

Part A: Market Risk Capital Framework

PART A(1) – PRESCRIBED APPROACHES IN RELATION TO CALCULATION OF THE MARKET RISK CAPITAL CHARGE UNDER THE NEW MARKET RISK FRAMEWORK

Item 1. Add the following new definitions to section 2(1) of the BCR

New definitions	Remarks (including references)
(1) IMA means the internal models approach;	We intend to change the abbreviation of the internal models approach to “IMA” instead of “IMM approach” currently used in the BCR. The abbreviation “IMA” is more consistent with the publication of the BCBS.
(2) risk class , in relation to an authorized institution’s calculation of market risk and CVA risk capital charge, has the meaning assigned to it by section 281 and a new section in Part 8A;	Section 281 of the BCR is the interpretation section for Part 8 of the BCR. The concept of “risk class” applies to both the new standardized approach and new internal models approach under market risk and also the standardized CVA approach under CVA risk. For example, for the new standardized approach under market risk, a risk class refers the class of the institution’s market risk exposures which are at risk from: general interest rate risk, credit spread risk

New definitions	Remarks (including references)
	<p>(non-securitisation), credit spread risk (securitisation: non-correlation trading portfolio), credit spread risk (securitisation: correlation trading portfolio), equity risk, commodity risk and foreign exchange risk.</p> <p>We intend to keep the definition of “risk category”, as “risk category” will be applied to the simplified standardized approach.</p> <p>Reference: paragraph 69 of CP 19.01¹ and MAR10.12 of the Basel Framework²</p>
<p>(3) simplified standardized approach, in relation to the calculation of an authorized institution’s market risk capital charge, means the method set out in Divisions 2 to 10 of Part 8;</p>	<p>The current standardized approach as set out in Divisions 2 to 10 of the BCR, subject to minor amendments, would become the simplified standardized approach under the new framework.</p>

¹ https://www.hkma.gov.hk/media/eng/regulatory-resources/consultations/CP19_01_Market_Risk.pdf

² This refers to the consolidated version of the full set of standards of the Basel Committee. Some background on the Basel Framework can be found at <https://www.bis.org/baselframework/background.htm>. The Basel Framework itself can be accessed at https://www.bis.org/basel_framework/. References to the Basel Framework in these Detailed Instructions refer to the version to be effective as of 1 January 2023. Please choose “View future version” if necessary.

New definitions	Remarks (including references)
(4) SSTM approach means simplified standardized approach;	
(5) trading desk , in relation to the calculation of an authorized institution’s market risk capital charge, means a group of traders or trading accounts set up by an authorized institution to manage a portfolio of trading book positions in accordance with a well-defined business strategy and operating within a clear risk management structure;	This is the level at which model approval is granted as stated in item 7(6) ³ below. Reference: paragraphs 57-65 of CP 19.01 and MAR12 of the Basel Framework

Item 2. Amend the following existing definitions in section 2(1) of the BCR

Existing definitions – amendments to be made	Remarks (including references)
(1) internal models approach – update the reference to “Divisions 11 and 12” to become a reference to the new divisions to be created in Part 8.	Divisions 11 and 12 of the BCR will be repealed. New divisions will be added for the new internal models approach. See item 3 in Part A(4) (“Internal Models Approach”).
(2) market risk – replace the existing paragraphs (a) and (b) with the	Reference: paragraph 7 of CP 19.01 and MAR11.1 of the Basel

³ Unless otherwise specified, the reference refers to the item in the same Part. For example, item 7(6) here refers to item 7(6) in Part A(1).

Existing definitions – amendments to be made	Remarks (including references)
<p>following:</p> <p>“(a) interest rate risk, credit spread risk, equity risk, commodity risk, foreign exchange risk, and default risk for trading book instruments; and (b) commodity risk and foreign exchange risk for banking book instruments;”</p>	<p>Framework</p>
<p>(3) standardized (market risk) approach – update the reference to “Divisions 2 to 10 ” to become a reference to the new divisions to be created in Part 8;</p>	<p>New divisions will be added for the new standardized approach. See item 4 to 7 in Part A(3) (“Standardized (Market Risk) Approach”). As mentioned in item 1(3) above, Divisions 2 to 10 of the existing BCR, subject to amendments, will apply to the simplified standardized approach under the new market risk framework.</p>
<p>(4) trading book – delete the existing definition and add “trading book has the meaning given by item 3(1) in Part A(2)”;</p>	<p>The new market risk framework revised the definition of trading book to reduce incentives for regulatory arbitrage between the trading book and the banking book. The meaning of trading book will be defined in Part 8 of the BCR.</p> <p>Reference: paragraphs 23 of CP 19.01 and RBC25.1 of the Basel</p>

Existing definitions – amendments to be made	Remarks (including references)
	Framework

Item 3. Repeal the following existing definitions in section 2(1) of the BCR

Existing definitions to be repealed	Remarks (including references)
(1) comprehensive risk charge	This definition is no longer applicable to the new market risk framework.
(2) IMM approach	This definition is no longer applicable as we intend to change the abbreviation of the internal models approach to “IMA” instead of the “IMM approach” currently used in the BCR. The abbreviation “IMA” is more consistent with the publication of the BCBS.
(3) incremental risk charge	This definition is no longer applicable to the new market risk framework.
(4) incremental risks	This definition is no longer applicable to the new market risk framework.

Existing definitions to be repealed	Remarks (including references)
(5) stressed VaR	This definition is no longer applicable to the new market risk framework.

Item 4. Amend section 17 of the BCR – change the heading of section 17 to “Authorized institution shall only use STM approach, IMA and/or the SSTM approach to calculate its market risk”

Matters to be provided	Remarks (including references)
<p>(1) To amend section 17 of the BCR as follows—</p> <p>(a) in section 17(1)(a), delete everything after “subject to paragraph (b)”; and add “and (c), shall use the STM approach to calculate its market risk capital charge”;</p> <p>(b) in section 17(1)(b), delete everything after “subject to section 18(5)” and add “and [section 19A(1)] (see item 10(1) below), may use the IMA to calculate its market risk capital charge for the portfolio of exposures assigned to trading desks which are approved by the Monetary Authority to do so under section</p>	<p>As set out in MAR11.7 of the Basel Framework, there are three approaches to calculate the market risk capital charge under the new framework.</p> <p>The STM approach refers to the new standardized approach and the IMA refers to the new internal models approach. The newly added SSTM approach refers to the simplified standardized approach, which is a recalibrated version of the current standardized approach.</p> <p>In addition, the HKMA intends to continue allowing the <i>de-minimis</i> exemptions in accordance with section 22 of the BCR.</p>

Matters to be provided	Remarks (including references)
<p>18(2)(a)”;</p> <p>(c) add a new subsection (c) to section 17(1) to provide that subject to the new [section 17A] (see item 5(5) below), an AI may use the SSTM approach to calculate its market risk capital charge only if it has the approval to do so under the new [section 17A] (see item 5(3)(a) below); and</p> <p>(d) add a new subsection (3) to section 17 to provide that an authorized institution is not allowed to use (i) a combination of the SSTM approach and the STM approach or (ii) a combination of the SSTM approach and the IMA, to calculate its market risk capital charge.</p>	<p>In this item 4(1), section 19A(1) and section 17A are placed in square bracket as the exact section reference is yet to be determined. See also item 10 below which proposes the creation of the new section 19A and item 5 below which proposes the creation of the new section 17A.</p> <p>Pursuant to MAR11.7(1)(b) of the Basel Framework, this amendment prohibits the partial use of the SSTM approach with the new IMA. The partial use of the SSTM approach with the new STM approach is also explicitly prohibited.</p> <p>Reference: paragraphs 14, 16 and 433 of CP 19.01 and MAR11.7 of the Basel Framework</p>

Item 5. Add a new section 17A to the BCR – with the heading being “Authorized institution may apply for approval to use SSTM approach to calculate its market risk capital charge under the new market risk framework”

Matters to be provided	Remarks (including references)
(1) To provide that an authorized institution may apply to the Monetary	Pursuant to MAR11.7(2) of the Basel Framework, prior approval

Matters to be provided	Remarks (including references)
<p>Authority for approval to use the SSTM approach to calculate its market risk capital charge.</p>	<p>from the HKMA is required for the use of the SSTM approach.</p> <p>Reference: paragraph 428 of CP 19.01 and MAR11.7(2) of the Basel Framework</p>
<p>(2) To provide that the Monetary Authority may grant approval under item 5(1) above if the authorized institution making the application demonstrates to the satisfaction of the Monetary Authority that –</p> <p>(a) the institution’s risk-weighted amount for market risk, when using the SSTM approach –</p> <p style="padding-left: 40px;">(i) never exceeds HKD 1 billion; and</p> <p style="padding-left: 40px;">(ii) never exceeds 2% of its total risk-weighted assets;</p> <p>(b) the aggregate notional amount of non-centrally cleared derivatives (including both banking book and trading book positions) never exceeds HKD 6 trillion;</p> <p>(c) the institution is not a G-SIB, a D-SIB or a subsidiary of a G-SIB; and</p>	<p>The BCBS set out three indicative criteria to determine the appropriateness of the use of the simplified standardized approach by a bank in MAR11.7(1) of the Basel Framework. We have covered them in (c), (d) and item 4(2) above.</p> <p>In addition to the BCBS’s indicative criteria, we have laid down two quantitative criteria (a) and (b) which were proposed in paragraph 204 under section F of the <i>Consultative document on Simplified alternative to the standardized approach to market risk capital requirements</i> published by the BCBS in June 2017 (https://www.bis.org/bcbs/publ/d408.pdf). Although these were not adopted by the BCBS in the final standards, we consider these two criteria could identify AIs with relatively smaller or simpler market risk exposures, which are the targeted AIs for the use of the SSTM approach.</p>

Matters to be provided	Remarks (including references)
<p>(d) the institution does not hold any correlation trading portfolio.</p>	<p>Considering a D-SIB or a subsidiary of a G-SIB should also be capable of implementing the new STM approach, we further limit their use of SSTM approach in (c). The terms “G-SIB” and “D-SIB” are already defined in section 3E(1) of the BCR.</p> <p>Reference: paragraph 428 of CP 19.01 and MAR11.7(1) of the Basel Framework</p>
<p>(3) To provide that, subject to item 5(2) above and item 5(5) below, the Monetary Authority must determine an application from an authorized institution by—</p> <p>(a) granting approval to the authorized institution to use the SSTM to calculate its market risk capital charge; or</p> <p>(b) refusing to grant the approval.</p>	<p>The provision empowers the MA to approve or reject the AI to use the SSTM to calculate its market risk capital charge.</p>
<p>(4) To provide that the Monetary Authority can mandate that an authorized institution with relatively complex or sizeable risks in particular risk classes apply the STM approach instead of the SSTM approach, even if the authorized institution meets all the eligibility criteria stated in</p>	<p>Reference: paragraph 429 of CP 19.01 and MAR11.7(2) of the Basel Framework</p>

Matters to be provided	Remarks (including references)
item 5(2) above.	
(5) To provide that the Monetary Authority may grant an approval under this new section 17A (see item 5(3)(a) above) to an authorized institution to use the SSTM approach to calculate its market risk capital charge, specified in the approval, beginning on any date specified in the approval.	
(6) To provide that where an authorized institution has been approved to use the SSTM approach to calculate its market risk capital charge, the authorized institution shall give notice in writing to the Monetary Authority if the authorized institution — (a) no longer on a permanent basis fulfils all of the eligibility criteria stated in item 5(2) above; or (b) expects that any of the eligibility criteria stated in item 5(2) above will not be fulfilled.	Reference: paragraph 430 of CP 19.01

Item 6. Add a new section 17B to the BCR – with the heading being “Revocation of approval under the new section 17A”

Matters to be made	Remarks (including references)
<p>(1) To provide that, where—</p> <p>(a) an authorized institution that has been approved to use the SSTM approach to calculate its market risk; and</p> <p>(b) either—</p> <p style="padding-left: 40px;">(i) the Monetary Authority is satisfied that if the authorized institution were to make a fresh application under [section 17A] (see item 5 above) for approval to use the SSTM approval to calculate its market risk, the approval would be refused by virtue of [section 17A] (see item 5(3) above); or</p> <p style="padding-left: 40px;">(ii) an authorized institution has given the Monetary Authority a notice referred to in [section 17A] (see item 5(6) above),</p> <p>the Monetary Authority may, by notice in writing given to the authorized institution, revoke the approval granted under</p>	<p>This provision empowers the MA to revoke the approval under the new section 17A and also specifies the ground on which this power can be exercised.</p> <p>In this item 6(1), section 17A is placed in square bracket as the exact section reference is yet to be determined. See also item 5 above which proposes the creation of the new section 17A.</p>

Matters to be made	Remarks (including references)
<p>[section 17A] (see item 5(3)(a) above) and require the authorized institution to use another approach under the amended section 17(1) instead of the SSTM approach to calculate its market risk beginning on such date as specified in the notice.</p>	

Item 7. Amend section 18 of the BCR – keep the same section heading, except for updating the reference to “IMM approach” to become “IMA”

Matters to be made	Remarks (including references)
<p>(1) To amend section 18(1) of the BCR by removing everything in section 18(1); and provide that an authorized institution may apply to the Monetary Authority for approval to use the IMA to calculate its market risk capital charge and the application should refer to individual trading desks; and to repeal section 18(1A) of the BCR.</p>	<p>Under Basel 2.5 (i.e. the current framework), an AI may submit an application for the MA’s approval to use the IMM approach to calculate the market risk capital charge for general market risk or specific risk, or both, for its market risk exposures, in any combination of the four risk categories.</p> <p>The manner in which an AI should submit such an application is described in section 18(1A) of the BCR. This is no longer applicable in the new framework.</p> <p>Under the new framework, the model approval process is more granular and extends to the level of individual regulatory trading desks. An AI must specify in the application the trading desks nominated for seeking the MA’s approval for the use of new IMA.</p> <p>Reference: paragraph 260 and 262 of CP 19.01 and MAR30.4(2) of the Basel Framework</p>

Matters to be made	Remarks (including references)
<p>(2) To add a new subsection (1B) to section 18 of the BCR to provide that an approval to use the IMA would not be granted to an authorized institution by the Monetary Authority for an individual trading desk which holds securitisation exposures and/or equity investments in funds that cannot be looked through but are assigned to the trading book.</p>	<p>This provision prohibits AIs from using the new IMA for (i) securitisation exposures and (ii) equity investments in funds that cannot be looked through but are assigned to the trading book in accordance to the conditions set out in paragraph 30 of the CP.</p> <p>Reference: paragraph 263 of CP 19.01 and MAR11.9 of the Basel Framework</p>
<p>(3) To add a new subsection (1C) to section 18 of the BCR to provide that an approval to use the IMA would not be granted to an authorized institution by the Monetary Authority for all its trading desks if, following the approval, less than 30% of its aggregate market risk capital charges are based on positions held in trading desks referred to in the approval.</p>	<p>Reference: paragraph 341 of CP 19.01</p>
<p>(4) To amend section 18(2) of the BCR by deleting “Subject to subsections (1A), (3), (5) and (8),” and adding “Subject to subsections (1B), (1C), (3) and (5),”; and deleting paragraph (a) in section 18(2) and adding the following “(a) granting approval to the</p>	<p>The amendments update the subsection references.</p> <p>We will also update Schedule 3 mentioned in subsection (3) in order to reflect all the general criteria and qualitative criteria for AIs’ use</p>

Matters to be made	Remarks (including references)
<p>institution to use the IMA to calculate its market risk capital charge to which the application relates; or”.</p>	<p>of the IMA under the new market risk framework.</p>
<p>(5) To amend section 18(3) of the BCR by updating the reference to “Schedule 3” to become a new Schedule in item 4 in Part A(4) (“Internal Models Approach”).</p>	
<p>(6) To amend section 18(4) of the BCR by removing everything in section 18(4); and provide that, where an authorized institution uses the IMA to calculate its market risk capital charge, the institution must not, without the prior consent of the Monetary Authority, make any change to the core model documentation that is the subject of the approval granted to the institution under the amended section 18(2)(a) (see item 7(4) above).</p>	<p>MAR30.14 of the Basel Framework requires that a bank must receive approval from its supervisory authority prior to implementing any significant changes to its internal models used to determine market risk capital requirements.</p> <p>With reference to paragraphs 278 to 281 of the CP, we introduced the concept of “core model documentation” and “non-core model documentation”.</p> <p>The core model documentation should cover all the key components of the internal models. It is of essential importance that the key components of an internal model are properly documented. This implies a reliable documentation which at any time correctly reflects</p>

Matters to be made	Remarks (including references)
	<p>what the AI is actually doing.</p> <p>We believe that the core model documentation and its linkage with significant model changes are essential for effectively monitoring changes to AIs' internal models. As such, instead of "significant change to internal models", we proposed the wording "change to the core model documentation" in this provision.</p> <p>Reference: paragraph 278–281 of CP 19.01 and MAR30.14 of the Basel Framework</p>
<p>(7) To amend section 18(5) of the BCR by removing everything in section 18(5); and provide that the Monetary Authority may grant an approval under the amended section 18(2)(a) (see item 7(4) above) to an authorized institution to use the IMA to calculate its market risk capital charge, for any trading desks, specified in the approval, beginning on any date, or the occurrence of any event, specified in the approval.</p>	<p>The IMA under the new framework is subject to a more granular model approval process whereby internal models are approved for use at the level of individual trading desks. The approval will no longer refer to risk categories or any local or overseas business of the institution.</p>
<p>(8) To amend section 18(6) of the BCR by removing everything in</p>	<p>This provision requires an AI that uses the IMA for any of its trading</p>

Matters to be made	Remarks (including references)
<p>section 18(6); and provide that where an authorized institution is granted an approval under the amended section 18(2)(a) (see item 7(4) above) and uses the IMA to calculate its market risk capital charge for the approved trading desks, it must, in respect of each approved trading desk, additionally use the STM approach to calculate its market risk capital charge.</p>	<p>desks should also calculate a stand-alone STM approach capital charge for each approved trading desk. This allows the AI to immediately switch to the STM approach if required to do so.</p> <p>Reference: paragraph 15 (the second bullet) and 261 of CP 19.01 and MAR11.8(2) of the Basel Framework</p>
<p>(9) To add a new subsection (6A) to section 18 of the BCR to provide that where an authorized institution is granted an approval under the amended section 18(2)(a) (see item 7(4) above), it must, additionally use the STM approach to calculate its market risk capital charge for all positions across all trading desks regardless of whether it is an approved trading desk.</p>	<p>The intent of this provision is to ensure that the AIs can calculate the threshold for the Basel III output floor. For details of Basel III output floor, please refer to RBC20 of the Basel Framework.</p> <p>Reference: paragraph 15 (the first bullet) and 261 of CP 19.01 and MAR11.8(1) of the Basel Framework</p>
<p>(10) To repeal section 18(7) of the BCR.</p>	
<p>(11) To repeal section 18(8) of the BCR.</p>	
<p>(12) To add the following new definition to section 18(9) of the BCR to</p>	

Matters to be made	Remarks (including references)
<p>provide that, in this section—</p> <p><i>core model documentation</i> has the meaning given by item 4(1)(d)(i) in Part A(4) (“Internal Models Approach”).</p>	
<p>(13) To repeal the following definitions in section 18(9) of the BCR—</p> <p><i>deemed application</i></p> <p><i>group of relevant charges</i></p> <p><i>relevant charges</i></p>	

Item 9. Amend section 19 of the BCR – keep the same section heading, except for updating the reference to “IMM approach” to become “IMA”

Matters to be provided	Remarks (including references)
<p>(1) To amend section 19(1) of the BCR by adding “the internal model falls into the backtesting red zone in accordance with item 3.4(1)(c) in Part A(4) (“Internal Models Approach”) which indicates an</p>	<p>To further specify that the Monetary Authority could take measures set out in subsection (2) (e.g. to disallow the use of models) when the internal model falls into the backtesting red zone.</p>

Matters to be provided	Remarks (including references)
<p>inaccurate model or problems with the basic integrity of the model” under a new subparagraph (iii) of subsection (b).</p>	<p>Reference: paragraph 353 of CP 19.01 or MAR32.15 of the Basel framework</p>
<p>(2) To amend section 19(2)(a) of the BCR by removing everything in section 19(2)(a); and provide that the Monetary Authority may, by notice in writing given to the institution, require the institution to use the STM approach instead of the IMA to calculate its market risk capital charge in respect of trading desks as specified in the notice, beginning on such date, or the occurrence of such event, as specified in the notice.</p>	<p>To update that under the new framework, internal models are approved for use at the level of individual trading desks.</p>
<p>(3) To amend section 19(4)(a) of the BCR by removing everything in section 19(4)(a); and provide that, for the avoidance of doubt, it is hereby declared that the requirements specified in the new Schedule in item 4 in Part A(4) (“Internal Models Approach”) are also applicable to and in relation to an authorized institution using the IMA to calculate its market risk capital charge in respect of the use by the institution of an internal model to which a change of the core model documentation referred to in the amended section 18(4) (see</p>	<p>To update the concept of “core model documentation” referred to in the amended section 18(4) of the BCR.</p>

Matters to be provided	Remarks (including references)
<p>item 7(6) above) relates (whether or not the institution has, in respect of that change, been given the prior consent referred to in the amended section 18(4)), and section 19(1)(b) and the other provisions of this section apply to the institution accordingly.</p>	

Item 10. Add a new section 19A to the BCR – with the heading being “Measures which must be taken by an authorized institution if a trading desk using IMA no longer fulfils back-testing requirements or is assigned to the red zone in the profit and loss attribution test”

Matters to be provided	Remarks (including references)
<p>(1) To provide that, subject to item 3.5(5) in Part A(4) (“Internal Models Approach”), where —</p> <p>(a) an authorized institution that has been approved to use the IMA to calculate its market risk capital charge for a trading desk; and</p> <p>(b) either that trading desk —</p> <p style="padding-left: 40px;">(i) no longer fulfils the back-testing requirements under item 3.5(1) in Part A(4) (“Internal Models</p>	<p>Under the new market risk framework, each trading desk must pass two validation tests on an ongoing basis to maintain the eligibility to the use of internal models. Trading desks that fail either of the two tests must use the standardized approach.</p> <p>(i) Profit and loss attribution: a test to determine whether the internal model comprehensively measures the risks that drive the daily profits and losses of the trading desk.</p> <p>(ii) Back-testing: a test to determine if the risk estimated by the</p>

Matters to be provided	Remarks (including references)
<p>Approach”); or</p> <p>(ii) is assigned to the red zone in the profit and loss attribution test under item 3.5(3) in Part A(4) (“Internal Models Approach”),</p> <p>the authorized institution must use the STM approach to calculate its market risk capital charge for that trading desk together with trading desks that are not approved trading desks until that trading desk has satisfied the back-testing requirements over the past 12 months and has been reassigned to the green zone in the profit and loss attribution test. The authorized institution shall give notice in writing to the Monetary Authority upon switching to the STM approach and upon switching back to the IMA.</p>	<p>internal model is sufficiently conservative to cover observed trading losses.</p> <p>Unlike section 19 of the BCR, any trading desk failing either of the two tests above would result in an automatic switch to the new STM approach.</p> <p>Reference: paragraph 357 and 376 of CP 19.01 and MAR30.4(3)(b)–(c) and MAR32.1 of the Basel Framework</p>

Item 11. Repeal the following existing sections of the BCR

Matters to be provided	Remarks (including references)
<p>(1) Repeal sections 18A, 23A and 23B.</p>	

PART A(2) – BOUNDARY BETWEEN THE TRADING BOOK AND THE BANKING BOOK

Item 1. Amend the following existing definition in section 2(1) of the BCR

Exiting definitions	Remarks (including references)
<p>(1) Repeal the existing definition of “banking book” and substitute:</p> <p>“banking book in relation to an authorized institution, consists of—</p> <p>(a) the institution’s on-balance sheet exposures and off-balance sheet exposures set out in item 3(4) below; and</p> <p>(b) all of the institution’s other on-balance sheet exposures and off-balance sheet exposures which are not assigned to the trading book.”</p>	<p>This item 1(1) updates the definition of banking book in order to include the instruments under the banking book list set out in item 3(4) below.</p>

Item 2. Add the following new definitions in section 281 of the BCR

New definitions	Remarks (including references)
<p>(1) internal risk transfer in relation to the calculation of an authorized institution’s market risk capital charge, means an internal written record of</p>	<p>Reference: paragraph 40 of CP19.01 and RBC25.18 of the Basel Framework.</p>

New definitions	Remarks (including references)
a transfer of risk within the banking book, between the banking book and the trading book or between different desks within the trading book;	
(2) eligible internal risk transfer in relation to the calculation of an authorized institution’s market risk capital charge, means an internal risk transfer that fulfils the requirements of item 5(1) below.	

