Consultation Paper
on
Draft Insurance (Valuation and Capital) Rules and
Draft Insurance (Submission of Statements, Reports and Information) Rules

FOREWORD

1. This paper is published by the Insurance Authority ("IA") to consult the public on the draft rules to be made under section 129 of the Insurance Ordinance (Cap. 41), namely the Insurance (Valuation and Capital) Rules and Insurance (Submission of Statements, Reports and Information) Rules. The two draft Rules in the attached set out technical details for the implementation of the new risk-based capital regime upon the full commencement of the Insurance (Amendment) Ordinance 2023.

2. The IA welcomes written submissions on or before **16 January 2024** by any of the following means:

Mail: Policy and Development Division
Insurance Authority
19/F, 41 Heung Yip Road
Wong Chuk Hang
Hong Kong
Email: rbc@ia.org.hk

3. A feedback template is enclosed.

4. Any person making a submission on behalf of an organization is requested to provide details of such organization.

5. If you wish to suggest alternative approaches, we encourage you to send proposed amendments to the consultation documents for our consideration.

6. Submissions will be received on the basis that the Insurance Authority may freely reproduce and publish them, in whole or in part, in any form, and use, adapt or develop any proposal put forward without seeking permission or providing acknowledgement of the party making such proposal.

7. Please note that name(s) of respondent(s), their affiliation(s) and the contents of their submissions may be referred to in any forms of documentation the Insurance Authority may publish or release. Please read the Personal Information Collection Statement attached to this consultation paper. If you do not wish your name, affiliation or submission to be disclosed, please expressly state so when you make your submission.

PERSONAL INFORMATION COLLECTION STATEMENT

1. This Personal Information Collection Statement ("PICS") is made by the Insurance Authority ("IA") to comply with the notification requirements of the Personal Data (Privacy) Ordinance (Cap. 486) ("PDPO"). The PICS sets out the purposes for which your personal data (as defined in section 2 of the PDPO) will be used following collection, what you are agreeing to with respect to the IA's use of your personal data, and your rights under the PDPO.

Purpose of Collection

2. The personal data submitted will only be used by the Insurance Authority for one or more of the following purposes –
   - consultation and its related purposes;
   - to administer the provisions of the Insurance Ordinance (Cap. 41) and any regulations, rules, codes, guidelines, circulars and regulatory instruments made or promulgated pursuant to the powers vested in the IA;
   - to perform statutory functions under the provisions of the Insurance Ordinance (Cap. 41);
   - for research and statistical purposes; or
   - for other purposes as permitted by the laws of Hong Kong.

3. It is voluntary for you to supply the relevant information or submission (including personal data) for this consultation.

Transfer of Personal Data

4. The personal data submitted may be disclosed by the IA to members of the public in Hong Kong and elsewhere as part of this consultation. The names of persons who submitted comments on this consultation paper, together with the whole or any part of their submissions, may be disclosed to members of the public. This will be done by publishing this information on the IA's website and/or in documents to be published by the IA during the consultation period or at its conclusion.

Access to Data

5. You have the right to request access to and correction of your personal data in accordance with the provisions of the PDPO. Your right of access includes the right to obtain a copy of your personal data provided in your submission on this consultation paper. The IA has the right to charge a reasonable fee for processing any data access request.

Retention

6. Personal data provided to the IA in response to this consultation paper will be retained for such period as may be necessary for the proper discharge of its functions.

Enquiries

7. Any enquiries regarding the personal data provided in your submission on this consultation paper, requests for access to personal data or correction of

personal data should be addressed in writing to –

Personal Data Privacy Officer
Insurance Authority
19/F, 41 Heung Yip Road
Wong Chuk Hang
Hong Kong

A copy of the IA's Privacy Policy is made available at the IA's website.

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CHAPTER 1 – EXECUTIVE SUMMARY

1 The Insurance Authority ("IA") is a body corporate established under the Insurance Ordinance (Cap. 41) ("IO") as an independent regulator for the insurance industry in Hong Kong.

2 With general support from the insurance industry to move towards a risk sensitive capital framework as concluded in the consultation on development of a risk-based capital ("RBC") framework in 2015, the IA started to develop detailed requirements for the RBC regime and conducted three rounds of quantitative impact study ("QIS") in consultation with the industry. The IA has lately come to a broad consensus with the industry on the detailed requirements, and considers that the proposed RBC regime is appropriate for the insurance industry in Hong Kong.

3 To enable the implementation of the RBC regime, the Insurance (Amendment) Ordinance 2023 ("Amendment Ordinance") was enacted in July 2023, which provides the legal basis for the implementation of the RBC regime for the insurance industry in Hong Kong. The Amendment Ordinance, among others, empowers the IA to make rules to prescribe detailed requirements in subsidiary legislation. The two draft rules attached to this consultation, namely, Insurance (Valuation and Capital) Rules and Insurance (Submission of Statements, Reports and Information) Rules respond to the quantitative assessment under Pillar 1 and the reporting requirements to the IA under Pillar 3 based on the three-pillar framework respectively.

4 The draft Insurance (Valuation and Capital) Rules are intended to complement the detailed requirements on Pillar 1 of the proposed RBC regime, and cover areas including the valuation basis, eligibility of capital, capital requirements, as well as the fund requirements under the amended section 22 and new section 25AAB as amended and added by the Amendment Ordinance respectively. The draft Rules are largely brought from the latest technical specifications for QIS.

5 The draft Insurance (Valuation and Capital) Rules contain 7 parts –

- Part 1 – preliminary – this Part sets out the definition of terms and the scope of application of these Rules;

- Part 2 – capital adequacy – this Part prescribes capital requirements that the capital base is required to be sufficient to meet prescribed capital amount ("PCA");

- Part 3 – determination of capital base – this Part prescribes the determination of capital base including the eligibility of capital and categorizing capital into tiers based on the quality of capital;

- Part 4 – valuation of assets and liabilities – this Part prescribes the valuation basis of assets and liabilities, including the insurance liabilities;

- Part 5 – determination of PCA – this Part prescribes the determination of PCA based on the risk capital amounts for market risk, life insurance risk,

general insurance risk, counterparty default and other risk, and operational risk;

- Part 6 – fund requirements – this Part prescribes the amount of assets required to be held for the statutory funds maintained for long term business and general business; and

- Part 7 – transitional arrangement – this Part provides for the transitional arrangement for insurers to fulfil the new capital requirement in a gradual manner subject to IA's approval.

6 The draft Insurance (Submission of Statements, Reports and Information) Rules are intended to prescribe the information required to be submitted to the IA under Pillar 3 of the RBC regime, including the financial statements required under the Companies Ordinance or required in the place of incorporation or domiciliation, regulatory returns, and actuarial reports. The draft Rules also cover the submission requirements (in relation to timeframe, frequency and manner), the auditor's reporting requirements for specified forms within regulatory returns, and the transitional arrangement.

7 The two draft Rules are published for consultation. A feedback template is included in **Annex C**.

8 The two draft Rules will be refined and finalized after taking into account the feedback collected during this public consultation. After that, the finalized draft Rules will be published in the Gazette and submitted to the Legislative Council for negative vetting.

9 The Amendment Ordinance, together with the relevant subsidiary legislation, is expected to commence operation in full on a date to be appointed by the Secretary for Financial Services and the Treasury after the passage of the two Rules by the Legislative Council in 2024.

CHAPTER 2 – THE PROPOSED RISK-BASED CAPITAL REGIME FOR INSURERS

Background

10 The Insurance Authority ("IA") is a member of the International Association of Insurance Supervisors ("IAIS") and adheres to the Insurance Core Principles ("ICPs") promulgated by the IAIS, which provide an internationally accepted framework for insurance supervision.

11 The then Office of the Commissioner of Insurance conducted consultation and proposed a new risk-based capital ("RBC") regime for Hong Kong's insurance industry in 2014-2015 ("Framework Consultation")[1]. The Framework Consultation proposed adopting three-pillar framework for the RBC regime –

- Pillar 1 refers to the quantitative assessment, including the valuation, capital quality, and capital requirements;
- Pillar 2 refers to the qualitative assessment, including enterprise risk management; and
- Pillar 3 refers to the reporting requirements to the IA, as well as the public disclosure requirements.

12 With general support from the insurance industry to move towards a risk sensitive capital framework as concluded in the Framework Consultation in 2015, the IA started to develop the detailed requirements for the RBC regime. Subsequent to the Framework Consultation, the IA conducted three rounds of quantitative impact study ("QIS")[2] in consultation with the industry with a view to ensuring the proposed detailed requirements could achieve the following overarching principles –

- aligning with ICP, including ICP 14 on the valuation and ICP 17 on the capital adequacy[3], and other international standards;
- fostering risk culture for resilience of the insurance industry and enhancing protection of policy holders; and
- taking account of market landscape, needs and competitiveness of the insurance industry of Hong Kong.

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[1] The consultation paper and consultation conclusion on a risk-based capital framework can be found at the following webpages:
consultation paper – https://www.ia.org.hk/en/infocenter/files/rbc_consultation_paper.pdf
consultation conclusion – https://www.ia.org.hk/en/infocenter/files/rbc_consultation_conclusions.pdf

[2] The three rounds of QIS were based on the financial positions of insurers as of 31 December 2016, 31 December 2017, and 31 December 2018 respectively. An additional round of QIS in a smaller scope, focusing on long term business, was conducted in 2020.

[3] ICP 14 recognizes economic valuation as the valuation for assets and liabilities for solvency purposes.
ICP 17 sets out approaches and regulatory requirements for the assessment of solvency and requires supervisors to impose triggers of solvency level for which supervisory intervention should be taken on capital adequacy grounds.

13 After technical discussions with the industry and based on observations from the three rounds of QIS, the IA has come to a broad consensus with the industry on the detailed requirements, and considers that the proposed RBC regime is appropriate for the insurance industry in Hong Kong.

14 To enable the implementation of the RBC regime, the Insurance (Amendment) Ordinance 2023 ("Amendment Ordinance") was enacted in July 2023, which, among others, empowers the IA to make rules to prescribe detailed requirements in subsidiary legislation. The two draft rules attached to this consultation, namely, Insurance (Valuation and Capital) Rules and Insurance (Submission of Statements, Reports and Information) Rules respond to the quantitative assessment under Pillar 1 and the reporting requirements to the IA under Pillar 3 based on the three-pillar framework[4] respectively.

Draft Insurance (Valuation and Capital) Rules

15 Pursuant to the new section 3C and section 10 of the Insurance Ordinance ("IO") as added and amended by the Amendment Ordinance, the IA may by rules prescribe valuation and capital requirements to an applicable insurer respectively. The current Insurance (Determination of Long Term Liabilities) Rules (Cap. 41E), Insurance (Margin of Solvency) Rules (Cap. 41F) and Insurance (General Business) (Valuation) Rule (Cap. 41G) are no longer applicable and to be repealed under the RBC regime. In this respect, the IA proposes to make new rules in relation to valuation and capital requirements.

16 The IA considers that marine insurers, captive insurers and Lloyd's have uniqueness in capital features, and policy holders' characteristics, these insurers are proposed to be subject to a capital regime that is different from other authorized insurers and is fit for their operating circumstances. Therefore, the IA proposes to make the following draft rules, and this consultation focuses on the draft Insurance (Valuation and Capital) Rules, with the other two draft rules to be next consulted –

(a) Insurance (Valuation and Capital) Rules (Cap. 41R) – it covers the capital requirements for insurers other than marine insurers and captive insurers;
(b) Insurance (Marine Insurers and Captive Insurers) Rules (Cap. 41U) – it covers the capital requirements for marine insurers and captive insurers; and
(c) Insurance (Lloyd's) Rules (Cap. 41V) – it covers the capital requirements for Lloyd's.

17 Apart from the capital requirements, pursuant to the new section 3C of the IO as added by the Amendment Ordinance, the IA may make rules to provide for the determination of the value of assets and the amount of liabilities for insurers. Also, pursuant to the amended section 22 and new section 25AAB as amended and added by the Amendment Ordinance respectively, the IA may by rules prescribe the amount of assets that is required to be held with the funds maintained in accordance with the new section 21B as added by the Amendment

[4] The IA has implemented the Pillar 2 requirements by way of Guideline on Enterprise Risk Management (GL 21).

Ordinance in respect of long term business, and new section 25AA as added by the Amendment Ordinance in respect of general business respectively ("Fund Requirements").

18 Chapter 3 outlines the draft Insurance (Valuation and Capital) Rules (see **Annex A**). Given that the valuation of assets and liabilities and Fund Requirements are closely related to the determination of capital requirements, the draft Rules are intended to complement the detailed requirements of the proposed RBC regime, and cover areas including the valuation basis, eligibility of capital, capital requirements and Fund Requirements. The draft Rules are largely brought from the latest technical specifications for QIS, with some necessary updates.

Draft Insurance (Submission of Statements, Reports and Information) Rules

19 In order to commensurate with the proposed capital regimes, the existing regulatory returns as stipulated in the Schedule 3 to the IO are no longer applicable and regulatory returns are required to be updated. Pursuant to the amended section 17 as amended by the Amendment Ordinance, the IA may by rules prescribe submission requirement of any statements, reports or other information.

20 Given the need of timely updates of the submission requirements in response of changes in prevailing market environment and international standards, it is proposed that the draft Insurance (Submission of Statements, Reports and Information) Rules prescribe the information required to be submitted, the manner of the submission and the auditor's reporting requirements, while the details of the forms are specified by the IA under section 137 of the IO. The finalized forms will be published at the IA's website as well as at the online communication system.

21 In conjunction with the amended sections 18 and new section18A of the IO as amended and added by the Amendment Ordinance, the draft Insurance (Submission of Statements, Reports and Information) Rules also cover the submission requirements of the report and statement of the actuarial investigation and actuarial review in respect of long term business and general business respectively. Details of the contents of the actuarial report will be elaborated by guidelines to be made by the IA.

22 Chapter 4 outlines the draft Insurance (Submission of Statements, Reports and Information) Rules (see **Annex B**), which are intended to prescribe the information required to be submitted to the IA, as well as cover the submission requirements (including timeframe, frequency and manner) and audit requirements.

Consultation

23 The two draft Rules will be refined and finalized after taking into account the feedback collected during this public consultation. After that, the finalized draft Rules will be published in the Gazette and submitted to the Legislative Council

for negative vetting.

24 The Amendment Ordinance, together with the relevant subsidiary legislation, is expected to commence operation in full on a date to be appointed by the Secretary for Financial Services and the Treasury after the passage of the two Rules by the Legislative Council in 2024.

CHAPTER 3 – OVERVIEW OF THE DRAFT INSURANCE (VALUATION AND CAPITAL) RULES

25 The draft Insurance (Valuation and Capital) Rules ("**draft Rules**" as referred in this chapter) contain 7 parts, of which the details for each part are further elaborated in following paragraphs –

Part 1 – preliminary
Part 2 – capital adequacy
Part 3 – determination of capital base
Part 4 – valuation of assets and liabilities
Part 5 – determination of prescribed capital amount
Part 6 – fund requirements
Part 7 – transitional arrangement

Part 1 – Preliminary (Rules 1 to 4)

26 Part 1 mainly –

(a) provides the commencement of the draft Rules;
(b) sets out the defined expressions that are necessary for the interpretation of the draft Rules;
(c) provides the scope of application of the draft Rules on insurers other than marine insurers, captive insurers, special purpose insurers and Lloyd's; and
(d) provides the basis in applying the draft Rules for HK insurers, designated insurers and non-HK insurers (other than designated insurers). That is to require, broadly, HK insurers and designated insurers to apply the draft Rules on company basis, while non-HK insurers (other than designated insurers) to apply the draft Rules on Hong Kong branch basis.

Part 2 – Capital Adequacy (Rules 5 to 6)

27 Rule 5 provides that an applicable insurer must ensure its capital base is not less than each of prescribed capital amount ("PCA"), minimum capital amount ("MCA") and $20,000,000.

28 By virtue of the new section 13AA(2) of the IO as added by the Amendment Ordinance, rule 6 provides that if an applicable insurer is in the view that it is at risk in contravene with rule 5, or believes that a contravention with rule 5 has been occurred, it must immediately notify the IA.

Part 3 – Determination of Capital Base (Rules 7 to 10)

29 Part 3 provides that capital base composes of Unlimited Tier 1 capital, Limited Tier 1 capital and Tier 2 capital, where only those capital resources or instruments meeting the tiering criteria of capital may be part of the capital base. Part 3, together with Schedules 1 to 3 to the draft Rules, sets out the

criteria for being classified as respective tier of capital and the regulatory adjustments based on the principle of quality of capital –

(a) Rule 8 and Schedule 1 – cover Unlimited Tier 1 capital;
(b) Rule 9 and Schedule 2 – cover Limited Tier 1 capital; and
(c) Rule 10 and Schedule 3 – cover Tier 2 capital.

30 Rule 7 further provides the composition of capital base, where –

(a) Limited Tier 1 capital must not exceed 10% of the PCA; and
(b) Tier 2 capital must not exceed 50% of the PCA.

Consultation question 1
Do you agree with the proposal on the composition of capital base and the amount of the capital to be maintained by an applicable insurer?

Part 4 – Valuation of Assets and Liabilities (Rules 11 to 36)

31 Part 4 of the draft Rules prescribes the valuation basis of assets and liabilities as required under the IO, where rules 12 to 32 cover the valuation method of insurance liabilities.

32 In applying the valuation method of insurance liabilities, an applicable insurer is required to first unbundle a contract of insurance in accordance with rule 13. Under rule 13, for insurance liabilities in relation to long term business, any contract of insurance which combines long term business, additional business of the nature of class 1 or 2, funds on deposit or prepaid premium is required to be unbundled.

33 For each unbundled part, in accordance with rule 14, an applicable insurer must determine the boundary of the insurance liabilities by applying the principles relating to contract boundary under the International Financial Reporting Standard 17 to each unbundled part and treating the unbundled part as if it is a separate contract.

34 The valuation method of long term insurance liabilities in rules 15 to 26 includes the determination of current estimate, time value of options and guarantees, and margin over current estimate. Rules 23, 24, and Schedule 5 to the draft Rules provide that an applicable insurer may derive the discount rate by applying matching adjustment as a parallel shift of the specified risk-free yield curve for the purpose of valuing the long term insurance liabilities.

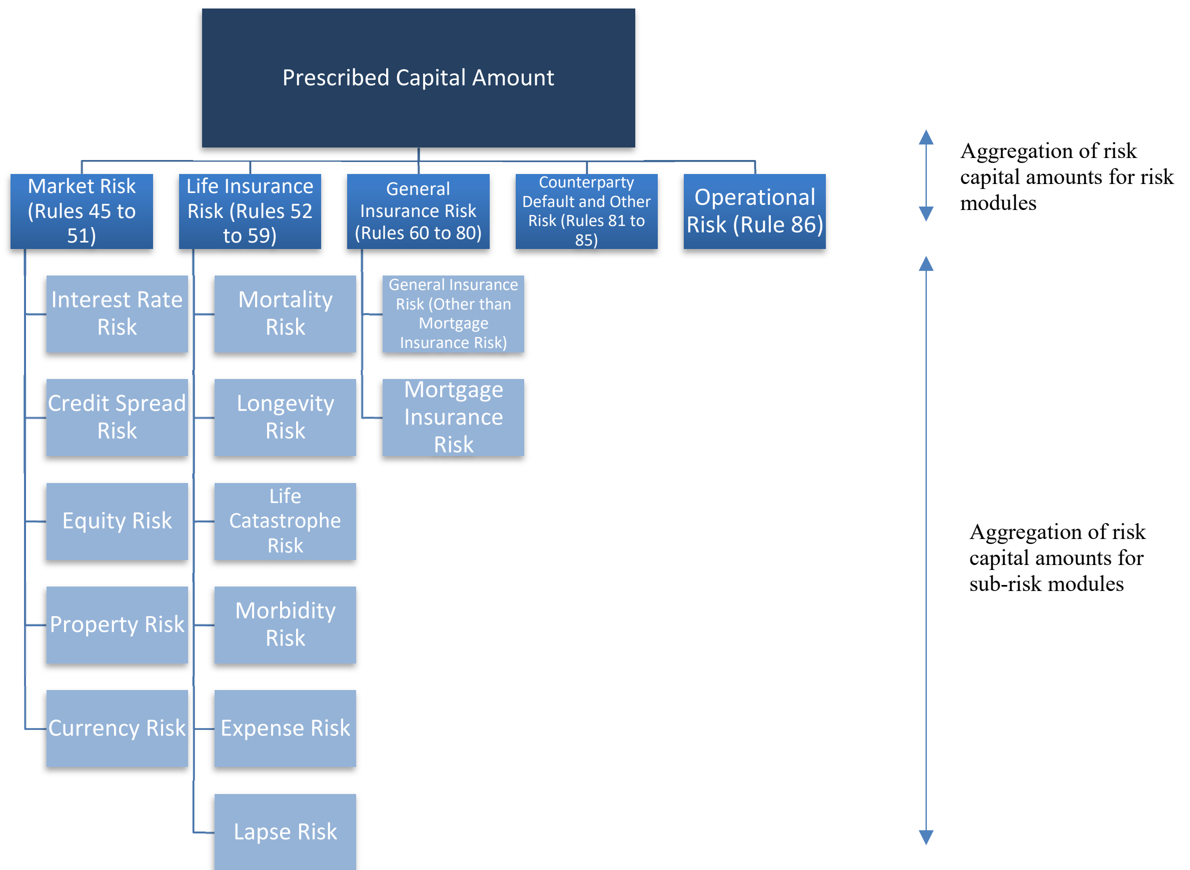
35 The valuation method of general insurance liabilities in rules 27 to 32 includes the determination of current estimate, and margin over current estimate. Rule 30 requires the general insurance liabilities to be valued separately for outstanding claims liabilities and premium liabilities. An applicable insurer may discount the expected future cash flows using a specified risk-free yield curve.

36 Rules 33 to 36 provide the valuation of other items including reinsurance recoverables, deferred tax assets and liabilities, and contingent liabilities.

Consultation question 2   Do you agree with the proposed approach and basis on the valuation of assets and liabilities?

Part 5 – Determination of Prescribed Capital Amount (Rules 37 to 86)

37 Part 5 of the draft Rules prescribes the determination of the PCA. The PCA is determined by aggregating the risk capital amounts for each risk module with respect to market risk, life insurance risk, general insurance risk, counterparty default and other risk, and operational risk, taking account of diversification benefits. Similarly, the risk capital amounts for each risk module are determined by aggregating the risk capital amounts for each sub-risk module. The below diagram illustrates the list of all risk modules and the corresponding sub-risk modules.



38 The principles for determining the relevant risk capital amounts are set out in rules 38 to 44, whereby an applicable insurer –

(a) is required to apply look-through approach on underlying risk (rules 38 and 39);
(b) may recognize the insurance risk mitigation effect or financial risk mitigation effect (rules 41 and 42);
(c) may reflect the loss absorbing capacity of future discretionary benefits in relation to long term business, subject to a cap (rule 43); and
(d) may reflect the loss absorbing capacity of deferred tax (rule 44).

39 The risk capital amount for market risk (rules 45 to 51) is determined by aggregating, taking account of diversification benefits, the risk capital amounts for each of the following sub-risk modules by applying the prescribed stresses in relation to –

(a) interest rate risk,
(b) credit spread risk,
(c) equity risk,
(d) property risk, and
(e) currency risk.

40 An applicable insurer which applies matching adjustment in the valuation of long term insurance liabilities is required to recalculate the matching adjustment under the stressed scenarios when determining the risk capital amounts for interest rate risk, credit spread risk and equity risk.

41 The risk capital amount for life insurance risk (rules 52 to 59) is determined by aggregating, taking account of diversification benefits, the risk capital amounts for each of the following sub-risk modules by applying the prescribed stresses in relation to –

(a) mortality risk,
(b) longevity risk,
(c) life catastrophe risk,
(d) morbidity risk,
(e) expense risk, and
(f) lapse risk.

42 In determining the risk capital amount for life insurance risk, an applicable insurer is required to group its contracts of insurance into homogeneous risk groups for those with similar risk characteristics such that there is no significant offset between the risks associated with the contracts of insurance in the same group.

43 The risk capital amount for general insurance risk (rules 60 to 80) is determined by aggregating, taking account of diversification benefits, the risk capital amounts for each of the following sub-risk modules by applying the prescribed risk factors in relation to –

(a) reserve and premium risk for general business other than mortgage insurance,
(b) catastrophe risk for general business other than mortgage insurance, and

(c) mortgage insurance risk.

44 An applicable insurer may apply for the approval from the IA to adopt its own assessment approach for catastrophe risk for general business other than mortgage insurance in lieu of standard factor approach. The approval criteria will be elaborated in a guideline issued by the IA.

45 The risk capital amount for counterparty default and other risk (rules 81 to 85) is determined by adding the risk capital amounts for the relevant risk exposures from balance sheet items (except for deferred tax assets and right-of-use assets). Risk exposures subject to counterparty default and other risk include deposits with a bank and reinsurance recoverables and receivables.

46 For derivatives, regardless of their fair value being positive or negative, an applicable insurer must determine the relevant risk capital amounts by reference to the respective notional amounts.

47 The risk capital amount for operational risk (rule 86) is determined by reference to the current estimate of insurance liabilities, annual gross premiums and premium growth, subject to a cap. A three-year average of the current estimate of insurance liabilities should be taken to reduce the volatility of risk capital amount arising from the change of the current estimate.

48 An applicable insurer is required to map the credit rating from rating agencies to obtain the appropriate credit rating band in accordance with Schedule 6. Schedule 6 also provides the power for the IA to approve an insurer to use its internal assessment of assigning credit rating band. The approval criteria will be provided at a later stage subsequent to the implementation of the RBC regime.

49 As reflected in the amended section 22 and new section 25AAB of the IO as amended or added by the Amendment Ordinance, rule 37 provides that the part of the reinsurance business with offshore risk maintained in a designated fund under new sections 21B(5)(e) and 25AA(4)(a) as added by the Amendment Ordinance is excluded from the calculation of PCA.

> Consultation question 3
>
> Do you consider if it is appropriate for the categorization of the respective risk modules and the corresponding stress factors or risk factors for long term business and general business in the determination of PCA?

Part 6 – Fund Requirements (Rule 87)

50 An applicable insurer must determine the fund-level minimum capital amount for the purposes of new sections 22(3B)(b), 22(3C)(b) and 25AAB(3)(b) of the IO as added by the Amendment Ordinance. Fund-level minimum capital amount is determined by allocating the MCA to all funds maintained by the insurer under the new sections 21B and 25AA, where appropriate, as added

under the Amendment Ordinance.

> Consultation question 4
>
> Do you consider if it is appropriate that the amount to be held at the fund level under new sections 22(3B)(b), 22(3C)(b) and 25AAB(3)(b) of the IO is determined by allocating the insurer's MCA to each of the corresponding funds?

Part 7 – Transitional Arrangement (Rule 88)

51 As reflected from the result of the latest QIS and the capital projection of insurers in their Own Risk and Solvency Assessment reports, most of the insurers are able to comply with the proposed PCA, with very few which may need more time to get compliant. In order to provide for a smooth transition from the existing capital regime to the proposed RBC regime, an applicable insurer may apply for the transitional arrangement. The IA, after giving approval for the transitional arrangement, must gazette the list of insurers which are subject to transitional arrangement for transparency. Also, the IA may, by a written notice, refrain the insurer subjecting to transitional arrangement from dividend payment to its shareholder or redemption payment in relation to Tier 1 Capital.

52 Regardless of the transitional arrangement, the MCA and fund-level minimum capital amount for the fund requirements remain the same amount as determined by these Rules.

> Consultation question 5
>
> Do you agree it is required for an insurer to make application for using the transitional arrangement under Cap. 41R for its smooth transition from existing capital regime to the proposed RBC regime?

CHAPTER 4 – OVERVIEW OF THE DRAFT INSURANCE (SUBMISSION OF STATEMENTS, REPORTS AND INFORMATION) RULES

53 The draft Insurance (Submission of Statements, Reports and Information) Rules ("**draft Rules**" as referred in this chapter) aim to provide the information that is required to be submitted by authorized insurers, the timeframe, frequency and manner of submission, audit requirements, and the reporting requirements in relation to actuarial investigations or reviews. The draft Rules are applicable to all authorized insurers including marine insurers, captive insurers and Lloyd's unless otherwise specified. Details for each rule are further elaborated in following paragraphs.

54 Rule 1 provides the commencement of the draft Rules.

55 Rule 2 sets out the defined expressions that are necessary for the interpretation of the draft Rules.

56 Rule 3 requires an authorized insurer to submit financial statements as required under the Companies Ordinance (Cap. 622) or required in the place of its incorporation or domiciliation. That means, for example, where the insurer is required to submit financial statements prepared under Hong Kong Financial Reporting Standards under the Companies Ordinance, the same set of financial statements is required to be submitted to the IA.

57 Rule 4 provides that an authorized insurer is required to submit annual, quarterly, or monthly returns, as the case may be. The returns submissions are required to be signed or approved by the controller and key person in financial control function. An insurer may determine to have director(s) to sign or approve the submission in place of controller or key person in financial control function or both. The act of signing or approval may be in digital form and the IA may allow multiple factor authentication to be applied at the designated online communication system approved by the IA.

58 Given the need for timely updates of the regulatory returns in response to changes in market environment and international standards, it is proposed that the IA specifies details of the forms for regulatory returns by virtue of section 137 of the IO. The finalized forms will be published at the IA's website as well as at the online communication system approved by the IA.

Consultation question 6
Do you agree that the contents of the regulatory returns required under Cap. 41S are to be contained in forms specified by IA to allow flexibility for future changes?

59 Rule 5 provides the auditor's reporting requirements for specified forms within regulatory returns, and lays down the contents and statement containing the opinion required to be given by auditors. The IA will gazette the list of specified forms that require auditor's report.

60 In conjunction with new sections 18 and 18A of the IO as amended and added by the Amendment Ordinance, rules 6 and 7 provide the submission requirements of the report and statement of the actuarial investigation and actuarial review in respect of long term business and general business respectively. Details of the contents of the actuarial report will be elaborated by guidelines issued by the IA.

61 To allow the authorized insurers more time to prepare the submission requirements at the initial phase of the implementation of the RBC regime, the draft Rules provide transitional arrangement for the submission of returns, auditor's report, and actuarial reports.

Consultation question 7 Do you agree with providing transitional arrangement under Cap. 41S for a smooth transition of the industry from existing capital regime to the proposed RBC regime?

Insurance (Valuation and Capital) Rules (Cap. 41R)
(Cap. 41, section 129(1))

Part 1 – Preliminary

1. Commencement

These Rules come into operation on the day on which section 11 of the Insurance (Amendment) Ordinance 2023 comes into operation.

2. Interpretation

(1) In these Rules –

account balance (帳戶結餘), in relation to funds on deposit and prepaid premiums, means the accumulation of deposits or premiums, as the case may be, including interests credited, if any;

affiliate (附屬成員) in relation to an applicable insurer means –
(a) an entity that –
 (i) has a beneficial interest in, or controls, 20% or more of the total number of ordinary shares in the insurer; or
 (ii) is entitled to exercise, or control the exercise of, 20% or more of the voting power at a general meeting of the insurer; or
(b) an entity of which –
 (i) the insurer or an entity mentioned in paragraph (a) has a beneficial interest in, or controls, 20% or more of the total number of ordinary shares; or
 (ii) the insurer or an entity mentioned in paragraph (a) is entitled to exercise, or control the exercise of, 20% or more of the voting power at a general meeting;

applicable accounting standards (適用會計準則) means, as the context requires –
(a) the Hong Kong Financial Reporting Standards issued by the Hong Kong Institute of Certified Public Accountants, as in force from time to time; or
(b) the International Financial Reporting Standards issued by the International Accounting Standards Board, as in force from time to time;

applicable insurer (適用保險人) means an authorized insurer or a company to which these Rules apply as provided in rule 3;

as a whole (整體), in relation to an applicable insurer which is –
(a) a HK insurer or a designated insurer, means the business carried on by the insurer, including its assets and liabilities and capital resources and those parts required to be consolidated for these Rules, treated as a single unit; and

(b) a non-HK insurer but not a designated insurer, means only the business carried on in or from Hong Kong of the insurer and its assets, liabilities and capital resources related to that business, treated as a single unit;

base scenario (基本情景), in relation to Part 5, means a scenario before any stress is applied;

bond (債券) means an interest-bearing or zero-coupon debt security –
(a) which is an acknowledgment of a debt promising payment of a specified sum to the holder of the debt security; and
(b) which describes a time to maturity which is, or will become, definite;

consolidated subsidiary (綜合附屬公司), in relation to an applicable insurer, means a subsidiary of the insurer which is required to be consolidated under rule 4;

contracts of insurance (保險合約) include contracts of reinsurance unless otherwise specified;

contractual option (合約內選擇權) means a right to change the benefits or other terms and conditions under a contract of insurance, that can be exercised at the choice of a party to the contract (generally the policy holder), on terms that are established in advance. Options may be on an opt-in or opt-out basis, where an explicit action may not be required to exercise an option;

credit rating band (信用評級等級) refers to the credit rating band based on the credit rating of an instrument or a party as mapped in accordance with Schedule 6;

current estimate (現時估計值) in relation to insurance liabilities, means the current estimate of long term insurance liability as determined in accordance with rule 16 for long term insurance liabilities, or the current estimate of general insurance liability as determined in accordance with rule 28 for general insurance liabilities;

deterministic current estimate (確定式現時估計值), in relation to a contract of insurance with options and guarantees, means the current estimate before consideration of the time value of options and guarantees;

dynamic policy holder behaviour (動態保單持有人行為) means policy holder behaviour that is assumed to react and vary in response to one or more factors (such as changes in market environment);

eligible bilateral netting agreement (合資格雙邊淨額結算協議) means agreement recognized under rule 82(4);

eligible credit derivative contract (合資格信用衍生工具合約) means credit derivative contract recognized under rule 84(4);

eligible collateral (合資格抵押品) means collateral recognized under rule 83(4);

eligible guarantee (合資格擔保) means guarantee recognized under rule 84(4);

expense risk (開支風險), in relation to life insurance risk, means the risk of loss due to a reduction in the net asset value of an applicable insurer resulting from an increase in expenses incurred in servicing contracts of insurance;

financial guarantee (財務保證) means the possibility for a party to a contract to pass losses to the other party or to receive additional benefits from the other party as a result of a change in a financial variable (either alone or in conjunction with other variables);

funds on deposit (存款資金) means a feature of a contract of insurance which provides the policy holder an option to deposit a portion of the benefits received under the contract into an account to earn interest, and to withdraw such deposit without any surrender penalty. To avoid doubt, funds on deposit do not include prepaid premium;

general insurance liability (一般保險負債) means a liability of an applicable insurer arising from –

(a) general business of the nature specified in Part 3 of Schedule 1 of the Ordinance; and

(b) in relation to a contract of insurance mentioned in paragraph 3 of Schedule 1 of the Ordinance, additional business of the nature of Class 1 or 2 specified in Part 3 of Schedule 1 of the Ordinance not being long term insurance liability;

general insurance lines of business (一般保險業務線) means lines of business being general business as defined in Schedule 9;

gross of reinsurance (未減除再保險前) means before taking into account the effect of a contract of reinsurance under which an applicable insurer is a cedant;

homogenous risk group (同類風險組別) means a collection of insurance liabilities grouped in accordance with rule 53;

insurance liabilities (保險負債) refers to the long term insurance liabilities and general insurance liabilities of an applicable insurer;

lapse risk (退保風險), in relation to life insurance risk, means the risk of loss due to a reduction in the net asset value of an applicable insurer resulting from a change in the expected exercise rates of policy holder options which can change the value of future cash flows;

life catastrophe risk (人壽巨災風險), in relation to life insurance risk, means the risk of loss due to a reduction in the net asset value of an applicable insurer resulting from a sudden significant increase in mortality rates stemming from extreme or irregular events;

