This module should be read in conjunction with the Introduction and with the Glossary, which contains an explanation of abbreviations and other terms used in this Manual. If reading on-line, click on blue underlined headings to activate hyperlinks to the relevant module.

Purpose

To set out the MA[1]'s policy on capital adequacy for AIs incorporated in Hong Kong and to provide an overview of the framework for the calculation of such AIs' capital adequacy ratio.

Classification

A statutory guideline issued by the MA under the Banking Ordinance (the Ordinance) (Cap. 155), §7(3).

Previous guideline(s) superseded

CA-G-1 "Overview of Capital Adequacy Regime for Locally Incorporated Authorized Institutions" (V.4) dated 29.11.24.

Application

To all locally incorporated AIs.

Structure

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[1] In this module, the term 'MA' refers to the 'Monetary Authority' or the 'Hong Kong Monetary Authority', as the context so requires.

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1. Introduction

1.1 Terminology

1.1.1 Unless otherwise specified, abbreviations and terms used in this module have the same meaning as those used in the Banking (Capital) Rules (BCR) (Cap. 155L).

1.2 Implementation

1.2.1 Version 5 of this module takes effect on the same date as the commencement date of the Banking (Capital) (Amendment) Rules 2025 (1 January 2026).

1.3 Background

1.3.1 Capital is important to a bank as, apart from being a permanent source of funding for business operations and growth, it provides a buffer to absorb losses. In so doing, capital not only reduces the risk of insolvency of a bank but can also enable the bank to continue to conduct its credit intermediation activities in times of stress, thereby reducing any propensity for the banking sector to amplify the effects of a financial and economic downturn. The prudential regulation of banks therefore seeks to ensure that banks hold sufficient capital (and reserves) against the inherent risks in their business.

1.3.2 The MA's policy on capital adequacy closely reflects the latest regulatory capital standards published by the Basel Committee on Banking Supervision (BCBS). This module presents an overview of the capital standards under Basel III that are currently effective in

Hong Kong.

2. Approach to supervising AIs' capital adequacy

2.1 The MA's regulatory framework for the capital adequacy of AIs incorporated in Hong Kong consists of the following elements:

2.1.1 As one of the minimum criteria for authorization set out in the Seventh Schedule to the Ordinance, the MA needs to be satisfied that an institution applying for authorization presently has, and will if it is authorized continue to have, financial resources (whether actual or contingent) which are adequate for the nature and scale of its operations (see the first part of paragraph 6 of the Seventh Schedule to the Ordinance). In the case of locally incorporated AIs, this criterion will mainly be satisfied by the institutions complying with the BCR made pursuant to the Ordinance (including the minimum capital adequacy ratio (CAR) set out in §3B of the BCR as may be varied under §97F of the Ordinance (see paragraph 2.1.3 below) and the minimum leverage ratio (LR) set out in §3Z of the BCR (see paragraph 2.1.4 below)). For an AI that is subject to loss absorbing capacity requirements under the Financial Institutions (Resolution) (Loss-absorbing Capacity Requirements – Banking Sector) Rules (LAC Rules) (Cap. 628B), the MA will, in making an assessment of the financial resources of the AI, also have regard to whether the AI complies and will continue to comply with the LAC Rules.

2.1.2 The CAR as defined in §3 of the BCR is a collective term referring to the three risk-weighted capital ratios, namely the:

(a) Common Equity Tier 1 (CET1) capital ratio;

(b) Tier 1 capital ratio; and

(c) Total capital ratio,

prescribed under Basel III. The minimum CAR, in terms of the three ratios as prescribed in §3B of the BCR, is 4.5%, 6% and 8% respectively.

2.1.3 To enable the MA to take account of the risks associated with a particular AI, §97F(1) of the Ordinance empowers the MA to vary any capital requirement rule (including the minimum CAR applicable to the AI under §3B of the BCR) if he is satisfied, on reasonable grounds, that it is prudent to make the variation, taking into account the risks associated with the AI. If the MA proposes to vary any capital requirement rule (including the minimum CAR) applicable to an AI, the AI will be given an opportunity to make representations as provided for under §97F(3)(b) of the Ordinance. In addition, an AI aggrieved by a decision of the MA under §97F(1) of the Ordinance may apply to the Banking Review Tribunal (BRT) under §101B(1) of the Ordinance for a review of that decision.

2.1.4 The LR, as defined in §3Y of the BCR, is a non-risk based measure of an AI's capital adequacy introduced under Basel III as a "back-stop" to restrict the build-up of excessive leverage in the banking sector and to provide an additional safeguard against model risk and measurement error in the risk-based CAR calculation. The minimum LR, as prescribed in §3Z of the BCR, is 3%.

2.1.5 Under paragraph 2 of the Eighth Schedule to the Ordinance, the failure of an AI to meet the criteria set out in paragraph 6 of the Seventh Schedule to the Ordinance would provide grounds for the MA to revoke the AI's authorization. An AI's breach of the BCR will not, however, automatically lead to the revocation of its banking licence, and the MA will discuss remedial action with the AI (as required under §97E(1) of the Ordinance) and will likely require the AI to submit a remediation plan. If the plan meets with the MA's

approval and seems reasonable and practically achievable, the MA may then serve a written notice on the AI under §97E(2) of the Ordinance requiring the AI to implement the remediation plan. Under §97E(4) of the Ordinance, if an AI fails to comply with any requirement imposed in a notice served on it under §97E(2) of the Ordinance, then every director, every chief executive and every manager of that AI commits an offence (see section 14 of this module for details).

2.1.6 Under §97D(3) of the Ordinance, if an AI fails to immediately notify the MA regarding a matter prescribed in the BCR[2], then every director, every chief executive and every manager of that AI commits an offence.

2.1.7 In broad terms, the BCR impose CAR requirements on an AI at two levels (and likewise for LR requirements):

(a) on a solo basis, which measures the capital adequacy of an AI based on the capital strength, risk profile, or the on- and off-balance sheet exposures of the AI taking into account the combined position of its head office and branches, both in and outside Hong Kong;

(b) on a consolidated basis, which measures the capital adequacy of an AI based on the capital strength, risk profile, or the on- and off-balance sheet exposures of the AI after consolidating the assets and liabilities of such of its subsidiaries as specified by the MA for such calculation purposes.

2.1.8 AIs are required to calculate their CAR in accordance with the methodologies and requirements set out in the

[2] Such as: (i) §3D of the BCR, which requires an AI to immediately notify the MA of its failure to comply with any of the minimum CAR set out in §3B of the BCR, as the same may be varied by the MA under §97F(1) of the Ordinance; and (ii) §3ZA of the BCR, which requires an AI to immediately notify the MA of its failure to comply with the minimum LR set out in §3Z of the BCR.

BCR. The BCR set out various alternative approaches which AIs can use to calculate their capital requirements for credit risk[3], market risk and credit valuation adjustment (CVA) risk[4]. Certain of the alternative approaches, however, can only be adopted by an AI if the AI satisfies specified criteria and has obtained the prior approval of the MA (see section 8 of this module for details). The approval may be granted subject to any conditions that the MA thinks proper to attach to the approval in any particular case. If an AI disagrees with a decision made by the MA in respect of the AI's application to use a particular approach (including a decision to attach conditions to the approval of the application granted by the MA), the AI may under §101B(1) of the Ordinance apply to the BRT for a review of that decision. For the calculation of their LR, AIs are required to apply the formula likewise specified in the BCR (see section 9 of this module for details).

2.1.9 To ensure that AIs have adequate capital to guard against their exposure to all risks (i.e. not only those captured in the CAR calculation under the BCR which focuses on the Basel "Pillar 1" risks – i.e. credit risk, market risk, CVA risk, operational risk and sovereign concentration risk), the MA adopts a risk-based and structured framework to set and review individual AIs' minimum CAR requirements. This framework, which reflects Pillar 2 of the Basel regulatory capital framework and is referred to as the supervisory review process (SRP), is set out in CA-G-5 "Supervisory Review Process".

2.1.10 AIs should have an internal capital adequacy

[3] Credit risk may arise from non-securitization exposures (see subsection 8.2 of this module) and securitization exposures (see subsection 8.6). Non-securitization exposures also include default risk exposures in respect of non-centrally cleared transactions (see subsection 8.3), default risk exposures in respect of centrally cleared transactions (see subsection 8.4) and CIS exposures (see subsection 8.5).
[4] The approaches for calculating the capital requirements in relation to market risk and CVA risk are described in subsection 8.9 on "Market Risk and CVA Risk".

assessment process (CAAP) for assessing their overall capital adequacy in relation to their risk profile. They should also have a strategy for maintaining the required level of capital. The supervisory standards expected of AIs' CAAP are set out in CA-G-5. The MA evaluates an AI's CAAP and capital adequacy through the SRP and uses the results for determining the AI's minimum CAR requirements which are commensurate with its risk profile. The MA may issue a notice under §97F of the Ordinance to vary the minimum CAR applicable to the AI if the MA is satisfied on reasonable grounds that it is prudent to do so, taking into account the risks associated with the AI.

2.1.11 Furthermore, it has been the MA's practice to require AIs to set non-statutory internal capital targets above the statutory minimum requirements and any applicable regulatory capital buffers (and likewise for LR, a non-statutory internal LR target above their minimum LR requirement), which serve as an early warning signal for potential contravention of the statutory requirements (see paragraphs 9.5 and 13.1 below for more details).

2.1.12 As set out in the Banking (Disclosure) Rules (BDR) (Cap. 155M) made by the MA under §60A of the Ordinance, AIs (unless they are exempted by the MA under the BDR) are required to disclose publicly information in relation to their state of affairs, including their profit and loss and their financial resources (including capital resources and liquidity resources) in accordance with the standards set out in the BDR and by reference to CA-D-1 "Guideline on the Application of the Banking (Disclosure) Rules".

2.2 Where necessary, further elaboration on the capital adequacy framework is (and will continue to be) provided in supplementary guidance issued by the MA from time to time in the form of codes of practice, guidelines, circular letters, supervisor's memos, Frequently Asked Questions, etc.

2.3 It should however be borne in mind that the CAR of an AI only provides a snap-shot indication of the AI's capital position. The minimum CAR requirements, though an important element in the MA's regulatory regime, are not (and never have been) substitutes for a sound risk management and control environment which all AIs should have in place and which is the most effective way to mitigate risks.

3. Solo CAR and LR requirements

3.1 In order to provide a conservative measure of each AI's stand-alone capital strength, all AIs are required to comply with the minimum CAR and LR requirements on a solo basis. To arrive at the capital position of an AI on a solo basis, the investments of the AI in capital instruments issued by, or non-capital LAC liabilities[5] of "financial sector entities" (as defined in the BCR) are subject to the deduction requirements under the BCR. These entities include:

(a) those that are members of the AI's consolidation group; and

(b) those that are not members of the AI's consolidation group, in which case exemptions are allowed for: (i) "insignificant LAC investments"[6] in the form of CET1 capital instruments, Additional Tier 1 capital instruments and Tier 2 capital instruments, or non-capital LAC liabilities (provided the amounts are within the specified "thresholds", determined by reference to 5% and 10% of the CET1 capital of the AI) calculated in accordance with Schedule 4F to the BCR; and (ii) "significant LAC investments"[7] in the form of CET1 capital instruments (up to 10% of the CET1 capital of the AI) calculated in accordance with Schedule 4G to the BCR. Investments in capital instruments and non-capital LAC

[5] Please refer to rule 2(1) of the LAC Rules for the definition of "non-capital LAC liabilities".