Item 3. Add a new section after section 281 in Division 1 of Part 8 of the BCR – with the heading being “Trading book”

Matters to be provided	Remarks (including references)
(1) To provide that a trading book, in relation to an authorized institution, means the institution’s exposures that meet the specifications for trading book instruments as set out in this item.	<p>We replaced the definition of “trading book” in section 2(1) by referring it to this new section (see item 2(4) in Part A(1) (“Prescribed approaches in relation to calculation of the market risk capital charge under the new market risk framework”)).</p> <p>The original definition of the trading book in section 2(1) has been</p>

Matters to be provided	Remarks (including references)
	<p>one of the main weaknesses in the design of the current regime. The current boundary is determined based on an AI’s trading intent, which is a subjective and hard-to-verify criterion. It allows flexibility for AIs to arbitrage the assignment of an instrument between the trading book and booking book.</p> <p>The revised definition of the trading book is designed to improve consistency of the designation and to reduce arbitrage opportunities between the regulatory books.</p> <p>Reference: paragraph 23 of CP19.01 and RBC25.1 of the Basel Framework.</p>
<p>(2) To provide that, unless specifically otherwise provided for in item 3(4) and 3(10)(a) below, an authorized institution must assign to the trading book, upon initial recognition on its books, an instrument that is held for one or more of the following purposes—</p> <ul style="list-style-type: none"> (a) short-term resale; (b) profiting from short-term price movements; 	<p>In line with paragraph 27 of the CP and RBC25.5 of the Basel Framework, the AI’s trading intent is still the first criterion to determine whether an instrument should be assigned to the trading book or not. This subjective criterion will however be supplemented by three lists: (i) a list of instruments that must be assigned to the trading book (see item 3(3) below); (ii) a list of instruments that must be allocated to the banking book (or in order</p>

Matters to be provided	Remarks (including references)
<p>(c) locking in arbitrage profits; or</p> <p>(d) hedging risks that arise from instruments that are held for one or more of the purposes in item 3(2)(a), (b) and (c) above.</p>	<p>words, a list of instruments that must not be assigned to the trading book) (see item 3(4) below); and (iii) a list of instruments “presumed” to be assigned to the trading book (see item 3(5) below), but which may instead be assigned to the banking book with the MA’s approval (see item 3(6) below).</p> <p>Reference: paragraph 27 of CP19.01 and RBC25.5 of the Basel Framework.</p>
<p>(3) To provide that, unless specifically otherwise provided for in item 3(4) and 3(10)(a) below, an authorized institution must assign—</p> <p>(a) instruments in the correlation trading portfolio;</p> <p>(b) instruments that would give rise to a net short credit or equity position in the banking book; or</p> <p>(c) instruments resulting from securities underwriting commitments, and relate only to securities that are expected to be actually purchased by the institution on the settlement date,</p> <p>to the trading book upon initial recognition on its books on the basis that</p>	<p>This item 3(3) provides for a list of instruments that must be allocated to the trading book.</p> <p>Reference: paragraph 28 of CP19.01 and RBC25.6 of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p>the instruments above are seen as being held for at least one of the purposes as set out in item 3(2) above.</p>	
<p>(4) To provide that an authorized institution must assign the following instruments to the banking book—</p> <ul style="list-style-type: none"> (a) unlisted equities; (b) instruments designated for securitization warehousing; (c) direct holdings of real estate and derivatives on such direct holdings; (d) retail and small or medium-sized enterprise credit; (e) equity investments in a collective investment scheme, unless the institution meets at least one of the following conditions: <ul style="list-style-type: none"> (i) the institution is able to apply the look-through approach to the collective investment scheme; or (ii) the institution obtains daily price quotes for the collective investment scheme and it has access to the information contained in the collective investment scheme’s mandate or in 	<p>This item 3(4) provides for a list of instruments that must not be allocated to the trading book. In other words, these instruments must be allocated to the banking book as set out in paragraph 30 of the CP and RBC25.8 of the Basel Framework.</p> <p>In some cases, an instrument could be included in the list of this sub-item or other sub-items. To avoid confusion, the list in this sub-item takes precedence over the other two lists in item 3(3) above and item 3(5) below.</p> <p>In item 3(4)(e)(i), “look-through approach” has been defined in item 2(5) in Part A(3) (“Standardized (Market Risk) Approach”).</p> <p>Reference: paragraph 30 of CP19.01 and RBC25.8 of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p>the relevant regulations governing such a collective investment scheme;</p> <p>(f) hedge funds;</p> <p>(g) derivative contracts and collective investment schemes that have the instrument types set out in item 3(4)(a)–(f) above as underlying assets; or</p> <p>(h) instruments held for the purpose of hedging a particular risk of a position in the types of instruments in item 3(4)(a)–(g) above.</p>	
<p>(5) To provide that, unless specifically otherwise provided for in item 3(4) above, item 3(6) below and item 3(10)(a) below, an authorized institution must assign—</p> <p>(a) instruments held as accounting trading assets or liabilities;</p> <p>(b) instruments resulting from market-making activities;</p> <p>(c) equity investments in a collective investment scheme excluding those assigned to the banking book under item 3(4)(e) above;</p>	<p>In addition to the “must” lists in items 3(3) and 3(4) above, this item 3(5) provides for the definition of the trading book with a list of instruments “presumed” to be in the trading book. An AI must obtain approval from the Monetary Authority before any instruments referenced in this list can be assigned to the banking book.</p> <p>Reference: paragraph 31 of CP19.01 and RBC25.9 of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p>(d) listed equities;</p> <p>(e) trading-related repo-style transactions; or</p> <p>(f) options (including embedded derivatives from instruments that the institution issued out of its own banking book and that relate to credit or equity risk),</p> <p>to the trading book upon initial recognition on its books on the basis that the instruments above are presumed to be held for at least one of the purposes as set out in item 3(2) above.</p>	
<p>(6) To provide that if an authorized institution believes that it needs to deviate from item 3(5) above, it must—</p> <p>(a) submit a written request to the Monetary Authority and the institution must provide evidence that the instrument concerned is not held for any of the purposes as set out in item 3(2)(a)–(d) above in the request;</p> <p>(b) receive an explicit approval from the Monetary Authority to assign the instrument concerned to the banking book; and</p>	<p>This item 3(6) provides that an AI may assign an instrument under the presumptive list in item 3(5) above to the banking book if it receives an explicit approval from the Monetary Authority to do so on the ground that the concerned instrument is not held for trading purposes.</p> <p>Reference: paragraph 32 of CP19.01 and RBC25.10 of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p>(c) document all deviations from item 3(5) above in detail on an on-going basis.</p> <p>In cases where this approval is not given by the Monetary Authority, the institution must assign the instrument concerned to the trading book.</p>	
<p>(7) To provide that, in addition to item 3(6) above, the Monetary Authority may require an authorized institution to provide, within a specified period, evidence that an instrument in the trading book, other than one falling in item 3(3) above, is held for at least one of the purposes as set out in item 3(2)(a)–(d) above. If—</p> <p>(a) the authorized institution has not, within the specified period, provided sufficient evidence to satisfy the Monetary Authority that the instrument is held for at least one of the purposes as set out in item 3(2)(a)–(d) above; or</p> <p>(b) the Monetary Authority is of the view that the instrument customarily belongs to the banking book,</p> <p>the Monetary Authority may require the authorized institution to assign</p>	<p>This item 3(7) is to provide the Monetary Authority with the power to require an AI to switch an instrument from the trading book to the banking book if an instrument is deemed to be improperly assigned.</p> <p>Reference: paragraph 33 of CP19.01 and RBC25.11 of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
such instrument to the banking book within a specified period.	
<p>(8) To provide that the Monetary Authority may require an authorized institution to provide, within a specified period, evidence that an instrument in the banking book, other than one falling in item 3(4) above, is not held for any of the purposes as set out in item 3(2)(a)–(d) above. If—</p> <p>(a) the authorized institution has not, within the specified period, provided sufficient evidence to satisfy the Monetary Authority that the instrument is not held for any of the purposes as set out in item 3(2)(a)–(d) above; or</p> <p>(b) the Monetary Authority is of the view that the instrument customarily belongs to the trading book,</p> <p>the Monetary Authority may require the authorized institution to assign such instrument to the trading book within a specified period.</p>	<p>This item 3(8) provides for the Monetary Authority with the discretion to switch an instrument from the banking book to the trading book if an instrument is deemed to be improperly assigned.</p> <p>Reference: paragraph 34 of CP19.01 and RBC25.12 of the Basel Framework.</p>
<p>(9) To provide that an authorized institution must—</p>	<p>This item 3(9) provides for the documentation requirements regarding an instrument’s initial designation. Particularly, AIs</p>

Matters to be provided	Remarks (including references)
<ul style="list-style-type: none"> (a) have clearly defined policies, procedures and documented practices for determining which instruments are to be included in or are to be excluded from the trading book; (b) have effective internal controls to ensure all instruments are being properly assigned initially to the trading book or banking book; (c) keep comprehensive records to demonstrate compliance by it with the policies and procedures in item 3(9)(a) above; and (d) conduct, at least on an annual basis by the institution's internal auditors, an independent review or audit of the institution's compliance with the requirements specified in item 3(9)(a) above. 	<p>must document the rationale for including an instrument in the trading book and their compliance with the framework's scope of application.</p> <p>Reference: paragraph 35 of CP19.01 and RBC25.13 of the Basel Framework.</p>
<p>(10) To provide that an authorized institution must—</p> <ul style="list-style-type: none"> (a) only include an instrument in the trading book that there is no legal impediment against selling and fully hedging it, and (b) fair value daily each instrument in the trading book and recognise any valuation change in the profit and loss account. 	<p>Reference: paragraph 25–26 of CP19.01 and RBC25.3–25.4 of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p>(11) To provide that, in item 3(5)(f) above:</p> <p><i>embedded derivative</i>, means a derivative contract that is defined in paragraph (b) of <i>derivative contract</i> in section 2(1) of the BCR.</p>	<p>This item 3(11) provides for the definition of “embedded derivative” used in item 3(5)(f) above.</p> <p>Reference: paragraph 31 (footnote 9) of CP19.01 and RBC25.9 (footnote 5) of the Basel Framework.</p>

Item 4. Add a new section in Division 1 of Part 8 of the BCR – with the heading being “Restrictions on moving instruments between books”

Matters to be provided	Remarks (including references)
<p>(1) To provide that, subject to items 3(7) and (8) above and item 4(2) below, an authorized institution must not move any instruments between the trading book and the banking book after its initial designation.</p>	<p>In line with the revised market risk framework, this item 4(1) provides for a strict limit on the movement of instruments between the banking book and the trading book.</p> <p>Reference: paragraph 36 of CP19.01 and RBC25.14 of the Basel Framework.</p>
<p>(2) To provide that an authorized institution must not move an instrument between the trading book and the banking book unless—</p>	<p>This item 4(2) provides for the two situations where an AI may switch an instrument between the trading book and the banking</p>

Matters to be provided	Remarks (including references)
<p>(a) the instrument is reclassified to be an accounting trading asset or liability (in which case there is a presumption that the instrument is in the trading book, as required by item 5(a) above); or</p> <p>(b) the institution obtains the approval from the Monetary Authority to do so under extraordinary circumstances.</p>	<p>book.</p> <p>Reference: paragraph 36 and 38 of CP19.01 and RBC25.14 and RBC25.16 of the Basel Framework.</p>
<p>(3) To provide that, after each move under item 4(2) above, an authorized institution must—</p> <p>(a) determine whether the total capital charge across the banking book and trading book is reduced immediately after the move; and</p> <p>(b) impose the reduced amount, if any, as a fixed market risk capital surcharge. The surcharge is allowed to run off as such position matures or expires, in a manner agreed with the Monetary Authority.</p>	<p>This item 4(3) provides that if the capital charge for an instrument is reduced as a result of moving the instrument from one book to the other, the difference in the capital charge as measured at the time of the move is imposed as a fixed and additional market risk capital charge.</p> <p>Reference: paragraph 37 of CP19.01 and RBC25.15 of the Basel Framework.</p>
<p>(4) To provide that an authorized institution must have in place policies to move an instrument between the trading book and the banking book. The</p>	<p>This item 4(4) provides for the documentation requirements regarding moves of instruments between the trading book and the</p>

Matters to be provided	Remarks (including references)
<p>institution must review and if necessary update the policies at least on an annual basis based on an analysis of all extraordinary circumstances mentioned in item 4(2)(b) above identified during the previous 12 months and must notify the Monetary Authority on any change in the policies.</p>	<p>banking book.</p> <p>Reference: paragraph 39 of CP19.01 and RBC25.17 of the Basel Framework.</p>

Item 5. Add a new section in Division 1 of Part 8 of the BCR – with the heading being “Treatment of internal risk transfers”

Matters to be provided	Remarks (including references)
<p>(1) To provide that an authorized institution may recognize internal risk transfers from the banking book to the trading book, in relation to calculation of its market risk capital charge, which aim to—</p> <p style="padding-left: 40px;">(a) hedge a credit risk exposure in the banking book where if it fulfils the requirements of item 100 of the document in footnote⁴ or item 42 of the document in footnote⁵, as the case requires; or</p>	<p>AIs may choose to hedge some of risks in the banking book via positions held in the trading book. The current framework only specifies the treatment for credit risk whereby a recognized credit derivative contract booked in the AI’s trading book as a hedge to a credit exposure booked in the AI’s banking book shall be excluded in the calculation of the market risk capital charge under section 283(2)(a) for the current STM approach and section</p>

⁴ https://www.hkma.gov.hk/media/eng/regulatory-resources/consultations/Annex_1_ECAI_mapping_tables_20220630.pdf

⁵ https://www.hkma.gov.hk/media/eng/regulatory-resources/consultations/Annex_2_BCAR_2023_Credit_risk_20220630.pdf

Matters to be provided	Remarks (including references)
<p>(b) hedge a general interest rate risk exposure in the banking book where—</p> <p>(i) the institution documents the internal risk transfer with respect to the interest rate risk being hedged and the sources of such risk;</p> <p>(ii) the institution conducts the internal risk transfer with a dedicated trading desk that—</p> <p>(A) obtains an approval from the Monetary Authority;</p> <p>(B) obtains an external hedge directly from an external counterparty; or</p> <p>(C) obtains an external hedge from the market via a separate non-internal risk transfer trading desk acting as an agent, provided that the internal risk transfer entered into with the separate trading desk exactly matches the external hedge obtained from the external counterparty;</p>	<p>316(2)(a) for the current IMM approach. However, the framework is silent with respect to general interest rate risk.</p> <p>In line with paragraphs 43 to 49 of the CP and RBC25.20 to RBC25.27 of the Basel Framework, eligible internal risk transfers are introduced for credit risk and interest rate risk from the banking book to the trading book for regulatory capital purposes. Eligible internal risk transfers are taken into account in the market risk capital charge calculations, i.e. the trading book leg will be included in the market risk capital charge calculation to offset the external hedge. Requirements on recognized internal risk transfers of credit risk are specified in the credit risk framework. This is slightly different from the existing arrangement under section 283(2)(a) and section 316(2)(a) where we directly excluded the external hedge from the scope from the market risk capital framework. There is no concept of “internal risk transfer” under the current rules. We will use a new wording to reflect this in a new section in Part 8 (see item 6(2)(a) below) to provide for the positions to be used to calculate market risk capital charge,</p>

Matters to be provided	Remarks (including references)
<p>(iii) the institution calculates the market risk capital charge for the dedicated trading desk on a stand-alone basis.</p>	<p>irrespective of the approach the AI uses, and we will repeal section 283 and section 316 accordingly.</p> <p>We deliberately exclude the concept of recognized internal risk transfers of equity risk after further consideration. At this stage, we are not aware of any practical use case for such internal risk transfers.</p> <p>Reference: paragraph 43–49 of CP19.01 and RBC25.20–RBC25.27 of the Basel Framework.</p>

Item 6. Add a new section in Division 1 of Part 8 of the BCR – with the heading being “Positions to be used to calculate market risk capital charge”

Matters to be provided	Remarks (including references)
<p>(1) To provide that, subject to item 6(2) and (3) below, the institution must calculate its market risk capital charge for—</p> <p>(a) the institution’s trading book positions; and</p>	<p>This item 6(1) provides for the positions to be subject to the market risk capital charge, i.e. the scope. In the current BCR, we have two sections on “Positions to be used to calculate market risk” separately for STM approach and IMM approach (i.e.</p>

Matters to be provided	Remarks (including references)
<p>(b) the foreign exchange risk and commodity risk of the institution’s banking book positions.</p>	<p>section 283 and 316). However, we intend to include only one section which applies to all three approaches under the new market risk framework, since the scope of application is the same regardless of the approach used to calculate the capital charge. By doing so, we will repeal section 283 and 316 accordingly.</p> <p>The wording is based on the existing section 283(1), and updated according to the new market risk framework.</p> <p>Reference: paragraph 7 of CP19.01 and MAR11.1 of the Basel Framework.</p>
<p>(2) To provide that, an authorized institution must not include a position in the calculation of its market risk capital charge if the position is—</p> <p>(a) the banking book leg of an eligible internal risk transfer;</p> <p>(b) an exposure that under Division 4 of Part 3 is required to be deducted from any of the institution’s CET1 capital, Additional Tier 1 capital or Tier 2 capital; or</p>	<p>This item 6(2) is similar to the existing section 283(2). However, section 283(2)(a) is no longer applicable. In the new market risk framework, we have specific requirements on internal risk transfers where only the banking book leg of an eligible internal risk transfer should be excluded from the market risk framework. The trading book leg and the external hedge should be offset under the calculation of the market risk capital charge.</p> <p>There is an existing definition of “eligible CVA hedge” in section</p>

Matters to be provided	Remarks (including references)
<p>(c) an eligible CVA hedge.</p>	<p>2(1) of the BCR, and under section 226A of the BCR by reference to section 226T(1) of the BCR. However, to implement the new CVA risk framework, we intend to update the definition of “eligible CVA hedge” in section 2(1) and repeal the definition in section 226A of the BCR.</p> <p>Reference: paragraph 10, 11, 44, 48 and 52–53 of CP19.01 and MAR11.4–11.5, RBC25.22, RBC25.26 and RBC25.30 of the Basel Framework.</p>
<p>(3) To provide that, an authorized institution may, for the purposes of calculating the market risk capital charge for its foreign exchange risk, exclude a foreign exchange risk position from such calculation provided that—</p> <p>(a) the risk position is taken or maintained by the institution for the purpose of hedging partially or totally against any adverse effect of exchange rate movements on its capital ratio;</p> <p>(b) the risk position is of a structural (that is, non-dealing) nature;</p>	<p>Similar to the current market risk framework, i.e. section 295(2) and (3) of the BCR, the new market risk framework also allows AIs to exclude certain foreign exchange risk positions from its market risk capital charge if such positions were entered into or maintained with the intent to completely or partially hedge the adverse effects of exchange rate movements on its capital ratio.</p> <p>Under the new framework, the BCBS explicitly requires that the amount of the exclusion is limited to the amount that serves to neutralise fluctuation of the capital ratio due to foreign exchange</p>

Matters to be provided	Remarks (including references)
<p>(c) the institution’s risk management policy for structural foreign exchange positions obtains the approval from the Monetary Authority;</p> <p>(d) the establishment of, and any changes to, the risk position follow the risk management policy mentioned in item 6(3)(c) above;</p> <p>(e) the exclusion is limited to the amount of the risk position that neutralises the sensitivity of the capital ratio to movements in exchange rates;</p> <p>(f) the exclusion is made for at least six months;</p> <p>(g) the institution applies the exclusion of the position consistently, with the exclusionary treatment of the hedge remaining in place for the life of the assets or other items; and</p> <p>(h) the institution keeps comprehensive records of the position and amount excluded from the market risk capital charge.</p>	<p>movements. Also, the new framework requires AIs to prepare and submit to the MA a risk management policy for structural positions.</p> <p>Reference: paragraph 9 of CP19.01 and MAR11.3 of the Basel Framework.</p>
<p>(4) To provide that, where a position of an authorized institution does not fall within item 6(1) above by virtue of item 6(2) above, the institution must</p>	<p>This item 6(4) is similar to the existing section 283(6) of the BCR.</p>

Matters to be provided	Remarks (including references)
apply Part 4, 5, 6 or 7 of the BCR, as the case requires, to calculate the credit risk for that position.	

PART A(3) – STANDARDIZED (MARKET RISK) APPROACH (“STM APPROACH”)

Item 1. Amend the following existing definitions in section 2(1) of the BCR

Existing definitions – amendments to be made	Remarks (including references)
<p>(2) Repeal the existing definition of “commodity” and substitute:</p> <p>“commodity—</p> <p>(a) in relation to the calculation of counterparty credit risk, means any of the following—</p> <p>(i) any metal (including gold), energy, agricultural product or any other physical product;</p> <p>(ii) any freight rate, climatic variable or other economic statistic (other than any measure of inflation); or</p> <p>(b) in relation to the calculation of market risk and CVA risk, means any energy, freight, non-precious metals, gaseous combustibles, precious metals, grains and oilseed, livestock and dairy, softs and other</p>	<p>We would like to include a more specific definition of commodity for the calculation market risk and CVA risk capital charges.</p> <p>While gold is classified as a foreign exchange under the current STM approach (i.e. the SSTM approach in the future), it will be classified as a commodity under the new STM approach and IMA under the new market risk framework as well as CVA risk framework.</p> <p>Reference: paragraph 174 of CP 19.01 and MAR21.82 of the Basel Framework.</p>

Existing definitions – amendments to be made	Remarks (including references)
<p>agricultural products or any other commodity products, where—</p> <ul style="list-style-type: none"> (i) under the SSTM approach, gold is treated separately under the foreign exchange risk class and not considered under precious metals; and (ii) in any other case, precious metals include gold; or (c) in relation to the calculation of credit risk (other than counterparty credit risk), means any item falling within paragraph (a)(i) that is traded on an exchange.” 	