Limited Tier 1 capital instrument (有限制一級資本工具) means a capital instrument that meets the qualifying criteria set out in Schedule 2;

longevity risk (長壽風險), in relation to life insurance risk, means the risk of loss due to a reduction in the net asset value of an applicable insurer resulting from a decrease in mortality rates;

long term business fund (長期業務基金) means a separate fund maintained by an applicable insurer carrying on long term business under Part IV of the Ordinance;

long term insurance liability (長期保險負債) means a liability of an applicable insurer arising from –

(a) long term business of the nature specified in Part 2 of Schedule 1 of the Ordinance; or

(b) in relation to a contract of insurance mentioned in paragraph 3 of Schedule 1 of the Ordinance, additional business of the nature of Class 1 or 2 specified in Part 3 of Schedule 1 of the Ordinance with a long boundary; and

(c) includes any funds on deposit and prepaid premiums;

MA portfolio (對配調整組合) means a matching adjustment portfolio which is a portfolio of long term insurance liabilities and supporting assets and is identified by an applicable insurer's asset and liability management practice;

marine insurer (海事保險人) has the meaning given by rule 2 of Insurance (Marine Insurers and Captive Insurers) Rules (Cap. 41U);

matching adjustment (對配調整), in relation to an MA portfolio, means the adjustment added to a risk-free yield curve used by an applicable insurer to derive the discount rate for determining its long term insurance liabilities in the portfolio;

morbidity risk (發病率風險), in relation to life insurance risk, means the risk of loss due to a reduction in the net asset value of an applicable insurer resulting from an increase in morbidity rates;

mortality risk (死亡風險), in relation to life insurance risk, means the risk of loss due to a reduction in the net asset value of an applicable insurer resulting from an increase in mortality rates;

net asset value (資產淨值) means the value of assets less liabilities;

net of reinsurance (已減除再保險) means after taking into account the effect of a contract of reinsurance under which an applicable insurer is a cedant;

non-consolidated subsidiary (非綜合附屬公司) in relation to an applicable insurer means a subsidiary of the insurer which is not a consolidated subsidiary;

onshore reverse mortgage insurance (在岸逆按揭保險) has the meaning given by rule 71;

portfolio investment (組合投資) means an investment in a scheme, fund or similar arrangement which invests in and holds assets or liabilities that are not directly held by its investors, but the profits, income or other returns of the investment in the scheme, fund or similar arrangement, are dependent on the underlying assets or liabilities;

prepaid premiums (預付保費) means premiums paid by policy holders to an applicable insurer in relation to contracts of insurance, prior to the dates on which such premiums are required to be paid under the terms and conditions of such contracts and where such premiums have not yet been earned by the insurer, including any interest credited;

professional reinsurer (專業再保險人) means an authorized insurer carrying on only reinsurance business in or from Hong Kong;

property (房產), in these Rules, unless otherwise specified, means land and buildings. To avoid doubt, property damage has the meaning given by Schedule 9;

qualified LTA (具資格長期調整) means qualified long term adjustment which is the spread above risk-free yield curve recognized for holding equities and properties in an MA portfolio as determined in accordance with section 10 of Schedule 5;

reciprocal cross holding (互相交叉持有) means an arrangement –

(a) under which –
    (i) an applicable insurer holds capital instruments issued by a financial entity,
    (ii) the entity also holds capital instruments issued by the insurer; and
(b) which results in an artificial inflation of the capital position of the insurer;

recognized multilateral development bank or supranational organization (認可的多邊開發銀行或超國家機構) refers to a bank or an organization in Schedule 10;

regulated financial entity (受規管財務實體) means a financial institution that is subject to regulatory requirements on solvency under the laws of a jurisdiction which require the entity to maintain adequate regulatory capital to support the provision of financial services or the conduct of financial activities, comparable to those prescribed for authorized insurers under the Ordinance and these Rules, including without limitation –

(a) an authorized insurer;

(b) a licensed insurance broker company;
(c) an authorized institution within the meaning of the Banking Ordinance (Cap. 155); and
(d) a licensed corporation within the meaning of the Securities and Futures Ordinance (Cap. 571);

reinsurance recoverables (再保攤回應收) mean the portion of insurance liabilities that is expected to be recovered from reinsurers under contracts of reinsurance;

restricted capital component (受限制資本組成部分) means, in relation to an applicable insurer carrying on long term business, the capital resources comprising a separate sub-fund of participating business maintained by the insurer pursuant to section 21B(3), (6) or (9) of the Ordinance, for which the allocation to policy holders or shareholders has not yet been determined and which are restricted from being used to meet liabilities or losses arising outside the sub-fund on a going concern basis. To avoid doubt, it does not include the present value of expected future distributions to shareholders;

retained earnings (保留盈利) means the retained earnings based on the valuation in accordance with Part 4, unless otherwise specified;

sovereign (官方實體) means –
(a) the Government;
(b) the central government of a jurisdiction;
(c) the central bank of a jurisdiction; or
(d) a recognized multilateral development bank or supranational organization;

specified risk-free yield curve (指明無風險收益率曲線) means a risk-free yield curve constructed in accordance with Schedule 4 for a specified currency set out in column 1 of Table 1 of Schedule 4;

Tier 1 capital (一級資本) means the total of Unlimited Tier 1 capital under rule 8 and Limited Tier 1 capital under rule 9;

Tier 2 capital instrument (二級資本工具) means a capital instrument that meets the qualifying criteria set out in Schedule 3;

universal life business (萬用壽險業務) means long term business which is not participating business, and which features a savings component designed to accumulate an account value over time. The account value is credited with periodic interest credits (at a declared crediting interest rate) which may vary from time to time (and may be subject to a minimum if a guaranteed rate is offered), and is reduced by, where applicable, cost of insurance charges and other policy charges and fees;

Unlimited Tier 1 capital instrument (無限制一級資本工具) means a capital instrument that meets the qualifying criteria set out in Schedule 1;

unrated (無評級), in relation to an instrument or party, means no credit rating has been assigned to the instrument or party by a rating agency.

(2) A reference in these Rules to a table or formula followed by a number is a reference to the table or formula, as the case may be, bearing that number in these Rules.

(3) Where, under a provision of these Rules, the prior consent of the Authority is required by an applicable insurer in respect of any matter, the insurer shall seek such prior consent by making an application to the Authority, and in the form and manner described in these Rules (where applicable).

(4) If any matter referred to in a provision of these Rules includes qualifying terms such as "adequate", "key", "practical", "realistic", "reasonably", "relevant", "significant", "substantive" or "sufficient", the interpretation of that qualification shall take into account any relevant guidelines or codes of practice issued under the Ordinance which are applicable to that provision

(5) Individual provisions, Parts, Divisions, Subdivisions and Schedules of these Rules may contain interpretation provisions which have application in accordance with their terms.

3. Application

(1) Subject to subrule (2), these Rules apply to –
  (a) authorized insurers; and
  (b) any company that makes an application under section 7 of the Ordinance for authorization.

(2) These Rules do not apply to –
  (a) marine insurers, except to the extent provided in the Insurance (Marine Insurers and Captive Insurers) Rules;
  (b) captive insurers, except to the extent provided in the Insurance (Marine Insurers and Captive Insurers) Rules;
  (c) Lloyd's, except to the extent provided in the Insurance (Lloyd's) Rules; or
  (d) special purpose insurers.

4. Basis for application

(1) For the purpose of valuing its assets and liabilities, the capital resources that make up its capital base and calculating its capital requirements in accordance with these Rules, an applicable insurer which is a HK insurer or a designated insurer must consolidate its assets, liabilities and capital resources together with those of its subsidiaries, except for subsidiaries which are regulated financial entities.

(2) To avoid doubt, in applying these Rules, an applicable insurer referred in subrule (1) is required to include –
   (a) its assets, liabilities and capital resources related to any business it carries on from its places of business outside of Hong Kong; and
   (b) the assets, liabilities and capital resources of any consolidated subsidiaries.

(3) An applicable insurer which is a non-HK insurer but not a designated insurer is required to apply these Rules only in relation to the assets, liabilities and capital resources related to its business carried on in or from Hong Kong.

(4) All amounts and calculations in these Rules are based on Hong Kong dollars, unless otherwise specified.

Part 2 – Capital Adequacy

5. Capital Requirements

(1) For the purposes of section 10 of the Ordinance, subject to subrule (2), an applicable insurer must ensure at all times that its capital base as determined pursuant to Part 3 of these Rules is not less than each of –
   (a) the prescribed capital amount of the insurer as determined in accordance with Part 5 of these Rules;
   (b) the minimum capital amount of the insurer as determined in accordance with subrule (3); and
   (c) $20,000,000.

(2) If the Authority varies or relaxes any of the requirements in subrule (1) pursuant to section 10(3) or section 130(1) of the Ordinance, an applicable insurer must determine the requirement in accordance with subrule (1), but as so varied or relaxed.

(3) For the purposes of subrule (1)(b), the minimal capital amount is determined as 50% of the prescribed capital amount, unless the Authority by way of variation or relaxation mentioned in subrule (2) determines it to be different.

6. Applicable insurer must notify the Authority in respect of any contravention of rule 5

(1) An applicable insurer must immediately notify the Authority in writing on its directors, its controller(s) or any key person in control functions –
   (a) reaching a view that the insurer is at risk of contravening rule 5; or
   (b) knowing or having reason to believe that a contravention by the insurer of rule 5 has occurred;

   and provide the Authority with particulars of the notified case as required by the Authority.

Part 3 – Determination of Capital Base

7. Determination of capital base

(1) For the purposes of rule 5 –
  (a) the capital base of an applicable insurer is the sum of the insurer's –
    (i) Unlimited Tier 1 capital;
    (ii) Limited Tier 1 capital; and
    (iii) Tier 2 capital;
  (b) the Limited Tier 1 capital of an applicable insurer must not exceed 10% of the prescribed capital amount; and
  (c) the Tier 2 capital of an applicable insurer must not exceed 50% of the prescribed capital amount.

8. Unlimited Tier 1 capital

(1) Subject to subrule (3), the Unlimited Tier 1 capital of an applicable insurer that is a HK insurer or a designated insurer, is the sum of the following capital resources of such insurer –
  (a) the ordinary shares and other Unlimited Tier 1 capital instruments issued by the insurer that satisfy the criteria in Schedule 1;
  (b) share premium, if any, resulting from the Unlimited Tier 1 capital instruments issued by the insurer;
  (c) the insurer's retained earnings net of any dividends that are proposed to be declared or declared by the insurer;
  (d) the accumulated other comprehensive incomeof the insurer;
  (e) the fair market value of the insurer's equity-settled employee stock options provided that a corresponding expense is recorded in the profit and loss account or retained earnings of the insurer in accordance with applicable accounting standards;
  (f) the unrestricted and restricted reservesof the insurer; and
  (g) the minority or non-controlling interests arising from the Unlimited Tier 1 capital instruments issued by the consolidated subsidiaries of the insurer and held by third partiesand any interests generated by share issuance and subsequent changes in reserves of the issuing entities, if applicable.

(2) The Unlimited Tier 1 capital of an applicable insurer that is a non-HK insurer but not a designated insurer, is the sum of the surpluses of assets over liabilities of all funds maintained by the insurer pursuant to sections 21B and 25AA of the Ordinance and after the deduction of items specified in subrule (3).

(3) An applicable insurer must deduct the following amounts from its Unlimited Tier 1 capital, to the extent that such amounts have not already been excluded through valuation under Part 4 –
  (a) the amount of any goodwill that is recognized by the insurer as an intangible asset of the insurer, net of any associated deferred tax liabilities;

(b) the amount of other intangible assets of the insurer, net of any associated deferred tax liabilities;

(c) the amount of any assets of any defined benefit pension fund or plan, net of the amount of obligations under the fund or plan and any associated deferred tax liabilities;

(d) subject to subrule (4), the amount of deferred tax assets of the insurer net of deferred tax liabilities (excluding any deferred tax liabilities already taken into account under paragraphs (a), (b) or (c) of this subrule);

(e) the amount of any cumulative fair value gains or losses on liabilities of the insurer that are valued at fair value and that result from changes in the insurer's own credit risk;

(f) subject to subrule (5), the amount of any direct holdings, indirect holdings and synthetic holdings by the insurer of Unlimited Tier 1 capital instruments issued by a non-consolidated subsidiary of the insurer;

(g) subject to subrule (7), the amount of any relevant capital shortfall of the insurer in respect of its non-consolidated subsidiary as described in subrule (6);

(h) subject to subrule (5), the amount of any direct holdings, indirect holdings and synthetic holdings by the insurer of Unlimited Tier 1 capital instruments issued by an affiliate of the insurer which is a regulated financial entity;

(i) the amount of any direct holdings, indirect holdings and synthetic holdings by the insurer of Unlimited Tier 1 capital instruments issued by it, unless already derecognized;

(j) the amount of any direct holdings, indirect holdings and synthetic holdings by the insurer of Unlimited Tier 1 capital instruments issued by any regulated financial entity where that entity has a reciprocal cross holding with the insurer;

(k) the amount of any encumbered assets of the insurer in excess of the sum of its relevant on-balance sheet liabilities secured by those assets and any incremental capital requirement relating to those encumbered assets and liabilities;

(l) the amount of insurer's negative reserves at the level of total long term business or total general business, in excess of the corresponding prescribed capital amount in respect of insurance liabilities;

(m) the amount of insurer's restricted capital component in excess of the corresponding prescribed capital amount;

(n) the amount of insurer's reinsurance assets arising from arrangements deemed to constitute non-qualifying reinsurance;

(o) the amount of insurer's crypto assets and off-balance sheet commitments to purchase crypto assets; and

(p) any amount that would otherwise be deducted from the insurer's Limited Tier 1 capital pursuant to rule 9 but cannot be so deducted because the insurer does not have sufficient Limited Tier 1 capital to make such deduction.

(4) For the purpose of determining the amount of the deduction in subrule (3)(d), the deferred tax assets of the applicable insurer may only be netted with deferred tax liabilities of the insurer if the deferred tax assets and deferred tax liabilities relate to taxes levied by the same taxation authority and offsetting is permitted by the relevant taxation authority.

(5) For the purpose of determining the amount of the deduction for holdings of capital instruments issued either by a non-consolidated subsidiary of the applicable insurer in subrule (3)(f), or by an affiliate of the insurer which is a regulated financial entity in subrule (3)(h), the amount –
(a) includes capital instruments issued by the entity that are eligible to be counted towards satisfying regulatory capital requirements under the laws relating to regulatory capital to which the entity is subject;
(b) includes loans and credit facilities provided by the insurer to the entity and other credit exposures of the insurer to the entity;
(c) includes potential future holdings that the insurer will be obliged to purchase pursuant to an existing contractual commitment, irrespective of whether the obligation to purchase is contingent on certain conditions having to be satisfied; and
(d) excludes capital instruments issued by the entity that are not eligible to be counted towards satisfying regulatory capital requirements under the laws relating to regulatory capital to which the entity is subject.

(6) Subject to subrule (7), the relevant capital shortfall in respect of a non-consolidated subsidiary of an applicable insurer referred to in subrule (3)(g) is the amount by which the non-consolidated subsidiary fails to meet the regulatory capital requirements applying to it under the laws relating to regulatory capital to which the subsidiary is subject, multiplied by the insurer's proportional interest in the subsidiary based on ordinary shares held directly or indirectly by the insurer.

(7) To enable the Authority to monitor the potential impact of a deduction of a relevant capital shortfall from the Unlimited Tier 1 capital pursuant to subrule (3)(g), an applicable insurer must notify the Authority in writing as soon as practicable –
(a) upon it becoming aware of any breach by a non-consolidated subsidiary of its capital requirements which may result in a relevant capital shortfall having to be deducted from its Unlimited Tier 1 capital; and
(b) of any period for remedying the shortfall prescribed by the regulator to whose jurisdiction the subsidiary is subject, in relation to the regulatory capital requirement that applies to the subsidiary.

(8) In this rule –

crypto assets (加密資產) means digital assets that
(a) depend primarily on cryptography and distributed ledger technology or similar technology;
(b) are not digital currency issued by a central bank or by an entity that performs the functions of a central bank or by an entity authorized by a central bank on its behalf;
(c) are not digital currency issued by the government of a jurisdiction, or by an entity authorized by the government of a jurisdiction and acting pursuant to an authority to issue currency in that jurisdiction;
(d) have no intrinsic value and are not explicitly and directly linked to, or backed by, assets with intrinsic values; and

(e) the holdings of which do not give rise to a contract between the holder and another identified issuer;

encumbered asset (具有產權負擔的資產) means an asset that an applicable insurer pledges as collateral to a counterparty either to meet regulatory requirements or in order to participate in certain activities, including derivatives trading, borrowing, entering repurchase agreements, obtaining reinsurance, securing guarantees, obtaining letters of credit and holding assets in trust;

negative reserves (負儲備金) mean the insurance liabilities where the relevant cash inflows are larger than the relevant cash outflows as determined under Part 4;

non-qualifying reinsurance (非合格再保險) means a reinsurance arrangement that –
(a) does not provide sufficient transfer of risk;
(b) is provided by an entity that is not regulated; or
(c) belongs to arrangement that the Authority issues in a notice published at the Gazette, or in a notice to an applicable insurer.

9. Limited Tier 1 capital

(1) Subject to subrule (2), the Limited Tier 1 capital of an applicable insurer is the sum of the following capital resources of such insurer –
(a) the Limited Tier 1 capital instruments issued by the insurer that satisfy the criteria in Schedule 2; and
(b) share premium, if any, resulting from such Limited Tier 1 capital instruments issued by the insurer.

(2) An applicable insurer must deduct the following amounts from its Limited Tier 1 capital, to the extent that such amounts have not already been excluded through valuation under Part 4 –
(a) subject to subrule (3), the amount of any direct holdings, indirect holdings and synthetic holdings by the insurer of Limited Tier 1 capital instruments issued by a non-consolidated subsidiary of the insurer;
(b) subject to subrule (3), the amount of any direct holdings, indirect holdings and synthetic holdings by the insurer of Limited Tier 1 capital instruments issued by an affiliate of the insurer which is a regulated financial entity;
(c) the amount of any direct holdings, indirect holdings and synthetic holdings by the insurer of Limited Tier 1 capital instruments issued by it, unless already derecognized;
(d) the amount of any direct holdings, indirect holdings and synthetic holdings by the insurer of Limited Tier 1 capital instruments issued by any regulated financial entity where that entity has a reciprocal cross holding with the insurer; and
(e) any amount that would otherwise be deducted from the insurer's Tier 2 capital pursuant to rule 10 but cannot be so deducted because the insurer does not have sufficient Tier 2 capital to make such deduction.

(3) For the purpose of determining the amount of the deduction for holdings of capital instruments issued either by a non-consolidated subsidiary of the applicable insurer in subrule (2)(a), or by an affiliate of the insurer which is a regulated financial entity in subrule (2)(b), the amount –

(a) includes capital instruments issued by the entity that are eligible to be counted towards satisfying regulatory capital requirements under the laws relating to regulatory capital to which the entity is subject;

(b) includes loans and credit facilities provided by the insurer to the entity and other credit exposures of the insurer to the entity;

(c) includes potential future holdings that the insurer will be obliged to purchase pursuant to an existing contractual commitment, irrespective of whether the obligation to purchase is contingent on certain conditions having to be satisfied; and

(d) excludes capital instruments issued by the entity that are not eligible to be counted towards satisfying regulatory capital requirements under the laws relating to regulatory capital to which the entity is subject.

10. Tier 2 capital

(1) Subject to subrule (2), the Tier 2 capital of an applicable insurer is the sum of the following eligible capital resources of such insurer –

(a) the Tier 2 capital instruments issued by the insurer that satisfy the criteria in Schedule 3;

(b) share premium, if any, resulting from such Tier 2 capital instruments issued by the insurer;

(c) the amount of deferred tax assets of the insurer net of deferred tax liabilities as deducted from the Unlimited Tier 1 capital of the insurer pursuant to rule 8(3)(d);

(d) the amount of any encumbered assets of the insurer in excess of the sum of its relevant on-balance sheet liabilities secured by those assets and any incremental capital requirement relating to those encumbered assets and liabilities, as deducted from the Unlimited Tier 1 capital of the insurer pursuant to rule 8(3)(k);

(e) the amount of insurer's negative reserves (which may be deducted the corresponding prescribed capital amount in respect of insurance liabilities) as deducted from the Unlimited Tier 1 capital of the insurer pursuant to rule 8(3)(l);

(f) the amount of insurer's restricted capital component in excess of the corresponding prescribed capital amount as deducted from the Unlimited Tier 1 capital of the insurer pursuant to rule 8(3)(m); and

(g) the amount of Limited Tier 1 capital of the insurer that is in excess of 10% of the prescribed capital amount.

(2) An applicable insurer must deduct the following amounts from its Tier 2 capital, to the extent that such amounts have not already been excluded through valuation under Part 4 –

(a) subject to subrule (3), the amount of any direct holdings, indirect holdings and synthetic holdings by the insurer of Tier 2 capital instruments issued by a non-consolidated subsidiary of the insurer;

(b) subject to subrule (3), the amount of any direct holdings, indirect holdings and synthetic holdings by the insurer of Tier 2 capital instruments issued by an affiliate of the insurer which is a regulated financial entity;
(c) the amount of any direct holdings, indirect holdings and synthetic holdings by the insurer of Tier 2 capital instruments issued by it, unless already derecognized; and
(d) the amount of any direct holdings, indirect holdings and synthetic holdings by the insurer of Tier 2 capital instruments issued by any regulated financial entity where that entity has a reciprocal cross holding with the insurer.

(3) For the purpose of determining the amount of the deduction for holdings of capital instruments issued either by a non-consolidated subsidiary of the applicable insurer in subrule (2)(a) or by an affiliate of the insurer which is a regulated financial entity in subrule (2)(b), the amount –
(a) includes capital instruments issued by the entity that are eligible to be counted towards satisfying regulatory capital requirements under the laws relating to regulatory capital to which the entity is subject;
(b) includes loans and credit facilities provided by the insurer to the entity and other credit exposures of the insurer to the entity;
(c) includes potential future holdings that the insurer will be obliged to purchase pursuant to an existing contractual commitment, irrespective of whether the obligation to purchase is contingent on certain conditions having to be satisfied; and
(d) excludes capital instruments issued by the entity that are not eligible to be counted towards satisfying regulatory capital requirements under the laws relating to regulatory capital to which the entity is subject.

Part 4 – Valuation of Assets and Liabilities

Division 1 – General

11. Recognition and derecognition of assets and liabilities

(1) Unless specified in these Rules, an applicable insurer must recognize and derecognize assets and liabilities in accordance with the applicable accounting standards.

Division 2 – Valuation of Insurance Liabilities

12. Recognition and derecognition of insurance liabilities

(1) An applicable insurer, for the purpose of valuing insurance liabilities under the contracts of insurance it enters into, must recognize such liabilities at the earliest of –
(a) the date when the first premium under the contract becomes due;
(b) the date the insurance cover under the contract begins; or

(c) the date the insurer becomes a party to the contract that gives rise to the insurance liabilities.

(2) Subject to subrule (1), an applicable insurer must recognize all insurance liabilities within the boundary of each contract of insurance as determined in accordance with rule 14.

(3) An applicable insurer must derecognize an insurance liability only when that liability is extinguished, discharged, cancelled, or has expired, and all future cash flows in respect of the liability are nil. To avoid doubt, purchase of reinsurance does not result in the derecognition of any part of the insurance liabilities covered by such reinsurance.

13. Insurance contracts covering different types of risk

(1) Where an applicable insurer effects and carries out a contract of insurance which combines distinguishable sets of insurance obligations and a portion of the premium under the contract is allocated to each set of obligations, for the purpose of valuing the insurance liabilities arising under the contract, the insurer must unbundle the obligations under the contract into each distinguishable set of obligations and separately value the insurance liabilities for each such distinguishable set.

(2) Subject to subrule (6), if an applicable insurer authorized to carry on long term business effects and carries out a contract of insurance which combines long term business and additional business of the nature of class 1 or 2 specified in Part 3 of Schedule 1 of the Ordinance, the insurer must unbundle such additional business from the long term business for the purpose of valuing the insurance liabilities under the contract.

(3) Where a contract of insurance includes the feature of funds on deposit, an applicable insurer is required to unbundle and separately value such funds on deposit from the other insurance liabilities under the contract.

(4) Where a contract of insurance includes the feature of prepaid premiums, an applicable insurer is required to unbundle and separately value such prepaid premiums from the other insurance liabilities under the contract.

(5) Subject to subrule (6), where an applicable insurer effects and carries out a contract of insurance which covers different general insurance lines of business specified in Schedule 9, the insurer must unbundle and separately value the insurance liabilities in respect of each different lines of general business.

(6) Where –
(a) it is not practicable for an applicable insurer to unbundle insurance obligations under a contract of insurance in accordance with subrule (2) or (5), as the case may be; and
(b) it would not result in any material misstatement in the valuation of the insurer's insurance liabilities or prescribed capital amount if such insurance obligations are not unbundled,

the insurer may leave such insurance liabilities not unbundled and value such liabilities in accordance with subrule (7).

(7) In the case of insurance liabilities under a contract of insurance or part of such contract which are not unbundled in accordance with subrule (6), an applicable insurer must value such liabilities and determine its prescribed capital amount under Part 5 based on the nature of the key risk driver for the liabilities under that contract or part of the contract, as the case may be.

(8) Where in relation to a contract of insurance mentioned under subrule (2), an applicable insurer has –
- (a) unbundled the insurance liabilities for additional business in accordance with subrule (2); or
- (b) not unbundled the insurance liabilities for additional business in accordance with subrule (6), and the key risk driver for the liabilities which are not unbundled is of the nature of class 1 or 2 specified in Part 3 of Schedule 1 of the Ordinance,

the insurer must determine how to value such liabilities in accordance with subrule (9).

(9) For purposes of valuing the insurance liabilities mentioned in subrule (8) –
- (a) if a long boundary is determined to apply to such liabilities based on rule 14 , an applicable insurer must value the liabilities in accordance with Subdivision 1 of this Division and, for purposes of determining its prescribed capital amount, include such liabilities in the determination of its risk capital amount for life insurance risk in accordance with Division 3 of Part 5; or
- (b) otherwise, an applicable insurer must value the liabilities in accordance with Subdivision 2 of this Division and, for the purpose of determining its prescribed capital amount, include such liabilities in the determination of its risk capital amount for general insurance risk in accordance with Division 4 of Part 5.

14. Boundary of insurance liabilities

(1) To value its insurance liabilities under a contract of insurance, an applicable insurer must determine the boundary for such liabilities in accordance with subrule (2).

(2) For the purposes of subrule (1), except funds on deposit and prepaid premiums, an applicable insurer must determine the boundary for the insurance liabilities by applying the principles in relation to contract boundary in Hong Kong Financial Reporting Standard 17 or International Financial Reporting Standard 17.

(3) Where insurance liabilities under a contract of insurance are unbundled in accordance with rule 13, for the purposes of subrule (2), an applicable insurer must treat each unbundled part of the contract as if it were a separate contract of insurance.

Subdivision 1 – Valuation of Long Term Insurance Liabilities

15. Determination of long term insurance liabilities

(1) Rules 16 to 26 apply to an applicable insurer for the purpose of valuing the amount of its long term insurance liabilities.

(2) Subject to subrules (4) to (6), an applicable insurer must value the amount of its long term insurance liabilities as the sum of the current estimates for such liabilities calculated under rule 16 and the margins over current estimate for such liabilities calculated under rule 25.

(3) To avoid doubt, long term insurance liabilities include amounts set aside by the applicable insurer for outstanding claims in respect of such liabilities (including claims that have been reported but not yet settled and claims that have been incurred but not yet reported).

(4) For long term business of the nature specified as Class C under Part 2 of Schedule 1 of the Ordinance, the current estimates for liabilities arising from such business must be determined as comprising unit reserves and non-unit reserves, with the unit reserves being valued as the value of the assets backing the units relating to the contract of insurance.

(5) Liabilities for funds on deposit must be valued in accordance with rule 22.

(6) Liabilities for prepaid premiums must be valued in accordance with rule 26.

16. Calculation of current estimate for long term insurance liabilities

(1) Subject to subrule (3), the current estimate of a long term insurance liability must be calculated as the probability-weighted average of the present values of the future cash flows required to settle the obligations giving rise to the liability within the relevant boundary for the liability as determined under rule 14.

(2) To calculate the present values as mentioned in subrule (1), an applicable insurer must use the discount rates determined in accordance with rule 23.

(3) The current estimate for a long term insurance liability must be calculated gross of any reinsurance. The recoverables from contracts of reinsurance to which the insurer is a cedant must be calculated separately in accordance with Subdivision 3 of this Division.

17. Cash flows projection

(1) The projection of future cash flows used to calculate the current estimate of a long term insurance liability under rule 16 must –

(a) take into account the probability of occurrence, timing, frequency and severity of the insured events and their corresponding cash flows;
(b) be based on best estimate assumptions which reflect expected realistic future demographic, legal, medical, technological, social or economic developments;
(c) include cash flows arising from future discretionary benefits which are expected to be paid;
(d) take into account the obligations under related contractual options and financial guarantees; and
(e) allow for expected policy holder behaviour, which may include dynamic policy holder behaviour.

(2) Subject to subrule (3), the projection of future cash flows referenced in subrule (1) is performed separately for long term insurance liabilities under each contract of insurance or the unbundled part of such contract, as the case may be.

(3) Notwithstanding subrule (2), an applicable insurer may project the future cash flows referenced in subrule (1) based on grouped model points if –
(a) the grouping does not misrepresent the underlying risk and the key risk drivers, and does not result in a material misstatement of the current estimate of the long term insurance liabilities under the contracts of insurance in the grouping;
(b) the grouping has not resulted in the loss of any significant attributes of the long term insurance liabilities under the relevant contracts of insurance in the group; and
(c) the contracts grouped share similar characteristics and product features.

(4) Where relevant, all future cash inflows and outflows associated with, and within the boundary of a long term insurance liability as determined in accordance with rule 14 should be included in the projection of future cash flows referenced in subrule (1), including but not limited to the following –
(a) cash inflows from premiums and any other amounts to be received from the policy holder(s);
(b) cash inflows from non-reinsurance recoveries related to claims;
(c) cash outflows for all types of benefits and payments payable to policy holders and beneficiaries;
(d) cash outflows for expenses that will be incurred in servicing the contract of insurance or relevant part thereof, including allocated overhead expenses, investment expenses, claims handling expenses and acquisition expenses; and
(e) cash outflows for taxation payments which are, or are expected to be, charged based on policy holder premiums or are required to settle the insurance liability.

(4) In this rule –

model point (模型要點) means a set of records used in a model to represent a contract of insurance or a cohort of contracts of insurance, usually with similar characteristics.

18. Allowance for future discretionary benefits

(1) In determining future cash outflows for the purposes of rule 17(4)(c), an applicable insurer must make an objective and realistic allowance for future discretionary benefits.

(2) For the purpose of making the allowance referred to in subrule (1), the amount of any future discretionary benefits recognized by the insurer as expected future cash outflows must –

(a) be consistent with expected future experience, the underlying economic scenarios on which the liability valuation is based and policy holders' reasonable expectations;

(b) be consistent with the discount rate used for valuing the relevant insurance liabilities; and

(c) take into account the level of accumulated policy holder surplus or deficit as at the valuation date, subject to the requirement on future management actions as set out in rule 21.

(3) Where the future discretionary benefit depends on assets held by the insurer, the amount of future discretionary benefits recognized by the insurer as expected future cash outflows must be based on the value of such assets held as of the valuation date, with any subsequent changes to the asset allocation subject to the requirement on future management actions as set out in rule 21.

19. Valuation of contractual options and financial guarantees

(1) Where contractual options and financial guarantees are offered under a contract of insurance, the applicable insurers must calculate and reflect the time value of such options and guarantees in the current estimate of the long term insurance liabilities under the contract.

(2) Subject to subrule (4), an applicable insurer must use a stochastic simulation approach in calculating the time value of options and guarantees under groups of contracts of insurance which include contractual options or financial guarantees.

(3) For the purpose of calculating the time value of options and guarantees under the stochastic simulation approach referred to in subrule (2), the insurer must –

(a) base on assets and liabilities valued on a market-consistent basis with risk neutral scenarios;

(b) ensure that liability cash flows reflect the expected policy holder behaviour and foreseeable management actions under different scenarios;

(c) if a yield curve is needed as an input to assume future financial market parameters and the future returns on the assets, determine the discount rates to be used in accordance with rule 23; and

(d) ensure that the model used is verifiable and reasonably consistent results are capable to be reproduced.

(4) Where a stochastic simulation approach has never before been applied by an applicable insurer for a group of contracts of insurance, the insurer may adopt 20% of the deterministic current estimate as the time value of options and guarantees for that group of contracts.

(5) Time value of options and guarantees must not be negative for the insurer as a whole.

(6) In this rule –

market consistent basis (市場一致基準) means a basis that will reproduce prices at which assets and liabilities are exchanged in the market;

risk neutral scenarios (風險中性情景) means a set of stochastic simulation scenarios generated based on risk neutral probability measures such that the average of the values calculated under all scenarios is arbitrage-free.

stochastic simulation (隨機模擬) means a simulation of a system that has variables that can change stochastically (randomly) with individual probabilities;

time value (時間價值) means, in the case of contractual options and financial guarantees, the value of liabilities on top of the intrinsic value of such liabilities, taking into account the possibility of future fluctuations in such values.

20. Allowance for policy holder behaviour

(1) An applicable insurer must allow for expected policy holder behaviour in valuing its long term insurance liabilities. If contractual options and financial guarantees under contracts of insurance that are long term business allow policy holders to take actions to change the amount, timing or nature of the benefits they will receive under the contracts, where appropriate, the insurer may also allow for dynamic policy holder behaviour in projecting future cash flows used to derive the current estimate of its long term insurance liabilities arising under such contracts.

21. Management actions

(1) Subject to subrule (2), for the purpose of valuing its long term insurance liabilities, an applicable insurer may allow for future management actions in projecting future cash flows, provided the following conditions are satisfied –
   (a) the management actions considered are objective, realistic and verifiable;
   (b) the management actions are not contrary to the applicable insurer's obligations to policy holders or to legal requirements applicable to the insurer;
   (c) the management actions are consistent with the insurer's current business practices and business strategy unless there is sufficient evidence that the insurer will change its practices or strategy;
   (d) the management actions are reasonably expected to be carried out under the specific circumstances to which they apply, and not contrary to any public indication by the

insurer as to the actions that it would expect to take, or not take in such circumstances;

(e) the management actions are consistent with each other;

(f) assumptions about the future management actions take into account the time needed to implement such actions and any resulting incremental expense;

(g) the insurer is able to justify that assumptions about future management actions are realistic based on a comparison with management actions actually taken by the insurer in the past;

(h) the insurer takes into account expected policy holder reactions to the management actions; and

(i) the management actions considered are regularly reviewed and are subject to adequate internal governance controls and procedures before they are taken.

(2) Future management actions recognized for the valuation of long term insurance liabilities are confined to those that have an impact on future discretionary benefits.

22. Funds on deposit

(1) Subject to subrule (2), an applicable insurer must unbundle any funds on deposit and value them separately from other liabilities under the contract at their account balance.

(2) As an alternative to subrule (1), future cash flow projection method may be adopted to value funds on deposit, provided that –

(a) the cash flows are within the boundary of the contract of insurance to which the funds on deposit relate;

(b) the applicable insurer assumes in its projections that no future deposits will be made into the funds on deposit account; and

(c) the applicable insurer considers expected policy holder behaviour relating to the withdrawal of deposits.

23. Discount rate for long term insurance liabilities

(1) Subject to subrules (2), (3) and (4), to obtain the current estimate of its long term insurance liabilities, an applicable insurer must discount future cash flows using the discount rate derived from the applicable specified risk-free yield curve.

(2) For the purposes of subrule (1) and subject to subrule (3), an applicable insurer must ensure that the currency for the applicable specified risk-free yield curve it uses to derive the discount rate is the same as with the currency for the underlying insurance obligations.

(3) If the currency for the underlying insurance obligations is not a currency specified in Schedule 4, an applicable insurer may use a specified risk-free yield curve that it considers appropriate for discounting cash flows.