[6] An "insignificant LAC investment", as defined in §35 of the BCR, refers to an investment by an AI in a capital instrument issued by, or a non-capital LAC liability of, an entity that is not an affiliate of the AI and of which the AI owns not more than 10% of the issued ordinary share capital.

[7] A "significant LAC investment", as defined in §35 of the BCR, refers to an investment by an AI in a capital instrument issued by, or a non-capital LAC liability of: (i) an affiliate of the AI; or (ii) any other entity of which the AI owns more than 10% of the issued ordinary share capital.

liabilities that are not deducted from the AI's capital base must however still be subject to risk-weighting treatment as required under the BCR.

3.2 An AI may, however, apply to the MA under §28(1) of the BCR for approval to include any subsidiary in the calculation of its solo CAR and LR[8] (referred to in the BCR as a "solo-consolidated" basis for the calculation of CAR and LR). Before approving such application, the MA must be satisfied that the subsidiary concerned meets the following criteria:

(a) the subsidiary is wholly owned by, and managed as if it were an integral part of, the AI;

(b) the subsidiary is wholly financed by the AI such that the subsidiary has no depositors or other external creditors except external creditors for audit fees, company secretarial services and sundry operating expenses; and

(c) there are no regulatory, legal or taxation constraints on the transfer of the subsidiary's capital to the AI.

4. Consolidated CAR and LR requirements

4.1 Where an AI undertakes other banking and financial business through subsidiary companies, it is normally expected to provide the necessary capital to support the latter's operations. To ensure that the AI's capital position is maintained at an adequate level taking into account its exposures to risks stemming from such subsidiaries, the MA will generally require the AI to comply with its minimum CAR and LR requirements on a consolidated basis, in addition to a solo / solo-consolidated basis, by issuing a notice under §3C(1) of the BCR to the AI.

4.2 When calculating its CAR and LR on a consolidated basis, an AI is only required to include those subsidiaries which the MA has specified in the notice issued under §3C(1) of the BCR. The MA

[8] Under §3Z(2) of the BCR, LR must be calculated on the same basis as that adopted for the calculation of CAR under Division 7 of Part 2 to the BCR.

will generally only specify those subsidiaries engaging mainly in "relevant financial activities" as defined in §27(3) of the BCR.

4.3 As a matter of the MA's general policy in relation to a notice to be issued to an AI under §3C(1) of the BCR, an AI's calculation of its consolidated CAR and LR is generally expected to exclude (save for exceptional circumstances to be determined by the MA based on the facts and circumstances of each particular case[9]) any subsidiaries of the AI which are securities firms or insurance firms that are subject to the regulation of the Securities and Futures Commission (SFC) or the Insurance Authority (IA), or of relevant authorities outside Hong Kong having similar functions to the SFC or the IA. An AI's capital investments in these securities and insurance subsidiaries should in general (but see paragraph 4.4 below) be deducted from the AI's capital base in calculating its CAR. Furthermore, to ensure that these subsidiaries are themselves adequately capitalised, the MA may require that any capital shortfall in these subsidiaries, if not rectified in a timely manner, be deducted from the AI's CET1 capital.

4.4 In calculating its CAR and LR on a consolidated basis, an AI is required to deduct from its capital base its capital investments in any financial sector entities (including those that are securities and insurance firms) that are not the subject of consolidation under §3C of the BCR. As mentioned in paragraph 3.1 above, a limited exemption from deduction is available to the extent of the thresholds permitted in the BCR and calculated under Schedule 4F and Schedule 4G to the BCR.

4.5 Where an AI is itself a subsidiary company within a wider group, the MA will seek to ensure that the AI's capital position is not jeopardised by adverse developments in other business activities within the group by means of his authority under §70 of the

[9] Under exceptional AI-specific circumstances, the MA may require an AI (through a notice to be issued under §3C(1) of the BCR) to include its subsidiaries that are regulated securities firms or insurance firms in its consolidation group for calculating consolidated CAR and LR. In making such determination, the MA would take into account the nature of the business and activities of these subsidiaries, the significance of these subsidiaries to the AI (including their materiality in terms of size and potential financial impact), the consequent assessment of the risks potentially posed to the AI, as well as any other factors as the MA may consider relevant.

Ordinance to ensure the fitness and propriety of a majority shareholder controller of the AI on a continuing basis. Specifically, the MA may, after considering factors specific to each case, attach a condition under §70(7) of the Ordinance to his approval for a company to become a majority shareholder controller of an AI, such as requiring the controller to notify the MA of any matters that may significantly impair the capital adequacy of the group to which the AI belongs or the controller's ability to provide capital or liquidity support to the AI. These matters would cover, for instance, material losses incurred by other members of the group, significant financial exposures of the group to unrelated or connected parties, a significant amount of charges over assets on a group-wide aggregate basis, etc. In addition, if the majority shareholder controller is incorporated outside Hong Kong, or if the majority shareholder controller is a locally incorporated company that is neither a financial holding company[10] nor a subsidiary of a financial holding company, the majority shareholder controller will generally be asked to establish a locally incorporated intermediate holding company whose sole purpose will be to hold the shares in the AI concerned. The intermediate holding company will itself be made subject to certain conditions under §70(7) of the Ordinance, in addition to the conditions imposed on the majority shareholder controller and any ultimate holding company (if applicable). The conditions will likely cover, among other things, requirements on capital adequacy.

4.6 For AIs with subsidiaries that are incorporated outside Hong Kong and that are subject to comparable capital adequacy standards in the relevant host jurisdictions, the MA may, on the application of an AI under §33(1) of the BCR, grant approval to the AI to risk-weight exposures of the subsidiary based on the capital adequacy standards applicable in those jurisdictions (instead of the BCR). This will however only be considered on an exceptional basis where the MA is satisfied that, inter alia, the relevant subsidiary is subject to capital adequacy standards that are equivalent to the

[10] "Financial holding company" means a holding company that controls a group of financial institutions engaged in financial activities such as insurance, banking and securities dealing.

Basel III capital standards.

5. Calculation of CAR

5.1 Under the BCR, an AI must calculate each of the capital ratios referred to in paragraph 2.1.2 above as a ratio (expressed as a percentage) of the corresponding tier of the AI's capital base (see section 6 of this module) to the sum of its risk-weighted amounts (RWAs) for credit risk, market risk, CVA risk, operational risk and sovereign concentration risk, adjusted for the application of the output floor where applicable. Sections 6 to 8 and 10 to 13 of this module provide a summary, respectively, of the composition of each tier of the capital base and of the methodologies for calculating the RWA for each type of risk as set out in the BCR.

6. Composition of capital base

6.1 General

6.1.1 Provisions for determining an AI's capital base are included in Part 3 of the BCR. In summary, an AI is required to categorise its capital base into three tiers, viz., CET1 capital, Additional Tier 1 (AT1) capital and Tier 2 capital, by reference to the capacity of the constituents of capital to absorb losses. The sum of CET1 capital and AT1 capital is the AI's Tier 1 capital. An AI's capital base is the sum of its Tier 1 capital and Tier 2 capital.

6.1.2 The inclusion of a capital instrument into an AI's capital base, for the purposes of calculating the AI's CAR, is subject to the instrument meeting (and strictly complying with) all of the qualifying criteria specified in Schedule 4A, Schedule 4B or Schedule 4C to the BCR for the relevant tier of capital into which the instrument is proposed to be included. AIs are expected to also refer to publications issued by the BCBS providing

interpretative guidance[11] in relation to the definition of capital base as appropriate, to the extent such interpretative guidance does not deviate from any relevant guidance which may be issued by the MA from time to time.

6.2 **Tier 1 capital**

6.2.1 Tier 1 capital is intended to absorb losses on a going concern basis. As noted above, Tier 1 capital consists of CET1 capital and AT1 capital.

6.2.2 Generally regarded as having the highest loss absorption capacity, CET1 capital includes capital instruments that meet the qualifying criteria set out in Schedule 4A to the BCR (for instance, the instrument should be perpetual and represent the most subordinated claim in the event of liquidation). In the case of AIs that are joint-stock companies (which is the case for all locally incorporated AIs as at the date of issuance of this module), CET1 capital instruments must be ordinary shares. Other elements of CET1 capital include (i) share premium resulting from the issue of CET1 capital instruments[12]; (ii) retained earnings and other disclosed reserves (subject to certain exclusions); and (iii) in the case of a consolidation group, the amount, calculated in accordance with Schedule 4D to the BCR, of CET1 capital instruments issued by consolidated bank subsidiaries of the AI and held by third parties (to the extent that the amount to be included does not represent "surplus CET1 capital" in excess of the capital requirements applicable to the subsidiaries as

[11] These include "Basel III definition of capital – Frequently asked questions" published by the BCBS in September 2017, as incorporated into the consolidated Basel Framework, and any subsequent publications and revisions thereof that may be issued by the BCBS from time to time.

[12] With the "no par" regime of the Companies Ordinance which came into effect on 3 March 2014, share premium will be accounted for as a separate item for CAR calculation only in respect of an AI with subsidiaries incorporated in jurisdictions outside Hong Kong which have not implemented a "no par" regime.

specified in Schedule 4D).

6.2.3 AT1 capital is Tier 1 capital which does not meet the eligibility criteria of CET1 capital but is nevertheless able to absorb the losses of an AI on a going concern basis. It includes capital instruments issued by an AI that meet the qualifying criteria set out in Schedule 4B to the BCR (for instance, the instrument should be subordinated, perpetual, with no incentives to redeem and only redeemable by the issuer after a minimum period of 5 years from the date of issue). Other elements of AT1 capital include: (i) share premium resulting from the issue of AT1 capital instruments[12], and, (ii) in the case of a consolidation group, the amount, calculated in accordance with Schedule 4D to the BCR, of Tier 1 capital instruments issued by consolidated bank subsidiaries of the AI and held by third parties (to the extent that the amount to be included does not represent "surplus Tier 1 capital" in excess of the capital requirements applicable to the subsidiaries as specified in Schedule 4D, net of the amount that has already been recognized in the consolidated CET1 capital).

6.2.4 Furthermore, to ensure the loss absorption ability of AT1 capital, Schedule 4B to the BCR requires AT1 capital instruments, among other things, to be:

(a) capable of being converted into ordinary shares or written down at the "point of non-viability" (see subsection 6.5 below for more details); and

(b) capable, in the case of AT1 instruments classified as liabilities for accounting purposes, of being converted into ordinary shares or written down when the CET1 capital ratio of the AI issuing the AT1 capital instrument reaches a level at or below 5.125% (or any higher level specified in the terms and conditions of a given AT1 capital instrument).

6.2.5 In addition, for any AT1 capital instruments issued on or after the commencement of Part 5 of the Financial Institutions (Resolution) Ordinance (FIRO) (Cap. 628)[13], §1(r) of Schedule 4B to the BCR requires that the terms and conditions of the instrument must contain a provision to the effect that the holder of the instrument:

(a) acknowledges that the instrument is subject to being written off, cancelled, converted or modified, or to having its form changed, in the exercise of powers under the FIRO;

(b) agrees to be bound by any such write off, cancellation, conversion, modification or form change; and

(c) acknowledges that the rights of the holders are subject to anything done in the exercise of those powers.