Item 2. Add the following new definitions in section 281 of the BCR

New definitions	Remarks (including references)
<p>(1) bucket, in case of market risk capital charge under the STM approach, in relation to a risk class, means any of the buckets determined by an authorized institution for such risk class under item 5.4(1) below;</p>	
<p>(2) covered bond, has the meaning given by rule 17 of the Banking (Liquidity) Rules (Cap. 155 sub. leg. Q);</p>	<p>This is the definition of covered bond in the Banking (Exposure Limits) Rules.</p> <p>Reference: paragraph 148 (footnote 31) of CP 19.01 and MAR21.51 (footnote 15) of the Basel Framework.</p>
<p>(3) CTP means correlation trading portfolio;</p>	<p>The term “correlation trading portfolio” is already defined in section 281 of the BCR.</p>
<p>(4) gross jump-to-default risk amount, in relation to SA-DRC, means the estimated loss or gain on an individual exposure as a result of the default of an obligor;</p>	

New definitions	Remarks (including references)
<p>(5) look-through approach means the decomposition of an instrument into its underlying exposures or its individual components. In the case of an collective investment scheme, such decomposition is based on sufficient and frequent information regarding its composition which is verified by an independent third party;</p>	<p>Reference: paragraph 30 (the fifth bullet) of CP 19.01 and RBC25.8(5)(a) of the Basel Framework.</p>
<p>(6) net jump-to-default risk amount, in relation to SA-DRC, means the estimated loss or gain for an institution due to the default of an obligor, after offsetting gross jump-to-default risk amounts with respect to such an obligor;</p>	
<p>(7) qualifying covered bond means a covered bond that meets all conditions in rule 70(3) of the Banking (Exposure Limits) Rules (Cap. 155 sub. leg. S) at the inception of the covered bond and throughout its remaining maturity;</p>	<p>Reference: paragraph 148 (footnote 31) of CP 19.01 and MAR21.51 (footnote 15) of the Basel Framework.</p>
<p>(8) residual risk add-on means one component of the STM approach under [Division 1C of Part 8] to capture any additional risks beyond the main risk</p>	<p>Reference: paragraph 68 (the second bullet) of CP 19.01 and MAR20.4(3) of the Basel Framework.</p>

New definitions	Remarks (including references)
factors already captured in the SBM and the SA-DRC;	
<p>(9) risk class—</p> <p>(a) in case of market risk capital charge under the STM approach, means any of the following classes of risk which an institution’s market risk exposures can be allocated to: general interest rate risk, credit spread risk (non-securitization), credit spread risk (securitization: non-CTP), credit spread risk (securitization: CTP), equity risk, commodity risk and foreign exchange risk; or</p> <p>(b) in case of market risk capital charge under the IMA, means any of the following classes of risk which an institution’s market risk exposures can be allocated to: general interest rate risk, credit spread risk, equity risk, commodity risk and foreign exchange risk;</p>	Reference: paragraph 69 of CP 19.01 and MAR21.1(1) of the Basel Framework.
(10) risk factor means a variable that affects the value of an instrument;	Reference: paragraph 70 of CP 19.01 and MAR21.1(2) of the Basel Framework.

New definitions	Remarks (including references)
(11) RRAO means residual risk add-on;	This is the abbreviation for residual risk add-on.
(12) SA-DRC means standardized default risk charge;	This is the abbreviation for standardized default capital charge.
(13) SA-DRC (non-securitization) means the SA-DRC for the exposures as set out in item 7.2(1) below;	
(14) SA-DRC (securitization: CTP) means the SA-DRC for the exposures as set out in item 7.4(1) below;	
(15) SA-DRC (securitization: non-CTP) means the SA-DRC for the exposures as set out in item 7.3(1) below;	
(16) SBM means sensitivities-based method;	This is the abbreviation for sensitivities-based method.
(17) SBM curvature is a sensitivity to capture the changes in the value of an authorized institution's position due to movements in its non-volatility risk factors not captured by the SBM delta;	Reference: paragraph 74 of CP 19.01 and MAR10.16 of the Basel Framework.

New definitions	Remarks (including references)
(18) SBM curvature risk means the risk of changes in the value of an authorized institution’s position due to movements in its non-volatility risk factors not captured by the SBM delta risk;	Reference: paragraph 74 of CP 19.01 and MAR10.16 of the Basel Framework.
(19) SBM delta is a sensitivity to capture the changes in the value of an authorized institution’s position due to movements in its non-volatility linear risk factors;	Reference: paragraph 74 of CP 19.01 and MAR10.14 of the Basel Framework. “SBM delta” refers to the delta under the SBM of the new STM approach. This is to be distinguished from the “delta” under the SSTM approach (i.e. the current STM approach) which is simply called “delta”. See item 3(1) below.
(20) SBM delta risk means the risk of changes in the value of an authorized institution’s position due to movements in its non-volatility linear risk factors;	Reference: paragraph 74 of CP 19.01 and MAR10.14 of the Basel Framework.
(21) SBM vega is a sensitivity to capture the changes in the value of an authorized institution’s position due to movements in its volatility linear risk factors;	Reference: paragraph 74 of CP 19.01 and MAR10.15 of the Basel Framework. “SBM vega” refers to the vega under the SBM of the new STM

New definitions	Remarks (including references)
	<p>approach. This is to be distinguished from the “vega” under the SSTM approach (i.e. the current STM approach) which is simply called “vega”. See item 3(2) below.</p>
<p>(22) SBM vega risk means the risk of changes in the value of an authorized institution’s position due to movements in its volatility linear risk factors;</p>	<p>Reference: paragraph 74 of CP 19.01 and MAR10.15 of the Basel Framework.</p>
<p>(23) sensitivities-based method means one component of the STM approach, which captures SBM delta, SBM vega and SBM curvature risks within a particular risk class under [Division 1B of Part 8];</p>	<p>Reference: paragraph 68 (the first bullet) of CP 19.01 and MAR20.4(1) of the Basel Framework.</p>
<p>(24) standardized default risk charge means one component of the STM approach to capture jump-to-default risk for credit and equity instruments under [Division 1D of Part 8];</p>	<p>Reference: paragraph 68 (the third bullet) of CP 19.01 and MAR20.4(2) of the Basel Framework.</p>

Item 3. Amend the following existing definitions in section 281 of the BCR

Existing definitions – amendments to be made	Remarks (including references)
<p>(1) Repeal the existing definition of “delta” and substitute the following:</p> <p>“delta, in relation to the calculation of an authorized institution’s market risk capital charge for its option contracts under the SSTM approach, means a measure of the rate of change in the value of the option contract to changes in the value of the underlying exposure of the option contract;”.</p>	<p>We intend to distinguish the delta under the SSTM approach (i.e. the current STM approach) and the delta under the SBM of the new STM approach. We will label the latter one as “SBM delta” throughout the BCR.</p>
<p>(2) Repeal the existing definition of “vega” and substitute the following:</p> <p>“vega, in relation to the calculation of an authorized institution’s market risk capital charge for its option contracts under the SSTM approach, means a measure of the rate of change in the value of the option contract to changes in the volatility of the value of the underlying exposure of the option contract;”.</p>	<p>We intend to distinguish the vega under the SSTM approach (i.e. the current STM approach) and the vega under the SBM of the new STM approach. We will label the latter one as “SBM vega” throughout the BCR.</p>
<p>(3) Amend the existing definition of “investment grade” by—</p> <p>(a) in paragraph (a), replacing “Table A in Schedule 6” by “the LT ECAI</p>	<p>This is a consequential change arising from the removal of Schedule 6.</p>

Existing definitions – amendments to be made	Remarks (including references)
<p>rating mapping table for Type A ECAIs”;</p> <p>(b) in paragraph (b), replacing “Table B in Schedule 6 or Part 1 of Table E in that Schedule” by “the LT ECAI rating mapping table or ST ECAI rating mapping table for Type A ECAIs”;</p> <p>(c) in paragraph (c), replacing “Part 1 of Table C in Schedule 6 or Part 1 of Table E in that Schedule” by “the LT ECAI rating mapping table or ST ECAI rating mapping table for Type A ECAIs”;</p> <p>(d) in paragraph (d), replacing “Part 2 of Table C in Schedule 6 or Part 2 of Table E in that Schedule” by “the LT ECAI rating mapping table or ST ECAI rating mapping table for Type B ECAIs”;</p>	

Item 4. Add a new Division 1A (Calculation of market risk capital charge under STM approach: General) after Division 1 in Part 8 of the BCR

4.1 Add a new section to provide for the application of Divisions 1A to 1D

Matters to be provided	Remarks (including references)
<p>(1) To provide that Divisions 1A, 1B, 1C and 1D apply to an authorized institution which uses the STM approach to calculate its market risk capital charge.</p>	<p>This item 4.1(1) is similar to the existing section 282(1) of the BCR.</p> <p>As the new STM approach is a newly designed approach in the revised market risk framework, we will include the new STM approach in new Divisions 1A to 1D of Part 8. The current Divisions 2 to 10 will be slightly modified and renamed as the SSTM approach.</p>
<p>(2) To provide that unless the context otherwise requires, a reference to an authorized institution in Divisions 1A, 1B, 1C and 1D is a reference to an authorized institution which uses the STM approach to calculate its market risk capital charge.</p>	<p>This item 4.1(2) is similar to the existing section 282(2) of the BCR.</p>

4.2 Add a new section to provide for the calculation of risk-weighted amount for market risk

Matters to be provided	Remarks (including references)
<p>(1) To provide that an authorized institution shall calculate the market risk capital charge as the sum of—</p> <ul style="list-style-type: none">(d) ultimate SBM capital charge under item 5.1(1) below;(e) RRAO under item 6.1(1) below; and(f) SA-DRC under item 7.1(1) below.	<p>There are three components in the new STM approach, namely the sensitivities-based method (SBM), the residual risk add-on (RRAO) and the standardized default risk charge (SA-DRC).</p> <p>Reference: paragraph 68 of CP 19.01 and MAR20.4 of the Basel Framework.</p>
<p>(2) To provide that an authorized institution shall calculate its risk-weighted amount for market risk by multiplying the market risk capital charge as calculated pursuant to item 4.2(1) below by 12.5.</p>	<p>This item 4.2(2) is similar to the existing section 285 of the BCR.</p> <p>Reference: MAR20.1 of the Basel Framework.</p>

Item 5. Add a New Division 1B (Calculation of market risk capital charge: SBM capital charge) after the new Division 1A in Part 8 of the BCR

5.1 Add a new section to provide for general matters

Matters to be provided	Remarks (including references)
<p>(1) To provide that an authorized institution shall calculate the SBM capital charge for each of the three correlation scenarios as set out in item 5.3(1) below for the respective portfolios included in the calculation. Under each correlation scenario, the SBM capital charge is calculated by aggregating the following capital charges—</p> <ul style="list-style-type: none"> (a) SBM delta risk capital charge under item 5.2(1) below; (b) SBM vega risk capital charge under item 5.2(2) below; and (c) SBM curvature risk capital charge under item 5.2(3) below, <p>in all risk classes by a simple sum. The institution shall determine the ultimate SBM capital charge as the largest SBM capital charge resulting from the three correlation scenarios.</p>	<p>The SBM captures three risk sensitivities, namely, “delta”, “vega” and “curvature”. Delta risk measures the change in price resulting from a small price or rate shock to the value of each relevant risk factor. Vega risk is the risk due to variations in the volatility linear risk factors for an option – computed as the product of the vega of a given option and its implied volatility; and curvature risk captures all the additional risk due to changes in the underlying price not captured by delta risk.</p> <p>This item 5.1(1) also links with the correlation scenarios introduced in item 5.3 below. To address the risk that correlations in the movement of risk factors can fluctuate in periods of financial stress, sensitivities are aggregated in three ways, assuming high, medium and low correlations between risk factor shocks. The final capital charge is the largest of the capital</p>

Matters to be provided	Remarks (including references)
	<p>charges across the three correlation scenarios.</p> <p>Reference: paragraph 74, 83 and 84 of CP 19.01 and MAR20.4(1), MAR21.6 and MAR21.7 of the Basel Framework.</p>
<p>(2) To provide that an authorized institution shall calculate the SBM delta risk capital charge for all instruments in the respective portfolios included in the calculation, except for any position where the value at any point of time is purely driven by an exotic underlying and is subject to the RRAO in accordance with item 6.1(1)(a) below.</p>	<p>This item 5.1(2) specifies the positions to be subject to SBM delta risk capital charge.</p> <p>Reference: paragraph 78 of CP 19.01 and MAR21.2 of the Basel Framework.</p>
<p>(3) To provide that an authorized institution shall calculate the SBM vega risk capital charge for any instrument with optionality and any instrument whose cash flows cannot be written as a linear function of the underlying notional amount except for any position where the value at any point of time is purely driven by an exotic underlying and is subject to the RRAO in accordance with item 6.1(1)(a) below.</p>	<p>This item 5.1(3) specifies the positions to be subject to SBM vega risk capital charge.</p> <p>Reference: paragraph 78 of CP 19.01 and MAR21.2 of the Basel Framework.</p>
<p>(4) To provide that an authorized institution shall calculate the SBM curvature</p>	<p>This item 5.1(4) specifies the positions to be subject to SBM</p>

Matters to be provided	Remarks (including references)
<p>risk capital charge for—</p> <p>(a) any instrument with optionality and any instrument whose cash flows cannot be written as a linear function of the underlying notional amount, except for any position where the value at any point of time is purely driven by an exotic underlying and is subject to the RRAO in accordance with item 6.1(1)(a) below; or</p> <p>(b) all instruments subject to SBM delta risk capital charge except for any position where the value at any point of time is purely driven by an exotic underlying and is subject to the RRAO in accordance with item 6.1(1)(a) below, provided that such treatment is applied consistently over time.</p>	<p>curvature risk capital charge.</p> <p>Reference: paragraph 78 of CP 19.01 and MAR21.2 of the Basel Framework.</p>
<p>(5) To provide that, in this section—</p> <p><i>instrument with optionality</i> means an option contract or an instrument that includes an option component.</p>	<p>This item 5.1(5) provides the definition of the “instrument with optionality”.</p> <p>Reference: footnote 1 under MAR21.2(1) of the Basel Framework.</p>

5.2 Add a new section to provide for the SBM delta, SBM vega and SBM curvature risk charge

Matters to be provided	Remarks (including references)
<p>(1) To provide that an authorized institution shall calculate the SBM delta risk capital charge separately for each risk class. Specifically, for each risk class, an authorized institution shall—</p> <p>(a) determine a SBM delta sensitivity $delta_{k,i}$ for each instrument i subject to each SBM delta risk factor k as determined in accordance with item 5.4(2) below as follows (unless the institution is able to otherwise demonstrate to the satisfaction of the Monetary Authority that alternative formulations are conceptually sound and yield results very close to the formulae below)—</p> <p>(i) $delta_{k,i} = \frac{V_i(k+0.0001) - V_i(k)}{0.0001}$ for general interest rate risk, credit spread risk (non-securitization), credit spread risk (securitization: non-CTP), credit spread risk (securitization: CTP) and equity repo rate risk factors; or</p>	<p>This item 5.2(1) sets out the step-by-step approach to calculate the SBM delta risk capital charges for each risk class, which are inputs for calculating the SBM capital charge under item 5.1(1)(a) above.</p> <p>The below explains the mechanism of SBM calculations in general, taking the SBM delta sensitivity as an example. The logic applies to SBM vega and SBM curvature as well.</p> <ul style="list-style-type: none"> • Instruments subject to SBM delta are first mapped to a set of prescribed risk factors from which their values are derived. • Prescribed shocks are applied to calculate the SBM delta sensitivity for each risk factor. An instrument could be subject to capital charge for several risk factors within the same risk class or even under different risk classes. • Under each risk class, sensitivities to the same risk factor are net across instruments and such net sensitivities are multiplied by prescribed risk weights.

Matters to be provided	Remarks (including references)
<p>(ii) $delta_{k,i} = \frac{V_i(1.01k) - V_i(k)}{0.01}$ for equity price, commodity and foreign exchange risk factors,</p> <p>where $V_i(k)$ is the value of the instrument i as a function of the SBM delta risk factor k;</p> <p>(b) calculate the net sensitivity s_k for each SBM delta risk factor k by netting all $delta_{k,i}$ across all instruments in the portfolio as follows—</p> $s_k = \sum_i delta_{k,i}$ <p>(c) calculate the risk-weighted sensitivity WS_k as the product of the net sensitivity s_k and the prescribed risk weight RW_k as determined in accordance with item 5.6(1) below;</p> <p>(d) calculate the capital charge for each SBM delta bucket b, K_b, by aggregating the risk-weighted sensitivities within the same bucket using the correlation parameters ρ_{kl} depending on the correlation scenario as set out in item 5.3(1) below as follows—</p>	<ul style="list-style-type: none"> • The risk-weighted sensitivities are aggregated within each bucket, using the prescribed correlations applied within a prescribed aggregation formula. • The resulting “bucket level” capital charges are then aggregated using identical techniques from the previous step to determine the “risk class-level” SBM delta capital charge. <p>Reference: paragraph 80, 121 and 124–125 of CP 19.01 and MAR21.4, FAQ 1 under MAR21.17 and MAR21.19–21.24 of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p style="text-align: center;"> $K_b = \sqrt{\max\left(\sum_k WS_k^2 + \sum_k \sum_{l \neq k} \rho_{kl} WS_k WS_l, 0\right)}$; and </p> <p>(e) calculate the SBM delta risk capital charge by aggregating between the capital charges calculated for each of the SBM delta buckets within the risk class, using the correlation parameters γ_{bc} depending on the correlation scenario as set out in item 5.3(1) below as follows—</p> <p style="text-align: center;"> SBM delta risk capital charge = $\sqrt{\sum_b K_b^2 + \sum_b \sum_{c \neq b} \gamma_{bc} S_b S_c}$ </p> <p>where—</p> <p>(i) $S_b = \sum_k WS_k$ for all SBM delta risk factors in bucket b and $S_c = \sum_k WS_k$ in bucket c; and</p> <p>(ii) if these values for S_b and S_c produce a negative number for the overall sum of $\sum_b K_b^2 + \sum_b \sum_{c \neq b} \gamma_{bc} S_b S_c$, an authorized institution shall</p>	

Matters to be provided	Remarks (including references)
<p>calculate the SBM delta risk capital charge using an alternative specification whereby $S_b = \max [\min (\sum_k WS_k, K_b), -K_b]$ for all risk factors in bucket b and $S_c = \max [\min (\sum_k WS_k, K_c), -K_c]$ for all risk factors in bucket c.</p>	
<p>(2) To provide that an authorized institution shall calculate the SBM vega risk capital charge separately for each risk class. Specifically, for each risk class, an authorized institution shall—</p> <p>(a) determine a SBM vega sensitivity $vega_{k,i}$ for each instrument i subject to each SBM vega risk factor k as determined in accordance with item 5.4(3) below as follows (unless the institution is able to otherwise demonstrate to the satisfaction of the Monetary Authority that alternative formulation is conceptually sound and yields results very close to the formula below)—</p> $vega_{k,i} = \frac{\partial V_i}{\partial k} \times k$	<p>This item 5.2(2) sets out the step-by-step approach to calculate the SBM vega risk capital charges for each risk class, which are inputs for calculating the SBM capital charge under item 5.1(1)(b) above.</p> <p>Reference: paragraph 80, 121 and 126 of CP 19.01 and MAR21.4 FAQ 1 under MAR21.17 and MAR21.25 of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p>where—</p> <p>(i) SBM vega risk factor k is the respective implied volatility as set out in item 5.4(3) below; and</p> <p>(ii) $\frac{\partial V_i}{\partial k}$ is defined as the change in the value of the instrument i V_i as a result of a small amount of change to the implied volatility k;</p> <p>(b) calculate the net sensitivity s_k for each SBM vega risk factor k by netting all $vega_{k,i}$ across all instruments in the portfolio as follows—</p> $s_k = \sum_i vega_{k,i}$ <p>(c) calculate the risk-weighted sensitivity WS_k as the product of the net sensitivity s_k and the prescribed risk weight RW_k as determined in accordance with item 5.7(1) below;</p> <p>(d) calculate the capital charge for SBM vega bucket b, K_b, by aggregating the risk-weighted sensitivities within the same bucket using the correlation parameters ρ_{kl} depending on the correlation scenario as set</p>	

Matters to be provided	Remarks (including references)
<p>out in item 5.3(1) below as follows—</p> $K_b = \sqrt{\max\left(\sum_k WS_k^2 + \sum_k \sum_{l \neq k} \rho_{kl} WS_k WS_l, 0\right)}; \text{ and}$ <p>(e) calculate the SBM vega risk capital charge by aggregating between the capital charges calculated for each of the SBM vega buckets within the risk class, using the correlation parameters γ_{bc} depending on the correlation scenario as set out in item 5.3(1) below as follows—</p> $\text{SBM vega risk capital charge} = \sqrt{\sum_b K_b^2 + \sum_b \sum_{c \neq b} \gamma_{bc} S_b S_c}$ <p>where—</p> <p>(i) $S_b = \sum_k WS_k$ for all SBM vega risk factors in bucket b and $S_c = \sum_k WS_k$ in bucket c; and</p> <p>(ii) if these values for S_b and S_c produce a negative number for the overall sum of $\sum_b K_b^2 + \sum_b \sum_{c \neq b} \gamma_{bc} S_b S_c$, an authorized institution shall</p>	

Matters to be provided	Remarks (including references)
<p>calculate the SBM vega risk capital charge using an alternative specification whereby $S_b = \max [\min (\sum_k WS_k, K_b), -K_b]$ for all risk factors in bucket b and $S_c = \max [\min (\sum_k WS_k, K_c), -K_c]$ for all risk factors in bucket c.</p>	
<p>(3) To provide that an authorized institution shall calculate the SBM curvature risk capital charge separately for each risk class. Specifically, for each risk class, an authorized institution shall—</p> <p>(a) apply an upward shock and a downward shock to each instrument i subject to SBM curvature risk associated with each SBM curvature risk factor k determined in accordance with item 5.4(4) below to calculate CVR_k^+ and CVR_k^- as follows—</p> $CVR_k^+ = -\sum_i \left\{ V_i(x_k^{RW(Curvature)^+}) - V_i(x_k) - RW_k^{Curvature} \cdot S_{ik} \right\};$ $CVR_k^- = -\sum_i \left\{ V_i(x_k^{RW(Curvature)^-}) - V_i(x_k) + RW_k^{Curvature} \cdot S_{ik} \right\};$	<p>This item 5.2(3) sets out the step-by-step approach to calculate the SBM curvature risk capital charges for each risk class, which are inputs for calculating the SBM capital charge under item 5.1(1)(c) above.</p> <p>Reference: paragraph 82 and 121 of CP 19.01 and MAR21.5 and FAQ 1 under MAR21.17 of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p>where—</p> <ul style="list-style-type: none"> (i) x_k is the current level of risk factor k; (ii) $V_i(x_k)$ is the value of instrument i depending on the current level of SBM curvature risk factor k; (iii) $V_i\left(x_k^{(RW^{(curvature)+})}\right)$ and $V_i\left(x_k^{(RW^{(curvature)-})}\right)$ denote the value of instrument i after x_k is shocked upward and downward respectively; (iv) $RW_k^{(curvature)}$ is the risk weight for SBM curvature risk factor k for instrument i as determined in accordance with item 5.8(1) below; and (v) s_{ik} is— <ul style="list-style-type: none"> (A) for equity risk and foreign exchange risk class, the SBM delta sensitivity of instrument i with respect to the SBM delta risk factor that 	

Matters to be provided	Remarks (including references)
<p>corresponds to SBM curvature risk factor k; and</p> <p>(B) for other risk classes, the sum of SBM delta risk sensitivities to all tenors of the relevant curve(s) of instrument i with respect to SBM curvature risk factor k;</p> <p>(b) calculate the capital charge K_b for SBM curvature bucket b, using the correlation parameters ρ_{kl} depending on the correlation scenario as set out in item 5.3(1) below as follows—</p> $K_b = \max(K_b^+, K_b^-)$ <p>where</p> $\begin{cases} K_b^+ = \sqrt{\max\left(0, \sum_k \max(CVR_k^+, 0)^2 + \sum_k \sum_{l \neq k} \rho_{kl} CVR_k^+ CVR_l^+ \psi(CVR_k^+, CVR_l^+)\right)} \\ K_b^- = \sqrt{\max\left(0, \sum_k \max(CVR_k^-, 0)^2 + \sum_k \sum_{l \neq k} \rho_{kl} CVR_k^- CVR_l^- \psi(CVR_k^-, CVR_l^-)\right)} \end{cases}$ <p>where—</p> <p>(i) K_b is determined as the greater of the capital charge</p>	