(4) Where an applicable insurer constructs one or more than one MA portfolios to match its long term insurance liabilities, or a part thereof, with corresponding backing assets, the

insurer may apply the matching adjustment for each MA portfolio determined based on rule 24 to adjust the risk-free yield curve used to derive the discount rate for the valuation of long term insurance liabilities.

(5) For the purposes of subrule (4), an applicable insurer must construct its MA portfolio based on its asset and liability management practice.

24. Matching adjustment

(1) For the purposes of rule 23(4), an applicable insurer must apply the matching adjustment to each MA portfolio as a parallel adjustment to the entire specified risk-free yield curve in accordance with the following formula –

$$Discount\ rate_{t,currency,each\ MA\ portfolio} = risk\ free\ rate_{t,currency} + \text{matching adjustment}_{each\ MA\ portfolio}$$

where –

$risk\ free\ rate_{t,currency}$ means the rate in the specified risk-free yield curve for a point of time and specific currency; and

$\text{matching adjustment}_{each\ MA\ portfolio}$ means the amount of matching adjustment of a particular MA portfolio, as determined in accordance with subrule (2).

(2) For each of its MA portfolios, the applicable insurer must calculate the matching adjustment as the sum of the applicable portion of the adjusted spread, the constant prescribed spread component and (subject to subrule (3)) the qualified LTA, in accordance with the following formula –

$$\begin{aligned}\text{Matching adjustment}_{each\ MA\ portfolio} &= adjusted\ spread_{each\ MA\ portfolio} \times application\ ratio_{each\ MA\ portfolio} \\ &+ weighted\ constant\ prescribed\ spread \\ &\times predictability\ Factor \\ &\times Max\left[Min\left(20\%, eligible\ asset\ percentage - \frac{asset\ dollar\ duration}{liability\ dollar\ duration}\right), 0\right] \\ &+ qualified\ LTA_{each\ MA\ portfolio}\end{aligned}$$

where each component is determined in accordance with Schedule 5.

(3) An applicable insurer may include a qualified LTA in calculating the matching adjustment for a MA portfolio, only if the portfolio satisfies all of the following criteria –

(a) the MA portfolio is a subset of a physically segregated participating business fund or universal life business fund, or the physically segregated fund itself of participating business or universal life business. To avoid doubt, the following portfolios are not eligible for inclusion of qualified LTA –

(i) portfolios that are not physically segregated;
(ii) physically segregated portfolios containing both participating and universal life businesses; or
(iii) physically segregated portfolios containing long term business other than participating and universal life businesses;

(b) the underlying participating and universal life policies provide discretionary benefits to policy holders, and the determination of such discretionary benefits is governed by dividend or crediting rate policies pursuant to guidelines issued by the Authority; and

(c) the assets covering the insurance liabilities in the MA portfolio are identified by the applicable insurer and, together with the corresponding liabilities, are managed separately by the insurer and are not to be used to cover losses from other business.

(4) For each MA portfolio constructed by an applicable insurer, the insurer must ensure that the amount of assets is no less than the amount of liabilities.

(5) An applicable insurer must consider the cost of hedging in calculating the matching adjustment for a MA portfolio.

(6) An applicable insurer which has practical difficulty in performing the full matching adjustment calculation may opt to adopt simplified alternatives specified by the Authority.

(7) In calculating the matching adjustment for a MA portfolio, the input parameters related to liability used by an applicable insurer must be net of reinsurance, unless otherwise specified.

25. Margin over current estimate for long term insurance liabilities

(1) The margin over current estimate to be used by an applicable insurer in valuing its long term insurance liabilities is an amount, calculated net of reinsurance, added to the current estimates for such liabilities which reflects the uncertainty of liability cash flows related to the following life insurance sub-risk modules –
(a) mortality risk;
(b) longevity risk;
(c) morbidity risk;
(d) expense risk; and
(e) the level and trend lapse component of lapse risk.

(2) The margin over current estimate for each sub-risk mentioned in subrule (1) must be calculated by the applicable insurer as the 75th percentile of the normal distribution characterized by –
(a) a mean equal to the current estimate of long term insurance liabilities as determined in accordance with rule 16; and
(b) a 99.5th percentile equal to the capital requirement for the corresponding sub-risk as determined in accordance with Division 3 of Part 5.

(3) For the purposes of subrule (1), the margin over current estimate for each sub-risk calculated in accordance with subrule (2) is to be aggregated pursuant to the following formula –

$$Margin\ over\ curent\ estimate = \sqrt{\sum_{i,j} correlation\ matrix_{i,j} \times margin\ over\ current\ estimate_i \times margin\ over\ current\ estimate_j}$$

where –
correlation matrix refers to the correlation matrix set out in Table 1 of Schedule 7; and
i and j represent the sub-risks in each paragraph in subrule (1).

(4) An applicable insurer must calculate and include a fund-level margin over current estimate as part of the long term insurance liabilities attributable to each of its long term business funds. The margin over current estimate for each long term business fund is first calculated on a standalone basis using the formula in subrule (3) and reflects the diversification between risks within that fund. Further diversification benefits between the insurer's different long term business funds are allocated back to the funds proportionately to determine the margin over current estimate at fund level.

26. Prepaid premiums

(1) An applicable insurer must value the prepaid premiums at the account balance. In addition, the insurer must make provision for any shortfall arising from future guaranteed interest associated with the prepaid premiums.

Subdivision 2 – Valuation of General Insurance Liabilities

27. Determination of general insurance liabilities

(1) Rules 27 to 32 apply to an applicable insurer for the purpose of valuing the amount of its general insurance liabilities.

(2) An applicable insurer must value its general insurance liabilities as the sum of the current estimates for such liabilities calculated under rules 28 to 31 and the margins over current estimates for such liabilities calculated under rule 32.

(3) To avoid doubt, general insurance liabilities include amounts set aside by the applicable insurer for outstanding claims in respect of such liabilities (including claims that have been reported but not yet settled and claims that have been incurred but not yet reported).

28. Calculation of current estimate for general insurance liabilities

(1) Subject to subrule (3), the current estimate of a general insurance liability must be calculated as the probability-weighted averages of the present values of the future cash flows required to settle the obligations giving rise to the liability within the relevant boundary as determined under rule 14.

(2) To calculate the present values as mentioned in subrule (1), an applicable insurer must use the discount rates determined in accordance with rule 31.

(3) The current estimate for a general insurance liability must be calculated gross of any reinsurance. The recoverables from contracts of reinsurance to which the insurer is a cedant must be calculated separately in accordance with Subdivision 3 of this Division.

29. Cash flows projection

(1) The projection of future cash flows used to calculate the current estimate of a general insurance liability under rule 28 must –
  (a) take into account the probability of occurrence, timing, frequency and severity of the insured events and their corresponding cash flows;
  (b) be based on best estimate assumptions which reflect expected realistic future demographic, legal, medical, technological, social or economic developments; and
  (c) avoid double counting by excluding cash flows related to a liability where such cash flows have already been accounted for and recognized as assets in the insurer's economic balance sheet.

(2) Subject to subrule (3), the projection of future cash flows referenced in subrule (1) is performed separately for the general insurance liabilities under each contract of insurance or unbundled part of a contract of insurance, as the case may be (based on the boundary determined under rule 14 for the relevant liabilities) .

(3) Notwithstanding subrule (2), an applicable insurer may project the future cash flows referenced in subrule (1) based on grouped contracts of insurance or grouped claims if –
  (a) the grouping does not misrepresent the underlying risk and the key risk drivers, and claims patterns, and does not result in a material misstatement of the current estimate of the general insurance liabilities under the contracts of insurance in the grouping; and
  (b) the grouping has not resulted in the loss of any significant attributes of the general insurance liabilities under the relevant contracts of insurance in the grouping.

(4) Where relevant, all future cash inflows and outflows associated with, and within the boundary of a general insurance liability should be included in the projection of future cash flows referenced in subrule (1), including but not limited to the following –
  (a) cash inflows from premiums and any other amounts to be received from the policy holder;
  (b) cash inflows from non-reinsurance recoveries related to the claims;

(c) cash outflows for all types of benefits and payments payable to policy holder and beneficiaries;
(d) cash outflows for expenses that will be incurred in servicing the contract of insurance or relevant part thereof, including allocated overhead expenses, investment expenses, claims handling expenses and acquisition expenses; and
(e) cash outflows for taxation payments which are, or are expected to be, charged based on policy holder premiums or are required to settle the insurance liability.

30. Outstanding Claims Liabilities and Premium Liabilities

(1) An applicable insurer must calculate the current estimates for its general insurance liabilities separately for outstanding claims liabilities and premium liabilities.

(2) For the purposes of subrule (1) –
(a) outstanding claims liabilities relate to claim events that have already occurred, regardless of whether the claims arising from those events have been reported or not; and
(b) premium liabilities relate to future claim events that are expected to be incurred after the valuation date, attributable to the unexpired coverage of the insurer's contracts of insurance or relevant part thereof as at the valuation date, within the boundary referred to in rule 14.

31. Discount rate for general insurance liabilities

(1) Subject to subrules (2) and (3), an applicable insurer may discount expected future cash flows to obtain the current estimate of its general insurance liabilities.

(2) For the purposes of subrule (1) and subject to subrule (3), an applicable insurer must use the discount rate derived from the applicable specified risk-free yield curve and ensure that the currency for the applicable specified risk-free yield curve it uses to derive the discount rate is consistent with the currency for the underlying insurance obligations.

(3) If the currency for the underlying insurance obligations is not a currency specified in Schedule 4, an applicable insurer may use a specified risk-free yield curve that it considers appropriate for discounting cash flows.

32. Margin over current estimate for general insurance liabilities

(1) The margin over current estimate to be used by an applicable insurer in valuing its general insurance liabilities is an amount, calculated net of reinsurance, added to the current estimates for such liabilities, such that the sum of current estimates and margin over current estimate provides for a 75% probability of adequacy for its general insurance liabilities.

(2) In calculating the margin over current estimate for the purpose of valuing its general insurance liabilities, an applicable insurer may take into account the diversification of

such liabilities to the extent such liabilities arise from obligations in different general insurance lines of business.

Subdivision 3 – Recoverables from Reinsurance Contracts

33. Valuation of reinsurance recoverables

(1) An applicable insurer must value its reinsurance recoverables –
  (a) in a way that is consistent with the current estimates of the underlying insurance liabilities ceded, including the assumptions and the boundary of the underlying insurance liabilities ceded; and
  (b) including cash flows associated with the contract of reinsurance to which the insurer is a cedant.

(2) For the purposes of subrule (1), an applicable insurer must –
  (a) only recognize those reinsurance recoverables arising from the contracts of reinsurance that meet the criteria under rule 41(2);
  (b) discount a reinsurance recoverable with the same discount rate used for valuing the underlying insurance liabilities ceded; and
  (c) classify its reinsurance recoverables as assets or liabilities on a contract-by-contract basis, with no offsetting between reinsurance contracts.

(3) An applicable insurer, for the purpose of valuing its reinsurance recoverables, must adjust the value of the reinsurance recoverables for the expected losses due to potential default of the counterparty of the reinsurance contracts to which the insurer is a cedant.

(4) In valuing its reinsurance recoverables, to avoid any double counting of assets and liabilities, an applicable insurer must adjust the amount of the recoverable to take account of any deposit made to cover cash flows under the reinsurance contract.

Division 3 – Valuation of Assets and Other Items

34. Valuation of assets

(1) Unless otherwise specified in these Rules, an applicable insurer must value its assets at market value.

(2) An applicable insurer must value the following assets in accordance with the applicable accounting standards –
  (a) investment holdings in subsidiary and affiliate, except investment holdings in and amount due from non-consolidated subsidiary; and
  (b) leases.

(3) Where impairment exists for an asset and the asset's market value does not fully reflect the impairment, an applicable insurer must ensure the value of the asset is decreased to reflect the full effect of the impairment.

(4) An applicable insurer must measure goodwill and intangible assets at zero.

(5) An applicable insurer must value the investment holdings in and amount due from non-consolidated subsidiary at cost.

35. Deferred tax assets and liabilities

(1) Subject to subrule (2), an applicable insurer must recognize deferred tax assets and liabilities (other than those arising from the carryforward of unused tax credits and the carryforward of unused tax losses), in accordance with the principles in Hong Kong Accounting Standard 12 or International Accounting Standard 12.

(2) For the purposes of subrule (1), recognition of deferred tax assets and liabilities is based on the temporary difference between –
(a) the values of the assets and liabilities of the applicable insurer as determined in accordance with these Rules; and
(b) the values of such assets and liabilities for tax purposes.

36. Contingent liabilities

(1) An applicable insurer must recognize and value its contingent liabilities based on the probability and amount of future cash outflows required to settle a contingent liability over the lifetime of that liability, discounted at the specified risk-free yield curve for the currency in which the liability is denominated.

(2) If the currency in which the liability is denominated is not a currency specified in Schedule 4, an applicable insurer may use a specified risk-free yield curve that it considers appropriate for discounting cash flows.

Part 5 – Determination of Prescribed Capital Amount

Division 1 – General Requirements for determination of Prescribed Capital Amount

37. Determination of the prescribed capital amount

(1) Subject to subrules (2), (3) and (4), an applicable insurer must determine its prescribed capital amount by –
(a) determining risk capital amounts for its risk exposures to –
(i) market risk, in accordance with rules 45 to 51;
(ii) life insurance risk, in accordance with rules 52 to 59;

(iii) general insurance risk, in accordance with rules 60 to 80; and
(iv) counterparty default and other risk, in accordance with rules 81 to 85;

(b) determining a risk capital amount for operational risk, in accordance with rule 86;

(c) aggregating the risk capital amounts determined for paragraph (a) and adding the risk capital amount determined for paragraph (b), using the following formula –

$$Prescribed\ capital\ amount = \sqrt{\sum_{x,y} correlation\ matrix_{x,y} \times risk\ capital\ amount_x \times risk\ capital\ amount_y} + risk\ capital\ amount_{Operational\ Risk}$$

where –
correlation matrix refers to the correlation matrix set out in Table 2 of Schedule 7; and
x and y represent the risk in each subparagraph in paragraph (a).

(d) adding the amount, if any, as calculated in accordance with rule 43, by which the insurer's adjustment for the loss absorbing capacity of future discretionary benefits exceeds the cap on such adjustment; and

(e) deducting the amount, if any, calculated in accordance with rule 44 to reflect the loss absorbing capacity of any change in the deferred tax impact after applying the steps in paragraphs (a), (b), (c) and (d).

(2) In the case of the risk capital amounts mentioned in subrule (1) which, in accordance with these Rules, are required to be determined by the application of scenarios as prescribed by these Rules, in applying those prescribed scenarios to determine the relevant risk capital amounts, an applicable insurer must not change any –
(a) margin over current estimates; or
(b) deferred tax assets and liabilities.

(3) An applicable insurer, for the purposes of subrule (1), may exclude from the calculation of its prescribed capital amount, its risk exposures in respect of assets and liabilities attributable to any separate fund it maintains –
(a) for the part of its long term business that is long term reinsurance business with offshore risk, in accordance with section 21B(5)(e) of the Ordinance; and
(b) for the part of its general business that is general reinsurance business with offshore risk, in accordance with section 25AA(4)(a) of the Ordinance.

(4) Where restricted capital component exists in respect of any separate sub-fund of participating business maintained by an applicable insurer, for the purpose of determining its prescribed capital amount, the insurer must –
(a) determine a separate prescribed capital amount based on the assets and liabilities in respect of the restricted capital component of each sub-fund of participating business, using the approach in subrule (1);

(b) determine a separate prescribed capital amount based on all its assets and liabilities, other than those in respect of the restricted capital component, using the approach in subrule (1); and

(c) determine its prescribed capital amount as the sum of the separate prescribed capital amounts in paragraphs (a) and (b).

38. Look-through approach in general

(1) Subject to rule 39, if an applicable insurer holds an asset or liability and the profit, income or other return on which is dependent on an underlying risk exposure, it must identify the underlying risk exposure in determining the relevant risk capital amounts under rule 37(1).

39. Look-through approach for portfolio investments

(1) If an applicable insurer holds a portfolio investment, in determining each relevant risk capital amount in rule 37(1) an applicable insurer must –

(a) identify the underlying assets or liabilities of the portfolio investment, using the approaches mentioned in subrules (2), (3), (4) and (5); and

(b) in determining each relevant risk capital amount, use the underlying assets or liabilities identified in accordance with paragraph (a) in proportion to the insurer's holding in the portfolio investment.

(2) For the purposes of subrule (1)(a) –

(a) subject to paragraph (b), an applicable insurer must identify all the underlying assets or liabilities of the portfolio investment, to the extent of the granularity required to determine each relevant risk capital amount in accordance with these Rules, (the "**full look-through approach**");

(b) subject to paragraph (c), if the insurer cannot identify some or all of the underlying assets or liabilities of the portfolio investment after applying the full look-through approach, the insurer must use the approach in subrule (3) (the **"actual allocation-based look-through approach**");

(c) subject to paragraph (d), if the insurer cannot identify some or all of the underlying assets or liabilities of the portfolio investment after applying the full look-through approach and actual allocation-based look-through approach, the insurer must use the approach referred to in subrule (4) to determine the unidentified underlying assets or liabilities (the "**mandate-based look-through approach**"); and

(d) if, after applying the full look-through approach, actual allocation-based look-through approach and mandate-based look-through approach, there remains an amount of underlying assets or liabilities of the portfolio investment which the insurer cannot identify, the insurer must classify such amount as portfolio investment of no look-through.

(3) In the actual allocation-based look-through approach, an applicable insurer treats multiple debt securities of the same currency as a single debt security with a duration, maturity and credit rating band on the weighted average duration, maturity and credit rating band of such debt securities.

(4) For the purposes of the mandate-based look-through approach in subrule (2)(c) –
  (a) subject to paragraph (b), in relation to the amount of underlying assets and liabilities of the portfolio investment which cannot be identified an applicable insurer must assume that these are assets and liabilities that result from the amount being invested, to the maximum extent allowed, in the class of assets under the investment mandate or governing instrument of the portfolio investment that would result in the highest prescribed capital amount for the insurer;
  (b) subject to paragraph (c), if there is any amount of unidentified underlying assets or liabilities of the portfolio investment remaining after the application of the approach in paragraph (a), the insurer must assume that this amount is invested, to the maximum extent allowed, in the class of assets under the investment mandate or governing instrument, other than the class mentioned in paragraph (a), that would result in the next highest prescribed capital amount for the insurer; and
  (c) if there continue to be any amount of unidentified assets or liabilities of the portfolio investment remaining after the application of the approaches in paragraphs (a) and (b), the insurer must continue to use the approach in paragraph (b) until either the entire amount of underlying assets or liabilities of the portfolio investment has been identified by reference to the classes of assets under the investment mandate or governance instrument of the investment, or it is impractical for the insurer to continue to use the approach in paragraph (b) to identify the remaining underlying assets or liabilities.

(5) If –
  (a) any underlying asset of a portfolio investment held by an applicable insurer is in turn a portfolio investment (***underlying portfolio investment***); or
  (b) any underlying asset held by an underlying portfolio investment mentioned in paragraph (a) in turn is a portfolio investment, such that there are three or more layers of underlying portfolio investments between the portfolio investment held by the insurer and the ultimate underlying assets and liabilities from which the profit, income and other returns of the portfolio investment held by the insurer derive;

  the insurer, for the purposes of subrule (1), must apply the approaches in subrule (2) in accordance with subrule (6).

(6) For the purposes of subrule (5) –
  (a) subject to paragraph (b), an applicable insurer must apply the full look-through approach in subrule (2)(a), to identify the underlying assets or liabilities ultimately held through all the layers of the portfolio investments;
  (b) subject to paragraph (c), if the insurer cannot identify some or all of the ultimate underlying assets or liabilities after applying the approach in paragraph (a), the

insurer must apply the actual allocation-based look-through approach in subrule (2)(b);

(c) subject to paragraph (d), if the insurer cannot identify some or all of the ultimate underlying assets or liabilities after applying the approaches in paragraphs (a) and (b), the insurer must, for the purpose of identifying such unidentified underlying assets and liabilities, apply the mandate-based look-through approach in subrule (2)(c) by reference to the investment mandate or governing instrument of the portfolio investment in the layer at which the insurer ceased being able to identify the underlying assets or liabilities held by such portfolio investment in applying the full look-through approach or actual allocation-based look-through approach; or

(d) if, after applying the approaches in paragraphs (a), (b) and (c), there remains an amount of such ultimate underlying assets or liabilities, which the insurer has not identified, the insurer must classify such amount as portfolio investments of no look-through.

(7) In this rule –

portfolio investment of no look-through (無法穿透的組合投資) means some or all of the underlying assets or liabilities of the portfolio investment classified using the approach in subrule (2)(d) or (6)(d).

40. Valuation of contractual options and financial guarantees in determining risk capital amounts

(1) This rule applies to an applicable insurer which adopts 20% of the deterministic current estimate as the time value of options and guarantees pursuant to rule 19(4).

(2) For the risk capital amounts mentioned in rule 37(1) which are determined by the application of scenarios as prescribed by these Rules, an applicable insurer, when determining the relevant risk capital amounts, must ensure it maintains 20% of the deterministic current estimate (after applying those scenarios), as adopted pursuant to rule 19(4), as the time value of options and guarantees.

41. Recognition of insurance risk mitigating effect

(1) In determining the relevant risk capital amounts mentioned in rule 37(1), an applicable insurer may utilize a contract of reinsurance as an insurance risk mitigation arrangement to reduce its potential losses under adverse events, if the contract is recognized in accordance with subrule (2).

(2) A contract of reinsurance is recognized for the purposes of subrule (1) if –

(a) the applicable insurer, as the ceding insurer under the contract of reinsurance, transfers insurance risk to a reinsurer;

(b) the transfer of risk to the reinsurer under the contract of reinsurance is effective and is clearly defined in the contract;

(c) the contract of reinsurance is binding on the parties, legally effective and enforceable in all relevant jurisdictions;

(d) the insurer has taken all appropriate steps to ensure the effectiveness of the arrangement and operation of the contract of reinsurance and to address the risks related to the contract, including the risk that may result in a discontinuation of the transfer of risk under the contract;

(e) in the event of a default, insolvency, bankruptcy of the reinsurer, or other similar credit event adversely impacting the reinsurer, the insurer has a direct claim on the reinsurer under the contract of reinsurance and such right is documented in the contract;

(f) there is no double counting by the insurer of the insurance risk mitigating effect of the contract of reinsurance in valuing its assets or liabilities for the purposes of these Rules and in determining the relevant risk capital amounts mentioned in rule 37(1);

(g) if the contract of reinsurance results in the insurer being materially exposed to basis risk resulting from a potential mismatch between the coverage under the contract of reinsurance and the insurance risk to which the insurer is exposed, the insurer must allow for such basis risk in deriving the insurance risk mitigation effect of the contract of reinsurance;

(h) the derivation of the insurance risk mitigation effect of the contract of reinsurance by the insurer must not result in creating other risks or adding material basis risk to the insurer;

(i) the insurer must be able to demonstrate that the contract of reinsurance adequately mitigates its insurance risk under a range of gross loss scenarios; and

(j) the reinsurer which is a party to the contract of reinsurance must have adequate credit quality to guarantee, with appropriate certainty, that the insurer will receive the protection in the cases specified by the contracting parties in the contract.

(3) For the purposes of subrule (1) and subject to subrule (4), if the term of the contract of reinsurance is due to expire within 365 days from the valuation date, an applicable insurer must adjust the risk mitigating effect of the contract to reflect only the outstanding term of the contract as of the valuation date, using the following multiplicative adjustment –

$$Min\left[1, \frac{Number\ of\ days\ to\ expiry\ of\ contract\ of\ reinsurance\ as\ at\ valuation\ date}{Min(365, Number\ of\ days\ of\ outstanding\ term\ of\ underlying\ risk\ exposure)}\right]$$

(4) If the term of the contract of reinsurance is due to expire within 365 days from the valuation date, instead of applying the adjustment in subrule (3) the applicable insurer may make an assumption that the contract will be renewed on expiry, provided that in making that assumption the insurer satisfies following conditions –

(a) the insurer takes into account the costs of renewing the contract in its assumptions and reflects such in the valuation of assets and liabilities; and

(b) the insurer –

(i) can justify as realistic its assumption that the contract will renew on expiry and that the risk mitigating effect will thereby continue after expiry;

(ii) has credible evidence to support its assumption; and

(iii) provides the Authority, upon request, the justification and evidence of its assumption.

42. Recognition of financial risk mitigation effect

(1) In determining the relevant risk capital amount mentioned in rule 37(1), an applicable insurer may utilize a financial risk mitigation arrangement to reduce its potential financial losses under adverse events in accordance with subrule (2).

(2) For the purposes of subrule (1), an applicable insurer must only recognize the financial risk mitigation effect of contractual arrangements provided that the following criteria are met –

(a) the contractual arrangement has risk mitigating effect on a specific exposure, specific exposures or a pool of specific exposures of the insurer;

(b) the transfer of risk to the counterparty under the contractual arrangement is effective and is clearly defined in the contract;

(c) the contractual arrangement is binding on the parties, legally effective and enforceable in all relevant jurisdictions;

(d) the insurer has taken all appropriate steps to ensure the effectiveness of the arrangement (such as clear documentation on undertaking of the counterparty to pay the protection in specified circumstances), and to address the risks related to that arrangement, including the risk that may result in discontinuation of the transfer of risk under the arrangement;

(e) in the event of a default, insolvency, bankruptcy of a counterparty or other similar credit event adversely impacting the counterparty, the insurer has a direct claim on that counterparty and such right is documented in the contract;

(f) there is no double counting by the insurer of market risk mitigation effect of the arrangement in valuing its assets or liabilities for the purposes of these Rules and in determining the relevant risk capital amounts mentioned in rule 37(1);

(g) the derivation of financial risk mitigation effect must not result in material basis risk or in the creation of other risks;

(h) the insurer must be able to demonstrate that the arrangement adequately mitigates its financial risk under a range of loss scenarios; and

(i) the counterparty of the contractual arrangement must have adequate credit quality to guarantee with appropriate certainty that the insurer will receive the protection in the cases specified by the contracting parties in the contract.

(3) For the purposes of subrule (1) and subject to subrule (4), an applicable insurer must only recognize the mitigating effect of a financial risk mitigation arrangement up to the expiry of the contract term of the arrangement and must adjust the risk mitigating effect to reflect only the outstanding term of the arrangement as of the valuation date using the following multiplicative adjustment –

$$Min\left(1, \frac{number\ of\ days\ to\ expiry\ of\ contract\ as\ at\ valuation\ date}{365}\right)$$

(4) If the contract term of a financial risk mitigation arrangement is due to expire within 365 days from the valuation date, instead of applying the adjustment in subrule (3), the applicable insurer may make an assumption that the risk mitigation arrangement will roll over on expiry and recognize the mitigating effect of the arrangement in accordance with subrule (5), provided that in making that assumption the insurer satisfies the following conditions –

(a) the insurer takes into account the costs of the roll over in its assumption; and

(b) the insurer –

(i) can justify as realistic its assumption that the arrangement will renew on expiry and that the risk mitigating effect will thereby continue after expiry;

(ii) has credible evidence to support its assumption; and

(iii) provides the Authority, upon request, the justification and evidence of its assumption.

(5) If, in relation to a financial risk mitigating arrangement with a contract term that is due to expire within 365 days of the valuation date, an applicable insurer satisfies the conditions in subrule (4), the insurer may maintain the same risk mitigating effect of the arrangement up to the end of the shorter of the following periods –

(a) the assumed period for which the arrangement is rolled-over; or

(b) 365 days from the valuation date.

43. Adjustment to prescribed capital amount to reflect the loss absorbing capacity of future discretionary benefits

(1) An applicable insurer, in accordance with subrules (2), (3) and (4), may take into account the effect of management actions on future discretionary benefits in relation to the insurer's long term business in calculating the risk capital amounts mentioned in rule 37(1), subject to a cap determined in accordance with subrule (5).

(2) An applicable insurer may only take into account the effect of management actions that comply with rule 21.

(3) The applicable insurer must, using the formula in subrule (4), determine the amount of usage of the loss absorbing capacity of future discretionary benefits under each sub-risk module by –

(a) calculating the difference in the present value of future discretionary benefits before and after management actions based on the same stressed assumptions;

(b) multiplying the difference calculated in paragraph (a) by –

(i) in the case of the interest rate risk, credit spread risk and equity risk, the ratio of the present value of future discretionary benefits based on the base assumptions before management actions to the present value of future discretionary benefits based on the stressed assumptions before management actions; and

(ii) in the case of other sub-risks, 100%.

(4) The formula mentioned in subrule (3) is –

$$LAC\ usage\ = \left(PV\ FDB_{without\ mgmt\ action}@stressed\ assumptions - PV\ FDB_{with\ mgmt\ action}@stressed\ assumptions\right) \times adjustment\ ratio$$

where –

$LAC\ usage$ means the amount of usage of the loss absorbing capacity of future discretionary benefits;

$$adjustment\ ratio\ = \begin{cases} \frac{PV\ FDB_{without\ mgmt\ action}@base\ assumptions}{PV\ FDB_{without\ mgmt\ action}@stressed\ assumptions}, & for\ interest\ rate\ , credit\ spread\ and\ equity\ risks \\ 100\% & , for\ other\ risks \end{cases}$$

where –

$PV\ FDB_{without\ mgmt\ action}@stressed\ assumptions$ means the present value of future discretionary benefits before management actions based on stressed assumptions;

$PV\ FDB_{with\ mgmt\ action}@stressed\ assumptions$ means the present value of future discretionary benefits after management actions based on stressed assumptions; and

$PV\ FDB_{without\ mgmt\ action}@base\ assumptions$ means the present value of future discretionary benefits before management actions based on the base assumptions.

(5) An applicable insurer must determine a cap on the total amount of adjustment for the loss absorbing capacity of future discretionary benefits it may make in calculating its prescribed capital amount, by using the following formula –

$$LAC\ cap = Max(PV\ FDB_{base} - PV\ FDB_{min}, 0)$$

where –

$LAC\ cap$ means the cap on the total amount of adjustment for the loss absorbing capacity of future discretionary benefits the insurer may make in calculating its prescribed capital amount;

$PV\ FDB_{base}$ means the present value of future discretionary benefits under the base scenario, net of reinsurance, based on the base assumptions; and

$PV\ FDB_{min}$ means the present value of the lowest allowed future discretionary benefits in accordance with the insurer's board-approved policy, net of reinsurance, based on the base assumptions.

(6) If the total amount of adjustment for the loss absorbing capacity of future discretionary benefits applied by an applicable insurer in determining its prescribed capital amount exceeds the cap calculated in accordance with subrule (5), the insurer, in accordance with rule 37(1)(d), must add the amount of the excess, as calculated using the following formula, for the purpose of determining its prescribed capital amount –

$$Max\left(0, PCA_{without\ mgmt\ action}\ - PCA_{with\ mgmt\ action}\ -\ LAC\ cap\right)$$

where –

$PCA_{without\ mgmt\ action}$ means the prescribed capital amount as aggregated using the formula in rule 37(1)(c) with each risk capital amount before applying the management actions on future discretionary benefits; and

$PCA_{with\ mgmt\ action}$ means the prescribed capital amount as aggregated using the formula in rule 37(1)(c) with each risk capital amount after applying the management actions on future discretionary benefits.

(7) For the purposes of subrule (6), the applicable insurer must determine the risk capital amounts before the management actions on future discretionary benefits by adding the amount of usage of the loss absorbing capacity as determined in accordance with subrule (3) to the risk capital amounts after the management actions on future discretionary benefits.

$$Risk\ capital\ amount_{without\ mgmt\ action} = Risk\ capital\ amount_{with\ mgmt\ action} + LAC\ usage$$

(8) In this rule –

base assumptions (基本假設) means the assumptions as used for the valuation of insurance liabilities before any stress is applied; and

stressed assumptions (受壓假設) means the assumptions as used for the valuation of insurance liabilities after stress is applied in determining the relevant risk capital amount.

44. Adjustment to prescribed capital amount to reflect loss absorbing capacity of deferred tax

(1) Subject to subrule (4), an applicable insurer may make a deduction in accordance with rule 37(1)(e) to reflect the loss absorbing capacity of the deferred tax impact resulting from the steps in rule 37(1)(a) to (d) for the purposes deriving its prescribed capital amount.

(2) The applicable insurer must calculate the amount of the deduction referred to in subrule (1) by applying the effective tax rate to the pre-tax prescribed capital amount, where –

(a) the pre-tax prescribed capital amount of the insurer is the amount calculated in accordance with rule 37(1)(a) to (d); and

(b) the effective tax rate is derived using the following formula –

$$effective\ tax\ rate = Max\left(0, \frac{Total\ current\ tax\ amount\ excluding\ premium\text{-}based\ tax\ recognized}{\Delta Retained\ earnings + total\ current\ tax\ amount\ excluding\ premium\text{-}based\ tax\ recognized}\right)$$

where –

$\Delta Retained\ earnings$ means retained earnings at the period end to which the current tax amount relates minus retained earnings at the beginning of the period of which the current

tax amount relates, after adjustment of any dividends during the period of which the current tax amount relates.

(3) For the purposes of subrule (2)(b), subject to subrules (4) and (5), an applicable insurer must base its determination of the effective tax rate on the –
  (a) specified period immediately preceding the valuation date, or
  (b) its latest available tax assessment for the specified period as of the valuation date.

(4) For the purposes of subrule (3), the specified period is –
  (a) if the period between the commencement date of these Rules and the financial year end of the applicable insurer is, or the applicable insurer has carried on insurance business in or from Hong Kong for, less than 1 year before the valuation date – the period between the commencement date and the valuation date;
  (b) if the period between the commencement date of these Rules and the financial year end of the applicable insurer is, or the applicable insurer has carried on insurance business in or from Hong Kong for, not less than 1 year but less than 2 consecutive years before the valuation date – 1 year;
  (c) if the period between the commencement date of these Rules and the financial year end of the applicable insurer is, or the applicable insurer has carried on insurance business in or from Hong Kong for, not less than 2 years but less than 3 consecutive years before the valuation date – 2 years; or
  (d) if the period between the commencement date of these Rules and the financial year end of the applicable insurer is, or the applicable insurer has carried on insurance business in or from Hong Kong for, not less than 3 years before the valuation date – 3 years.

(5) If the specified period determined in subrule (4) is 2 years or 3 years, the effective tax rate for the purposes of subrule (2)(b) is the average of the effective tax rates of each of 2 years or 3 years, as the case may be, which are determined in accordance with subrule (2)(b) for each year.

(6) If the amount for the loss absorbing capacity of the deferred tax impact determined under subrule (1) would result in an increase in the deferred tax assets of the applicable insurer, the insurer may make the deduction in rule 37(1)(e) in determining its prescribed capital amount, provided that the insurer considers, and is able to justify, that it is probable that future taxable profit will be available against which the deferred tax asset can be utilized.

(7) In this rule –

current tax amount (當期課稅額) means the amount of taxes payable (recoverable) in respect of the taxable profit (tax loss) for a period.

Division 2 – Market Risk

45. Risk capital amount of market risk

(1) To determine its risk capital amount for market risk, an applicable insurer must –
(a) in respect of its assets and liabilities that are sensitive to market risk, determine the risk capital amounts for the following sub-risks –
(i) interest rate risk, in accordance with rule 47;
(ii) credit spread risk, in accordance with rule 48;
(iii) equity risk, in accordance with rule 49;
(iv) property risk, in accordance with rule 50; and
(v) currency risk, in accordance with rule 51; and
(b) aggregate the risk capital amounts for the sub-risks mentioned in sparagraph (a)(i), (ii), (iii), (iv) and (v) according to the formula mentioned in subrule (2).

(2) The formula mentioned in subrule (1)(b) is –

$$Risk\ capital\ amount_{Market\ risk} = \sqrt{\sum_{s,t} correlation\ matrix_{s,t} \times risk\ capital\ amount_s \times risk\ capital\ amount_t}$$

where –
correlation matrix refers to the correlation matrix set out in –
(a) Table 3A of Schedule 7, if interest rate upward stress is applied in determining the risk capital amount of interest rate risk under rule 47(1); and
(b) Table 3B of Schedule 7, if interest rate downward stress is applied in determining the risk capital amount of interest rate risk under rule 47(1); and
s and *t* represent the corresponding sub-risks in each subparagraph in subrule (1)(a).