6.2.6 Debt instruments with loss-absorption features are subject to the risk of being written down or converted to ordinary shares (such as recapitalizing the issuer in the context of resolution), potentially resulting in a substantial loss to the investors concerned. Hence, these instruments are inherently complex and are of high risk, and are generally not suitable for retail investors. Therefore, §1(ab), (s) and (t) of Schedule 4B[14] to the BCR specifically require that AT1 capital instruments must, unless they are issued to and held by an entity within the same banking group as the issuing AI, be (i) issued to a professional investor if the instrument is issued in Hong Kong; (ii) subject to adequate risk disclosure; and (iii) in a denomination of no less than HK$2,000,000 (if denominated in Hong

[13] Part 5 of the FIRO commenced on 7 July 2017.
[14] Introduced under the Banking (Capital) (Amendment) Rules 2018, such provisions took effect from 11 January 2019 and apply to instruments issued on or after this date.

Kong dollars), US$250,000 (if denominated in US dollars), Euro 200,000 (if denominated in Euros) or a sum equivalent to HK$2,000,000 (if denominated in any other currency).

6.3 **Tier 2 capital**

6.3.1 Tier 2 capital is intended to absorb losses on a gone concern basis, that is, when an AI is no longer able to continue its activities as a going concern. It includes an AI's capital instruments that meet the qualifying criteria set out in Schedule 4C to the BCR (for instance, the instrument should be subordinated to depositors and general creditors and should have a minimum original maturity of at least 5 years). Other elements of Tier 2 capital include: (i) share premium resulting from the issue of Tier 2 capital instruments; (ii) in the case of a consolidation group, the amount, calculated in accordance with Schedule 4D to the BCR, of Tier 1 and Tier 2 capital instruments issued by consolidated bank subsidiaries of the AI and held by third parties (to the extent that the amount to be included does not represent "surplus total capital" in excess of the capital requirements applicable to the subsidiaries as specified in Schedule 4D, net of the amount that has already been recognized in the consolidated Tier 1 capital); (iii) reserves and retained earnings attributable to fair value gains arising from: (a) revaluation of an AI's holdings (including through its subsidiaries) of land and buildings or, (b) disposal of an AI's holdings of land and buildings in any transaction or arrangement with another company within the AI's consolidation group[15]; and (iv) regulatory reserve for general banking risks

[15] The amount of fair value gains arising from revaluation or disposal of land and buildings included in an AI's Tier 2 capital must not exceed 45% of such fair value gains.

and collective provisions[16].

6.3.2 Similar to the qualifying criteria for AT1 capital instruments, the qualifying criteria for Tier 2 capital instruments set out in Schedule 4C to the BCR include a criterion that a Tier 2 instrument should be capable of being converted into ordinary shares or written down at the "point of non-viability" (see subsection 6.5 below for more details). Schedule 4C also contains provisions, viz., §1(ab), (l), (m) and (n), that mirror §1(ab), (r), (s) and (t) of Schedule 4B, for the same purposes as those described in paragraphs 6.2.5 and 6.2.6 above.

6.4 Self-assessment of capital instruments

6.4.1 In order to ensure that a proposed capital instrument can be included within an AI's AT1 capital or Tier 2 capital, the AI will have to undertake a detailed self-assessment and will be expected to review and document whether the criteria in Schedule 4B to the BCR (if the instrument is intended to be an AT1 capital instrument) or Schedule 4C to the BCR (if the instrument is intended to be a Tier 2 capital instrument) are met.

6.4.2 As part of the self-assessment for any proposed AT1 capital instrument or Tier 2 capital instrument, the AI should obtain a sufficiently independent legal opinion (preferably from an external legal firm) to ensure compliance of the proposed instrument from a legal perspective. The legal opinion should address:

(a) the due incorporation and capacity of the issuer to issue the instrument and perform its obligations

[16] The amount of the institution's regulatory reserve for general banking risks and collective provisions that may be included in its Tier 2 capital must not exceed the limits set out in §42 of the BCR. Please refer to the completion instructions for MA(BS)3 - Part II (Annex II-C) for further guidance on the determination of the amount of the institution's regulatory reserve.

under it;

(b) the due authorization of the instrument by the issuer, and the absence of conflict with (i) the issuer's constitutional documents and (ii) applicable law;

(c) the instrument constituting legal, valid, binding and enforceable obligations of the issuer;

(d) the legal effectiveness of any write-off/conversion provisions and the absence of legal impediments to such provisions operating in accordance with their terms;

(e) the legal effectiveness of the acknowledgement or agreement of the instrument holder in relation to any exercise of powers under the FIRO;

(f) the recognition of the governing law of the instrument; and

(g) the compliance of the instrument with the qualifying criteria set out in Schedule 4B to the BCR (for an AT1 capital instrument) or Schedule 4C to the BCR (for a Tier 2 capital instrument), including the degree of subordination.

6.4.3 If an AI proposes to issue an instrument that is intended to qualify not only as AT1 capital or Tier 2 capital under the BCR, but also as a LAC debt instrument under the LAC Rules, it should also consider the guidance in the Code of Practice LAC-1 "Resolution Planning – LAC requirements" issued by the MA under the FIRO.

6.4.4 In addition, where the proposed instrument is subject to the law of a jurisdiction other than Hong Kong, a legal opinion issued under such law should also be obtained, addressing the matters in paragraph 6.4.2 above (where applicable), as well as addressing the

issue of whether such law could prevent the instrument from satisfying the criteria referenced in paragraph 6.4.2(g) above.

6.4.5 However, where an AI proposes to issue a new capital instrument with identical features (save only for price, maturity, amount and dates) to capital instruments previously issued that meet all the criteria set out in Schedule 4B (for AT1 capital instruments) or Schedule 4C (for Tier 2 capital instruments) to the BCR, and for which an independent legal opinion was obtained, the AI may, instead of obtaining a fresh legal opinion, obtain a confirmation issued by its in-house legal counsel that there are no other terms or any intervening changes in law that will render the previous legal opinion "out-of-date".

6.4.6 After completing the self-assessment, the AI should submit to the MA:

(a) a letter (from the AI's Chief Financial Officer or another person with an equivalent role and seniority within the institution) confirming that based on its assessment:

(i) the proposed instrument meets the qualifying criteria in Schedule 4B or Schedule 4C to the BCR (as applicable); and

(ii) the terms and conditions of the proposed instrument do not provide for trigger events in addition to those specified under §1(q) of Schedule 4B or §1(k) of Schedule 4C to the BCR (as applicable); and

(b) the AI's self-assessment of whether the proposed capital instrument meets the eligibility criteria in Schedule 4B or Schedule 4C to the BCR (as applicable), including any relevant legal opinions referred to in paragraphs 6.4.2 and 6.4.4 above.

6.4.7 Where a proposed instrument contains an additional trigger referred to in paragraph 6.4.6(a)(ii) above, the AI should seek the MA's consent pursuant to §1(q)(viia) of Schedule 4B or §1(k)(viia) of Schedule 4C to the BCR (as applicable).

6.4.8 As a standing practice, an AI proposing to issue an instrument for inclusion in its AT1 capital or Tier 2 capital is expected, when in doubt, to discuss with the MA beforehand whether the instrument complies with the necessary criteria. For this purpose, the AI is expected to submit to the MA the relevant supporting documents (including a summary of the main features of, and a draft term sheet for, the instrument, together with drafts of the confirmation letter, self-assessment and legal opinions referred to in the preceding paragraphs) demonstrating that the instrument meets the criteria in Schedule 4B or Schedule 4C to the BCR (as applicable), for the MA's review.

6.4.9 Should a capital instrument: (i) bear loss in accordance with its terms, or (ii) be written off, cancelled, converted, modified, or have its form changed, in the exercise of powers under the FIRO and BCR, this should not trigger any cross-default or acceleration rights in any other financial contracts to which the issuer is a party. Were it to do so, this could increase the financial pressure on the issuer, and could potentially undermine the issuer's viability. The MA therefore expects that the terms and conditions of any capital instrument should specifically set out that the occurrence of any event included in (i) or (ii) above does not constitute an event of default.

6.4.10 However, whether such an event could trigger cross-default or acceleration rights in any other financial contracts of the issuer will ultimately depend on the wording of any such rights in those other contracts. The MA therefore expects each institution to ensure that the wording of any cross-default or acceleration

rights in any financial contracts it enters into in the future does not allow for any such rights to be triggered following the occurrence of any event included in (i) or (ii) above.

6.4.11 The MA will, once no further follow-up issues need to be raised with an AI in respect of its proposed capital instrument, communicate its acknowledgement to the AI based on the confirmations by the AI referred to in paragraph 6.4.6(a) above. Such an acknowledgement should not be taken as confirmation by the MA that relevant capital instrument complies with all the necessary criteria for it to constitute AT1 capital or Tier 2 capital (as applicable). Such compliance remains at all times the responsibility of the AI.

6.4.12 Generally speaking, it is to be expected that the process described in paragraphs 6.4.1 to 6.4.11 above would provide sufficient evidence on the eligibility of an instrument to be included within the AT1 capital or Tier 2 capital of an AI. However, the MA may require that additional evidence be provided.

6.5 Point of non-viability

6.5.1 In order to be eligible for inclusion in AT1 capital or Tier 2 capital, a capital instrument issued by an AI should have the ability to absorb losses at the "point of non-viability". This means that the instrument must have contractual terms allowing it to be written-off or converted into ordinary shares in the event that the AI is unable to support itself without such write-off or conversion (i.e. on the occurrence of a trigger event). The trigger event is the earlier of the MA notifying an AI in writing that (i) in his opinion, a write-off or conversion is necessary, without which the AI would become non-viable; or (ii) a decision has been made by the government body, a government officer or other relevant regulatory body with the authority to make such a decision, that a public sector injection of capital

or equivalent support is necessary, without which the AI would become non-viable. In determining an AI's "point of non-viability", the MA will consider various factors, including primarily the level of the AI's regulatory capital and liquidity resources (e.g. the extent to which the AI is able to meet its obligations as they fall due and is able to obtain funding from its shareholder controllers or other sources and whether the AI is sustaining, or is likely to imminently sustain, significant capital losses such that its capital base is being/will be severely eroded in a manner detrimental to the interests of its depositors and creditors and, in either case, whether there is a realistic prospect of the AI being able to take swift remedial action to raise funding or recapitalise to a level sufficient to maintain viability). Inevitably this will be affected by the degree of confidence in the AI demonstrated by depositors, creditors and the public generally at the relevant time.

6.6 **Regulatory deductions**

6.6.1 In order to ensure that an AI maintains a strong capital base, an AI is required to deduct from its capital base certain of its balance sheet items which can be broadly categorised as:

(a) contingent items – that ultimately may not provide the AI with loss absorbing capital in stress situations (e.g. goodwill and other intangible assets[17]);

(b) double gearing items – that may inflate regulatory capital within the financial system by virtue of their "double-counting effect", such as (i) an investment in the AI's own capital instruments or non-capital LAC liabilities; (ii) an investment in the capital instruments or non-capital LAC liabilities

[17] For the purpose of regulatory deductions under the BCR, intangible asset does not include a cryptoasset exposure.

of another financial sector entity that has reciprocal cross holdings with the AI; (iii) an investment in the capital instruments or non-capital LAC liabilities of any members of the AI's consolidation group; or (iv) an investment in the capital instruments or non-capital LAC liabilities of other financial sector entities that are not members of the AI's consolidation group (as mentioned in paragraph 3.1 above, an exemption from deduction is allowed in respect of this last category of items up to certain specified thresholds under the BCR);

(c) other capital investments in connected commercial companies (exemption from deduction for investments in any such company is allowed up to the threshold of 15% of the capital base of an AI as specified under the BCR); and

(d) "re-characterised" items – except where incurred in the ordinary course of an AI's business, credit exposures of the AI to connected companies (whether financial sector or commercial entities) which bear the characteristics of, and are in substance, capital investments (e.g. those that take the form of perpetual loans, or other similar "capital like" structures), in which case (as mentioned in paragraph 3.1 and paragraph (c) above) limited exemption from deduction is available to the extent of the thresholds permitted in the BCR.