Matters to be provided	Remarks (including references)
<p>under the upward scenario K_b^+ and the capital charge under the downward scenario K_b^- where—</p> <p>(A) the upward scenario is selected if $K_b = K_b^+$;</p> <p>(B) the downward scenario is selected if $K_b = K_b^-$; and</p> <p>(C) in the specific case where $K_b^+ = K_b^-$, if $\sum_k CVR_k^+ > \sum_k CVR_k^-$, it is deemed that the upward scenario is selected and $K_b = K_b^+$; otherwise the downward scenario is selected and $K_b = K_b^-$;</p> <p>(ii) $\psi(CVR_k^+, CVR_l^+)$ takes the value 0 if CVR_k^+ and CVR_l^+ both have negative signs; and $\psi(CVR_k^+, CVR_l^+)$ takes the value of 1 otherwise; and</p> <p>(iii) $\psi(CVR_k^-, CVR_l^-)$ takes the value 0 if CVR_k^- and CVR_l^- both have negative signs; and $\psi(CVR_k^-, CVR_l^-)$ takes the value of 1 otherwise;</p>	

Matters to be provided	Remarks (including references)
<p>(c) calculate the SBM curvature risk capital charge by aggregating between the capital charges calculated for each of the SBM curvature buckets within the same risk class using the correlation parameters γ_{bc} depending on the correlation scenario as set out in item 5.3(1) below as follows—</p> $\text{SBM curvature risk capital charge} = \sqrt{\max\left(0, \sum_b K_b^2 + \sum_b \sum_{c \neq b} \gamma_{bc} S_b S_c \psi(S_b, S_c)\right)}$ <p>where—</p> <p>(i) $S_b = \sum_k CVR_k^+$ for all risk factors in bucket b, when the upward scenario has been selected for bucket b in item 5.2(3)(b)(i) above; and $S_b = \sum_k CVR_k^-$ otherwise; and</p> <p>(ii) $\psi(S_b, S_c)$ takes the value 0 if S_b and S_c both have negative signs; and $\psi(S_b, S_c)$ takes the value of 1 otherwise.</p>	

5.3 Add a new section to provide for the correlation scenarios

Matters to be provided	Remarks (including references)
<p>(1) To provide that the three correlation scenarios are as follows—</p> <p>(a) the medium scenario, whereby the correlation parameters are set in accordance with items 5.6(2)–(3), 5.7(2)–(3) and 5.8(2)–(3) below;</p> <p>(b) the high scenario, whereby the correlation parameters ρ_{kl}^{high} and γ_{bc}^{high} are determined by multiplying the correlation parameters in the medium scenario by 1.25, where the resulting correlation parameters are subject to a cap at 100%; and</p> <p>(c) the low scenario, whereby the correlation parameters ρ_{kl}^{low} and γ_{bc}^{low} are calculated with using $\rho_{kl}^{low} = \max(2 \cdot \rho_{kl} - 100\%, 75\% \cdot \rho_{kl})$ and $\gamma_{bc}^{low} = \max(2 \cdot \gamma_{bc} - 100\%, 75\% \cdot \gamma_{bc})$ where ρ_{kl} and γ_{bc} equal the correlation parameters in the medium scenario.</p>	<p>To address the risk that correlations in the movement of risk factors can fluctuate in periods of financial stress, sensitivities are aggregated in three ways, assuming high, medium and low correlations between risk factor shocks. This item 5.3(1) sets out the three correlation scenarios accordingly.</p> <p>Reference: paragraph 83 of CP 19.01 and MAR21.6 of the Basel Framework.</p>

5.4 Add a new section to provide for the SBM risk factors

Matters to be provided	Remarks (including references)
<p>(1) To provide that an authorized institution shall, in respect of a risk class, determine buckets as specified by the Monetary Authority for such risk class that appropriately distinguish the risk characteristics of risk factors across different buckets and allocate each risk-weighted sensitivity calculated under item 5.2(1)(c) above and item 5.2(2)(c) above; and each CVR_k^+ and CVR_k^- calculated under item 5.3(a) above to an appropriate bucket.</p>	<p>This item 5.4(1) provides for buckets to be determined in respect of each risk class. The intention is that authorized institutions should by default adopt the same buckets as those specified in a new Supervisory Policy Manual where the guidance on the bucket set-up is the same as that required under the Basel Framework.</p>
<p>(2) To provide that depending on the positions held, an authorized institution shall define the SBM delta risk factors at a level of granularity specified by the Monetary Authority as—</p> <p>(a) risk-free interest rates, market-implied inflation rates and cross-currency basis for general interest rate risk;</p> <p>(b) credit spreads for credit spread risk (non-securitization), credit spread risk (securitization: non-CTP) and credit spread risk (securitization: CTP);</p>	<p>This item 5.4(2) provides for the SBM delta risk factors to be included in each risk class. The intention is that authorized institutions should by default follow a new Supervisory Policy Manual regarding the level of granularity of the SBM delta risk factors where the guidance set out in the Supervisory Policy Manual adopt the standards set out under the Basel Framework. Similar considerations apply to item 5.4(3) and (4) below.</p> <p>Reference: section 12 of CP 19.01 and MAR21.8 to MAR21.14</p>

Matters to be provided	Remarks (including references)
<ul style="list-style-type: none"> (c) equity prices and equity repo rates for equity risk; (d) commodity prices for commodity risk; and (e) foreign exchange rates between HKD and each foreign currency, or with the approval of the Monetary Authority, the exchange rates between a base currency and each foreign currency. 	<p>of the Basel Framework.</p>
<p>(3) To provide that, depending on the positions held, an authorized institution shall define the SBM vega risk factors at a level of granularity specified by the Monetary Authority as implied volatilities of the underlying exposures.</p>	<p>This item 5.4(3) provides for the SBM vega risk factors to be included in each risk class.</p>
<p>(4) To provide that, depending on the positions held, an authorized institution shall define the SBM curvature risk factors at a level of granularity specified by the Monetary Authority as—</p> <ul style="list-style-type: none"> (a) risk-free interest rates for general interest rate risk; (b) credit spreads for credit spread risk (non-securitization), credit 	<p>This item 5.4(4) provides for the SBM curvature risk factors to be included in each risk class.</p>

Matters to be provided	Remarks (including references)
<p>spread risk (securitization: non-CTP) and credit spread risk (securitization: CTP);</p> <p>(c) equity prices and equity repo rates for equity risk;</p> <p>(d) commodity prices for commodity risk; and</p> <p>(e) foreign exchange rates between HKD and each foreign currency, or with the approval of the Monetary Authority, the exchange rates between a base currency and each foreign currency.</p>	

5.5 Add a new section to provide for instruments with multiple constituents

Matters to be provided	Remarks (including references)
<p>(1) To provide that, subject to item 5.5(2), (4), (5) and (7) below, for any—</p> <p>(a) index instruments;</p> <p>(b) multi-underlying options; and</p>	<p>In accordance with MAR21.31 and MAR21.35 of the Basel Framework., various instruments with multiple constituents should be treated based on the look-through approach where such an instrument should be decomposed into its underlying</p>

Matters to be provided	Remarks (including references)
<p>(c) equity investment in a collective investment scheme, an authorized institution shall apply the look-through approach to calculate the SBM delta risk capital charge under item 5.1(1)(a) above and SBM curvature risk capital charge under item 5.1(1)(c) above. Under the look-through approach, the institution shall decompose the instrument into its underlying exposures, and compute the SBM delta sensitivity under item 5.2(1)(a) above and CVR_k^+ and CVR_k^- under item 5.2(3)(a) above with respect to each underlying exposure.</p>	<p>exposures, and sensitivities to those underlying exposures should be computed.</p> <p>However, some flexibility is allowed in respect of (i) instruments in relation to qualified indices under item 5.5(2) below and (ii) equity investments in funds (i.e. collective investment schemes referred to in the BCR) where an AI has access both to daily price quotes and to the information contained in the mandate of the fund / collective investment scheme under item 5.5(5) below.</p> <p>Reference: paragraph 132 and 136 of CP 19.01 and MAR21.31 and MAR21.35 of the Basel Framework.</p>
<p>(2) To provide that, for any—</p> <p>(a) index instrument that references any qualified index as defined in item 5.5(9) below;</p> <p>(b) index instrument referred to in item 5.5(2)(a) above which is held by a collective investment scheme in respect of which an authorized institution can apply the look-through approach; and</p>	<p>This item 5.5(2) provides for the discretion for AIs not to apply the look-through approach for certain instruments in relation to qualified indices.</p> <p>Reference: paragraph 132, 134 and 136 of CP 19.01 and MAR21.31, MAR21.33 and MAR21.35 of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p>(c) collective investment scheme which can be looked through and tracks a qualified index as defined in item 5.5(9) below, where—</p> <ul style="list-style-type: none"> (i) the collective investment scheme has an absolute value of a tracking difference (ignoring fees and commissions) of less than 1%; and (ii) the tracking difference is checked at least annually and is defined as the annualised return difference between the collective investment scheme and its tracked benchmark over the last 12 months of available data (or a shorter period in the absence of a full 12 months of data), <p>an authorized institution may opt not to apply the look-through approach as set out in item 5.5(1) above, instead the institution may calculate a single sensitivity for both SBM delta and SBM curvature with respect to each index that an instrument references or a collective investment scheme tracks.</p>	

Matters to be provided	Remarks (including references)
<p>(3) To provide that an authorized institution shall assign the single sensitivity as set out in item 5.5(2) of a qualified index to—</p> <p>(a) an appropriate specific sector bucket if more than 75% of constituents in that index (taking into account their weightings in that index) would be mapped to a specific sector; or</p> <p>(b) an appropriate non-sector specific index bucket otherwise.</p>	<p>This item 5.5(3) explains the alternative treatment for instruments as set out in item 5.5(2) above. Specifically, the treatment depends on whether the majority of the constituents in that index would be mapped to a specific industry sector.</p> <p>Reference: paragraph 134 of CP 19.01 and MAR21.33 of the Basel Framework.</p>
<p>(4) To provide that an authorized institution shall not break an index CTP instrument down into its constituents and shall consider the index CTP a risk factor as a whole.</p>	<p>This item 5.5(4) explicitly excludes index CTP instruments from the look-through approach.</p> <p>Reference: paragraph 135 (the second bullet) of CP 19.01 and MAR21.34(2) of the Basel Framework.</p>
<p>(5) To provide that, for any equity investments in a collective investment scheme that cannot be looked through but the institution has access to its daily price quotes and the information contained in mandate of the collective investment scheme or in the national regulations governing the collective investment scheme, the institution may opt not to apply the</p>	<p>This item 5.5(5) provides for the discretion for AIs not to apply the look-through approach for equity investments in funds (i.e. collective investment schemes referred to in the BCR) where an AI has access both to daily price quotes and to the information contained in the mandate of the fund.</p>

Matters to be provided	Remarks (including references)
<p>look-through approach as set out in item 5.5(1) above, instead—</p> <ul style="list-style-type: none"> <li data-bbox="280 359 1229 670">(a) the institution may assume that the collective investment scheme is a position in a tracked index and assign the sensitivity of the tracked index to relevant sector specific buckets or non-sector specific index buckets as set out in item 5.5(3) above if the collective investment scheme tracks an index benchmark and meets the requirement set out in item 5.5(2)(c)(i) and (ii) above; or <li data-bbox="280 710 1229 1021">(b) the institution may, with the approval from the Monetary Authority, calculate on a standalone basis the capital charge of a hypothetical portfolio in which the collective investment scheme invests to the maximum extent allowed under the collective investment scheme’s mandate in assets attracting the highest risk weight and then progressively in other assets attracting a lower risk weight; or <li data-bbox="280 1061 1229 1268">(c) subject to item 6.1(4) and 7.1(4) below, the institution may treat the equity investment in the collective investment scheme as an unrated equity exposure and assign it to “other sectors” under the sector classification. 	<p>Reference: paragraph 137 of CP 19.01 and MAR21.36 of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p>(6) To provide that an authorised institution shall exclude any net short position in a collective investment scheme where—</p> <p>(a) the institution cannot look through such a collective investment scheme; and</p> <p>(b) the institution has no access to daily price quotes or knowledge of the information contained in the mandate of such a collective investment scheme or in the national regulations governing such a collective investment scheme,</p> <p>from other positions subject to the market risk capital charge and subject such a net short position to a 100% capital charge.</p>	<p>This item 5.5(6) specifies the treatment for net short position in an equity investment under certain conditions.</p> <p>Reference: paragraph 138 and 30 (the fifth bullet) of CP 19.01 and MAR21.37 and RBC25.8(5) of the Basel Framework.</p>
<p>(7) To provide that, for instruments mentioned in item 5.5(1) above with an identical underlying, once an authorized institution applies the look-through approach to such instruments, the institution must not switch to the approach set out in item 5.5(2) above, unless the institution obtains an approval from the Monetary Authority.</p>	<p>This item 5.5(7) provides that the authorized institutions must apply the look-through approach to instruments mentioned in item 5.5(1) above that have the same underlying (e.g. instruments reference the same index) consistently over time.</p> <p>Reference: paragraph 135 (third bullet) of CP 19.01 and</p>

Matters to be provided	Remarks (including references)
	MAR21.34(3) of the Basel Framework.
<p>(8) To provide that, for multi-underlying options, an authorized institution may determine the SBM vega risk factor as the implied volatility of the option rather than the implied volatility of its underlying constituents. The institution shall assign such SBM vega sensitivity in accordance with item 5.5(3) above.</p>	<p>This item 5.5(8) specifies the treatment of SBM vega for multi-underlying options. The look-through approach may not need to be applied.</p> <p>Reference: paragraph 139 of CP 19.01 and MAR21.38 of the Basel Framework.</p>
<p>(9) To provide that a <i>qualified index</i>, in relation to the calculation of market risk capital charge for instruments with multiple constituents, means an exchange traded and widely recognised and accepted equity or credit index, where—</p> <ul style="list-style-type: none"> (a) the constituents of the index and their respective weightings are known; (b) the index contains at least 20 constituents; (c) no single constituent contained within the index represents more than 25% of the total index; 	<p>This item 5.5(9) provides for the definition of the “qualified index”.</p> <p>Reference: paragraph 132 of CP 19.01 and MAR21.31 of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p>(d) the largest 10% of constituents represents less than 60% of the total index; and</p> <p>(e) the total market capitalisation of all the constituents of the index is no less than HKD 312 billion.</p>	

5.6 Add a new section to provide for SBM delta risk weights and correlation parameters

Matters to be provided	Remarks (including references)
<p>(1) To provide that, in respect of an SBM delta risk factor, an authorized institution shall assign a risk weight for such SBM delta risk factor at a level specified by the Monetary Authority that sufficiently represents stressed market conditions.</p>	<p>This item 5.6(1) provides for the determination of risk weights for SBM delta risk factors. The intention is that authorized institutions should follow the guidance specified in a new Supervisory Policy Manual to adopt risk weights that are the same as those specified for an SBM delta risk factor under the Basel Framework, except for an intended deviation for the currency pair USD/HKD explained below.</p> <p>The risk weight for the currency pair USD/HKD is set at 1.3% (“preferential risk weight”) whenever the authorized institution does not adopt USD as its base currency. The rationale is explained in paragraph 181 of the CP. The preferential risk weight is unavailable to institutions adopting USD as their base currency since the combined use of the two can lead to significant distortions of the capital charge.</p> <p>Similar considerations apply to item 5.6(2) and (3) below.</p> <p>Reference: section 13 of CP 19.01 and MAR21.41 to MAR21.89</p>

Matters to be provided	Remarks (including references)
	of the Basel Framework.
(2) To provide that, for the purpose of aggregating SBM delta risk-weighted sensitivities within the same bucket, an authorized institution shall use the correlation parameters ρ_{kl} specified by the Monetary Authority that appropriately recognise a degree of diversification benefit within the bucket.	This item 5.6(2) provides for the determination of correlation parameters for aggregating SBM delta risk-weighted sensitivities within the same bucket.
(3) To provide that, for the purpose of aggregating SBM delta risk-weighted sensitivities across buckets within the same risk class, an authorized institution shall use the correlation parameters γ_{bc} specified by the Monetary Authority that appropriately recognise a degree of diversification benefit across buckets.	This item 5.6(3) provides for the determination of correlation parameters for aggregating between the SBM delta buckets within the same risk class.

5.7 Add a new section to provide for SBM vega risk weights and correlation parameters

Matters to be provided	Remarks (including references)
(1) To provide that, in respect of an SBM vega risk factor, an authorized	This item 5.7(1) provides for the determination of risk weights for

Matters to be provided	Remarks (including references)
<p>institution shall assign a risk weight for such SBM vega risk factor at a level specified by the Monetary Authority that sufficiently represents stressed market conditions.</p>	<p>SBM vega risk factors. Again, the intention is that authorized institutions should follow the guidance specified in a new Supervisory Policy Manual to adopt risk weights that are the same as those specified for an SBM vega risk factor under the Basel Framework. Similar considerations apply to item 5.7(2) and (3) below.</p> <p>Reference: section 14 of CP 19.01 and MAR21.90 to MAR21.95 of the Basel Framework.</p>
<p>(2) To provide that, for the purpose of aggregating SBM vega risk-weighted sensitivities within the same bucket, an authorized institution shall use the correlation parameters ρ_{kl} specified by the Monetary Authority that appropriately recognise a degree of diversification benefit within the bucket.</p>	<p>This item 5.7(2) provides for the determination of correlation parameters for aggregating SBM vega risk-weighted sensitivities within the same bucket.</p>
<p>(3) To provide that, for the purpose of aggregating SBM vega risk-weighted sensitivities across buckets within the same risk class, an authorized institution shall use the correlation parameters γ_{bc} specified by the Monetary Authority that appropriately recognise a degree of</p>	<p>This item 5.7(3) provides for the determination of correlation parameters for aggregating between the SBM vega buckets within the same risk class.</p>

Matters to be provided	Remarks (including references)
diversification benefit across buckets.	

5.8 Add a new section to provide for SBM curvature risk weights and correlation parameters

Matters to be provided	Remarks (including references)
<p>(1) To provide that, in respect of an SBM curvature risk factor, an authorized institution shall assign a risk weight for such SBM curvature risk factor at a level specified by the Monetary Authority that sufficiently represents stressed market conditions.</p>	<p>This item 5.8(1) provides for the determination of risk weights for SBM curvature risk factors. Here also, the intention is that authorized institutions should follow the guidance specified in a new Supervisory Policy Manual to adopt risk weights that are the same as those specified for an SBM curvature risk factor under the Basel Framework, except for the preferential risk weight of 1.3% for the currency pair USD/HKD. Similar considerations apply to item 5.8(4) and (5) below.</p> <p>Reference: section 15 of CP 19.01 and MAR21.96 to MAR21.101 of the Basel Framework.</p>
<p>(2) To provide that for exchange rate-related option contracts that do not reference HKD or an authorized institution's base currency as an</p>	<p>The item 5.8(2) introduces an alternative treatment of foreign exchange curvature sensitivities for exchange rate-related option</p>

Matters to be provided	Remarks (including references)
<p>underlying, the authorized institution may divide the CVR_k^+ and CVR_k^- under foreign exchange risk as set out in item 5.2(3)(a) above by 1.5.</p>	<p>contracts that do not reference HKD or the base currency. The intent of the treatment is to alleviate the double-counting of foreign exchange risk for such instruments.</p> <p>The new STM approach requires AIs to define FX exposures relative to their reporting currency (i.e. HKD) or the base currency. However, in the specific situation of AIs holding exchange rate-related derivative contracts where neither of the underlying currencies is HKD or the base currency, the approach to calculate curvature risk capital charges may lead to double-counting. For example, if an AI writes an option on the EUR/JPY exchange rate and does not adopt the base currency approach, the AI is considered to have two separate FX risk exposures – a EUR/HKD exposure and a JPY/HKD exposure. The AI calculates curvature risk capital charges based on two shocks: one where EUR is shocked relative to HKD, and one where JPY is shocked relative to HKD. This is unlike the case of an EUR-reporting bank, which will have one foreign exchange risk exposure and calculates curvature risk capital charge based on one shock: where</p>

Matters to be provided	Remarks (including references)
	<p>JPY is shocked relative to EUR.</p> <p>Reference: paragraph 192 of CP 19.01 and MAR21.98 of the Basel Framework.</p>
<p>(3) To provide that, as an alternative to item 5.8(2) above and with the approval of the Monetary Authority, an authorized institution may divide the CVR_k^+ and CVR_k^- under foreign exchange risk as set out in item 5.2(3)(a) above by 1.5 consistently for all foreign exchange instruments on the condition that SBM curvature sensitivities are calculated for all currencies, including sensitivities determined by shocking—</p> <p>(a) HKD relative to all other currencies; or</p> <p>(b) the base currency relative to all other currencies.</p>	<p>Similar with item 5.8(2) above, this item 5.8(3) also alleviates the double-counting of foreign exchange risk for specific instruments. The main difference between the two sub-items is that this item 5.8(3) extends the alternative treatment to all foreign exchange instruments, subject to the approval from the Monetary Authority. The policy intent is to avoid broken hedges on curvature. For example, based on the previous provision, EUR/HKD curvature sensitivity resulting from an EUR/HKD foreign exchange option cannot be divided by 1.5 while the EUR/HKD curvature sensitivity resulting from an EUR/JPY foreign exchange option can be divided by 1.5. This may lead to a broken hedge from a capital perspective if an AI intends to offset the curvature sensitivity from the two instruments from a risk management perspective.</p>

Matters to be provided	Remarks (including references)
	<p>However, unlike item 5.8(2) above, AIs must obtain an approval from the Monetary Authority before adopting the treatment under this item 5.8(3). Also, AIs must also shock HKD or the base currency in order to obtain two curvature sensitivities for exchange rate-related option contracts where one of the underlying currencies is HKD or the base currency.</p> <p>AIs may exercise discretion in adopting either treatment in (i) item 5.8(2) above, (ii) subject to the approval from the Monetary Authority, this item 5.8(3), or neither of the above.</p> <p>Reference: paragraph 192 of CP 19.01 and MAR21.98 of the Basel Framework.</p>
<p>(4) To provide that, for the purpose of aggregating SBM curvature risk-weighted sensitivities within the same bucket, an authorized institution shall use the correlation parameters ρ_{kl} specified by the Monetary Authority that appropriately recognise a degree of diversification benefit within the bucket.</p>	<p>This item 5.8(4) provides for the determination of correlation parameters for aggregating SBM curvature risk-weighted sensitivities within the same bucket.</p>

Matters to be provided	Remarks (including references)
<p>(5) To provide that, for the purpose of aggregating SBM curvature risk-weighted sensitivities across buckets within the same risk class, an authorized institution shall use the correlation parameters γ_{bc} specified by the Monetary Authority that appropriately recognise a degree of diversification benefit across buckets.</p>	<p>This item 5.8(5) provides for the determination of correlation parameters for aggregating between the SBM curvature buckets within the same risk class.</p>

Item 6. Add a new Division 1C (Calculation of market risk capital charge: RRAO) after the new Division 1B in Part 8 of the BCR

6.1 Add a new section to provide for calculation of RRAO

Matters to be provided	Remarks (including references)
<p>(1) To provide that, subject to item 6.1(2) and (3) below, an authorized institution shall calculate the RRAO for any instrument in the trading book—</p> <p>(a) with an exotic underlying where such an instrument has an underlying exposure whose risk profile is not captured by the SBM or SA-DRC; or</p>	<p>This item 6.1(1) provides for the scope of instruments subject to the RRAO. The RRAO is intended to be a simple and conservative capital treatment for those more sophisticated or complex instruments that would otherwise not be captured in a practical manner under the other two components (i.e. SBM and SA-DRC) of the new STM approach.</p> <p>Reference: paragraph 198–200 of CP 19.01 and MAR23.2–23.4</p>