(3) For the purposes of subrule (1)(a), any reduction in the change in net asset value resulting from the revaluation of derivatives for which the contractual arrangements do not meet the criteria in rule 42 must be removed when determining the risk capital amount for any sub-risk referred in subrule (1)(a)(i), (ii), (iii), (iv) or (v).

(4) If any risk capital amount for a sub-risk referred in subrule (1)(a)(i), (ii), (iii), (iv) or (v) is negative, the risk capital amount for that sub-risk must be set to zero before being aggregated under subrule (2).

46. Recalculation of matching adjustment under interest rate, credit spread and equity risks

(1) Subject to subrule (5), for the purpose of calculating the risk capital amounts for interest rate risk (under both interest rate upward and interest rate downward stress scenarios), credit spread risk and equity risk, an applicable insurer to which Schedule 5 applies must re-value the long term insurance liabilities in its MA portfolios by recalculating the matching adjustment in accordance with the formula set out in subrule (2). To avoid

doubt, no recalculation of the matching adjustment under Schedule 5 must be made for the other sub-risks of market risk, or for risks other than market risk.

(2) The formula mentioned in subrule (1) is –

$$Matching\ adjustment_{stressed} = adjusted\ spread_{stressed} \times application\ ratio_{stressed} + weighted\ constant\ prescribed\ spread_{base} \times predictability\ factor_{base} \times Max\left[Min\left(20\%, eligible\ asset\ percentage_{base} - \frac{asset\ dollar\ duration_{stressed}}{liability\ dollar\ duration_{stressed}}\right), 0\right] + qualified\ LTA_{base}$$

where –

(a) each component is determined in accordance with Schedule 5; but

(b) application ratio$_{stressed}$, asset dollar duration$_{stressed}$, liability dollar duration$_{stressed}$ are recalculated under interest rate risk stress, credit spread risk stress and equity risk stress, and adjusted spread$_{\text{stressed}}$ is recalculated under credit spread risk stress.

(3) For purpose of recalculating the matching adjustment under subrules (1) and (2), in the case of interest rate risk stress, credit spread risk stress and equity risk stress, an applicable insurer must –

(a) recalculate the application ratio in section 6 of Schedule 5 using a duration factor which is recalculated in accordance with section 8 of Schedule 5 under stress, but with the predictability factor unchanged; and

(b) recalculate the constant prescribed spread component in section 9(1) of Schedule 5 by recalculating and applying the asset dollar duration and liability dollar duration under stress, but with no change to the constant prescribed spread, predictability factor and eligible asset percentage.

(4) For purpose of recalculating the matching adjustment under subrules (1) and (2), in the case of credit spread risk stress, for eligible assets that are subject to credit spread risk (other than sovereign bonds as described in rule 48(3)(a)), an applicable insurer may recalculate the adjusted spread in accordance with section 5 of Schedule 5 by adding the corresponding credit spread stress factor under rule 48 as reduced by the relevant reduction factor in accordance with the following formula –

$$Adjusted\ spread_{stress} = Adjusted\ spread_{base} + \sum_{Eligible\ Assets\ subject\ to\ credit\ spread\ risk\ i} \omega_i \times Credit\ spread\ stress\ factor_i \times (1 - reduction\ factor_i)$$

where –

ω_i means weight assigned to the eligible assets calculated in accordance with section 5 of Schedule 5;

$credit\ spread\ stress\ factor$ means the credit spread stress factor under rule 48; and

$reduction\ factor$ means the factor set out in Table 1 (according to the whether the eligible asset is rated, and if so, credit rating band of eligible assets).

Table 1
Prescribed reduction factor (%)

Credit rating band	**Reduction factor (%)**
Column 1	Column 2
1	40
2	40
3	45
4	55
5 or below	100
Unrated	77.5

(5) An applicable insurer which has practical difficulty in performing full calculation of the matching adjustment of a MA portfolio under credit spread risk, interest rate risk and equity risk scenarios may opt to adopt simplified alternatives specified by the Authority.

47. Risk capital amount for interest rate risk

(1) Subject to rule 46, an applicable insurer must determine the risk capital amount for interest rate risk as the reduction in the net asset value based on the scenario as specified in paragraph (a) or (b) that results in the lowest net asset value for the applicable insurer as a whole –

(a) applying the upward stressed risk-free yield curve and upward stressed prime rate (if applicable) under subrules (2) and (5) to all assets and liabilities sensitive to interest rate risk; or

(b) applying the downward stressed risk-free yield curve and downward stressed prime rate (if applicable) under subrules (2) and (5) to all assets and liabilities sensitive to interest rate risk.

(2) Subject to subrules (3) and (4), the interest rate upward and downward stressed risk-free yield curves for each specified currency are generated in accordance with Schedule 4, but with the following adjustments –

(a) multiplying each observable market rate of the respective risk-free yield curve by *X*, where *X* is calculated as 1 plus –

(i) the corresponding upward stress factor in column 2 of Table 2, in the case of the upward stressed risk-free yield curve; and

(ii) the corresponding downward stress factor in column 3 of Table 2, in the case of the downward stressed risk-free yield curve,

for each relevant term in column 1 of Table 2 until the last liquid point (as prescribed in Schedule 4) for the specified currency; and

Table 2
Upward and downward stress factors – risk-free yield curve

Term (in year)	**Upward**	**Downward**
Column 1	Column 2	Column 3
1	307%	-75%
2	194%	-66%
3	181%	-64%
4	173%	-63%
5	160%	-61%
6	144%	-59%
7	134%	-57%
8	125%	-55%
9	119%	-54%
10	114%	-53%
15	99%	-49%
20	76%	-43%
30	73%	-42%
50	73%	-42%

(b) multiplying the ultimate forward rate of the respective risk-free yield curve (as prescribed in Schedule 4) by –
   (i) 1.1, in the case of the upward stressed risk-free yield curve, and
   (ii) 0.9, in the case of the downward stressed risk-free yield curve.

(3) If any observable market rate is negative, in generating the stressed risk-free yield curves, the applicable insurer may not apply the adjustments in subrule (2)(a) to the negative rate.

(4) Each point on the interest rate upward and downward stressed risk-free yield curves generated pursuant to subrule (2) is capped at the corresponding point on the risk-free yield curve plus 200 basis points, and floored at corresponding point on the risk-free yield curve minus 200 basis points.

In the case of an applicable insurer with onshore reverse mortgage insurance, –
(a) the additive upward stress to the prime rate associated with the contract of insurance that the insurer must also apply to its onshore reverse mortgage insurance for the purposes of subrule (1)(a) is the stress factor determined in accordance with column 2 of Table 3; and
(b) the additive downward stress to the prime rate associated with the contract of insurance that the insurer must also apply to its onshore reverse mortgage insurance for the purposes of subrule (1)(b) is the stress factor determined in accordance with column 3 of Table 3.

Table 3
Upward and downward stress factors – prime rate

Prime rate	Upward	Downward
Column 1	Column 2	Column 3
Lower than or equal to 5%	2.50%	-1.00%
Higher than 5% but lower than or equal to 6%	3.25%	-1.75%
Higher than 6% lower than or equal to 7%	3.75%	-2.25%
Higher than 7% lower than or equal to 8%	4.25%	-3.00%
Higher than 8% lower than or equal to 9%	4.75%	-3.75%
Higher than 9% lower than or equal to 10%	5.25%	-4.50%
Higher than 10% lower than or equal to 11%	6.00%	-5.25%
Higher than 11% lower than or equal to 12%	6.50%	-6.00%
Higher than 12% lower than or equal to 13%	7.00%	-6.75%
Higher than 13% lower than or equal to 14%	7.50%	-7.50%
Higher than 14% lower than or equal to 15%	7.50%	-8.25%
Higher than 15% lower than or equal to 16%	6.50%	-9.00%
Higher than 16% lower than or equal to 17%	5.50%	-9.75%
Higher than 17% lower than or equal to 18%	4.50%	-10.50%
Higher than 18% lower than or equal to 19%	3.50%	-11.25%
Higher than 19%	2.50%	-11.75%

(5) For an asset with callable option, an applicable insurer must determine whether such option is exercisable and reflect the effect in deriving the risk capital amount under subrule (1)(a) or (1)(b).

48. Risk capital amount for credit spread risk

(1) Subject to rule 46, an applicable insurer must determine the risk capital amount for credit spread risk as the amount of reduction in the net asset value by applying the credit spread stress factor to its assets and liabilities which are sensitive to changes in the level and volatility of credit spreads.

(2) Subject to subrule (3), the credit spread stress factors set out in Table 4 are applied additive to the credit spread at base scenario, corresponding to the credit rating band and remaining term to maturity of the relevant asset or liability.

Table 4
Credit spread stress factors in basis points

Remaining term to maturity / Credit rating band	Not more than 5 years	More than 5 years but not more than 10 years	More than 10 years but not more than 15 years	More than 15 years but not more than 20 years	More than 20 years but not more than 25 years	More than 25 years but not more than 30 years	More than 30 years
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
1	95	85	75	70	65	60	55
2	110	100	90	85	75	70	60
3	175	145	130	120	110	100	90
4	275	220	200	180	165	150	135
5	425	390	355	325	295	265	245
6	640	585	530	485	440	400	365
7	640	585	530	485	440	400	365
Unrated	350	305	277.5	252.5	230	207.5	190

(3) For the purpose of determining the credit spread stress factor under subrule (2) –

(a) despite the stress factors in Table 4, a sovereign bond may be assigned a credit spread stress factor of 0 basis point only if –

(i) its credit rating is in credit rating band 1 or 2, or

(ii) it is a government bond issued in a jurisdiction whose government bond is used to derive a specified risk-free yield curve set out in Table 1 of Schedule 4 and it is denominated in that specified currency;

(b) to avoid doubt, an asset which is issued by a recognized multilateral development bank or supranational organization is treated as sovereign bond and paragraph (a)(i) applies to it;

(c) in the case of a recognized green bond, a factor of 0.9 is multiplied to the stress factor in Table 4;

(d) in the case of an asset, of which a portion of the obligations of the issuer under the asset is guaranteed by an eligible guarantee, the portion of the asset which is guaranteed, may be assigned with credit spread stress factor based on the credit rating band of the guarantee provider rather than the issuer; and

(e) to avoid doubt, an asset which is issued by a public sector entity without eligible guarantee from a sovereign, must be assigned with credit rating stress factor based on the credit rating band of the entity as a corporate.

(4) In this rule –

recognized green bond (認可的綠色債券) refers to a bond for which the bond has obtained pre-issuance external verification from an independent and qualified international third party that the bond meets the green criteria or principles as issued by the Authority in notice published at the Gazette.

49. Risk capital amount for equity risk

(1) Subject to rule 46, an applicable insurer must determine the risk capital amount for equity risk as the amount of reduction in the net asset value by applying the adjusted equity downward stress factor determined pursuant to subrule (2) to its assets and liabilities which are sensitive to changes in equity market prices or volatility.

(2) Subject to subrules (3), (4) and (5), adjusted equity downward stress factor is applied multiplicatively and –
  (a) the adjusted equity downward stress factor for developed market listed equities, emerging market listed equities, portfolio investments of no look-through and other equities is determined pursuant to Table 5 as the sum of –
    (i) the equity downward stress factor in column 2 of Table 5 corresponding to the type of equities in column 1 of Table 5, and
    (ii) the most recent countercyclical adjustment specified by the Authority from time to time for developed market listed equities, emerging market listed equities, portfolio investments of no look-through and other equities, as the case may be; and
  (b) the adjusted equity downward stress factor for non-regulated investments in affiliates (if not consolidated) and strategic investments, is the equity downward stress factor in column 2 of Table 5 corresponding to the type of equities in column 1 of Table 5.

Table 5
Equity downward stress factors

Type of equities	**Stress factor**
Column 1	Column 2
Developed market listed equities	40%
Emerging market listed equities	50%
Non-regulated investment in affiliates (if not consolidated)	20%
Strategic investments	20%
portfolio investments of no look-through	50%
Other equities (equities other than the above categories)	50%

(3) For purposes of subrule (2)(a)(ii), the countercyclical adjustment is capped at 10% and floored at -10%.

(4) Where an equity is secondary listed, the equity downward stress factor set out in Table 5 must be applied based on the exchange on which the equity has its primary listing.

(5) Where an equity is listed on more than one securities exchange, there is no offset for net long and short positions in that equity exposure from its listing on different exchanges.

(6) An applicable insurer may only classify an equity as a strategic investment for the purpose of applying the corresponding stress factor set out in Table 5, if it obtains approval from the Authority to do so under subrule (9).

(7) To obtain an approval under subrule (9), an applicable insurer must make an application to the Authority for such approval in accordance with subrule (8) and make payment of a prescribed fee.

(8) An application under subrule (7) must –
- (a) be made in writing;
- (b) contain or be accompanied by particulars of –
  - (i) the details of the investment; and
  - (ii) any other information as may be reasonably required by the Authority to consider the application, having regard to guidelines issued by the Authority under section 133 of the Ordinance; and
- (c) be served on the Authority.

(9) On an application made under subrule (7), the Authority may, by written notice to the applicable insurer, approve or reject the application and if it approves the application it may do so subject to any conditions it may impose including in relation, but not limited to –
- (a) the period for which the approval shall remain in effect; and
- (b) the limit on amount or value of the investment.

(10) In this rule –

countercyclical adjustment (逆周期調節) means the adjustment reflecting risk arising from changes in the level of equity prices, which is based on a function of the current level of an appropriate equity index and a weighted average level of that index;

developed market listed equities (已發展市場上市股權) means equities listed on the securities exchanges of the jurisdictions set out in Table 1 of Schedule 8;

emerging market listed equities (新興市場上市股權) means listed equities not being developed market listed equities;

portfolio investment of no look-through (無法穿透的組合投資) has the meaning given by rule 39.

50. Risk capital amount of property risk

(1) Subject to rule 46, an applicable insurer must determine the risk capital amount for property risk as the amount of reduction in the net asset value by applying a property downward stress factor of 25% to its assets and liabilities that are sensitive to changes in the market prices or volatility of properties.

(2) In the case of an applicable insurer with onshore reverse mortgage insurance, the insurer must apply the property stress in subrule (1) in respect of its onshore reverse mortgage insurance.

51. Risk capital amount for currency risk

(1) An applicable insurer must determine the risk capital amount for currency risk as the sum of the risk capital amounts for currency risk for each currency in which the insurer's assets and liabilities are denominated, as determined pursuant to subrule (2).

(2) An applicable insurer shall determine the risk capital amount for currency risk for each currency against Hong Kong dollars, by multiplying –
- (a) the relevant currency risk factor in column 2 or 4 of Table 6 corresponding to the relevant currency in column 1 or 3 of Table 6; and
- (b) by the value of the net long or net short position in the relevant currency exposure, after adjusting the impact of any risk mitigation arrangement pursuant to rule 42, for the insurer as a whole.

Table 6
Currency risk factors for currencies against Hong Kong dollars

Currency	**Risk factor**	**Currency**	**Risk factor**
Column 1	Column 2	Column 3	Column 4
AUD	25%	MYR	15%
BRL	55%	NOK	35%
CAD	25%	NZD	40%
CHF	35%	PEN	15%
CLP	30%	PHP	15%
COP	35%	PLN	40%
CZK	35%	RMB	10%
DKK	30%	RON	30%
EUR	25%	RUB	35%
GBP	25%	SAR	5%
HKD	0%	SEK	35%
HUF	45%	SGD	15%
IDR	35%	THB	20%
ILS	25%	TRY	60%
INR	15%	TWD	10%
JPY	30%	USD	1%
KRW	25%	ZAR	55%
MOP	1%	Others	60%
MXN	30%		

(3) In determining its net long or net short position in a relevant currency exposure against Hong Kong dollars under subrule (2)(b), the insurer must exclude the following items –

(a) investment in non-consolidated subsidiaries and investment in affiliates which is a regulated financial entity, and
(b) margin over current estimate.

Division 3 – Life Insurance Risk

52. Risk capital amount for life insurance risk

(1) To determine its risk capital amount for life insurance risk, an applicable insurer must –
(a) in respect of its assets and liabilities that are sensitive to life insurance risk, determine the risk capital amounts of the following sub-risks –
(i) mortality risk, in accordance with rule 54;
(ii) longevity risk, in accordance with rule 55;
(iii) life catastrophe risk, in accordance with rule 56;
(iv) morbidity risk, in accordance with rule 57;
(v) expense risk, in accordance with rule 58; and
(vi) lapse risk, in accordance with rule 59; and
(b) aggregate the risk capital amounts for the sub-risks mentioned in paragraphs (a)(i) to (vi) in accordance with the formula in subrule (2).

(2) The formula mentioned in subrule (1)(b) is –

$$Risk\ capital\ amount_{Life\ insurance\ risk} = \sqrt{\sum_{m,n} correlation\ matrix_{m,n} \times risk\ capital\ amount_m \times risk\ capital\ amount_n}$$

where –
correlation matrix refers to the correlation matrix set out in Table 4 of Schedule 7; and
m and *n* represent the corresponding sub-risks in each subparagraph in subrule (1)(a).

(3) For the purposes of subrule (1), where onshore reverse mortgage insurance is sensitive to life insurance risk, an applicable insurer must include such business in the calculation of the risk capital amounts for mortality risk, longevity risk and lapse risk in rules 54, 55 and 59.

(4) If any risk capital amount for a sub-risk referred in subrule (1)(a)(i), (ii), (iii), (iv), (v) or (vi) is negative, an applicable insurer must set the amount to zero before being aggregated in accordance with subrule (1)(b).

53. Homogenous risk group

(1) To determine its risk capital amounts for each sub-risk mentioned in rule 52(1), an applicable insurer must group its insurance liabilities with exposure to life insurance risk into homogenous risk groups.

(2) For the purposes of subrule (1), a homogeneous risk group is a collection of insurance liabilities with similar risk characteristics, such that there is no significant offset between the risks associated with the insurance liabilities in the group when calculating the risk capital amount for each sub-risk mentioned in rule 52(1).

54. Risk capital amount for mortality risk

(1) An applicable insurer must calculate the risk capital amount for mortality risk by –
  (a) applying the mortality stress factor in subrule (2) to the best estimate mortality rates for each homogenous risk group and determining the resulting reduction to its net asset value; and
  (b) determining the total sum of the reductions to its net asset value for each homogenous risk group determined in paragraph (a) in accordance with the formula in subrule (3).

(2) For the purposes of subrule (1)(a) and subrule (3), an applicable insurer applies the mortality stress factor by –
  (a) applying a multiplicative permanent increase of 12.5% to the best estimate mortality rates for a homogenous risk group; and
  (b) capping the stressed mortality rates resulting from the application of the permanent increase mentioned in paragraph (a) at 100%.

(3) The formula mentioned in subrule (1)(b) is –

$$Risk\ capital\ amount_{Mortality} = \sum_{i} Max\ (\Delta NAV_{stressed}, 0)$$

where –
i refers to each homogeneous risk group; and
$\Delta NAV_{stressed}$ refers to the reduction in the net asset value resulting from the application of the mortality stress factor in subrule (2) to the homogenous risk group.

55. Risk capital amount for longevity risk

(1) An applicable insurer must calculate the risk capital amount for longevity risk by –
  (a) applying the longevity stress factor in subrule (2) to the best estimate mortality rates for each homogenous risk group and determining the resulting reduction to its net asset value; and
  (b) determining the total sum of the reductions to the net asset value for each homogenous risk group determined in paragraph (a) in accordance with the formula in subrule (3).

(2) For the purposes of subrule (1)(a) and subrule (3), an applicable insurer applies the longevity stress factor by applying a multiplicative permanent decrease of 17.5% to the best estimate mortality rates for a homogenous risk group.

(3) The formula mentioned in subrule (1)(b) is –

$$Risk\ capital\ amount_{Longevity} = \sum_{i} Max\ (\Delta NAV_{stressed}, 0)$$

where –
i refers to each homogeneous risk group; and
$\Delta NAV_{stressed}$ refers to the reduction in net asset value resulting from the application of the longevity stress factor in subrule (2) to the homogenous risk group.

56. Risk capital amount for life catastrophe risk

(1) An applicable insurer must determine the risk capital amount for life catastrophe risk as the reduction in its net asset value resulting from applying the life catastrophe stress factor mentioned in subrule (2) for the insurer as a whole.

(2) For the purposes of subrule (1), an applicable insurer applies the life catastrophe stress factor by –
- (a) adding an absolute increase of 1.5 per mille to its best estimate mortality rates for all its contracts of insurance with exposure to life insurance risk in the first 12 months from the valuation date; and
- (b) capping the stressed mortality rates resulting from the application of the additive amount mentioned in paragraph (a) at 100%.

57. Risk capital amount for morbidity risk

(1) An applicable insurer must determine the risk capital amount for morbidity risk by –
- (a) assigning each disability benefit and morbidity benefit under its contracts of insurance with exposure to life insurance risk to categories 1, 2, 3, or 4 as mentioned in subrule (2), based on the category which most appropriately describes the benefit;
- (b) in the case of each homogenous risk group with disability benefits and morbidity benefits assigned to categories 1, 2 and 3 mentioned in subrule (2) –
  - (i) applying the morbidity stress factors mentioned in subrule (3) to each such homogenous risk group and determining the resulting reduction in its net asset value for each homogenous risk group; and
  - (ii) determining the total sum of the reductions to the net asset value mentioned in (i) for each category using the formula in subrule (5);
- (c) in the case of each homogenous risk group with disability benefits and morbidity benefits assigned to category 4 mentioned in subrule (2) –
  - (i) applying the morbidity stress factors mentioned in subrule (4) to each such homogenous risk group; and
  - (ii) determining the resulting reduction in its net asset value in accordance with subrule (4)(e); and
- (d) determining the total sum of the reductions in net asset value for disability or morbidity benefits from paragraphs (b) and (c).

(2) The categories of disability or morbidity benefits mentioned in subrule (1)(a) are –
   (a) Category 1: Medical expenses – benefits under contracts of insurance that provide compensation for medical expenses, based on the treatment or expenses incurred by the policy holders, and not on the time spent in a given health status;
   (b) Category 2: Lump sum in case of a health event – benefits under contracts of insurance that provide for one or more lump sum compensation upon the occurrence of a specified, and usually severe, health event, such as the diagnosis of cancer or another type of dread disease, or the occurrence of an accident resulting in a certain level of disability;
   (c) Category 3: Short-term recurring payments – benefits under contracts of insurance that provide for recurring amounts of compensation for a period that depends on the time spent in a temporary health status, such as inability to work, hospitalization, or similar status; and
   (d) Category 4: Long-term recurring payments – benefits under contracts of insurance that provide for a fixed annuity in case of a long-term or permanently deteriorated health status.

(3) For the purposes of subrule (1)(b)(i), in relation to the disability benefits and morbidity benefits assigned to categories 1, 2 and 3 –
   (a) if the applicable insurer has used disability and morbidity inception rates to model its claim costs , the insurer applies the morbidity stress factor by –
      (i) applying a multiplicative permanent increase to such best estimate inception rates for a homogenous risk group, with such permanent increase being the applicable percentage in Table 7; and
      (ii) capping the stressed inception rates resulting from the application of the permanent increase mentioned in paragraph (i) at 100%;
   (b) if the insurer has not used inception rates to model its claim costs, but modelled recovery rates, the insurer applies the morbidity stress factor by applying a multiplicative permanent decrease to its modelled recovery rates for a homogenous risk group, with the permanent decrease being the applicable percentage in Table 7; and
   (c) if the insurer has not modelled inception rates or recovery rates, the insurer applies the morbidity stress factor by applying a multiplicative increase to the medical claim payment amounts for a homogenous risk group, with the increase being the applicable percentage in Table 7.

Table 7
Morbidity stress factors

Benefit Category	**Coverages with original term (based on the boundary determined under rule 14) shorter or equal to 5 years**	**Coverages with original term (based on the boundary determined under rule 14) longer than 5 years**
Column 1	Column 2	Column 3
1: Medical expenses	20%	8%
2: Lump sum in case of a health event	25%	20%
3: Short-term recurring payments	20%	12%
4: Long-term recurring payments	25%	20%

(4) For the purposes of subrule (1)(c), in relation to the disability benefits and morbidity benefits assigned to category 4, an applicable insurer applies the morbidity stress factor by –

(a) applying a multiplicative permanent increase to the best estimate disability and morbidity inception rates for each homogenous risk group, with such permanent increase being the percentage in Table 7 corresponding to the relevant benefit category and contract term, subject to the stressed inception rate being capped at 100%, and determining the resulting reduction in its net asset value for each homogenous risk group;

(b) determining the sum of the reductions in net asset value for each homogenous risk group mentioned in (a) using the formula in subrule (5);

(c) applying a multiplicative 20% permanent decrease to the best estimate recovery rates to each same homogenous risk group mentioned in paragraph (a), and determining the resulting reduction in its net asset value for each homogenous risk group;

(d) determining the sum of the reductions in net asset value for each homogenous risk group mentioned in paragraph (c) using the formula in subrule (5); and

(e) taking the greater of the reductions in the net asset value determined in paragraphs (b) and (d) as the reduction in its net asset value for purposes of subrule (1)(c).

(5) The formula mentioned in subrules (1)(b)(ii), (4)(b) and (4)(d) is –

$$Risk\ capital\ amount_{Morbidity,benefit\ category} = \sum_i Max\ (\Delta NAV_{stressed}, 0)$$

where –

i refers to each homogeneous risk group; and

$\Delta NAV_{stressed}$ refers to the reduction in the net asset value resulting from the application of the morbidity stress factors determined in accordance with subrule 1(b) or (c), as the case may be.

58. Risk capital amount for expense risk

(1) An applicable insurer must calculate the risk capital amount for expense risk as the reduction in its net asset value resulting from the application of the expense stress factors in subrule (2) for all homogeneous risk groups.

(2) For the purposes of subrule (1), an applicable insurer applies the following expense stresses factors simultaneously –

(a) applying a multiplicative increase of x% to its best estimate expense assumptions for all homogeneous risk groups for all years, with x% being the percentage set out in column 2 of Table 8 for the applicable geographical region in column 1 of Table 8, based on the location of expense risk, or the location where the business is written ; and

(b) adding y% to its best estimate expense inflation assumptions for all homogeneous risk groups for all years, with y% being the percentage referred to in column 3 of Table 8 for the applicable geographical region in column 1 of Table 8, based on the location of expense risk, or the location where the business is written.

Table 8
Expense stress factors

Geographical region	**x%**	**y%**
Column 1	Column 2	Column 3
Canada, Japan, Switzerland, the United Kingdom and the United States of America	6%	1%
A member state of the European Economic Area	6%	1%
Hong Kong and other developed markets defined in Table 2 of Schedule 8	8%	Year 1–10: 2% Year 11 onwards: 1%
Markets not listed in the regions above	8%	Year 1–10: 3% Year 11–20: 2% Year 21 onwards: 1%

59. Risk capital amount for lapse risk

(1) An applicable insurer must determine its risk capital amount for lapse risk as the greater of –

(a) the level and trend lapse component determined in accordance with subrules (2) and (3); and

(b) the mass lapse component determined in accordance with subrule (4).

(2) For the purposes of subrule 1(a), an applicable insurer must determine the level and trend lapse component by –

(a) for each homogenous risk group –

(i) applying the upward lapse risk stresses mentioned in subrule (3)(b)(i) to the legal or contractual options mentioned in subrule (3)(a) for the homogenous risk group and determining the resulting reduction to its net asset value; and

(ii) applying the downward lapse risk stress mentioned in subrule (3)(b)(ii) to the legal or contract options mentioned in subrule (3)(a) for the homogenous risk group and determining the resulting reduction to its net asset value;

(b) taking the greater of the reductions in the net asset value determined in paragraphs (a)(i) and (ii), as the reduction in the net asset value for the homogeneous risk group for the level and trend lapse component; and

(c) determining the sum of the reductions in the net asset value for all homogenous risk groups determined in paragraph (b) in accordance with the formula (to avoid doubt, with the amount in respect of any homogenous risk group being zero, if there is no resulting reduction in the net asset value) –

$$Risk\ capital\ amount_{Level\ and\ trend} = \sum_i Max\ (\Delta NAV \mid stress_{Up}, \Delta NAV \mid stress_{Down}, 0)$$

where–

i refers to each homogeneous risk group;

$\Delta NAV \mid stress_{Up}$ refers to the reduction in the net asset value for the homogeneous risk group resulting from the application of the upward lapse risk stress in (a)(i); and

$\Delta NAV \mid stress_{Down}$ refers to the reduction in the net asset value for the homogeneous risk group resulting from the application of the downward lapse risk stress in (a)(ii)

(3) For the purposes of subrule (2)(a) –

(a) an applicable insurer must apply the stresses to all legal or contractual options which can significantly change the value of the future cash flows, including but not limited to –

(i) policy lapse or surrender,

(ii) partial withdrawal,

(iii) premium persistency, such as premium holiday, and

(iv) optional changes to insurance cover;

(b) the stresses which the insurer must apply are, subject to paragraph (c) –

(i) for the upward stress in subrule (2)(a)(i), a multiplicative permanent increase of 40% to its best estimates for the exercise rates of the legal or contractual options, subject to the stressed exercise rate for each option being capped at 100%; and

(ii) for the downward stress in subrule (2)(a)(ii), a multiplicative permanent decrease of 40% to its best estimates for the exercise rates of the legal or contractual options; and

(c) The upward stresses mentioned in paragraph (b)(i) must only be applied in a manner that increases policy lapses or reduces insurance cover, while the downward stresses mentioned in paragraph (b)(ii) must only be applied in a manner that decreases policy lapses or increases insurance cover, as the case may be.

(4) For the purposes of subrule (1)(b), an applicable insurer must determine the mass lapse component by –

(a) applying the following one-off instantaneous stresses to each homogeneous risk group, and determining the resulting reduction in its net asset value from the application of such stresses –

(i) an immediate 30% lapse or surrender of contracts of insurance which are individual insurance policies, and

(ii) an immediate 50% lapse or surrender of contracts of insurance which are non-individual insurance policies; and

(b) in accordance with the following formula, determining the sum of the reductions in the net asset value for all homogenous risk groups determined in paragraph (a) (to avoid doubt, with the amount in respect of any homogenous risk group being zero, if there is no resulting reduction in the net asset value) –

$$Risk\ capital\ amount_{Mass} = \sum_{i} Max\ (\Delta NAV \mid shock_{Mass}, 0)$$

where –

i refers to each homogeneous risk group; and

$\Delta NAV \mid shock_{Mass}$ refers to the reduction in the net asset value resulting from the application of the stresses in paragraph (a) to the homogenous risk group.

(5) In this rule –

individual insurance policy (個人保險保單) means a contract of insurance which is held by a natural person as policy holder or by a trust of which a natural person is the settlor;

non-individual insurance policy (非個人保險保單) means a contract of insurance which is not an individual insurance policy.

Division 4 – General Insurance Risk

Subdivision 1 – Preliminary

60. Interpretation

(1) In this Division –

earned premium (滿期保費) means, in relation to a period of time, the portion of the premium under a contract of insurance that relates to the insurance coverage under the contract that elapses during that period;

net earned premium (滿期淨保費) means earned premium that is net of reinsurance;

net-down procedures (淨下調程序) means the process of estimating the net loss to an applicable insurer under its general insurance business, by deducting from the gross loss, the estimated insurance risk mitigation effect of any contract of reinsurance (being the amount of the gross loss that is recoverable under that contract) that is recognized under rule 41.

(2) For the purpose of determining any risk capital amount under this Division which is determined by applying prescribed catastrophe loss scenarios –
   (a) if the prescribed loss scenario consists of more than one loss event, in applying the net-down procedures to those loss events an applicable insurer must assume that–
      (i) the loss events are independent; and
      (ii) the insurer does not enter into any new contract of reinsurance, as a cedant, between the loss events;
   (b) if the prescribed loss scenario does not prescribe how losses arising from the scenario are to be attributed to specific individual risks, the applicable insurer must not recognize the insurance risk mitigation effect of any contract of reinsurance which is a per risk excess of loss reinsurance, even if that contract is recognized under rule 41; and
   (c) if the applicable insurer, in applying the prescribed loss scenario, would result in premium payable under a contract of reinsurance under which it is a cedant, to reinstate the coverage under that contract (***outward reinstatement premium***), or premium receivable under a contract of reinsurance under which it is a reinsurer to reinstate the coverage under that contract (***inward reinstatement premium***), for determining its net losses arising from the scenario in accordance with the applicable approaches prescribed in this Division, the insurer –
      (i) must add any such outward reinstatement premium; and
      (ii) may deduct any such inward reinstatement premium.

(3) In this rule –

per risk excess of loss reinsurance (險位超額賠款再保險) means a form of excess of loss reinsurance which indemnifies a cedant against the amount of loss on an individual risk (for example, building) in excess of a specified retention with respect to each individual risk.

61. Risk capital amount for general insurance risk

(1) To determine its risk capital amount for general insurance risk, an applicable insurer must –
   (a) for its general insurance liabilities, determine the risk capital amounts for the following sub-risks –
      (i) general insurance risk (other than mortgage insurance risk), in accordance with rules 62 to 70; and
      (ii) mortgage insurance risk, in accordance with rules 71 to 80; and
   (b) aggregate the risk capital amounts for the sub-risks mentioned in paragraphs (a)(i) and (ii) in accordance with the formula in subrule (2).

(2) The formula mentioned in subrule (1)(b) is –

$$Risk\ capital\ amount_{\ General\ insurance\ risk} = \sqrt{\sum_{u1,v1} correlation\ matrix_{u1,v1} \times risk\ capital\ amount_{u1} \times risk\ capital\ amount_{v1}}$$

where –
correlation matrix refers to the correlation matrix set out in Table 5 of Schedule 7; and
u1 and *v1* represent the corresponding sub-risks in each subparagraph in subrule (1)(a).

Subdivision 2 – General insurance risk (other than mortgage insurance risk)

62. Risk capital amount for general insurance risk (other than mortgage insurance risk)

(1) To determine its risk capital amount for general insurance risk (other than mortgage insurance risk), an applicable insurer must –
  (a) determine the risk capital amounts for the following sub-risks –
    (i) reserve and premium risk, in accordance with rules 63 to 65; and
    (ii) general insurance catastrophe risk, in accordance with rules 66 to 70; and
  (b) aggregate the risk capital amounts for the sub-risks mentioned in paragraphs (a)(i) and (ii) in accordance with the formula in subrule (2).

(2) The formula mentioned in subrule (1)(b) is –

$$Risk\ capital\ amount_{\ General\ insurance\ risk\ (other\ than\ mortgage\ insurance\ risk)} = \sqrt{\sum_{u2,v2} correlation\ matrix_{u2,v2} \times risk\ capital\ amount_{u2} \times risk\ capital\ amount_{v2}}$$

where –
correlation matrix refers to the correlation matrix set out in Table 6 of Schedule 7; and
u2 and *v2* represent the corresponding sub-risks in each subparagraph in subrule (1)(a).

63. Risk capital amount for reserve and premium risk

(1) To determine its risk capital amount for reserve and premium risk, an applicable insurer –
  (a) must determine its risk capital amounts for the following sub-risks –
    (i) reserve risk for each general insurance line of business, in accordance with rule 64; and
    (ii) premium risk for each general insurance line of business, in accordance with rule 65;

(b) must determine its risk capital amounts for reserve and premium risk for each general insurance line of business by aggregating the risk capital amounts for the sub-risks mentioned in paragraphs (a)(i) and (ii) for the corresponding general insurance lines of business, in accordance with the formula in subrule (2);

(c) may apply the adjustment, if any, to the risk capital amounts for reserve and premium risk for each general insurance line of business in accordance with subrule (3) to take account of geographical diversification; and

(d) must aggregate the risk capital amounts for reserve and premium risk for each general insurance line of business after the adjustment mentioned in paragraph (c) in accordance with the formula in subrule (4).