6.6.2 For those items included in paragraph 6.6.1(b) above, deduction should be made from the regulatory capital of an AI (in full for items included in paragraphs 6.6.1(a) and 6.6.1(b)(i), (ii) and (iii); and with threshold exemption for items included in paragraphs 6.6.1(b)(iv) and 6.6.1(c)). For items included in paragraph 6.6.1(d), threshold exemption is also applicable except for an AI's exposures to connected companies that are

members of the AI's consolidation group. In addition, for investment in non-capital LAC liabilities falling within §48A of the BCR[18], only the amount that exceeds the AI's non-capital LAC debt resources (if any) should be deducted from the AI's Tier 2 capital. For items included in paragraph 6.6.1(b) which are investments in capital instruments or non-capital LAC liabilities, deduction should generally be applied to the corresponding tiers (i.e. CET1 capital, AT1 capital or Tier 2 capital) of an AI's capital.

7. Capital buffers

7.1 To promote the conservation of capital and the build-up of adequate cushions above minimum capital requirements that can be used to absorb losses during periods of financial and economic stress, AIs are required to reserve additional capital as described below:

(a) for all AIs, two capital buffers above the statutory minimum CAR requirements –

(i) a **capital conservation buffer**, which must be maintained in the form of CET1 capital equal to 2.5% of risk-weighted assets; and

(ii) a **countercyclical capital buffer (CCyB)**, which operates as an extension of the capital conservation buffer, and which is expected to range from 0% to 2.5%[19] of risk-weighted assets depending on the assessment of the system-wide risks that may be built up across the banking system of Hong Kong. The CCyB is expected to be released when any system-wide risk crystallises and the financial system enters a

[18] Non-capital LAC liabilities falling within §48A of the BCR that are not deducted from the AI's capital base must still be subject to risk-weighting treatment as required under the BCR except for the AI's direct holdings of non-capital LAC liabilities of financial sector entities that are members of the AI's LAC consolidation group falling within §48(4) of the BCR.

[19] The MA has flexibility under the BCR to, after consultation with the industry, increase the CCyB to more than 2.5% if specified conditions are met.

phase of stress or contraction. The MA's approach to operating the CCyB is set out in CA-B-1 "Countercyclical Capital Buffer (CCyB) – Approach to its Implementation". Separately, CA-B-3 "Countercyclical Capital Buffer (CCyB) – Geographic Allocation of Private Sector Credit Exposures" provides guidance to AIs on determining the geographic allocation of private sector credit exposures. Announcements on the applicable CCyB rate for Hong Kong, determined by the MA pursuant to §3Q(3) of the BCR, can be found at the CCyB web page on the HKMA website.

(b) for AIs designated by the MA as global systemically important AIs (G-SIBs) or domestic systemically important AIs (D-SIBs), a **higher loss absorbency (HLA) requirement** to reduce any probability of them becoming non-viable. This HLA requirement, like the CCyB, is implemented as an extension of the capital conservation buffer. G-SIBs and D-SIBs will be allocated to different HLA "buckets", to reflect the diversified nature and varying degrees of systemic importance of G-SIBs and D-SIBs in Hong Kong. G-SIBs and D-SIBs will normally be allocated to buckets with an HLA range from 1% to 2.5% of risk-weighted assets depending on their degree of systemic importance. An empty top bucket (currently at 3.5%[20]) is maintained to provide an incentive for the most systemically important AIs to refrain from becoming even more systemically important in the future. The MA's approach to identifying systemically important AIs in Hong Kong and implementing the HLA requirement is set out in CA-B-2 "Systemically Important Banks".

7.2 Restrictions are imposed on discretionary distributions by an AI when its net CET1 capital ratio is equal to or falls below its required buffer level (being its capital conservation buffer as

[20] The MA will consider adding new buckets of higher HLA if the empty top bucket gets populated.

extended, where applicable, by any CCyB and HLA requirement to which it may be subject). An AI intending to make a distribution payment that would result in its net CET1 capital ratio being equal to or falling below its buffer level, or an AI intending to make a distribution payment when it is subject to distribution constraints, must submit for the MA's approval a capital plan that sets out measures proposed by the AI to manage and improve its capital position. The AI will be expected to satisfy the MA that the proposed measures set out in the capital plan will rebuild the AI's capital buffers over a time frame acceptable to the MA.

8. Risk-weighting framework

8.1 Risk coverage

8.1.1 AIs are required to calculate their CAR in accordance with the requirements set out in the BCR. The BCR set out the risk-weighting framework for calculating the RWAs for credit risk, market risk, CVA risk, operational risk and sovereign concentration risk, in the following parts:

Part 4 – Calculation of credit risk for non-securitization exposures: standardized (credit risk) approach (STC approach)

Part 5 – Calculation of credit risk for non-securitization exposures: basic approach (BSC approach)

Part 6 – Calculation of credit risk for non-securitization exposures: internal ratings-based approach (IRB approach)

Part 6A – Calculation of counterparty credit risk

Part 6B – Calculation of risk-weighted amounts of CIS exposures

Part 7 – Calculation of credit risk for securitization exposures

Part 8 – Calculation of market risk capital charge

Part 8A – Calculation of CVA risk capital charge

Part 9 – Calculation of operational risk

Part 10 – Calculation of sovereign concentration risk

Part 11 – Calculation of output floor

Part 12 – Calculation of risk-weighted amounts of cryptoasset exposures

8.1.2 The risk-weighting framework for credit risk generally captures AIs' on- and off-balance sheet credit exposures in the banking book as well as AIs' CCR exposures in respect of certain transactions booked in the trading book.

8.1.3 The risk-weighting framework for market risk (Part 8) captures the risk of losses arising from movements in market prices (see paragraph 8.9.1 below). The risk-weighting framework for CVA risk (Part 8A) captures the risk of losses arising from changing CVA values in response to changes in counterparty credit spreads and market risk factors that drive prices of the covered transactions (see paragraph 8.9.8 below).

8.1.4 The above risk-weighting frameworks for credit risk, market risk and CVA risk are supplemented by Parts 6A, 6B and 12 which focus on CCR, collective investment schemes and cryptoasset exposures respectively.

8.1.5 The risk-weighting framework for operational risk (Part 9) captures the risk of loss resulting from inadequate or failed internal processes, people and systems or from

external events.

8.1.6 The risk-weighting framework for sovereign concentration risk (Part 10) captures AIs' concentrated sovereign exposures, which serves to complement the BCBS' large exposures standard set out in the Basel Framework[21].

8.1.7 The output floor (Part 11) places a limit on the regulatory capital benefits that an AI using model-based approaches to calculate its credit risk or market risk or both can derive relative to the standardized approaches.

8.1.8 Each AI must have written policies (approved by the appropriate authority within the AI) for determining which exposures are to be included in, or excluded from, the AI's trading book as well as procedures to ensure compliance with these classification policies. Such policies and procedures should define the trading book in line with the following:

(a) a trading book consists of positions in financial instruments and commodities held either with trading intent[22] or in order to hedge other positions booked in the trading book;

(b) the financial instruments must be free of any restrictive covenants on their tradability, or the exposures in the financial instruments and commodities must be capable of being hedged completely; and

[21] https://www.bis.org/basel_framework/standard/LEX.

[22] Positions held with trading intent are those held intentionally for short-term resale or with the intent of benefiting from actual or expected short-term price movements or to lock in arbitrage profits, and include, for example, proprietary positions, positions arising from client servicing (e.g. matched principal broking) and market making.

(c) positions in these instruments and commodities must be actively managed and frequently and accurately valued.

8.1.9 Where an AI's exposures are measured at fair value, the AI must establish and maintain valuation systems, controls and procedures that are effective to ensure that the valuation of its exposures is prudent and reliable for the purposes of calculating the RWA under Parts 4, 5, 6, 6A, 7, 8, 10, 11 and 12 of the BCR (see CA-S-10 "Fair Value Practices").

8.1.10 For credit risk, market risk and CVA risk, the risk-weighting framework offers alternative approaches (of varying levels of sophistication) to calculate the RWA. There is, however, a "default approach" for the calculation of each of the above risks that every AI must adopt unless the prior approval of the MA for the use of another approach has been obtained. In other words, the MA will not require or mandate any particular AI, or any type or group of AIs, to adopt the more sophisticated approaches. In considering which approaches to adopt, AIs should conduct feasibility studies and analyses of the associated costs and benefits, having regard to the diversity and complexity of their operations.

8.1.11 The MA's approval for the use of approaches other than the default approaches is based on the minimum requirements set out in the BCR, and may be subject to conditions attached to the approval (see also paragraph 2.1.8 above). AIs adopting a more sophisticated approach are expected to comply with the minimum requirements and (where applicable) the conditions attached to their approval on an on-going basis. A return to a less sophisticated approach (e.g. from the IRB approach to the STC approach) will be permitted only in exceptional circumstances, subject to the prior approval of the MA.

8.2 **Credit risk (non-securitization exposures)**

8.2.1 Three different approaches for calculating the RWA for credit risk are provided under the current framework: the STC approach as the default option, the BSC approach and the IRB approach.

STC approach

8.2.2 The STC approach involves the calculation of credit risk using risk-weights specified in the BCR which are mainly supported by ratings assigned by external credit assessment institutions (ECAIs) recognised by the MA. The MA's policy on recognition of ECAIs for regulatory purposes is set out in the paper "Recognition of External Credit Assessment Institutions".

8.2.3 The credit exposures of AIs under the STC approach are divided broadly into the following three categories:

(a) classes of exposures whose risk-weights are determined by reference to ECAI ratings in accordance with risk-weight tables specified in the BCR, such as exposures to sovereigns, public sector entities, multilateral development banks (MDBs), banks, eligible covered bonds, qualifying non-bank financial institutions and corporates (including specialized lending);

(b) classes of exposures that are subject to flat risk-weights determined by reference to the obligor and/or the nature and general characteristics of an exposure. For example:

(i) cash and gold, and items in the process of clearing or settlement;

(ii) real estate exposures;

(iii) retail exposures;

(iv) equity exposures and subordinated debts (other than those falling within subparagraphs (v) and (vii) and paragraph (c) below);

(v) the portion of holdings of capital instruments issued by, and non-capital LAC liabilities of, financial sector entities that are not required to be deducted from capital base;

(vi) defaulted exposures; and

(vii) significant capital investments in commercial entities (other than those that are connected companies) that exceeds 15% of the capital base; and

(c) exposures to collective investment schemes (CIS exposures) whose risk-weights are determined by using the approaches set out in Part 6B of the BCR (see subsection 8.5 below for more information).