Matters to be provided	Remarks (including references)
<p>(b) bearing other residual risks where—</p> <ul style="list-style-type: none"> (i) such instrument is subject to SBM vega or SBM curvature risk capital charges in the trading book and with pay-offs that cannot be written or perfectly replicated as a finite linear combination of vanilla options with a single underlying equity price, commodity price, exchange rate, bond price, credit default swap price or interest rate swap; or (ii) such instrument falls under the definition of the CTP, except for instruments that are recognized as eligible hedges of risks within the CTP. 	<p>of the Basel Framework.</p>
<p>(2) To provide that an authorized institution is not required to calculate the RRAO for an instrument where such instrument is a back-to-back transaction that exactly matches with a third-party transaction in the trading book, in which case both transactions should be excluded from the RRAO.</p>	<p>This item 6.1(2) lists out the exceptions for instruments as set out in item 6.1(1) above from the RRAO.</p> <p>Reference: paragraph 202 (the third bullet) of CP 19.01 and MAR23.7 of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p>(3) To provide that an authorized institution is not required to calculate the RRAO for an instrument bearing other residual risks as defined in item 6.1(1)(b) above where such instrument—</p> <p>(a) is listed on an exchange; or</p> <p>(b) is eligible for central clearing.</p>	<p>This item 6.1(3) lists out the exceptions for instruments as set out in item 6.1(1)(b) above from the RRAO.</p> <p>Please refer to MAR23.7 of the Basel Framework, which has been amended in December 2019 to clarify that instruments that are listed and/or eligible for central clearing are only excluded from other residual risks. However, any instrument with an exotic underlying must be included in the RRAO. This interpretation will override paragraph 202 in the CP.</p> <p>Reference: paragraph 202 (the first and second bullets) of CP 19.01 and MAR23.7 of the Basel Framework.</p>
<p>(4) To provide that, for equity investments in a collective investment scheme that are treated as an unrated “other sectors” equity as set out in item 5.5(5)(c) above, an authorized institution shall assume the collective investment scheme is exposed to exotic underlying exposures, and to other residual risks, to the maximum possible extent allowed under the collective investment scheme’s mandate.</p>	<p>This item 6.1(4) sets out the RRAO calculations for equity investments in funds (i.e. collective investment schemes referred to in the BCR) that are treated as an unrated “other sectors” equity.</p> <p>Reference: paragraph 204 of CP 19.01 and MAR23.6(5) of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p>(5) To provide that an authorized institution shall calculate the RRAO as a simple sum of gross (long plus short) notional amounts of the instruments bearing residual risks multiplied by the following risk weights—</p> <p>(a) 1.0% for instruments including an exotic underlying; and</p> <p>(b) 0.1% for instruments bearing other residual risks without an exotic underlying.</p>	<p>This item 6.1(5) sets out the calculation methodology.</p> <p>Reference: paragraph 207 of CP 19.01 and MAR23.8(2) of the Basel Framework.</p>

Item 7. Add a new Division 1D (Calculation of market risk capital charge: SA-DRC) after the new Division 1C in Part 8 of the BCR

7.1 Add a new section to provide for the general matters

Matters to be provided	Remarks (including references)
<p>(1) To provide that an authorized institution shall calculate SA-DRC of the following components by a simple sum of—</p> <p>(a) SA-DRC (non-securitization) under item 7.2(3)(f) below;</p> <p>(b) SA-DRC (securitization: non-CTP) under item 7.3(2)(f) below; and</p>	<p>The SA-DRC captures the jump-to-default risk of equity and credit instruments in the trading book exclusively. It is calculated separately from all other market risks, including the credit spread risk. It is calibrated to the credit risk treatment in the banking book to reduce the potential discrepancy in capital requirements for</p>

Matters to be provided	Remarks (including references)
<p>(c) SA-DRC (securitization: CTP) under item 7.4(3)(f) below.</p>	<p>similar risk exposures across the banking book and trading book.</p> <p>AIs shall calculate the SA-DRC for (1) non-securitization exposures, (2) non-CTP securitization exposures and (3) CTP securitization exposures separately. As no diversification benefit is recognised between the SA-DRC for three types of exposures mentioned above, the overall SA-DRC is aggregated via a simple sum.</p> <p>Reference: paragraph 209 and 211 of CP 19.01 and MAR22.2 and MAR22.4 of the Basel Framework.</p>
<p>(2) To provide that, for the purpose of calculating the SA-DRC—</p> <p>(a) a long exposure is defined as the default of the underlying obligor resulting in a loss from such exposure and the notional amount of a long exposure is recorded as a positive value; and</p> <p>(b) a short exposure is defined as the default of the underlying obligor resulting in a gain from such exposure and the notional amount of a short exposure is recorded as a negative value.</p>	<p>This item 7.1(2) provides for the definition of “long” or “short” direction for the purpose of calculating SA-DRC. The determination must be on the basis of long or short with respect to whether the credit exposure results in a loss or gain in the case of a default.</p> <p>Reference: paragraph 217 (the first and fourth bullet) of CP 19.01 and MAR22.10 of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p>(3) To provide that, for the purpose of calculating SA-DRC, an authorized institution shall assign a default risk weight of 0% to an exposure of the authorized institution to sovereigns, public sector entities and multilateral development banks which would be allocated a 0% risk weight under the standardized (credit risk) approach as set out in sections 55 to 58 of the BCR.</p>	<p>This item 7.1(3) sets out the 0% default risk weight treatment for specific sovereign, public sector entity (PSE) and multilateral development bank exposures, which is consistent with the standardized (credit risk) approach. Please refer to paragraph 215 of the CP and MAR22.7 of the Basel Framework.</p> <p>Before the industry consultation, the PSE exposures with 0% credit risk weight were not subject to a zero default risk weight in our CP. However, based on the industry comments we received, we decided to also include the PSE exposures in this item 7.1(3). Including such PSE exposures is in line with the BCBS standard.</p> <p>Reference: paragraph 215 of CP 19.01 and MAR22.7 of the Basel Framework.</p>
<p>(4) To provide that, for equity investments in a collective investment scheme that are treated as an unrated “other sectors” equity as set out in item 5.5(5)(c) above, subject to item 7.1(5) below, an authorized institution shall—</p>	<p>This item 7.1(4) sets out the SA-DRC requirements for equity investments in funds (i.e. collective investment schemes referred to in the BCR) that are treated as an unrated “other sectors” equity.</p> <p>Reference: paragraph 216 of CP 19.01 and MAR22.8 of the Basel</p>

Matters to be provided	Remarks (including references)
<p>(a) treat the equity investment in a collective investment scheme as an unrated equity; or</p> <p>(b) where the mandate of that collective investment scheme allows the collective investment scheme to invest primarily in names of certain credit qualities, apply the maximum risk weight as set out in item 7.2(13) below that is achievable under the collective investment scheme’s mandate. The institution shall neither offset nor aggregate with correlation the generated exposure with other exposures.</p>	<p>Framework.</p>
<p>(5) To provide that, for equity investments in a collective investment scheme that are treated as an unrated “other sectors” equity as set out in item 5.5(5)(c) above, an authorized institution shall reasonably consider whether, given the mandate of the collective investment schemes, the default risk weight applied is sufficiently prudent.</p>	<p>Reference: paragraph 137 (the third bullet) of CP 19.01 and MAR21.36(3) of the Basel Framework.</p>

7.2 Add a new section to provide for SA-DRC for non-securitization exposures

Matters to be provided	Remarks (including references)
<p>(1) To provide that, subject to item 7.2(2) below, an authorized institution shall calculate SA-DRC (non-securitization) for any non-securitization exposure in the trading book subject to default risk which is a credit or an equity instrument..</p>	<p>The item 7.2(1) provides for the scope of instruments subject to SA-DRC (non-securitization).</p>
<p>(2) To provide that an authorized institution shall exclude from the calculation of SA-DRC (non-securitization) any non-securitization exposure that—</p> <p>(a) hedges a CTP instrument and the institution shall include such exposure in SA-DRC (securitization: CTP); or</p> <p>(b) is held for the purpose of offsetting and hedging any non-CTP securitization exposure where such non-securitization exposure together with other exposures is decomposed proportionately into the equivalent replicating tranches that span the entire tranche structure and the institution shall include it in SA-DRC (securitization: non-CTP).</p>	<p>The item 7.2(2) excludes hedges to securitization exposures from the scope of SA-DRC (non-securitization), instead these exposures are subject to either SA-DRC (securitization: CTP) or SA-DRC (securitization: non-CTP).</p> <p>Reference: paragraph 214 and 235 of CP 19.01 and MAR22.6 and MAR22.28 of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p>(3) To provide that, to calculate SA-DRC (non-securitization), an authorized institution shall—</p> <p>(a) determine the gross jump-to-default risk amount as set out in item 7.2(4) and (5) below for each instrument mentioned in item 7.2(1) above;</p> <p>(b) subject to item 7.2(11) below, determine the net jump-to-default risk amount with respect to each obligor by offsetting the gross jump-to-default risk amount of long and short exposures with respect to the same obligor;</p> <p>(c) calculate the risk-weighted net jump-to-default risk amount with respect to an obligor as the product of—</p> <p style="padding-left: 40px;">(i) the net jump-to-default risk amount mentioned in item 7.2(3)(b) above; and</p> <p style="padding-left: 40px;">(ii) the prescribed risk weights as set out in item 7.2(13) below;</p> <p>(d) allocate the risk-weighted net jump-to-default risk amount into the</p>	<p>The item 7.2(3) sets out the step-by-step calculations of SA-DRC (non-securitization).</p> <p>In the first step, “gross jump-to-default risk amount” captures the loss at default for such instrument. Offsetting with respect to the same obligor is allowed under certain conditions to come up with the “net jump-to-default risk amount” in the second step.</p> <p>In the third step, a risk weight, based on the credit rating of the obligor is applied to each net jump-to-default risk amount to come up with the “risk-weighted net jump-to-default risk amount”.</p> <p>In the fourth step, each risk-weighted net jump-to-default risk amount, which represents an obligor, is allocated to a bucket according to the nature of the obligor, i.e. whether the obligor is a corporate, sovereign, or a local government / municipality.</p> <p>In the fifth step, within each bucket, a hedge benefit ratio is calculated. This acts as a discount factor that reduces the amount of net short positions to be netted against net long positions within</p>

Matters to be provided	Remarks (including references)
<p>following buckets according to the nature of the obligor—</p> <ul style="list-style-type: none"> (i) corporates; (ii) sovereigns; or (iii) local governments and municipalities; <p>(e) calculate the bucket level SA-DRC as set out in item 7.2(14) below; and</p> <p>(f) calculate the SA-DRC (non-securitization) as a simple sum of bucket level SA-DRC for each bucket.</p>	<p>a bucket.</p> <p>Finally, bucket level SA-DRC (non-securitization) are aggregated as a simple sum across buckets to give the overall SA-DRC (non-securitization).</p> <p>Reference: paragraph 210 and 230 of CP 19.01 and MAR22.3 and MAR22.22 of the Basel Framework.</p>
<p>(4) To provide that, subject to item 7.2(6), (7) and (8) below, for a long exposure defined in item 7.1(2)(a) above, an authorized institution shall calculate the gross jump-to-default risk amount as—</p> <p>(a) for an exposure with a maturity that is equal to or longer than one year, the maximum of zero and the sum of—</p> <ul style="list-style-type: none"> (i) the product of— 	<p>This item 7.2(4) sets out the calculations of “gross jump-to-default risk amount” for a long exposure. The gross jump-to-default risk amount captures the loss at default, generally representing the difference between the market value and the notional amount recovered at default.</p> <p>Reference: paragraph 217–219 and 228 of CP 19.01 and MAR22.11–22.12 and MAR22.15 of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p>(A) subject to item 7.2(9) below, the notional amount of the instrument recorded as a positive value; and</p> <p>(B) LGD as set out in item 7.2(10) below if the price of the instrument is linked to the recovery rate of the defaulter or 1 otherwise; and</p> <p>(ii) the cumulative mark-to-market gain or loss over the face value already taken on the exposure where a gain is recorded as a positive value and a loss is recorded as a negative value; or</p> <p>(b) for an exposure with a maturity that is shorter than one year, the product of—</p> <p>(i) the amount calculated in item 7.2(4)(a) above if the exposure had a maturity equal to or longer than one year; and</p> <p>(ii) a scaling factor that is equal to the greater of 0.25 and the ratio of its maturity relative to 1 year.</p>	

Matters to be provided	Remarks (including references)
<p>(5) To provide that, subject to item 7.2(6), (7) and (8) below, for a short exposure defined in item 7.1(2)(b) above, an authorized institution shall calculate the gross jump-to-default risk amount as—</p> <p>(a) for an exposure with a maturity that is equal to or longer than one year, the minimum of zero and the sum of—</p> <p style="padding-left: 40px;">(i) the product of—</p> <p style="padding-left: 80px;">(A) subject to item 7.2(9) below, the notional amount of the instrument recorded as a negative value; and</p> <p style="padding-left: 80px;">(B) LGD as set out in item 7.2(10) below if the price of the instrument is linked to the recovery rate of the defaulter or 1 otherwise; and</p> <p style="padding-left: 40px;">(ii) the cumulative mark-to-market gain or loss over the face value already taken on the exposure where a gain is recorded as a positive value and a loss is recorded as a negative value; or</p> <p>(b) for an exposure with a maturity that is shorter than one year, the</p>	<p>This item 7.2(5) sets out the calculations of “gross jump-to-default risk amount” for a short exposure.</p> <p>Reference: paragraph 217–219 and 228 of CP 19.01 and MAR22.11–22.12 and MAR22.15 of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p>product of—</p> <ul style="list-style-type: none"> (i) the amount calculated in item 7.2(5)(a) above if the exposure had a maturity equal to or longer than one year; and (ii) a scaling factor that is equal to the greater of 0.25 and the ratio of its maturity relative to 1 year. 	
<p>(6) To provide that, for an instrument that could be unwound with no exposure to default risk, an authorized institution shall determine the gross jump-to-default amount for such an instrument as zero.</p>	<p>If the contractual or legal terms of the derivative allow for the unwinding of the instrument with no exposure to default risk, it is not subject to the jump-to-default risk.</p> <p>Reference: paragraph 217 (the third bullet) of CP 19.01 and MAR22.13 of the Basel Framework.</p>
<p>(7) To provide that, for a cash equity position, an authorized institution shall determine the gross jump-to-default risk amount as the market value of the equity position.</p>	<p>This item 7.2(7) sets out the gross jump-to-default risk amount for spot equity positions.</p> <p>Reference: paragraph 221 of CP 19.01</p>

Matters to be provided	Remarks (including references)						
<p>(8) To provide that, for an instrument with multiple constituents, an authorized institution shall decompose the instrument into exposures in the individual constituents to determine the gross jump-to-default amount of each individual constituent.</p>	<p>AIs should apply the look-through approach to calculate the SA-DRC (non-securitization) for an instrument with multiple constituents.</p> <p>Reference: paragraph 212 of CP 19.01 and MAR22.5 of the Basel Framework.</p>						
<p>(9) To provide that, in relation to the calculations of SA-DRC, where the payoffs of an instrument are not related to its notional amount in the event of default, the authorised institution shall set the notional amount for such instrument as zero.</p>	<p>An example would be a call option on a debt security as set out in paragraph 220 of the CP.</p> <p>Reference: paragraph 220 of CP 19.01 and MAR22.14(1)(c) of the Basel Framework.</p>						
<p>(10) To provide that an authorized institution shall apply the following LGD to calculate the gross jump-to-default risk amount—</p> <table border="0" data-bbox="264 1086 864 1273"> <thead> <tr> <th data-bbox="264 1086 763 1126"><u>Underlying instrument</u></th> <th data-bbox="763 1086 864 1126"><u>LGD</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="264 1161 763 1201">Equity</td> <td data-bbox="763 1161 864 1201">100%</td> </tr> <tr> <td data-bbox="264 1233 763 1273">Non-senior debt security</td> <td data-bbox="763 1233 864 1273">100%</td> </tr> </tbody> </table>	<u>Underlying instrument</u>	<u>LGD</u>	Equity	100%	Non-senior debt security	100%	<p>This item 7.2(10) sets out the loss given default (LGD) for different non-securitization exposures.</p> <p>Reference: paragraph 219 of CP 19.01 and MAR22.12 of the Basel Framework.</p>
<u>Underlying instrument</u>	<u>LGD</u>						
Equity	100%						
Non-senior debt security	100%						

Matters to be provided	Remarks (including references)
above.	
<p>(12) To provide that an authorized institution may consistently assign cash equity positions a maturity of either—</p> <p>(a) more than one year; or</p> <p>(b) three months.</p>	<p>The item 7.2(12) allows AIs to either apply a three-month maturity (i.e. scale down the exposure by a factor of 0.25) or a maturity of more than one year to a cash equity position.</p> <p>Reference: paragraph 226 of CP 19.01 and MAR22.16 of the Basel Framework.</p>
<p>(13) To provide that, subject to item 7.1(3) above, an authorized institution shall determine the default risk weight in accordance with the credit quality of the obligor as follows—</p> <p>[Table 27 is inserted here.]</p>	<p>This item 7.2(13) sets out the default risk weight for each obligor, depending on the credit quality.</p> <p>Tables are inserted at the end of each item.</p> <p>Reference: paragraph 232 of CP 19.01 and MAR22.24 of the Basel Framework.</p>
<p>(14) To provide that an authorized institution shall calculate the bucket level SA-DRC ($SA-DRC_b$) as follows—</p>	<p>This item 7.2(14) sets out the calculation formula for the bucket level SA-DRC for non-securitizations. The SA-DRC allows for some limited hedging recognition within each bucket by</p>

Matters to be provided	Remarks (including references)
<p> $SA-DRC_b = \max \left[\left(\sum_{i \in Long} RW_i \cdot net JTD_i \right) - HBR \cdot \left(\sum_{i \in Short} RW_i \cdot net JTD_i \right), 0 \right]$ </p> <p>where—</p> <ul style="list-style-type: none"> (a) i refers to an obligor belonging to bucket b; (b) RW_i refers to the default risk weight of the obligor i; (c) $net JTD_i$ refers to the net jump-to-default risk amount of the obligor i; (d) HBR is the hedge benefit ratio and is equal to $\frac{\sum net JTD_{long}}{\sum net JTD_{long} + \sum net JTD_{short} }$; (e) $\sum net JTD_{long}$ is a simple sum of all net long jump-to-default risk amounts within bucket b; and (f) $\sum net JTD_{short}$ is a simple sum of all net short jump-to-default risk amounts in absolute value within bucket b. 	<p>introducing the hedge benefit ratio (HBR) in the formula.</p> <p>Reference: paragraph 231 of CP 19.01 and MAR22.23, MAR22.25 of the Basel Framework.</p>

Table 27
Default risk weights

Credit quality	Standard & Poor's Ratings Services	Moody's Investors Service	Fitch Ratings	Rating and Investment Information, Inc.	Japan Credit Rating Agency, Ltd.	Default risk weight
1	AAA	Aaa	AAA	AAA	AAA	0.5%
2	AA+	Aa1	AA+	AA+	AA+	2%
	AA	Aa2	AA	AA	AA	
	AA-	Aa3	AA-	AA-	AA-	
3	A+	A1	A+	A+	A+	3%
	A	A2	A	A	A	
	A-	A3	A-	A-	A-	
4	BBB+	Baa1	BBB+	BBB+	BBB+	6%
	BBB	Baa2	BBB	BBB	BBB	
	BBB-	Baa3	BBB-	BBB-	BBB-	
5	BB+	Ba1	BB+	BB+	BB+	15%
	BB	Ba2	BB	BB	BB	
	BB-	Ba3	BB-	BB-	BB-	
6	B+	B1	B+	B+	B+	30%
	B	B2	B	B	B	
	B-	B3	B-	B-	B-	
7	any rating below B-	any rating below B3	any rating below B-	any rating below B-	any rating below B-	50%
Unrated						15%
Defaulted						100%

7.3 SA-DRC for non-CTP securitization exposures

Matters to be provided	Remarks (including references)
<p>(1) To provide that an authorized institution shall calculate SA-DRC (securitization: non-CTP) for any—</p> <ul style="list-style-type: none"> (a) non-CTP securitization exposure in the trading book; and (b) non-securitization exposure in the trading book that is held for the purpose of offsetting and hedging any exposure mentioned in item 7.3(1)(a) above where such a non-securitization exposure together with other exposures is decomposed proportionately into the equivalent replicating tranches that span the entire tranche structure. 	<p>The item 7.3(1) provides for the scope of exposures subject to SA-DRC (securitization: non-CTP).</p> <p>Reference: paragraph 235 of CP 19.01 and MAR22.28 of the Basel Framework.</p>
<p>(2) To provide that, to calculate SA-DRC (securitization: non-CTP), an authorized institution shall—</p> <ul style="list-style-type: none"> (a) determine the gross jump-to-default risk amount as set out in item 7.3(3) below for each exposure mentioned in item 7.3(1) above; (b) determine the net jump-to-default risk amount by offsetting the gross jump-to-default risk amount of long and short exposures where— 	<p>The item 7.3(2) sets out the step-by-step calculations of SA-DRC (securitization: non-CTP). The calculation logic is similar to SA-DRC (non-securitization) as set out in item 7.2(3) above.</p> <p>Item 7.3(2)(b) sets out that offsetting is allowed.</p> <p>Item 7.3(2)(e) sets out the aggregation within buckets to be consistent with the treatment under non-securitizations.</p>

Matters to be provided	Remarks (including references)
<p>(i) the long and short exposures are arising from the same underlying asset pool and the same tranche; or</p> <p>(ii) the exposure is a perfect replication in the opposite direction of the exposure to be offset through decomposition by a collection of non-securitization positions, securitization exposures with different securitized portfolios, or both,</p> <p>provided that the conditions set out in item 7.2(11)(b) above are met;</p> <p>(c) calculate the risk-weighted net jump-to-default risk amount as the product of—</p> <p>(i) the net jump-to-default risk amount as set out in item 7.3(2)(b) above; and</p> <p>(ii) the prescribed risk weights as set out in item 7.3(4) below;</p> <p>(d) allocate the risk-weighted net jump-to-default risk amount into the buckets as set out in item 7.3(5) below;</p>	<p>Item 7.3(2)(f) sets out that no hedging is recognised between different buckets which implies a simple sum of the bucket level SA-DRC.</p> <p>Reference: paragraph 210, 236, 238, 241 and 244 of CP 19.01 and MAR22.3, MAR22.29-30, MAR22.33 and MAR22.35 of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p>(e) calculate the bucket level SA-DRC as set out in item 7.2(14) above; and</p> <p>(f) calculate the SA-DRC (securitization: non-CTP) as a simple sum of bucket level SA-DRC for each bucket.</p>	
<p>(3) To provide that, subject to item 7.2(6) and (7) above as well as the scaling factor applicable to exposures with a maturity of less than one year as set out in item 7.2(4)(b)(ii) and 7.2(5)(b)(ii) above, an authorized institution shall calculate the gross jump-to-default risk amount for each non-CTP securitization exposure—</p> <p>(a) for a long exposure defined in item 7.1(2)(a) above, as the maximum of zero and the sum of—</p> <p style="padding-left: 40px;">(i) the notional amount of the instrument recorded as a positive value; and</p> <p style="padding-left: 40px;">(ii) the cumulative mark-to-market gain or loss over the principal already taken on the exposure where a gain is recorded as a positive value and a loss is recorded as</p>	<p>This item 7.3(3) sets out the calculations of “gross jump-to-default risk amount” for securitization exposures.</p> <p>Reference: paragraph 234 of CP 19.01 and MAR22.27 of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p>a negative value; and</p> <p>(b) for a short exposure defined in item 7.1(2)(b) above, as the minimum of zero and the sum of—</p> <p>(i) the notional amount of the instrument recorded as a negative value; and</p> <p>(ii) the cumulative mark-to-market gain or loss over the principal already taken on the exposure where a gain is recorded as a positive value and a loss is recorded as a negative value.</p>	
<p>(4) To provide that, subject to item 7.1(3) above, an authorized institution shall assign to each securitization tranche a default risk weight that is equal to the product of—</p> <p>(a) 8%; and</p> <p>(b) the applicable risk weight of the credit risk for such non-CTP securitization exposure as set out in Part 7 of the BCR, provided</p>	<p>This item 7.3(4) sets out the standardized default risk weight for non-CTP securitization exposures. The rationale is that the default risk weight is consistent with the corresponding credit risk weight applied to such securitization exposure so as to avoid regulatory arbitrage between the banking book and the trading book.</p> <p>We applied the scalar of 8% in this provision since the risk weights set out in Part 7 is for calculating the risk-weighted assets</p>

Matters to be provided	Remarks (including references)
<p>that—</p> <ul style="list-style-type: none"> (i) the institution shall apply the prescribed approach required under section 15 of the BCR to determine the risk weight based on the pool of underlying exposures; (ii) a maturity of one year is assumed for such securitization exposure under the SEC-IRBA, SEC-ERBA and SEC-SA; and (iii) the total market risk capital charge for an individual cash securitization exposure under the STM approach is capped at the fair value of such exposure. 	<p>instead of capital charges.</p> <p>The hierarchy of approaches mentioned in MAR22.34 is set out in CRE40.41 to CRE40.48 of the Basel Framework, which are set out in section 15 of the BCR.</p> <p>Reference: paragraph 242–243 of CP 19.01 and MAR22.34 of the Basel Framework.</p>
<p>(5) To provide that an authorized institution shall allocate the net jump-to-default risk amounts to the following buckets—</p> <ul style="list-style-type: none"> (a) one unique bucket for all corporates (excluding small-and-medium sized corporates), regardless of their region; and (b) other 44 buckets defined along two dimensions: asset class and 	<p>This item 7.3(5) sets out the buckets for non-CTP securitization exposures. There are 45 buckets in total.</p> <p>Reference: paragraph 239 of CP 19.01 and MAR22.31 of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p>region—</p> <ul style="list-style-type: none"> (i) the 11 asset classes are asset-backed commercial paper (ABCP), auto loans/leases, residential mortgage-backed securities (RMBS), credit cards, commercial mortgage-backed securities (CMBS), collateralised loan obligations, collateralised debt obligations (CDO) squared, small-and-medium sized corporates, student loans, other retail, other wholesale; and (ii) the 4 regions are Asia, Europe, North America and other regions. 	