(2) The formula mentioned in subrule 1(b) is –

$$Risk\ capital\ amount_{\ Reserve\ and\ premium\ risk_LOB} = \sqrt{\sum_{u3,v3} correlation\ matrix_{u3,v3} \times risk\ capital\ amount_{u3} \times risk\ capital\ amount_{v3}}$$

where –

correlation matrix refers to the correlation matrix set out in Table 7 of Schedule 7; and

u3 and *v3* represent the corresponding sub-risks in each subparagraph in subrule (1)(a).

(3) For the purposes of subrule (1)(c), an applicable insurer may adjust the risk capital amount for reserve and premium risk for each general insurance line of business to take account of geographical diversification using the formula –

$$Risk\ capital\ amount_{\ reserve\ and\ premium\ after\ geographical\ diversification} = Risk\ capital\ amount_{\ reserve\ and\ premium\ before\ geographical\ diversification} \times (0.75 + 0.25 \times \frac{\sum_i {x_i}^2}{(\sum_i x_i)^2}),$$

where x_i is the sum of –

(a) the exposure base of reserve risk determined under rule 64(2) for a general insurance line of business in a risk region as defined in Table 3 of Schedule 8; and

(b) the exposure base for premium risk determined under rule 65(2) for the same general insurance line of business and same risk region.

(4) The formula mentioned in subrule 1(d) is –

$$Risk\ capital\ amount_{\ Reserve\ and\ premium\ risk} = \sqrt{\sum_{u4,v4} correlation\ matrix_{u4,v4} \times risk\ capital\ amount_{Reserve\ and\ premium_u4} \times risk\ capital\ amount_{Reserve\ and\ premium,_v4}}$$

where –

correlation matrix refers to the correlation matrix in Table 8 of Schedule 7; and

u4 and *v4* represent the corresponding general insurance lines of business.

(5) If the insurance risk mitigation effect of a contract of reinsurance that is recognized under rule 41 is not sufficiently taken into account in the risk capital amount of reserve and premium risk, an applicable insurer may only take into account the additional insurance risk mitigation effect of the contract in determining its risk capital amount for reserve and premium risk, if it obtains approval from the Authority to do so under subrule (8).

(6) To obtain an approval under subrule (8), an applicable insurer must make an application to the Authority for such approval in accordance with subrule (7) and make payment of a prescribed fee.

(7) An application under subrule (6) must –
   (a) be made in writing;
   (b) contain or be accompanied by particulars of –
      (i) the contract of reinsurance;
      (ii) how the applicable insurer proposes to take account of the insurance risk mitigation effect of the contract in determining its risk capital amount for reserve and premium risk; and
      (iii) any other information as may be reasonably required by the Authority to consider the application, having regard to guidelines issued by the Authority under section 133 of the Ordinance; and
   (c) be served on the Authority.

(8) On an application made under subrule (6), the Authority may, by written notice to the applicable insurer, approve or reject the application and if it approves the application it may do so subject to any conditions it may impose including in relation, but not limited to –
   (a) the period for which the approval shall remain in effect; and
   (b) the approach or manner in which insurance risk mitigation effect of the contract of reinsurance may be taken in account in the determination of the risk capital amount for reserve and premium risk.

64. Risk capital amount for reserve risk

(1) An applicable insurer must determine its risk capital amount for reserve risk for each general insurance line of business in column 2 of Table 9 as the amount resulting from multiplying its exposure base for reserve risk for that line of business by the corresponding reserve risk factor in column 3 of Table 9.

Table 9
Reserve risk factors

Business	General insurance line of business	Reserve risk factor
Column 1	Column 2	Column 3
Direct	Accident and health	25%
	Motor	30%
	Aviation	40%
	Ships	40%
	Goods in transit	40%
	Property damage	35%
	Employees' compensation–construction	30%
	Employees' compensation–non-construction	25%
	General liability–public liability	30%
	General liability–other liability	40%
	Pecuniary loss–credit and other	55%
Proportional Reinsurance	Accident and health	25%
	Motor	30%
	Aviation	40%
	Ships	40%
	Goods in transit	40%
	Property damage	35%
	Employees' compensation	30%
	General liability	40%
	Pecuniary loss–credit and other	55%
Non-Proportional Reinsurance	Accident and health	50%
	Motor	50%
	Marine, aviation, and transport	50%
	Property damage	50%
	Employees' compensation	50%
	General liability	50%
	Pecuniary loss–credit and other	50%

(2) For the purposes of subrule (1), an applicable insurer's exposure base for reserve risk for a general insurance line of business, subject to subrule (3), is its outstanding claims liabilities net of reinsurance for the line of business as at the valuation date.

(3) Subject to subrule (4), in determining its exposure base for reserve risk for a general insurance line of business, an applicable insurer may exclude a loss event's outstanding claims liability where the insurer's maximum liability for the loss event is already reflected in the outstanding claims liability and cannot be exceeded due to –

(a) such amount of the outstanding claims liability, considered together with any relevant settled amount, being not less than the maximum limit of liability of the insurer under the contract of insurance; or

(b) such amount of the outstanding claims liability, considered together with relevant settled amount, being not less than the maximum amount of liability retained by the insurer for the loss event, with any amount of liability exceeding this being covered by contracts of reinsurance recognized under rule 41 and there must be no dispute with any reinsurer on the reinsurance recoveries assumed.

(4) An applicable insurer may only exclude outstanding claims liabilities mentioned in subrule (3) from its exposure base for reserve risk if such liabilities –
(a) arise from an unexpected and extreme loss event; and
(b) form a significant portion of the insurer's total outstanding claims liabilities net of reinsurance.

65. Risk capital amount for premium risk

(1) An applicable insurer must determine its risk capital for premium risk for each general insurance line of business in column 2 of Table 10 as the amount resulting from multiplying its exposure base for premium risk for that line of business by the corresponding premium risk factor in column 3 of Table 10.

Table 10
Premium risk factors

Business	General insurance line of business	Premium risk factor
Column 1	Column 2	Column 3
Direct	Accident and health	10%
	Motor	20%
	Aviation	30%
	Ships	30%
	Goods in transit	30%
	Property damage	20%
	Employees' compensation–construction	40%
	Employees' compensation–non-construction	30%
	General liability–public liability	20%
	General liability–other liability	35%
	Pecuniary loss–credit and other	25%
Proportional Reinsurance	Accident and health	10%
	Motor	20%
	Aviation	30%
	Ships	30%
	Goods in transit	30%
	Property damage	30%

	Employees' compensation	30%
	General liability	30%
	Pecuniary loss–credit and other	25%
Non-Proportional Reinsurance	Accident and health	30%
	Motor	30%
	Marine, aviation, and transport	30%
	Property damage	30%
	Employees' compensation	30%
	General liability	30%
	Pecuniary loss–credit and other	30%

(2) For the purposes of subrule (1), an applicable insurer's exposure base for premium risk for a general insurance line of business in column 2 of Table 10, is the sum of –

(a) the greater of –

(i) the insurer's net earned premium for the general insurance line of business for the period commencing 12 months immediately preceding the valuation date and ending on the valuation date; and

(ii) the insurer's estimated net earned premium for the same line of business during the period commencing on the date immediately after the valuation date and ending 12 months after that date; and

(b) in respect of a multi-year insurance contract recognized as at the valuation date, 25% of the net earned premium to be earned during the period under such contract commencing 12 months immediately after the valuation date up to the boundary of the contract.

(3) In this rule –

multi-year insurance contract recognized as at the valuation date (於估值日已確認的多年期保險合約) means a contract of insurance, the insurance liabilities under which are recognized at the valuation date to have a boundary of longer than 12 months in accordance with division 2 of Part 4.

66. Risk capital amount for general insurance catastrophe risk

(1) An applicable insurer must determine its risk capital amount for general insurance catastrophe risk by –

(a) determining the risk capital amounts for the following sub-risks –

(i) natural catastrophe risk, in accordance with rule 67 or 68,

(ii) man-made non-systemic catastrophe risk, in accordance with rule 69; and

(iii) man-made systemic catastrophe risk, in accordance with rule 70; and

(b) aggregating the risk capital amounts mentioned in paragraphs (a)(i) to (iii) according to the formula in subrule (2).

(2) The formula mentioned in subrule (1)(b) is –

$$Risk\ capital\ amount_{General\ insurance\ catastrophe\ risk} = \sqrt{\sum_{u5,v5} correlation\ matrix_{u5,v5} \times risk\ capital\ amount_{u5} \times risk\ capital\ amount_{v5}}$$

where –
correlation matrix refers to the correlation matrix set out in Table 9 of Schedule 7; and
u5 and *v5* represent the corresponding sub-risks in each subparagraph in subrule (1)(a).

67. Risk capital amount for natural catastrophe risk

(1) An applicable insurer –
(a) subject to obtaining approval from the Authority in accordance with subrule (4) and no subsequent objection having been made by the Authority in accordance with subrule (7), may use its own assessment, subject to any conditions imposed by the Authority on its approval under subrule (4), to determine its risk capital amount for natural catastrophe risk; or

(b) must determine its risk capital amount for natural catastrophe risk in accordance with rule 68.

(2) For the purposes of subrule (1)(a), to obtain an approval under subrule (4), an applicable insurer must make an application to the Authority in accordance with subrule (3) and make payment of a prescribed fee.

(3) An application made under subrule (2) must –
(a) be made in writing;
(b) contain –
(i) the particulars in relation to the own assessment specified by the Authority; and
(ii) any other information as may reasonably be required by the Authority to consider the application, having regard to guidelines published under section 133 of the Ordinance; and
(c) be served on the Authority.

(4) On an application made under subrule (2), the Authority may by written notice to the applicable insurer, approve or reject the application and if it approves the application, it may do so subject to such conditions it may impose including in relation, but not limited to –
(a) the period for which the approval shall remain in effect; and
(b) the approach or manner in which the insurer must apply in its own assessment to determine its risk capital amount for natural catastrophe risk.

(5) After obtaining an approval from the Authority under subrule (4) and during the period in which the approval remains in effect, an applicable insurer must –

(a) submit to the Authority such information in relation to the own assessment as specified by the Authority in a specified form and within the period specified in the specified form, including such information as may reasonably be required by the Authority to monitor the continued effectiveness of the own assessment in determining the insurer's risk capital amount for natural catastrophe risk, having regard to guidelines published under section 133 of the Ordinance; and

(b) pay the prescribed fee on submission of information under paragraph (a).

(6) The Authority may, by serving a notice in writing on the applicable insurer, object to the applicable insurer continuing to adopt the risk capital amount for natural catastrophe risk based on the insurer's own assessment if it appears to the Authority that the own assessment is no longer suitable to be adopted by the insurer.

(7) Where the Authority makes an objection pursuant to subrule (6), the applicable insurer must determine its risk capital amount for natural catastrophe risk in accordance with rule 68.

68. Risk capital amount for natural catastrophe risk–factor based

(1) This rule applies to an applicable insurer which does not have an approval from the Authority under rule 67(4) or in respect of which the Authority has made an objection under subrule 67(7).

(2) To determine its risk capital amount for natural catastrophe risk, an applicable insurer must –

(a) determine its –

(i) net loss for windstorm, in accordance with subrules (3), (4), (5), (6) and (7); and

(ii) net loss for earthquake, in accordance with subrules (3), (4), (5), (6) and (8);

(b) aggregate the net losses mentioned in paragraphs (a)(i) and (ii), by using the following formula –

$$Net\ loss = \sqrt{net\ loss_{windstorm}^{2} + net\ loss_{earthquake}^{2}}$$

and –

(c) add to the net loss determined in accordance with paragraph (b), the risk capital amounts for counterparty default and other risk for the reinsurance recoverables made through the net-down procedures under subrules (6) and (7), in accordance with subrule (9).

(3) To determine its net loss for windstorm and net loss for earthquake, an applicable insurer must first determine its exposure base for natural catastrophe in accordance with subrules (4), (5) and (6).

(4) Subject to subrule (5), an applicable insurer's exposure base for natural catastrophe is, for each region and contract type as specified in Table 11 –
  (a) the gross aggregated limit of coverage under each contract of insurance under which the insurer is providing coverage for losses incurred for property related damage in the region at any time within the 12 months immediately after the valuation date; and
  (b) in the case of a contract of insurance mentioned in paragraph (a) which is a proportional treaty without an event limit, a gross 1-in-200 year annual aggregate loss for the 12 months immediately after the valuation date.

(5) If any part of an applicable insurer's exposure base includes exposure from a region or jurisdiction not explicitly specified in Table 11, and would thereby be from "any other region or jurisdiction" as stated in that table, an applicable insurer –
  (a) may define such regions or jurisdictions based on its own risk management framework;
  (b) must group such regions or jurisdictions which are correlated and prone to be impacted by the same earthquake or windstorm as a single region for the purpose of determining the risk capital amount for natural catastrophe risk; and
  (c) must, for each such region determined under paragraph (b), separately determine the exposure base and, for the purposes of subrules (7) and (8), apply the risk factors for "any other region or jurisdiction" in Table 11.

(6) For the purposes of subrules (4) and (5), to avoid doubt, an applicable insurer must include in the determination of its exposure base any risk types where losses could be incurred in the event of property related damages due to natural catastrophe.

(7) For the purposes of subrule (2)(a), to determine its net loss for windstorm, an applicable insurer must –
  (a) determine a 1-in-200 year gross annual aggregate loss for windstorm for each region in Table 11, by –
    (i) multiplying the exposure base for each region by the risk factors for windstorm in Table 11 applicable to the types of contracts of insurance (as stated in Table 11) in the exposure base; and
    (ii) determining the sum of the amounts resulting from paragraph (i) for each region;

Table 11
Natural catastrophe risk factor

Type	Natural catastrophe risk factor							
	Direct and facultative business		**Proportional treaty business with event limit**		**Proportional treaty business without event limit**		**Non-proportional treaty business**	
Peril Region	Windstorm	Earthquake	Windstorm	Earthquake	Windstorm	Earthquake	Windstorm	Earthquake
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9
Hong Kong	0.20%	Not applicable	35%	Not applicable	100%	Not applicable	50%	Not applicable
Macau	0.60%	Not applicable	35%	Not applicable	100%	Not applicable	80%	Not applicable
Mainland China	0.30%	0.40%	35%	65%	100%	100%	80%	80%
Taiwan	1.00%	3.50%	80%	80%	100%	100%	80%	80%
Japan	1.00%	9.00%	45%	40%	100%	100%	80%	80%
South Korea	0.30%	Not applicable	30%	Not applicable	100%	Not applicable	80%	Not applicable
Indonesia	Not applicable	2.00%	Not applicable	80%	Not applicable	100%	Not applicable	80%
Any other region or jurisdiction	2.00%	5.00%	80%	80%	100%	100%	80%	80%

(b) determine the net loss for windstorm in Hong Kong, by –
   (i) applying scenario 1 in Table 12 to its 1-in-200 year gross annual aggregate loss for windstorm in Hong Kong determined in accordance with paragraph (a) for each of the two events in scenario 1;
   (ii) applying to both resulting amounts determined in subparagraph (i) for each of the two events –
      (A) the net-down procedures; and
      (B) any reinstatement adjustments in accordance with rule 60(2)(c); and
   (iii) determining the sum of the resulting amounts derived from subparagraph (ii) relating to each of the two events;

(c) determine the net loss for windstorm in each region other than Hong Kong as the greater of the net loss for scenario 1 defined in Table 12 and the net loss for scenario 2 defined in Table 12, where –
   (i) the net loss for scenario 1 is determined by –
      (A) applying scenario 1 in Table 12 to its 1-in-200 year gross annual aggregate losses for windstorm in a region other than Hong Kong determined in accordance with paragraph (a) for each of the two events in scenario 1,

(B) applying to both resulting amounts determined in subparagraph (A) for each of the two events –
1. the net-down procedures; and
2. any reinstatement adjustments in accordance with rule 60(2)(c); and

(C) determining the sum of the resulting amounts derived from subparagraph (B) relating to each of the two events; and

(ii) the net loss for scenario 2 is determined in the same manner as stated in subparagraph (i), as if the references to scenario 1 in that subparagraph were a reference to scenario 2; and

Table 12
Scenarios for windstorm

Windstorm	**Scenario 1**	**Scenario 2**
Column 1	Column 2	Column 3
Size of gross losses from the first event within the next 12 months	83% of 1-in-200 year gross annual aggregate losses	67% of 1-in-200 year gross annual aggregate losses
Size of gross losses from the second event within the next 12 months	17% of 1-in-200 year gross annual aggregate losses	33% of 1-in-200 year gross annual aggregate losses

(d) aggregating the net losses for windstorm by region determined in paragraphs (b) and (c) using the following formula–

$$Net\ loss_{\ windstorm} = \sqrt{\sum_{u6,v6} correlation\ matrix_{u6,v6} \times net\ loss_{windstorm_u6} \times net\ loss_{windstorm_v6}}$$

where –
correlation matrix refers to the correlation matrix set out in Table 10 of Schedule 7; and
u6 and *v6* represent corresponding regions;

(8) For the purposes of subrule (2)(b), to determine its net loss for earthquake, an applicable insurer must –

(a) determine a 1-in-200 year gross annual aggregate loss for earthquake by each region in Table 11, by –

(i) multiplying the exposure base for each region by the risk factors for earthquake in Table 11 applicable to the types of contracts of insurance (as stated in Table 11) in the exposure base; and

(ii) determining the sum of the amounts resulting from paragraph (i) for each region or jurisdiction;

(b) applying to each of the 1-in-200 year net losses for earthquake for each region determined from paragraph (a) –
   (i) the net-down procedures; and
   (ii) any reinstatement adjustments in accordance with rule 60(2)(c); and

(c) aggregating the net losses for earthquake by region determined from paragraph (b) using the following formula–

$$Net\ loss_{\text{earthquake}} = \sqrt{\sum_{u7,v7} correlation\ matrix_{u7,v7} \times net\ loss_{earthquake_u7} \times net\ loss_{earthquake_v7}}$$

where –
correlation matrix refers to the correlation matrix set out in Table 11 of Schedule 7; and
u7 and *v7* represent corresponding regions.

(9) For the purposes of subrule (2)(c), an applicable insurer –
   (a) must determine the risk capital amounts for counterparty default and other risk by
      (i) treating each reinsurance recoverable from each reinsurer through the net-down procedures applied under subrules (7)(b), (7)(c) and (8)(b), as a risk exposure for the purposes of Division 6; and
      (ii) multiplying each risk exposure mentioned in subparagraph (i) by the counterparty default risk factor applicable to the relevant reinsurer, in accordance with Division 6; and
   (b) for the purposes of paragraph (a), may adjust the value of the relevant reinsurance recoverable if such reinsurance recoverable is covered by any eligible collateral in accordance with rule 83.

69. Risk capital amount for man-made non-systemic catastrophe risk

(1) This rule applies to an applicable insurer which is not a professional reinsurer.

(2) To determine the risk capital amount for man-made non-systemic catastrophe risk, an applicable insurer must –
   (a) determine the risk capital amounts for each of the following sub-risks –
      (i) explosion and conflagration of property and engineering, in accordance with subrules (3) and (4);
      (ii) loss of marine vessel, in accordance with subrules (5) and (6);
      (iii) loss of aircraft, in accordance with subrules (7) and (8); and
      (iv) default of large principal, in accordance with subrule (9) and (10); and
   (b) aggregate the risk capital amounts determined in paragraph (a)(i), (ii), (iii) and (iv) using the following formula –

$$Risk\ capital\ amount_{man-made\ non-systemic} = \sqrt{\sum_{i = scenario\ (a)(i)}^{scenario\ (a)(iv)} risk\ capital\ amount_i^2}$$

where i represents the corresponding scenario in each subparagraph in paragraph (a).

(3) For purposes of subrule (2)(a)(i), the risk capital amount for explosion and conflagration of property and engineering must be determined by an applicable insurer as the largest risk capital amount for a unit of exposure, being a block of buildings, for which the insurer is providing coverage for loss arising from explosion and conflagration of property and engineering under one or more contracts of insurance, where the risk capital amount for each unit of exposure is determined in accordance with subrule (4).

(4) The risk capital amount for each unit of exposure mentioned in subrule (3) is calculated by –

(a) determining the gross loss for a unit of exposure as –

(i) the maximum foreseeable loss the applicable insurer would incur under contracts of insurance providing coverage for a loss at the block of buildings which is the unit of exposure at the point in time during the 12 months immediately after the valuation date at which the insurer's exposure to loss for the unit of exposure would be at its highest; and

(ii) multiplied by a damage ratio of 100%;

(b) applying to the gross loss determined in subparagraph (a) –

(i) the net-down procedures; and

(ii) any reinstatement adjustments in accordance with rule 60(2)(c); and

(c) adding to the net loss derived from paragraph (b), the risk capital amount for counterparty default and other risk for the reinsurance recoverables made through the net-down procedures under paragraph (b) in accordance with subrule (12).

(5) For the purposes of subrule (2)(a)(ii), the risk capital amount for loss of marine vessel must be determined by an applicable insurer as the largest risk capital amount for a unit of exposure, being a marine vessel, for which the insurer is providing coverage for loss of marine vessel under one or more contracts of insurance, where the risk capital amount for each such unit of exposure is determined in accordance with subrule (4).

(6) The risk capital amount for each such unit of exposure mentioned in subrule (5) is calculated by –

(a) determining the gross loss for a unit of exposure as –

(i) the total of the agreed values relating to the hull and machinery coverage for the vessel that is the unit of exposure and the liability limit relating to the protection and indemnity coverage for that vessel during the 12 months immediately after the valuation date; and

(ii) multiplied by a damage ratio of 100%;

(b) applying to the gross loss determined in paragraph (a)–

(i) the net-down procedures; and
(ii) any reinstatement adjustments in accordance with rule 60(2)(c); and

(c) adding to the net loss derived from paragraph (b), the risk capital amounts for counterparty default and other risk for the reinsurance recoverables made through the net-down procedures under paragraph (b) in accordance with subrule (12).

(7) For the purposes of subrule (2)(a)(iii), the risk capital amount for loss of aircraft must be determined by an applicable insurer as the largest risk capital amount for a unit of exposure, being an aircraft, for which the insurer is providing coverage for loss of aircraft under one or more contracts of insurance, where the risk capital amount for each unit of exposure is determined in accordance with subrule (8).

(8) The risk capital amount for each unit of exposure mentioned in subrule (7) is calculated by –

(a) determining the gross loss for a unit of exposure as –
(i) the total sum insured for the hull and liability coverage for the aircraft that is the unit of exposure during the 12 months immediately after the valuation date; and
(ii) multiplied by a damage ratio of 100%;

(b) applying to the gross loss determined in subparagraph (a) –
(i) the net-down procedures; and
(ii) any reinstatement adjustments in accordance with rule 60(2)(c); and

(c) adding to the net loss derived from paragraph (b), the risk capital amounts for counterparty default and other risk for the reinsurance recoverables made through the net-down procedures under paragraph (b) in accordance with subrule (12).

(9) For the purposes of subrule (2)(a)(iv), the risk capital amount for default of large principal must be determined by an applicable insurer –

(a) determining, in accordance with subrule (10), its risk capitals amounts for each unit of exposure, being a principal or group of principals within the same group of companies, for which the insurer is providing coverage for default of the principal or principals in the group; and

(b) determining the sum total of the largest two risk capital amounts derived from paragraph (a).

(10) The risk capital amount for each unit of exposure mentioned in subrule (9) is calculated by –

(a) determining the gross loss for a unit of exposure as –
(i) subject to subrule (11), the gross of the penal sums under the contracts of insurance for which the applicable insurer is providing coverage in respect of each principal or group of principals within the same group of companies, as the case may be, that is the unit of exposure, during the 12 months immediately after the valuation date; and
(ii) multiplied by a maximum probable loss factor 30%;

(b) applying to the gross loss determined in paragraph (a) –
(i) the net-down procedures; and

(ii) any reinstatement adjustments in accordance with rule 60(2)(c); and

(c) adding to the net loss derived from paragraph (b), the risk capital amounts for counterparty default and other risk for the reinsurance recoverables made through the net-down procedures under paragraph (b) in accordance with subrule (12).

(11) An applicable insurer may adjust the gross loss derived from subrule (10)(a) to take account of any eligible collateral which would cover such loss in accordance with rule 83, for the purposes of that subrule.

(12) For the purposes of subrules (4)(c), (6)(c), (8)(c) and (10)(c), an applicable insurer –

(a) must determine the risk capital amounts for counterparty default and other risk by –

(i) treating each reinsurance recoverable from each reinsurer through the net-down procedures applied under subrules (4)(b), (6)(b), (8)(b) and (10)(c), as a risk exposure for the purposes of Division 6; and

(ii) multiplying each risk exposure mentioned in subparagraph (i) by the counterparty default risk factor applicable to the relevant reinsurer, in accordance with Division 6; and

(b) for the purposes of paragraph (a), may adjust the value of the relevant reinsurance recoverable if such reinsurance recoverable is covered by any eligible collateral in accordance with rules 83.

(13) In this rule –

maximum foreseeable loss (最大可預見損失) means the anticipated maximum loss based on the highest value of the on-site property or equipment at any point in time over the next 12 months that could result under the worst circumstances.

70. Risk capital amount for man-made systemic catastrophe risk

(1) To determine its risk capital amount for man-made systemic catastrophe risk, an applicable insurer must –

(a) determine the gross loss under its contracts of insurance providing coverage for trade credit in accordance subrule (2);

(b) apply to the gross loss derived from paragraphs (a) –

(i) the net-down procedure; and

(ii) any reinsurance adjustments in accordance with rule 60(2)(c); and

(c) add to the net loss derived from paragraph (b), the risk capital amounts for counterparty default and other risk for the reinsurance recoverables made through the net-down procedures under paragraph (b) in accordance with subrule (3).

(2) An applicable insurer must determine its gross loss under subrule (1)(a) as the sum of –

(a) 100% of the expected gross earned premium during the 12 months immediately after the valuation date in respect of direct and proportional trade credit business; and

(b) 250% of the expected gross earned premium during the 12 months immediately after the valuation date in respect of non-proportional trade credit business.

(3) For the purposes of subrule (1)(c) an applicable insurer –

(a) must determine the risk capital amounts for counterparty default and other risk by –

(i) treating each reinsurance recoverable from each reinsurer through applying the net-down procedures under subrule (1)(b), as a risk exposure for the purposes of Division 6; and

(ii) multiplying each risk exposure mentioned in subparagraph (i) by the counterparty default risk factor applicable to the relevant reinsurer, in accordance with Division 6; and

(b) for the purposes of paragraph (a), may adjust the value of the relevant reinsurance recoverable if such reinsurance recoverable is covered by any eligible collateral in accordance with rule 83.

Subdivision 3 – Mortgage insurance risk

71. Interpretation

(1) In this Subdivision –

general business with onshore risk (具在岸風險的一般業務) has the meaning given by section 25A of the Ordinance;

insurance coverage starting level (保險範圍起始成數), in relation to a contract of mortgage insurance, means the ratio, expressed as a percentage, of the amount of the mortgage loan for which the lender is not covered by the contract of mortgage insurance, to the value of the property that is the subject of the mortgage loan at inception of contract of mortgage insurance;

loss given default factor (違約損失率因子) means the factor representing the proportion of loss in terms of risk exposure upon default of a loan covered under a contract of mortgage insurance provided by an applicable insurer, as stipulated in Table 13, determined by reference to the insurance coverage starting level under the contract and the original loan-to-value ratio of the mortgage loan covered under the contract;

Table 13
Loss given default factor

Original loan-to-value ratio / Insurance coverage starting level	Lower than or equal to 70%	Higher than 70% but lower than or equal to 80%	Higher than 80%
Column 1	Column 2	Column 3	Column 4
40% or 50%	0.40	0.60	0.75
60%	0.55	0.75	0.85
70%	Not applicable	0.90	0.95

mortgage insurance (按揭保險) means insurance against the risk of loss to lenders arising from –
(a) the default of mortgage loans; or
(b) reverse mortgage loans;

offshore mortgage insurance (離岸按揭保險) means mortgage insurance which is not onshore standard mortgage insurance or onshore reverse mortgage insurance;

onshore reverse mortgage insurance (在岸逆按揭保險) means insurance against the risk of loss to lenders arising from reverse mortgage loans and which is general business with onshore risk;

onshore standard mortgage insurance (在岸標準按揭保險) means insurance against risk of loss to the lenders arising from the default of mortgage loans (not being reverse mortgage loans) and which is general business with onshore risk;

original loan-to-value ratio (原定按揭成數) means the ratio, expressed as a percentage, of the original mortgage loan amount to the lower of the value of the property at mortgage loan origination and the property transaction price.

72. Risk capital amount for mortgage insurance risk

(1) An applicable insurer must determine its risk capital amount for mortgage insurance risk by –
(a) determining its risk capital amounts for the following sub-risks–
(i) onshore mortgage insurance, in accordance with subrule (3); and
(ii) offshore mortgage insurance, in accordance with subrule (4); and
(b) aggregating the risk capital amounts for the sub-risks mentioned in paragraph (a)(i) and (ii) in accordance with the formula in subrule (2).

(2) The formula mentioned in subrule (1)(b) is –

$$Risk\ capital\ amount_{\ Mortgage\ insurance\ risk} = \sqrt{\sum_{u8,v8} correlation\ matrix_{u8,v8} \times risk\ capital\ amount_{u8} \times risk\ capital\ amount_{v8}}$$

where –
correlation matrix refers to the correlation matrix set out in Table 12 of Schedule 7; and
u8 and *v8* represent the corresponding sub-risks in each subparagraph in subrule (1)(a).

(3) An applicable insurer must determine its risk capital amount for onshore mortgage insurance by –
  (a) determining its risk capital amounts for the following sub-risks –
    (i) onshore standard mortgage insurance in accordance with rule 73; and
    (ii) reserve risk for onshore reverse mortgage insurance in accordance with rule 76; and
  (b) determining the sum total of the risk capital amounts mentioned in paragraph (a)(i) and (ii).

(4) An applicable insurer must determine its risk capital amount for offshore mortgage insurance by –
  (a) determining its risk capital amount for the following sub-risks –
    (i) reserve and premium risk for offshore mortgage insurance, in accordance with rule 77; and
    (ii) catastrophe risk for offshore mortgage insurance, in accordance with rule 80; and
  (b) aggregating the risk capital amounts for the sub-risks mentioned in paragraph (a)(i) and (ii) in accordance with the formula in subrule (5).

(5) The formula mentioned in subrule (4)(b) is –

$$Risk\ capital\ amount_{\ Offshore\ mortgage\ insurance} = \sqrt{\sum_{u10,v10} correlation\ matrix_{u10,v10} \times risk\ capital\ amount_{u10} \times risk\ capital\ amount_{v10}}$$

where –
correlation matrix refers to the correlation matrix set out in Table 14 of Schedule 7; and
u10 and *v10* represent the corresponding sub-risks in each subparagraph in subrule (4)(a).

73. Risk capital amount for onshore standard mortgage insurance

(1) An applicable insurer must determine its risk capital amount for onshore standard mortgage insurance by –
  (a) determining its risk capital amounts for the following sub-risks –

(i) reserve risk for onshore standard mortgage insurance, in accordance with rule 74; and

(ii) catastrophe and premium risk for onshore standard mortgage insurance, in accordance with rule 75; and

(b) aggregating the risk capital amounts for the sub-risks mentioned in paragraph (a)(i) and (ii) in accordance with the formula in subrule (2);

(2) The formula mentioned in subrule (1)(b) is –

$$Risk\ capital\ amount_{Onshore\ standard\ mortgage\ insurance}$$
$$= \sqrt{\sum_{u9,v9} correlation\ matrix_{u9,v9} \times risk\ capital\ amount_{u9} \times risk\ capital\ amount_{v9}}$$

where –

correlation matrix refers to the correlation matrix set out in Table 13 of Schedule 7; and
u9 and *v9* represent the corresponding sub-risks in each subparagraph in subrule (1)(a).

74. Risk capital amount for reserve risk for onshore standard mortgage insurance

(1) An applicable insurer must determine its risk capital amount for reserve risk for onshore standard mortgage insurance as the greater of the amounts X and Y, where –

(a) X is the amount determined by –

(i) identifying, in relation to each of the insurer's outstanding claims liabilitiesunder its contracts of onshore standard mortgage insurance, the amount of expected recovery from property disposal which has not yet been settled, determined on a net of reinsurance basis, and used by the insurer in determining its net best estimate for the outstanding claim liabilities;

(ii) multiplying each amount mentioned in subparagraph (i) by the applicable loss given default factor; and

(iii) determining the sum total of the amounts derived from subparagraph (ii); and

(b) Y is the amount determined by –

(i) identifying the outstanding claims liabilities net of reinsurance for the insurer's onshore standard mortgage insurance, for direct business, proportional business and non-proportional business;

(ii) multiplying the amounts mentioned in subparagraph (i) by the applicable reserve risk factor prescribed in Table 14; and

(iii) determining the sum total of the amounts derived from subparagraph (ii).

Table 14
Reserve risk factor for onshore standard mortgage insurance

Business	Reserve risk factor
Column 1	Column 2
Direct	55%
Proportional	55%
Non-proportional	50%

(2) Subject to subrule (3), in determining the amount of outstanding claims liabilities net of reinsurance in subrule (1)(b)(i), an applicable insurer may exclude a loss event's outstanding claims liability where the insurer's maximum liability for the loss event is already reflected in the outstanding claims liability and cannot be exceeded due to –
   (a) such amount of the outstanding claims liability, considered together with relevant settled amount, being not less than the maximum limit of liability of the insurer under the contract of insurance; or
   (b) such amount of the outstanding claims liability, considered together with relevant settled amount, being not less than the maximum amount of liability retained by the insurer for the loss event, with any amount of liability exceeding this being covered by contracts of reinsurance recognized under rule 41 and there must be no dispute with any reinsurer on the reinsurance recoveries assumed.

(3) An applicable insurer may only exclude outstanding claims liabilities mentioned in subrule (2) from its exposure base for reserve risk if such liabilities –
   (a) arise from an unexpected and extreme loss event; and
   (b) form a significant portion of the insurer's total outstanding claims liabilities net of reinsurance.

75. Risk capital amount for catastrophe and premium risk for onshore standard mortgage insurance

(1) An applicable insurer must determine its risk capital amount for catastrophe and premium risk for onshore standard mortgage insurance by –
   (a) determining the amount of net loss in respect of its onshore standard mortgage insurance business, in accordance with subrule (2); and
   (b) adding to the amount of net loss mentioned in paragraph (a), the risk capital amounts for counterparty default and other risk for the reinsurance recoverables made through the net-down procedures under subrule (2)(e), in accordance with subrule (4).

(2) For the purposes of subrule (1)(a), an applicable insurer must determine the amount of net loss in respect of its onshore standard mortgage insurance by –
   (a) determining the amount of its gross risk-in-force in relation to each contract of onshore standard mortgage insurance, as theoutstanding loan balance less the amount of mortgage loan not covered by the contract, adjusted up with the percentage of accrued interest and allowable expense in accordance with subrule (3), floored at zero;
   (b) multiplying each amount of gross risk-in-force determined in paragraph (a) by a base rate of 2.72%;
   (c) multiplying the LTV factor in Table 15 to each amount resulting from paragraph (b) by reference to the original loan-to-value ratio of the mortgage loan covered under the contract of onshore standard mortgage insurance;
   (d) multiplying each amount derived from paragraph (c) by the applicable loss given default factor in Table 13;
   (e) applying to the amounts derived from paragraph (d) –

(i) the net down procedures; and
(ii) any reinstatement adjustments in accordance with rule 60(2)(c); and
(f) taking the sum total of the amounts derived after paragraphs (a), (b), (c), (d) and (e) as the insurer's net loss in respect of its onshore standard mortgage insurance.

Table 15
LTV factor

Original loan-to-value ratio	**LTV factor**
Column 1	Column 2
Lower than or equal to 65%	0.4
Higher than 65% but lower than or equal to 70%	0.55
Higher than 70% but lower than or equal to 75%	0.7
Higher than 75% but lower than or equal to 80%	1
Higher than 80% but lower than or equal to 85%	1.55
Higher than 85%	2.5

(3) For the purposes of subrule (2)(a), the percentage of accrued interest and allowable expense by which the outstanding loan balance less the amount of mortgage loan not covered by the contract of onshore standard mortgage insurance is adjusted upwards, is the percentage of allowance made to cover legal fees and other expenses borne by lenders, in accordance with the contract.