8.2.4 In order to reduce undue reliance on ECAI ratings, AIs are required to conduct their own credit assessments of their exposures (at origination and at least annually thereafter) and, for exposures falling within the category mentioned in paragraph 8.2.3(a) (except exposures to sovereigns and public sector entities), to assess whether the risk-weights assigned to those exposures based on ECAI ratings (rating-based RW) are appropriate and prudent. If an AI's credit assessment of an exposure reflects higher risk characteristics than those implied by the exposure's rating-based RW, the AI must use a risk-weight that is at least one bucket higher than the exposure's rating-based RW (and if there is no such next higher risk-weight, the AI must use the highest base risk-weight applicable to the ECAI ratings based portfolio to which the exposure belongs) for calculating its RWA.

BSC approach

8.2.5 The BSC approach is essentially the OECD-based (i.e. Basel I) framework (which applied to AIs incorporated in Hong Kong before the BCR first came into force on 1 January 2007) modified to incorporate (among other things) certain changes in exposure classification and treatments of credit risk mitigation to bring it more into line with the STC approach.

8.2.6 Under the BSC approach, credit exposures are divided into three categories:

(a) exposures whose risk-weights are mainly determined by reference to whether the obligor is the sovereign of a Tier 1 country[23] or a Tier 2 country (any place other than a Tier 1 country), or in other cases, whether the place of establishment of the obligor is a Tier 1 country or a Tier 2 country. Exposures falling within this category are those to sovereigns, public sector entities, banks and eligible covered bonds;

(b) exposures that are subject to flat risk-weights, such as MDB exposures, real estate exposures, exposures to corporates and individuals other than real estate exposures; and

(c) CIS exposures whose risk-weights are determined by using the approaches set out in Part 6B of the BCR (see subsection 8.5 below for more information).

8.2.7 To use the BSC approach, an AI must obtain the prior approval of the MA. The MA cannot give his approval unless he is satisfied that an AI's business operation is small (i.e. total assets of not more than HK$10 billion),

[23] Tier 1 country is defined in §2(1) of the Banking Ordinance, which generally means Hong Kong and any place or country that is a member of the OECD.

simple, and straightforward.

IRB approach

8.2.8 The IRB approach allows AIs with prior approval of the MA to use their own internal estimates for some or all of the credit risk components of an exposure to determine the capital requirement for that exposure. The credit risk components of an exposure include the estimates of the probability of default (PD), loss given default (LGD), expected loss (EL), exposure at default (EAD) and maturity (M) of the exposure. There are two levels of sophistication under the IRB approach: the foundation IRB approach (FIRB) and the advanced IRB approach (AIRB)[24]. Where the IRB calculation approach for certain IRB classes/subclasses differentiates between the FIRB and the AIRB, AIs are required, under the FIRB, to use a supervisory estimate (instead of their own internal estimate) for one or more of the credit risk components. The estimates (internal or supervisory as the case may be) are then input into formulae prescribed in the BCR known as "risk-weight functions" to calculate the RWA of the exposures subject to the IRB approach. The appropriate risk-weight function to use depends on the IRB class or subclass to which a particular exposure belongs.

8.2.9 Under the FIRB, for corporate, sovereign and bank exposures, AIs use their own estimate for PD and the supervisory estimates for LGD, EAD and M as prescribed in the BCR[25], as inputs to the appropriate risk-weight function. Under the AIRB, by contrast, AIs

[24] Apart from the FIRB for corporate, sovereign and bank exposures and the AIRB for certain corporate and sovereign exposures, there are other IRB calculation approaches such as the supervisory slotting criteria approach for specialized lending exposures (an IRB subclass under the corporate exposures) and retail IRB approach for retail exposures. Please refer to §147 of the BCR for the details.

[25] Under §167(1)(c) of the BCR, an AI that uses the FIRB approach may calculate the M of all of its corporate, sovereign and bank exposures as if the institution were using the AIRB approach. AIs may refer to the HKMA's supplementary guidance on the adoption of this option if necessary.

use their own internal estimates for PD, LGD, EAD and M as inputs to the appropriate risk-weight function, subject to the relevant provisions[26] and floor values under the BCR.

8.2.10 The use of the IRB approach is subject to the fulfillment of the minimum requirements set out in Schedule 2 to the BCR and requires the prior approval of the MA under §8(2)(a) of the BCR (also see paragraph 2.1.8 above). Specifically, the MA must be satisfied that the applicant AI has an established effective rating system with all of the methods, processes, controls, and data collection and IT systems that support the assessment of credit risk, the assignment of internal risk ratings and the quantification of default and loss estimates. CA-G-4 "Validating Risk Rating Systems under the IRB Approach" sets out the HKMA's approach to the validation of rating systems and supervisory expectations for AIs using the IRB approach to calculate credit risk for non-securitization exposures for capital adequacy purposes.

8.2.11 AIs wishing to use the IRB approach should provide an implementation plan to the MA, specifying, among other things, the expected timing for the roll out of the IRB approach for each IRB adoption class. Subject to the MA's prior approval, however, an AI may be permitted to exclude certain exposures within an IRB adoption class from calculation under the IRB approach pursuant to the relevant provisions set out in Division 3 of Part 2 of the BCR.

8.2.12 In the case of AIs that are subsidiaries of banking groups outside Hong Kong, the MA will, where appropriate, coordinate with the home supervisors of those banking groups regarding the fulfillment of the minimum requirements for the use of the IRB approach.

[26] In accordance with §164(3) and (3A) of the BCR, an AI must determine the EAD of certain exposures as if it were using the FIRB approach.

If such AIs plan to adopt in Hong Kong any group-wide rating systems, they will need to satisfy the MA that the relevant systems can adequately capture the specific risk characteristics of the AIs' exposures and that any differences in the home supervisor's approach to applying the minimum requirements are not materially different from those prescribed in the BCR in respect of the IRB approach. Similarly, the MA may coordinate with the host supervisors of AIs' banking subsidiaries incorporated outside Hong Kong to facilitate cross-border implementation of the approach.

8.3 **Counterparty credit risk (CCR)**

8.3.1 CCR refers to the risk of loss due to the default of a counterparty to a transaction before the final settlement of the transaction's cash flows. AIs are required to hold regulatory capital for CCR exposures arising from derivative contracts and securities financing transactions (SFTs) entered into with counterparties, whether booked in the banking book or trading book, in accordance with the requirements set out in the BCR.

8.3.2 There are four approaches to calculating the default risk exposure to a counterparty in respect of derivative contracts and SFTs that do not relate to cryptoassets:

(a) the standardized (counterparty credit risk) approach (SA-CCR approach) which is the default option for derivative contracts;

(b) the current exposure method (CEM), which is an alternative to the SA-CCR approach for derivative contracts that is only available to AIs using the BSC approach to calculate the credit risk for their non-securitization exposures;

(c) the collateralization approach[27] which is the default option for SFTs, where supervisory haircuts or value-at-risk (VaR) model may be used to take into account price volatilities of the securities delivered or obtained by an AI under SFTs. The VaR model is only available to AIs that use the IRB approach to calculate the RWAs of SFTs and have the required supervisory approval granted by the MA; and

(d) the internal models (counterparty credit risk) approach (IMM(CCR) approach) which can be used for derivative contracts and SFTs. Use of this approach requires prior approval from the MA.

8.3.3 The default risk exposure in respect of derivative contracts and SFTs that relate to cryptoassets is calculated by using the following approach(es):

(a) Group 1a or 1b cryptoasset derivative contracts—the same approach as that used by the AI for calculating the default risk exposures of derivative contracts on traditional assets.

(b) Group 2a cryptoasset derivative contracts—only the SA-CCR approach[28].

(c) Group 2b cryptoasset derivative contracts—a conservative approach that calculates the default risk exposure as 1.4 multiplied by the sum of the replacement cost (RC) and the potential future exposure (PFE). RC is calculated by using the SA-CCR approach, while PFE is equal to 50% of the gross notional amount of the derivative contract. Netting is not allowed in the

[27] Collateralization approach is not a formal term used in the BCR. The term refers collectively to the various methods set out in Division 2B of Part 6A of the BCR.
[28] There is an exception for AIs that are using the BSC approach. Please see §10AB(b) of the BCR for details.

calculation of PFE.

(d) SFTs on cryptoassets—the collateralization approach where price volatilities of assets exchanged must be accounted for by using supervisory haircuts.

8.3.4 The RWA of the default risk exposure to a counterparty other than a central counterparty is determined as the product of the default risk exposure and the risk-weight applicable to the counterparty ascertained in accordance with Part 4, 5 or 6 of the BCR, depending on the approach used by the AI concerned for calculating its credit risk for non-securitization exposures to the counterparty.

8.3.5 Both the **SA-CCR approach** and the **CEM** are non-model based approaches that calculate the default risk exposures in respect of derivative contracts as the product of 1.4 and the sum of the replacement cost (RC) and the potential future exposure (PFE) in respect of the derivative contracts. The main differences between the two approaches are the ways in which the RC and the PFE are calculated. The SA-CCR approach is designed to be more risk sensitive than the CEM in the sense that the SA-CCR approach is more reflective of the credit risk mitigation effects of netting and margining, and the correlations among market risk factors underlying the derivative contracts held by an AI.

8.3.6 The **collateralization approach** calculates the default risk exposure in respect of an SFT as a net credit exposure to the counterparty concerned by treating the money paid or securities delivered by an AI as a credit exposure to the counterparty secured by the money or securities received by the AI under the SFT.

8.3.7 The **IMM(CCR) approach** allows AIs to use their own internal models to calculate the default risk exposure to

counterparties. Approval will be granted by the MA to an AI to use the IMM(CCR) approach only if all of the relevant requirements set out in Schedule 2A to the BCR are met. Essentially, the MA must be satisfied that the AI concerned has put into operation an adequate risk management framework consisting of sound governance arrangements, policies and procedures and internal controls for CCR management (including adequate safeguards in relation to the use of internal models such as validation and stress-testing).

8.4 **Exposures to central counterparties**

8.4.1 AIs are required to hold regulatory capital for their exposures to central counterparties (CCPs) in respect of derivative contracts and SFTs cleared through CCPs. An AI that is a clearing member of a CCP basically incurs two types of exposure to the CCP:

(a) default risk exposures in respect of:

(i) derivative contracts or SFT entered into by the AI with the CCP for the AI's own purposes; and

(ii) guarantees provided by the AI to its direct clients against default of the CCP in relation to direct clients' derivative contracts or SFTs cleared through the CCP; and

(b) default fund contributions to the CCP.

8.4.2 Default risk exposures to qualifying CCPs (as defined in the BCR) are eligible for preferential risk-weights to reflect the perceived lower risk of default of qualifying CCPs, while exposures to non-qualifying CCPs are generally subject to higher risk-weights determined in accordance with the STC approach. Unless otherwise specified in the BCR, an AI's regulatory capital for its default fund contributions to a qualifying

CCP is determined as the AI's proportionate share of the CCP's hypothetical capital requirement[29]. Default fund contributions to non-qualifying CCPs should be assigned a risk-weight of 1250%.

8.4.3 AIs that are clearing members are also required to capitalise the following exposures:

(a) default risk exposures and exposures to CVA risk in respect of CCP-related transactions [30] or offsetting transactions[31] entered into with the AIs' direct clients; and

(b) default risk exposures in respect of any guarantees that are provided by the AIs to CCPs guaranteeing performance by the AIs' direct clients under transactions or contracts cleared by the CCPs.

