustments thereto?
- Others** **List**
- l)** What is the risk measure (VaR, TVaR etc), confidence interval (95%, 99.95% etc) and time horizon (1 year, 3 years etc) used to derive CISSA capital?

SCHEDULE XII (Paragraph 6)

SCHEDULE OF ELIGIBLE CAPITAL

The schedule of eligible capital shall provide particulars of the following matters:

- a) Tier 1, Tier 2 and Tier 3 eligible capital (Table 1); and
- b) particulars of each capital instrument approved by the Authority as “ Any other fixed capital” (in accordance with Form 8, STMT LINE 1 (c) under the Insurance Accounts Regulations 1980).

Table 1

Total statutory capital and surplus (Form 8, STMT LINE 3)	XXX
Less: Encumbered assets (not securing policyholder obligations)	XXX
Subtotal:	<u>XXX</u>

Tier 1 – basic capital

(a) Fully paid shares (Form 8, STMT LINE 1a(i))	XXX
(b) Contributed surplus or share premium (Form 8, STMT LINE 1b)	XXX
(c) Statutory surplus- End of Year (Form 8, STMT LINE 2 (h) (deficit) or retained earnings]	XXX
(d) Capital adjustments	XXX
(e) Hybrid capital instruments:	
(i) Non-cumulative, perpetual or fixed term preference shares	XXX
(f) Other:	XXX
(g) Less: Treasury shares (Form 8, STMT LINE 1a(iii))	XXX
(h) Less: Difference between encumbered assets for policyholder obligations and policyholder obligations (Form 4, STMT LINE 27a)—	
Encumbered assets for policyholder obligations	XXX
Less: Policyholder obligations (Form 4, STMT LINE 27a)	XXX XXX
(i) Less: Encumbered assets not securing policyholder obligations	XXX
(j) Less: Residual restricted assets in excess of capital requirements	XXX

<u>Tier 1 – ancillary capital</u>	
(a) Perpetual or fixed term subordinated debt	<u>XXX</u>
<u>Total Tier 1 available capital</u>	<u>XXX</u>
 <u>Tier 2 -basic capital</u>	
(a) Hybrid capital instruments:	
Cumulative preference shares	XXX
(b) Other:	
	XXX
(c) Add: Difference between encumbered assets for policyholder obligations and policyholder obligations (Form 4, STMT LINE 27a) deducted from Tier 1 (if it qualifies)	XXX
 <u>Tier 2 -ancillary capital</u>	
(a) Unpaid and callable common shares	XXX
(b) Qualifying unpaid and callable hybrid capital	XXX
(c) Qualifying unpaid and callable non-cumulative, perpetual preference Shares	XXX
(d) Perpetual or fixed term subordinated debt	XXX
(e) Approved letters of credit (Form 8, STMT LINE (1c))	XXX
(f) Approved guarantees (Form 8, STMT LINE (1c))	<u>XXX</u>
<u>Total Tier 2 available capital</u>	XXX
 <u>Tier 3 -basic capital</u>	
(a) Short-term hybrid capital instruments	
Cumulative preference shares	XXX
 <u>Tier 3- ancillary capital</u>	
(a) Short-term subordinated debt	XXX
(b) Approved letters of credit (Form 8, STMT LINE (1c))	XXX
(c) Approved guarantees (Form 8, STMT LINE (1c))	<u>XXX</u>

Total Tier 3 available capital

XXX

Instructions affecting Table 1

Table 1 inputs are subject to any eligible capital rules prescribed by the Authority under section 6A of the Act.

The insurer shall include all components of total statutory capital and surplus (Form 8, Line 3 of the Insurance Accounts Regulations 1980) subject to adjustments made under Section 6D of the Act in Table 1 any eligible capital rules prescribed by the Authority under section 6A of the Act.

The insurer shall be required to calculate the “Difference between the encumbered assets for policyholder obligations and policyholder obligations” only where encumbered assets for policyholder obligations exceed both (i) the policyholder obligations of the insurer for which assets have been held, and (ii) the capital requirement applicable to the encumbered assets for policyholder obligations.

For the Tier 1 capital, to calculate the “Difference between encumbered assets for policyholder obligations and policyholder obligations”, the insurer shall determine the difference between the encumbered assets for the policyholder obligations and the higher of i) the policyholder obligations of the insurer for which assets have been held and calculated in accordance with Form 4, line (27a) and ii) the capital requirement applicable to the encumbered assets for policyholder obligations where the encumbered assets for policyholder obligations exceeds both policyholder obligations and the capital requirement applicable to the encumbered assets for policyholder obligations.

For Tier 2-basic capital, to calculate the “Difference between encumbered assets for policyholder obligations and policyholder obligations”, the insurer shall determine the difference between the encumbered assets for the policyholder obligations and the higher of i) the policyholder obligations of the insurer for which assets have been held and calculated in accordance with Form 4, line (27a) and ii) the capital requirement applicable to the encumbered assets for policyholder obligations where the encumbered assets for policyholder obligations exceeds both policyholder obligations and the capital requirement applicable to the encumbered assets for policyholder obligations.

Table 2

Description of capital instrument	Date of issue	Maturity date (as applicable)	Value of the capital instrument	Eligible capital Tier
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XXX

XXX

Instructions affecting Table 2

The insurer to include every capital instrument contributing to the amount reported in Form 8, **STMT LINE (1c)** of the Insurance Accounts Regulations 1980 in Table 2 in accordance with any eligible capital rules prescribed by the Authority under section 6A of the Act.