7.4 Add a new section to provide for SA-DRC for CTP securitization exposures

Matters to be provided	Remarks (including references)
<p>(1) To provide that an authorized institution shall calculate SA-DRC (securitization: CTP) for—</p>	<p>The item 7.4(1) provides for the scope of instruments subject to SA-DRC (securitization: CTP).</p> <p>Reference: paragraph 214 of CP 19.01 and MAR22.6 of the</p>

Matters to be provided	Remarks (including references)
<p>(a) CTP instruments in the trading book; and</p> <p>(b) non-securitization instruments in the trading book that hedge the CTP instruments.</p>	<p>Basel Framework.</p>
<p>(2) To provide that, for the purpose of calculating SA-DRC (securitization: CTP), an authorized institution shall treat a n^{th}-to-default credit derivative contract as a tranche in a CTP securitization transaction with the value of—</p> <p>(a) attachment point calculated as $(n - 1) / N$; and</p> <p>(b) detachment point calculated as n / N,</p> <p>where N is the total number of names in the underlying basket or pool.</p>	<p>This item 7.4(2) provides for the value of attachment point and the value of detachment point for a n^{th}-to-default credit derivative contract for the purpose of calculating SA-DRC.</p> <p>Reference: paragraph 247 of CP 19.01 and MAR22.38 of the Basel Framework.</p>
<p>(3) To provide that, to calculate SA-DRC (securitization: CTP), an authorized institution shall—</p> <p>(a) subject to the scaling factor applicable to exposures with a maturity of less than one year as set out in item 7.2(4)(b)(ii) and 7.2(5)(b)(ii) above, determine the gross jump-to-default risk amount—</p>	<p>The item 7.4(3) sets out the step-by-step calculations of SA-DRC (securitization: CTP). The calculation logic is also similar with SA-DRC (non-securitization) as set out in item 7.2(3) above.</p> <p>Reference: paragraph 210, 245–246 and 249–251 of CP 19.01 and MAR22.3, MAR22.36–22.37 and MAR22.39 of the Basel</p>

Matters to be provided	Remarks (including references)
<ul style="list-style-type: none"> (i) for each instrument mentioned in item 7.4(1)(a) above in accordance with item 7.3(3) above as if it were a non-CTP securitization exposure; and (ii) for each instrument mentioned in item 7.4(1)(b) above as its market value; <p>(b) subject to item 7.4(4) and (5) below, determine the net jump-to-default risk amount by offsetting the gross jump-to-default risk amount of long and short exposures where—</p> <ul style="list-style-type: none"> (i) the long and short exposures— <ul style="list-style-type: none"> (A) where the underlying is a credit index, must arise from the same index, the same series and the same tranche; or (B) in case of other CTP securitization exposures, must arise from the same underlying basket or pool and the same tranche; (ii) the exposure is a perfect replication in the opposite 	<p>Framework.</p>

Matters to be provided	Remarks (including references)
<p style="padding-left: 40px;">direction of the exposure to be offset through decomposition by a collection of non-securitization positions, securitization tranches or index tranches where the decomposed exposure cannot be a re-securitization exposure;</p> <p>(c) calculate the risk-weighted net jump-to-default risk amount as the product of—</p> <ul style="list-style-type: none"> (i) the net jump-to-default risk amount mentioned in item 7.4(3)(b) above; and (ii) the prescribed risk weights as set out in item 7.4(6) below; <p>(d) allocate the risk-weighted net jump-to-default risk amount into the buckets as set out in item 7.4(7) below;</p> <p>(e) calculate the bucket level SA-DRC as set out in item 7.4(8) below; and</p> <p>(f) calculate the SA-DRC (securitization: CTP) as set out in item 7.4(9) below.</p>	

Matters to be provided	Remarks (including references)
<p>(4) To provide that an authorized institution shall offset the gross jump-to-default risk amounts of long and short exposures provided that—</p> <p>(a) the maturity of all exposures is equal to or longer than 1 year; or</p> <p>(b) where the maturity of one or more exposures is less than 1 year, the gross jump-to-default risk amount for each of such exposures shall be scaled down by a factor as set out in item 7.4(3)(a) above.</p>	<p>This item 7.4(4) supplements the offsetting rule regarding the maturity of the securitization exposures.</p> <p>Reference: paragraph 248 of CP 19.01 and MAR22.39 of the Basel Framework.</p>
<p>(5) To provide that where—</p> <p>(a) a perfect replication under item 7.4(3)(b)(ii) above is not possible; and</p> <p>(b) the long and short securitization exposures are otherwise equivalent except for a residual component,</p> <p>an authorized institution may offset the exposures and reflect the net jump-to-default risk amount for the residual exposure.</p>	<p>The item 7.4(5) sets out the only situation where a perfect replication is not possible but an offsetting is allowed.</p> <p>An example would be a long securitization exposure in an index of 125 names, and a short securitization exposure of the appropriate replicating amounts in 124 of the names. In such a case, a net long securitization exposure in the not offset 125th name of the index should be captured.</p> <p>Reference: paragraph 252 of CP 19.01 and MAR22.39(3) of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p>(6) To provide that an authorized institution shall assign a default risk weight as set out in—</p> <p>(a) item 7.3(4) above for net jump-to-default risk amounts resulting from exposures mentioned in item 7.4(1)(a) above as if it were a non-CTP securitization exposure; and</p> <p>(b) item 7.2(13) above for net jump-to-default risk amounts resulting from exposures mentioned in item 7.4(1)(b) above.</p>	<p>The item 7.4(6) sets out the standardized default risk weight under SA-DRC (securitization: CTP). For a net jump-to-default risk amount resulting from tranching products, the determination of default risk weight follows the treatment under SA-DRC (securitization: non-CTP). Otherwise, for a net jump-to-default risk amount resulting from non-securitization exposures, the determination of default risk weight follows the treatment under SA-DRC (non-securitizations).</p> <p>Reference: paragraph 256 of CP 19.01 and MAR22.42–22.43 of the Basel Framework.</p>
<p>(7) To provide that an authorized institution shall allocate the net jump-to-default risk amounts to buckets that correspond to a credit index or an underlying basket.</p>	<p>This item 7.4(7) sets out the buckets for CTPs under SA-DRC. For each credit index, the underlying basket represents a bucket on its own.</p> <p>Reference: paragraph 254 of CP 19.01 and MAR22.40 of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p>(8) To provide that an authorized institution shall calculate the bucket level SA-DRC ($SA-DRC_b$) as follows—</p> $SA-DRC_b = \left(\sum_{i \in Long} RW_i \cdot net JTD_i \right) - HBR \cdot \left(\sum_{i \in Short} RW_i \cdot net JTD_i \right)$ <p>where—</p> <p>(a) i refers to an exposure belonging to bucket b;</p> <p>(b) RW_i refers to the default risk weight of the exposure i;</p> <p>(c) $net JTD_i$ refers to the net jump-to-default risk amount of the exposure i;</p> <p>(d) HBR is the hedge benefit ratio and is equal to $\frac{\sum net JTD_{long}}{\sum net JTD_{long} + \sum net JTD_{short} }$;</p> <p>(e) $\sum net JTD_{long}$ is a simple sum of all net long jump-to-default risk amounts across all buckets; and</p> <p>(f) $\sum net JTD_{short}$ is a simple sum of all net short jump-to-default risk</p>	<p>This item 7.4(8) sets out the bucket level SA-DRC for CTPs. A deviation from the approach for non-securitizations is that no floor at zero applies, and consequently, the bucket level SA-DRC can be negative for CTPs.</p> <p>Reference: paragraph 257 of CP 19.01 and MAR22.44 of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p>amounts in absolute value across all buckets.</p>	
<p>(9) To provide that an authorized institution shall calculate the SA-DRC (securitization: CTP) as follows—</p> <p style="text-align: center;">SA – DRC (securitization: CTP)</p> $= \max \left\{ \sum_b (\max(SA-DRC_b, 0) + 0.5 \cdot \min(SA-DRC_b, 0)), 0 \right\}$ <p>where $SA-DRC_b$ is the bucket level SA-DRC obtained in item 7.4(8) above.</p>	<p>This item 7.4(9) sets out the aggregation of bucket level DRCs for CTPs. Unlike for non-securitizations where a simple sum is adopted, limited diversification benefits are allowed under CTPs.</p> <p>Reference: paragraph 258 of CP 19.01 and MAR22.45 of the Basel Framework.</p>

PART A(4) – INTERNAL MODELS APPROACH (“IMA”)

Item 1. Add the following new definitions in section 281 of the BCR

New definitions	Remarks (including references)
<p>(1) current ES, in relation to a portfolio of exposures held by an authorized institution, means an ES calculated by the institution under the IMA with model inputs calibrated to historical data from the most recent 12-month period;</p>	<p>Reference: MAR33.6(2) of the Basel Framework.</p>
<p>(2) default risk charge, in relation to the IMA, means the greater of—</p> <p>(a) the most recent market risk capital charge calculated by the institution’s internal models to capture the risk of direct loss due to a default event as well as the potential for indirect loss that may arise from such default event in respect of its trading book positions in credit instruments and equity instruments; and</p> <p>(b) the average of all such market risk capital charges calculated by the institution’s internal models over the previous 12-week period.</p>	<p>This term is used for the new IMA only, while the default risk charge under the new STM approach is separately defined as “standardized default risk charge” (see item 2(24) in Part A(3)).</p>

New definitions	Remarks (including references)
(3) ES means expected shortfall;	
(4) expected shortfall , in relation to a portfolio of exposures, means the average of all potential losses exceeding the VaR over a period of time at a given confidence level;	Reference: MAR10.18 of the Basel Framework. The term “VaR” is already defined in section 2(1) of the BCR.
(5) idiosyncratic credit spread NMRF , in relation to the IMA, means a credit spread NMRF that is associated with a particular issuance, including default provisions, maturity and seniority;	Reference: MAR31.26(2) of the Basel Framework.
(6) idiosyncratic equity NMRF , in relation to the IMA, means an equity NMRF that is associated with a particular equity;	Reference: MAR31.26(2) of the Basel Framework.
(7) modellable risk factor , in relation to the IMA, means a risk factor that passes the risk factor eligibility test under the institution’s internal models;	Reference: paragraph 317 of CP 19.01 and MAR31.12 of the Basel Framework. The term “risk factor” is defined in item 2(10) of Part A(3) (“Standardized (market risk) approach”).
(8) non-modellable risk factor , in relation to the IMA, means a risk factor	

New definitions	Remarks (including references)
that is not a modellable risk factor;	
(9) NMRF means non-modellable risk factor;	
<p>(10) profit and loss attribution test, in relation to the IMA, means a process comparing the daily changes in the value of a portfolio of exposures held by an approved trading desk for the most recent 250 trading days calculated by (i) the internal models used for determining market risk capital charges and (ii) the front office systems based on two statistical metrics—</p> <p>(a) the Spearman correlation metric; and</p> <p>(b) the Kolmogorov-Smirnov test metric.</p>	Reference: paragraph 358 and 372 of CP 19.01 and MAR32.20 and MAR 32.34-35 of the Basel Framework.
<p>(11) real price observation, in relation to a risk factor under the IMA, means—</p> <p>(a) a price at which the institution has conducted a transaction;</p> <p>(b) a verifiable price for an actual transaction between other arms-length parties;</p> <p>(c) a price obtained from a committed quote made by the institution itself</p>	Reference: paragraph 317 of CP 19.01 and MAR31.12 of the Basel Framework.

New definitions	Remarks (including references)
<p>or another party. The committed quote must be collected and verified through a third-party vendor, a trading platform or an exchange; or</p> <p>(d) a price obtained from a third-party vendor where—</p> <p>(i) the transaction or committed quote has been processed through the vendor;</p> <p>(ii) the vendor agrees to provide evidence of the transaction or committed quote to the Monetary Authority upon the request from the institution; and</p> <p>(iii) the price meets any of the criteria listed in paragraph (a), (b) or (c) of this definition;</p>	
<p>(12) reduced set of modellable risk factors, in relation to the IMA, subject to item 3.3(4) below, means a set of modellable risk factors that—</p> <p>(a) are relevant for the institution’s portfolio of exposures;</p> <p>(b) for which there is a sufficiently long history of observations; and</p> <p>(c) the ES of the reduced set of modellable risk factors is able to explain</p>	<p>Reference: paragraph 385 of CP 19.01 and MAR33.5(2) of the Basel Framework.</p>

New definitions	Remarks (including references)
<p>at least 75% of the variation of the fully specified ES which is based on all modellable risk factors on average measured over the preceding 12-week period;</p>	
<p>(13) risk factor eligibility test, in relation to the IMA, means a test to check whether there are a sufficient number of real price observations that are representative of a risk factor;</p>	<p>Reference: paragraph 317 of CP 19.01 and MAR31.12 of the Basel Framework.</p>
<p>(14) stressed ES, in relation to a portfolio of exposures held by an authorized institution, means an ES calculated by the institution under the IMA with model inputs calibrated to historical data from a stressed ES relevant period;</p>	
<p>(15) stressed ES relevant period, in relation to an authorized institution and the definition of stressed ES in item 1(14) above, means a continuous 12-month period of significant financial stress for which the relevant portfolio held by the institution experienced the largest loss and spans back to and includes 2007 at a minimum;</p>	<p>Reference: paragraph 387 of CP 19.01 and MAR33.7 of the Basel Framework.</p>

New definitions	Remarks (including references)
<p>(16) stress scenario capital charge, in relation to an authorized institution, means the market risk capital charge for an NMRF calculated by the institution under the IMA with model inputs calibrated to a relevant continuous 12-month period of significant financial stress. The institution should determine—</p> <ul style="list-style-type: none"> (a) a common stress scenario across all idiosyncratic credit spread NMRFs; (b) a common stress scenario across all idiosyncratic equity NMRFs; or (c) a common stress scenario across all NMRFs within the same risk class that are not idiosyncratic credit spread NMRFs or idiosyncratic equity NMRFs, or (d) after obtaining the approval from the Monetary Authority, a common stress scenario across NMRFs that belong to the same bucket within a curve, surface or cube, <p>where the model inputs are calibrated to a 12-month period of significant financial stress to which the institution experiences the largest loss within</p>	<p>Reference: paragraph 396 of CP 19.01 for (c) and paragraph 398 of CP 19.01 for (a) and (b) and MAR33.16 of the Basel Framework.</p>

New definitions	Remarks (including references)
the set of NMRFs in (a), (b), (c) or (d) above.	

Item 2. Existing Divisions of, and Schedule to, the BCR to be repealed

Repeal Divisions 11 and 12 of Part 8 of the BCR, and repeal Schedule 3 to the BCR.

Item 3. Substitute a new Division (Calculation of Market Risk Capital Charge under IMA) for the repealed Divisions 11 and 12 of Part 8 of the BCR

Even if the subject of an approval by the MA under section 18(2)(a) of the BCR (see item 7(4) in Part A(1)), the market risk capital charge for an approved trading desk may only be calculated using the IMA if such trading desk passes back-testing requirements and is also assigned either to the green zone or yellow zone (but not the red zone) under the profit and loss attribution test. Back-testing (a concept which already exists under the current IMM approach – please see the definition of “back-testing” in section 2(1) of the BCR) is used to determine whether risks estimated by internal models are sufficiently conservative to cover observed trading losses. The profit and loss attribution test (a new concept under the IMA) is to ensure that there is not too big or too variable of a difference between the profit and loss calculated by an AI’s front office systems and the profit and loss calculated by the AI’s internal models, with the result being based on a “traffic lights” system of green zone (if the difference is less than specified thresholds), red zone (if the difference exceeds maximum specified thresholds) and yellow zone (if the difference falls between the two thresholds; named “amber zone” under the Basel Framework).

We intend to provide a one-year transitional period for the Pillar 1 capital requirement consequences of the profit and loss attribution test. That said, AIs are required to conduct the profit and loss attribution test beginning from a date t, no earlier than 1 January 2024, to be specified by the MA. The outcomes of the profit and loss attribution test will be used for Pillar 2 purposes starting from date t. The Pillar 1 capital requirement consequences of assigning an approved trading desk to the yellow or the red zone, will apply starting one year from date t.

Item 3.1 below provides for the application of this item 3 to AIs which use the IMA for calculating their market risk capital charges. Item 3.2 then provides for how an AI is to calculate its risk-weighted amount for market risk (as a function of its market risk capital charge), which calculation differs depending on whether its approved trading desks are all assigned to the green zone of the profit and loss attribution test, or whether some desks are assigned to the green zone and some are assigned to the yellow zone (in which case a capital surcharge is added in calculating the risk-weighted amount). Item 3.3 (together with item 3.4) provides for the calculation of an AI’s market risk capital charge. Item 3.5 provides for back-testing and the profit and loss attribution test, and finally item 3.6 provides for the capital surcharge.

3.1 Add a new section to provide for the application of item 3

Matters to be provided	Remarks (including references)
(1) To provide that the matters in this item 3 applies to an authorized institution which uses the IMA for calculating its market risk capital charge.	This item 3.1(1) is similar to the existing section 315(1) of the BCR.

Matters to be provided	Remarks (including references)
(2) To provide that unless the context otherwise requires, a reference to an authorized institution in this item 3 is a reference to an authorized institution which uses the IMA for calculating its market risk capital charge.	This item 3.1(2) is similar to the existing section 315(2) of the BCR. For the changes to be made to section 18 of the BCR, please see item 7 in Part A(1).
(3) To provide that unless the context otherwise requires, a reference to an approved trading desk in this item 3 is a reference to a trading desk of an authorized institution that is specified in an approval under section 18(2)(a) of the BCR.	

3.2 Add a new section to provide for the calculation of risk-weighted amount for market risk

Matters to be provided	Remarks (including references)
(1) To provide that— (a) where none of the approved trading desks is assigned to the yellow zone in the profit and loss attribution test under item 3.5(4) below, the authorized institution shall calculate its risk-weighted amount for	This item 3.2(1) sets out the calculation of risk-weighted amount for market risk for an authorized institution that is approved to use the IMA. The new IMA introduces the profit and loss attribution test to better differentiate well-performing models

Matters to be provided	Remarks (including references)
<p>market risk by the sum of—</p> <ul style="list-style-type: none"> (i) the product of 12.5 and the market risk capital charge as calculated pursuant to item 3.3(1) for all approved trading desks that fulfil the backtesting requirements under item 3.5(1) below and are assigned to the green zone in the profit and loss attribution test under item 3.5(2) below; and (ii) the risk-weighted amount for market risk calculated under the STM approach in accordance with item 4.2(1) in Part A(3) (“Standardized (market risk) approach”) for— <ul style="list-style-type: none"> (A) trading desks that are not approved trading desks; and (B) approved trading desks to which the new section 19A applies (see item 10 in Part A(1) (“Prescribed approaches in relation to calculation of the market risk capital charge under the new market risk 	<p>from those performing poorly.</p> <p>Item 3.2(1)(a) sets out the calculation for cases where none of the approved trading desk is assigned to the yellow zone in the profit and loss attribution test.</p> <p>Item 3.2(1)(b) sets out the formula where any of the approved trading desks is assigned to the yellow zone in the profit and loss attribution test. Such trading desks may continue to use the internal models but will be subject to a capital surcharge. The formula however limits the impact of the capital surcharge on the total risk-weighted amount.</p> <p>The only difference from the original formula in the CP or the Basel Framework is that the formula as laid down in this provision is used to determine the risk-weighted amount instead of the capital charge. It is worth noting that the capital charge multiplied by 12.5 equals the risk-weighted amount.</p> <p>Reference: paragraph 425 of CP 19.01 and MAR33.43 of the Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p style="text-align: center;">framework”)); or</p> <p>(b) where any approved trading desk is assigned to the yellow zone in the profit and loss attribution test, must calculate the risk-weighted amount for market risk as follows—</p> $RWA = 12.5 \cdot [\min(IMA_{G,Y} + Capital\ surcharge + C_u, SA_{all\ desks}) + \max(0, IMA_{G,Y} - SA_{G,Y})]$ <p>where—</p> <ul style="list-style-type: none"> (i) $IMA_{G,Y}$ is the market risk capital charge as calculated pursuant to item 3.3(1) for all approved trading desks that fulfil the backtesting requirements under item 3.5(1) below and are assigned to the green or yellow zone in the profit and loss attribution test under item 3.5(2) or item 3.5(4) below; (ii) <i>Capital surcharge</i> is calculated in accordance with item 3.6 below; (iii) C_u is the market risk capital charge calculated under the 	

Matters to be provided	Remarks (including references)
<p>STM approach in accordance with item 4.2(1) in Part A(3) (“Standardized (market risk) approach”) for—</p> <p>(A) trading desks that are not approved trading desks; and</p> <p>(B) approved trading desks to which the new section 19A applies (see item 10 in Part A(1) (“Prescribed approaches in relation to calculation of the market risk capital charge under the new market risk framework”));</p> <p>(iv) $SA_{all\ desks}$ is the market risk capital charge for all trading desks calculated under the STM approach in accordance with item 4.2(1) in Part A(3) (“Standardized (market risk) approach”); and</p> <p>(v) $SA_{G,Y}$ is the market risk capital charge for all approved trading desks that fulfil the backtesting requirements under item 3.5(1) below and are assigned to the green or yellow zone in the profit and loss attribution test under</p>	

Matters to be provided	Remarks (including references)
<p>item 3.5(2) or item 3.5(4) below, calculated under the STM approach in accordance with item 4.2(1) in Part A(3) (“Standardized (market risk) approach”).</p>	