(4) For the purposes of subrule (1)(b), an applicable insurer –
(a) must determine of the risk capital amounts for counterparty default and other risk by –
(i) treating each reinsurance recoverable from each reinsurer through applying the net-down procedures under subrule (2)(e), as a risk exposure for the purposes of Division 6; and
(ii) multiplying each risk exposure mentioned in subparagraph (i) by the counterparty default risk factor applicable to the relevant reinsurer, in accordance with Division 6; and
(b) for the purposes of paragraph (a), may adjust the value of the relevant reinsurance recoverable if the reinsurance recoverable is covered by any eligible collateral in accordance with rule 83.

76. Risk capital amount for reserve risk for onshore reverse mortgage insurance

An applicable insurer must determine its risk capital amount for reserve risk for onshore reverse mortgage insurance by –
(a) identifying, in relation to each of the insurer's outstanding claims liabilities under its contracts of onshore reverse mortgage insurance, the amount of expected recovery from property disposal which has not yet been settled, determined on a

net of reinsurance basis, and used by the insurer in determining its net best estimate for the outstanding claim liabilities; and

(b) determining the sum total of the amounts in paragraph (a); and

(c) multiplying the amount derived from paragraph (b) by a reserve risk factor of 30%.

77. Risk capital amount for reserve and premium risk for offshore mortgage insurance

(1) An applicable insurer must determine its risk capital amount for reserve and premium risk for offshore mortgage insurance by –

(a) determining its risk capital amounts for the following sub-risks –

(i) reserve risk for offshore mortgage insurance determined in accordance with rule 78; and

(ii) premium risk for offshore mortgage insurance in accordance with rule 79; and

(b) aggregating the risk capital amounts for the sub-risks mentioned in paragraph (a)(i) and (ii) in accordance with the formula in subrule (2).

(2) The formula mentioned in subrule (1)(b) is –

$$Risk\ capital\ amount_{\ Reserve\ and\ premium\ risk\ of\ offshore\ mortgage\ insurance} = \sqrt{\sum_{u11,v11} correlation\ matrix_{u11,v11} \times risk\ capital\ amount_{u11} \times risk\ capital\ amount_{v11}}$$

where –

correlation matrix refers to the correlation matrix set out in Table 15 of Schedule 7; and

u11 and *v11* represent the corresponding sub-risks in each subparagraph in subrule (1)(a).

78. Risk capital amount for reserve risk for offshore mortgage insurance

(1) An applicable insurer must determine its risk capital amount for reserve risk for offshore mortgage insurance by –

(a) identifying its exposure base for reserve risk for offshore mortgage insurance, by applying rule 64(2) to its offshore mortgage insurance business;

(b) multiplying its exposure base identified by paragraph (a), by the applicable reserve risk factors prescribed in Table 16; and

(c) determining the sum total of the amounts derived from paragraph (b).

Table 16
Reserve risk factor for offshore mortgage insurance

Business	**Reserve risk factor**
Column 1	Column 2
Direct	55%
Proportional	55%
Non-proportional	50%

(2) Subject to subrule (3), in determining its exposure base for reserve risk in subrule (1)(a), an applicable insurer may exclude a loss event's outstanding claims liability where the insurer's maximum liability for the loss event is already reflected in the outstanding claims liability and cannot be exceeded due to –
   (a) such amount of the outstanding claims liability, considered together with relevant settled amount, being not less than the maximum limit of liability of the insurer under the contract of insurance; or
   (b) such amount of the outstanding claims liability, considered together with relevant settled amount, being not less than the maximum amount of liability retained by the insurer for the loss event, with any amount of liability exceeding this being covered by contracts of reinsurance recognized under rule 41, and there must be no dispute with any reinsurer on the reinsurance recoveries assumed.

(3) An applicable insurer may only exclude outstanding claims liabilities mentioned in subrule (2) from its exposure base for reserve risk if such liabilities –
   (a) arise from an unexpected and extreme loss event; and
   (b) form a significant portion of the insurer's total outstanding claims liabilities net of reinsurance.

79. Risk capital amount for premium risk for offshore mortgage insurance

An applicable insurer must determine its risk capital amount for premium risk for offshore mortgage insurance by –
   (a) identifying its exposure base of premium risk defined for offshore mortgage insurance by applying rule 65(2) to its offshore mortgage insurance business;
   (b) multiplying its exposure base identified in paragraph (a) by the applicable premium risk factors prescribed in Table 17; and
   (c) determining the sum total of the amounts derived from paragraph (b).

Table 17
Premium risk factor for offshore mortgage insurance

Business	**Premium risk factor**
Column 1	Column 2
Direct	25%
Proportional	25%
Non-proportional	30%

80. Risk capital amount for catastrophe risk for offshore mortgage insurance

An applicable insurer must determine its risk capital amount for catastrophe risk for offshore mortgage insurance by –
   (a) determining its expected net earned premium during the 12 months immediately after the valuation date in respect of offshore mortgage insurance for direct business, proportional business and non-proportional business;

(b) multiplying the net earned premium determined in paragraph (a) by the applicable catastrophe risk factors prescribed in Table 18; and
(c) determining the sum total of the amounts derived from paragraph (b).

Table 18
Catastrophe risk factor for offshore mortgage insurance

Business	**Catastrophe risk factor**
Column 1	Column 2
Direct	150%
Proportional	150%
Non-proportional	250%

Division 5 – Counterparty Default and Other Risk

81. Risk capital amount of counterparty default and other risk

(1) An applicable insurer must determine its risk capital amount for counterparty default and other risk by –
(a) determining, in accordance with subrules (3) to (5), the individual risk capital amount for each of its risk exposures arising from the balance sheet items mentioned in subrule (2);
(b) if rule 85 applies, determining the individual risk capital amount in accordance with rule 85; and
(c) summing the individual risk capital amounts mentioned in paragraphs (a) and (b).

(2) The balance sheet items mentioned in subrule (1)(a) are –
(a) deposits with a bank or deposit taking institution;
(b) loans for non-investment purpose and receivables;
(c) outstanding premiums;
(d) reinsurance recoverables;
(e) reinsurance receivables;
(f) derivative contracts that are not traded at an exchange platform; and
(g) assets recognized on the balance sheet other than –
(i) balance sheet items mentioned in paragraphs (a), (b), (c), (d), (e), and (f);
(ii) assets that have been addressed by risk modules under Divisions 2, 3 and 4 of this Part;
(iii) deferred tax asset; and
(iv) right-of-use asset.

(3) Subject to rule 85, an applicable insurer must determine the individual risk capital amount for each risk exposure mentioned in subrule (1)(a) by –
(a) determining the amount of the relevant risk exposure in accordance with subrules (4) and (5); and

(b) multiplying the amount of the relevant risk exposure determined in accordance with paragraph (a) (taking account of subrules (6), (7), (8) and (9)) by the risk factor corresponding to the credit rating band in Table 19 of the counterparty to the risk exposure.

Table 19
Counterparty default and other risk factors

Credit rating band	**Risk factors**
Column 1	Column 2
1	0.4%
2	0.8%
3	1.6%
4	4.0%
5	8.4%
6	16.0%
7	38.8%
Unrated	6.2%

(4) In the case of a risk exposure arising from an asset mentioned in subrule (2)(a), (b), (c), (d), (e) and (g), for the purposes of subrule (3)(a), the amount of the risk exposure is –

(a) the value of the relevant asset determined in accordance with Part 4;

(b) in the case of any risk exposure covered by an eligible bilateral netting agreement or eligible collateral, subject to paragraph (c), the value of the relevant asset determined in accordance with Part 4, after the adjustment made in accordance with rule 82 (in the case of an eligible bilateral netting agreement), or rule 83 (in the case of eligible collateral), as the case may be; or

(c) zero, if the valuation of the risk exposure in accordance with paragraph (b) would result in a negative amount.

(5) In the case of a risk exposure arising from a derivative contract mentioned in subrule (2)(f) that is not a credit derivative contract, for the purposes of subrule (3)(a), the amount of the risk exposure is the sum of –

(a) the total replacement cost or market value of the contract if the contract is of positive fair value; and

(b) the potential future credit exposure, calculated by multiplying the notional amount of the contract by the credit exposure factor corresponding to the residual maturity and type of contract as set out in Table 20.

Table 20
Credit exposure factors for derivative contract

Residual Maturity	Interest rate-related contract	Exchange rate-related contract	Equity-related contract	Commodity-related contract
Column 1	Column 2	Column 3	Column 4	Column 5
Not more than 1 year	0.0%	1.0%	6.0%	10.0%
More than 1 year but not more than 5 years	0.5%	5.0%	8.0%	10.0%
More than 5 years	1.5%	7.5%	10.0%	10.0%

(6) In the case of a deposit with a bank or deposit taking institution as mentioned in subrule (2)(a), if that deposit can be withdrawn unconditionally within 3 months, an applicable insurer may use 50% of the corresponding risk factor in Table 19 to determine the individual risk capital amount for the risk exposure in accordance with subrule (3).

(7) Despite the credit rating band of the relevant counterparty, an applicable insurer must use a risk factor of 100% to determine the individual risk capital amount for the risk exposure in accordance with subrule (3) for any risk exposure arising from –
(a) a loan for non-investment purpose and receivables as mentioned in subrule (2)(b), that are past due for more than 1 year; and
(b) outstanding premiums as mentioned in subrule (2)(c), that are past due for more than 1 year.

(8) In the case of a risk exposure arising from an asset mentioned in subrule (2)(a), (b), (c), (d), (e) and (g) that is covered by an eligible guarantee or an eligible credit derivative contract, for the purposes of subrule (3)(b), the applicable insurer may apply rule 84 in determining the risk factors to apply to the risk exposure.

(9) In the case of reinsurance recoverables as mentioned in subrule (2)(d), if any portion of the reinsurance recoverables cannot be allocated by the applicable insurer between two or more counterparties, to determine the individual risk capital amount for the risk exposure arising from that portion, the insurer must assume that portion of reinsurance recoverables is allocated to the counterparty with the lowest credit rating band.

(10) In the case of reinsurance recoverables and reinsurance receivables mentioned in subrule (2)(d) and (e) from a reinsurance counterparty that is a special purpose vehicle under a contract of reinsurance that is fully funded, the applicable insurer may take the assets held under the terms of the contract of reinsurance for the benefit of the insured as collateral covering the risk exposures arising from such reinsurance recoverables and reinsurance receivables and, if such collateral is eligible collateral, may adjust the value of such risk exposures in accordance with rule 83.

(11) In this rule –

bank or deposit taking institution (銀行或接受存款機構) means –

(a) an authorized institution with the meanings given in section 2(1) of the Banking Ordinance (Cap. 155), except an authorized institution the authorization of which is for the time being suspended under section 24 or 25 of the Banking Ordinance (Cap. 155); or

(b) a bank licensed or authorized outside Hong Kong which is not an authorized institution except such a bank the license or other authorization of which to carry on banking business is for the time being suspended;

notional amount (名義數額) means the reference amount used to calculate a payment obligation between the parties to an off-balance sheet exposure, such as a derivative contract;

reinsurance receivables (應收分保款項), in relation to an applicable insurer, mean the receivables relating to any requests for payments issued to the reinsurers of the insurer that have not yet been fulfilled, whether in terms of claims recovery, reinsurance commissions, or other related receivables;

right-of-use asset (使用權資產)***,*** in relation to an applicable insurer, means a leased asset that the insurer as lessee has the right to use for the lease term.

82. Adjustment for eligible bilateral netting agreement

(1) In the case of risk exposures of an applicable insurer which are subject to an eligible bilateral netting agreement, for the purposes of rule 81(4)(b), an applicable insurer may adjust the value of such risk exposures, by –

(a) applying a haircut to the liabilities of the insurer to the counterparty to the eligible bilateral netting agreement, using the formulae in subrule (2), if there is a mismatch in denominated currency between the insurer's risk exposures to the counterparty and the insurer's liabilities to the counterparty which are subject to the eligible bilateral netting agreement; and

(b) reducing the value of its risk exposures to the counterparty to the eligible bilateral netting agreement, by the amount of its liabilities to the counterparty under the eligible bilateral netting agreement after the haircut mentioned in paragraph (a).

(2) The haircut mentioned in subrule (1)(a) is determined using the following formula –

$$Adjustment_{netting} = liabilities \times (1 - H_{FX}),$$

where H_{FX} is the haircut for currency mismatch if the risk exposures of the applicable insurer to the counterparty for applying the netting in subrule (1)(a) are denominated in a currency different from that in which the liabilities of the insurer are denominated, with such haircut being calculated using the following formula –

$$H_{FX} = \sqrt{\left(1 + RF_{FX\ of\ risk\ exposure}\right) \times \left[1 + \sum_i \left(RF_{FX\ of\ liability_i} \times \omega_i\right)\right]} - 1$$

where –

$RF_{FX\ of\ risk\ exposure}$ is the risk factor for the currency of risk exposure of the insurer to the counterparty for applying the netting in subrule (1)(a) set out in Table 6 in rule 51;

i refers to the i-th currency of liabilities of the insurer for applying the netting in subrule (1)(a).

$RF_{FX\ of\ liability_i}$ is the risk factor for the i-th currency of liabilities of the insurer for applying the netting in subrule (1)(a) set out in Table 6 in rule 51; and

ω_i is the weighting of the liabilities denominated in the i-th currency over the total liabilities for applying the netting in subrule (1)(a).

(3) If an applicable insurer makes an adjustment to its risk exposures which are subject to an eligible bilateral netting agreement, pursuant to subrule (1) –
  (a) the insurer must perform the netting in respect of the risk exposures by each eligible bilateral netting agreement; and
  (b) the total amount of the adjustment must not exceed the valuation of the liabilities recognized in the insurer's balance sheet in relation to the eligible bilateral netting agreement.

(4) In this rule –

eligible bilateral netting agreement(合資格雙邊淨額結算協議), in relation to an applicable insurer, means an agreement which satisfies the following conditions –
  (a) the agreement is in writing;
  (b) the agreement creates a single legal obligation for all individual contracts or transactions covered by the agreement, and provides, in effect, that –
    (i) the insurer has a single claim or obligation to receive or pay only the net amount owed to or by the insurer in respect of the transactions covered by the agreement; and
    (ii) the insurer has the claim or obligation in the event that the counterparty to the agreement, or a counterparty to whom the agreement has been validly assigned, fails to comply with any obligation under the agreement due to default, insolvency, bankruptcy, or similar circumstance;
  (c) the insurer has been given independent legal advice in writing to the effect that in the event of a challenge in a court of law, including a challenge resulting from default, insolvency, bankruptcy, or similar circumstance, the relevant court or administrative authority would find the insurer's exposure to be the net amount under –
    (i) the law of the jurisdiction in which the counterparty is incorporated or the equivalent location in the case of non-corporate entities, and if a branch of the counterparty is involved, then also under the law of the jurisdiction in which the branch is located;
    (ii) the law which governs the individual contracts or transactions covered by the agreement; and

(iii) the law which governs the agreement;

(d) the insurer establishes and maintains procedures to monitor developments in any law relevant to the agreement and to ensure that the agreement continues to satisfy this definition;

(e) the insurer maintains in its files documentation adequate to support the netting of the contracts or transactions covered by the agreement; and

(f) the agreement is not subject to a provision that permits the non-defaulting counterparty to make only limited payment, or no payment at all, to the defaulter or the estate of the defaulter, regardless of whether or not the defaulter is a net creditor under the agreement.

83. Adjustment for eligible collateral

(1) In the case of a risk exposure which is covered by eligible collateral, for the purposes of rule 81(4)(b), an applicable insurer may adjust the value of such risk exposure, by –

(a) applying haircuts to the value of the eligible collateral using the formulae in subrule (2), to take account of the counterparty default risk and equity risk for the eligible collateral and any currency mismatch between the currency in which the eligible collateral is denominated and the currency in which the risk exposure it covers is denominated; and

(b) deducting from the value of the risk exposure, the value of the eligible collateral after haircut in accordance with paragraph (a).

(2) The formula mentioned in subrule (1)(a) is –

$$Adjustment_{collateral} = value\ of\ eligible\ collateral \times (1 - H_{CPD}) \times (1 - H_E) \times (1 - H_{FX})$$

where –

H_{CPD} is the haircut for counterparty default risk for eligible collateral which is collateral mentioned in subrule (4)(e)(i), (ii), (iii) and (iv) determined in accordance with the risk factor corresponding to the credit rating band of the counterparty in Table 19 in rule 81;

H_E is the haircut for equity risk for eligible collateral which is collateral mentioned in subrule (4)(e)(v) determined in accordance with the stress factor in Table 5 in rule 49; and

H_{FX} is the haircut for currency mismatch if the eligible collateral is denominated in a currency different from that in which the risk exposure covered by the eligible collateral is denominated, with such haircut being calculated using the following formula –

$$H_{FX} = \sqrt{(1 + RF_{FX\ of\ risk\ exposure}) \times (1 + RF_{FX\ of\ eligible\ collateral})} - 1$$

where –

$RF_{FX\ of\ risk\ exposure}$ is the risk factor for the currency of risk exposure set out in Table 6 in rule 51; and

$RF_{FX\ of\ eligible\ collateral}$ is the risk factor for the currency of eligible collateral set out in Table 6 in rule 51.

(3) An applicable insurer –

(a) must not double count the risk mitigation impact of any eligible collateral in determining the risk capital amounts mentioned in rule 37(1); and

(b) without limiting paragraph (a), must ensure that no more than the total amount of the eligible collateral, before any haircut in accordance with subrule (1)(b), is used as risk mitigation impact in determining all risk capital amounts under rule 37(1)(a).

(4) In this rule –

eligible collateral (合資格抵押品), in relation to an applicable insurer, means collateral in respect of which the following conditions are satisfied –

(a) all documentation creating the collateral and providing for the obligations of the parties with respect to each other in respect of the collateral is binding on all parties and legally enforceable in all relevant jurisdictions;

(b) the legal mechanism by which the collateral is pledged or transferred ensures that the insurer has the right to realize, or to take legal possession of, the collateral in a timely manner in the event of a default by, or the insolvency or bankruptcy of, or any other event specified in the relevant legal documentation applicable to any of –

(i) the obligor in respect of the exposure; or

(ii) the custodian, if any, holding the collateral;

(c) the insurer has taken all steps to fulfil requirements under the law applicable to the insurer's interest in the collateral which are necessary to obtain and maintain an enforceable security interest, whether by registration or otherwise, or to exercise a right to set-off in relation to title transfer collateral;

(d) there is no material positive correlation between the credit quality of the obligor in respect of which the insurer has an exposure and the current market value of the collateral provided in respect of the exposure; and

(e) the collateral is –

(i) cash or certificates of deposit;

(ii) letters of credit that are irrevocable, clean and unconditional;

(iii) debt securities with credit rating band 1, 2 or 3;

(iv) debt securities issued by sovereign; or

(v) equities which are included in any main indices of developed markets specified in Table 1 of Schedule 8.

84. Adjustment for eligible guarantee or eligible credit derivative contract

(1) In the case of a risk exposure which is covered in whole or in part by an eligible guarantee or eligible credit derivative contract, an applicable insurer may, for the purposes of rule 81(8) –

(a) for the portion of the risk exposure covered by the eligible guarantee or eligible credit derivative contract, after haircut in accordance with subrule (2) or (3), as the

case may be, apply the risk factor corresponding to the credit rating band of the guarantor or protection seller; and

(b) for the uncovered portion of the risk exposure (if any), apply the risk factor corresponding to the credit rating band of the counterparty to the relevant exposure.

(2) If the eligible guarantee covering the applicable insurer's risk exposure mentioned in subrule (1) is denominated in a different currency to the risk exposure it covers, the portion of the risk exposure covered by the eligible guarantee, for the purposes of subrule (1)(a), must be adjusted using the following formula –

$$Covered\ portion_{guarantee} = guarantee\ exposure \times (1 - H_{FX})$$

where H_{FX} is the haircut for the currency mismatch if the covered portion of the risk exposure is denominated in a currency different from that in which the eligible guarantee is denominated, which is calculated using the following formula –

$$H_{FX} = \sqrt{(1 + RF_{FX\ of\ covered\ portion}) \times (1 + RF_{FX\ of\ eligible\ guarantee})} - 1$$

where –

$RF_{FX\ of\ covered\ portion}$ is the risk factor for the currency of the covered portion of the risk exposure set out in Table 6 in rule 51; and

$RF_{FX\ of\ eligible\ guarantee}$ is the risk factor for the currency of the eligible guarantee set out in Table 6 in rule 51.

(3) If the eligible credit derivative contract covering the applicable insurer's risk exposure referred to in subrule (1) is denominated in a different currency to the risk exposure it covers, the portion of the risk exposure covered by the eligible credit derivative contract, for the purposes of subrule (1)(a), must be adjusted using the following formula –

$$Covered\ portion_{credit\ derivative} = protected\ exposure \times (1 - H_{FX}) \times \frac{remaining\ term\ to\ maturity\ (in\ days)}{365}$$

where H_{FX} is the haircut for the currency mismatch if the covered portion of the risk exposure is denominated in a currency different from that in which the eligible credit derivative contract is denominated, which is calculated using the following formula –

$$H_{FX} = \sqrt{(1 + RF_{FX\ of\ covered\ portion}) \times (1 + RF_{FX\ of\ eligible\ credit\ derivative\ contract})}$$

where –

$RF_{FX\ of\ covered\ portion}$ is the risk factor for the currency of the covered portion of the risk exposure set out in Table 6 in rule 51; and

$RF_{FX\ of\ eligible\ credit\ derivative\ contract}$ is the risk factor for the currency of the eligible credit derivative contract set out in Table 6 in rule 51.

(4) In this rule–

eligible credit derivative contract (合資格信用衍生工具合約), in relation to an applicable insurer, means a credit derivative contract entered by the insurer as a credit protection buyer and in respect of which the following conditions are satisfied for the risk exposure covered by the credit derivative contract (referred to in this rule as ***protected exposure*** (受保障風險承擔)) –

(a) the credit derivative contract is a credit default swap or total return swap (other than a restricted return swap);

(b) the protection seller of the credit derivative contract is –

(i) a sovereign; or

(ii) a regulated financial entity with a credit rating band higher than that of the protected exposure;

(c) the credit derivative contract gives the insurer a direct claim against the protection seller;

(d) the credit protection provided by the credit derivative contract relates to a specific exposure, specific exposures, or a pool of specific exposures, of the insurer;

(e) the undertaking of the protection seller under the credit derivative contract to make payment in specified circumstances relating to the protected exposure is clearly documented so that the extent of the credit protection provided by the credit derivative contract is clearly defined;

(f) there is no clause in the credit derivative contract, the satisfaction of which is outside the direct control of the insurer, which would allow the protection seller to cancel the contract unilaterally or which would increase the effective cost of the credit protection offered by the credit derivative contract as a result of the deteriorating credit quality of the protected exposure;

(g) there is no clause in the credit derivative contract, the satisfaction of which is outside the direct control of the insurer, which could operate to prevent the protection seller from being obliged to pay out promptly in the event that the obligor in respect of the protected exposure defaults in making any payments due to the insurer in respect of the protected exposure;

(h) the jurisdiction in which the protection seller is located and from which the protection seller may be obliged to make payment has no existing exchange controls in place or, if there are existing exchange controls in place, approval has been obtained for the funds to be remitted freely in the event that the protection seller is called upon under the terms of the credit derivative contract to make payment to the insurer;

(i) the protection seller has no recourse to the insurer for any losses suffered as a result of the protection seller being obliged to make any payment to the insurer pursuant to the credit derivative contract;

(j) the credit derivative contract obliges the protection seller to make payment to the insurer in the credit events of the obligor's failure to pay amounts due or bankruptcy or insolvency of the obligor; and

(k) the credit derivative contract is binding on all parties and legally enforceable in all relevant jurisdictions;

eligible guarantee (合資格擔保), in relation to an applicable insurer, means a guarantee in respect of which the following conditions are satisfied for the remaining term to maturity of the risk exposure of the insurer in respect of which the guarantee has been given (referred to in this rule as ***guaranteed exposure*** (獲擔保風險承擔)) –

(a) the guarantee is given by
   (i) a sovereign; or
   (ii) a corporate with a credit rating band higher than that of the guaranteed exposure;

(b) the guarantee gives the insurer a direct claim against the guarantor;

(c) the credit protection provided by the guarantee relates to a specific exposure, specific exposures, or specific pools of exposures, of the insurer;

(d) the undertaking of the guarantor to make payment in specified circumstances relating to the guaranteed exposure is clearly documented so that the extent of the credit protection provided by the guarantee is clearly defined;

(e) there is no clause in the guarantee, the satisfaction of which is outside the direct control of the insurer, which would allow the guarantor to cancel the guarantee unilaterally or which would increase the effective cost of the credit protection provided by the guarantee as a result of the deteriorating credit quality of the guaranteed exposure;

(f) there is no clause in the guarantee, the satisfaction of which is outside the direct control of the insurer, which could operate to prevent the guarantor from being obliged to pay out promptly in the event that the obligor in respect of the guaranteed exposure defaults in making any payments due to the insurer in respect of the guaranteed exposure;

(g) the jurisdiction in which the guarantor is located and from which the guarantor may be obliged to make payment has no existing exchange controls in place or, if there are existing exchange controls in place, approval has been obtained for the funds to be remitted freely in the event that the guarantor is called upon under the terms of the guarantee to make payment to the insurer;

(h) the guarantor has no recourse to the insurer for any losses suffered as a result of the guarantor being obliged to make any payment to the insurer pursuant to the guarantee;

(i) the insurer has the right to receive payment from the guarantor without having to take legal action in order to pursue the obligor in respect of the guaranteed exposure for payment; and

(j) the guarantee is binding on all parties and legally enforceable in all relevant jurisdictions;

restricted return swap (受限制回報掉期) means a total return swap where the applicable insurer being the protection buyer records the net payments received by it under the swap as net income but does not record, either through deductions in fair value in the accounts of the insurer or by an addition to reserves or provisions, the extent to which the value of the protected exposure has deteriorated.

85. Credit derivative contract other than eligible credit derivative contract

(1) A credit derivative contract entered into by an applicable insurer as a protection buyer other than an eligible credit derivative contract is not recognized under rule 84 and an insurer must not use such contract to reduce any risk capital amounts mentioned in rule 37(1).

(2) Where an applicable insurer enters a credit derivative contract as protection seller, the insurer must determine the risk capital amount for the credit derivative contract for the purposes of rule 81(1)(b), in accordance with subrule (3).

(3) The risk capital amount for a credit derivative contract mentioned in subrule (2) is determined by multiplying the protected exposure by the risk factor corresponding to the credit rating band set out in Table 19 of rule 81 based on the reference obligation underlying the contract.

Division 6 – Operational Risk

86. Risk capital amount for operational risk

(1) An applicable insurer must determine the risk capital amount for operational risk as the lower of A and B where –
  (a) A is the sum of –
    (i) the risk capital amount for operational risk in respect of Class C business and Class H business as determined in accordance with subrule (3);
    (ii) the risk capital amount for operational risk in respect of specified long term business as determined in accordance with subrule (4); and
    (iii) the risk capital amount for operational risk in respect of general business as determined in accordance with subrule (5); and
  (b) B is 30% of the insurer's prescribed capital amount before operational risk.

(2) For subrule (1)(b), the prescribed capital amount before operational risk refers to the amount determined in accordance with rule 37(1)(a) and aggregated in accordance with rule 37(1)(c) but without the inclusion of any risk capital amount for operational risk in the aggregation.

(3) For the purposes of subrule (1)(a)(i), the risk capital amount for operational risk for any Class C business and any Class H business under Part 2 of Schedule 1 of the Ordinance, is determined as 0.4% of the simple average of the current estimates of insurance liabilities (gross of reinsurance) for Class C and Class H business as at the three referenced dates.

(4) For the purposes of subrule (1)(a)(ii), the risk capital amount for operational risk for specified long term business is the sum of –
- (a) the amount that is higher of C and D, where –
  - (i) C is the amount determined as 4% of annual gross premiums for specified long term business of the applicable insurer for its most recent financial year ending on or before the valuation date; and
  - (ii) D is the amount determined as 0.45% of the simple average of the current estimates of the insurance liabilities (gross of reinsurance) for the applicable insurer's specified long term business as at the three referenced dates; and
- (b) 4% of the portion of the premium growth for the applicable insurer's specified long term business that exceeds 20% of such premium growth, floored at zero.

(5) For the purposes of subrule (1)(a)(iii), the risk capital amount for operational risk for general business is the sum of –
- (a) the amount that is higher of E and F, where –
  - (i) E is the amount determined as 2.75% of annual gross premiums for general business of the applicable insurer for its most recent financial year endingon or before the valuation date; and
  - (ii) F is the amount determined as 2.75% of the simple average of the current estimates of the insurance liabilities (gross of reinsurance) for the applicable insurer's general business as at the three referenced dates; and
- (b) 2.75% of the portion of the premium growth for the applicable insurer's general business that exceeds 20% of such premium growth, floored at zero.

(6) In this rule –

annual gross premiums (年度毛保費) means gross written premiums in a financial year;

premium growth (保費增長) means the annual gross premium of the relevant business for the applicable insurer's most recent financial year ending on or before the valuation date, less the annual gross premium of such business for the financial year immediately preceding the most recent financial year;

specified long term business (指明長期業務) means long term business other than Class C business and Class H business;

three referenced dates (三個參考日期), in respect of current estimates of insurance liabilities (gross of reinsurance), means –

1. the valuation date;

2. the date 12 months prior to the valuation date; and
3. the date 24 months prior to the valuation date,

subject to the following adjustments –

(a) if the commencement date of these Rules or the date on which an applicable insurer commences carrying on insurance business in or from Hong Kong is less than one year before the valuation date, then the dates referred to in 2 and 3 are both replaced by the valuation date referred to in 1 for purposes of calculating the average of current estimates as at the three referenced dates; and

(b) if the commencement date of these Rules or the date on which an applicable insurer commences carrying on insurance business in or from Hong Kong is at least one year but less than two consecutive years before the valuation date, then the date referred to in 3 is replaced by the date referred to in 2 for purpose of calculating the average of current estimates as at the three referenced dates.

Part 6 – Fund Requirements

87. Determination of fund-level minimum capital amounts

(1) An applicable insurer must determine the fund-level minimum capital amount required to be held for the purposes of sections 22(3B)(b), 22(3C)(b) and 25AAB(3)(b) of the Ordinance, as applicable, in accordance with subrules (2), (3), (4), (5), (6), (7) and (8).

(2) For the purposes of subrule (1), an applicable insurer must, in accordance with subrules (3) and (4), determine –

(a) a notional minimum capital amount based on its assets and liabilities attributable to any restricted capital component in respect of each separate sub-fund of participating business;

(b) a notional minimum capital amount based on its assets and liabilities attributable to any long term business not included in paragraph (a);

(c) a notional minimum capital amount based on its assets and liabilities attributable to general business; and

(d) a notional minimum capital amount based on its assets and liabilities not included in paragraphs (a), (b) and (c).

(3) To determine the notional minimum capital amounts mentioned in subrule (2), an applicable insurer must first determine a notional prescribed capital amount based on each set of assets and liabilities mentioned in subrule (2)(a), (b), (c) and (d) in accordance with rule 37(1), with the following variations –

(a) in applying rule 37(1)(a) –

(i) the insurer must determine the risk capital amounts mentioned in that rule based on each set of assets and liabilities mentioned in subrule (2)(a), (b), (c) and (d), as applicable;

(ii) to determine the risk capital amounts for market risk in respect of each set of assets and liabilities mentioned in subrule (2) (a), (b), (c) and (d) –

(A) the risk capital amount for interest rate risk under rule 47 must be determined based on the same scenario in rule 47(1)(a) or (b), as the case may be, which determines the risk capital amount for interest rate risk for the insurer as a whole; and

(B) the risk capital amount for currency risk under rule 51 must be determined based on the same scenario for each currency exposure, which determines the risk capital amount for currency risk for the insurer as a whole; and

(iii) to determine the risk capital amount for life insurance risk in respect of each set of assets and liabilities mentioned in subrule (2)(a), (b) and (c), the risk capital amount for lapse risk under rule 59 must be determined based on the same component in rule 59(1)(a) or (b), as the case may be, which determines the risk capital amount for lapse risk for the insurer as a whole;

(b) in applying rule 37(1)(b), the insurer must determine the risk capital amount for operational risk in respect of each part of its business mentioned in subrule (2)(a), (b) and (c) in accordance with rule 86, with the use of premiums or current estimates being consistent with that determined under rule 86(4) for long term business and rule 86(5) for general business;

(c) in applying rule 37(1)(c), using the methodology stated in that rule the insurer must aggregate the risk capital amounts determined in respect of each set of assets and liabilities mentioned in subrule (2)(a), (b), (c) and (d);

(d) in applying rule 37(1)(d), the insurer must add the amount, if any, determined in accordance with rule 43 for the purpose of determining the notional prescribed capital amounts in respect of each set of assets and liabilities mentioned in subrule (2)(a) and (b); and

(e) in applying rule 37(1)(e), the amount of the deduction to be made, if any, in determining the notional prescribed capital amounts in respect of each set of assets and liabilities mentioned in subrules (2)(a), (b), (c) and (d), must be calculated in accordance with rule 44, and use the same effective tax rate which is determined for the insurer as a whole.

(4) Each notional minimum capital amount mentioned in subrule (2) is the amount obtained by multiplying each notional prescribed capital amount determined in subrule (3) by 50%.

(5) The fund-level minimum capital amount required to be held under section 22(3B)(b) or 22(3C)(b) of the Ordinance, as the case may be, is calculated as the sum of –

(a) the notional minimum capital amount in respect of the set of assets and liabilities referenced in subrule (2)(a); and

(b) the notional minimum capital amount in respect of the set of assets and liabilities in subrule (2)(b), less the diversification benefit determined in accordance with subrule (6).

(6) The diversification benefit mentioned in subrule (5)(b) is determined by multiplying the amount C by the percentage D, where –

(a) C is the amount obtained by subtracting the minimum capital amount of the applicable insurer determined for the purposes of rule 5(2) from the sum of the notional minimum capital amounts in respect of each set of assets and liabilities mentioned in subrule (2)(a), (b), (c) and (d); and

(b) D is the notional minimum capital amount in respect of the set of assets and liabilities mentioned in subrule (2)(b) as a proportion of the sum of the notional minimum capital amounts in respect of each set of assets and liabilities mentioned in subrule (2)(b), (c) and (d), expressed as a percentage.

(7) The fund-level minimum capital amount required to be held under section 25AAB(3)(b) of the Ordinance, is calculated as the notional minimum capital amount in respect of the set of assets and liabilities mentioned in subrule (2)(c), less the diversification benefit determined in accordance with subrule (8).

(8) The diversification benefit mentioned in subrule (7) is determined by multiplying the amount E by the percentage F, where –

(a) E is the amount obtained by subtracting the minimum capital amount of the applicable insurer determined for the purposes of rule 5(2) from the sum of the notional minimum capital amounts in respect of each set of assets and liabilities mentioned in subrule (2)(a), (b), (c) and (d); and

(b) F is the notional minimum capital amount in respect of the set of assets and liabilities mentioned in subrule (2)(c) as a proportion of the sum of the notional minimum capital amounts in respect of each set of assets and liabilities mentioned in subrule (2)(b), (c) and (d), expressed as a percentage.

(9) In this rule –

fund-level minimum capital amount (基金層面最低資本額) means the amount of assets required to be held by an applicable insurer –

(a) in relation to its long term insurance business –

(i) in accordance with section 22(3B)(b) of the Ordinance for all funds under section 21B(2) or (8) of the Ordinance, in addition to the amount of liabilities mentioned in section 22(3B)(a) of the Ordinance; or

(ii) in accordance with section 22(3C)(b) of the Ordinance for all the funds maintained under section 21B(5)(a), (b), (c) and (d) of the Ordinance, in addition to the amount of liabilities mentioned in section 22(3C)(a) of the Ordinance; or

(b) in relation to its general insurance business, in accordance with section 25AAB(3)(b) of the Ordinance for each fund under section 25AA (other than under section 25AA(4)(a)) of the Ordinance, in addition to the amount of liabilities mentioned in section 25AAB(3)(a) of the Ordinance.