8.4.4 AIs that are direct clients of clearing members of a CCP are also required to capitalise default risk exposures and exposures to CVA risk in respect of CCP-related transactions and offsetting transactions entered into with the clearing members that act as clearing intermediaries between the AIs and the CCP.

8.4.5 If an AI is an indirect client in a multi-level client structure, it is required to capitalise default risk exposures and exposures to CVA risk in respect of the following transactions—

(a) where the AI is also a clearing intermediary within the structure—

(i) offsetting transactions entered into with a

[29] The hypothetical capital requirement is the capital requirement that would have been held by the CCP under Basel III for its default risk exposures to its clearing members if the CCP were a bank.

[30] As defined in §2AA of the BCR.

[31] As defined in §2AA of the BCR.

higher level client within the structure; and

(ii) offsetting transactions or CCP-related transactions entered into with a lower level client within the structure; or

(b) where the AI is only an end client—CCP-related transactions entered into with a higher level client within the structure.

8.4.6 If an AI, whether acting as a clearing member or as a clearing client of a clearing member, has posted collateral to a CCP, a clearing member or a higher level client for transactions cleared by the CCP and such collateral is held by a person in a manner that is not bankruptcy remote from that person and the collateral is not included in the calculations of the AI's default risk exposures to the CCP, clearing member or higher level client under any of the applicable approaches mentioned in paragraph 8.3.2, the AI is required to capitalise its credit exposure to the person that holds the collateral.

8.4.7 An AI's capital charges for default risk exposures to clearing members or to the AI's clearing clients and for credit exposures to persons holding collateral posted by the AI should be determined using the STC, BSC or IRB approach unless otherwise specified in the BCR.

8.5 Credit risk (CIS exposures)

8.5.1 The BCR provides a hierarchy of four approaches, with varying degrees of risk sensitivity, to calculate the RWA of a CIS exposure booked in an AI's banking book:

(a) the look-through approach (LTA) is the most risk-sensitive approach that requires the AI to look through the CIS to its underlying exposures and calculate the total RWA of those exposures as if they were held directly by the AI. Such total

RWA will be used to determine the risk-weight of the CIS exposure (see paragraph 8.5.3);

(b) the third-party approach (TPA) under which a third party (usually the management company of the CIS) will perform the calculations needed under the LTA for the CIS. The figures so calculated will be used to determine the risk-weight of the CIS exposure (see paragraph 8.5.3);

(c) the mandate-based approach (MBA) calculates the total RWA of the underlying exposures of the CIS by assuming that the CIS uses leverage and invests in the most risky assets to the maximum extent allowed by the investment mandate of the CIS or the legislation or regulations governing the CIS. The total RWA so calculated will be used to determine the risk-weight of the CIS exposure (see paragraph 8.5.3); and

(d) the fall-back approach (FBA) requires the AI to calculate the RWA of the CIS exposure by allocating to it a risk-weight of 1250%.

8.5.2 The approach or approaches to be used by an AI for a CIS are determined based on the availability of the information on the CIS to the AI and the quality of the available information:

(a) LTA must be used if the AI has sufficient, frequent and independently verified information on all the underlying exposures (e.g. equities and debt securities) of the CIS;

(b) if the AI does not have adequate data to use only LTA, TPA may be used provided certain conditions are satisfied;

(c) if TPA is not usable or not used by the AI, MBA, or any combination of LTA, MBA and FBA, must be used to calculate the RWA of the underlying exposures of a CIS, provided that the conditions for using the approaches concerned are met;

(d) FBA must be used when none of the above is usable.

8.5.3 The total RWA of the underlying exposures of a CIS calculated by the LTA, TPA, MBA or a combination of different approaches will be input into a supervisory formula that takes into consideration the leverage level of the CIS to generate the risk-weight that should be allocated to an AI's CIS exposure to such CIS for the purpose of determining the RWA of the exposure.

8.6 **Credit risk (securitization exposures)**

8.6.1 Key aspects of the risk-weighting framework for securitization exposures include:

(a) the criteria that should be met in order for AIs to apply a particular approach in the framework for determining the regulatory capital to be held in respect of exposures arising from traditional and synthetic securitization transactions as defined in the BCR. Since securitization transactions may be structured in many different ways, whether a transaction is a securitization transaction for the purposes of the BCR and the capital treatment of a securitization exposure in a securitization transaction must be determined on the basis of the economic substance of the transaction rather than its legal form. AIs should consult the MA whenever there is uncertainty about whether a given transaction should be considered a securitization transaction within the meaning of the BCR;

(b) the definition of "securitization exposures", which includes but is not limited to: exposures arising from the purchase of securitization issues for investment purposes; the repurchase of securitization issues by originators; the provision of credit protection or credit enhancement to parties to securitization transactions; the retention of one or more securitization positions; the provision of liquidity facilities or servicer cash advance facilities in respect of securitization transactions; and the obligation to acquire any investors' interest in the underlying exposures of securitization transactions that are subject to early amortization provisions;

(c) the definition of "re-securitization exposure", which means an exposure to a securitization transaction in which any of the underlying exposures is itself a securitization exposure, with the exception of an exposure resulting from retranching another securitization exposure where certain conditions are met. Re-securitization exposures are subject to higher capital charges than other securitization exposures in recognition of the greater risk associated with them;

(d) requirements for AIs to have, on a continuous basis, a comprehensive understanding of, and access to information in relation to, the risks of their securitization exposures as well as the respective underlying exposures (in particular, the underlying exposures of re-securitization transactions). The aim is to ensure that AIs perform their own credit analyses and do not unduly rely on ECAI ratings; and

(e) detailed requirements with which originating AIs must comply in order for the credit risk of the underlying exposures in a traditional or synthetic securitization transaction to be considered as

significantly transferred in the calculation of the RWA of the underlying exposures. The AIs are required to verify that all the requirements have been met and give advance notice of its intention to apply the relevant treatment to the underlying exposures, together with a confirmation of fulfillment of the requirements, to the MA. A set of Q&As is available that provides guidance on the notification requirement and the assessment of significant credit risk transfer for the purposes of obtaining capital relief for the underlying exposures of a securitization transaction under the BCR.

8.6.2 The BCR provides a hierarchy of four approaches to calculating the capital charges for securitization exposures in an AI's banking book:

(a) the securitization internal ratings-based approach (SEC-IRBA), under which the capital charge of a securitization exposure is a function of the capital charge of the underlying exposures of the securitization transaction concerned determined primarily by using the IRB approach;

(b) the securitization external ratings-based approach (SEC-ERBA), under which the risk-weight applicable to a securitization exposure is determined:

(i) by reference to the ECAI issue specific rating or the inferred rating of the securitization exposure; or

(ii) (if the exposure does not have an ECAI issue specific rating, the exposure is an eligible ABCP exposure and the AI concerned has been granted an approval by the MA to use the internal assessment approach (IAA)) by reference to the internal

credit rating assigned by the AI to the exposure;

(c) the securitization standardized approach (SEC-SA), under which the capital charge of a securitization exposure is a function of the capital charge of the underlying exposures of the securitization transaction concerned determined by using the STC approach (if the underlying exposures are non-securitization exposures) or in accordance with Part 7 (if the underlying exposures are securitization exposures); and

(d) the securitization fall-back approach (SEC-FBA), which assigns a risk-weight of 1250% to a securitization exposure.

8.6.3 In general, for a securitization exposure (other than a re-securitization exposure), an AI must first determine whether the conditions for using the SEC-IRBA[32] to determine the capital charge of the securitization exposure can be met. If not, the AI must proceed to see if an approach at the next lower level of the hierarchy can be used. However, the SEC-IRBA and the SEC-ERBA (including the IAA) cannot be used to risk-weight re-securitization exposures.

8.6.4 An AI intending to use the IAA to risk-weight securitization exposures to ABCP programmes that are without ECAI issue specific ratings must seek prior approval from the MA. Guidance on the factors that the MA will look at when considering an application from an AI for using the IAA and the criteria an AI should use in determining whether a securitization exposure is an eligible ABCP exposure is set out in the Banking (Securitization) Code.

[32] If the AI only uses the STC approach to calculate its credit risk for non-securitization exposures, the AI should start from the SEC-ERBA.

8.6.5 Securitization transactions may involve complicated structures and terms. Therefore, it is important for an AI entering into a securitization transaction (whether as an originating or an investing AI) to have adequate policies and procedures in place for evaluating and addressing the risks arising from such transaction, and to ensure that the economic substance of the transaction is fully reflected in its risk assessment and management decisions. The risk evaluation / assessment should not unduly or mechanically rely on ECAI ratings.

8.6.6 Any AI that is a party to a securitization transaction should fully understand the risks it has assumed or retained so as to be able to determine correctly its capital charges in relation to the transaction. In addition, an originating AI is expected to continue to monitor any risks to which it may be subject even if it has excluded the underlying exposures in a securitization transaction from the determination of its capital charges. Such risks include the implications for capital planning in cases where risks transferred out through the securitization transaction may return and the impact that the securitization transaction may have on the quality of the exposures retained by the AI.

8.7 Credit risk (cryptoasset exposures)

8.7.1 Group 1a cryptoasset exposures held in the banking book will generally be subject to the same rules as discussed in subsection 8.2 above as if they were exposures to the traditional assets being tokenised.

8.7.2 For group 1b cryptoasset exposures held in the banking book, separate RWAs have to be calculated by using the relevant approach discussed in subsection 8.2 above—

(a) for the following risks—

(i) the credit risk of the reference asset (e.g. a bond) of the group 1b cryptoasset; and

(ii) the credit risk of the redeemer (i.e. the entity that performs the redemption function); and

(b) in cases where only a subset of holders (members) are allowed to transact directly with the redeemer to redeem the cryptoasset—for either of the following risks in addition to those risks mentioned in subparagraph (a)—

(i) if the AI is a member, the credit risk that it would be obliged to purchase the cryptoasset from non-members; or

(ii) if the AI is a non-member, the credit risk of the members.

8.7.3 Group 2b cryptoasset exposures are subject to the conservative treatment set out in §385 of the BCR.

8.7.4 The risk-weighted amount of each of the following items is also treated as the risk-weighted amount for credit risk:

(a) The credit risk of group 1b cryptoasset exposures assigned to the trading book, as set out in §376 of the BCR;

(b) The infrastructure risk add-on for group 1 cryptoasset exposures assigned to the banking book, as set out in §380 of the BCR;

(c) The credit risk for group 2a cryptoasset exposures to stablecoins, as set out in §384 of the BCR; and

(d) in the case of a G-SIB or a D-SIB, the add-onwhen its group 2 cryptoasset exposure ratio exceeds the prescribed limits as set out in §388

of the BCR.

8.8 **Use of credit risk mitigation techniques**

8.8.1 AIs may use credit risk mitigation (CRM) techniques to reduce the RWA of their credit exposures (including their default risk exposures to CCPs) and to lower their capital charges as a result. AIs are permitted to recognize the credit risk mitigating effect of certain types of collateral (e.g. cash or securities), bilateral netting agreements (both for netting of on-balance sheet exposures and netting of certain off-balance sheet exposures), guarantees and credit derivative contracts (including those that are booked in the trading book) that are recognized under the BSC approach, the STC approach, the IRB approach, the CCR framework (Part 6A of the BCR) and the securitization framework (Part 7 of the BCR).