3.3 Add a new section to provide for the calculation of market risk capital charge for approved trading desks that fulfil the backtesting requirements and are assigned to the green or yellow zone in the profit and loss attribution test

Matters to be provided	Remarks (including references)
<p>(1) To provide that, for trading desks that fulfil the backtesting requirements under item 3.5(1) below and are assigned to the green or yellow zone in the profit and loss attribution test under item 3.5(2) or (4) below, an authorized institution must calculate the market risk capital charge by its internal models as the sum of—</p> <p>(a) the higher of—</p> <p style="padding-left: 40px;">(i) the sum of—</p> <p style="padding-left: 80px;">(A) the institution’s latest available market risk capital charge for modellable risk factors, calculated in</p>	<p>The new IMA replaced the current IMM approach’s heavy reliance on VaR, by including the three components below:</p> <p>(i) an expected shortfall metric as set out in item 3.3(1)(a)(i)(A) and (a)(ii)(A), which determines the capital charge for those risk factors (i.e. market variables such as interest rates or equity prices that affect the value of financial instruments) for which a sufficient amount of observable market data is available and which therefore are deemed suitable for modelling;</p> <p>(ii) an NMRF capital charge as set out in item 3.3(1)(a)(i)(B) and</p>

Matters to be provided	Remarks (including references)
<p>accordance with item 3.3(2) below; and</p> <p>(B) the institution’s latest available market risk capital charge for non-modellable risk factors, calculated in accordance with item 3.3(3) below; and</p> <p>(ii) the sum of—</p> <p>(A) the average market risk capital charge for modellable risk factors, calculated in accordance with item 3.3(2) below, for the last 60 trading days multiplied by a multiplication factor m_c determined under item 3.4(1) below; and</p> <p>(B) the average market risk capital charge for non-modellable risk factors, calculated in accordance with item 3.3(3) below, for the last 60 trading days; and</p> <p>(b) the default risk charge.</p>	<p>(a)(ii)(B) for risk factors with limited observable market data which are deemed unsuitable for modelling; and</p> <p>(iii) a default risk charge as set out in item 3.3(1)(b), to determine the capital charge associated with default risk for credit and equity instruments. The default risk charge replaces the incremental risk charge in the current IMM approach. While the incremental risk charge covers both default and migration risk (i.e. the potential for loss due to an internal/external rating downgrade or upgrade unrelated to a jump-to-default.), the default risk charge focuses exclusively on default risk. The migration risk is taken into account in the expected shortfall metric instead since it requires longer liquidity horizons compared to the VaR metric under the current IMM approach.</p> <p>The overall market risk capital charge under the IMA is calculated as the simple sum of the capital charge for each of the three components.</p> <p>For “modellable risk factors” and “non-modellable risk factors”, please see the explanation in the remarks column for item 3.3(2)</p>

Matters to be provided	Remarks (including references)
	<p>below.</p> <p>Reference: paragraph 423 of CP 19.01 and MAR33.41 of the Basel Framework.</p>
<p>(2) To provide that, an authorized institution must calculate the market risk capital charge for all modellable risk factors by using its internal models as follows—</p> $IMCC = 0.5 \cdot (IMCC(C)) + 0.5 \cdot \left(\sum_{i=1}^5 IMCC(C_i) \right)$ <p>where—</p> <p>(a) <i>IMCC</i> is the market risk capital charge for all modellable risk factors;</p> <p>(b) <i>IMCC(C)</i> is the unconstrained ES capital charge at the portfolio-wide level with no constraint on cross-risk class correlations and is calculated as $IMCC(C) = ES_{R,S} \cdot \max\left(\frac{ES_{F,C}}{ES_{R,C}}, 1\right)$;</p> <p>(c) <i>IMCC(C_i)</i> is the constrained ES capital charge at the risk class level</p>	<p>The current IMM approach allows AIs to model all risks inherent in their trading portfolio. However, the new IMA recognises that there is significant uncertainty in modelling risk factors for which there are limited observable historical market data.</p> <p>We refer to risk factors with sufficient historical market data as “modellable risk factors”, while risk factors with limited observable historical market data are referred to as “non-modellable risk factors”.</p> <p>This provision sets out the calculation of the market risk capital charge for all modellable risk factors.</p> <p>The first term in the formula, i.e. <i>IMCC(C)</i>, represents the unconstrained ES capital charge at the portfolio-wide level, i.e. AIs are free to recognise empirical correlations of risk factors</p>

Matters to be provided	Remarks (including references)
<p>and is calculated as $IMCC(C_i) = ES_{R,S,i} \cdot \max\left(\frac{ES_{F,C,i}}{ES_{R,C,i}}, 1\right)$;</p> <p>(d) $ES_{R,S}$ is the stressed ES calculated with the reduced set of modellable risk factors across all five risk classes;</p> <p>(e) $ES_{F,C}$ is the current ES calculated with the full set of modellable risk factors across all five risk classes;</p> <p>(f) $ES_{R,C}$ is the current ES calculated with the reduced set of modellable risk factors across all five risk classes;</p> <p>(g) $ES_{R,S,i}$ is the stressed ES calculated with the reduced set of modellable risk factors within risk class i;</p> <p>(h) $ES_{F,C,i}$ is the current ES calculated with the full set of modellable risk factors within risk class i; and</p> <p>(i) $ES_{R,C,i}$ is the current ES calculated with the reduced set of modellable risk factors within risk class i; and</p> <p>(j) the stressed ES and the current ES must be calculated in accordance with item 3.3(5) and item 4(1)(h) below.</p>	<p>both within and across the risk classes.</p> <p>The second term, i.e. $IMCC(C_i)$, represents the constrained ES capital charge at the risk class level, i.e. AIs can only recognise empirical correlations of risk factors within each risk class and come up with constrained capital charges at each risk class level. No empirical correlations between risk classes can be recognised; therefore, the constrained capital charges at each risk class level are aggregated by a simple sum.</p> <p>We slightly simplified the formula in MAR33.15 of the Basel Framework by substituting rho (ρ) directly by 0.5 and by substituting B directly by 5.</p> <p>Reference: paragraph 395 of CP 19.01 for the formula and (a)–(c), paragraph 393 of CP 19.01 for (b), paragraph 394 of CP 19.01 for (c) and paragraph 386 of CP 19.01 for (d)–(i); and MAR33.15 of the Basel Framework.</p>

Matters to be provided

Remarks (including references)

(3) To provide that an authorized institution must calculate the market risk capital charge for all NMRFs calculated by its internal models as follows—

$$SES = \sqrt{\sum_{i=1}^I ISES_{NM,i}^2} + \sqrt{\sum_{j=1}^J ISES_{NM,j}^2} + \sqrt{\left(0.6 \cdot \sum_{k=1}^K SES_{NM,k}\right)^2 + 0.64 \cdot \sum_{k=1}^K SES_{NM,k}^2}$$

where—

- (a) *SES* is the market risk capital charge for all NMRFs;
- (b) *ISES_{NM,i}* is the stress scenario capital charge for the idiosyncratic credit spread NMRF *i* from the *I* risk factors where the institution has demonstrated to the satisfaction to the Monetary Authority that it is appropriate to aggregate all *I* idiosyncratic credit spread NMRFs with a zero correlation assumption;
- (c) *ISES_{NM,j}* is the stress scenario capital charge for the idiosyncratic

The aggregation approach to calculating the overall NMRF capital charge limits diversification benefits, to take into account the uncertainty in determining the capital charge for NMRFs due to the limited observable historical market data.

While a zero correlation is applied to the idiosyncratic credit spread NMRFs (in the first term in the formula) and the idiosyncratic equity NMRFs (in the second term of the formula), respectively, AIs can recognise diversification effects between other non-idiosyncratic NMRFs as indicated in the third term of the formula.

We slightly simplified the formula in MAR33.17 of the Basel Framework by substituting rho (ρ) directly by 0.6.

Reference: paragraph 399 of CP 19.01 and MAR33.17 of the Basel Framework.

Matters to be provided	Remarks (including references)
<p>equity NMRF j from the J risk factors where the institution demonstrates to the satisfaction to the Monetary Authority that it is appropriate to aggregate all J idiosyncratic equity NMRFs with a zero correlation assumption;</p> <p>(d) $SES_{NM,k}$ is the stress scenario capital charge for the NMRF k other than the I idiosyncratic credit spread NMRFs mentioned in item 3.3(3)(b) above and the J idiosyncratic equity NMRFs mentioned in item 3.3(3)(c) above; and</p> <p>(e) the calculation of the stress scenario capital charge is subject to item 4(1)(i) below.</p>	
<p>(4) To provide that the institution must, for the purposes of calculating the current ES and the stressed ES under item 3.3(2) above—</p> <p>(a) obtain the approval of the Monetary Authority for the use of a reduced set of modellable risk factors included in the calculation and any subsequent update of the reduced set of modellable risk factors;</p> <p>(b) regularly review and update if necessary the stressed ES relevant</p>	<p>The policy intent for introducing a reduced set of modellable risk factors is to reduce the computational burden of searching for the stressed ES relevant period based on the historical data for the full set of modellable risk factors.</p> <p>The new IMA allows for maximum stress to be calculated on a reduced set of AI-selected risk factors, provided that these factors explain at least 75% of the variation in the ES model with a full</p>

Matters to be provided	Remarks (including references)
<p>period, on at least a quarterly basis, or whenever there are material changes in the composition of the portfolio or in the time series of the relevant risk factors in the portfolio; and</p> <p>(c) regularly review and update if necessary the reduced set of modellable risk factors, on at least a quarterly basis, or whenever there is an update on the stressed ES relevant period resulting from item 3.3(4)(b) above.</p>	<p>set of risk factors. The 75% coverage (i.e. the second bullet of paragraph 385 of CP 19.01) is covered in the definition of the “reduced set of modellable risk factors” set out in item 1(12) above.</p> <p>For item 3.3(4)(c), even if there is no update in the stressed ES relevant period, authorized institutions should also review and update if necessary the reduced set of modellable risk factors at least on a quarterly basis as set out in paragraph 426 of CP 19.01.</p> <p>Reference: paragraph 385 of CP 19.01 for (a), paragraph 387 of CP 19.01 for (b) and (c) and paragraph 426 of CP 19.01 for (c); and MAR33.5, MAR33.7 and MAR33.44 of the Basel Framework.</p>
<p>(5) To provide that an authorized institution must calculate the current ES and the stressed ES as follows—</p>	<p>This item 3.3(5) sets out the calculation methodology of the ES measure which is based on ES calculated at a base liquidity horizon of 10 days. In (e), instead of introducing a new term $Q(p_i, j)$, we explained it in words, i.e. “a subset of modellable risk factors with a liquidity horizon that is equal to or longer than LH_j</p>

Matters to be provided

Remarks (including references)

$$ES = \sqrt{(ES_T(P))^2 + \sum_{j \geq 2} \left(ES_T(P, j) \cdot \sqrt{\frac{(LH_j - LH_{j-1})}{T}} \right)^2}$$

where—

- (a) T is the base liquidity horizon of 10 days;
- (b) P are positions that are exposed to a set of modellable risk factors;
- (c) LH_j is the liquidity horizon j where—
 - (i) LH_1 is 10 days;
 - (ii) LH_2 is 20 days;
 - (iii) LH_3 is 40 days;
 - (iv) LH_4 is 60 days; and
 - (v) LH_5 is 120 days;
- (d) $ES_T(P)$ is the ES at a liquidity horizon T (that is, 10 days) with positions P with respect to shocks to modellable risk factors that the

that the positions P are exposed to, with other modellable risk factors held constant”.

Reference: paragraph 383 of CP 19.01 and MAR33.4 of the Basel Framework.

Matters to be provided	Remarks (including references)
<p>positions P are exposed to; and</p> <p>(e) $ES_T(P, j)$ is the ES at a liquidity horizon T (that is, 10 days) with positions P with respect to shocks to a subset of modellable risk factors with a liquidity horizon that is equal to or longer than LH_j that the positions P are exposed to, with other modellable risk factors held constant.</p>	

3.4 Add a new section to provide for the multiplication factor

Matters to be provided	Remarks (including references)
<p>(1) To provide that the multiplication factor, m_c, to be used by an authorized institution for the purposes of item 3.3(1)(a) above shall be the sum of—</p> <p>(a) the value of 1.5;</p> <p>(b) a backtesting add-on specified for the number of backtesting exceptions in the table below for the last 250 trading days where the backtesting is on the basis of—</p>	<p>This item 3.4(1) relates to item 3.3(1)(a)(ii)(A) above and is similar to the existing section 319(1) of the BCR. It sets out the impact on the multiplication factor based on the backtesting results at the firm-wide level. AIs should include all positions across all trading desks that are subject to the market risk capital requirements under the IMA to perform the backtesting at the firm-wide level.</p>

Matters to be provided	Remarks (including references)															
<p>(i) all the positions of all approved trading desks using the IMA; and</p> <p>(ii) VaR calibrated at a one-tailed 99% confidence interval; and</p> <p>(c) any additional backtesting add-on assigned to the institution pursuant to item 3.4(3) below.</p> <p style="text-align: center;">Add-on for Backtesting Exceptions</p> <table border="1" data-bbox="268 829 1075 1276"> <thead> <tr> <th>Zone</th> <th>Number of backtesting exceptions</th> <th>Add-on</th> </tr> </thead> <tbody> <tr> <td>Green</td> <td>≤ 4</td> <td>0.00</td> </tr> <tr> <td rowspan="4">Yellow</td> <td>5</td> <td>0.20</td> </tr> <tr> <td>6</td> <td>0.26</td> </tr> <tr> <td>7</td> <td>0.33</td> </tr> <tr> <td>8</td> <td>0.38</td> </tr> </tbody> </table>	Zone	Number of backtesting exceptions	Add-on	Green	≤ 4	0.00	Yellow	5	0.20	6	0.26	7	0.33	8	0.38	<p>Backtesting is a test to determine if the risk estimated by the internal models is sufficiently conservative to cover observed trading losses. Although an accurate internal model is expected to also deliver a number of exceptions, an excessive number of backtesting exceptions observed consistently over time is an indication of a model’s inaccuracy. For this reason, a backtesting add-on is applied in the calculation of the capital charge.</p> <p>Backtesting requirements at the firm-wide level also apply in the existing framework under the existing section 319 of the BCR. However, due to the switch from VaR-based to ES-based internal models, the floor value and the backtesting add-on are also recalibrated under the new IMA.</p> <p>The first column of the table relates to item 9(1) in Part A(1) (“Prescribed approaches in relation to calculation of the market risk capital charge under the new market risk framework”) to clarify that measures that the Monetary Authority could take when the internal model falls into the backtesting red zone.</p> <p>Reference: paragraph 348 and 424 of CP 19.01 and MAR32.9 and</p>
Zone	Number of backtesting exceptions	Add-on														
Green	≤ 4	0.00														
Yellow	5	0.20														
	6	0.26														
	7	0.33														
	8	0.38														

Matters to be provided	Remarks (including references)
<p style="text-align: center;">9</p> <p style="text-align: center;">0.42</p> <p>Red ≥ 10 0.50</p>	<p>MAR33.42 of the Basel Framework.</p>
<p>(2) To provide that, for the purposes of calculating the number of backtesting exceptions under item 3.4(1)(b) above, an authorized institution may exclude any backtesting exception if the institution demonstrates to the satisfaction of the Monetary Authority that—</p> <p>(a) a backtesting exception relates to an NMRF and the market risk capital charge for such NMRF exceeds both the actual and the hypothetical loss for that day; or</p> <p>(b) these backtesting exceptions do not result from deficiencies of the relevant internal models.</p>	<p>This item 3.4(2) is similar to the existing section 319(2) of the BCR.</p> <p>We added a new ground for excluding back-testing exceptions if they relate to an NMRF, in accordance with MAR32.6 of the Basel Framework.</p> <p>We avoided the term “temporary” in the existing section 319(2) of the BCR, since most exceptions are typically temporary in nature.</p> <p>Reference: paragraph 345 of CP 19.01 and MAR32.6 of the Basel Framework.</p>
<p>(3) To provide that, where—</p> <p>(a) an authorized institution uses the IMA to calculate its market risk; and</p>	<p>This item 3.4(3) is similar to the existing section 319(3) of the BCR.</p> <p>We added a new ground for assigning an additional back-testing</p>

Matters to be provided	Remarks (including references)
<p>(b) the Monetary Authority is satisfied that—</p> <ul style="list-style-type: none"> (i) the institution has ceased to satisfy any of the requirements specified in item 4 applicable to or in relation to the institution; or (ii) the institution satisfies all the requirements specified in item 4, but there is a minor imperfection in the relevant internal models due to an assumption or approximation underlying the models, <p>the Monetary Authority may, by notice in writing given to the institution, assign an additional back-testing add-on to the institution.</p>	<p>add-on under item 3.4(3)(b)(ii) to cater for minor imperfections in the relevant internal models (which do not result in a breach of any requirements) since the initial approval.</p>

3.5 Add a new section to provide for backtesting and profits and loss attribution test for an approved trading desk

Matters to be provided	Remarks (including references)
<p>(1) To provide that back-testing requirements are fulfilled in respect of an approved trading desk if—</p>	<p>To monitor whether risks are adequately captured by a trading desk’s internal model, two validation tests must be passed on an ongoing basis for each trading desk: (i) backtesting and (ii) profit</p>

Matters to be provided	Remarks (including references)
<p>(a) there are no more than 12 backtesting exceptions against the VaR calibrated at the one-tailed 99% confidence level for the most recent 250 trading days; and</p> <p>(b) there are no more than 30 backtesting exceptions against the VaR calibrated at the one-tailed 97.5% confidence level for the most recent 250 trading days.</p>	<p>and loss attribution test.</p> <p>Backtesting only results in a binary pass or fail outcome. Consequence of failing the backtesting is set out in the new section 19A(b)(i) of the BCR (see item 10 in Part A(1) (“Prescribed approaches in relation to calculation of the market risk capital charge under the new market risk framework”)).</p> <p>Reference: paragraph 357 of CP 19.01 and MAR32.19 of the Basel Framework.</p>
<p>(2) To provide that an approved trading desk is assigned to the green zone in the profit and loss attribution test if—</p> <p>(a) the Spearman correlation metric is higher than 0.80; and</p> <p>(b) the Kolmogorov-Smirnov distributional test metric is lower than 0.09.</p>	<p>We intend to specify the technical details in relation to the calculation methodology of (i) the Spearman correlation metric and (ii) the Kolmogorov-Smirnov test metric in a new Supervisory Policy Manual</p> <p>Reference: paragraph 375 of CP 19.01 and MAR32.42(1) of the Basel Framework.</p>
<p>(3) To provide that an approved trading desk is assigned to the red zone in the</p>	<p>For the profit and loss attribution test, the consequence of failing the test is based on a “traffic light” approach with an intermediate</p>

Matters to be provided	Remarks (including references)
<p>profit and loss attribution test if—</p> <p>(a) the Spearman correlation metric is lower than 0.70; or</p> <p>(b) the Kolmogorov-Smirnov distributional test metric is higher than 0.12.</p>	<p>“yellow zone”. Trading desks in the “yellow zone” may continue to use the internal models but will be subject to a capital surcharge as set out in the item 3.6 below. Trading desks that materially fail the test are assigned to the “red zone” and must use the STM approach as set out in the new section 19A(b)(ii) of the BCR (see item 10 of Part A(1)).</p> <p>Reference: paragraph 375 of CP 19.01 and MAR32.42(2) of the Basel Framework.</p>
<p>(4) To provide that an approved trading desk is assigned to the yellow zone in the profit and loss attribution test if it is not assigned to the green zone under item 3.5(2) above or to the red zone under item 3.5(3) above.</p>	<p>Reference: paragraph 375 of CP 19.01 and MAR32.42(3) of the Basel Framework.</p>
<p>(5) To provide that, where an approved trading desk—</p> <p>(a) is assigned to the red zone in the profit and loss attribution test in accordance with item 3.5(3) above; or</p> <p>(b) does not fulfil the backtesting requirements in accordance</p>	<p>This item 3.5(5) provides the authorized institutions with flexibility in exceptional situations to depart from the results of the trading desk-level backtesting and profit and loss attribution test, should a need to do so arise in the future.</p> <p>Reference: paragraph 378 of CP 19.01 and MAR32.45 of the</p>

Matters to be provided	Remarks (including references)
<p>with item 3.5(1) above,</p> <p>due to extraordinary circumstances with systemic relevance, the Monetary Authority may permit the trading desk to continue to use the IMA, but subject to item 7(6) of Part A(1) (“Prescribed approaches in relation to calculation of the market risk capital charge under the new market risk framework”), requires the institution to update the internal models to take into account the regime shift or significant market stress as quickly as practicable.</p>	<p>Basel Framework.</p>

3.6 Add a new section to provide for the capital surcharge for approved trading desks assigned to the yellow zone in the profit and loss attribution test

Matters to be provided	Remarks (including references)
<p>(1) To provide that the capital surcharge for approved trading desks fulfil the backtesting under item 3.5(1) above and are assigned to the yellow zone in the profit and loss attribution test under item 3.5(4) above is calculated as the product of—</p>	<p>This provision sets out the calculation of the capital surcharge for trading desks assigned to the yellow zone in the profit and loss attribution test.</p> <p>Reference: paragraph 427 of CP 19.01 and MAR33.45 of the</p>

Matters to be provided	Remarks (including references)
<p>(a) the market risk capital charge calculated under the STM approach in accordance with item 4.2(1) in Part A(3) (“Standardized (market risk) approach”) for trading desks that are assigned to the green or yellow zone in the profit and loss attribution test minus the market risk capital charge calculated under the IMA in accordance with item 3.3(1) above for such trading desks, and subject to a floor of zero;</p> <p>(b) the ratio $\frac{\sum_{i \in Y} SA_i}{\sum_{i \in G, Y} SA_i}$ where—</p> <p>(i) $\sum_{i \in Y} SA_i$ is the market risk capital charge calculated under the STM approach in accordance with item 4.2(1) in Part A(3) (“Standardized (market risk) approach”) for approved trading desks which fulfil the backtesting under item 3.5(1) above and are assigned to the yellow zone in the profit and loss attribution test under item 3.5 (4) above; and</p> <p>(ii) $\sum_{i \in G, Y} SA_i$ is the market risk capital charge calculated under the STM approach in accordance with item 4.2(1) in Part A(3) (“Standardized (market risk) approach”) for</p>	<p>Basel Framework.</p>

Matters to be provided	Remarks (including references)
<p>approved trading desks which fulfil the backtesting under item 3.5(1) above and are assigned to the green zone or yellow zone in the profit and loss attribution test under item 3.5(2) and item 3.5(4) above respectively; and</p> <p>(c) 0.5.</p>	

Item 4. Substitute a new Schedule for the repealed Schedule 3 to the BCR to provide for the minimum requirements to be satisfied for approval under section 18 of the BCR to use IMA

Matters to be provided	Remarks (including references)
<p>(1) To add a new section to provide that an authorized institution which makes an application under section 18 of the BCR to use the IMA shall demonstrate to the satisfaction of the Monetary Authority that—</p> <p>(a) the institution’s market risk management system is conceptually sound and implemented with integrity;</p> <p>(b) the institution has a sufficient number of staff who are qualified and</p>	<p>Paragraphs (a) to (g) provide for the qualitative requirements that authorized institutions must satisfy to obtain the approval to use the IMA for the nominated trading desks.</p> <p>In paragraphs (e) and (f), we intend to provide further guidance on various qualitative standards (which is likely in the form of a Supervisory Policy Manual) based on the Basel Framework with</p>