Part 7 – Transitional Arrangement

88. Application to use transitional arrangement

(1) An applicable insurer may make an application to the Authority for approval of a transitional arrangement under subrule (5) to reduce its risk capital amount for market risk during the transitional period using the approach stated in subrule (2).

(2) After obtaining an approval from the Authority under subrule (5), subject to subrule (3), the applicable insurer may reduce its risk capital amount for market risk during the periods stated in column 1 of Table 21 for the purpose of determining its prescribed capital amount in accordance with rule 37, by –

(a) multiplying the risk capital amount for market risk determined in accordance with Division 2 of Part 5, by the applicable percentage in column 2 of Table 21; and

(b) using the reduced risk capital amount for market risk determined in accordance with paragraph (a), in place of the risk capital amount for market risk determined in accordance with Division 2 of Part 5, for determining the prescribed capital amount in accordance with rule 37.

Table 21
Phasing percentage of risk capital amount for market risk

Period in which percentage is applied	**Percentage to be applied**
Column 1	Column 2
Commencement date of these Rules to 31 December 2024	50%
1 January to 31 December 2025	60%
1 January to 31 December 2026	80%
1 January 2027 and onwards	100%

(3) Despite any approval granted under subrule (5), during the transitional period, an applicable insurer must continue to use the risk capital amount for market risk determined in accordance with Division 2 of Part 5 without applying the reduction under subrule (2), to determine –

(a) its minimum capital amount under rule 5(3), and

(b) its notional prescribed capital amount and notional minimum capital amount under Part 6.

(4) An application made under subrule (1) must –

(a) be made in writing;

(b) contain particulars of the information that the Authority reasonably requires to enable it to consider the application; and

(c) be served on the Authority.

(5) On receiving an application made under subrule (1), the Authority may by written notice to the applicable insurer approve or reject the application, and if it approves the application, it may do so subject to such conditions as it may impose.

(6) If the Authority grants an approval to an applicable insurer under subrule (5), at any time while the approval remains in effect, the Authority may, by a written notice served on the insurer –
   (a) prohibit the insurer from making any of the payments mentioned in subrule (7), or require the insurer to obtain prior approval from the Authority before making any of the payments mentioned in subrule (7); and
   (b) impose other conditions.

(7) The payments by an applicable insurer mentioned in subrule (6)(a) are –
   (a) dividends to shareholders;
   (b) purchase of the insurer's own shares;
   (c) discretionary payment on Tier 1 capital; and
   (d) any payment that is in substance a distribution of Tier 1 capital.

(8) After obtaining approval from the Authority under subrule (5), an applicable insurer may, by notice in writing to the Authority, revoke its reliance on the approval for using transitional arrangement for the remaining part of the transitional period, or for a specified part of such period. If such revocation is made, the insurer must, on the revocation becoming effective, cease reducing its risk capital amount for market risk in accordance with subrule (2) for the remaining part of the transitional period or specified part of such period, as the case may be.

(9) For the purposes of subrule (8), a notice revoking reliance on the approval for using transitional arrangement becomes effective on the date it is served on the Authority or, if later, on the date stated in the notice for the revocation to come into effect.

(10) Where, during the transitional period, an applicable insurer is approved under subrule (5) to use a transitional arrangement, or revokes its reliance on the approval for using transitional arrangement under subrule (8), the Authority shall publish a notice in the Gazette stating the name of the insurer and the fact that the insurer has been so approved or made such revocation, as the case may be.

(11) In this rule –

transitional period (過渡期) means the period beginning on the date on which these Rules come into operation and ending on 31 December 2026.

Schedule 1

Unlimited Tier 1 Capital

1. Qualifying criteria for capital instrument

(1) A capital instrument qualifies as Unlimited Tier 1 capital of an applicable insurer only if all of the following criteria are met –

(a) the instrument is issued and fully paid-up in cash whereby only the amount of net cash proceeds received from the issuance of instruments (that is, the paid-up amount) shall be included as Unlimited Tier 1 capital;

(b) the instrument is in the form of issued capital such that it is the first instrument to absorb losses as they occur;

(c) the instrument absorbs losses on a going concern basis proportionately and pari passu with all other Unlimited Tier 1 capital instruments of the same quality issued by the insurer;

(d) the instrument entitles the holder of the instrument to the most subordinated claim in a liquidation of the insurer;

(e) the instrument entitles the holders to a claim on the residual assets of the insurer, that, in the event of its liquidation, and after the payment of all senior claims, is proportional with the holder's share of the issued share capital, and is not fixed or subject to a cap (that is, the holder has an unlimited and variable claim);

(f) the instrument is perpetual;

(g) the principal amount of the instrument is not repaid outside liquidation (except discretionary repurchase or other discretionary means of reducing capital that is permitted under the applicable law);

(h) the insurer has not created, and has not done anything to create, an expectation at issuance that the instrument will be bought back, redeemed or cancelled, and there are no statutory or contractual terms which might reasonably give rise to such an expectation;

(i) for distributions to holders of the instrument –

(i) distributions are paid only out of distributable items;

(ii) the level of distributions is not in any way tied or linked to the amount paid up at issuance;

(iii) the terms and conditions governing the instrument do not include a cap or other restrictions on the maximum level of distributions except to the extent that the insurer is unable to pay distributions that exceed the level of distributable items;

(iv) there are no circumstances under which a distribution for the insurer to holders of the instrument is obligatory;

(v) the non-payment of distributions does not constitute an event of default of the insurer; and

(vi) there are no preferential distributions, including in respect of other Unlimited Tier 1 capital instruments, and distributions are paid only after all legal and contractual obligations have been met and payments on more senior capital instruments have been made;

(j) the instrument is neither undermined nor rendered ineffective by encumbrances, and in particular, the instrument is not secured or covered by a guarantee of the insurer or any of its affiliates, and is not subject to any other arrangement that legally or economically enhances the seniority of the claim;
(k) the insurer has not directly or indirectly funded the purchase of the instrument;
(l) the paid-up amount is recognized as equity capital for the purpose of determining balance sheet insolvency;
(m) the paid-up amount is classified as equity within the meaning of applicable accounting standards; and
(n) The instrument is clearly and separately disclosed on the balance sheet in the financial statements of the insurer.

Schedule 2

Limited Tier 1 Capital

1. Qualifying criteria for capital instrument

(1) A capital instrument qualifies as Limited Tier 1 capital of an applicable insurer only if all of the following criteria are met –

(a) the instrument is issued and fully paid-up in cash, whereby only the amount of net cash proceeds received from the issuance of instruments (that is, the paid-up amount) shall be included as Limited Tier 1 capital;

(b) the instrument is subordinated to policy holders, non-subordinated creditors and other subordinated creditors, including the holders of capital instruments that are Tier 2 capital of the insurer;

(c) the instrument is perpetual;

(d) the terms and conditions of the instrument contain no step-ups or other incentives to redeem;

(e) the instrument is only callable at the option of the insurer after at least 5 years from the date of issue (so that the instrument is not retractable by the holder), and the insurer must obtain prior consent from the Authority to exercise a call option;

(f) the insurer must obtain prior consent from the Authority for any repayment of principal (whether through repurchase, redemption or otherwise) of the instrument;

(g) the insurer has not created, and has not done anything to create, an expectation at issuance that the instrument will be bought back, redeemed or cancelled, or that the insurer will exercise any right to call the instrument, or that the repurchase or redemption will receive supervisory approval, and there are no statutory or contractual terms which might reasonably give rise to such an expectation;

(h) the dividend or coupon distributions in respect of the instrument are subject to the following –

(i) the distributions are paid only out of distributable items;

(ii) the insurer has full discretion at all times to cancel the distributions on the instrument for an unlimited period and on a non-cumulative basis;

(iii) the insurer has full access to cancelled payments to meet its obligations as they fall due;

(iv) the cancellation of distributions on the instrument does not constitute an event of default for the instrument; and

(v) the cancellation of distributions on the instrument imposes no restrictions on the insurer except in relation to distributions to ordinary shareholders;

(i) the instrument does not have distributions that are tied or linked to the credit quality or financial condition of the insurer or its affiliates, such that those distributions may accelerate winding-up;

(j) the instrument is neither undermined nor rendered ineffective by encumbrances, and in particular, the instrument is not secured or covered by a guarantee of the insurer or by any of its affiliates, and is not subject to any other arrangement that legally or economically enhances the seniority of the claim;

(k) the instrument does not contribute to liabilities exceeding assets of the insurer if a balance sheet test forms part of national insolvency law applicable to the insolvency of the insurer;

(l) the paid-up amount is classified as equity within the meaning of applicable accounting standards;

(m) neither the insurer nor its affiliates over which the insurer exercises control or significant influence (excluding the holding company of the insurer) has purchased the instrument;

(n) the insurer has not directly or indirectly funded the purchase of the instrument;

(o) the instrument cannot possess features that hinder recapitalization, such as provisions that require the insurer to compensate investors if a new instrument is issued at a lower price during a specified time frame; and

(p) if the instrument is not issued out of an operating entity (being an entity established to conduct business with clients with a view to making a profit in its own right) or any holding company of the insurer (for example, the instrument is issued by a special purpose vehicle), proceeds are immediately available without limitation to an operating entity or the holding company of the insurer, as the case may be, in a form that meets or exceeds all of the other qualifying criteria set out in this Schedule for inclusion in Limited Tier 1 capital.

Schedule 3

Tier 2 Capital

1. Qualifying criteria for capital instrument

(1) A capital instrument qualifies as Tier 2 capital of an applicable insurer only if all of the following criteria are met –

(a) the instrument is issued and fully paid-up in cash whereby only the amount of net cash proceeds received from the issuance of instruments (that is, the paid-up amount) shall be included as Tier 2 capital;

(b) the instrument is subordinated to policy holders and non-subordinated creditors;

(c) the instrument has an original maturity of at least 5 years with its effective maturity date defined to be the earlier of the following –

(i) the first call date, together with a step-up or other incentive to redeem the instrument; and

(ii) the contractual maturity date fixed in the instrument's terms and conditions;

(d) The instrument's availability to absorb losses as it nears its effective maturity is reflected by either –

(i) decreasing the amount of the instrument qualifying as Tier 2 capital from 100% to 0% on a straight-line basis in the final 5 years prior to maturity (where the instrument is repayable in separate tranches, each tranche shall be amortized individually, as if it were a separate instrument); or

(ii) the existence of a lock-in clause, which is a requirement for the insurer to suspend repayment or redemption if it is in breach (or would be in breach in the event of repayment or redemption) of its capital requirements;

(e) subject to paragraph (f), the instrument is only callable at the option of the insurer after at least 5 years from the date of issue (so that the instrument is not retractable by the holder), and the insurer must obtain prior consent from the Authority to exercise a call option;

(f) the instrument may be callable within the first 5 years from the date of issue only at the option of the insurer (so that the instrument is not retractable by the holder), provided that –

(i) the insurer must obtain prior consent from the Authority to exercise a call option; and

(ii) the called instruments must be replaced in full before or at redemption by a new issuance of the same or higher quality;

(g) the insurer must obtain prior consent from the Authority for any repayment of principal (whether through repurchase, redemption or otherwise) of the instrument;

(h) the insurer has not created, and has not done anything to create, an expectation at issuance that the instrument will be bought back, redeemed or cancelled, or that the insurer will exercise any right to call the instrument, or that the repurchase or redemption will receive supervisory approval, and there are no statutory or contractual terms which might reasonably give rise to such an expectation;

(i) the instrument does not have distributions that are tied or linked to the credit quality or financial condition of the insurer or its affiliates, such that those distributions may accelerate winding-up;

(j) the holders of the instrument have no rights to accelerate the payment or repayment of future scheduled payments except in the event of a liquidation of the insurer;

(k) the instrument is neither undermined nor rendered ineffective by encumbrances, and in particular, the instrument is not secured or covered by a guarantee of the insurer or by any of its affiliates, and is not subject to any other arrangement that legally or economically enhances the seniority of the claim;

(l) neither the insurer nor its affiliates over which the insurer exercises control or significant influence (excluding the holding company of the insurer) has purchased the instrument;

(m) the insurer has not directly or indirectly funded the purchase of the instrument; and

(n) if the instrument is not issued out of an operating entity (being an entity established to conduct business with clients with a view to making a profit in its own right) or any holding company of the insurer (for example, the instrument is issued by a special purpose vehicle), proceeds are immediately available without limitation to an operating entity or the holding company of the insurer, as the case may be, in a form that meets or exceeds all of the other qualifying criteria set out in this Schedule for inclusion in Tier 2 capital.

Schedule 4

Determination of Risk-free Yield Curves

1. Application

(1) Where these Rules require an applicable insurer to use a risk-free yield curve, the insurer must determine the risk-free yield curve using the methodology stated in section 2 of this Schedule.

2. Three-segment approach for determining risk-free yield curve

(1) An applicable insurer must use the Smith-Wilson extrapolation method and the three-segment approach mentioned in subsection (2) to determine the risk-free yield curve.

(2) For the purposes of subsection (1), the insurer must determine the risk-free yield curve as three segments with –
- (a) segment 1 of the yield curve –
  - (i) commencing at the current point in time and ending at the last liquid point;
  - (ii) being determined by –
    - (A) interpolating between observable market rates of government bonds or swaps, as specified in column 2 of Table 1, of various tenors; and
    - (B) if a swap rate is used for the determination in sub-subparagraph (A), applying a parallel downward shift to the observable market rates for the swap using the credit risk adjustment in column 4 of Table 1 applicable for the relevant currency specified, up to the last liquid point specified in column 5 of Table 1;
- (b) segment 2 of the yield curve –
  - (i) commencing immediately after the last liquid point specified in column 5 of Table 1 and ending at the convergence point specified in column 6 of Table 1; and
  - (ii) beings determined using the Smith-Wilson extrapolation method, to converge the curve towards the applicable ultimate forward rate specified in column 7 of Table 1; and
- (c) segment 3 of the yield curve –
  - (i) commencing immediately after the convergence point specified in column 6 of Table 1 and continuing thereafter; and
  - (ii) being determined by continuing to converge the curve towards the applicable ultimate forward rate specified in column 7 of Table 1.

(3) In this section, Table 1 refers to the following table –

Table 1
Parameters for generating the base risk-free yield curve

Specified currency	**Rate type**	**Coupon frequency per year**	**Credit risk adjustment (in basis points)**	**Last liquid point (in years)**	**Convergence point (years)**	**Ultimate Forward Rate**
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
HKD	Swap	4	10	15	60	3.8%
USD	Zero coupon government bonds	N/A	0	30	60	3.8%
RMB	Zero coupon government bonds	N/A	0	10	60	4.6%
THB	Zero coupon government bonds	N/A	0	10	60	5%
GBP	Swap	2	10	50	80	3.8%
JPY	Zero coupon government bonds	N/A	0	30	60	3.8%
TWD	Zero coupon government bonds	N/A	0	10	60	4.4%
SGD	Zero coupon government bonds	N/A	0	20	60	3.8%
EUR	Swap	1	10	20	60	3.8%

Schedule 5

Determination of Matching Adjustment

1. Application

(1) This Schedule applies to an applicable insurer that applies a matching adjustment to adjust the specified risk-free yield curve used to derive the discount rate for its future cash flows in valuing the current estimates of its long term insurance liabilities in an MA portfolio.

(2) An applicable insurer to which this Schedule applies must calculate a matching adjustment in accordance with the following formula with the methodologies set out in sections 3 to 10 of this Schedule –

$$\text{Matching adjustment}_{each\ MA\ portfolio} = adjusted\ spread_{\ each\ MA\ portfolio} \times\ application\ ratio_{\ each\ MA\ portfolio} + weighted\ constant\ prescribed\ spread \times\ predictability\ Factor \times Max\left[Min\left(20\%, eligible\ asset\ percentage - \frac{asset\ dollar\ duration}{liability\ dollar\ duration}\right), 0\right] + qualified\ LTA_{each\ MA\ portfolio}$$

where –

$adjusted\ spread_{\ each\ MA\ portfolio}$ is determined in accordance with section 5 of this Schedule;

$application\ ratio_{\ each\ MA\ portfolio}$ is determined in accordance with section 6 of this Schedule;

$$weighted\ constant\ prescribed\ spread\ \times\ predictability\ Factor \times Max\left[Min\left(20\%, eligible\ asset\ percentage - \frac{asset\ dollar\ duration}{liability\ dollar\ duration}\right), 0\right]$$

collectively refers to the constant prescribed spread component which is determined in accordance with section 9 of this Schedule; and

$qualified\ LTA_{each\ MA\ portfolio}$ is determined in accordance with section 10 of this Schedule.

2. Interpretation

(1) In this Schedule –

asset group (資產組別) means a group of eligible assets, organized according to their maturity bucket and credit rating band, and split further by sovereign bonds from other types of eligible assets;

asset spread (資產利差) is the constant spread that makes the price of an eligible asset equal to the present value of its cash flows when added to the specified risk-free yield curve at each point on the spot rate;

duration (存續期), in relation to an eligible asset or insurance liability, is a measure of sensitivity of the value of asset or liability with respect to a change in interest rate. It refers to the percentage change in price of the asset or value of the liability for a 100 basis point change in yield;

effective duration (有效存續期), in relation to an insurance liability, means the sensitivity of the liability to a change in discount rates, taking into account expected change in cash flows due to management actions;

invested assets (投資資產) refers to the assets defined under Table 1 of this Schedule, which are held within long term business funds, excluding the assets held for the account balance of Class C, Class G and Class H defined under Part 2 of Schedule 1 to the Ordinance.

3. Classification of assets within an MA portfolio

(1) For the purpose of calculating the matching adjustment for valuing the long term insurance liabilities in a MA portfolio, an applicable insurer must classify the assets in the MA portfolio into eligible assets, non-eligible assets and non-invested assets in accordance with Table 1.

Table 1
Classification of eligible assets, non-eligible assets and non-invested assets for MA portfolio

Total assets used to support the liabilities that are subject to matching adjustment		
Invested assets		**Non-invested assets**
Eligible assets	**Non-eligible assets**	
Column 1	Column 2	Column 3
Sovereign bonds	Equities	Cash and cash equivalents
Corporate bonds	Convertible bonds convertible at the option of the issuer or a third party	Assets held for Linked Long Term business
Asset backed securities	Derivatives	Investments in affiliates
Other debt securities	Properties	Other balance with affiliates
Loans and advances to financial institutions or corporates	Portfolio investment (Other than fixed income component)	Policy loans
Other loans and advances	Interest receivables from interest bearing assets	Other non-invested assets
Assets held for retirement schemes account balances (Fixed income component only)	Assets held for retirement schemes account balances (Other than fixed income component)	
Portfolio investment (Fixed income component only)	Other non-eligible assets	

(2) For purpose of classifying assets in accordance with subsection (1), in relation to any convertible bond it holds, an applicable insurer may classify the bond as a corporate bond (and as an eligible asset in Table 1 of subsection (1)), if, under the terms and conditions of the bond, the bond is convertible at the discretion of the insurer. To avoid doubt, if under its terms and conditions, the bond is convertible at the discretion of the issuer or a third party or is automatically triggered (for example, in the case of contingent convertible bonds), the insurer must treat the convertible bond as equities (and classify it as a non-eligible asset in Table 1 of subsection (1)).

(3) In calculating the matching adjustment for valuing long term insurance liabilities in an MA portfolio, the applicable insurer must exclude assets held by the insurer to cover or support liabilities that are not subject to matching adjustment for purposes of sections 5 to 10 of this Schedule.

4. Treatment of assets in MA portfolio with call options

(1) If the eligible assets within an MA portfolio include any eligible assets with embedded call options, for the purpose of determining the matching adjustment to be applied when valuing the insurance liabilities in the MA portfolio, the insurer must treat such assets in accordance with subsections (2) and (3).

(2) If the call option embedded in the eligible asset is not a make-whole call option, the insurer must project the cash flows for the asset on the assumption that the asset will be redeemed at the first callable date of the option.

(3) If the call option embedded in the eligible asset is a make-whole call option, subject to subsection (4), the insurer must determine the make-whole call spread of the asset and –

(a) if the make-whole call spread is less than or equal to the applicable maximal make-whole call spread stated in column 2 of Table 2 corresponding to the credit rating band in column 1 of Table 2 for the asset, the insurer must recognize the value of such asset and cash flows from such asset in full in determining the matching adjustment; or

(b) if the make-whole call spread exceeds the applicable maximal make-whole call spread stated in column 2 of Table 2 corresponding to the credit rating band in column 1 of Table 2 for the assets, the insurer must either:

(i) project the cash flows for the asset on the assumption that the asset will be redeemed at the first callable date; or

(ii) only partially recognize the market value of the asset in determining the matching adjustment by multiplying the market value with the ratio of X to Y, where –

(A) X is the amount of valuation date call price determined according to make-whole call spread of individual asset; and

(B) Y is the amount of valuation date call price determined according to maximal make-whole call spread; and

adjust the projected cash flows for the asset based on partial recognition of the market value of the asset (without any adjustment to asset spread and asset duration).

Table 2
Maximal make-whole call spread by credit rating band

Credit rating band	**Maximal make-whole call spread (in basis points)**
Column 1	Column 2
1	30
2	40
3	60
4 or below	80

(4) If the call option embedded in the eligible asset is a make-whole call option and the insurer cannot identify the make-whole call spread of the asset, the insurer must calculate the matching adjustment based on the projection of cash flows up to the first callable date of the option.

5. Determination of adjusted spread

(1) This section applies to the determination by an applicable insurer of the adjusted spread in the matching adjustment formula in section 1(2) of this Schedule.

(2) For the purpose of determining the adjusted spread mentioned in subsection (1), an applicable insurer must derive the adjusted spread for the eligible assets in the MA portfolio, based on the weighted average of the asset spread (denoted as $spread_i$ below) minus a risk correction (denoted as RC_i below) for the eligible assets, using the following formula –

$$Adjusted\ spread = \sum_{Eligible\ assets\ i} \omega_i \times (spread_i - RC_i)$$

where –

ω_i denotes the weight assigned to the eligible assets, based on the credit rating band and the maturity bucket of the eligible assets, where –

(a) the weight is determined by the proportion of the asset group's market value multiplied by the asset duration of the asset group to total eligible assets' market value multiplied by the asset duration of total eligible assets; and

(b) maturity bucket of eligible assets is determined according to the remaining term to maturity of the eligible assets in years, stated in Table 3.

Table 3
Maturity bucket grouping

Maturity bucket grouping
Less than or equal to 5 years
Larger than 5 years less than or equal to 10 years
Larger than 10 years less than or equal to 15 years
Larger than 15 years less than or equal to 20 years
Larger than 20 years less than or equal to 25 years
Larger than 25 years less than or equal to 30 years
Larger than 30 years

$Spread_i$ denotes the asset spread for the eligible assets held by applicable insurer with corresponding credit rating band and the maturity bucket. To avoid doubt, negative spreads should be included in the calculation and should not be floored at zero; and

RC_i denotes the risk correction to be applied to the asset spread of the eligible assets based on the corresponding credit rating band of the eligible assets. The risk correction refers to a percentage of the asset spread that represents the average probability of default and cost of downgrade of the eligible assets for which the adjusted spread is being calculated and is determined in accordance with subsections (3) and (4).

(3) Subject to subsection (4), the risk correction in the formula in subsection (2), is –

(a) zero basis points for eligible assets which are government bonds issued by jurisdictions whose government bonds are used to derive specified risk-free yield curves set out in Table 1 of Schedule 4 and are denominated in that corresponding specified currency; or

(b) in the case of eligible assets other that those mentioned in paragraph (a), determined by applying the relevant percentage to the asset spread for the eligible assets (denoted as $Spread_i$ in the formula in subsection (2)), where the relevant

percentage is the percentage in column 2 of Table 4 corresponding to the credit rating band in column 1 of Table 4 for the eligible assets.

Table 4
Risk correction in terms of a percentage of asset spread by credit rating band

Credit rating band	**Risk Correction (percentage of asset spread)**
Column 1	Column 2
1	11%
2	14%
3	20%
4 or below	22%

(4) For eligible assets in the MA portfolio with a credit rating band of 5 or below, or which are unrated, the weighted average spread for such assets which can be included in the formula in subsection (2) to determine adjusted spread is subject to the following –
(a) the weighted average spread for such assets is capped by the weighted average spread of bonds in the MA portfolio with a credit rating band of 4; or
(b) where there are no such bonds with a credit rating band of 4 in the MA portfolio or the asset spread of such bonds is not available, the weighted average spread for the relevant assets is capped by the weighted average spread of bonds in the MA portfolio with the credit rating band next higher than credit rating band 4 for which an asset spread is available; or
(c) the weighted average spread for such assets is set at zero if there are no bonds in the MA portfolio with a credit rating band of 4 or above.

6. Determination of the application ratio

(1) This section applies to the determination by an applicable insurer of the application ratio in the matching adjustment formula in section 1(2) of this Schedule.

(2) For the purpose of determining the application ratio mentioned in subsection (1), an applicable insurer must multiply a predictability factor (as determined under section 7 of this Schedule) and a duration factor (as determined under section 8 of this Schedule), using the following formula –

$$Application\ ratio = predictability\ factor \times duration\ factor$$

7. Determination of predictability factor

(1) The predictability factor is determined as 1 minus the largest accumulated cash flow shortfall percentage, floored at zero, using the following formula –

$$Predictability\ factor = Max\ (0\ , 1 - largest\ accumulated\ cash\ flow\ shortfall\ percentage)$$

where –
largest accumulated cash flow shortfall percentage is calculated in accordance with subsection (2).

(2) For the purposes of the formula in subsection (1), the largest accumulated cash flow shortfall percentage is the maximum of the largest accumulated cash flow shortfall percentage determined in accordance with subsections (3), (4) and (5) under the following scenarios –
(a) base scenario;
(b) lapse up scenario as described under rule 59; and
(c) mass lapse scenario as described under rule 59.

(3) For the purposes of subsection (2), and subject to subsection (5), to calculate the largest accumulated cash flow shortfall percentage, an applicable insurer must –
(a) project its excess cash balance at the end of each year during the period up to the last liquid point for each scenario in subsection (2), using the following formula for each year of projection –

$$Excess\ cash\ balance\ at\ year\text{–}end = excess\ cash\ balance\ at\ beginning\ of\ year + asset\ cash\ in\ flow\ for\ the\ year - liability\ cash\ out\ flow\ for\ the\ year$$

(b) if the excess cash balance for any given year calculated under paragraph (a) is negative, regard the absolute value of that negative excess cash balance as an accumulated cash flow shortfall;
(c) calculate the present value of each accumulated cash flow shortfall from paragraph (b) using the relevant specified risk-free yield curve, based on the major currency in which the largest portion of eligible assets is denominated;
(d) take the largest present value of accumulated cash flow shortfall calculated in paragraph (c) as its largest accumulated cash flow shortfall; and
(e) calculate the amount from paragraph (d) as a percentage of the total market value of eligible assets in the MA portfolio.

(4) For the purposes of subsection (3)(a), the last liquid point is determined as the longest last liquid point, based on the currencies in which the applicable insurer's long term insurance liabilities in the MA portfolio subject to matching adjustment are denominated, excluding long term insurance liabilities denominated in any currency which makes up less than 1% of the long term insurance liabilities in the MA portfolio subject to matching adjustment.

(5) The requirements relating to the cash flows in determining accumulated cash flow shortfall for subsection (3) are that –

(a) annual asset cash flows only include cash flows from the eligible assets, premium received in respect of contracts of insurance, the insurance liabilities of which are subject to matching adjustment, and investment return on excess cash balance, without reflecting any cash flows arising from asset sales and purchases;
(b) cash flows of callable bonds exclude bonds with only make-whole call options, and must be projected assuming the bonds will be redeemed at the first callable date;
(c) cash flows arising from assets used to support liabilities that are not subject to matching adjustment are excluded;
(d) premium cash flows may include contractually fixed premiums, premiums subject to premium holiday feature (with the consideration of premium holiday assumptions), and premiums from adjustable premium products that are highly predictable;
(e) any flexible top-up premiums which are at the discretion of the policy holders are excluded from premium cash flows;
(f) prepaid premiums already included as part of the applicable insurer's assets are excluded from premium cash flows;
(g) asset cash flows include investment returns on the excess cash balance at the risk-free forward rate of the major currency of the eligible assets; and
(h) liability cash flows only include guaranteed liability cash outflow.

(6) In this section –

last liquid point (最終流動點), for the purpose of determining predictability factor, means the last liquid point as specified under column 5 of Table 1 of Schedule 4 if the currency is a currency specified under column 1 of Table 1 of Schedule 4, or 30 years if otherwise;

premium holiday feature (保費假期特點) means a feature of a contract of insurance that allows the policy holder to stop paying premiums for a specific period of time.

8. Determination of duration factor

(1) For the purpose of determining the application ratio using the formula in section 6(2) of this Schedule, the duration factor takes into account the ratio of asset dollar duration of eligible assets in the MA portfolio to liability dollar duration of long term insurance liabilities that are subject to matching adjustment, is capped at the eligible asset percentage and is floored at zero. The duration factor is calculated by the following formula –

$$Duration\ factor = Max\left[0\ , Min\left(Eligible\ asset\ percentage, \frac{Asset\ dollar\ duration}{Liability\ dollar\ duration}\right)\right]\ .$$

where –
asset dollar duration means the weighted average duration for the eligible assets, multiplied by the market value of eligible assets;

eligible asset percentage means the portion of eligible assets to the total invested assets used to support the long term insurance liabilities that are subject to matching adjustment in a MA portfolio, expressed as a percentage and capped at 100%;
liability dollar duration means the effective duration of the insurance liabilities, multiplied by the current estimate for such liabilities discounted by the specified risk-free yield curves, adjusted by an estimated matching adjustment determined in accordance with subsection (2).

(2) For the purpose of determining the estimated matching adjustment in the definition of liability dollar duration in subsection (1), an applicable insurer –
(a) may make such determination using any appropriate method, provided that the difference between the estimated matching adjustment and the final matching adjustment is no more than 10 basis points; and
(b) must not directly adopt a current estimate of long term insurance liabilities from reporting periods before the valuation date and must determine its current estimate of long term insurance liabilities in accordance with rule 15 to calculate the final matching adjustment mentioned in paragraph (a).

9. Constant prescribed spread component

(1) This section applies to the determination by an applicable insurer of the constant prescribed spread component in the matching adjustment formula in section 1(2) of this Schedule, in accordance with the following formula –

$$constant\ prescribed\ spread\ component = weighted\ constant\ prescribed\ spread \times predictability\ factor \times Max\left[Min\left(20\%, eligible\ asset\ percentage - \frac{asset\ dollar\ duration}{liability\ dollar\ duration}\right), 0\right]$$

where –
weighted constant prescribed spread is determined in accordance with subsection (2);
predictability factor is determined in accordance with section 7 of this Schedule; and
eligible asset percentage, asset dollar duration and liability dollar duration are determined in accordance with section 8(1) of this Schedule.

(2) For the purposes of the formula in subsection (1), subject to subsections (3) and (4), the weighted constant prescribed spread is derived by –
(a) identifying the constant prescribed spreads in Table 5 for the eligible assets corresponding to the maturity bucket and the credit rating band of the eligible assets;

Table 5
Constant prescribed spreads in basis points by credit rating band and maturity bucket

Maturity bucket \ Credit rating band	1	2	3	4 or below
Column 1	Column 2	Column 3	Column 4	Column 5
0-5 Years	20	30	45	60
5-10 Years	35	45	60	70
10-15 Years	40	50	65	80
15-20 Years	50	60	75	90
20-25 Years	50	60	75	90
25-30 Years	50	60	75	90
30+ Years	50	60	75	90

(b) subtracting from the constant prescribed spreads identified in (a), the risk correction as prescribed under section 5(3) of this Schedule in respect of the eligible assets based on the corresponding credit rating band of the eligible assets; and

(c) calculating the weighted average of the constant prescribed spreads minus the risk correction, based on the weight of the eligible assets represented in each credit rating band and maturity bucket, where the weight is the proportion of the market value of the asset group multiplied by the asset duration of the asset group to the market value of total eligible assets multiplied by the asset duration of total eligible assets.

(3) Notwithstanding the constant prescribed spreads set out in Table 5, the constant prescribed spread for government bonds issued by jurisdictions whose government bonds are used to derive specified risk-free yield curves set out in Table 1 of Schedule 4 is zero;

(4) If the asset spread calculated in accordance with section 5 of this Schedule is below the weighted constant prescribed spread calculated in accordance with subsection (2), the asset spread calculated in accordance with section 5 of this Schedule will be taken as the weighted constant prescribed spread for the purposes of the formula under subsection (1).

10. Qualified LTA

(1) This section applies to the determination by an applicable insurer of the qualified LTA in the matching adjustment formula in section 1(2) of this Schedule which is the spread above risk-free yield curve recognized for holding equities and properties in an MA portfolio for MA portfolios that meet the criteria in rule 24(3).

(2) The qualified LTA is determined by the following formula –

$$qualified\ LTA_{each\ MA\ portfolio} = long\ term\ adjustment \times equity\ and\ property\ proportion_{each\ MA\ portfolio}$$

where –
long term adjustment is prescribed to be 100 basis points; and
equity and property proportion is the proportion of equities and properties in the matching adjustment portfolio that is the lower of –

(a) the ratio of market value of equities and properties to total market value of invested assets in the MA portfolio; and

(b) cap on equity and property proportion using the formula below –

$$Cap\ on\ equity\ and\ property\ proportion = \frac{Sum\ of\ discounted\ liability\ cash\ outflows\ over\ 30\ years}{Sum\ of\ total\ discounted\ liability\ cash\ outflows\ for\ all\ years}$$

where an applicable insurer must discount its liability cash outflows by using relevant specified risk-free yield curve, based on the specified currency in which the largest portion of the insurer's insurance liabilities subject to matching adjustment is denominated.

Schedule 6

Credit Rating Band

1. Interpretation

For this Schedule –

data history (數據歷史) means the number of years for which a credit rating agency has published cumulative default rates data;

specified rating agency (指明評級機構) means a rating agency specified in Table 1 of section 3(1) of this Schedule.

2. Determination of credit rating band required by these Rules

Where an applicable insurer is required by these Rules to determine the credit rating band of an instrument or a party, the insurer must determine the credit rating band for the instrument or party as the case may be, in accordance with this Schedule.

3. Use of credit rating of a specified rating agency

(1) Subject to subsection (2), if a credit rating has been assigned to an instrument or party, as the case may be, by a specified rating agency, an applicable insurer must determine the credit rating band for the instrument or party by mapping the credit rating to the credit rating band in accordance with Table 1.

Table 1
Credit rating band mapping

Credit rating band		**Specified rating agency**					
		S&P Global Ratings	**Moody's Investors Service**	**Fitch Ratings**	**A.M. Best Company, Inc.**	**Japan Credit Rating Agency, Ltd.**	**DBRS Morningstar**
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Long-term rating	1	AAA	Aaa	AAA	aaa	AAA	AAA
	2	AA+ to AA-	Aa	AA	aa	AA	AA
	3	A+ to A-	A	A	a	A	A
	4	BBB+ to BBB-	Baa	BBB	bbb	BBB	BBB
	5	BB+ to BB-	Ba	BB	bb	BB	BB
	6	B+ to B-	B	B	b	B	B

	7	CCC and lower	Caa and lower	CCC and lower	ccc and lower	CCC and lower	CCC and lower
Short-term rating	1						
	2	A-1	P-1	F1	AMB-1+	J-1	R-1
	3	A-2	P-2	F2	AMB-1-	J-2	R-2
	4	A-3	P-3	F3	AMB-2 to AMB-3	J-3	R-3
	5				AMB-4		
	6	B	NP	B		NJ	R-4
	7	C and lower		C and lower			R-5 and lower
Financial strength rating	1	AAA	Aaa	AAA			
	2	AA+ to AA-	Aa	AA	A++ to A+		
	3	A+ to A-	A	A	A to A-		
	4	BBB+ to BBB-	Baa	BBB	B++ to B+		
	5	BB+ to BB-	Ba	BB	B to B-		
	6	B+ to B-	B	B	C++ to C+		
	7	CCC and lower	Caa and lower	CCC and lower	C and lower		

(2) If more than one credit rating has been assigned to an instrument or party by more than one specified rating agency, an applicable insurer must determine the credit rating band for the instrument or party by mapping the credit ratings assigned to the instrument or party to the credit rating band in accordance with Table 1 and using the second highest credit rating band.