8.8.2 The use of any CRM technique is subject to the requirements relating to legal certainty and operational issues described under the risk-weighting framework for credit risk in the BCR. Moreover, exposures that are covered by "high cost credit protection", where the combined effect of the costs paid for the protection and its terms and conditions call into question the degree to which the credit risk of the exposures has been effectively mitigated, will be subject to scrutiny under the MA's SRP (see Annex G to CA-G-5).

8.9 **Market risk and CVA risk**

Market risk

8.9.1 Market risk refers to the risk of losses arising from movements in market prices. The risks subject to market risk capital charges are: (i) interest rate risk, credit spread risk, equity risk, foreign exchange risk, commodity risk and default risk for trading book instruments; and (ii) foreign exchange risk and

commodity risk for banking book instruments.

8.9.2 AIs, with the exception of those mentioned in paragraph 8.9.3, are required to calculate their market risk capital charge using (i) the standardized (market risk) approach (STM approach), (ii) subject to approval, the internal models approach (IMA) or, (iii) subject to approval, the simplified standardized approach (SSTM approach). This does not prevent an AI from using a combination of the IMA and the STM approach for calculating its market risk capital charge. However, a combination of the STM approach and the SSTM approach is not allowed. For AIs with an IMA approval, a combination of the IMA and the SSTM approach is also not allowed.

8.9.3 An AI which is not using the IRB approach for the calculation of its credit risk and which has small market risk positions may be exempted by the MA from having to calculate its market risk if the MA is satisfied that:

(a) the AI's market risk positions never exceed 5%, or only sporadically exceed 5% and never exceed 6%, of its total on-balance and off-balance sheet positions; and

(b) the AI's market risk positions never exceed HK$50 million, or only sporadically exceed HK$50 million and never exceed HK$60 million.

8.9.4 Under the **STM approach**, market risk is calculated using three components, i.e. (i) the ultimate sensitivities-based method capital charge, (ii) the residual risk add-on and (iii) the standardized default risk charge.

8.9.5 The **IMA** allows AIs, with the prior approval of the MA under §18(2)(a) of the BCR, to use their own internal models to calculate market risk capital charge for eligible trading desks. The MA may only grant

approval to an AI to use the IMA if the AI satisfies the minimum requirements set out in Schedule 3 to the BCR (also see paragraph 2.1.8 above). For ineligible trading desks, the AI must use the STM approach to calculate its market risk capital charge.

8.9.6 The **SSTM approach** is a recalibrated version of the Basel II standardized approach. The use of the SSTM is intended for AIs with relatively smaller and simpler market risk exposure and is subject to the approval of the MA under §17A(2)(a) of the BCR.

8.9.7 AIs should refer to MR-1 "Market Risk Capital Charge" for detailed guidance on the calculation of their market risk capital charges.

CVA risk

8.9.8 CVA risk refers to the risk of losses arising from changing CVA values in response to changes in counterparty credit spreads and market risk factors that drive the prices of covered transactions. Covered transactions generally include OTC derivative transactions and, if required by the MA, SFTs that are fair-valued for accounting purposes, except for those specified in Schedule 1A to the BCR.

8.9.9 The **basic CVA approach** (BA-CVA) (either in its full or reduced version) is the default approach which must be used by AIs for calculating the CVA risk capital charge, unless prior approval is obtained from the MA for the use of the standardized CVA approach. In addition, an AI whose aggregate notional amount of non-centrally cleared OTC derivative transaction is less than or equal to HK$1 trillion on a permanent basis may choose to set its CVA risk capital charge as 100% of its capital charge for counterparty credit risk. However, the MA may remove this option if it is determined that the CVA risk resulting from the AI's covered transactions materially contributes to its

overall risk.

8.9.10 Under the BA-CVA, the CVA capital charge is calculated by prescribed formulas such that the standalone CVA capital charge for all counterparties are aggregated. The standalone CVA capital charge for each counterparty depends on its sector and credit quality. There are two versions of the BA-CVA. While the reduced version does not recognize any eligible CVA hedges, the full version recognizes the counterparty credit spread hedges and is intended for AIs that hedge their CVA risk.

8.9.11 The **standardized CVA approach** (SA-CVA) allows an AI, subject to the approval of the MA granted under §23D(2)(a) of the BCR, to make use of delta and vega sensitivities to calculate the CVA risk capital charge. SA-CVA also recognizes eligible CVA hedges that hedge the variability of either the counterparty credit spread component or the exposure component of the CVA risk.

8.9.12 AIs should refer to MR-2 "CVA Risk Capital Charge" for detailed guidance on the calculation of their CVA risk capital charge.

Cryptoasset exposures

8.9.13 AIs should calculate their market risk capital charge for group 1 cryptoasset exposures assigned to the trading book using (i) the STM approach, (ii) subject to approval, the IMA or, (iii) subject to approval, the SSTM approach. However, the use of the IMA is not allowed for group 2a cryptoasset exposures. AIs should refer to section 6 of MR-1 "Market Risk Capital Charge" for detailed guidance.

8.9.14 Covered transactions on group 1 cryptoassets are generally subject to the same requirements to determine the CVA risk capital charge as non-

tokenised traditional assets. However, the use of SA-CVA is not allowed for covered transactions on group 2a cryptoassets. AIs should refer to section 4 of MR-2 "CVA Risk Capital Charge" for detailed guidance.

8.10 **Operational risk**

8.10.1 An AI must use the standardized method set out in §324(1) of the BCR for calculating its operational risk capital charge (which is then multiplied by a factor of 12.5 to arrive at the RWA for operational risk)[33]. The calculation method involves two components, namely the Business Indicator Component ("BIC") and the Loss Component ("LC").

8.10.2 To calculate the BIC, an AI first calculates its Business Indicator (BI), which is a measure of an AI's business scale. The underlying assumption is that an AI's operational risk exposure increases with its business scale. In this regard, AIs are classified into 3 buckets (i.e. buckets 1, 2 and 3) based on their BI values. Buckets 1, 2 and 3 AIs are those with BI values of not more than HK$10bn, more than HK$10bn but not more than HK$300bn, and more than HK$300bn respectively. The BIC of an AI is arrived at with the application of prescribed marginal coefficient(s) to (different portions of) its BI value.

8.10.3 The LC is a measure of an AI's internal loss experience. The underlying assumption is that an AI's operational risk losses in the past are an indicator of that in the future. LC is calculated with reference to the historical average annual operational losses of the AI. Operational risk capital charge is calculated by multiplying the BIC by the Internal Loss Multiplier (ILM). The ILM can take on a value of either below, equal to,

[33] An AI which has been in operation for less than 18 months on any calendar quarter end date after §324 of the BCR (as amended by the Banking (Capital) (Amendment) Rules 2023, L.N. 167 of 2023) comes into operation must obtain the prior consent of the MA to calculate its capital charge for operational risk by the method specified in §324(1) or by an alternative method.

or above 1 depending on the relative significance of the LC and the BIC based on a prescribed formula. In general, only Bucket 2 and Bucket 3 AIs are allowed to calculate their own ILM subject to certain data quality requirements being met, and for Bucket 1 AIs, the ILM is set at 1, meaning in effect that they determine their capital charge solely based on the BIC.

8.11 **Sovereign concentration risk**

8.11.1 Sovereign exposure refers to an AI's exposure to the central government, central bank or a sovereign foreign public sector entity of a jurisdiction, including an exposure to any of the foregoing which arises from guarantees given, or collateral issued, by the foregoing. While sovereign exposure is exempted from the BCBS large exposures standard (which is implemented in Hong Kong under Part 7 of the Banking (Exposure Limits) Rules (BELR) (Cap. 155S)), such exposure is not considered risk-free. Therefore, to complement the large exposures framework in Hong Kong, a locally incorporated AI's concentrated sovereign exposure to a jurisdiction is subject to an additional risk-weighted amount in the calculation of its CAR.

8.11.2 Concentrated sovereign exposure is defined as specified sovereign exposure to a jurisdiction that exceeds 100% of an AI's Tier 1 capital.

8.11.3 Specified sovereign exposure is defined in §342A of the BCR. In brief, the amount of an AI's specified sovereign exposure to a specified sovereign entity is the sum of (i) the AI's aggregate single counterparty exposure to that specified sovereign entity determined in accordance with Part 7 of the BELR as if the sovereign exemption available under rule 48(1)(c) of the BELR were not applicable, plus (ii) any indirect exposure attributed to the specified sovereign entity as a credit protection provider.

8.11.4 A concentrated sovereign exposure will be subject to different risk weights that increase progressively with the value of the exposure as set out in the table below.

Portion of concentrated sovereign exposure to jurisdiction (expressed as percentage of Tier 1 capital)	Risk-weight
Portion exceeding 0% but not exceeding 100%	not applicable
Portion exceeding 100% but not exceeding 150%	5%
Portion exceeding 150% but not exceeding 200%	6%
Portion exceeding 200% but not exceeding 250%	9%
Portion exceeding 250% but not exceeding 300%	15%
Portion exceeding 300%	30%

8.11.5 Having taken into account the local situation, some concentrated sovereign exposures to Hong Kong, Mainland China and the US are exempted from the additional risk-weighted amount requirement (detailed exclusions are set out in the definition of specified sovereign entity under §342(1) of the BCR).

8.12 Output floor

8.12.1 An AI that uses a model-based approach to calculate its credit risk or market risk or both is subject to the output floor, which provides a risk-based backstop that limits the extent to which AIs can lower their capital requirements relative to the standardized approaches.

8.12.2 Specifically, an AI subject to the output floor is required to calculate the floor RWA (i.e. output floor) and the actual RWA for credit risk, market risk, CVA risk and operational risk. If the amount of output floor is larger than the actual RWA, the institution must add the difference to the total RWA for credit risk, market risk, CVA risk and operational risk for the calculation of its capital adequacy ratio.

8.12.3 For the purposes of calculating the output floor—

(a) an alternative method is available[34] whereby an AI may choose to allocate the risk-weights to all of its general corporate exposures that are unrated exposures falling under §61(2)(a) of the BCR ("concerned exposures") according to the loan classification category of the exposure (generally referred to as the "loan classification method") (see §356(4) and (5) of the BCR)[35];

(b) a 5-year phase-in arrangement is adopted, whereby the output floor level would gradually increase from 50% in 2025 to 72.5% in and after 2030) (see §356(8) of the BCR).

8.12.4 The MA is empowered under §356(9) of the BCR to adjust the output floor level applicable to a particular AI, a group of or all relevant AIs, by written notice. This power is intended to be exercised only in limited circumstances, of which the following are some examples:

(a) an AI's rating system has material deficiencies such that the credit risk components cannot be

[34] Once an AI chooses this method, it must apply the method consistently, and the MA's prior consent is required to switch to the other method.

[35] The AIs which select such a method are expected to be capable of mapping the concerned exposures to the loan classification categories by referencing the loan classification criteria in the *Guideline on Loan Classification System*. The guidance thereof is deemed applicable to all loans and advances and other types of on- and off-balance sheet exposures.

reliably and accurately estimated; or

(b) there is an adverse impact on the financial soundness of an AI as a result of unpredictable economic and market conditions in Hong Kong.

8.12.5 In general, the adjustment specified in the notice will be effective immediately. The MA will communicate with the concerned AI in advance to ensure it is aware of the requirements with sufficient time to comply with the changes.