Matters to be provided	Remarks (including references)
<p>trained to use the institution’s internal models to which the application relates (“the relevant models”) in the institution’s business, risk control, audit and back office functions;</p> <p>(c) the relevant models have a proven track record of reasonable accuracy in measuring market risk and demonstrates such reasonable accuracy during a period of initial monitoring and live testing of the relevant models upon the request of the Monetary Authority;</p> <p>(d) the institution clearly documents the relevant models, with—</p> <p style="padding-left: 40px;">(i) the core model documentation which covers all key components of the relevant models; all model changes that affect the core model documentation need to be approved by the Monetary Authority; and</p> <p style="padding-left: 40px;">(ii) the non-core model documentation which covers a comprehensive range of detailed aspects of the relevant models; any update to such non-core model documentation must be promptly notified to the MA;</p> <p>(e) the institution has an appropriate organisational infrastructure</p>	<p>modifications to take into account the circumstances in Hong Kong, and this will cover:</p> <ul style="list-style-type: none"> • the qualitative standards for the organisational infrastructure and the relevant models as set out in section 18.3 of CP 19.01 (i.e. MAR30.5–MAR30.12 of the Basel Framework); • the definition and structure of trading desks as set out in section 9 of CP 19.01 (i.e. MAR12 of the Basel Framework); • the model validation standards as set out in section 18.4 and 18.5 of CP 19.01 (i.e. MAR30.17–MAR30.18 of the Basel Framework); and • the stress testing requirements as set out in section 18.6 of CP 19.01 (i.e. MAR30.19–MAR30.23 of the Basel Framework). <p>Paragraphs (h) and (i) provide for specific requirements for internal models for modellable risk factors and non-modellable</p>

Matters to be provided	Remarks (including references)
<p>(including the definition and structure of trading desks) and its firm-wide internal models meet qualitative evaluation criteria as specified by the Monetary Authority;</p> <p>(f) the institution has a comprehensive stress-testing programme conducted regularly and has a robust system for validating the accuracy and consistency of the relevant models;</p> <p>(g) the relevant models capture and accurately reflect, on a continuing basis, all material risk factors affecting market risk inherent in the institution's market risk exposures and determine whether each risk factor is modellable through identifying a sufficient number of real price observations in the risk factor eligibility test;</p> <p>(h) in respect of the relevant models for modellable risk factors—</p> <p style="padding-left: 40px;">(i) $ES_{F,C}$, $ES_{R,C}$ and $ES_{R,S}$ as set out in item 3.3(2) above is computed on a daily basis for each approved trading desk and across all approved trading desks;</p> <p style="padding-left: 40px;">(ii) $ES_{F,C,i}$, $ES_{R,C,i}$ and $ES_{R,S,i}$ as set out in item 3.3(2) above is computed at least on a weekly basis for each</p>	<p>risk factors respectively.</p> <p>Reference for each paragraph:</p> <p>(a)–(c): paragraph 264 of CP 19.01 and MAR30.2 of the Basel Framework</p> <p>(c): paragraph 265 of CP 19.01 and MAR30.3 of the Basel Framework</p> <p>(d): paragraphs 278–280 of CP 19.01</p> <p>(g): paragraph 296 and 317 of CP 19.01 and MAR31.1 and MAR31.12 of the Basel Framework</p> <p>(h)(i): paragraph 382 of CP 19.01 and MAR33.2 and FAQ 1 under MAR33.15 of the Basel Framework</p> <p>(h)(ii): paragraph 382 of CP 19.01 and MAR33.2 and FAQ 1 under MAR33.15 of the Basel Framework</p> <p>(h)(iii): paragraph 383 of CP 19.01 and MAR33.3 of the Basel Framework</p>

Matters to be provided	Remarks (including references)
<p>approved trading desk and across all approved trading desks on the condition that the weekly calculation does not lead to a systematic underestimation of risks relative to daily calculation, and that the institution must be in a position to switch to daily calculation if requested by the Monetary Authority;</p> <p>(iii) a 97.5% confidence level is used in calculating ES;</p> <p>(iv) the base liquidity horizon used by the relevant models is 10 days;</p> <p>(v) an appropriate liquidity horizon applicable to individual risk factors or sets of risk factors, which—</p> <p>(A) is capped at the maturity of the related instrument; and</p> <p>(B) is set in accordance with Table A below, or set at a higher level than that set out in Table A below where the increased liquidity horizon must be in the value of 20, 40, 60 or 120 days and the</p>	<p>(h)(iv): paragraph 383 of CP 19.01 and MAR33.4(2) of the Basel Framework</p> <p>(h)(v): paragraph 392 of CP 19.01 and MAR33.12 of the Basel Framework</p> <p>(h)(vi): paragraph 386 of CP 19.01 and MAR33.6 of the Basel Framework</p> <p>(h)(vii): paragraph 388 (the second bullet) of CP 19.01 and MAR33.8(2) of the Basel Framework</p> <p>(h)(viii): paragraph 388 of CP 19.01 and MAR33.8 of the Basel Framework</p> <p>(h)(ix): paragraph 390 of CP 19.01 and MAR33.10 of the Basel Framework</p> <p>(i)(i): paragraph 423 of CP 19.01 and MAR 33.41 of the Basel Framework (note: the daily calculation is not explicitly mentioned; however, based on the formula in MAR 33.41, daily calculation is required in order to obtain the average SES)</p>

Matters to be provided	Remarks (including references)
<p style="text-align: center;">institution must obtain an approval from the Monetary Authority to do so,</p> <p style="text-align: center;">is properly documented and reflected in the relevant models;</p> <p>(vi) subject to item 4(1)(f)(vii) below, the historical observation period for calculating current ES and stressed ES is a 12-month period;</p> <p>(vii) the institution is able to use a shorter historical observation period for the calculation of current ES if the Monetary Authority requests the institution to do so on the ground that the Monetary Authority is of the opinion that the request is justified due to a significant increase in volatility in the price of the institution's portfolio of exposures and such historical observation period is not shorter than six months;</p> <p>(viii) data sets used for the calculation of current ES are updated at least once every three months and are</p>	<p>(i)(ii): paragraph 396 of CP 19.01 and MAR33.16 of the Basel Framework</p> <p>(i)(iii): paragraph 397 of CP 19.01 and MAR33.16(1) of the Basel Framework</p> <p>(i)(iv): paragraph 398 of CP 19.01 and MAR33.16(2) of the Basel Framework</p>

Matters to be provided	Remarks (including references)
<p>reassessed whenever market prices are subject to material change, and the updating process is flexible enough to allow for more frequent updates where necessary;</p> <p>(ix) the relevant models only recognise empirical correlations of risk factors as permitted in the formula under item 3.3(2) above; and</p> <p>(i) in respect of the relevant models for NMRFs—</p> <p>(i) stress scenario capital charge for all NMRFs is computed on a daily basis for each approved trading desk and across all approved trading desks;</p> <p>(ii) stress scenario capital charge for a NMRF is calibrated to be at least as prudent as the stressed ES for a modellable risk factor;</p> <p>(iii) an appropriate liquidity horizon applicable to individual risk factors or sets of risk factors, which—</p>	

Matters to be provided	Remarks (including references)
<p>(A) is capped at the maturity of the related instrument and floored at 20 days; and</p> <p>(B) is in accordance with Table A below, or set at a higher level as required by the Monetary Authority,</p> <p>is properly documented and reflected in the relevant models; and</p> <p>(iv) the relevant models only recognise the prescribed correlations of NMRFs as permitted in the formula under item 3.3(3) above.</p>	
<p>(2) To add a new section to provide that in addition to item 4(1) above, an authorized institution must demonstrate to the satisfaction of the Monetary Authority that, if the institution uses the relevant models to calculate the default risk charge—</p> <p>(a) the relevant models capture and adequately reflect, on a continuing basis, the default risk inherent in the institution’s relevant positions</p>	<p>This item 4(2) provides for specific requirements for internal models calculating the default risk charge.</p> <p>Reference in general: paragraph 400 of CP 19.01 and MAR33.18 of the Basel Framework</p> <p>Reference for each paragraph:</p>

Matters to be provided	Remarks (including references)
<p>as specified in the definition of default risk charge in section 281 of the BCR;</p> <p>(b) the default risk charge is measured as a VaR at the 99.9% confidence level over a one-year liquidity horizon;</p> <p>(c) except for the equity positions mentioned in item 4(2)(d) below, the DRC must be based on the assumption of constant positions over a one-year horizon;</p> <p>(d) the liquidity horizon for designated sets of equity positions may be set with a floor of 60 days instead of the one-year liquidity horizon set out in item 4(2)(b) above and, consistently and across all designated sets of equity positions the DRC must be based on the assumption of constant positions over the liquidity horizon;</p> <p>(e) the relevant models simulate the default event for each obligor, taking into account—</p> <p style="padding-left: 40px;">(i) two types of systematic risk factors; and</p> <p style="padding-left: 40px;">(ii) the economic cycle, including the dependence of the</p>	<p>(b): paragraph 402 (the last bullet point) of CP 19.01 and MAR33.20(5) of the Basel Framework</p> <p>(c): paragraph 405 of CP 19.01 and MAR33.23 of the Basel Framework</p> <p>(d): paragraph 402 (the fourth bullet) and 405 of CP 19.01 and MAR33.20(4) and MAR33.23 of the Basel Framework</p> <p>(e): paragraph 402 (the first bullet) and 413 of CP 19.01 and MAR33.20(1) and MAR33.31 of the Basel Framework</p> <p>(f): paragraphs 406, 419–420 of CP 19.01 and MAR33.24, MAR33.37–MAR33.38 of the Basel Framework</p> <p>(g)(i): paragraph 406 and 419 of CP 19.01 and MAR33.24 and MAR33.37 of the Basel Framework</p> <p>(g)(ii): paragraph 420 of CP 19.01 and MAR33.38 of the Basel Framework</p>

Matters to be provided	Remarks (including references)
<p style="text-align: center;">recovery on the systematic risk factors mentioned in item 4(2)(e)(i) above;</p> <p>(f) where the institution uses the IRB approach, the relevant models apply the probability of default, subject to a floor of 0.03%, and loss given default estimated under the IRB approach;</p> <p>(g) where the institution uses the IRB approach and the estimates mentioned in item 4(2)(f) above do not exist, or where the institution does not use the IRB approach, the relevant models apply—</p> <p style="padding-left: 40px;">(i) a probability of default for each obligor, subject to a floor of 0.03%, and the relevant models should—</p> <p style="padding-left: 80px;">(A) measure the probability of defaults based on historical data of both formal default events and price declines equivalent to default losses over a one-year period, where such data should be based on publicly traded securities over a complete economic cycle with a minimum observation period of five years; or</p>	<p>(h): paragraph 409 of CP 19.01 and MAR33.27 of the Basel Framework</p> <p>(i): paragraph 407 of CP 19.01 and MAR33.25 of the Basel Framework</p> <p>(j): paragraph 408 of CP 19.01 and MAR33.26 of the Basel Framework</p> <p>(k): paragraph 410 of CP 19.01 and MAR33.28 of the Basel Framework</p> <p>(l): paragraph 411 of CP 19.01 and MAR33.29 of the Basel Framework</p> <p>(m): paragraph 414 of CP 19.01 and MAR33.32 of the Basel Framework</p> <p>(n): paragraph 402 (the fifth bullet) of CP 19.01 and MAR33.20(5) of the Basel Framework</p>

Matters to be provided	Remarks (including references)
<p>(B) use probability of defaults provided by external sources that are relevant to its portfolio; and</p> <p>(ii) the loss given default that reflects the type and seniority of the position, and the relevant models should—</p> <p>(A) measure the loss given default based on historical data that is sufficient to derive robust and accurate estimates; or</p> <p>(B) use the loss given default provided by external sources that are relevant to its portfolio;</p> <p>(h) the relevant models incorporate correlation effects between defaults among obligors, including the effect on correlations of periods of stress, that—</p> <p>(i) are based on objective data of credit spreads and listed equity prices;</p> <p>(ii) are calibrated with data covering a period of at least 10 years that includes the stressed ES relevant period as</p>	

Matters to be provided	Remarks (including references)
<p>defined in section 281 of the BCR and are measured over a liquidity horizon of one year; and</p> <p>(iii) the institution must reflect all significant basis risks in recognising the correlations;</p> <p>(i) the relevant models reflect netting of long and short exposures to the same obligor and such netting accounts for different losses in different instruments with exposures to the same obligor (for example, differences in seniority);</p> <p>(j) the relevant models capture explicitly the basis risk between long and short exposures of different obligors. The potential for offsetting default risk among long and short exposures across different obligors must be included through the modelling of defaults. The pre-netting of positions before input into the internal model other than as described in item 4(2)(i) above is not allowed;</p> <p>(k) the relevant models capture any material mismatch between a position and its hedge as well as any maturity mismatch between a long and a short position with a maturity of less than one year;</p>	

Matters to be provided	Remarks (including references)
<p>(l) the relevant models reflect—</p> <p style="padding-left: 40px;">(i) issuer and market concentration; and</p> <p style="padding-left: 40px;">(ii) concentrations that may arise within and across product classes under stressed conditions;</p> <p>(m) the relevant models reflect the nonlinear impact of options and other positions with material nonlinear behaviour with respect to default, taking account of model risk inherent in the valuation and estimation of price risks associated with such positions; and</p> <p>(n) the default risk charge is computed at least once a week.</p>	

Table A

Liquidity horizon of risk factors

Risk class	Type of risk factors	Liquidity horizon (in days)
GIRR	Interest rate in relation to HKD, AUD, CAD, EUR, GBP, JPY, SEK and USD	10
	Interest rate in relation currencies other than HKD, AUD, CAD, EUR, GBP, JPY, SEK and USD	20

Risk class	Type of risk factors	Liquidity horizon (in days)
	Interest rate volatility	60
	Other types	60
Credit spread	Credit spread in relation to investment grade sovereign	20
	Credit spread in relation to non-investment grade sovereign	40
	Credit spread in relation to investment grade corporate	40
	Credit spread in relation to non-investment grade corporate	60
	Credit spread volatility	120
	Other types	120
Equity	Equity price in relation to equity with market capitalisation of HKD 15.6 billion (see remark 1 below) or above based on the sum of market values of all the outstanding shares issued by the same legal entity across all stock exchanges	10
	Equity price in relation to equity with market capitalisation lower than HKD 15.6 billion based on the sum of market values of all the outstanding shares issued by the same legal entity across all stock exchanges	20
	Equity volatility in relation to equity with market capitalisation of HKD 15.6 billion or above based on the sum of market values of all the outstanding shares issued by the same legal entity across all stock exchanges	20
	Equity volatility in relation to equity with market capitalisation lower than HKD 15.6 billion based on the sum of market values of	60

Risk class	Type of risk factors	Liquidity horizon (in days)
	all the outstanding shares issued by the same legal entity across all stock exchanges	
	Other types	60
Foreign exchange	Foreign exchange rate in relation to USD/AUD, USD/BRL, USD/CAD, USD/CHF, USD/CNY, USD/EUR, USD/GBP, USD/HKD, USD/INR, USD/JPY, USD/KRW, USD/MXN, USD/NOK, USD/NZD, USD/RUB, USD/SEK, USD/SGD, USD/TRY, USD/ZAR, and their first-order cross-currency pairs between each other (see remark 2 below)	10
	Foreign exchange rate in relation to currency pairs other than USD/AUD, USD/BRL, USD/CAD, USD/CHF, USD/CNY, USD/EUR, USD/GBP, USD/HKD, USD/INR, USD/JPY, USD/KRW, USD/MXN, USD/NOK, USD/NZD, USD/RUB, USD/SEK, USD/SGD, USD/TRY, USD/ZAR, and their first-order cross-currency pairs between each other	20
	Foreign exchange volatility	40
	Other types	40
Commodity	Energy and carbon emissions trading price	20
	Precious metals and non-ferrous metals price	20
	Other commodity price	60
	Energy and carbon emissions trading volatility	60
	Precious metals and non-ferrous metals volatility	60
	Other commodity volatility	120

Risk class	Type of risk factors	Liquidity horizon (in days)
	Other types	120

Remarks:

1. The threshold of HKD 15.6 billion is derived based on (i) the BCBS threshold of USD 2 billion as set out in MAR21.74 of the Basel Framework and (ii) an assumed USD/HKD exchange rate of 7.8.
2. Unlike the footnote 1 under MAR33.12 of the Basel Framework, we removed EUR/JPY, EUR/GBP, EUR/CHF and JPY/AUD. The reason is that these currency pairs are the first-order currency pairs of the USD pairs.

PART A(5) – SIMPLIFIED STANDARDIZED APPROACH (“SSTM APPROACH”)

Item 1. Update the reference to “STM approach” to become “SSTM approach” throughout Divisions 2 to 10 of Part 8

As mentioned in the general statement, the current STM approach will be retained as the SSTM approach for AIs with small and non-complex trading book portfolios, subject to the application of specified scaling factors to ensure a sufficiently conservative calibration of capital requirements for the AIs.

Item 2. Repeal the following existing provisions of the BCR

Matters to be provided	Remarks (including references)
(1) Repeal the entire section 283.	We intend to specify the positions to be used to calculate market risk in a new section in Division 1 of Part 8 that can be applied to all three approaches, i.e. the STM approach, the IMA and also the SSTM approach.
(2) Repeal sections 295(2) and 295(3).	Together with item 2(1) above, we intend to specify the treatment for structural positions in a new section in Division 1 of Part 8 that can be applied to all three approaches, i.e. the STM approach, the IMA and also the SSTM approach.

Matters to be provided	Remarks (including references)
(3) Repeal sections 313 and 314.	It is well understood that credit derivatives are subject to: (i) counterparty credit risk in Part 6A of the BCR, (ii) CVA capital charge in a new Part of the BCR (note: it is under Part 6A currently and we intend to move the new CVA risk capital framework to a new Part), and (iii) the foreign exchange risk under Division 5 of Part 8 of the BCR. As such, it is not desirable to repeat the requirements again in Division 10 of Part 8.
(4) Repeal section 287B.	As authorized institutions with correlation trading portfolios are not eligible for the SSTM approach (see item 5(12)(d) in Part A(1) (“Prescribed approaches in relation to calculation of the market risk capital charge under the new market risk framework”), this section is no longer applicable.

Item 3. Amend section 284 of the BCR

Matters to be provided	Remarks (including references)
<p>(1) Repeal the existing section 284(1) of the BCR and substitute with a new section 284(1) to provide that an authorized institution shall calculate the market risk capital charge for its exposures falling into each risk category by multiplying the capital charge calculated in accordance with Divisions 2, 3, 4, 5, 6, 7, 8, 9 and 10 with a scaling factor of—</p> <ul style="list-style-type: none">(a) 1.3 for interest rate exposures;(b) 3.5 for equity exposures;(c) 1.9 for commodity exposures; and(d) 1.2 for foreign exchange exposures.	<p>This item 3(1) provides for the scaling factors applicable to the market risk capital charge for each risk category calculated in accordance with Divisions 2 to 10 of Part 8 of the BCR.</p> <p>Reference: paragraph 431 of CP 19.01 and MAR40.2 of the Basel Framework.</p>

Item 4. Amend section 286 of the BCR

Matters to be provided	Remarks (including references)
<p>(1) Amend section 286(a)(ii) by deleting “that do not fall within subparagraph</p>	<p>This is a consequential change arising from item 2(4) above.</p>

Matters to be provided	Remarks (including references)
(iii).” and adding “that do not fall within a correlation trading portfolio.”	
(2) Repeal section 286(a)(iii).	This is a consequential change arising from item 2(4) above.
(3) Amend section 286(a)(iv) by deleting “that do not fall within subparagraph (ii) or (iii).” and adding “that do not fall within subparagraph (ii) or a correlation trading portfolio.”	This is a consequential change arising from item 2(4) above.

Item 5. Amend section 287 of the BCR

Matters to be provided	Remarks (including references)
(1) Amend section 287(3)(a)(ii) by replacing “Tables in Schedule 6” by “the LT ECAI rating mapping table and the ST ECAI rating mapping table”.	This is a consequential change arising from the removal of Schedule 6.
(2) Amend section 287(6) by replacing the reference to section 69(2) by item 40(2) of document in the footnote ⁶ .	This is a consequential change arising from adding a proposed new section which replaces the existing section 69 of the BCR.

⁶ https://www.hkma.gov.hk/media/eng/regulatory-resources/consultations/Annex_1_ECAI_mapping_tables_20220630.pdf

Matters to be provided	Remarks (including references)
<p>(3) Amend section 287(7) by replacing the reference to section 69(2) by item 40(2) of document in the footnote⁷.</p>	<p>This is a consequential change arising from adding a proposed new section which replaces the existing section 69 of the BCR.</p>
<p>(4) Repeal the existing definition of “ECAI issue specific rating” under section 287(11) and substitute it with a new definition as follows.</p> <p>ECAI issue specific rating, in relation to a debt security or, in the case of a debt-related derivative contract, the underlying debt security, means a short-term credit assessment rating or long-term credit assessment rating that is assigned to the debt security or underlying debt security, as the case may be, by a Type A or a Type B ECAI.</p>	<p>This is a consequential change arising from the proposed amendment to the definition of “external credit assessment institution in section 2(1) of the BCR.</p>
<p>(5) Repeal the existing definition of “ECAI issuer rating” under section 287(11) and substitute with a new definition as follows.</p> <p>ECAI issuer rating, in relation to the issuer of a debt security or, in the case of a debt-related derivative contract, the underlying debt security, means a long-term credit assessment rating that is assigned to the issuer</p>	<p>This is a consequential change arising from the proposed amendment to the definition of “external credit assessment institution in section 2(1) of the BCR.</p>

⁷ https://www.hkma.gov.hk/media/eng/regulatory-resources/consultations/Annex_1_ECAI_mapping_tables_20220630.pdf

Matters to be provided	Remarks (including references)
by a Type A or a Type B ECAI.	

Item 6. Amend section 287A of the BCR – keep the same section heading being “Calculation of market risk capital charge for specific risk for interest rate exposures that fall within section 286(a)(ii)”

Matters to be provided	Remarks (including references)
<p>(1) Repeal the existing section 287A of the BCR and substitute with a new section 287A to provide that an authorized institution must calculate the market risk capital charge for specific risk arising from each of its net positions in securitization exposures held in the trading book that fall within section 286(a)(ii) by multiplying each of its net positions by an appropriate market risk capital charge factor, where the market risk capital charge factor is equal to the risk weight determined as if the net position were held in the banking book in accordance with Part 7 of the BCR and divided by 12.5.</p>	<p>Reference: MAR40.14 of the Basel Framework.</p>

Item 7. Amend section 288 of the BCR

Matters to be provided	Remarks (including references)
<p>(1) Repeal the existing section 288(3)(d) of the BCR and substitute with a new section 288(3)(d) to provide that the institution shall in order to calculate the horizontal disallowance between zone 1 and zone 3 for the purposes of paragraph (c)—</p> <ul style="list-style-type: none">(i) if the total net risk-weighted positions of zone 1 and zone 2 are netted, any full or partial position that cannot be offset remains in its zone; and(ii) if the total net risk-weighted positions of zone 2, after taking into account the offsetting in subparagraph (i) above, and those of zone 3 are netted, any full or partial position that cannot be offset remains in its zone.	<p>This amendment is driven by an enquiry from an authorized institution. The existing section 288(3)(d)(i) of the BCR requires authorized institutions to treat the net position after netting between zone 1 and zone 2 as the remaining position in zone 1. This is not consistent with the Basel framework. The net position, if any, should instead remain in the zone where the position cannot be fully offset.</p> <p>The same problem applies to section 288(3)(d)(ii) of the BCR.</p> <p>Reference: MAR40.28(2) of the Basel Framework.</p>

Item 8. Amend section 307 of the BCR

Matters to be provided	Remarks (including references)
<p>(1) Amend section 307(5)(b) by deleting “assign a market risk capital charge factor to the position in accordance with section 287A(3A), (6) or (8) (as the case requires), as determined by the operation of the pre-amended section 15 (within the meaning of section 287A(15)) as if that contract were a securitization exposure.” and adding “apply section 287A.”</p>	<p>This is a consequential change arising from item 6 above.</p>