(3) Subject to subsection (4), if an instrument or party does not have a credit rating assigned to it by a specified rating agency, but has a credit rating assigned to it by another rating agency, an applicable insurer must determine the credit rating band for the instrument or party by –

(a) determining the most recent average 3-year cumulative default rate based on data published by the rating agency for the instruments or parties with the same credit rating assigned; and

(b) mapping the most recent average 3-year cumulative default rate determined in paragraph (a) to the credit rating band in accordance with Table 2 based on the data history of the rating agency:

Provided that this method of determining the credit rating band can only be used where the rating agency in question has a data history covering at least the last 7 years.

Table 2
Mapping of average 3-year cumulative default rate for credit rating band

Credit rating band	**Average 3-year cumulative default rate for rating agency with over 20 years of data history**	**Average 3-year cumulative default rate for rating agency with 7 to 20 years of data history**
Column 1	Column 2	Column 3
1		
2	0 ≤ CDR ≤ 0.15%	
3	0.15% < CDR ≤ 0.35%	0 ≤ CDR ≤ 0.15%
4	0.35% < CDR ≤ 1.20%	0.15% < CDR ≤ 0.35%
5	1.20% < CDR ≤ 10.00%	0.35% < CDR ≤ 1.20%
6	10.00% < CDR ≤ 25.00%	1.20% < CDR ≤ 10.00%
7	CDR > 25%	CDR > 10%

where CDR means average 3-year cumulative default rate.

(4) If an instrument or party does not have a credit rating assigned to it by a specified rating agency, but has more than one credit rating assigned to it by more than one other rating agency, an applicable insurer must determine the credit rating band for the instrument or party by mapping the credit rating band for each such rating using the approach in subsection (3) and using the second highest credit rating band identified under Table 2.

(5) Where these Rules require a credit rating band to be determined for an instrument and subsections (1) to (4) apply for that purpose, an applicable insurer must determine the credit rating band for the instrument, by reference to the most relevant credit rating, based on the following order of priority –
(a) the issue credit rating of the instrument; or
(b) if there is no issue credit rating of the instrument, the long-term issuer credit rating of the party that issued the instrument.

(6) Where these Rules require a credit rating band to be determined for a party and subsections (1) to (4) apply for that purpose, an applicable insurer must determine the credit rating band for the party by reference to the most relevant credit rating, based on the following order of priority –
(a) if the party is an insurer, the financial strength rating of the party; or
(b) if the party is not an insurer or does not have a financial strength rating, the long-term issuer credit rating of the party.

4. Internal assessment of credit rating band

(1) If an instrument or party does not have a credit rating assigned to it by a specified rating agency or by any other rating agency, the insurer, subject to obtaining approval from the Authority in accordance with subsection (4) and no subsequent objection having been made by the Authority in accordance with subsection (7), may use an internal assessment process to map an exposure to an instrument or a party, as the case may be, to the appropriate credit rating band for the purposes of these Rules.

(2) For the purposes of subsection (1), to obtain an approval under subsection (4), an applicable insurer must make an application to the Authority in accordance with subsection (3) and make payment of a prescribed fee.

(3) An application made under subsection (2) must –
  (a) be made in writing;
  (b) contain –
    (i) the particulars of the internal assessment process specified by the Authority; and
    (ii) any other information as may reasonably be required by the Authority to consider the application, having regard to guidelines published under section 133 of the Ordinance; and
  (c) be served on the Authority.

(4) On an application made under subsection (2), the Authority may by written notice to the applicable insurer, approve or reject the application and if it approves the application, it may do so subject to such conditions it may impose including in relation, but not limited to –
  (a) the period for which the approval shall remain in effect; and
  (b) the approach or manner in which the insurer must apply its internal assessment process to map an exposure to an instrument or a party, as the case may be, to the appropriate credit rating band for the purposes of these Rules.

(5) After obtaining an approval from the Authority under subsection (4) and during the period in which the approval remains in effect, an applicable insurer must –
  (a) submit to the Authority such information in relation to the use of an internal assessment process to map credit rating band as specified by the Authority in a specified form and within the period specified in the specified form, including such information as may reasonably be required by the Authority to monitor the continued effectiveness of the internal assessment process in determining internal assessment process to map credit rating band, having regard to guidelines published under section 133 of the Ordinance; and
  (b) pay the prescribed fee on submission of information under paragraph (a).

(6) The Authority may, by serving a notice in writing on the applicable insurer, object to the applicable insurer continuing to use an internal assessment process to map its exposure to an instrument or a party, as the case may be, to the appropriate credit rating band for the purposes of these Rules if it appears to the Authority that the internal assessment process is no longer suitable to be adopted by the insurer.

Schedule 7

Correlation matrix

1. Correlation matrix for margin over current estimate for long term insurance liabilities

Table 1
Correlation matrix for mortality, longevity, morbidity, expense and lapse risks

Sub-risk j / Sub-risk i	**Mortality**	**Longevity**	**Morbidity**	**Expense**	**Lapse**
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Mortality	100%	-25%	25%	25%	0%
Longevity	-25%	100%	0%	25%	25%
Morbidity	25%	0%	100%	50%	0%
Expense	25%	25%	50%	100%	50%
Lapse	0%	25%	0%	50%	100%

2. Correlation matrix for prescribed capital amount and risk capital amounts

Table 2
Correlation matrix for prescribed capital amount

Risk y / Risk x	**Market**	**Life Insurance**	**General Insurance**	**Counterparty Default and Other**
Column 1	Column 2	Column 3	Column 4	Column 5
Market	100%	25%	25%	25%
Life Insurance	25%	100%	0%	25%
General Insurance	25%	0%	100%	25%
Counterparty Default and Other	25%	25%	25%	100%

Table 3A
Correlation matrix for market risk–interest rate upward

sub-risk t / sub-risk s	**Interest Rate**	**Credit Spread**	**Equity**	**Property**	**Currency**
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Interest Rate	100%	0%	0%	0%	25%
Credit Spread	0%	100%	75%	50%	25%
Equity	0%	75%	100%	50%	25%
Property	0%	50%	50%	100%	25%
Currency	25%	25%	25%	25%	100%

Table 3B
Correlation matrix for market risk–interest rate downward

sub-risk t / sub-risk s	Interest Rate	Credit Spread	Equity	Property	Currency
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Interest Rate	100%	50%	50%	25%	25%
Credit Spread	50%	100%	75%	50%	25%
Equity	50%	75%	100%	50%	25%
Property	25%	50%	50%	100%	25%
Currency	25%	25%	25%	25%	100%

Table 4
Correlation matrix for life insurance risk

Sub-risk n / Sub-risk m	Mortality	Longevity	Life CAT	Morbidity	Expense	Lapse
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Mortality	100%	-25%	25%	25%	25%	0%
Longevity	-25%	100%	0%	0%	25%	25%
Life CAT	25%	0%	100%	25%	25%	25%
Morbidity	25%	0%	25%	100%	50%	0%
Expense	25%	25%	25%	50%	100%	50%
Lapse	0%	25%	25%	0%	50%	100%

Table 5
Correlation matrix for general insurance risk

Sub-risk v1 / Sub-risk u1	General insurance (other than mortgage insurance)	Mortgage insurance
Column 1	Column 2	Column 3
General insurance (other than mortgage insurance)	100%	25%
Mortgage insurance	25%	100%

Table 6
Correlation matrix for general insurance (other than mortgage insurance) risk

Sub-risk v2 / Sub-risk u2	Reserve and premium	Catastrophe
Column 1	Column 2	Column 3
Reserve and premium	100%	25%
Catastrophe	25%	100%

Table 7
Correlation matrix for reserve and premium risk

Sub-risk u3 \ Sub-risk v3	Reserve	Premium
Column 1	Column 2	Column 3
Reserve	100%	50%
Premium	50%	100%

Table 8
Correlation matrix for reserve and premium risk–general insurance lines of business

u4 \ v4		General insurance line of business																					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
General insurance line of business	1	100%	0%	0%	0%	0%	0%	0%	25%	25%	25%	0%	0%	0%	0%	0%	50%	0%	0%	0%	25%	0%	0%
	2	0%	100%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	0%	50%	25%	25%	25%	25%	25%
	3	0%	25%	100%	25%	25%	25%	25%	0%	0%	0%	25%	25%	25%	25%	25%	0%	25%	50%	25%	0%	25%	25%
	4	0%	25%	25%	100%	50%	25%	25%	0%	0%	0%	25%	25%	25%	25%	25%	0%	25%	50%	25%	0%	25%	25%
	5	0%	25%	25%	50%	100%	25%	25%	0%	0%	0%	25%	25%	25%	25%	25%	0%	25%	50%	25%	0%	25%	25%
	6	0%	25%	25%	25%	25%	100%	100%	0%	0%	0%	25%	25%	25%	25%	25%	0%	25%	25%	50%	0%	25%	25%
	7	0%	25%	25%	25%	25%	100%	100%	0%	0%	0%	25%	25%	25%	25%	25%	0%	25%	25%	50%	0%	25%	25%
	8	25%	25%	0%	0%	0%	0%	0%	100%	50%	75%	50%	50%	50%	25%	25%	25%	25%	0%	0%	50%	50%	25%
	9	25%	25%	0%	0%	0%	0%	0%	50%	100%	75%	50%	50%	50%	25%	25%	25%	25%	0%	0%	50%	50%	25%
	10	25%	25%	0%	0%	0%	0%	0%	75%	75%	100%	50%	50%	50%	25%	25%	25%	25%	0%	0%	50%	50%	25%
	11	0%	25%	25%	25%	25%	25%	25%	50%	50%	50%	100%	50%	75%	50%	50%	0%	25%	25%	25%	50%	50%	50%
	12	0%	25%	25%	25%	25%	25%	25%	50%	50%	50%	50%	100%	75%	50%	50%	0%	25%	25%	25%	50%	50%	50%
	13	0%	25%	25%	25%	25%	25%	25%	50%	50%	50%	75%	75%	100%	50%	50%	0%	25%	25%	25%	50%	50%	50%
	14	0%	25%	25%	25%	25%	25%	25%	25%	25%	25%	50%	50%	50%	100%	75%	0%	25%	25%	25%	25%	50%	50%
	15	0%	25%	25%	25%	25%	25%	25%	25%	25%	25%	50%	50%	50%	75%	100%	0%	25%	25%	25%	25%	50%	50%
	16	50%	0%	0%	0%	0%	0%	0%	25%	25%	25%	0%	0%	0%	0%	0%	100%	0%	0%	0%	25%	0%	0%
	17	0%	50%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	0%	100%	25%	25%	25%	25%	25%
	18	0%	25%	50%	50%	50%	25%	25%	0%	0%	0%	25%	25%	25%	25%	25%	0%	25%	100%	25%	0%	25%	25%
	19	0%	25%	25%	25%	25%	50%	50%	0%	0%	0%	25%	25%	25%	25%	25%	0%	25%	25%	100%	0%	25%	25%
	20	25%	25%	0%	0%	0%	0%	0%	50%	50%	50%	50%	50%	50%	25%	25%	25%	25%	0%	0%	100%	50%	25%
	21	0%	25%	25%	25%	25%	25%	25%	50%	50%	50%	50%	50%	50%	50%	50%	0%	25%	25%	25%	50%	100%	50%
	22	0%	25%	25%	25%	25%	25%	25%	25%	25%	25%	50%	50%	50%	50%	50%	0%	25%	25%	25%	25%	50%	100%

where the general insurance lines of business represent as:

	Business	General insurance line of business
1	Direct and reinsurance	Accident and health
2	Direct and proportional reinsurance	Motor
3	Direct and proportional reinsurance	Aviation
4	Direct and proportional reinsurance	Ships
5	Direct and proportional reinsurance	Goods in Transit
6	Direct	Property damage
7	Proportional reinsurance	Property damage
8	Direct	Employees' compensation–construction
9	Direct	Employees' compensation–non-construction
10	Proportional reinsurance	Employees' compensation
11	Direct	General liability–public liability

	Business	General insurance line of business
12	Direct	General liability–other liability
13	Proportional reinsurance	General liability
14	Direct	Pecuniary loss–credit and others
15	Proportional reinsurance	Pecuniary loss–credit and others
16	Non-proportional reinsurance	Accident and health
17	Non-proportional reinsurance	Motor
18	Non-proportional reinsurance	Marine, aviation, and transport
19	Non-proportional reinsurance	Property Damage
20	Non-proportional reinsurance	Employees' compensation
21	Non-proportional reinsurance	General liability
22	Non-proportional reinsurance	Pecuniary loss–credit and others

Table 9
Correlation matrix for catastrophe risk

Sub-risk v5 / Sub-risk u5	Natural Catastrophe	Man-made Non-systemic Catastrophe	Man-made Systemic Catastrophe
Column 1	Column 2	Column 3	Column 4
Natural Catastrophe	100%	0%	0%
Man-made Non-systemic Catastrophe	0%	100%	0%
Man-made Systemic Catastrophe	0%	0%	100%

Table 10
Correlation matrix for net loss for windstorm for natural catastrophe risk

Region v6 / Region u6	Hong Kong	Macau	Mainland China	Taiwan	Others
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Hong Kong	100%	50%	25%	25%	0%
Macau	50%	100%	25%	25%	0%
Mainland China	25%	25%	100%	25%	0%
Taiwan	25%	25%	25%	100%	0%
Others	0%	0%	0%	0%	100%

Table 11
Correlation matrix for net loss for earthquake for natural catastrophe risk

Region v7 / Region u7	Hong Kong	Others
Column 1	Column 2	Column 3
Hong Kong	100%	0%
Others	0%	100%

Table 12
Correlation matrix for mortgage insurance risk

Sub-risk v8 / Sub-risk u8	Onshore Mortgage Insurance	Offshore Mortgage Insurance
Column 1	Column 2	Column 3
Onshore Mortgage Insurance	100%	75%
Offshore Mortgage Insurance	75%	100%

Table 13
Correlation matrix for onshore standard mortgage insurance

Sub-risk v9 / Sub-risk u9	Reserve Risk	Catastrophe and premium risk
Column 1	Column 2	Column 3
Reserve Risk	100%	50%
Catastrophe and premium risk	50%	100%

Table 14
Correlation matrix for offshore mortgage insurance

Sub-risk v10 / Sub-risk u10	Reserve and Premium Risk	Catastrophe Risk
Column 1	Column 2	Column 3
Reserve and Premium Risk	100%	50%
Catastrophe Risk	50%	100%

Table 15
Correlation matrix for reserve and premium risk for offshore mortgage insurance

Sub-risk v11 / Sub-risk u11	Reserve Risk	Premium Risk
Column 1	Column 2	Column 3
Reserve Risk	100%	50%
Premium Risk	50%	100%

Schedule 8

Geographical region definitions

Table 1
Developed market definitions for equity risk

Australia
Austria
Belgium
Canada
Denmark
Finland
France
Germany
Hong Kong
Ireland
Israel
Italy
Japan
Netherlands
New Zealand
Norway
Portugal
Singapore
Spain
Sweden
Switzerland
United Kingdom
United States of America

Table 2
Other developed market definitions for expense risk

Australia
Israel
Korea
New Zealand
San Marino
Singapore
Taiwan

Table 3
Risk region definitions for reserve and premium risk

Risk region
Mainland China and Mongolia
Hong Kong, Macau and Taiwan
Japan and Korea
South and South-Eastern Asia
Central and Western Asia
Oceania
Northern Europe
Western Europe
Eastern Europe
Southern Europe
Northern America excluding the United States of America
Caribbean and Central America
Eastern South America
Northern, southern and western South America
North-east United States of America
South-east United States of America
Mid-west United States of America
Western United States of America
Northern Africa
Southern Africa

Schedule 9

Definitions of General Insurance Lines of Business

Table 1
Definitions for General Insurance Lines of Business

Business	**General insurance line of business**	**Class under Schedule 1 of the Ordinance**	**Sub-line of business (if any)**	**Definition of sub-line of business (if any)**
Column 1	Column 2	Column 3	Column 4	Column 5
Direct and proportional reinsurance business	Accident and health	Classes 1 and 2		
	Motor	Classes 3 and 10		
	Aviation	Classes 5 and 11		
	Ships	Classes 6 and 12		
	Goods in transit	Class 7		
	Property damage	Classes 4, 8 and 9	Engineering	Including risks of property damage under contractor's all risks insurance, erection all risks insurance, contractors' plant and equipment insurance, machinery breakdown insurance, boiler and pressure vessel explosion insurance, electronic equipment insurance, and other contracts of insurance with similar coverage.
			Property damage (all others)	Including risks of property damage under sub-lines of business other than engineering.
	Employees' compensation	Class 13	Construction	Including liabilities in relation to employees' compensation insurance for construction business (whether on an annual wage or contract value basis).
			Non-construction	Including liabilities in relation to employees' compensation insurance for businesses other than construction.
	General liability	Class 13	Public liability	Including legal liability to third parties for bodily injury, death or property damage arising from the insured's negligence.

Business	General insurance line of business	Class under Schedule 1 of the Ordinance	Sub-line of business (if any)	Definition of sub-line of business (if any)
Column 1	Column 2	Column 3	Column 4	Column 5
			Other liability	Covering Class 13 business under Schedule 1 of the Ordinance other than employees' compensation and public liability insurance, including but not limited to directors and officers liability insurance, professional indemnity insurance, product liability insurance and any general liability insurance.
	Pecuniary loss	Classes 14, 15, 16 and 17	Standard mortgage	Covering the risk of losses on mortgage loans arising from default by borrowers.
			Reverse mortgage	Covering the risk of losses on reverse mortgage loans.
			Credit	Covering Class 14 business under Schedule 1 of the Ordinance
			Pecuniary loss (all others)	Covering the risk of other pecuniary losses not covered by standard mortgage, reverse mortgage and credit businesses.
Non-proportional reinsurance business	Accident and health	Classes 1 and 2		
	Motor	Classes 3 and 10		
	Marine, aviation and transport	Classes 5, 6, 7, 11 and 12		
	Property damage	Classes 8 and 9		
	Employees' compensatio n	Class 13		
	General liability	Class 13		
	Pecuniary loss	Classes 14, 15, 16 and 17	Standard mortgage	Covering the risk of losses on mortgage loans arising from default by borrowers.
			Reverse mortgage	Covering the risk of losses on reverse mortgage loans
			Credit	Covering Class 14 business under Schedule 1 of the Ordinance
			Pecuniary loss (all others)	Covering the risk of other pecuniary losses not covered by standard

Business	General insurance line of business	Class under Schedule 1 of the Ordinance	Sub-line of business (if any)	Definition of sub-line of business (if any)
Column 1	Column 2	Column 3	Column 4	Column 5
				mortgage, reverse mortgage and credit businesses.

Schedule 10

Table 1
Recognized Multilateral Development Banks or Supranational Organizations

Recognized Multilateral Development Banks or Supranational Organizations
United Nations
International Monetary Fund
International Bank for Reconstruction and Development
International Finance Corporation
Asian Development Bank
African Development Bank
European Bank for Reconstruction and Development
Inter-American Development Bank
European Investment Bank
European Investment Fund
Nordic Investment Bank
Caribbean Development Bank
Islamic Development Bank
Council of Europe Development Bank
International Finance Facility for Immunization
Multilateral Investment Guarantee Agency
International Development Association
Asian Infrastructure Investment Bank

Insurance (Submission of Statements, Reports and Information) Rules (Cap. 41S)
(Cap. 41, section 129(1))

1. Commencement

(1) These Rules come into operation on the day on which sections 33 and 34 of the Insurance (Amendment) Ordinance 2023 come into operation.

2. Interpretation

(1) In these Rules –

digital signature (數碼簽署) has the meaning given in section 2 of the Electronic Transactions Ordinance (Cap. 553);

electronic signature (電子簽署) means a digital representation of an individual's approval or consent in relation to an electronic record in a form which is acceptable to the Authority;

insurance liability (保險負債) has the meaning given by rule 2 of Insurance (Valuation and Capital) Rules (Cap. 41R);

marine insurer (海事保險人) has the meaning given by rule 2 of the Insurance (Marine Insurers and Captive Insurers) Rules (Cap. 41U);

multifactor authentication (多重因素認證) refers to the use of two or more unique forms of verification to perform any functions as required at an online communication system approved by the Authority;

transitional period (過渡期) means the period of two years from the commencement date.

(2) In these Rules, where a document (including a statement, return or report) must be signed or approved by a specified individual for the purposes of the relevant provision, and such document is submitted electronically by means of an online communication system approved by the Authority for this purpose, the signing or approval requirement may be satisfied by any of the following methods –

(a) confirmation of the document submitted by the specified individual using multifactor authentication;

(b) attachment of the specified individual's digital signature to the document submitted; or

(c) attachment of the specified individual's electronic signature to the document submitted.

3. Financial statements to be submitted to the Authority

(1) For the purposes of section 17(1) of the Ordinance, an authorized insurer must submit to the Authority, in respect of each financial year –
   (a) if the authorized insurer is a HK insurer – its financial statements as defined by section 357(1) of the Companies Ordinance (Cap. 622); or
   (b) in any other case – the financial statements that –
      (i) the authorized insurer is required to prepare under the laws of its place of incorporation, establishment, formation or domiciliation; and
      (ii) contain information that the Authority considers to be comparable to the information contained in the financial statements referred to in paragraph (a).

(2) An authorized insurer must submit the financial statements referred to in subrule (1), together with a report of its appointed auditor on those statements as required under applicable law, by depositing the statements and appointed auditor's report thereon with the Authority within 4 months after the end of the period to which they relate.

(3) The statements and appointed auditor's report submitted under subrule (2) must be produced in the Chinese or the English language or, if not so produced, must be accompanied by a complete Chinese or English translation.

(4) In this rule –

appointed auditor (委任核數師) refers to an auditor appointed under section 15 of the Ordinance.

4. Information to be submitted to the Authority

(1) For the purposes of section 17(1) of the Ordinance, an authorized insurer must submit annual returns by depositing the forms comprising such returns with the Authority within the specified period after the end of the financial year to which the returns relate, where such specified period is –
   (a) 3 months or 6 months (as the case may be), as specified by the Authority in the relevant form, in the case of an annual return in respect of a financial year ending within the transitional period, or
   (b) 3 months or 4 months (as the case may be), as specified by the Authority in the relevant form, in the case of an annual return in respect of a financial year ending after the transitional period.

(2) Subject to subrule (3), for the purposes of section 17(1) of the Ordinance, an authorized insurer must submit quarterly returns by depositing the forms comprising such returns with the Authority within the specified period after the end of each quarter ending respectively on 31 March, 30 June, 30 September and 31 December (unless otherwise specified by the Authority in specific forms), where such specified period is –

(a) 4 or 8 weeks (as the case may be), as specified by the Authority in the relevant form, in the case of a quarterly return in respect of a quarter ending within the transitional period, or
(b) 4 or 6 weeks (as the case may be), as specified by the Authority in the relevant form, in the case of a quarterly return in respect of a quarter ending after the transitional period.

(3) In the case of a marine insurer, which has its financial year ending on a date other than 31 March, 30 June, 30 September and 31 December, in addition to the returns required under subrule (2), the Authority may request the insurer to submit a quarterly return in respect of a quarter of its financial year as specified by the Authority within a specified period after the end of such quarter, where such specified period is –
(a) 4 or 8 weeks (as the case may be), as specified by the Authority in the relevant form, in the case of a quarterly return in respect of a quarter ending within the transitional period, or
(b) 4 or 6 weeks (as the case may be), as specified by the Authority in the relevant form, in the case of a quarterly return in respect of a quarter ending after the transitional period.

(4) For the purposes of section 17(1) of the Ordinance, an authorized insurer must submit monthly returns (if any) by depositing the forms comprising such returns with the Authority within 2 weeks after each month end.

(5) For the purposes of section 25B(3)(b) of the Ordinance, the authorized insurer concerned must submit its statement on the redetermined value of its assets and liabilities consisting of the forms specified by the Authority for that purpose.

(6) The returns and statements deposited under subrules (1), (2), (3), (4) and (5) must be signed or approved on behalf of the authorized insurer concerned by a controller of that insurer (within the meaning of section 13A of the Ordinance) and a key person in the financial control function of that insurer. Alternatively, the authorized insurer may choose to have a director of the insurer sign or approve such returns or statements in place of either its controller or key person in financial control function or both.

(7) In this rule –

annual return (周年申報表), in respect of each financial year of an authorized insurer, means –
(a) for an authorized insurer carrying on long term business, except for Lloyd's, the forms for that financial year that are specified by the Authority with respect to –
  (i) the insurer's financial position and capital adequacy;
  (ii) the insurer's business related information; and
  (iii) the insurer's supplementary and governance information;
(b) for an authorized insurer carrying on general business, except for marine insurers, captive insurers and Lloyd's, the forms for that financial year that are specified by the Authority with respect to –

(i) the insurer's financial position and capital adequacy;
(ii) the insurer's business related information; and
(iii) the insurer's supplementary and governance information;

(c) for a marine insurer, the forms for that financial year that are specified by the Authority for marine insurers;

(d) for a captive insurer, the forms for that financial year that are specified by the Authority for captive insurers;

(e) for Lloyd's, the forms for that financial year that are specified by the Authority for Lloyd's;

(f) for a special purpose insurer, the forms for that financial year that are specified by the Authority for special purpose insurers; or

(g) notwithstanding (a) to (f), for an authorized insurer that is subject to section 25A of the Ordinance (other than an insurer that is exempted under the Insurance (Maintenance of Assets in Hong Kong) Rules (Cap. 41T)), the forms specified by the Authority with respect to the insurer's assets and liabilities and the amount of assets in Hong Kong required.

quarterly return (季度申報表), in respect of each quarter of a calendar year, means –

(a) for an authorized insurer carrying on long term business, except for Lloyd's, the forms for that quarter that are specified by the Authority with respect to –
(i) the insurer's financial position and capital adequacy;
(ii) the insurer's business related information; and
(iii) the insurer's supplementary information;

(b) for an authorized insurer carrying on general business, except for marine insurers, captive insurers and Lloyd's, the forms for that quarter that are specified by the Authority with respect to –
(i) the insurer's financial position and capital adequacy;
(ii) the insurer's business related information; and
(iii) the insurer's supplementary information;

(c) for a marine insurer, the forms for that quarter that are specified by the Authority for marine insurers;

(d) for a captive insurer, the forms for that quarter that are specified by the Authority for captive insurer; or

(e) for Lloyd's, the forms for that quarter that are specified by the Authority for Lloyd's.

monthly return (每月申報表), in respect of each calendar month of an authorized insurer, in so far as applicable, means the forms for that month that are specified by the Authority with respect to business related information.

5. Auditor's report in relation to returns to be submitted to the Authority

(1) Subject to subrule (2), an authorized insurer must submit an auditor's report on each of the specified annual forms included within an annual return under rule 4(1).

(2) The auditor's report submitted pursuant to subrule (1) must contain a statement as to whether, in the auditor's opinion –
   (a) the authorized insurer maintains proper records in accordance with section 16 of the Ordinance for the purposes of preparing the specified annual forms;
   (b) the specified annual forms are prepared in accordance with the books and records of the authorized insurer;
   (c) the specified annual forms are prepared in accordance with any applicable rules or instructions as set out by the Authority on such forms;
   (d) the specified annual forms, in all material respects, are fairly stated;
   (e) the authorized insurer has complied with or failed to comply with the capital requirements prescribed under section 10 of the Ordinance as at the last day of its financial year;
   (f) where the authorized insurer is subject to sections 21B, 22A, or 22B of the Ordinance, the insurer has complied with or failed to comply with –
      (i) sections 22 and 23 of the Ordinance; and
      (ii) Part 6 of the Insurance (Valuation and Capital) Rules (Cap. 41R),
      as at the last day of its financial year;
   (g) where the authorized insurer is subject to sections 25AA, 25AAC, or 25AAD of the Ordinance, the insurer has complied with or failed to comply with
      (i) sections 25AAB and 25AAE of the Ordinance to the extent applicable; and
      (ii) Part 6 of the Insurance (Valuation and Capital) Rules (Cap. 41R),
      as at the last day of its financial year; and
   (h) where the authorized insurer is subject to section 25A of the Ordinance, the assets in Hong Kong held by the insurer enable the insurer to comply with the requirement stipulated in section 25A of the Ordinance as at –
      (i) the last day of its financial year; and
      (ii) 2 such other dates in the financial year as the auditor providing the report may elect which are separated by a period of at least 3 months.

(3) Where an authorized insurer is subject to section 25B of the Ordinance, the specified forms under rule 4(5) must be submitted together with the auditor's report.

(4) The auditor's report submitted pursuant to subrule (3) must contain a statement as to whether, in the auditor's opinion, the assets in Hong Kong held by the authorized insurer enables the insurer to comply with the requirement stipulated in section 25B of the Ordinance as at the date specified in the notice issued under that section.

(5) The auditor providing the report under subrules (1) and (3) must be a person who –
   (a) is a certified public accountant (practising), a CPA firm or a corporate practice as defined by section 2(1) of the Accounting and Financial Reporting Council Ordinance (Cap. 588);
   (b) is not prohibited under section 20AAZZR of the Accounting and Financial Reporting Council Ordinance (Cap. 588) from holding any appointment as an auditor of a company; and
   (c) is not disqualified under section 393 of the Companies Ordinance (Cap. 622).

(6) In this rule –

CPA firm (會計師事務所) has the meaning given by section 2 of the Accounting and Financial Reporting Council Ordinance (Cap. 588);

specified annual forms (指明周年申報表格) means the forms in an annual return which are required to be reported by auditor as specified in the relevant form and listed in a notice published in the Gazette by the Authority.

6. Actuary's report in respect of long term business

(1) For the purposes of sections 17(1), 18(1) and 18(2) of the Ordinance, an authorized insurer carrying on long term business must submit the actuary's report of the investigation referred to in section 18(1)(b) of the Ordinance by depositing such report with the Authority within the specified period after the end of the period to which the report relates, where such specified period is –
- (a) 6 months, during the transitional period; and
- (b) 4 months, after the transitional period has ended.

(2) The actuary's report and any statement submitted under subrule (1) must be produced –
- (a) in written form; and
- (b) in the Chinese or the English language or, if not so produced, must be accompanied by a complete Chinese or English translation.

(3) The actuary's report under subrule (1) must be signed by the actuary and include –
- (a) the general principles, details of methods, assumptions (with justification), and analysis used by the actuary in its valuation of the insurance liabilities in respect of the authorized insurer's long term business by each type of long term business;
- (b) a certificate by the actuary –
  - (i) stating whether in the actuary's opinion, proper records have been kept by the authorized insurer adequately for the purpose of the valuation of the insurance liabilities in respect of the insurer's long term business;
  - (ii) stating whether the actuary is satisfied with the completeness, accuracy and consistency of the data used in the valuation of the insurance liabilities in respect of the authorized insurer's long term business;
  - (iii) confirming that the insurance liabilities in respect of the authorized insurer's long term business have been valued in accordance with the Insurance (Valuation and Capital) Rules (Cap. 41R) and the relevant guidelines as issued by the Authority;
  - (iv) stating whether in the actuary's opinion, the valuation of the insurance liabilities in respect of the authorized insurer's long term business makes appropriate provision for the insurer's policy obligations;
  - (v) stating whether the actuary is satisfied that the authorized insurer complied with the requirements stipulated under sections 21B and 22 of the Ordinance as at the date to which the valuation relates;

(vi) stating whether in the actuary's opinion, there is a prudent and satisfactory relationship between the nature and term of the assets, and the nature and term of the liabilities, of the authorized insurer's long term business;
(vii) confirming that the actuary has complied with the prescribed standards, or such other standards as the Authority accepts as being comparable to the prescribed standards under section 15C of the Ordinance, which are applicable to the actuary and specifying the relevant applicable standards with which the actuary has complied; and
(viii) such other information as the actuary considers necessary, including any qualification, amplification or explanation considered appropriate.

7. Actuary's report in respect of general business

(1) For the purposes of sections 17(1) and 18A(1) of the Ordinance, an authorized insurer carrying on general business (other than an authorized insurer that is exempted under Insurance (Exemption to Appointment of Actuary) Rules (Cap. 41Q)) must submit the actuary's report of the review referred to in section 18A(1)(b) of the Ordinance by depositing such report with the Authority within the specified period after the end of the period to which the report relates, where such specified period is –
(a) 6 months, during the transitional period; and
(b) 4 months, after the transitional period has ended.

(2) The actuary's report and any statement submitted under subrule (1) must be produced –
(a) in written form; and
(b) in the Chinese or the English language or, if not so produced, must be accompanied by a complete Chinese or English translation.

(3) The actuary's report under subrule (1) must be signed by the actuary and include –
(a) the general principles, details of methods and assumptions (with justification), and analysis used by the actuary in its valuation of the insurance liabilities in respect of the authorized insurer's general business; and
(b) a certificate by the actuary –
(i) stating whether the actuary is satisfied with the completeness, accuracy and consistency of the data used in the valuation of the insurance liabilities in respect of the authorized insurer's general business;
(ii) confirming that the insurance liabilities in respect of the authorized insurer's general business have been valued in accordance with the Insurance (Valuation and Capital) Rules (Cap. 41R) and the relevant guidelines as issued by the Authority;
(iii) stating whether in the actuary's opinion, the valuation of the insurance liabilities in respect of the authorized insurer's general business makes appropriate provision for the insurer's policy obligations;
(iv) confirming that the actuary has complied with the prescribed standards, or such other standards as the Authority accepts as being comparable to the prescribed standards under section 15C of the Ordinance, which are

applicable to the actuary and specifying the relevant applicable standards with which the actuary has complied; and

(v) such other information as the actuary considers necessary, including any qualification, amplification or explanation considered appropriate.

8. Modification to specified period under section 17(1) of the Ordinance by virtue of section 17(2) of the Ordinance

(1) Without limiting section 17(2) of the Ordinance, at the written request of an authorized insurer, the Authority may exercise its discretion to extend the specified period referred to in rules 3(2), 4(1), 4(2), 4(3), 6(1) and 7(1) by a period not exceeding 3 months where circumstances warranting an extension of the specified period are shown by the insurer.

Annex C

Feedback to Consultation Paper on Draft Insurance (Valuation and Capital) Rules and Draft Insurance (Submission of Statements, Reports and Information) Rules

*(Comments should be sent to the Insurance Authority on or before **16 January 2024**.)*

To: Insurance Authority

(email: rbc@ia.org.hk)

Name of Respondent:

Contact Person (if Respondent is an organization):

Contact Details:

Consultation question 1 Do you agree with the proposal on the composition of capital base and the amount of the capital to be maintained by an applicable insurer?
Consultation question 2 Do you agree with the proposed approach and basis on the valuation of assets and liabilities?
Consultation question 3 Do you consider if it is appropriate for the categorization of the respective risk modules and the corresponding stress factors or risk factors for long term business and general business in the determination of PCA?
Consultation question 4 Do you consider if it is appropriate that the amount to be held at the fund level under new sections 22(3B)(b), 22(3C)(b) and 25AAB(3)(b) of the IO is determined by allocating the insurer's MCA to each of the corresponding funds?
Consultation question 5 Do you agree it is required for an insurer to make application for using the transitional arrangement under Cap. 41R for its smooth transition from existing capital regime to the proposed RBC regime?

Consultation question 6 Do you agree that the contents of the regulatory returns required under Cap. 41S are to be contained in forms specified by IA to allow flexibility for future changes?
Consultation question 7 Do you agree with providing transitional arrangement under Cap. 41S for a smooth transition of the industry from existing capital regime to the proposed RBC regime?