9. Calculation of leverage ratio

9.1 Under the BCR, an AI must calculate the LR as a ratio of its Tier 1 capital to its exposure measure (as defined in §3Y of the BCR). The LR must be calculated on the same basis as that adopted for the calculation of CAR ratio under Division 7 of Part 2 to the BCR (i.e. solo basis, solo-consolidated basis or consolidated basis).

9.2 As set out in §3ZB of the BCR, an AI's exposure measure (the denominator of LR) encompasses its on-balance sheet and off-balance sheet exposures, generally represented as the sum of the following items:

(a) on-balance sheet exposures, excluding those arising from derivative contracts or SFTs (other than collateral for derivative contracts or for SFTs recognized as an on-balance sheet asset under the applicable accounting standard);

(b) exposures arising from derivative contracts (other than collateral recognized as an on-balance sheet asset under the applicable accounting standard);

(c) exposures arising from SFTs (other than collateral recognized as an on-balance sheet asset under the applicable accounting standard); and

(d) off-balance sheet exposures, excluding those falling within items (b) or (c) above.

9.3 An AI may deduct from the sum of the above items (as calculated in accordance with the standard calculation methodology referred to in paragraph 9.4 below) its on-balance sheet exposures (other than liability items) that have been deducted from its Tier 1 capital. For an AI that is a note-issuing bank, it must not include any certificate of indebtedness issued by the Financial Secretary under §4 of the Exchange Fund Ordinance (Cap. 66) to, and held by, the AI.

9.4 AIs are required to calculate their LR using the standard calculation methodology set out in the standard return template relating to LR specified by the MA.

Non-statutory internal LR target

9.5 Same as for CAR, AIs are expected to set a non-statutory internal LR target above their minimum LR requirement and ensure that they have monitoring tools so that timely discussion with the MA can be undertaken if their LR falls close to the minimum level. As such, AI should set an internal LR target having regard to its portfolio of exposures and specific circumstances. The internal LR target, including the methodology for setting it, should be agreed with the MA.

Distribution payment requirements

9.6 AIs are required to comply with the distribution payment requirements set out in §3F of the BCR. Whether or not an AI may make distribution payment in a financial year depends on, among other things, whether the institution's net CET1 capital ratio is (i) above or (ii) equal to or below its buffer level. For the avoidance of doubt, an AI's calculation of its net CET1 capital for the determination of its net CET1 capital ratio does not take into account the amount of CET1 capital that the institution requires for complying with the minimum LR. An AI is however expected to be able to meet its minimum LR after making distribution payment.

10. Assessment of overall capital adequacy

10.1 AIs' CAAP (being their own internal process for assessing their overall capital adequacy in relation to their risk profile – see paragraph 2.1.10 above) and their strategy for maintaining the required level of capital should fit the AIs' individual circumstances and needs, having regard to the risk profile and level of sophistication of their operations. The CAAP should be risk-based, forward-looking and form an integral part of the AIs' management/decision making process. The supervisory standards expected of a CAAP are set out in section 4 of CA-G-5.

10.2 An AI's CAAP is a very significant part of the SRP (see paragraph 10.3 below). All AIs are expected to conduct their CAAP in accordance with section 4 of CA-G-5 save for those specified under paragraph 4.1.3 of CA-G-5. Acknowledging that it may not be cost-effective for AIs with small and simple operations to develop elaborate systems for conducting the CAAP, the MA does not expect AIs which have been approved by the MA to adopt the BSC approach permanently to fully satisfy the prescribed CAAP standards. Nevertheless, the MA will, in setting the minimum CAR requirements of individual AIs, take into account the compliance of their capital management practices with the supervisory standards.

10.3 The process conducted by the MA for the purposes of monitoring and evaluating the capital adequacy of individual AIs, and of determining their Pillar 2 capital requirement, is referred to as the SRP. Details of the SRP are set out in CA-G-5. The MA conducts the SRP on each AI regularly (normally once a year) as part of its risk-based supervisory process (see SA-1 "Risk-based Supervisory Approach") for the ongoing monitoring of the adequacy of AIs' capital to support the risks inherent in the AIs' business activities.

10.4 The SRP takes the form of a comprehensive and structured approach to assessing the adequacy of AIs' capital in respect of the risks (i.e. credit, market, operational (including legal), interest rate, liquidity, strategic and reputation risks) inherent in their business and operations and the adequacy of the AIs' systems

and controls relating to such risks. The scope and extent of the application of the assessment standards and criteria under the SRP will be commensurate with the nature, size and complexity of the business of individual AIs. The assessment will also have regard to the results of stress tests and scenario analyses conducted by individual AIs and the MA on a sector-wide basis.

11. Interest rate risk in the banking book

11.1 The SRP also covers an AI's interest rate risk in the banking book (IRRBB). The BCBS's IRRBB standards set out an outlier-based approach for potential capital add-ons and set expectations for banks' identification, measurement, monitoring and control of IRRBB as well as its supervision. The IRRBB framework in Hong Kong follows the BCBS standardized approach and the guidelines for the approach adopted by the MA in the supervision of AIs' IRRBB exposures are set out in IR-1.

11.2 Under the IRRBB framework in Hong Kong, the MA may, depending on the individual circumstances of the case, ask an outlier AI, i.e. a locally incorporated AI whose IRRBB leads to an economic value of equity decline of more than 15% of its Tier 1 capital as a result of applying one of the six standardized interest rate shocks, to strengthen its capital position or to reduce its IRRBB. An outlier AI may also become subject to additional reporting requirements for its IRRBB exposures.

12. Determination of minimum CAR requirements

12.1 §3B of the BCR prescribes minimum CAR requirements. However, having regard to the risks associated with an AI and if satisfied on reasonable grounds that it is prudent to do so, the MA may (under §97F of the Ordinance) vary any capital requirement rule under the BCR, including the minimum CAR requirements, for the AI after taking into account the representations, if any, made by the AI as provided for under §97F(3)(b) of the Ordinance. The MA will use the SRP results of an AI to determine whether the minimum CAR under §3B of the BCR should be varied in respect of that AI and, if so, by how much. Where it is considered prudent to increase the minimum CAR of an AI under §97F of the

Ordinance, the capital add-on will be allocated across the CET1 capital ratio, Tier 1 capital ratio and Total capital ratio of the AI on a proportionate basis, reflecting the prevailing split of "Pillar 1" capital under §3B of the BCR [36]. The details on the apportionment of the capital add-on and the arrangements to be adopted in respect of the capital add-on are set out in CA-G-5.

12.2 An AI aggrieved by a decision of the MA to vary the AI's minimum CAR may, under §101B(1) of the Ordinance, apply to the BRT for a review of that decision.

13. Monitoring compliance with minimum CAR requirements

13.1 The MA will endeavour to monitor and promote an AI's compliance with its minimum CAR requirements on a continuing basis by

(a) requiring AIs to establish internal capital targets (to be agreed with the MA) and monitoring tools so that timely discussion with the MA can be undertaken if their capital levels fall close to the buffer zone (see CA-G-5 for details);

(b) reviewing information reported in the Return of Capital Adequacy Ratio (MA(BS)3) (CAR return); and

(c) commissioning external auditors' reports, normally once a year, under §63(3A) of the Ordinance on the adequacy of the AI's systems of control over the compilation of banking returns and over the AI's compliance with statutory requirements, and under §63(3) of the Ordinance on whether a CAR return submitted to the MA by the AI has been correctly compiled in all material respects from the AI's books and records.

13.2 In addition, where as a result of its on-going supervisory process the MA has material concerns about the ability of an AI to compute its CAR correctly in accordance with the BCR or about an AI's ability to submit its CAR return to the MA in a timely fashion, the

[36] For example, the apportionment between CET1 capital ratio, Tier 1 capital ratio and Total capital ratio will be based on the split of 4.5/6/8.

MA may require the AI to submit an external auditors' report under §59(2) of the Ordinance in order to identify specific system and control weaknesses through a more in depth review of such systems and controls by the auditors.

14. Consequences of contraventions

14.1 Breach of any of the statutory minimum CAR or LR requirements is a serious matter and as described in section 2 of this module will almost certainly be a ground for revocation of authorization. As required under §3D and §3ZA of the BCR, any breach of any of the requirements must immediately be notified to the MA. The MA will, pursuant to §97E(1) of the Ordinance, enter into discussions with the AI to determine what remedial actions need to be taken for the AI to comply with the statutory minimum requirement(s) concerned. The MA may then require the AI to take remedial action by written notice served under §97E(2) of the Ordinance. In general, during his discussions with the AI, the MA will look to the AI to propose an action plan for restoring the capital ratio(s) or the LR concerned to an acceptable level within a reasonable period of time. In all likelihood, if the MA considers the action plan proposed by the AI to be reasonable and practically achievable, he will notify the AI under §97E(2) of the Ordinance to implement the plan by way of remedial action.

14.2 An AI's failure to immediately notify the MA of any breach of any of the statutory minimum CAR or LR requirements, and an AI's failure to comply with any remedial action specified in a notice issued under §97E(2) of the Ordinance, will result in every director, chief executive and manager of the AI committing an offence that may render them liable to a fine and imprisonment (§97D(3) and §97E(4) of the Ordinance).

15. Financial disclosures

15.1 Disclosure requirements complement the minimum CAR requirements, minimum LR requirements and the SRP. Through the mandatory public disclosure framework set out in the BDR (made by the MA under §60A of the Ordinance), the MA aims to engage market discipline in order to encourage AIs to operate in

a safe and sound manner. The framework has been designed to ensure that relevant and timely information is available to the general public (including the investor community and market professionals) and that AIs have in place a clearly documented policy for the disclosure of, among other things, relevant and adequate information that conveys an accurate impression of their actual risk profile.

15.2 To assist AIs with the application of the BDR, the BDR are supplemented by guidance issued by the MA in CA-D-1 and, where necessary, by standard templates and tables which serve as a tool to facilitate consistent and comparable disclosure among AIs.

15.3 The BDR, which are closely aligned with international standards (e.g. those promulgated by the BCBS and the International Accounting and Financial Reporting Standards), represent a set of disclosure requirements that should improve market participants' ability to assess AIs' capital structures, risk exposures, risk management processes and overall capital adequacy.

15.4 The BDR recognise that AIs have varying levels of sophistication and risk exposures. Different levels of disclosure therefore apply to AIs using the BSC approach, the STC approach and the IRB approach. In addition, there are de minimis exemptions for AIs which are smaller in terms of asset and deposit size, although the MA encourages such AIs to comply with the BDR to the greatest extent possible.

15.5 The BDR require AIs to have in place a formal disclosure policy which is subject to regular and independent review and approval by the institution's senior management and board of directors. The disclosure policy should address the AIs' approach to determining what disclosures they are required to make and the internal controls they have in place over the process for making such disclosures (e.g. the verification process).

15.6 Compliance with the BDR is a statutory requirement. AIs are required to declare their compliance with the BDR in the Return

of Certificate of Compliance with the Banking Ordinance (MA(BS)1F) which is submitted as part of the information comprising the quarterly banking return. The MA will monitor AIs' compliance with the BDR through review of the return and the disclosure statements made by AIs, and by requiring external auditors' reports on the correct compilation of the return under §63(3) and §63(3A) of the Ordinance.

15.7 §60A(4) of the Ordinance makes it an offence on the part of every director, every chief executive and every manager of an AI if the AI fails to comply with the BDR. Upon conviction, such persons will be liable to a fine.